Lots, Feeding-places, Houses and Fences for Hogs.

By Carl Thompson.

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The subject of, caring for the hogs, is perhaps one of the most important questions that confronts the farmer today. And yet the average farmer gives it but little thought. It has long been known that hog raising is one of the most important industries on the farm, but very few people seem to think that any reasonable care is needed to make a success of it. Men build barns for their horses, sheds and stables for their cows and houses for their poultry, but as for the hogs the general impression is- "Oh they are nothing but hogs they need no special care". And so it goes. The hog gets his feed and water when it is convenient for the farmer to wait upon him, and he is, as a rule, allowed to seek shelter where he may. But the time is now at hand when it takes skill and care to produce money by the raising of hogs the same as in any other industry on the farm, and the time is nigh at hand when the hog shall receive the care and treatment that he has so long deserved.

The matter of the location of the hog pens and lots is not entirely under our control. If we were buying for the purpose of going into the hog business, we could look around for a suitable location. But, as is more commonly the case, perhaps, the farm is already bought, when, of course, the best and only thing to be done is to improve what we have. It is a common practice of farmers to locate their hog pens on the lowest, dampest, ground they have, and if possible to have a round hole or swamp in it. This, of course, should not be. The hog lots should be located on the higher land and if possible on land with a southern slope. It is essential to have a considerable degree of slope to the land in order to insure good drainage. Good drainage is absolutely necessary in the hog pen, as hogs that are kept in moist, wet and filthy quarters are liable to have rheu-

matism as well as being subjected to conditions that are most conducive to the development of all kinds of disease producing bacteria. It is necessary, also, to have the slope a southern one as sunshine is very essential to the healthy development of the hog. Sunshine is not only necessary for the growing pigs and the health of the hogs, but it dries off the soil and is one of the most powerful disinfectants known. Of course on all farms it is not possible to have an ideal, natural slope, but with a team and road scoop, during the time of year when other work is slack, a place could soon be graded up that would be higher than the surrounding level and furnish a good drainage. Of course it could never be made as satisfactory as might be desired, but would be far superior to a low flat tract.

It is a common practice among farmers to have a pool in the hog pen for the hogs to wallow in during the hot days of summer. But this is as a rule not a desirable thing to have The water soon becomes stale and old rubbish and dead material and manure gather in it and make it a very filthy hole and dangerous to the health of the animals. Far better would it be to have plenty of shade trees under which the hogs may rest, than to compel them to soak in a pond of filth. As to the advisibility of allowing the hogs access to a running stream, where practical, authorities differ. It is a known fact that hogs should have all of the pure, clear water that they want at all times and to some it would look as though this was a cheap way to attain it. But the great danger comes, not from the excess of water, but from the danger of disease- especially hog cholera. The germ of hog cholera will float long distances in water and where a case breaks out towards the head of a stream, nearly all of the hogs along the stream will have the cholera before it is known to be in the country. For these reasons any one having a farm bordering on a public stream should be very

cautious about allowing their hogs access to it.

As to the kind of soil to be used for a hog lot it is hardly under the control of man to supply, a soil that will drain easily and not become muddy and sloppy when it rains, is most desirable. A gravel soil is perhaps the best, and could, if the gravel is accessible, be put into the smaller pens, at least. If the soil does not drain readily or under ground, drainage by means of tiles, as well as surface drainage should be practiced. A clay soil, when well packed, usually forms a good drainage surface. The subject of location, slope and soil conditions is perhaps less less under the control of man than any of the other factors in the hog industry. But we must take what we have and with the general principles of a well drained, dry, sanitary condition, build up the desired conditions as best we can. No one plan will work for all, but the plans must be varied to suit various conditions.

Perhaps the question of a suitable feeding place for hogs is overlooked more than any other, and yet it is a very important one. There are various ways of making feeding places, but the essential thing of each is cleanliness. As a ruke farmers pay but very little attention to that point. They think that there is nothing too dirty for a hog. As for location, the feeding place should be located about the center of the place and away from the sleeping apartments Thus the sleeping apartment is kept clean. The feeding places should be kept clean and fresh by an occasional washing. If you have a good gravel soil perhaps it is not so essential that an artificial feeding place be built. But on ordinary soils they are very essential. One reason why a feeding place is a valuable investment is in the saving it gives in manure. As all know, the manure of farm

animals is a valuable fertilizer and every effort should be made to save all that is excreated. Perhaps a board floor makes the best feeding place as it is easily cleaned and the manure easily saved. We should not allow too many hogs to feed in one place. A feeding place 30×30 made of 2×6 inch boards for the floor supported on 2×8 inch joists will accomodate from one hundred to one hundred and twenty hogs. An arrangement of this kind would be large enough for the average farmer and it costs but about $50.00. This may seem a little high at first thought, but when we think of the saving in feed that would otherwise be lost, and the saving of manure we can readily see that it would be a paying investment. As the feeding place is to be raised the space between the feeding place and the sleeping apartments should also be raised by means of saw-dust, sand, cinders, gravel and the like, to keep mud from being tracked to and fro in muddy weather. The other two kinds of feeding places that could be recommended are made of brick and concrete, respectively. One made of brick is a very efficient one but it is rather expensive. A concrete floor does very well and costs only about one-half that of brick. Most any one can lay the concrete by the aid of a little directions. A good concrete is made of one part Portland cement: Two parts clean sand, and five or six parts stone. No matter what the feeding place is made of the essential thing is to keep it clean and dry. Hence after each meal is over, or at least once a day, the manure and rubbish should be hauled off and put in a protected place.

The question of houses for hogs is an important one, and yet one that is much neglected. The question might be asked " What is the need of houses for hogs ?" In answering I would say that there is no other domestic animal that requires more care and shelter for its successful and profitable growth than the hog. All will admit that warmth and shelter is necessary for little pigs and brood sows. Hogs exposed to rain, storms, and cold are more subject to rheumatism, cramp and diarrhoea and do not thrive or fatten as well as if protected. It is a well known fact that if some of the heat from the food consumed is required to keep the animal body warm, it is that much energy or food wasted that would otherwise have been used to fattening the animal. But perhaps the worry, fretting, and anxiety that comes from facing the storm, causes a greater, or as great a loss of energy as that lost for heating the body. For these reasons, then, if not from a humane standpoint, the farmer should be induced to provide houses for his hogs. The house should be located in a high place in the lot and preferably on the north side, as the house wants to face the south in order to get the geatest possible amount of sunlight. Of course the location of the house would have to be somewhat different under various conditions, but it should be high enough to give good drainage and should face the south so as to get the greatest possible sunlight.

The chief essentials of a good hog house are -(1) Light,(2) Ventilation, (3) Warmth-(4) Cleanliness- all of which are of great importance to the growth of the hog.

The importance of light in the growth of any living individual, we all know. Sunlight is as important in the growth of an animals as it is to plants- without it animals, as plants, will grow up weak, slim, and sub-

ject to any and all diseases peculiar to the species. I think that all have seen animals that have been raised in some dark, damp, poorly ventilated place and then the owner wonders why they do not live and thrive. Often times the farmer will, when the sow is ready to farrow, and he has no suitable pens for her, put her in some dark corner of a barn where sunlight was never known. Here the little pigs come, and instead of having the privilege, and a pleasure we may well say, of basking in the warm sunlight, they are compelled to lay in the dark, damp, filth and litter, which usualy accompany such a place, and yield up their bodies, a living sacrifice, as it were, to the germs of disease and decay.- Yes, sunlight is absolutely necessary and you can no more raise animals without sunlight than you can without food.

Ventilation is of no less importance than sunlight, although it is not so apt to be found wanting, for what sheds are provided for hogs are usually of such a loose construction that plenty of fresh air can enter But in the building of new and more substantial structures this point is very likely to be overlooked. We all know how important it is to ventilate the sleeping room of a human being, and it is equally important to properly ventilate the sleeping rooms of the hogs. In ventilating there must be means of escape for the impure air, which is loaded with carbon dioxide, by means of a shaft near the bottom and the entering of fresh air near the ceiling. The oxygen in fresh air is more essential to the life of the animal than the food, for, in fact, the animal cannot live without it. Even if the animal exists with a deficient supply of oxygen and an over supply of carbon dioxide, it will not grow and thrive as it would under the proper conditions. The warmth is one of the essential features and one of the

primary reasons, in fact, for having a hog house. The house should not only be so arranged that it will be warm in the winter, but so that it will also be cool in the summer. The reasons why the animals should be kept warm are clear and have already been given.

The last, but not least, of the essentials of a good piggery, is cleanliness. It is appalling the way this requirement in regard to the hog quarters is neglected. Hogs are born and raised among the worst filth imaginable and, as a result, meat of a less quantity, due to the greater loss of pigs from death, and of a poorer quality, is produced, and, as has already been stated, litter and filth are homes for all kinds of vermin and bacteria. The farmer who lets the litter and manure thus accumulate for lack of time, as he says, to remove it, is loosing money from two sources- the loss of the manure and the loss of pigs. It is with this like many other things, the farmer is loosing money because he is trying to be economical. But perhaps the lack of cleanliness comes more from ignorance and carelessness than anything else.

As to the plan of construction of a hog house no general rule can be given, as a house that would be satisfactory in one locality would be quite utterly impracticable in another, hence I will not try to give any specific directions for building a hog house, but simply tell in a general way how each of the essential requirements may be obtained. First, as I have already said, the building should face the south and the house so arranged that a large window may be placed at each pen, thus giving the sunlight that is so essential to the health of the animals. Just inside the pens, where the house is partitioned off into several small pens, as should always be the case, there should be an outside lot about 16 ft. long where the hogs may

run at pleasure. Here they may spend the warmer days of winter and get exercise. A small door should connect it with the inside pen and if desired this door may be made to swing from the top, thus letting the animal open or shut it at will, or it may be made to raise up and fasten and lower when necessary. The swinging door would be the handier, as it would require no attention and would be fastened by means of a hook when desired. Each outside lot should have a gate either connecting it with the next lot or at the end, by means of which the manure is removed.

In order to insure the perfect health of the animals we must have good ventilation. A hog, or no other animal, could live and thrive in an atmosphere of carbon dioxide, ammonia, marsh gas, organic matter and moisture that is exhaled from the lungs. This impure air is also more full of microbes and dust than pure air. This air being loaded with all these various substances is heavier than pure air, and after it reachds the temperature of the barn, falls to the floor, hence the ventilating shafts must start from close to the bottom of the house. It may be wondered by some how this heavy air is going to be induced to ascend in the ventilating shaft. The forces that are at work to force the air up the shaft are (First) wind pressure on outside trying to force air into the building and (Second) wind suction on the other side tending to draw it out. (Third) by the difference in temperature of the air outside and in. (Fourth) by the aspiration on the top of the ventilator. By use of these aspirations on top of the ventilator, the air is aspirated out as the pressure is reduced by wind blowing across the top. There are various methods of constructing ventilators, some of which will be shown by drawings. (See Figs. I-II and III).

The matter of having the building as warm as possible in the winter and as cool as possible in the summer are both obtained by the same means. There is no heat in any kind of a wall, but the wall simply retains the heat that is produced by the animal. Hence the better nonconductor a material is the warmer will be the house. Likewise the poor conductor will keep out the heat of the sun in the summer and thus keep the house cool. The body temperature of the hog is from 100 to 105°, but as considerable heat is generated by the animal the temperature of the stable should not be much above 70° or 72°. Fortunately wood is one of the poorest conductors that we have and hence makes an excellent building material. From wood a house can be cheaply and rapidly built. The walls of the hog house should be securely boarded up so that no cracks are left for wind and rain to enter. The roof is especially important and should receive the best of material. In the absence of good material with which to build, a good thick thatch of straw or other material, will prove efficient for keeping the building warm, but will last but a short time.

The next subject, that of cleanliness, is an all important one. It will require the arrangement of the building and the construction of the floors and various other things to insure the cleanliness of the house. It is here, in fact, that I will discuss in a general way the arrangement of a hog house. I cannot here describe in full all the different arrangements, and in fact, no one place would be suited to all, but I will present some drawings of various arrangements and plans. It is admitted by all those who properly handle and treat the hogs that it is one of the most cleanly of domestic animals, if given a chance. It is the only domestic animal that will not litter and muss up its sleeping apartment, if things are so

arranged that it can help it. Therefore it is essential to keep the sleeping and eating rooms seperate. As has already been said, a yard should be connected with the inside pens, and in this case it would perhaps be more convenient to have the sleeping rooms next to the outside wall. And as the animal will spend more time in the eating than in the sleeping apartment, this should be where the greatest amount of sunlight can be secured. The sleeping apartment should be about 8×12 feet or somewhere in that neighborhood, varying, of course, with circumstances. A room this size will accomodate several shoats or one brood sow. As the time spent in the eating apartment is short, this need not be as large. A partition may be placed between the two with a sliding door in it, or a low partition six or eight inches high may suffice. If a low partition is present the hog will usually pass over out of the sleeping pen to void its excretions, thus keeping the sleeping apartment clean. The hog will be much more particular about this if the sleeping apartment is kept well bedded. It is not necessary to have the sleeping pen and eating pen one behind the other, but if it is more convenient one could be placed beside the other, and either or both, open into the outside lot. An alley about 4 ft. wide should run the whole length of the house, where the attendant may pass with feed and by which the manure can be removed by the use of a wheel-barrow.. It might not be amiss right here, although it does not bear directly upon the subject, to say that a well protected place should be kept near the hog house for the receiving of manure. Too much manure is wasted by being thrown out under the eave drip and left standing for months and, yes, even years. There should be enough absorbents put in the manure to absorb all the liquid and the whole placed under cover. Too much cannot be said about the prompt removal of all

manure and litter from the house and pens of hogs, as decaying vegetable matter, damp litter and dung, cause a poor growth in hogs and a poor quality of meat. Damp, cold floors, which are brought about by damp litter lying on them, causes cramp and diarrhoea in hogs. Before leaving this part of the subject I might here add that in pens meant for brood sows a rail about six to nine inches high should be placed around the edge of the wall and out a little way from it, to protect the little pigs from being laid upon by the sows. The next thing to consider in the construction of a hog house is the floor. The floor, of whatever make, should be given enough shant so that the liquid excretions would be promptly drained off. There are several kinds of floors that are used, and all have their good and bad points. The principal ones are wood, stone, brick and concrete. Some use the common earth for a floor but the hogs is liable to root it and, too, the liquid manure is lost A wooden floor is perhaps as good as any, but unless kept well bedded, it usually gets slick when damp. If wood is used, only good, hard wood that is well cured, should be used. It is a good plan to give it a coat of tar to protect it from the damp. It is sometimes laid in cement and placed about 1/4 inch apart for the purpose of drainage. 2×6 are the best size to use. Stone floor is good but usually stays damp and slick unless kept well bedded. Brick, well laid, makes an excellent floor but is rather expensive, however, when once laid will last almost forever. Concrete makes an excellent floor and does not cost but about half as much as brick. It can be made the same as given for feeding places- one part Portland cement- two parts washed sand- and five or six parts crushed stone. In the absence of arything better cinders make a fairly good floor, but not water proof. In the construction of a floor, one will have to judge from

the material at hand and the price, as to what to use, but always give it slant enough to give good drainage and save all the manure.

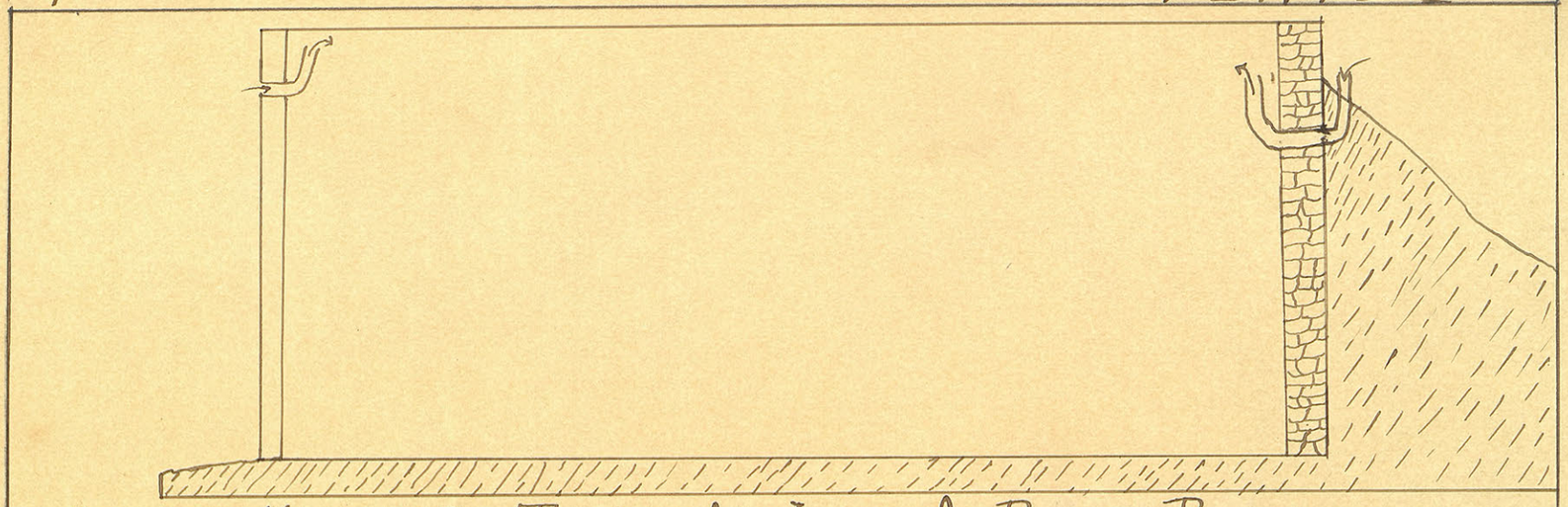
If it is absolutely impossible for any farmer, for any reason, to build a hog house, a good warm shed should be resorted to. A shed can be made that will keep the animals dry and reasonably warm, at a very low cost. A good stone wall should be built along the north side and, if possible, banked up with earth or something to keep it warm. The pens can be easily partitioned off and a lot made to join them on the south.. The stone wall should be about four feet high and the roof raised to about six feet at the highest point and come down to about five feet in front. The partitions should be three or four feet high. The front part of the pen should be used as the feeding pen and the back as the sleeping apartment.

I will now take up briefly the subject of portable houses, as they are sometimes very essential. Every farm should have at least one or two portable houses, as they are very convenient where there is danger of disease, such as cholera. They must be made firm and should be put on wheels. A portable house 6×6 or 8×8 is large enough to hold five or six hogs. They can easily be hauled around from place to place with a team. They are usually made without floors for they are most needed in the summer when there is grass, and the hogs can thus have access to the green feed. Another essential thing on the farm, if there is much hog buying to be done, is a quarantine pen where all new animals are placed and left until all danger of disease developing in them is past. It should be made of board and boarded up several feet high.

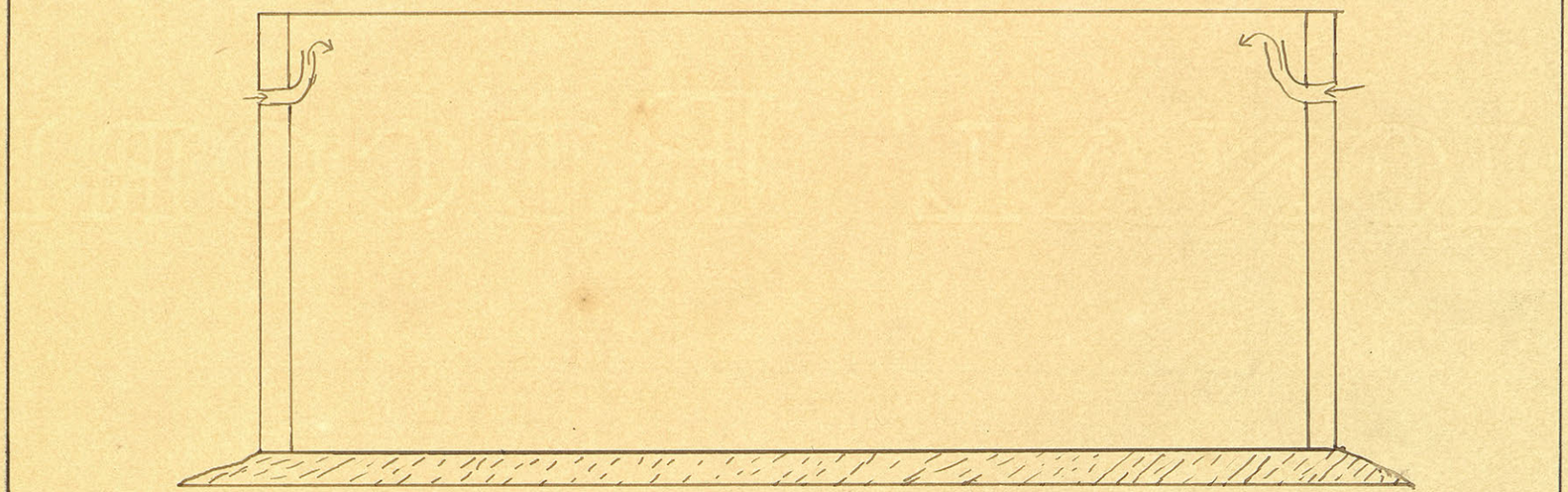
The subject of fences is important for several reasons. If the hog is allowed to run at large he is a public nuisance, and he will grow wild and will not fatten readily. All the lots and pastures should be fenced so that the hogs cannot, in any way, get out of their quarters. It used to be that the barbed wire fence was the only one in use, but since the introduction of woven wire, barbed wire has gone almost entirely out of use for hog fence. The wire netting fence is the one now most commonly used and, next to the board fence, the best one. It should be from 30 to 36 inches high, to prevent hogs from jumping. Over the woven wire there should be placed several barbed wires and if horses or cattle must be let run in the pasture with the hogs, which, however, should not be, it will suffice to keep them in. There are various kinds of posts that can be used- such as walnut, osage orange, oak, catalpa, cedar, where practicable, and in fact any material that will not readily decay. It is a good plan to char the end of the posts that goes in the ground. This prevents the posts from rotting and from the action of boring insects. The posts should be placed deeply in the ground, about eight or ten feet apart, and well tamped. Between every post should be placed staples to which the lower wire, especially, is stapled. This prevents the hog from rooting under.

I think anyone who would inteligently study the subject of the proper care of hogs, would surely be convinced of the fact that hogs must receive good care if they would do their best. True, money has been made from hogs without proper care, but, with the care that they should receive, how much more could be made. I think that the time is not far off when the hog will receive just as much care and be as much respected by the farmer, as other domestic animals.

PLATE I



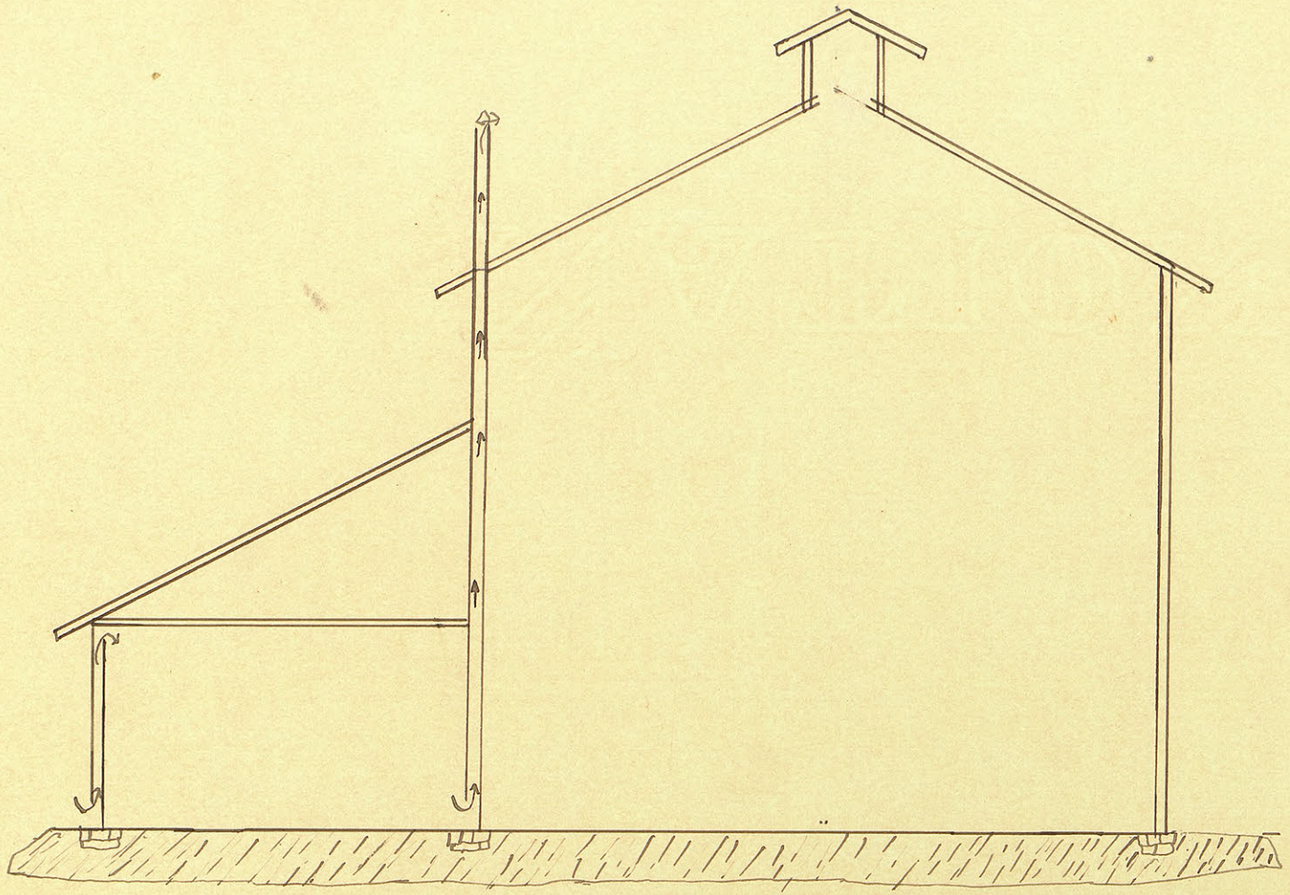
SHOWING METHOD OF TAKING AIR INTO A BANK BARN.



METHOD OF TAKING AIR INTO ORDINARY BARN.

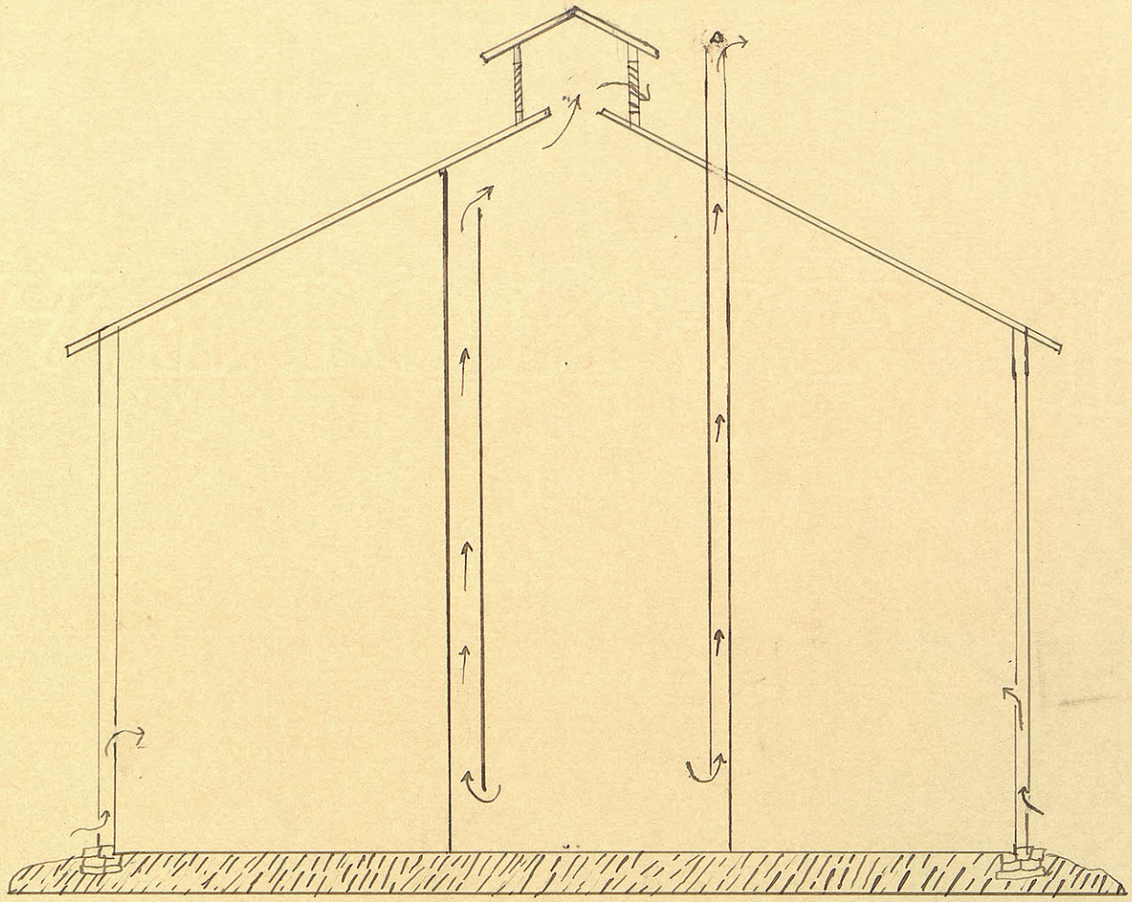
KING

PLATE II.



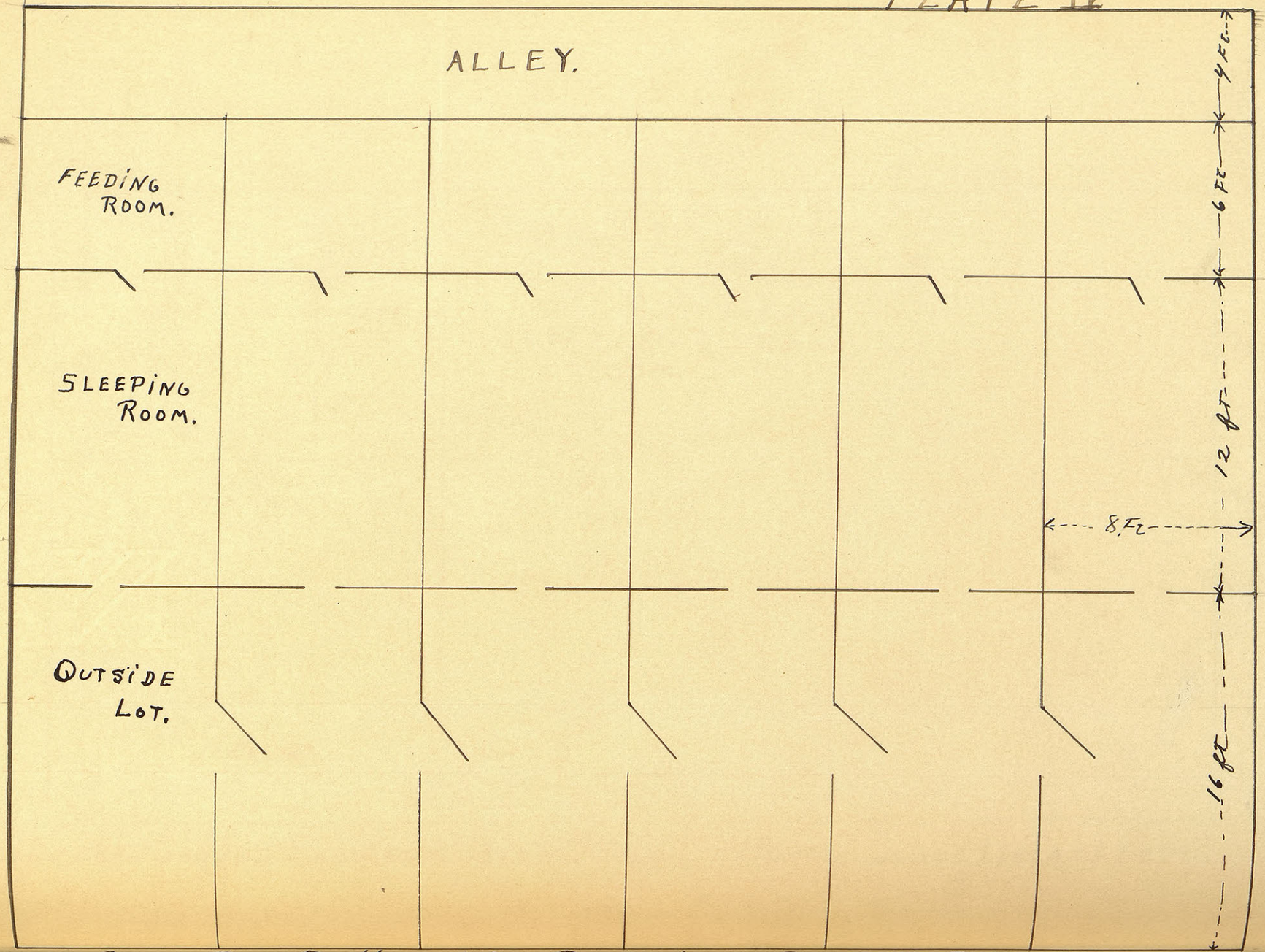
METHOD OF VENTILATING A SHED ON SIDE OF BARN. KING

PLATE III



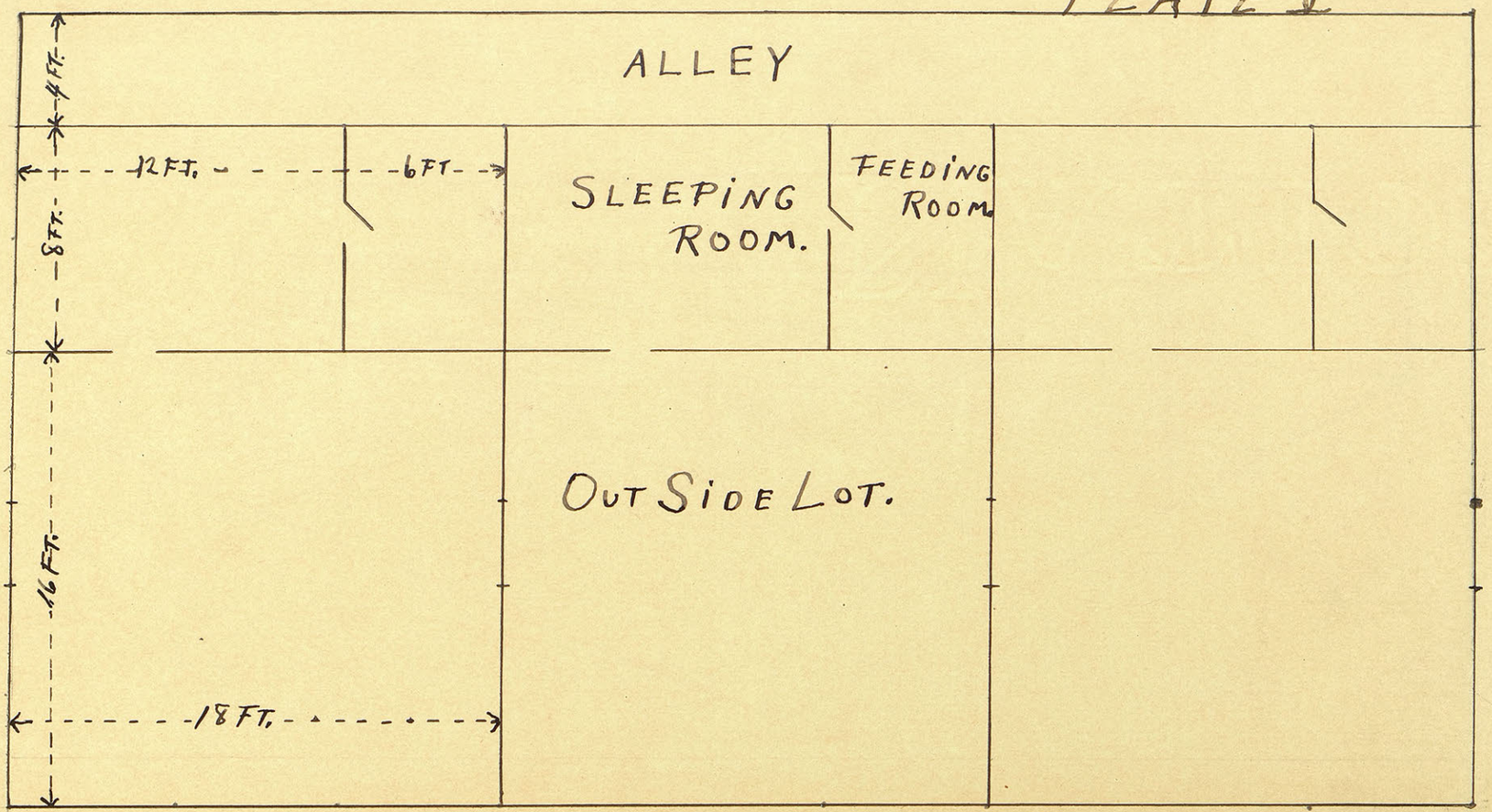
TWO METHODS OF VENTILATING A BARN. KING

PLATE IV



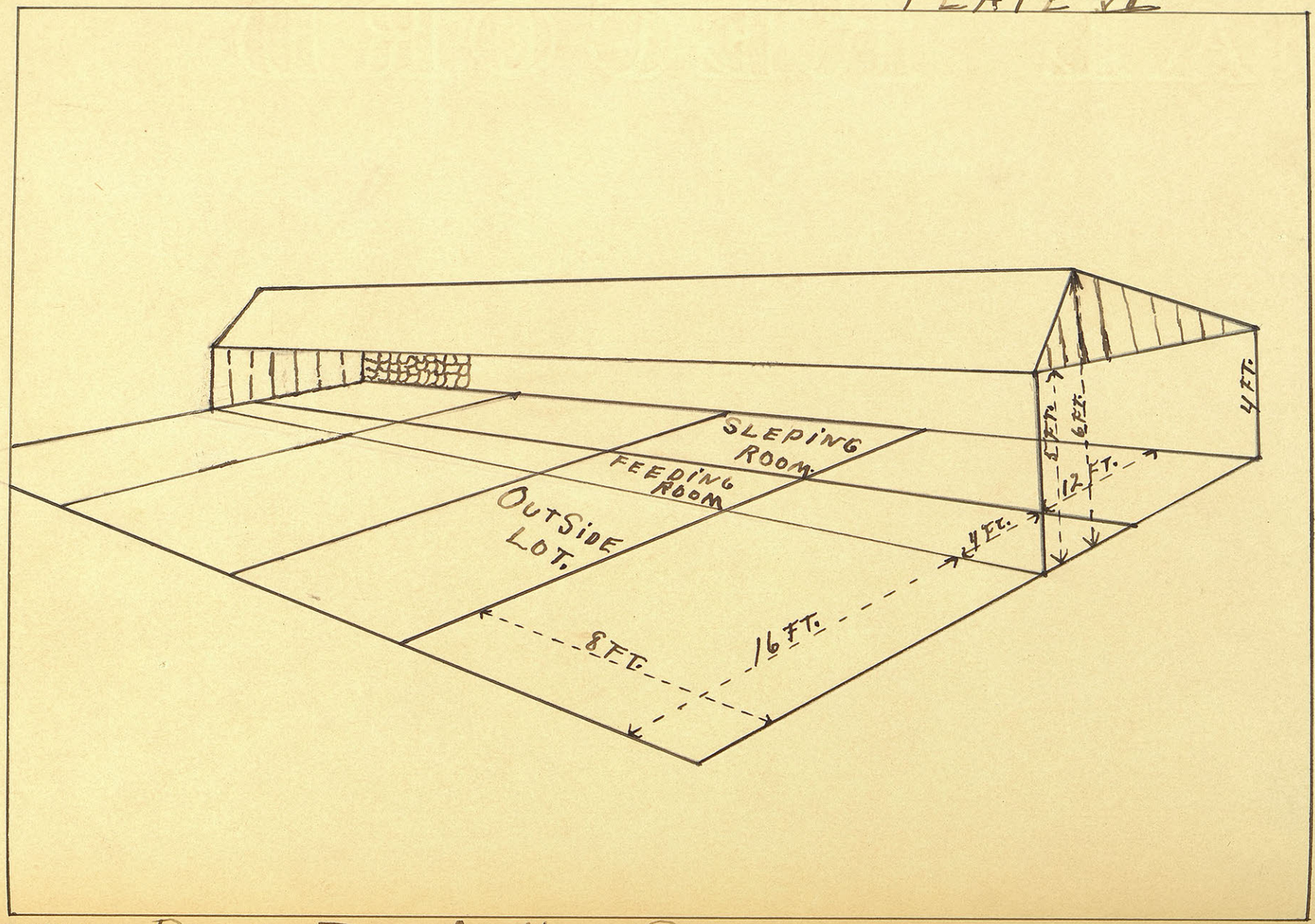
GENERAL GROUND PLAN OF HOUSE WITH OUTSIDE LOTS. SCALE 5 FT TO THE INCH.

PLATE I



GENERAL GROUND PLAN FOR SECOND STYLE OF HOUSE SCALE 1 INCH = 6 FEET.

PLATE VI



GENERAL PLAN FOR A HOG SHED