

down five acres of Austrian Brome grass (introduced into the West by the Experimental Farm); that grew so luxuriantly, making not only capital hay, but Al pasture as well, that I felt convinced that the way was now open to again engage in mixed farming, not for the sake of the theory only, but also for the profit. With this aim in view, I last season took the necessary steps to provide good stabling accommodation for 40 head of cattle (have but 7 now) and 16 horses by building a large stone stable 77 x 35 feet, costing, without any superstructure, over \$800. All being well, I purpose building a dwelling house of the same material (estimated cost \$2,500) during the coming summer, and have now on the ground 200 loads of stone for that purpose.

All this changing would seem to indicate a fickleness of purpose and lack of stability indicative of anything but success, but the fair measure of prosperity that has been my portion since coming here may be attributed largely to the practice of changing one's tactics to suit altered circumstances and better methods as indicated by past experience. I have also found that if the following points are carefully observed it will materially enhance one's chances of success on a prairie farm:

1. In as far as it is possible make a practice of paying as you go or else not going.
2. Make haste slowly, observing the methods of tillage, etc., pursued by the successful men in your district.
3. Provide the best farm labor obtainable, and pay good wages.
4. Keep up with your work.
5. As far as practical make all improvements on the farm permanent.
6. Take no chances fooling with intoxicants, you will require all your wits and small change on the farm.
7. Sell your wheat in the fall and pay up your debts.
8. Don't worry. "What cannot be cured must be endured."
9. Remember it is much easier to keep a farm free of weeds at the outset than rid it after becoming once foul.
10. Take an agricultural paper.
11. Contribute liberally to religious and charitable institutions.

That a farmer should be industrious goes without saying, but hard work does not always mean progress. Labor unless intelligently directed is comparatively unproductive. There is no profit in slaving one's self to death—at it early and late as if man was made for the sole purpose of working. If many farmers would put their thinking-cap on oftener it would be found that they could live and enjoy life more like those engaged in other occupations and less like beasts of burden. More education, especially along those lines pertaining to agriculture, and less whisky-drinking and idleness, would undoubtedly prevent the breaking down of many farmers that are not succeeding. Without going into details as to my present financial standing and possessions, I think I may lay claim, with due regard for modesty, to have succeeded very well in this western country, and that in the face of the many disadvantages incidental to pioneer life.

With the way to overcome many of these natural disadvantages opened up by the results of practical experience and the prospect of not the least of the artificial ones (the high tariff) being removed, or at least modified by legislation, at no distant date, the future agricultural success and prosperity of this district is almost assured. The advance in wheat has stimulated the already healthy tone in business circles, while a feeling of confidence pervades the country in general, such as is suggestive of peace and plenty. Even at this distance from a railway (20 miles north of Indian Head) the vacant C. P. R. lands are being gradually bought up by actual settlers, no less than nine quarter-sections in this school district being taken during the past few months. Of course, I could put up with being nearer a railway, but we look confidently forward to the time when this difficulty also will be removed. This country undoubtedly has its drawbacks, but withal it's good enough for me. There are many other important matters that should receive more attention on the farm, such as planting trees, shelter belts, small fruits, etc., which, while not yielding any material direct profit, should certainly be looked upon as contributing largely towards all-around successful farming.

Abernethy, N.-W. T. W. R. MOTHERWELL.

Depth of Covering Seeds.

As a general rule, the smaller the seed the lighter should be the covering. We are very apt to cover too deeply. Onions, parsnips, squashes and lima beans, such plants, especially, as push up the shells of the seed itself, find it difficult to force their way up through much depth of earth, after it is packed down by rains. A quarter, or half an inch at most, is quite sufficient for these seeds.

Care should be taken that no lumps of earth should be left over them. We like long rows of beets, carrots, parsnips, etc., and don't believe in wasting half the land in useless paths and walks with short rows running crosswise. Long rows are more easily worked and kept clean than short ones, and the labor for the same number of plants in long rows is less than in short ones.—*Massachusetts Ploughman.*

DAIRY.

"Elixir Compound"!

ANOTHER HUMBUG BROUGHT TO LIGHT—BUTTER FROM SKIM MILK—A DAIRYMAN DUPED THROUGH A NEWSPAPER ADVERTISEMENT—OFT REPEATED WARNINGS DISREGARDED.

It is positively astonishing, as well as lamentable, in this day of boasted enlightenment, how many fake schemes of one sort and another, under various guises, are hatched to humbug farmers and others by means of the pretense that "something is to be got for (or from) nothing." About six

in a bottle; one teaspoonful to be used to a quart of milk, and a large spoonful to a gallon of skim milk; color with yolk of egg or Spanish annatto.

I was assured that I could get \$5 or \$10 for the recipe in my own locality. I invested fifty cents more getting the drugs. I forgot to say above that there were no directions how to prepare the milk for churning—whether to sour or not—so I went on and tried it without, but failed completely to get anything. I wrote to the party for directions, but have never received any reply, as he evidently does not believe in wasting postage. I intend to try again by souring the milk, as with cream, for churning, and will let you know if I obtain any better result; but fear that the thing is a swindle, and you may use this letter as a warning to others, but need not give my name. I must freely admit

that I have myself to blame, because I have read repeated exposures and cautions against such things in your paper, but I can assure you I will not be bit again.

Yours truly,

P. O., Ont.

[NOTE.—We would advise our correspondent to waste no more time or milk with his recipe, for it is evidently an unadulterated humbug, and if he did make some product that "looked like butter" he would be defrauding his customers by selling it. He may not be aware that the investigation and exposure of such frauds as the above, and the rejection of questionable advertisements, costs the FARMER'S ADVOCATE many hundreds of dollars, not to mention trouble, but we consider our efforts well spent. If any genuine discoveries in dairying, or any other branch of farming, are made, our readers may depend that the facts will be made known in these columns without delay.—EDITOR.]

The Chemistry of Milk, with Particular Attention to the Relations between Milk Fat, Casein, and Yield of Cheese.

[From a paper read by A. E. Shuttleworth, Professor of Chemistry, Ontario Agricultural College, at Cheese and Butter Makers' Convention.]

It is very natural, in response to this universal dairy stimulus, that there should be a demand for an improvement in the quality of milk. Numerous methods for the estimation of fat in milk have been proposed during the past few years. But for a time it appeared that there was no practicable method for use where it was most needed, i.e., among practical dairymen in creameries and factories. Here, where a large number of tests must be made, economy of time and money, and simplicity of manipulation, must be combined with accuracy. Dr. S. M. Babcock's new method for the estimation of fat in milk, given to the public in July, 1890,

appeared to combine all these necessary requirements, viz., economy, simplicity, and accuracy. The inventor's "hope that it may benefit some who are striving to improve their stock and enable creameries to avoid the evils of the present system" was speedily realized.

The evils of the present system above referred to existed also in cheese factories. There is a difficulty, however, presents itself in avoiding these evils in cheese factories. The constituent of milk, known by the name casein, which constitutes a large part of cheese, does not admit of easy estimation. By chemical processes, however, in the hands of a chemist, involving considerable time and expense, it can be done with a remarkable degree of accuracy. Dr. Van Slyke, Chemist, New York Agricultural Experiment Station, Geneva, New York, was led by his investigations relating to the manufacture of cheese to advocate the use in cheese factories of Dr. Babcock's new method for the estimation of fat in milk. It has during the last two or three years been introduced into many cheese factories, both in Canada and the United States. This is a step in the right direction; and the time is coming when Dr. Babcock's tester will find a place in every factory probably throughout the length and breadth of the land. The ground upon which Dr. Van Slyke unhesitatingly recommends its use in cheese factories is undoubtedly his firm belief that the relation of fat to casein in mixed factory milk is sufficiently constant to make fat alone an accurate guide in regard to the amount of cheese that can be made from milk. He says: "Two, and only two, constituents of milk influence and concern the production of cheese, so far as the composition of milk is concerned. These two cheese-producing constituents of milk are fat and casein. The other constituents of the milk, such as albumen, sugar, etc., pass into the whey for the most part and are lost so far as the cheese is concerned. The question may be raised that the cheese contains water in addition to fat and casein.

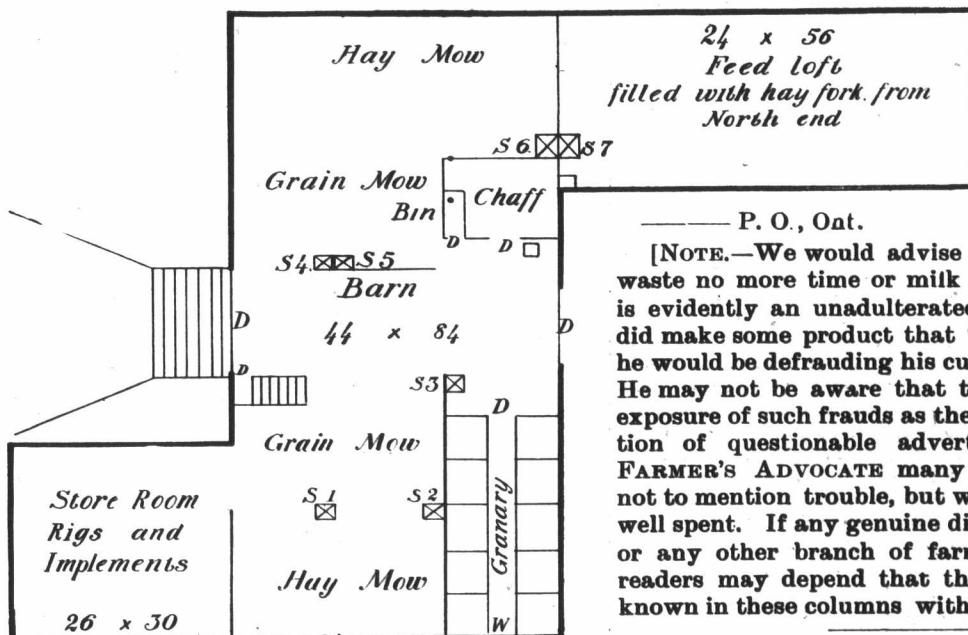


FIG. I.—UPPER BARN FLOOR PLAN.

weeks ago a small, innocent-looking (typographically) advertisement appeared in one of the foremost newspapers of Toronto, according to which a recipe was offered for \$2 whereby one pound of butter could be made from a quart of milk or from a gallon of skim milk. We were surprised that the paper in question would, without proper scrutiny or advice, give space to such a transparent humbug. The advertisement bore the signature of "O. H. Mason," the address being a small town in northern Wisconsin, which, by the way, lays some claims to being an advanced dairy State. How many Canadians were duped into sending their \$2 to this precious scam will probably never be known, because they are usually reticent, but one at least

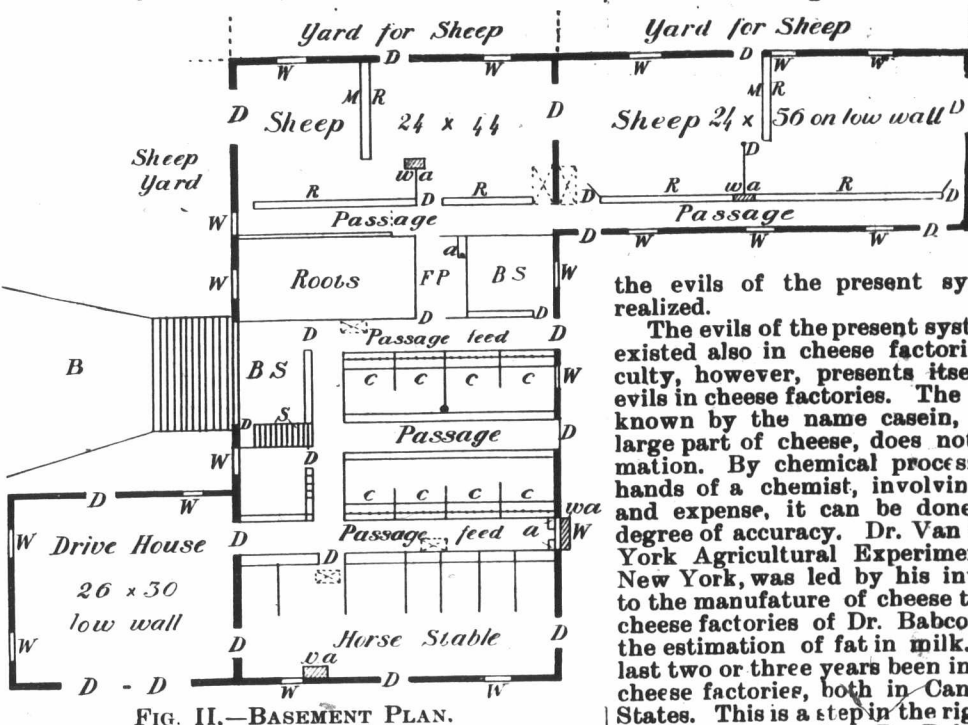


FIG. II.—BASEMENT PLAN.

has owned up to being "taken in," as the letter given below discloses. He writes to warn others from falling into the same or a similar trap, but requests that his name be not divulged, with which we comply:

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I saw the enclosed advertisement in the _____, of Toronto, a short time ago, and thinking that something really new in buttermaking had possibly been found out, I concluded to send for the recipe, which I did, and in eight or ten days it came to hand in very clumsy handwriting, and headed, "The Name of Mixture is Elixir Compound—Recipe for Buttermakers." It was composed of certain quantities of pulverized alum, gum arabic, pepsin and cream of tartar, mixed, and put