

check in the meantime, and, if possible, move towards its eradication. In buying new individuals to add to the breeding herds, do not hesitate to use the tuberculin test. If only healthy animals are used in breeding, and the stables are kept in a clean, sanitary condition, with sufficient and proper light and ventilation, wholesome feed and pure water used at all times, there is little danger of the disease gaining ground. As the loss will, without a doubt, revert to the producers, it behooves them to take reasonable precautions to keep the amount at a minimum.

Tying Cattle While Feeding.

Experiments have shown that larger gains are made when cattle are given freedom in loose box stalls than when kept tied. For fattening cattle, calves and young stock, this seems to be the ideal method of winter housing. There is, however, one difficulty or drawback in the system, and it is that, in nearly every bunch of cattle there is a "boss" or two which does not allow his mates to eat their allotted share of the daily ration in comfort, and often one or two of the animals are crowded out until those in authority get all they care to eat.

This difficulty can be easily overcome without much expense, and with very little trouble, by arranging stanchions along the feed trough on the side of the stall next the feed alley, and tying the cattle while they eat. The stanchions make it a very simple matter to fasten each of the steers or calves, as the case may be, and the tying insures that each animal receives the amount intended for him, thus overcoming the danger of some of the more greedy individuals being thrown off their feed, causing a loss, instead of a gain, in weight through their overgorging themselves at the expense of other animals in the stall which cannot make reasonable gains because of being robbed of the feed intended for them. The trouble is greater with fattening steers than with other cattle, and a system of tying while the animals feed is not expensive, and furnishes a ready and practicable method of solving the difficulty. Try it.

Feed Passage in Centre.

In these days of concrete floors, sanitary water systems, modern steel stanchions, stalls and mangers, the most important thing of all is often overlooked, that of the arrangement of the stable.

In designing a stable, there are several very important things to be considered, and of these, possibly, the farmer's pocketbook is the greatest, for, be it known, the arrangement can be made to meet with approved modern methods, and still kept at a medium cost.

The health of the stock must also be considered, and the convenience of feeding and tending.

In considering the first, the farmer's outlay, namely, having the cattle facing towards the center, or, on the other hand, toward the outside of the building, the majority of writers claim that the latter is the better; and so it is, if the ventilation system is not designed to suit, but, from an economical point, heading the stock towards the center is certainly the one to be used. A system of ventilation for this arrangement costs no more than any other, and fewer and lighter ceiling timbers may be used, and no trusses, as re-

quired on the upper floors. The girders, resting on the shoulder-posts of the stalls, come under the most heavily-loaded section of the building, and insure it against settlement.

In the other arrangement, these shoulder-posts are near the outside of the stable, and leave the heavy center span unsupported, requiring heavy timbers, girders and trusses, which ultimately sag and strain the whole building, if it be of timber-frame construction.

The ventilation may be effected in several ways, and will be efficient as long as the system tends to discharge pure breathing air at the center of the stable and draws the foul air towards the sides and away from the breathing zone. A system bringing the pure air in below the floor, through tile pipes, and discharging through spraylike openings at each animal, will answer, if the foul-air outlets are situated along the outside wall, behind the stock. Another method is to bring the fresh air in at the sides and conduct it across the ceiling to the center, in galvanized-iron pipes, using the same system of foul-air outlets as spoken of for the previous method.

Some will raise the objection that all the animals' breath will mingle and be breathed over and over again, but any of the above ventilation systems will keep the air from hanging in one place to be breathed again, as it is always travelling back past the bodies of the animals, and away from the mangers.

In the matter of feeding, the center passage has any other way "beat a mile," as all chutes from above are in center of barn, and it saves hauling the greater part of the fodder to the side chutes. The silo and feed-room may be built at the end of the building most convenient to the stock.

The convenient litter-carriers that are on the market at present make the removal of the manure a light job, and the track may circle from one door to the other, running over and dumping into a conveyance to carry the manure away to the fields, or can run into the manure shed and across, from one side to the other, in the stable.

When a stable is certainly stronger, more easily built, costs less, and is sanitary, I cannot see the use of extra expenditure. I am certain that a man in any other business would not incur it, and, as the farmer works hard for his money, I think he should be shown every possible way of saving it, and not let go on in any kind of hit-and-miss way in such an important investment.

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THE FARM.

A Cyclone Frame.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of Jan. 11th, "Old Subscriber" asks for information regarding cyclone frame for a barn, and in answer I would say that the cantilever truss bent of the latest plank-frame is what he wants, as these are being built throughout the Southwestern States, they having been found to stand nicely while other structures were torn to pieces.

In fact, these frames are so strong that it is almost impossible to wreck them, once they are completed and securely bolted to a heavy wall. Even a miniature frame, which I have built for

demonstrating purposes, is so rigid that a person can grasp one of the corner posts at the plate with one hand, and at the sill with the other, and raise the whole structure without it twisting a particle. This is surely a good test, as there is no sheathing to make it rigid.

At different times I have prepared elevations of these frames for "The Farmer's Advocate," but again present elevation of two bents for the benefit of "Old Subscriber" and any others who may intend building this design of frame.

This style of frame, carefully designed, built of good sound material, well spiked and bolted, will be the strongest possible structure you can build, with the added satisfaction of getting it for about 50 per cent. of the cost of the old-style timber frame.

There are several kinds of plank frames used at the present time which have some good points, but, after carefully studying them all, and building several of the different kinds, I have found that the improved cantilever-trussed bent is by far the strongest in existence, and can be built for about half what it costs for a timber frame.

It is this frame which I have been erecting throughout Canada the past year or so, and which I strongly advise "Old Subscriber" to build.

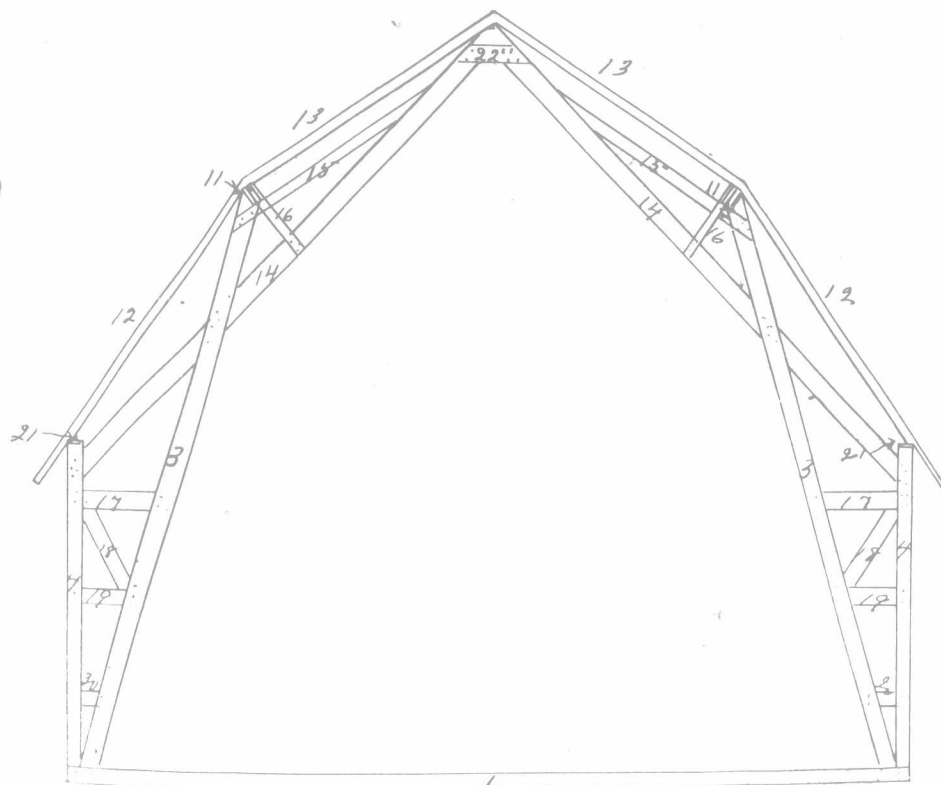
I hope the drawings and explanation will give the required information, but, if in doubt on any point, I will be pleased to give further descriptions, etc., through the columns of "The Farmer's Advocate."

KEY TO FIGURES ON TIMBER.

1. Sill, made of two pieces, 2 x 8, spiked to both sides of posts and purline posts, at each bent.
2. Beam, made same as sill.
3. Purline post, made of two pieces 2 x 8, or 2 x 12, with 2-inch space between.
4. Main posts, made of two pieces, 2 x 8, with 2-inch space between.
5. Girth, of 2 x 6 in., spiked to outside posts of braces, etc.
6. Main braces, 2 x 6.
7. Center posts, made of two pieces, 2 x 8 in., with one 2 x 4 in. between, and stiffener 3 x 6 in. on inside. These are only used on ends. The up-rights on sides between bents are 2 x 6 in., set edgewise to girths.
8. Purline brace at end bent, 2 x 6 in.
9. Gable stiffener, 2 x 8 in.
10. Gable beam stiffener, 2 x 10 in.
11. Purline plate, two pieces 2 x 8 in., with 2-in. space between.
- 12 and 13. Rafters, 2 x 6 in.
14. Roof support, 2 x 10 in.
15. Sub-support, 2 x 6 in.
16. Stays, of two pieces, 2 x 4 in.
17. Main tie, 2 x 8 in.
18. Strut, 2 x 6 in.
19. Intermediate tie, 2 x 6 in.
20. Sub-tie, 2 x 6 in.
21. Plate, one piece 2 x 8 in. on top of posts, and one piece 2 x 8 in. on outside of posts, capped by one piece 2 x 10 in. over top of first plank, and extending out over edge of side plank.
22. Collar tie, two pieces 2 x 12 in., one on each side of roof support.
23. Sill is made of one plank 2 x 8 in., on wall, with joints broken by 1-in. board 8 in. wide, and then, on outside of these, edge down, a piece of 2 x 6 in. is spiked.

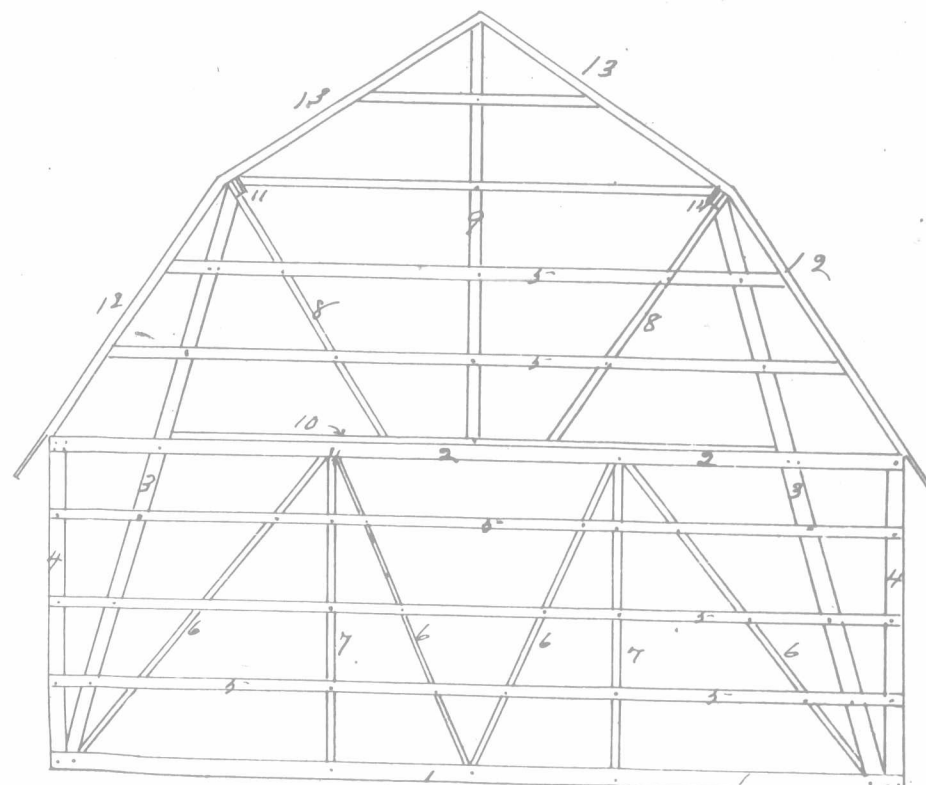
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INTERIOR BENT.

scale 1/8"=1'



END BENT. scale 1/8"=1'

A Cyclone Frame.