

of time that the raw cream butter keeps, which is bound to make it the coming storage butter of America. Extremely delicate flavors and high aromas are incompatible with long keeping quality, so that, generally speaking, the raw cream butters having that "nosy" bouquet flavor, soon lose this characteristic. Pasteurized butter does not have so much of this evanescent, high flavor, and therefore holds up and retains its original flavors for a much longer period of time.

Then, too, we know just what kind of fermentation we have introduced into the cream, and know by experience that it is a species of bacteria that will not cause detrimental fermentation in butter. Another reason is that by chemical analysis pasteurized butter is shown to contain less curd, together with a tendency towards containing less water, and a more uniform content of water from day to day, all of which is in its favor. But while the tendency is towards a lower water content, we can readily retain from 10 to 12 per cent., which you all will agree is sufficient.

From a buttermaker's standpoint I am decidedly in favor of pasteurization for several reasons. The best buttermakers that we have to-day will admit that they have control over every detail of making butter except the most important step, namely, ripening the cream. We can separate at will, as we have a separator to control it. We can cool the cream at will. We can churn properly if we choose, and we can work the butter as we please. All these things are under control. Not so in ripening raw cream.

That raw cream may contain any number of species of bacteria, and that it does contain several different species no one will pretend to deny, but a buttermaker has no means of knowing what species it does contain, and it is only when he has his butter made that he finds out whether the cream did contain a good or bad species, if he is a good judge—and most men are not—in which case he finds it out from his commission house, and you will admit that the amount of satisfaction in that way of doing is precious little. Many will at once say that they had not thought of it in that way, and I believe that it is true that they have not, and yet these are the very conditions confronting every maker of raw cream butter, and there exists no argument in favor of this being so. You may use a pure starter in the raw cream like you may sow selected wheat in the unprepared field, but in each instance you have no reason to expect to, and you never will, reap a harvest of pure clean butter flavor from the cream, nor a harvest of wheat without

weeds in it from the unprepared field.

Having learned to appreciate the value and virtues of pasteurized butter it is no mystery to me that the English people will buy a clean article, when they can get it, in preference to the conglomeration we are daily producing and which we call butter. It behoves the creamerymen of the U. S. to keep an open eye on the butter business. Canada is alive, and from the dozens of enquiries which I have received from there regarding pasteurization during the past four months, it is plain to me that our northern cousins are making a commendable effort to shut us out of the English butter market as they already have shut us out of the cheese market.

Pasteurize and use a pure culture starter, and you effectually do away with any chances in buttermaking, and place every condition under your immediate control. No worrying about what our butter will be to-morrow, for we will get just what we want. Our results are exactly in accordance with our efforts. "What we sow that shall we also reap," which is one way of telling you that the starter is about 75 per cent. of making pasteurized butter.

It's easy, yes, it's easy—it's a most delightful satisfaction to make butter when you know you have everything under control, but the making of pasteurized butter demands so much attention to small details, and scrupulous care that the average buttermaker of to-day will find it hard to bring himself to appreciate the minuteness of detail, and, though you may show him all about it, he will soon lose sight of and forget the little things, one by one, until, before he is aware of it, he has lost his grip, and down the plank of failure he slides.

A word as to our method of pasteurizing and I am done. As most of you know, we pasteurize the whole milk, and skim it at the pasteurizing temperature, this temperature being from 154 to 157 degrees F. As before stated we began under very unfavorable circumstances, the most unfavorable being that we could not at that time purchase a pasteurizing machine of sufficient capacity to handle our milk. We have no live steam connections to the pasteurizer at all.

Some few have said that this was all a mistake, that we could not skim clean this way, that it took too much steam and too much ice, that there was a loss all along, etc., but to such men I wish to say, that every time they have made such assertions they have only exposed their ignorance on the subject, and have given an intelligent public an opportunity of learning how little they really knew about the business.

Premiums.

All Lovers of Music

Should take advantage of this extraordinary opportunity to obtain one of the most delightful musical instruments

Absolutely Free of Charge

The APOLLO HARP, No. 72, E, renders 72 chords, is fitted with 6 bar Adjustable Symphonic Slide. In range and compass is equal to the piano, harp, or violin, while in richness and quality of tone and in simplicity of execution it is unexcelled by any other instrument.

HERE IS THE WAY TO GET IT. To any one who will send us between now and the 15th of May next Eight New Yearly subscriptions to FARMING at \$1.00 each, we will send Absolutely Free one of these instruments the regular retail price of which is \$8.50. Our friends should see to it that this rare opportunity is not allowed to pass. It is the chance of a life-time. There are only a very few of the instruments available and it will be utterly impossible to repeat this offer after the 15th of May.

FREE SEEDS.

In making up our selection of Seed Premiums we have endeavored to include in it some of the best varieties obtainable from the collective products of Ontario's leading seedsmen. The selection has been made with a due regard to the special requirements of our readers and to the production of the best results.

SPECIAL SEED OFFER

For one New Yearly Subscription at \$1.

Pkge. Beet, Early Intermediate.....	5c
" Cabbage, First and Best.....	10c
" Carrot, Half Long, Scarlet.....	5c
" Cucumber, Long Green.....	5c
" Lettuce, Selected Nonpareil.....	5c
" Onion, Yellow Globe Danvers.....	5c
" Parsnip, Intermediate, Half L. eg.....	10c
" Radish, Olive Gem.....	5c
" Squash, Hubbard.....	5c
" Asters, New Giant Flowering, Mixed.....	15c
" Sweet Pea, Selected, Finest Mixed.....	10c
" Wild Garden Flower, Mixed.....	5c

85c

COLLECTION A.

10 Packets Vegetables. Price, 50c.

1 Packet Beet	1 Packet Parsnip
1 " Carrot	1 " Cabbage
1 " Cucumber	1 " Radish
1 " Lettuce	1 " Squash
1 " Onion	1 " Tomato

Given for one new yearly subscriber at \$1.

COLLECTION B.

10 Packets Flowers. Price, 50c.

1 Packet Phlox Drummondii	1 Packet Pansy
1 " Stocks	1 " Nasturtium
1 " Petunia	1 " Dianthus
1 " Portulacca	1 " Balsam
1 " Mignonette	1 " Aster

Given for one new yearly subscriber at \$1.

COLLECTION C.

20 Packets Vegetables and Flowers. Price, \$1.00.

1 Packet Aster	1 Packet Squash
1 " Pansy	1 " Watermelon
1 " Stocks	1 " Musk Melon
1 " Balsam	1 " Lettuce
1 " Phlox	1 " Celery
1 " Sweet Peas	1 " Carrot
1 " Cauliflower	1 " Beet
1 " Cucumber	1 " Radish
1 " Onion	1 " Tomato
1 " Cabbage	1 " Vine Peach

Given for two new yearly subscribers at \$1 each.

COLLECTION D.

20 Packets Vegetables. Price, \$1.

1 Packet Beet	1 Packet Carrot
1 " Parsnip	2 " Cabbage
2 lb. " Cucumber	1 " Lettuce
1 " Musk Melon	1 " Watermelon
1 " Citron	1 " Onion
1 " Radish	1 " Squash
1 " Tomato	1 " Vine Peach
1 " Parsley	1 " S. Savory
1 " Sage	1 " Thyme

Given for two new yearly subscribers at \$1 each

Seed Grains

Barley

For one new yearly subscriber at \$1, and 18 cents added to pay for bag, we will give one bushel of Mandscheuri Barley.

Oats

For one new yearly subscriber at \$1, and 18 cents added to pay for bag, we will give one bushel of Siberian White Oats.

Peas

For one new yearly subscription at \$1, with 18 cents added to pay for bag, we will give one bushel of the famous Prussian Blue Peas.

Potatoes

For one new yearly subscription at \$1, and 18 cents added for bag, we will send one peck of the Great Divide Potatoes or one bushel of Empire State "Rosa of Erin" Potatoes. These seeds are advertised by Mr. Bowman in another column.

PUREBRED POULTRY

One pair of any of the following breeds of Fowls, from prize-winning stocks: Silver and Golden Wyandotte, Barred Plymouth Rocks, Black Langshans and Single Comb White Leghorns, for six new yearly subscribers at \$1 each.

EGGS FOR HATCHING.

One setting of 13 eggs of any one of the following varieties: White and Barred Plymouth Rocks, S. L. Wyandottes, Golden Wyandottes, B. Minorcas, S. L. White and Brown Leghorns, for two new yearly subscriptions at \$1 each.

BOOKS.

OGILVIE'S GUIDE TO THE KLONDIKE. The tentation of the year. Price 50 cents. Free for one new yearly subscriber at \$1.

FEEDS AND FEEDING, by Prof. W. A. Herr, Dean of the College of Agriculture, etc., of the University of Wisconsin. The latest, the best, and most comprehensive work on animal nutrition ever issued. Price \$2.00, 657 pages. For three new yearly subscribers at \$1.00 each.

Any one of the following Books, recommended in the Report of the O.A.C. for 1897, will be given for two new subscriptions at \$1 each, or the whole set of six books for eight new subscriptions at \$1 each.

First Principles of Agriculture, by Voorhees..... \$1.00
Soils and Crops of the Farm, by Morrow & Hunt..... 0.90
Milk and Its Products, by H. H. Wing..... 0.90
Fertility of the Land, by Roberts..... 1.10
The Soil, by King..... 0.65

\$5.55



"Alpha" DeLaval Separators

Capacity from
175 to 2,500
lbs. per hour.

Retail Prices from \$65 to \$500 each.

The closest skimmer and best machine on the market. Gives perfect satisfaction wherever used. Send for Catalogue and full particulars.

Canadian Dairy Supply Company,

or to
The Ballantyne Dairy Supply Co.
Stratford, Ont. 327 Commissioners St.
T. A. McLean & Co., Charlottetown, P. E. I.
T. L. Walworth, Vancouver, B. C. MONTREAL, CAN.

Address, FARMING, 44-46 RICHMOND ST. WEST, TORONTO