

Some Stock Farm Equipments.

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### Introduction.

Many farmers who are engaged in the live stock industry are sadly hampered by a lack of conveniences, or even those things almost essential to successful work. Much of this is due more to an ignorance of what is really required and may be obtained than from financial difficulties. While it is true that some of these inconveniences were due to a lack of means necessary for a proper equipment at the start, much of it can be explained by the disadvantage under which the early settlers of the western states labored in regard to the existing conditions, and the lack of experience as to how best to meet them. Others have failed to keep posted on the many modern contrivances which have been invented and introduced, or the constant advance, in this age of progress, of new and improved methods. The farmer's work may often be greatly lightened and better results secured by the intelligent use and application of methods, principles and machines, familiar to some, but comparatively new to others. Some persons have little use for certain things which others consider almost indispensable, perhaps thru ignorance of their real value, or an actual knowledge of their worthlessness.

It is the purpose of this paper to discuss certain methods and contrivances, and also offer others, which, in the writer's opinion, are superior to many in common use.

## Fences.

A fence which allows your neighbor's stock to get into your field or your own to wander thru that of the neighbor's, is a nuisance which probably causes more ill-feeling, together with some loss of stock, than any other single thing. The intentions of both parties may be the best, but poor fences or carelessness in keeping them repaired will not tend toward keeping stock properly confined.

A poorly constructed fence will require more work to make it answer the purpose at all than would be needed to build an entirely new one. A poorly set and poorly braced corner post is one of the common defects. One plan is to use a forked timber for a brace, one fork on each side of the post, and the lower end of the brace surrounded by stakes on the three sides, or one end of a board is nailed to the corner post and the other end nailed to a stake or another post; or a wire may be wrapped around the top, the other end being fastened to a stake driven into the ground. None of these methods are of much value, even for a short time.

The corner post should be of hard wood, seasoned oak preferred, and at least 6' x 6' x 10 in size. This is set four feet or more into the ground, packing the dirt well around the bottom of the post by pounding it with a spade handle or a crowbar with a large head. The brace should be 4' x 4' x 16 or longer, fitting the upper end into a notch in the corner post four feet from the ground. The lower end is set against another notched post in the line of fence, keeping the under side just above ground, as shown in the sketch, Fig. 1, Plate 1. Then four strands of no. 8 wire from the top of the second post to the bottom of the corner post, twisted together and tightened, will give a corner post from which one may stretch almost any length of fence.

The other posts do not need to be set so firmly, but should all be in a straight line between the corners, as a post out of line throws a constant strain on the staple which holds the wire and it is soon down.

The barb wire fence is of little value, unless the wire is tightly stretched and securely fastened at the corner posts. The wire at the other posts should be fastened firmly enough to hold it well in place, but should not be stapled too tightly, in order to allow for the expansion and contraction caused by the temperature changes.

The barb wire fence is probably the cheapest cattle fence that can be built, unless it is a stone fence where stones are near at hand and labor very cheap; yet it has its disadvantages near a barn yard, as well as being less secure than some others, especially the woven wire fence. The five or six foot woven wire stock fence is coming into good use in the barn yard. The short distance between corner posts in a small yard, makes it difficult to keep the barbed wire fences tight, while the other is not so much affected by that, and is less likely to injure stock which may run into it.

As a hog fence, the woven wire has no equal in usefulness and durability, while the low prices place it within practical reach of all. When well set up and thoroly staked down, little attention is necessary except to see that the staples are all in place.

Some labor may be saved by having the different fields connected by lanes, allowing all the stock access to a common center from which water, according to the needs of each animal, may be obtained. Where it is possible, large fields should be kept undivided as they are usually much more convenient to handle.

In the construction of gates, few if any nails should be used,-

three eighth inch bolts being much better, as they will not be worked loose by the the frequent wrenches which the gate will receive. Heavy gates, or those required to be opened many times, should, in order to move easily, be arranged either on hinges or on rollers. The post on which the gate is hung is often drawn out of position, thus greatly affecting the ease with which the gate may be handled. One form of bracing the posts and hanging the gate is given on Plate 1. Fig. 2.

#### Scales.

The farmer who is unprovided with a means of weighing his stock and the feed given to them, is not in a position to know positively whether he is making or losing money by his work. Nor can he tell with any degree of certainty the value of his feeds, singly or in combination. He may secure a happy mixture which will produce good gains at a low cost, but, thru a lack of knowledge as to the exact value of the feed, loses the benefit of his discovery. By the use of scales, stock will not receive a surplus one day and go hungry the next, but the amount of feed given daily will be uniform thru out, or can be definitely increased or diminished, according to the needs of the animal. Often times, stock will fail to do well on one kind or combination of feed, or other circumstances may enter in, and they will make little or no gains. The scales will show this, and search can at once be instituted for the cause and a possible remedy applied.

Again, if the buyer knows a farmer has access to scales, and can and does weigh his produce before delivering, there will be little temptation for him to give short weight, as is frequently charged against him. The farmer will also be better satisfied with the weights, if the weighing has been done on his own scales.

Buyers frequently offer to buy stock by "lumping them off " or guessing at their value. The farmer is at a disadvantage in this kind of a trade, as the buyer is observing and weighing constantly, and his experience usually keeps him on the safe side in his offer, but if the seller uses his scales before he goes to town, the buyer will stand little chance of success in guessing on weighed stock.

Ordinary hay scales, well set up on a brick or hard stone foundation, with the platform surrounded by a strong plank fence and heavy gates at each end, will usually answer the purpose, altho, in many cases, platform scales, mounted on wheels, with a weighing limit of seven or eight hundred pounds will be found more convenient and better adapted to some particular lines of work. Either one or both should be secured, and an intelligent use of them will be a source of profit as well as satisfaction to the owner.

#### Wagons.

There are many styles and makes of wagons, with their special advantages and disadvantages, and each man may have his individual preference. We shall not attempt to deal with the wagon as a whole, but shall concern ourselves briefly with a few of its parts.

Starting with the wheels, we find there is often room for improvement there. No one cares to exert more strength than is necessary in loading and unloading a wagon, yet this must often be done with the ordinary high wheeled wagon. For all the usual farm and feeding work, low wheels on the wagon will be found very convenient, and will greatly reduce the labor of handling the loads.

Again, the fields and yards are sometimes wet and soft, and the wagon passing over them, will cut great ruts, which in the fields will be injurious to the soil, and in both places, make the work of

the team more difficult, thus necessitating small loads. Wide tires will, to some extent, aid in this difficulty. These will expose more surface for the same weight to rest upon; hence they will sink into the ground less deeply. Wagons equipped with four inch tires have been found, on soft fields, to require one half less power to draw them than those with two inch tires. The inference is obvious.

Cast iron wheels with tires four inches or more in width, front and hind wheels twenty four and thirty inches high, respectively, and fitting almost any size of spindle are now cheaply and readily obtained, and, once used on a wagon, the farmer will never care to be without them.

While it may be somewhat out of place here, yet the fact might be noticed that the recognized superiority of the wide tires in keeping our roads in good condition will soon lead to legislation against the use of narrow tires on any heavy wagons; so the man who is accustomed to the use of the former will appreciate their value, become one of the factors in the "good roads" problem, which so intimately concerns him, and lead others, by his example, to similar opinions, thus making a wide tire law popular and so helping to insure its enforcement.

Few farmers are properly equipped to haul fat hogs to market. Many of them use the ordinary wagon box with wide side boards which admit little of the fresh air so necessary for a successful delivery. Some of the loss too commonly noticed could be avoided by the use of a rack similar to the sketch, Fig. 1, Plate II. This is made out of six inch fence boards, the lower box of the wagon being used as the foundation. Bolts are used in place of nails, which are constantly working loose when driven into anything of this nature.



Each end of the rack is provided with two rods, which hold the sides together and prevent any spreading. Each end gate is in one piece, and can quickly be placed in position. The air spaces between the boards admit of free ventilation, thus reducing the risk of smothered or over heated hogs to a minimum. The rack is light enough to be handled easily by two men and can be readily taken to pieces, and stored away when not in use. A useful arrangement to haul dirt or manure with may be built out of plank, twelve feet in length. The wagon box is taken off of the wagon, the space on the bolsters between the standards filled with two by fours, and two eighteen inch planks, set upright are used for the sides. At the end of each two by four, half of one side for eight inches back is cut off and the edges of the remainder rounded off. This gives a hand hold so that when the plank is raised slightly, the weight of the manure will turn it over and the load slides to the ground beneath. In this way, the wagon is quickly and easily unloaded, and the regular wagon box is kept clean and sweet.

#### Water.

The source of the water supply may vary in different places, but the fact remains that all stock, especially the young growing animals, require good water and plenty of it. In proportion to the size of the animals, young stock do not possess as great a capacity for water, yet require more for the use and development of the rapidly growing tissues, so arrangements should be made whereby they can have frequent and easy access to the water supply. Too often stock of all kinds is neglected in this respect, and a little carelessness on some one's part may leave the stock in a very thirsty condition,

not suitable for the best results. Every reasonable inducement to get stock to drink should be offered to them as the feed is much better digested and assimilated when they are well supplied with water than when they are not.

The distance between the water and the sheds should be short, as the cattle do not care to move around in disagreeable weather and often prefer to go without, rather than to venture very far from their shelter and feed, but when it is right at hand, they will drink much and often.

Drinking ice cold water is not conducive to best results with stock, as not only will they drink less of it than of the warmer, but the heat units in the feed necessary to raise the temperature of the water to that of the animal body had much better be expended ~~in producing~~ in producing fat, and the water warmed by some other means. Steers and dairy cows, especially, should drink large quantities of water at all times of the year, and the use of the water heater in the winter will well pay the stockman. This heater consists of a small stove surrounded with a sheet iron jacket with an air space between, requires very little attention, burns about twenty pounds of coal per day, and placed in an average sized tank, will keep the water from freezing in very severe weather.

The hog is the most difficult of all animals to provide with an abundance of water, and at the same time, keep the supply clean and sweet for the rest of the herd. He seems to delight in getting all of his feet in the trough, and, after taking a few swallows of the liquid, complacently proceeds to better his general health by taking a cold water bath. Many kinds of arrangements especially designed to allow him to drink and, at the same time, prevent him from contam-

inating what he does not care to use, have been devised, but some of the automatic machines, of which the Dewey waterer is a type, seems to answer the purpose very well. These are readily attached to a barrel or a tank, and the supply of water is kept clean and uniformly regulated. Another arrangement consists of a barrel set in the ground with the top just above the surface, and connected by a pipe with the tank, the amount of water in the barrel being controlled by an automatic cut off. A triangular hole in the plank cover permits the thirsty pig to insert his snout and refresh and rejuvenate himself after his wearisome but necessary stroll thru the luxuriant fields of Alfalfa.

#### Shelter for Cattle.

Stock of all kinds should be kept in a comfortable condition, and whether this requires protection from the burning rays of the summer sun, or from the raw, damp wind of winter, humanity and a profitable business demand that such should be accorded to them. Every year, more men are beginning to realize the value of shelter for cattle, yet still thousands pass thru the winter and the wet, chilly days of early spring with no more protection than that afforded by a barb wire fence or a few clumps of trees. It is unreasonable to think that cattle can make profitable gains when so much of their vital energy is expended in keeping the animal body at its normal temperature. Feeders who worked in the earlier part of eighteen hundred and ninety nine, have good cause to remember the effect of the weather on fattening cattle, when for from four to six weeks, scarcely any gains could be made, unless stock was exceptionally well protected. In these days, when so many things must be taken into consideration and figured on so closely, feeders cannot afford

to allow their stock to be exposed to all kinds of weather. A low temperature does not seem to injure them so much, unless accompanied by a chilling rain or snow, or a **strong** wind, which seems to penetrate to the innermost parts; so the main objects to work for in building a cattle shed is a place which will always be dry and will protect them from the winds.

A shed on a well drained location, with a good roof and well battened sides and an open front to the south, will do much toward making the cattle comfortable, and will add materially to their gains.

Plans for a shed suitable for forty head of cattle are shown on Plate lll.

#### Shelter for Pigs.

It would be difficult to calculate how many dollars worth of pigs are lost each year thru lack of protection from farrowing time until they are a month or more old, yet the figures must run well up into the hundred thousands, as probably fifty per cent of all the pigs born never live two weeks. In order to get the most benefit from the summer season, the farmer has found that they must be farrowed in March or April; just the time of year when the weather is most uncertain and cold and chilling rains most prevalent. Hardy, indeed, must be the constitution of the newly born pig, if he survives the precarious times of the first few days of his existence, with the constant danger of being chilled to death or crushed beneath the weight of his dam.

Large piggeries have been built for the accomodation of the sows and their pigs, but the danger from hog cholera and other affections, the difficult task of disinfecting such places, and the continual

annoyance and disturbance which irritates the sows and make them restless and uneasy, permit of some objection to them. For ordinary breeding purposes, a house similar to the sketch may be used. ( Fig. 2, Plate 11.) This will accomodate but a single sow and her brood, and a small, outside pen connected with it will allow them their needed exercise.

In a house of this kind, there is little danger of the sow lying on the pigs, as they can retreat close to the edge of the wall and be protected; it is also easily and cheaply built, may be readily moved from place to place, and if it becomes infected with disease, may be set on fire and burned without any great loss.

After the pigs have reached the fattening age, they still require protection from the cold or the heat, as the case may be. Fat hogs stand cold much better than too much heat and care should be taken in the summer to provide them with a shed which will protect from the sun and admits a plentiful supply of fresh air. A shed of this kind may be the means of saving many fat hogs when the south west winds and the August sun combine their forces and make life almost miserable.

#### Conclusion.

While recognizing the fact that in this subject, there is opened a wide field for work, and that but few of the equipments of the farm have been dwelt upon and many of them lightly and without much detail, yet it has been the aim to draw attention to a few practical methods, and to create a desire for the better and more convenient things, rather than enter into a thoro discussion of the subject.

There probably never will be a farm so equipped that some improvement could not be made or suggested; yet the nearer we approach our

conception of an ideal farm, the more our interest increases, better results are obtained and more improvements are desired. Intelligent farmers, the number of which is rapidly increasing, need but a suggestion to enable them to work out their own salvation, and, by the ingenious use of brain and muscle, make their calling one of the most attractive and profitable, as well as the most honorable which the Divine Being has seen fit to open to man.

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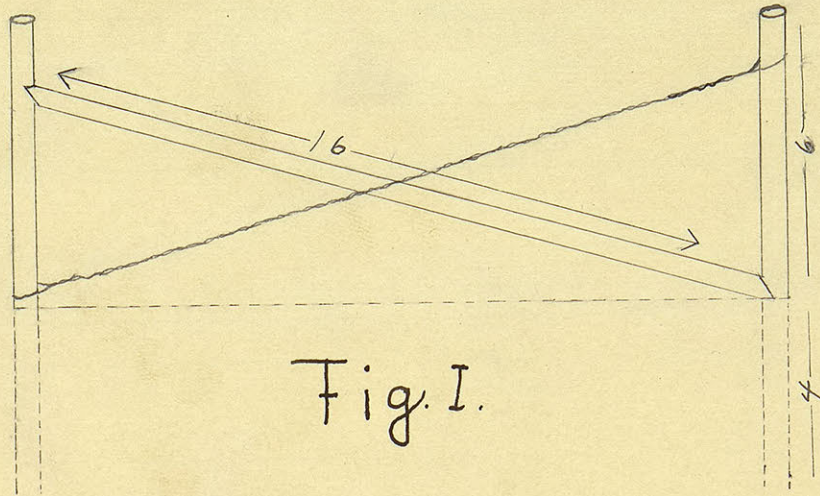


Fig. 1.

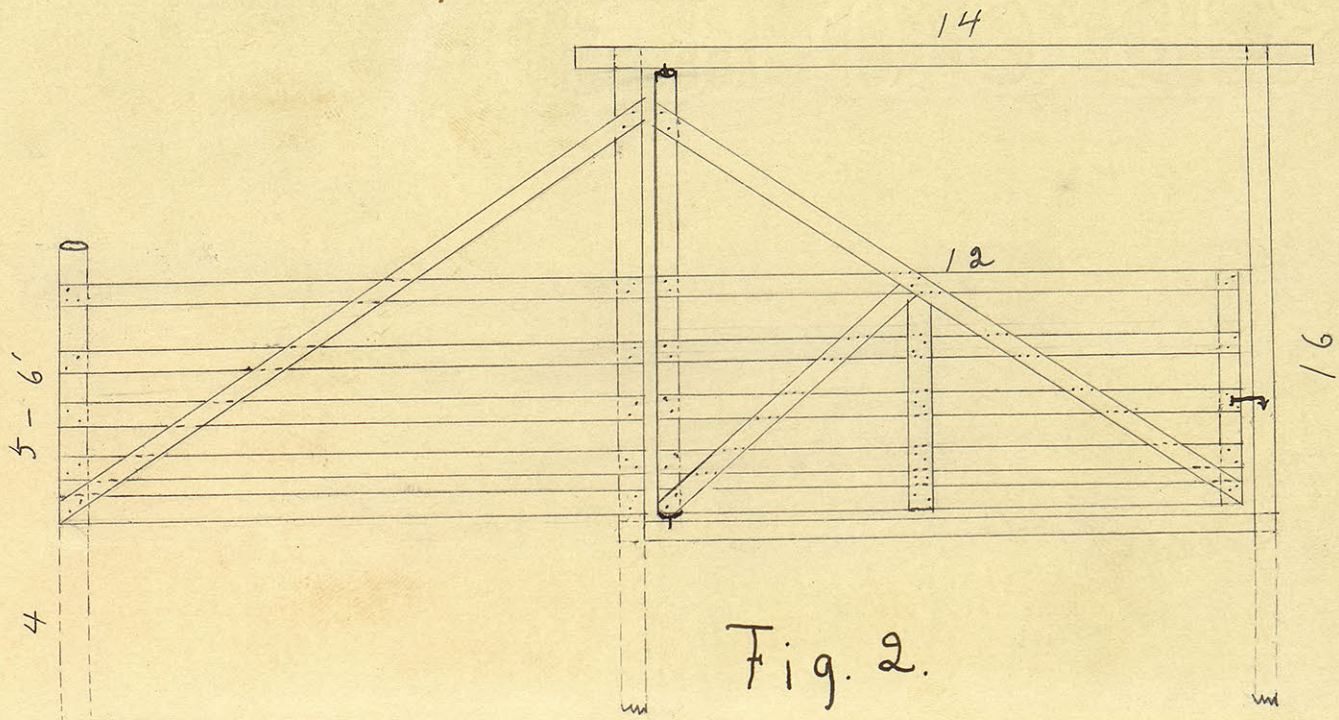


Fig. 2.

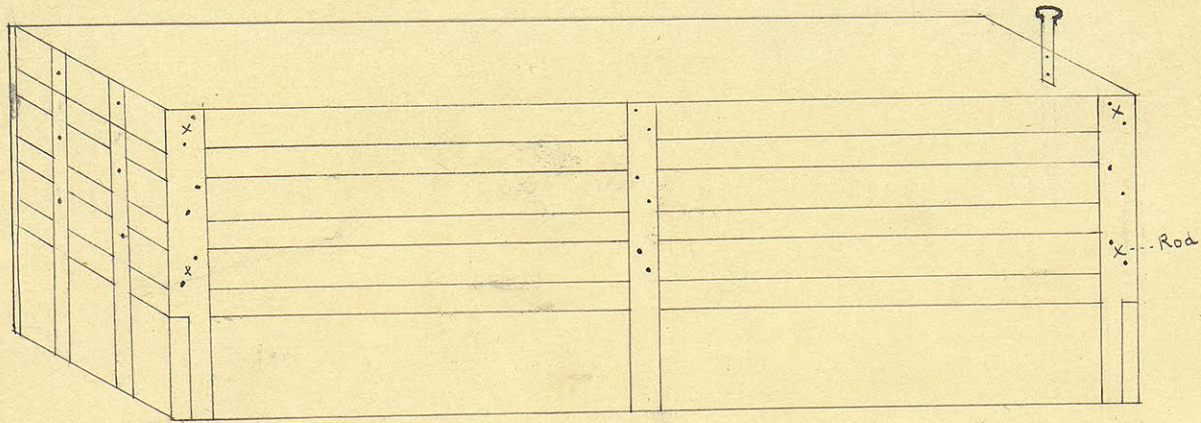


Fig. 1.

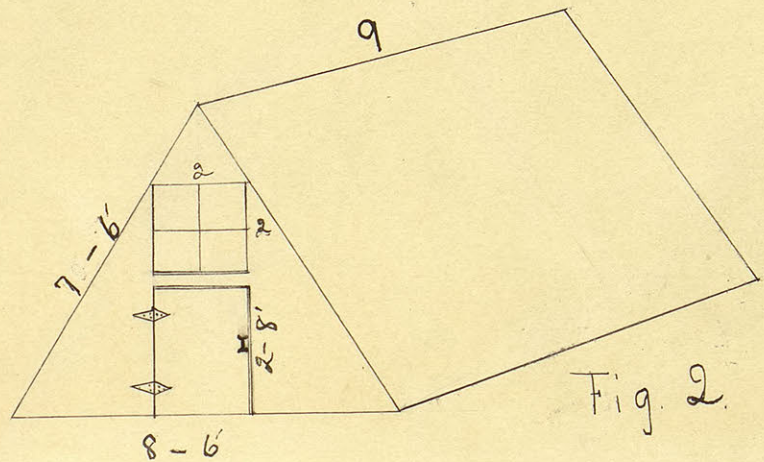


Fig. 2.



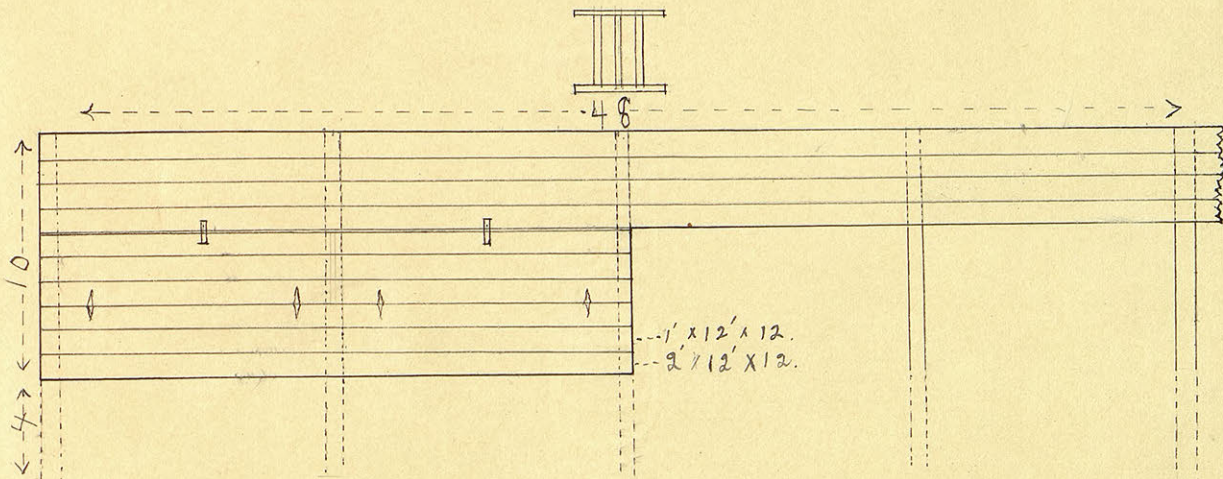


Fig. 1.  
 $\frac{1}{2}$  Front Elevation.

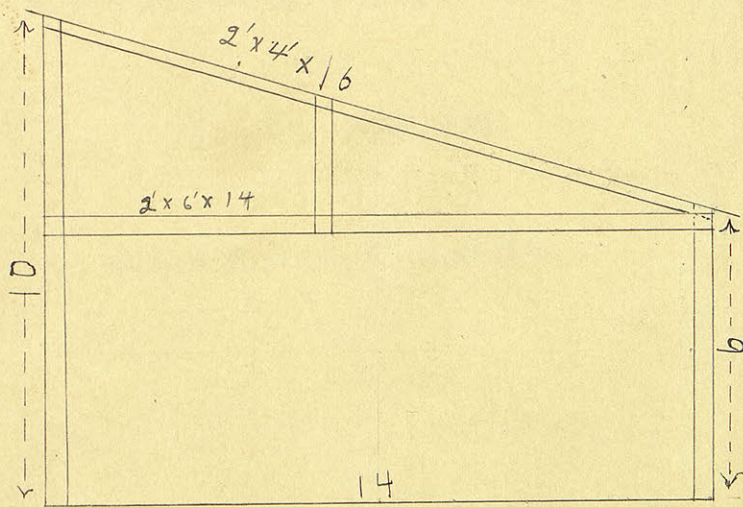


Fig. 2.  
 Side View