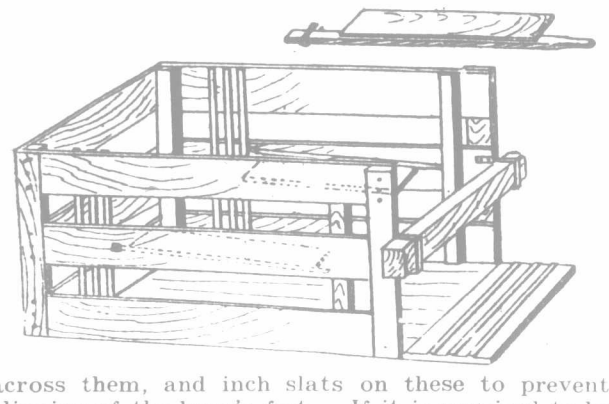
the climax in fair-minded judgment and stepped back to——? Only last winter hog-raisers wanted the packers to discriminate in favor of selects and against others inferior in quality, and it was no uncommon thing to hear such expressions as: "Oh, it doesn't make any difference what kind of hogs I raise—all go at the same price"; "I think I will raise the short, thick hog—they are the easiest feeders." Now a crisis has come, and that is what tells what foundation a thing has got, and the hogs do not come in finished shape as the packer requires. No, Messrs. Flatt, the farmer is not wholly to blame, but, of course, as farmers, we will bear a part, but whether it will be the large or small part, we leave each one who cares to know to weigh the evidence as far as obtainable on both sides, and judge accordingly.

S. H. WEBBER.

Huron Co., Ont.

BREEDING CRATE FOR HOGS.

A breeding crate in which to place sows while being served is almost indispensable, and will be found to save time and trouble as well as to facilitate the service, especially of young or small sows, or, for that matter, sows of any age or size. A breeding crate is built the same as a shipping box, with the top left off, and open at the rear end. It should be four feet ten inches long, two feet wide, and two feet nine inches high. The corner posts had better be two by four, and the side boards six or eight inches wide. The front is closely boarded, and slats are nailed on the inside of the side boards, at intervals of say six inches, near the front end, into which a false front is slid down from the top to shorten the box for small sows. Two iron staples or keepers are nailed on the inside of the rear posts, extending an inch and a half behind the posts, through which staples a 1 x 4-inch slat is run, to keep the sow from backing out. This should be about fourteen inches from the bottom. (The artist has shown this slat too thick.) A platform behind the crate, for the boar to stand upon, is essential in the use of a small boar to large sows, and, indeed, in most cases, irrespective of the size of the sow. This platform may be of two-by-four scantling, with boards



across them, and inch slats on these to prevent slipping of the boar's feet. If it is required to be higher, it can easily be raised by putting pieces under it. The foot rests for the front feet of the boar (shown above the box, and also by dotted lines), to sustain the weight, to the relief of the sow, is one of the most important parts of the box. In its construction, a piece of strong, tough wood is used, two by two inches, and two feet eight inches long. Round it, at the rear end, to fit into holes in the rear posts; of the holes there should be three, at intervals of say four inches. The front end of the strip should be left square, and fitted into a square staple which goes through the middle side board at the distance of two feet eight inches from the rear post, and is secured by nuts on the outside of the board. On the top of the two-by-two strip you nail a six-inch board, say about four inches shorter than the strip, leaving the strip extending beyond the board at both ends. This board is the foot rest, and also prevents the sow from moving sideways, if it is a small sow. If it is a large sow, and more room is needed, you turn down the side rests, which gives six inches more space. To do this, loosen the nuts on the front staples, pull out the rounded end of the strip, and then change the square of the front end so as to let the shelf fall down. Thumb nuts, such as are used on wagon rods, are handiest for this, since they need no wrench. This crate should stand in a corner of the pigpen, and a short hurdle is handy to guide the sow into the box.

SALT FOR LICE AND TICKS.

Editor "The Farmer's Advocate":

I have often noticed in your valuable paper good home cures for troubles on the farm. I have found common salt the best cure for lice on all kinds of stock. I rub it into their hair all along the backs on a soft rainy day, and turn them out in the rain, and the salt dissolves and runs all through the hair. I do it when the cattle are stabled in the fall, and three or four times more during the winter. I have done it for about five years and have had no trouble with lice ever since. It is a sure cure for sheep ticks. I treat them the same as cattle.

S. A. DEVITT.

Durham Co., Ont.

Note.—This certainly is a very simple treatment. Have any other readers tried it? Further communications are invited.—Editor.]

THE FARM.

ARTIFICIAL FERTILIZERS.

Editor "The Farmer's Advocate":

When reading R. J. Messenger's statements in "The Farmer's Advocate," the question in mind was, is he an agent selling the fertilizers he so strongly advocates, or is it a case of careless handling of facts and figures? for a more misleading article seldom finds its way into agricultural papers nowadays. I wonder, Mr. Editor, at your allowing it to go unchallenged. I am not going to take up at present but little of your space, as it is quite sufficient, in this day of business thought, with farmers who are stock-raisers, to point out the fictitious values of mangels and turnips Mr. Messenger gives in his reckonings.

In discussing feeds and feeding, for years, in the majority of counties in Ontario, never a man has been heard giving a higher value than six cents per bushel for roots fed on the farm. And, as frequently they can be grown and stored at a cost of three cents per bushel, and, as a rule, cost below five cents to grow and put into cellars, it is evident that, reckoning feeding value at six cents, it is put quite high enough. Besides, it requires careful and systematic management to get as much profit out of feeding six-cents-per-bushel roots as growing them at that price.

It would be very disastrous to Ontario farmers, with the splendid progress made in many counties the past ten years in restoring productive powers to the soil by high-class stock-feeding, were the idea of artificial fertilizers being profitable to use generally allowed to find a place in people's minds.

Mr. Messenger's facts and figures may be quite correct, as given by him, but results are quite different to those we got last season, when used experimentally on barley, oats, mangels and turnips, as well as on grass land.

On the other hand, I do maintain that Mr. Messenger has not, in the past, and cannot this year, make nine cents per bushel on turnips, nor twelve cents out of mangels, fed on the farm to any ordinary stock, be it of ever so good a kind. With such figuring, farmers would, with paper and pencil, make themselves rich just as fast as a man would lift himself to the moon by tugging at his boot-straps.

The condition of many New York State farms should be a warning to us. There, in one small county, their Department of Agriculture reported, recently, 199 deserted farms. The State's Secretary of Agriculture, Hon. James Wilson, counselled the New Yorkers to keep more stock and feed the products of their soil, instead of trusting, as they have for years been, to the use of commercial fertilizers. The use of the latter has been ruinous in many parts. For instance, the once famous Genesee Valley has, in parts where commercial fertilizers have been used for years in growing hay, become so depleted in fertility that no hope of a crop is entertained, unless the aftermath is allowed to rot on the surface; and even with that, the yield is slowly and surely lessening as the years go by. I fancy "too long" is in your mind, Mr. Editor, so, wishing you a peaceful New Year, I close for the present.

Victoria Co., Ont. JOHN CAMPBELL.

[Note.—We are obliged for Mr. Campbell's letter, drawing attention to certain points which Western farmers must needs keep prominently in mind. It is not our present purpose to reply to either Mr. Campbell's letter or the one to which it refers. We merely wish to state that, through an oversight, the names of Mr. Messenger's county and Province were omitted. Suffice to say that he is personally known to at least one member of our staff as an honorable, intelligent and well-educated farmer and fruit-grower in the Annapolis Valley of Nova Scotia, and, without being explicitly informed, we are perfectly satisfied that he has no financial interest in the exploitation of fertilizers. Indeed, it was through the recommendation of our staff that he was chosen by the Potash Syndicate to conduct the experiment in question. More it is unnecessary for us to add, except this, that conditions in Nova Scotia are radically different from those in Ontario. There the springs are late, the soils mostly light, and commercial fertilizers, judiciously employed, produce results such as Ontario farmers rarely or never procure. There has probably never yet been an Ontario Institute worker sent down into the Maritime Provinces who was not "thrown on the fertilizer question." True, there, as here, the results secured vary widely with men and circumstances, but we have every reason to believe that Mr. Messenger obtained precisely the returns stated in his communication, although the valuations for roots certainly do seem high to Western feeders. We shall be glad to hear further from Mr. Messenger, as well as from others who have used fertilizers, and especially those who have used them in comparison with manure.—Editor.]

SILOS PAST THE EXPERIMENTAL STAGE.

Editor "The Farmer's Advocate":

Your letter to hand re construction and experience with cement silos. My experience has been altogether with wooden silos. As to silage for cheap stock food, it is without doubt the cheapest and best winter food we have. It is past the experimental stage, and does not need argument to prove its value as stock food, bringing summer environments into winter, and halving up the cost of winter feeding, lessening the liability of impaction of the rumen and stomach troubles, and doubling the profits.

I have three silos; two are round, 14 feet in diameter and 24 feet high, and one square, with corners cut off, this one 14 x 22, and 24 feet high.

It takes 25 acres of good, fair-crop corn to fill them. My corn was not so good last fall, and it took 30 acres; and, by cutting the straw from spring grain, I feel that I have abundance of feed for my stock, consisting of 40 cows and 40 head of fattening cattle and young stuff, and some for horses and hogs; and there will be plenty if winter lasts six months.

Now, as to building cement, I am indebted to some near-by farmers that have built silos this last year or so. For a silo 14 feet in diameter, it will take about one barrel to the foot, best quality cement, and about one-quarter cord gravel per foot in height. Those that are building have had rings made that join together, and are 2½ feet in height each, and two rings making 5 feet in height per day, requiring a gang of five or six men. Barbed wire is run around in the cement at every ring, and the foundation is one foot thick, tapering to six inches thick at top of silo. I might say that an additional ring, with an extra man, would allow the building of 7½ feet per day, instead of 5 feet with the two rings.

The height here is 30 to 40 feet, the latter height being the better if the stock is large enough to use it, as six or eight feet of silage would put you right through a drought in summer, and would be very profitable if you did not have the drought.

My experience with silos is over the last eight years, and my only regret is that it was not over my lifetime of stock-feeding. The cement is the only perfectly satisfactory silo to build, and much the cheapest in the long run to-day, as a cement silo will last a lifetime if properly put up.

Wishing "The Farmer's Advocate" staff a very prosperous and happy New Year.

Elgin Co., Ont. EDGAR SILCOX.

THE DAIRY.

THE CO-OPERATIVE CHAIN IN DAIRYING.

Second part of an address by Frank Herns, Chief Dairy Instructor in Western Ontario, at the Ontario Provincial Winter Fair, December, 1907.

(Continued from January 9th issue.)

STORING ICE.

Thousands of dollars are lost every year by the milk producers of this country by not having plenty of cold water or ice for cooling purposes on the farm. To store ice does not cost very much, and the cost is saved many times over. It is, however, somewhat discouraging for some patron to store ice and send the milk sweet and cool, while perhaps his neighbor does not feel inclined to do anything of the kind. Here is where co-operation will come in again. Let everyone store ice that possibly can. Use it for putting around the milk cans in hot weather, and I venture to say that the yield of cheese will increase at least five per cent. from the milk produced, and the price increase also from the superior quality that can be made from such milk; the individual returns in cash amounting to a great deal more than the individual cost of storing ice. Milk can be cooled so much more quickly, with less labor and worry. The ice also comes in for other domestic uses on the farm. It will pay to store ice.

WHEY TANKS.

If anyone will prove to the entire satisfaction of all concerned that returning ordinary whey in the cans has no harmful effect on the milk supply, then I have nothing to say about whey tanks. But, as yet, I do not think anyone will make that statement. I believe patrons have a right to have clean whey returned in the cans just as well as they have a right to send clean milk. The proper thing to do, no doubt, is not to return any whey in cans, but the practice seems to have gotten a secure hold on the business, and it may not be practicable in many cases to feed the whey at the factory or sell it. Assuming, then, that whey is bound to be returned, and also assuming that if such is the case it would not be practical or profitable to return whey in other cans than those in which the milk is drawn, it then becomes a necessity that this whey be clean. The tanks must be constructed in such a way and of such material that they can readily be kept clean. I believe the whey tanks of Western Ontario, at least, have been kept cleaner this year than ever before, but they are yet, on the whole, a long way from perfection. Patrons who do not wash their cans properly are not co-operating with those who do. I believe every effort should be put forth to educate patrons up to the proper washing of their cans, but I must say