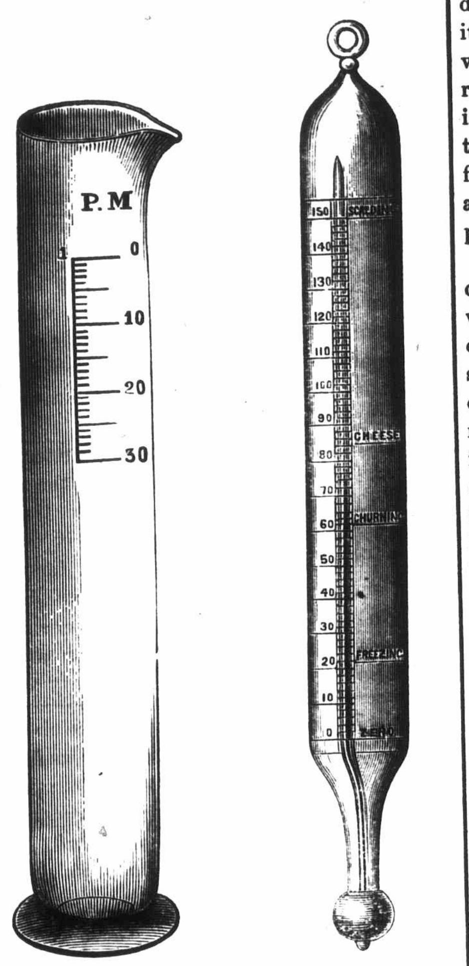
The Dairy.

Dairy Instruments.

There are a few cheap instruments which every farmer should keep, if he wants to make progress in his dairy business, or in the improvement of his herd. The chief of these are given in the accompanying illustrations.

By filling the cream guage with milk up to the mark indicated by 0, the percentage of cream by measure will be indicated by the other figures or marks. The percentage by measure is only an approximate guide to the percentage by weight, or the quantity of butter obtainable. For greater accuracy of results, the cream from the different cows should be churned in the different seasons, and the products weighed separately. The milk should



CREAM GUAGE. FLOAT THERMOMETER.

always be set and raised as near the same temperature as possible, and observations should be taken at different intervals during the rising of the cream, say after 12, 24 and 36 hours in order to ascertain which cows produce the quickest-rising cream, bearing in mind that the cream which rises the quickest makes the best butter. These experiments will make very little labor, and by this method you can weed out more inferior cows in one season than you can in 20 years by guess work.

The float thermometer explains itself. It can be used for plunging into the milk or cream, or for ascertaining the temperature of milk room, like the ordinary thermometer.

If you want to know where to get these instruments, consult our Premium List.

Canadian Butter for Export.

Editor Farmer's Advocate:

SIR,—I have always read Prof. Arnold's productions on dairy questions with great interest and profit, but his article in your last month's issue on the above subject is a little too cheesy to do justice to the farmers. As long as no effort was made to improve our butter interests, but was allowed to move on in its old channel, and the country losing millions, very little was said about the impropriety of making butter; but now when an effort is made with very fair prospects of making our butter interests fully as remunerative as cheese, there is an evident feeling on the part of some to discourage the enterprise. As long as these attacks are made openly, and we are able to hold the fort, no means could be devised to do us more good.

When the cheese factory system was introduced there was no direct opposition, and yet it took over twenty years of hard work, and with considerable aid from the government, to raise it to its present position. The creamery is only a few years old, and is laboring under the great disadvantage of having the cheese influence in opposition, and yet she is already able to put as much value into the farmers' pockets as the cheese factory.

In every effort made to show the superiority of the cheese factory over the creamery, I see a want of sound argument, which more firmly convinces me that the creamery will take the stand which the demands of the country require. Some will say that our pastures are not suitable to make good butter; others, that it can't be shipped without getting spoiled; others, that the very air in the ocean has a very injurious effect on the butter; and others are holding up the danger of overstocking the market; and Prof. Arnold, in sincere sympathy, thinks that it may be harder to work up the butter trade than we imagine.

In reply, I would say that our pastures and waters are excellent; that we can ship with perfect safety during any time of the year; that there is no more danger of over stocking the market with good butter than with cheese ; and to Prof. Arnold I would say, that with our true Canadianism, we are not afraid of hard work, as long as we can accomplish so good a work that will save the country from the yearly loss of millions of dollars.

Such statements are generally made by interested cheesemen, and not argued from a farmer's standpoint. As the dairy industry belongs to the farmers, the great question is, Which pays the farmers the best, the cheese factory or the creamery, taking not only the cash they get for the cream or milk into consideration, but also the value of the milk in stock, and the returns to the soil? Prof. Arnold stated before the "Committee on Immigration and Colonization," that the *best* part of the milk, or the nitrogenous portion, that which builds up the bone and other structures of the body, is left after the butter is out; and also that all the elements of nutrition and fertility were in the skim milk. He now not only repeats this more emphatically, but goes further and says that butter is a mere luxury which chemists can restore for 10 cents a pound. Now what better profit can the farmer reasonably wish for than to receive from 18 to 25 cents for what is intrinsically worth only 10 cents? The constant aim of the farmer should be to get as much money as possible for the removal of the smallest amount of fertility from his soil.

Prof. Arnold is arguing the questions entirely from a speculator's point of view when he says that it only pays to export the poorer qualities of our butter. According to his idea, if a dealer could buy inferior butter at 5 cents a pound and sell it for 15 cents, he would consider the dairy business a profitable one. The whole drift of his article is to make a big margin for the shipper, without taking the real business into consideration. Now if Prof. Arnold had the experience of a good many of our butter men, he would say that money is never lost on good, sweet, butter, but always on the poor qualities. I have now a letter in my pocket from England, in which the writer says that on account of the large supply of butterine which takes the place of *poor butter*, nothing in the shape of butter is wanted except *choice qualities*, which are *always* in demand, and for which *good prices* will be paid. Has the Professor an interest in a butterine factory?

He also says that butter depreciates in value by keeping. So does cheese if it is kept over its time. Butter is ready to go into consumption as soon as it is made, and then it is at its best value, and should be sold and can always be sold for a good fair price. Cheese must be held at least 4 weeks before it is fit to go on the table, and therefore the creamery has a march of just 4 weeks on the cheese factory on the use of the money for that time.

The speculator's business of buying up the butter through the summer and holding it for higher prices in the fall has nothing to do with the manufacturers. These are two distinct lines of business, and it is perhaps in every instance acting unwisely for the manufacturer to hold his goods after they are ready for the market, and this is particularly so with butter. Butter being at its highest value immediately after it is made, and cheese not until it is from 4 to 8 weeks old, it may perhaps after that time depreciate as rapidly as butter, which will be seen from the following quotations from a Montreal circular which came to my hands the other day:

"Western factory cheese, Sept. make, 11 to $11\frac{1}{2}$ cents. Do., earlier makes, 8 to 9 cents."

This does not show that cheese is exactly the jewel to keep. After Prof. Arnold has given us, as above stated, the value of skim milk, he says in his article on "Canadian Butter for Export," that the by-products of butter are a *little* more than those of cheese ; but aside from this l-i-t-t-l-e difference, 1 lb. of butter should sell for as much as $2\frac{1}{2}$ lbs. of cheese. He further says that now 22 cents was an outside price for butter, while the cheese from the same milk would bring 30 cents. Now is this a fair statement? Creamery butter for the whole season has averaged 22 cents, but surely the cheese has not averaged 12 cents per pound, or equal to 30 cents for $2\frac{1}{2}$ lbs. for the season. The fact of the matter is this, the farmers who patronized the creamery got about 7 cents for the cream contained in a gallon of milk and had the skim milk besides, which is 3 cents per gallon in the market (but is worth far more nutritively according to the Professor's own calculations), so that the creamery gave the farmers in cash, in stock and fertility to the soil, 10 cents for every gallon of