

Issued Each Week—Only One Dollar a Year

VOLUME XXVII

NUMBER 36

The CANADIAN DAIRYMAN AND FARMING WORLD

Dairy and Cold Storage
Commissaire Fe
(Agricultural Dept)

PETERBORO, ONT. SEPTEMBER 23, 1908



FREE RURAL MAIL DELIVERY FOR CANADIAN FARMERS

The Dominion Government has recently announced that it purposes introducing free rural delivery in Canada at an early date. The system at first will be confined to the mail routes, but before long it is certain to become general throughout the thickly-settled farming centres. This is a boon that The Canadian Dairyman and Farming World has long been advocating that our Canadian farmers should enjoy. The illustration above shows one of the rural mail carriers in the United States travelling light. It was secured by the special representative of The Canadian Dairyman and Farming World who last fall visited the United States especially to look into the question of free rural mail delivery and whose articles on this subject, as published last winter and spring, attracted wide attention. See article on page 3.

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CANADIAN COUNTRY LIFE

You Should Know What's in the Bowl

Interior Bowl Devices, or Skimming Devices, as they are sometimes called, may be divided into two general classes, those in which the milk in the bowl is divided by vertical partitions, forming vertical layers, and those in which the milk is divided by superposed discs, cones or plates into more or less horizontal layers.



From the time that the interior devices were first used in Separators, the advantage of the vertical layer system was recognized, but the disc system was used, because it was the easiest one to construct. No practical method of utilizing the vertical layer system to its full advantage was discovered until the invention of the Link Blades which allows the maximum number of layers of the proper shape, and the blades, or partitions, capable of being opened up for cleaning. The efficiency of this system of blades has been demonstrated before, and attempts have been made to use them without the hinging of the blades, but this was not successful because of the

great difficulty in cleaning. If the blades were placed far enough apart to clean between, then the efficiency is sacrificed. If they were placed close enough together to get the efficiency, then they could not be cleaned.

When the Link Blades were invented, it removed both these difficulties, and immediately put the vertical layer system to the front, and that's where it is to-day. If you want to know more about the

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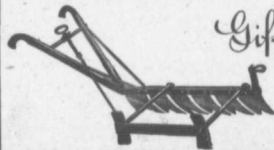
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Cows Worth Keeping

In three herds in the North Oxford, Ont., cow testing association some good records were made in the last regular monthly test. One cow gave 1,340 lbs. milk, testing 3.1 per cent. fat, and two other cows in two other herds each gave over 1,550 lbs. milk, testing 3.0 and 3.1 per cent. fat.

In the Bagotville, Que. association in each of the six herds recorded there were individual cows giving over 1,000 lbs. milk, all of them testing 3.3 per cent. and over.

Oranston, Que., also had a good record, for in ten herds tested, some one cow gave 1,000 lbs. milk; one went as high as 1,510 lbs. milk, testing 3.6 per cent. fat. Such cows are well worth keeping. But the fact remains, unfortunately, that there are probably hundreds of cows in the Dominion that are not worth keeping.

For instance, in the Dixville, Que. association 14 cows in one herd gave a total yield of 427 lbs. of butter fat in the month; but in an adjoining farm it took 21 cows to give 403 lbs. of fat during the same time. Think of it, half as many cows again to feed and milk and provide accommodation for, and yet receive no more income from! The work of these associations helps farmers to discover the cows that are worth keeping, and enables them to detect and dispose of the unprofitable summer and winter boarders.—C. F. W.

A Word of Caution

From one or two letters which we have received from our subscribers, it appears well to offer a word of caution regarding the use of Dr. Williams' Fly and Insect Destroyer, as advertised in our paper and about which we recently published several articles from satisfied users of this preparation. Several who have purchased this remedy have applied it by means of a rag or a very coarse spray pump with the result that some thin-skinned animals have been blistered.

Too much of this fly and insect destroyer must not be applied at one application as it is very strong. A very small quantity is all that is necessary to use and it must be applied in the form of a mist or spray. If it is put on in any other way, such as by a rag or brush or in a coarse spray, it will blister a thin-skinned horse or cow. When applied by means of a sprayer in the form of an even mist or spray, no ill effects will be experienced. It is also necessary to shake the contents of the can thoroughly before using. Judging from the tone of the testimonials furnished us by many satisfied users of this preparation, it is a most satisfactory remedy for flies, and when applied properly, there is not the least danger to the health of the animals.

Small Beside Other Records

In a recent number of the Overseas Daily Mail, an English publication, appears the record of a cow shown at the Tunbridge Wells and South Eastern Counties Exhibition. The cow referred to belonged to Messrs. Green Bros. of Goring and gave, as they state, the astonishing quantity of 77 lbs. 12 oz. of milk during 24 hours, this quantity being equivalent to more than seven and a half gallons of milk. This milk, it is stated, was so rich in fat that the cream after separation produced 3 lbs. 9 1/2 oz. of butter.

This is surely a good record but it is a long way short of the records recently made by two Holstein cows owned by Brown Bros., Leeds County, Ontario, photos of which cows have of late appeared in our columns. These cows, the one, Sarah Jewel Hengervold the third, recently made the stupendous record of 98 lbs. of milk in one day, 640.1 lbs. of milk and 30.307 lbs. of butter in 7 days. The other, Sarah Jewel Hengervold, gave 104.4 lbs. of milk in one day, 685 lbs.

and 28.13 lbs. of butter in 7 days. The record of this English cow appears small beside these two great performers. The English cow, reckoning from her record for one day, would have given 35 lbs. of milk and butter in 7 days. This one cow of Brown Bros. gave 30.307 lbs. of butter in 7 days by actual test.

Rural Free Delivery

Editor, The Canadian Dairyman and Farming World—Keep hammering away at the free delivery. When I was in the old country I saw the benefits of rural free delivery and believe that our farmers in the thickly settled farming centers should have this great boon. One has only to see how quickly the farmers receive their mail in the old country to realize what it would mean to the farmers of Canada who have similar advantages. When I should be possible for our government to institute rural free delivery. Rural free delivery is bound to come in time and when it does it will be healthy. The Dairyman and Farming World will deserve great credit for what it has done to show the farmers the need for an improvement in their mail facilities. —James Bowman, Guelph, Ont.

Items of Interest

A plucky young farmer near Avening, Ont., after being knocked down by a bull recently, grabbed the bull by the ring in his nose and held him firmly until two neighbors came to his rescue.

A fire which might have developed into a serious conflagration in the North Ops cheese factory, Victoria Nounly, Ont., was extinguished by means of a very healthy fireman.

A pig which was recently buried recently for 50 days without food or drink in a straw stack on Frank Wilson's farm, Crook-road, Harwich, was unearthed alive and healthy. The curious part of it is that the hog gained five pounds in weight during the time it was buried.

Some of the exhibitors at the Toronto exhibition kicked vigorously because Polled Angus cattle and Ayrshire cattle were mixed in one barn and Polled Angus and Jersey cattle in another barn. They contended that each of the different breeds should have been kept together.

The barn and stable, belonging to Mr. Geo. Bryant, Myrtle, near the new station, was recently burned to the ground. The unfortunate owner had just threshed. A large quantity of grain and over \$150 worth of clover seed were destroyed. Two prize horses in the stable also were burned.

The Post Office Department at Ottawa is already at work giving effect to the announcement of the Hon. Rodolph Lemieux at Niagara Falls on Tuesday, September 15th, promising that free rural delivery would be promptly installed throughout Canada. Applications for the installation of mail boxes along mail routes are now pouring in at a great rate and the department is hard at work sending out mail boxes as fast as applications come in.

The next annual meeting of the American Association of Farmers' Institute Workers will be held at Washington, D. C., November 16 and 17. At the same place and beginning November 17 will be held the annual meeting of the Association of American Agricultural Colleges and Experiment Stations. The Secretary of the Association of College and Stations writes: "It seems impossible to secure reduced railroad rates." Notice is sent out this early in order that the farmers' institute workers in the country may have time to arrange for attendance upon this meeting.

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Only \$1.00
a Year

AGRICULTURE, THE KEystone OF CANADIAN PROSPERITY

VOL. XXVIII.

FOR WEEK ENDING SEPTEMBER 23, 1908

No. 45

WE ARE TO HAVE FREE RURAL MAIL DELIVERY

WHEN The Canadian Dairyman and Farming World, last fall, sent its special representative to the United States to look into the question of free rural mail delivery it little thought that in less than a year the Canadian Government, would introduce the system in Canada. At that time Hon. Rodolph Lemieux, the Postmaster-general, informed our representative that he was opposed to the introduction of free rural mail delivery into Canada. He promised, however, to read with interest the articles on free rural mail delivery that we told him were to be published in The Canadian Dairyman and Farming World and stated that he was prepared to adopt suggestions from them whether it is the articles that we published in The Canadian Dairyman and Farming World or the approaching elections, or both, that have led Hon. Mr. Lemieux to change his mind it is interesting to learn that thousands of Canadian farmers are shortly to enjoy the benefits of free rural delivery.

In an address delivered recently at Niagara Falls, Ont., Hon. Mr. Lemieux announced that the mail drivers, who now carry the mail from railway centers to the small country post offices, are shortly to commence acting as rural mail carriers inasmuch as they will deliver mail to the farmers living along the roads they travel. Farmers living on side roads, not travelled by the mail carriers, will be allowed to place mail boxes at the junction of their side roads and the mail

roads. The mail carrier will then leave their mail in these boxes. This will save them the trouble of going longer distances to the post offices. The regulations under which this system is to be introduced will be announced shortly.

HON. MR. LEMIEUX'S ADDRESS

In the course of his remarks on this subject Hon. Mr. Lemieux, after explaining some of his former objections to the system said: "There is in store for Canada another great postal reform which is of particular interest to the farming community. I refer to that system known as the free rural mail delivery.

"This system, which is only an expansion of the letter delivery from the cities to the rural sections of the country, has been in vogue for a long time in Great Britain, France and Germany. Now, lately, it was adopted by the United States. I have stated in the House of Commons that it was not possible for Canada at the present time to assume a similar burden, and my statement was based on the well-known fact that the conditions which would warrant rural delivery were thick populations and large revenues. Such is the case with Great Britain, with a population of forty-four millions and an area of 120,000 square miles, i.e., about the size of Ontario, with 3 x times the population of the whole Dominion.

"In the United States there is an area no larger than that of Canada to be served, but there is a population of eighty-three millions as against six

here, and a postal revenue of one hundred and eighty-three millions against nine here.

"In other words with say an equal area, there is in the United States a population fourteen times as great as ours, and a revenue twenty times as great to bear the cost of the free rural mail delivery.

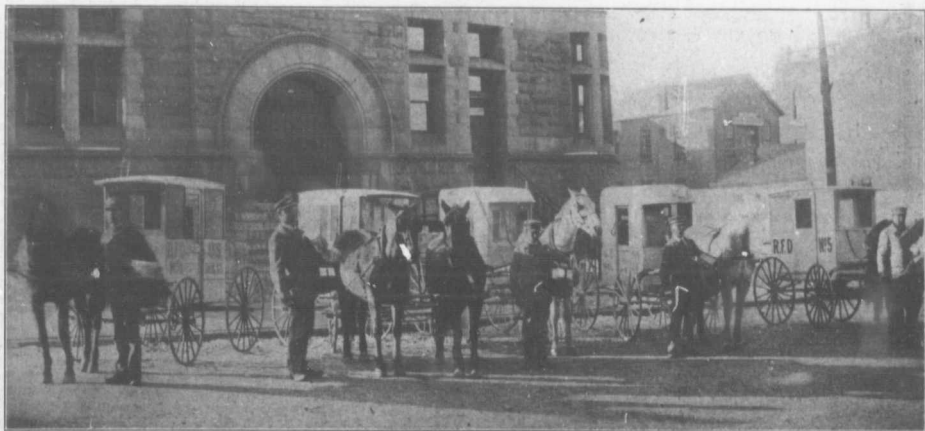
"Let it be remembered also that the United States only adopted the system when they had seventy million population and a postal revenue of over eighty millions.

A SPLENDID SYSTEM

"As I have often stated in Parliament, it is a splendid system, which I admire greatly, and which can be introduced step by step in Canada. For some two or three years, acting under my instructions, the officers of the department have been studying the main features of rural free delivery as operated in the United States, with a view to, if possible, the introduction of a scheme in accordance with our revenue, population and physical conditions.

"Towards that end the Post Office Department has evolved a scheme of rural free delivery and collection from the present system of stage routes, whereby the rural population of the country may be able to receive and post all ordinary mail matter at their doors, instead of having to drive from two to three miles to the nearest post office for that purpose.

"I have therefore determined with the consent of my colleagues, to equip all existing mail routes in Canada with rural delivery boxes, under reg-



Now that Free Rural Mail Delivery is to be introduced in Canada, Free Rural Mail Carriers are likely soon to become a Familiar Sight.

The special representative of The Canadian Dairyman and Farming World, who visited the United States last fall, to study the free rural mail delivery system, found that the cost of the service was not nearly as great as our Canadian farmers had been led to believe. On the other hand, the benefits of the service were so pronounced that the United States Government officials and farmers who were interviewed, all united in praising it. It was found that free rural delivery saved the farmers much time that was previously lost in going for their mail. It enabled farmers to take daily papers, and thereby made farm life more attractive, it increased the value of farms and added to the comfort of the people. The above illustration was secured by our representative while he was in the United States. It shows the mail carriers in a large town in one of the northern states, just as they were about to start out on their rounds. The Canadian Dairyman and Farming World is greatly pleased to learn that our Canadian farmers are shortly to enjoy a measure of free rural delivery. The latest announcement is that free rural mail delivery is an actuality. Mr. George Ross, Chief Superintendent of Post Offices, is at present laying out a route in Wentworth Co., Ont. It is expected that before the end of October 100 routes will be in operation. Parcels post will come next.

ulations to be published and enforced shortly at the junction of every concession line with the main road. The people will also be given the privilege of having boxes located for the receipt and collection of their mail as desired.

WILL BE INTRODUCED IMMEDIATELY

"The department has made all arrangements for the carrying out of the scheme and will at once proceed to inaugurate it. This system of rural mail delivery can be introduced at a cost which the country can afford to pay. It will evolve and expand gradually, with the growth and development of Canada, and at a ratio of cost that will not prove burdensome. It is, on the whole, a great postal reform which will be hailed."

WHAT MR. LEMIEUX SAID BEFORE

When our representative interviewed Hon. Rodolph Lemieux on this subject, in his office in Ottawa last October, he found that Hon. Mr. Lemieux was opposed at that time to the introduction of free rural mail delivery into Canada. Speaking to our representative, he said:

"The two great objections I see to the introduction of free rural mail delivery, are first, the great expense; and, second, the difficulty of knowing what to do with our thinly populated rural sections. Such sections would be quick to demand a similar service. What for instance, would we do with my own constituency of Gaspé, or with the people on the Labrador coast or those in such sections as North Pontiac, Quebec? Once free rural mail delivery was introduced in this country the people in those and similar districts would demand the service. To attempt to give it to them would be impracticable.

"Free rural mail delivery might prove a success in such sections as Norfolk and Essex Counties, Ontario. They are gridironed with railways, and thickly populated. We must, however, always remember the sparsely settled sections.

IN SYMPATHY WITH THE MOVEMENT

My sympathies are with this movement for free rural delivery. Before we can introduce this system, however, we must decide, first, if it is practical, and, second, if our farmers can stand the immense expense it would involve. I am ready to be enlightened on these points and will read with interest the articles that are to be published in *The Canadian Dairymen and Farming World*, and will be open to receive suggestions from them."

DESERVES CREDIT

It is fortunate for the farmer of Canada that the Government has changed its views on this subject. The Government is to be congratulated upon the announcement that it has made. After our farmers once find what free rural mail delivery means to them they will wonder why they did not demand it several years ago.

How to Train a Collie Dog

T. R. James, *Millsboro Co., Ont.*

A dog can be made a most useful animal on the farm. A good collie dog properly trained will save its owner many steps in getting the stock from the fields and in helping in many other ways. The great majority of farm dogs are a nuisance rather than a benefit to their owners. In too many cases this is more the fault of their master than of the dog. One cannot expect any common, bred cur to become a good shepherd any more than one can expect a pure bred pup of that breed that has been bred for generations for that purpose. Such a pup when properly trained will pay handsomely for the time spent on him.

A large amount of patience and considerable time is required to properly train a dog. He should not be taught too much at once. Training once begun should be kept up until it has been learned thoroughly. One of the first things to teach a dog is to come promptly when called. While teaching him this he should know that he is to obey. If he is favored with a kindly pat or a bit of meat, he will understand more readily.

A dog that will drive cattle by running to their heads is of little use. He must be taught to drive stock at the heel. When teaching him to drive stock keep him at your side while you do the driving. He will thus get accustomed to driving at the heel. Make sure that this habit is well formed before you undertake to teach the dog to turn stock to the right or left. With an over anxious dog it is well to use a rope on him as a restraint. In this way he can be kept from hurrying the stock too fast. Teach the dog to drive slowly and when older he will get the cows from the lot without hurrying or exciting them. One should always be careful not to allow a vicious animal to turn upon the dog while in training. Such will most surely teach him to run to the head when driving. A little time spent upon a good pup while he is young will be richly rewarded later when you have a dog that is a source of profit and pleasure instead of a nuisance.

Saddle Horse

Notwithstanding the fact that horse-back exercise is not very much in vogue in the rural districts yet in our larger towns and cities it is practiced to such an extent as to insure a reliable



Is Your Binder Sheltered?

During the past few weeks, we have seen many binders left in fence corners of fields in which they had last been used. Large sums of money are annually expended for new machinery by those who leave their implements, especially binders, exposed to the elements, as the above binder was when photographed by our special representative. Such expenditures could be largely reduced by housing all machinery under suitable shelter.

market for good saddle horses. The English Thoroughbred is the breed on which we have to depend for the best horses in this class. We rarely or never find a really high-class saddle horse which has not a good strong dash of this breed in his make-up.

As a rule in the breeding of any class of horse the more highly bred he is the more valuable he is likely to be. In the case of the saddle horse, however, we often find the grade animal more valuable than one more highly bred. However, the grade horse is never more valuable simply because he is a grade, but because he is much more likely to have substance and weight-carrying ability than is the more highly bred animal. The man who weighs about 140 lbs. may enjoy the luxury of riding a thoroughbred, but the man who rides at 200 lbs., or over and requires a mount that will weigh 1,100 or 1,200 lbs., has as a rule to content himself with a grade horse because of the difficulty he will experience in getting a highly bred horse up to his weight.

A large proportion of the brood mares of the country are animals of mixed breeding. Many of them would class as general purpose animals. Sometimes a farmer is at a loss to know just what breed of stallion to select to mate with such mares. In case such a farmer wishes to breed to some of the lighter classes he is not likely to make any selection that will give him better results at the first cross than to choose a good, big, strong Thoroughbred. Many very high-class saddle horses (more especially hunters), have been produced along this line of breeding. Care, however, should be taken to see that the brood mare is not of a draughty type, as a cross be-

tween the draught horse and the Thoroughbred is too violent, and is not usually attended with good results.

Also in the selection of a Thoroughbred sire, care should be exercised to choose a big strong horse with sufficient weight of bone below the knee and back, and one that will weigh at the least 1,900 pounds. Such a sire will be very likely to produce first-class saddle horses, if mated with a reasonably good mare, even though she may be deficient in breeding.—"Centaur."

We must Depend Upon the Average Cow

G. E. Caldwell, *Carlton Co., Ont.*

Possibly there is a trace of that egotism, which after all is one of the mainstays of life, in the idea that what we raise is better than the product raised by the other fella. I have known those who would not eat a morsel of butter when away from home; but the most of us all good butter tastes well. I have generally found it more difficult to safely buy one horse than to buy half a dozen cows.

In a recent issue of *The Dairymen and Farming World*, W. F. S. raises the question of calf-raising as regards the dairy farmer. For the man who sends his milk to the cheese or butter factory, or who makes butter at home, I quite agree with him, though like all rules there may be profitable exceptions. For the man who supplies the city trade, either wholesale or retail, the rearing of calves is quite out of the question. There is a type of cow which I have in mind, we might call her, broadly, Canadian, and these years that is no mean name, which can be bought for from \$45 to \$60, according to the season. Such will give good average results. Record breakers are very good, but like geniuses they are scarce.

HE MUST COUNT ON AVERAGES

The contractor who is going to build a railway or dig a canal must count on the average type of humanity. If he figures on doing the work by Sampsons or Louis Cyrs, he is going to be woefully disappointed. And this is just what some dairymen are looking for.

If two fair priced, fair looking cows will turn a given amount of feed into milk, why should we grow old before our time in the quest of one which will do the same? The cost of the one, no matter how she is acquired will certainly equal that of the two. The chance of total loss by death or udder injury is greater. The increased pleasure of owning is balanced by the extra care and anxiety called for. What then, would I arrest the march of progress? By no means. There will always be geniuses for breeding and feeding and they will have their reward. But I would cheer the man who may be discouraged with the good average cow. By all means destroy in some way the culls; but between them and the "wonders" the great body of milkers stand and they are and for years must be the backbone of Canadian dairying. They will respond to and pay for good treatment the year around.

USELESS WITHOUT PROPER ATTENTION

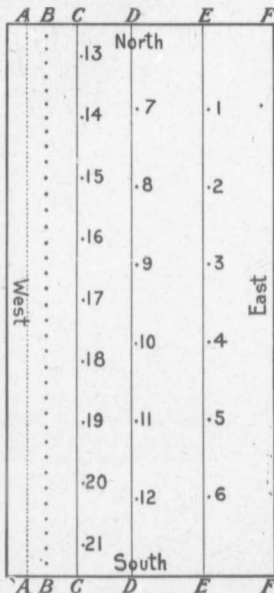
The best engine ever built must have fuel and water, oil and care, to give results. The farmer who can not get good results from the average Canadian cow had better leave the more expensive animals to some one else. Each particular situation needs its own consideration. The man who starts out to copy his neighbor is likely to come to grief. But we can all adapt the ideas we gain from others to our own special needs. If I were at a distance from city markets I would try a very different kind of farming from that which I follow, and I think with just as reasonable chance of success. The corner stone of farming is the production of good crops. Dairying fosters this, hence the profitability. But we must not put the cart before the horse, and in our attention to the machinery for refining the gross products of the farm we must not forget the fundamentals.

How to Plant a Family Orchard in Eastern Quebec

J. C. Chopais, Ass't Dominion Dairy Commissioner,
St. Denis, Que.

(Concluded from last week)

In the outline of the orchard given in the accompanying diagram, the line FF, which is the eastern limit of the orchard, must, in most cases, excepting only those where the site offers a natural shelter against eastern winds, be made a hedge placed at three feet, one from the other, and not longer than 20 inches in growth, in order to insure success. Line EE is to be planted with apple trees at a distance of 25 feet in the



rows and between the rows. The same thing is to be done with line DD. Line CC will be planted with plum and cherry trees. This line is placed at a distance of 30 feet from line DD and the trees in it also at a distance of 30 feet one from the other. The next line, BB, is at a distance of 10 feet from this last one, and is to be planted with small fruit bushes placed five feet apart in the row. Lastly, the dotted line AA is planted with strawberries, the plants being placed 18 inches apart in the row, and the row being five feet from the one planted with small fruit bushes.

Here is the most important part of the present paper, since the selection of varieties is chiefly the key to success:

In line EE are to be planted, at the points marked 1 and 2, Yellow-Transparent apple trees, at 3 and 4, Low Land Raspberry, and at 5 and 6, Duchesse.

In line DD, at points 7 and 8, should be planted Alexander, at 9 and 10 Fameuse, and at 11 and 12 Wealthy.

In line CC are to be planted, at points 13 and 14, Plum trees of the Blue Dawson variety, at 15 and 16, Reine Claude de Montmorency, and at 17, one Early-yellow.

In the same line CC, at points marked 18 and 19, should be planted two Early-Richmond, and at points 20 and 21, two Montmorency cherry trees. Line BB is to receive 36 bushes of small fruit, being composed of nine Dammag Gooseberries,

nine Fay's Prolific red currants, nine black champion currants and nine Marlborough red raspberries. The last line AA, will be a row of 120 Sharpless and Williams Strawberry plants. We would advise farmers to plant another piece of land by itself in those varieties of small fruit.

I have only two remarks to make in explanation of two points alluded to in the present paper. The first one is about the selection of varieties. All the varieties of fruit mentioned have been subjected to experimental culture during the last 30 years in many localities in the eastern section of the province of Quebec, and have always proved satisfactory. It is to be hoped that a similar paper for the western part of the province will be given by those who have had experience in that section.

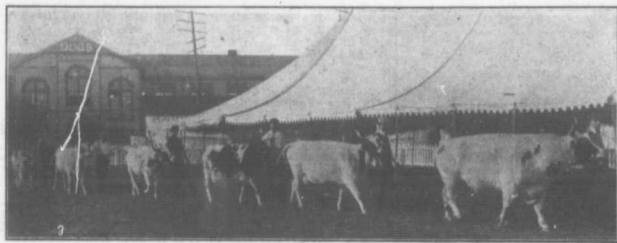
The second remark is about the distance apart to plant apple trees. I can but repeat what I wrote in another of my lectures on that subject: "We have already advocated to never have more than 25 feet between the trees in the row." Now, we know that 40 feet generally is the indicated distance. We found that under our severe climate they must be planted close together, in order to offer protection against the heavy, damp winds of our region. We are often told that when planted as close as that, they soon intermingling their branches, prevent the fruit from getting enough air and light and are an obstacle to the cultivation and spraying of the orchard. To this we answer that there is so much difference between our climate and that of the west of our province that none of those disadvantages of close planting are to be feared. We have seen in the County of Essex in Ontario, an orchard of 30 years' plantation where the trees set 40 feet apart and had all their branches intermingling, so that not a ray of sun could reach the ground. We have seen around Montreal a few orchards planted in the same way for 20 years, in which the trees were not yet intermingling their branches. Then

will be experienced in obtaining satisfactory results. Take an interest in the work, see how straight you can plow. Teach the boys how to plow. The old adage that more grain will grow on a crooked furrow than on a straight furrow is a poor incentive and will not conduce to build up a reputation for you as a model farmer. Plow the back field as carefully as you do the field joining the road, and see to it that your land is plowed in such a manner that strangers passing your farm will be attracted by its neatness. It is a cheap and efficient way in which to advertise.

Good plowing is profitable. If a fair crop can be obtained from poor plowing, a better crop can be obtained from good plowing. There are many features to be taken into consideration if good plowing is to be done. In the first place you must select a good plow, that is, one which will do the proper work in your soil. If your soil is loamy, and requires to be turned flat, choose a plow with a good width of share, a board with plenty of turning capacity, a high beam which will enable you to use a jointer when plowing under green or coarse manure, and sufficient length of handles to enable you to handle the plow with ease while at work. If the soil is heavy and inclined to cement choose a narrow plow, one that will set the soil up and give a good harrowage, and with sufficient press to the board to place the furrow over so that it will not fall back.

TWO-FURROWED PLOWS ARE POPULAR

In the last few years a great many of the more progressive farmers of Ontario have adopted the two-furrow plow, some makes of which are first class implements and will do just as good work as can be done with a single furrow walking plow. Of the two-furrow plows there are the walking and riding styles, either of which is profitable to the farmer as a labor-saver. In choosing a two-furrow plow care should be exercised in its selection for reasons mentioned, and also see that your dealer does not pan off an over-grown gang-plow



Prize Winners in an Interesting Class.

The graded herds of Ayreheires at the Canadian National Exhibition, made one of the grandest displays in the cattle section. A graded herd consisted of one bull, any age; two cows, over three years; two-year-old heifer; yearling heifer, and heifer calf. The herd illustrated, owned by R. B. Ness, of Howick, Quebec, won first.

we have in our own orchard, on good, rich, and well drained land; trees planted for 20 years, 25 feet apart, having yet no intermingling branches. This shows the great difference there is in the growth of trees under different climates. Let western people plant their apple trees 40 feet apart, but let us plant ours 25 feet. Both systems are beneficial where they are needed.

The Art of Plowing

Claud Mitchell, Brenton Co., Ont.

Plowing is an art. With a great many farmers it is a lost art. Far too few of our younger generation of farmers have learned the art of plowing. One sees repeated evidences of the little interest taken in this important farm work.

Many attribute this lack of interest in plowing to the advent of the two-furrow and machine plow. In using machine plows it is first necessary to become acquainted with the workings of the plow in order to be thoroughly conversant with it when in operation. Then little or no difficulty

on you. See that you get a plow built on proper lines, one that will do its work properly in your land. The same applies to a riding plow. There are several makes of these which are as good as single-furrow plows, but there are only a few really good two-furrow riding plows.

In operating a two-furrow plow, lay out your field systematically in lands of a uniform width, set up stakes to start the land, and adjust the plow to let the front plow cut a shallow furrow and the rear one nearly the depth you intend plowing the field. The next time have the front furrow just heavy enough to nicely cover the first furrow turned. By striking the land in this manner you will have a crown of sufficient height, and it will give the land the proper slope. Then plow the land down to one green furrow. In finishing take this furrow with the front plow and at the same time take out the sole furrow with the rear plow. If this method is followed no difficulty need be experienced in doing a first-class job of plowing with a two-furrow plow.

The Western Fair

The Western Fair Association, London, Ont., held its 41st annual exhibition last week. It was one of the most successful in a series of successful shows extending over a long period. This association was organized in 1868 and incorporated in 1887, and has been doing an actual business ever since. London is in the heart of one of the best agricultural sections of Ontario and its fair draws largely from the farming community. Farmers turned out in large numbers this

year and made the attendance a record one.

All departments of the exhibition were very well filled. In an agricultural products there was a fine display of good quality in vegetables and grains. The fruit exhibit was ahead of last year, with the quality superior. The Western Fair always puts up an excellent poultry show, so that it is hard to beat records in this branch. However, there were about 100 birds more on exhibition this year than last.

LIVE STOCK

There were over 1,000 entries in all in live stock, nearly all the classes being filled and some of them, notably dairy cattle and sheep sections, putting up the best show seen at this fair in many years. London is always strong in light horses, and this year was no exception to the rule. The roadsters, carriage and harness classes were well filled, with many of excellent quality facing the judges. Horse racing, or as some would term it, the speed events, were a little more exciting than usual to those interested, as many good horses tested their prowess on the half-mile track.

The Hackneys made a good show, Graham & Renfrew, Bedford Park, Ont., having their Toronto winners out. Other leading winners were Hamilton & Hawthorne, Simcoe; S. J. Prouse, Ingersoll; T. A. Cox, Brantford; J. McPherson, Campbellton; Alex. Duncan, Dutton, and M. McWilliams, Dutton.

The heavy horse sections were on the whole well filled. Graham & Renfrew had their Toronto Clydesdale winners here also and of course secured the top prizes, wherever shown. Sir Marcus came to his own here and deservedly so, was made champion of the show. Other exhibitors were Dalgety Bros., London; Chas. Bean & Son, Brimley; Jas. Henderson, Beeton; T. E. Robson, Iderton; Thos. Delaney, Ingersoll; P. H. Snellie, Inwood, and others.

The Shires were not out in large numbers, there being no entries in some of the classes. C. K. Geary, St. Thomas, was the largest exhibitor though he did not have things his own way. F. Drury, Charing Cross, Ont., coming to the top frequently with several good ones. He won the championship in mares on his yearling filly, a right good one. Geary

had the sweepstakes stallion. These two shared about equal in firsts, losing one to W. D. Monkman, Bond-Head, who won on three-year-old filly. Andrew Miller, Middlemarch, won 2nd in aged mares and two-year-old fillies. It was reported at the ringside, but we cannot vouch for its truth, that the 2nd prize mare was a pure bred Clyde. If so it shows the importance of having a catalogue and breeding of every animal down in black and white for the inspection of the public.

The heavy drafts were a good lot, nearly all Canadian bred Clydes. Prizes were well distributed among a number of exhibitors. P. H. Renfrew, Tavistock, had the championship Clyde. James Henderson & Son, Beeton, Ont., had the sweepstakes mare a good young Clyde with lots of quality, though not in as fine fit as she might have been. The other exhibitors were F. Kaldbeish, Tavistock; J. Smellie, Middlemarch; Geo. Seaforth, W. Annett and J. W. Dickson of Atwood; John Campbell and R. Hobbs, Thorndale; F. R. Palmer & Thorsdale; F. H. Harris, Mount Elgin; Murray Bros., Bennington, and others.

BEEF CATTLE

In the beef cattle classes the Shorthorns did not stand out so prominently as they did at Toronto. Considering the numbers of Shorthorns in Western Ontario it was rather a poor show. The smallness of the prizes is the excuse made. But the prizes in this class are the same as for other breeds in the middle department, besides showing. The only Toronto exhibitor was the firm of T. E. & G. C. Robson, Iderton. They won all the first except the female yearling, besides being no two-year-olds shown. Their three-year-old Cow, Queenston Bellona, third at Toronto, was the champion female. The female junior yearling calf at Toronto, had to take out second place here to one that did not get a place at Toronto.

DAIRY CATTLE

The dairy cattle exhibit at the Western Fair was not only the chief attraction in the middle department being much larger than the beef department, but it was in point of quality perhaps the best exhibit of dairy cattle that has ever been brought together on the London fair grounds. The Ayrshires put up the largest and most attractive exhibit. Holsteins were more numerous than at Toronto and were quite equal in quality. Jerseys were also quite numerous and of very good quality. A herd of Guernseys from Quebec was also on exhibition, shown by Guy Clark, who had the class all to himself. The Jersey exhibitors were Wm. McKenzie, Toronto; D. Duncan, Don. & B. H. Bull & Son, Brantford, fresh from Toronto show. Bert Lawson, Hyde Park, brought out a few promising young things not especially fitted and won a couple of prizes. The principal winnings were pretty well cut up by the three former herds. McKenzie winning sweepstakes on bull, while Bull & Sons won on female. Wm. Humridge placed the winners on the bull. Denkin & Hulet showed their ability to keep pace with the others in capturing ribbons throughout the different sections. C. E. Smith won 1st on 3-year-old bull and 2nd on yearling bull. Both were judged by H. Boller, Cassel, Ont.

The most sensational exhibit was the Ayrshires, shown by Robt. Hunter & Sons, Maxwell, & Co., Menie; Wm. Stewart & Son, Menie; N. Dymont, Clappison, and Frank H. Harris, a new exhibitor, who brought

out a few head in good shape. In the mature sections Hunter's herd won the best of the honors, winning both sweepstakes prizes, while in calves bred by exhibitors Hunter & Co. won out upon nice quality stuff. Stuart & Son, Dymont and Harris won the balance in the order named, upon good quality stock, but the mares were as highly fitted as the two former herds. Wm. McKee, Norwich, judged the Ayrshires.

SWINE

Most of the Toronto exhibit of swine came to London to fight over again. They made a very interesting exhibit, comfortably filling the pens. The Yorkshires were shown by the same parties as at Toronto, viz., D. C. Platt & Son, Milgrove; Jos. Featherstone & Son, Strathville, and Jas. Wilson and Son, Fergus, and H. T. McAdairm, Fingal. The winnings were practically the same as at Toronto, the first being won by the bulk of the prizes. Berkshire were also well brought out by Thos. Teasdale, Coxford; T. A. Cox, Brantford, and Cooper & Sons, Middlemarch. Several changes were made, however, in the placings from what they were at Toronto. The first place was won over Cox's Silver Medal, winner at Toronto with a massive smooth topped fellow that was favored by many for first place at Toronto. Teasdale's entry captured the best of it throughout the whole class, with Cox and Cooper & Nephews following in the order named.

Tanworth made a good display in the hands of D. Douglas & Son, Mitchell, and John W. Todd, Corinth. The former had rather the best of it. Chester, which were shown by D. DeCoursey, Barnholm, and W. E. Wright, Glanworth. The former leading in most sections.

Other breeds, brought together by the same parties, shown by C. E. Smith, Scotland; Essex, by Jos. Featherstone & Son, and Tamworths, a belted breed, shown by Artemus O'Neil, Middlemarch, and the Welsh-hill, between which the premiums were fairly evenly divided. The judges were as follows: Yorkshires, A. G. Hallman, Brantford, Yorkshires, S. Lyons, Torval, F. J. McEwen, Kerich; Tamworths, F. R. Shore, White Oak; other distinct breeds, F. R. Shore, White Oak; Chesters, D. G. Platt, Milgrove.

SHEEP

The sheep pens at London were comfortably filled with as good a lot as ever grazed them. There was keen competition in all classes excepting Lincoln, which were shown solely by F. T. Gibson, Denfield, Oxford. They were shown by Henry Arkell, Arkell, Ont. Both of these exhibitors were prepared to meet the best. Cotswolds were shown by much strength, brought out numbers and in quality. They were shown by E. F. Park, Burford; John Rawlings, Forest; T. Hardy Shore, Glanworth, and others which got a goodly share of the plums.

Hampshires had more competition than usual. Chas. Maw, Omagh; John Kelly, Shakespeare, and Geo. Allen, Park, being the winners. Mores had a fine bunch never imported, and got rather the best of it. Kelly's exhibit, however, was no doubt the best exhibit of home bred shire in the show of any breed. Dorsets were shown by Jas. Robertson & Son, Milton, and E. H. Harding, Thorndale, who divided honors almost the same as at Toronto, being the winning a sweepstakes. Leicester put up the largest exhibit in the show, all fresh from Toronto excepting John Barr Rhye, a new comer. His winnings were pretty well divided with Jas. Snell leading, winning both championships in the yearling Wether classes. Rawlings, Sons, Maxwell, & Co., Menie, was named in the long-wooled class, while Telfer & Harding won on short wools in a strong class.



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Beef Cattle at Toronto

The Shorthorns were as usual the feature of the best cattle exhibit. The entry in this class alone was nearly 200 greater than last year and the display made was a credit to the breed. Mr. D. E. Flatt, Hamilton, placed the awards. No judge in recent years did his work better or gave more general satisfaction. His was consistent throughout, set a type and following it through to the end. He judged solely from the breeders' standpoint, which will account for some animals of good blocky type, but lacking in breed character, not getting so high up as their owners expected. On the whole Mr. Flatt did his work very well indeed and made very few mistakes.

The bull classes were well filled, though not as even, a lot as the females. In the aged bull class, Sidelight, a Royal Wonder bull, shown by the Little Missouri Horse Co., Meadville, Pa., was a bull particularly worthy of mention. The principal exhibitors were R. A. & J. A. Watt, Salem, Ont.; W. C. Edwards & Co., Rockland, Sir Geo. Drummond, Beacomfield, Que.; John Gardhouse, Hightfield, Ont.; E. & G. C. Robson, Elderton, S. Dymont of Barrie, J. & D. J. Campbell, Woodville, W. R. Elliott & Son, Guelph, Arthur Johnston, W. & S. Auld, Eden Mills, Eastwood Bros., New Toronto, Kerr & Davidson, Balsam, W. G. Pettit & Son, Freeman, F. Smith, Kesteven, H. J. Mitchell, Burlington, G. Ames & Son, Moffat and others.

The cow classes were particularly strong. The aged cows that lined up before the judges were as good a lot of Shorthorn matrons as have ever graced a Canadian show ring. Queen Ideal of the Beaconfield Herd was placed first. She was brought out in good form and though showing the effects of frequent fitting for the show ring, her many good qualities were to the front.

The class for Shorthorns in milk was not as strong as it should have been. There should be at least two classes, one for three-year-olds in milk and another for four-year-olds or over. This would enable a championship to be given for the best cow in milk, and not have the winner come in competition with the best matrons for sweepstakes honors.

That veteran feeder and breeder, James Leask was strong in the steer classes sired by a Shorthorn bull, winning both 1st and 2nd in the two-year-old and yearling classes. Joseph Stone, Saintfield was first in the calf class, with a steer bred by Leask.

OTHER BEEF BREEDS

The Hereford show was not as strong as last year. W. H. Hunter, The Maples, had both the senior champion and junior champion bulls. His aged bull, Improver, looking well and showing his deep massive qualities to advantage, being given the grand championship by H. D. Smith, Hamilton, had the first prize yearling bull. J. A. Govenlock, Forest, had the best of it in the female classes winning both championships on two very good cows. He was also to the front in the herd classes, winning all but the junior herd, which went to Hunter. R. J. Mackie, Oshawa, judged the Herefords.

The Aberdeen Angus made an excellent show with a couple of new exhibitors out. John Lowe, Elora, had the senior champion bull, and James Bowman, Guelph, the junior and grand champion bull in his imported yearling. Magnificent. Bowman also had both championships in females on two splendid animals. He also won in graded herd. L. B. Broadfoot, Ferrus, won first on aged cows, with Elm Park Kyma 11th, a good deep individual.

There was nothing sensational about the Galloway display. D. McCrae, Guelph, and R. Shaw, Brantford, were the contestants. The former had much

the best of it in the bull classes, winning both championships. Shaw was stronger in females, winning the senior and grand championship, senior honors going to McCrae. John Davidson, Ashburn, judged the Angus and Galloway classes.

Horses at Toronto

The horse exhibit at the Canadian National Exhibition was always a strong one. This year it was stronger than ever, the large stable accommodation on the grounds being inadequate for the purpose. But quantity was not its only feature. The quality on the whole was of the best and quite bore out the reputation Canadians have for producing the best horse flesh to be found on this continent. Some of the breeds were not so strongly represented as they should have been, considering the numbers and quality to be found in the country. The exhibit of thoroughbreds is a notable example. The time was when the thoroughbred put up one of the best shows on the grounds. This year it was away below par. There were only 14 entries, and the total prize money of nearly \$10,000 divided equally among them would give a total of \$700 for each horse show. The thoroughbred people will have to be out of the prize lot. Contrast this show with the standard breeds, which made one of the largest exhibits in the horse department, one exhibitor alone, Miss Kitty Wilkes of Galt, had 65 entries, and put up a show that in itself would be creditable to any big fair. One of the sensational animals in this class, Morrigan, was owned by this exhibitor. That there were the pony classes. The entries in this section were nearly three times larger than last year and the quality very good. The Canadian Pony Society has been doing things the past few months. To its efforts is due the very fine display made this year in the pony classes. Some of the other horse societies should take a lesson from the Pony Society and get out more representative exhibits at next year's fair. The harness classes generally were well filled. Hunters and jumpers were very good. A feature worth noting was the strong infusion of trotting blood in many of the animals shown, especially at the dark side. The thoroughbred people should make a note of this.

SHIRES

The Shire men did not do themselves justice at this year's show. The exhibit was much smaller than it should have been, though the general quality shown was as good, if not better than at recent shows. Both cham-

(Continued on page 11)



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Continued on page 11

HACKNETS

Of the light horse display our readers will be more interested in the Hackney exhibit than any other. While it did not show much superiority over recent years in numbers, the quality was of a high order, many recently imported animals facing the judge, Mr. Wm. Gibson, of Beacomfield, Que. Mr. Gibson, did his work exceedingly well. He was consistent throughout in his placing, and did not jump from one type to another, something that could not be said of all the judges in the horse department.

The principal exhibitors of Hackneys were Messrs. Calkins & Angus, Byron, Mich.; Graham Bros., Claremont, Ont.; Oak Park Stock Farm Co., Brantford, Ont.; T. H. Hasard, Millbrook, Ont.; Graham & Renwick Co., Bedford Park, Ont.; A. Yeager, Simcoe, Ont.; Geo. A. Bennett & Sons, Carlisle, Ont.; Chas. E. Eard, Simcoe, Ont.; T. A. Cox, Brantford, Ont.; and W. G. Pettit & Son, Brantford, Ont.

CLYDES

For several years the Clydesdale show has been the feature of the horse display at Toronto. This year the display was everything the best of the Scotchmen's draft horse could wish for. But there was a fly in the ointment. Mr. James West of Sandeland, Scotland was brought over to place the awards and some real good judging was looked for. Whether it be that horsemen are born "kickers" and

stick to their favorites, no matter what quality may be against them, it is that never at the ringside of any Clydesdale ring, have we heard so much adverse criticism of a judge. In our opinion much of it was deserved. No judge in recent years at Toronto has jumped round from one system to another in his placing as did Mr. Weir. It may be the way they do things in Scotland. To say the least his placing was very hard to follow, though he may have had good reason for his decisions. They were not, however, apparent to the ringside.

In the aged stallion class, that splendid stallion, Sir Marcus, shown by the Graham, Renfrew Co. was an easy first. He was shown in the best of form and in a condition that could hardly be improved upon. He has all the good qualities and few of the bad ones and, as shown at Toronto, was a fine type of the modern Clydesdale. The principal exhibitors were Dalgely Bros., London, Ont.; Thos. Mercer, Markdale, Ont.; Smith & Richardson, Columbus, Ont.; Graham Bros., Claremont, Ont.; The Graham, Renfrew Co.; Hodgkinson & Tisdale, Beaverton, Ont.; W. J. Cowan, Cannington, Ont.; J. D. Larkin, Niagara-on-the-Lake, Ont.; E. R. New & Son, Howick, Que.; J. M. Gardhouse, Weston, Ont.; D. Gunn & Son, Beaverton, Ont.; A. G. Gormley, Unionville, Ont., and others.

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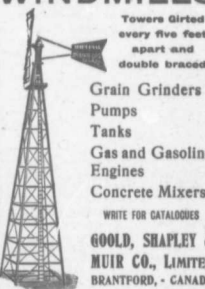
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HORTICULTURE

Another Nursery Scheme

The practice of some United States nursery firms operating in Canada and trying to lock by false representation is becoming altogether too common. References to schemes of this kind have appeared in these columns many times. Recently the attention of The Canadian Dairyman and Farming World was drawn to a troop of agents operating around Aylmer and St. Thomas, Ontario, who claim to be connected with a Michigan firm, which we fail to trace in the National Nurseryman's Directory. They are offering all kinds of absurd inducements, which include a four-year guarantee and a verbal agreement to trim the trees every year for four years. They are approaching farmers with bottles of prepared fruit, and also a bunch of root-grafts, which they use to demonstrate the inferior practices of the Canadian nurserymen. If they drop across a farmer who knows nothing about root grafting, (and there are many of them) they try to convince him, that they have a method in Michigan of grafting apple trees and other stock, that is known only to themselves, and which cannot fail to result in strong thrifty trees, which will grow ahead of any stock, propagated under Canadian systems.

Canadian nurserymen, who propagate their apple trees by grafting, use exactly the same methods as these Yankee people, only perhaps it is done a little bit better. It may not be amiss to point out to our readers, who do not know, the method followed by Canadian nurserymen. The strongest of the young stocks, that have either been grown at home or imported, are kept in cool cellars during the winter, until about the beginning of January, when the grafting takes place in these cool cellars. Whip or tongue-grafting is the method usually employed. The only advantage one nurseryman may have over another is;—that he uses a whole root for his graft, and discards the first and a second cut. By the first and second cuts, we mean, long tap or finger roots, that are cut from the stock, when the grafter is trimming his roots, and these same roots that are cut off are sometimes used by nurserymen and sometimes discarded. There is but little advantage in using the whole root, and this is no reason why the strong root trimmings should not be used, if they are thrifty enough to take a scion. Our leading nurserymen make a practice of grafting entirely on the whole root.

It is plain to anyone who knows the first thing about grafting, that the United States agents referred to are inventing some new scheme to gull the poor farmers again, and we would like the opportunity of warning our readers against them and their methods.

Importance of Moisture Control

F. T. Shutt, M.A., Chemist, Dominion Experimental Farms.

We have come to realize in these later years that one of the most important problems in agriculture, is the control, the regulation of soil moisture. It is a large subject, and, if discussed fully, would involve the question of drainage, a matter of considerable interest to the orchardist, the question of aeration of the soil, and several others. I propose mentioning two phases, only, phases that immediately touch upon our work under discussion in recent issues of The Canadian Dairyman and Farming World—cover crops in the orchard.

All the soil-formed food that plants absorb must be in a state of solution before the crops can utilize it; the feeding rootlets can only appropriate as it were highly-diluted food. In or-

der to obtain their food from the soil, crops require vast amounts of water. It has been estimated that at least 300 lbs. of water are taken up by the roots for every pound of dry matter stored up in stem, leaf or fruit. During the growing season then we are to understand that there is a constant stream of water passing through the tissues of the tree, parting with its dissolved material to build up here and there the various parts and organs of the tree, and finally to leave by the leaves of the tree, and so returned to the atmosphere. In this way probably more than one thousand tons of water an acre each season are absorbed by the roots of a mature orchard, and this in addition to the water retained in the tissues of the tree and fruit and that lost by capillarity and surface evaporation.

What is true of the tree, is likewise true of the grass. To produce a crop of hay will require at least from 500 to 600 tons of water. Unless the season is one characterized by an abundant rainfall there are few soils that can support both grass and trees with all this moisture, and, as I have already said, it is the trees that suffer.

It is essential then that while the tree is making its growth, and its fruit filling, there should be a sufficient soil moisture. This, as we have seen, is not likely to be the case if during that period a second crop—a soil feeder—is grown on the same area.

But it will not merely suffice in many districts to leave the trees the undisturbed crop upon the soil during this growing season. In soil that is bare of foliage and left undisturbed, capillarity is set up and surface evaporation takes place. How can this be prevented? By occasional cultivation. The dry earth mulch so formed breaks up the capillary tubes, and thus arrests evaporation. It seems clear then that cultivation should be practised during the spring and early summer. Is it essential or desirable that it should be continued throughout the season? I think not.

Some few years ago we determined during the autumn and winter the moisture content in the twigs of 10 varieties of apples. These apples included some of the hardiest and some of the most susceptible to cold of the varieties that can be grown in the Ottawa district. Our results showed that the hardiest were those containing the least water. Indeed the order of their moisture content, was the order, or practically so, in which the horticulturist, Mr. Macoun, had arranged the varieties, according to observed hardiness. This goes to support the view that growing tissue contains more water than mature wood, that cessation of growth and early maturity of the wood may be induced by limiting the soil moisture supply, and that such mature wood is better able to withstand very low temperatures. It seems quite probable from the results of this investigation that the character of the autumn, both as to rainfall and temperature, may have very much to do in determining the immaturity of the trees during the following winter.

Arguing from these premises, it is clear that to check the growth of the orchard trees in the autumn, by the abstraction of soil moisture, is very desirable. This can be accomplished through the growth of the cover crop sown in July.

Fruit Inspection

The staff of Dominion Fruit Inspectors has been substantially increased for this season by the appointment of additional inspectors. An inspector will be stationed at Port Arthur and Fort William, who will watch shipments to other points between the Soo and Winnipeg.

It is intended to give particular attention to shipments in bond via the Niagara River. Shippers using this route are warned that it may be necessary to detain cars at the frontier in order to make a proper inspection.

If you have a photograph of your orchard, small fruit patch, vegetable garden, flower garden or lawn, send it to The Canadian Dairyman and Farming World for publication. To make its appearance more interesting, write a letter describing the scene and how you grow the trees or plants illustrated.

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The Next Year's Flock

Though it was decided last spring what breed of hens was going to be kept for next year's laying the time will soon be here to decide again what birds will represent that breed. This latter decision is of much more importance than the matter settled in the spring.

In selecting the breed, what was wanted was one that we liked, one that would give eggs the year round, one that laid most in summer and one that gave eggs and meat, etc. The color that suited our fancy, the one that didn't crow too much or too early in the morning, the one that was easiest to keep out of the garden, or the one that was best able to forage. Taking some or all of these questions into consideration most people decided to keep the same breed they had last year, which is probably the best thing to be done. A change of breed may be an improvement sometimes, but usually the man who neglects his flock blames the breed and gets another breed that proves no better. One who is always changing cannot get the best out of any breed. Decide what breed is best for your conditions and then make the flock you keep the very best of the breed.

The breed then is of less importance than the individuals. In selecting the individuals that are to compose the flock there are a few specimens that are not wanted.—Old birds are not profitable. Don't keep an old hen simply because she has some peculiarity you like. Sentiment is all right in its place but in the poultry yard it doesn't always pay. The second season as a rule is long enough for the best hen to live.

Don't have immature pullets in the flock. Have them well developed before cold weather comes. Have no cripples or deformed birds; none that are or have been sick.

If you want to breed true to the breed cull out all that are off in color and shape. Cull out the lazy birds, have no loafers. Like beguets like.

Have no males that are not vigorous and full of life. The one that is never heard crow had better be eaten. Give the crower the preference. Have the flock made up of individuals that are good representation of the breed, a fair size rather than over or under. Have them well matured and from a good healthy parent stock of good laying stock.

Organization of Local Poultry Association

The local Poultry Associations which have received a grant during the past year, shall be recognized as such by the Minister of Agriculture and shall each receive an annual grant of fifty dollars (\$50.00) if complying with the regulations appended; if these regulations have not been fully complied with by any association, a lesser grant may be made to that association, the amount to be decided by the Minister of Agriculture. In addition a local Poultry Association may be organized under these regulations in any electoral district in the province where an association is not at the time recognized by the Minister of Agriculture, and shall receive under the following regulations, an annual grant of twenty-five dollars (\$25.00); but where there is more than one electoral district in a county, the annual grant shall be fifty dollars (\$50.00) during such time as there is only one recognized local Poultry Association in the county. Where an association fails to comply with the regulations during any calendar year, a new association may be formed to represent that district.

Application for recognition must

be made through the Director of the Live Stock Branch of the Minister of Agriculture. With the application must be sent a copy of the Constitution of the Association, the minutes of the organization meeting and the list of officers and directors.

2. Each Association must hold a Poultry Show between October and February inclusive, for which it is financially responsible.

3. The Poultry Show must consist of at least 300 hens file entries and the prizes offered, \$200, exclusive of pigeons and pet stock.

4. Proper accommodation, to in-

clude cooping, must be supplied for holding the show; also accommodation for lectures, in or convenient to the exhibition room.

5. A lecturer will be supplied by the Department of Agriculture, to speak on practical subjects and the local Association must use every reasonable means to properly advertise and interest the public in these lectures, which must consist of at least two sessions.

6. There must be sent to the Director of the Live Stock Branch, Ontario Department of Agriculture, application for a lecturer at least two months

prior to the date of holding the show, and there must also be submitted at the same time a copy of the proposed classification for the exhibition. Within one month after holding the show, there shall be forwarded to him, a full report showing all receipts, expenditures, number of entries in each class, names of judges, and a general report of the exhibition and meetings.

A. P. Westervelt, Director.

Don't let disease of any kind get a start in your flock. Isolate the affected birds, or, if not especially valuable apply the hatchet

Minnesota Iron Mines Are Paying Big Profits

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100%



DO YOU WANT TO BUY STOCK NOW AT ONE DOLLAR THAT MAY JUMP TO \$140

The Iron Producing Lands Co., is a strong organization of business and professional men, farmers, clerks and office people who seeing the vast fortunes being dug out of Minnesota Iron Lands determined to win some of the wealth Nature has so lavishly bestowed, by banding together to develop such ore lands as they might acquire.

The purpose of the company is first to acquire lands in the ore belt, then to develop such lands for all that is in them. To raise a fund for this purpose a limited

number of shares of stock in the company are offered for sale. The price of these shares are \$10 each and promise to be a very short time to be worth several times that amount. If we strike as rich a vein of ore as has been found on all sides of us our stockholders will realize big dividends on their investments.

This company has already acquired lands in the very heart of the ore belt. On all sides of our holdings rich strikes have been made and millions of tons of ore is the reward the stockholders will have as a result of their investment.

On all sides of this company's property are drillings showing vast deposits of iron ore, and within 80 rods forty million tons of ore have been blocked out. The accompanying illustrations show examples of the active mining operations now going on near our lands.

Now is the time for you to invest in a company owning ore lands ready for development. Don't hesitate and when the big stake is struck regret that you couldn't see ahead far enough to get in on the ground

floor. The ore belt is limited and the opportunity to increase your fortune in this way will soon be gone forever.

The increasing demand for iron makes the development of new iron producing fields a profitable enterprise and one which offers attractive inducements to investors, being a much different proposition than ordinary mining schemes.

Millions of tons of ore underlie the lands in the Cuyuna District of Minnesota. Heavy options for leases have been paid since the discovery of iron ore in this district. For instance \$10,000.00 cash was paid for the privilege of exploring fifteen 40-acre tracts. The Northern Western Improvement Company, organized by the Northern P. & I. C. Railway, interests to develop iron deposits along their railroad paid a \$40,000.00 fee on a tract of 40 acres that was sold by their agent for \$200.00.

The lands owned by this company have every indication of being as valuable when they are developed as any in this rich district. Won't you join with us in this work?

Every dollar invested in shares in this company participates directly in all operations carried on by the company and in all dividends declared.

Don't hesitate to send any amount you care to invest. But if you prefer more information write for free prospectus full of facts and figures that explain conditions as they actually exist. Remember only a limited amount of this stock is available, so write today.

IRON PRODUCING LANDS CO.,
822 Bank of Commerce Bldg.,
Minneapolis, Minn.

The Canadian Dairyman AND Farming World

Published by The Rural Publishing Company,
Toronto, Ontario.

1. THE CANADIAN DAIRYMAN AND FARMING WORLD is published every Wednesday. It is the official organ of the British Columbia Dairy and Farming Association of Western Ontario, and Bedford District Quebec Dairy and Farming Association of the Canadian Holstein, Arrshire, and Jersey Cattle Breeding Associations.

2. SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance. Great Britain, \$1.50 a year. For all countries, except Canada and Great Britain, add 50c. for postage. A year's subscription free for a club of two new subscribers.

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The paid-in-advance subscription to The Canadian Dairyman and Farming World exceed 10,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies of the paper sent to 11,000 copies (never being less than that) is also given. Subscriptions under \$1.00 are discontinued as they expire. No subscriptions are accepted at less than the full subscription rates. Thus our mailing lists do not contain any dead circulation. Senders detailed statements of the circulation of the paper, showing its distribution by countries and provinces, will be mailed free on request.

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THE CANADIAN DAIRYMAN AND FARMING WORLD

PETERBORO, ONT.

TORONTO OFFICE:

Room 306 Manning Chambers, 72 Queen St. West, Toronto.

WEEDS MORE PREVALENT THAN EVER

While travelling through Western Ontario recently, we were particularly struck with the great encroachment that weeds have made upon the farms during the past summer. On many farms that were familiar to us and upon which in years past it was considered almost a crime to allow weeds to seed, are to be seen weeds this fall in all the glory of possession. Fence corners, gardens, orchards and other places, more or less inaccessible to cultivation, or to stock, were over-run with various sorts of weeds. Fortunately none of the most obnoxious ones were present. Burdocks, lamb's quarters, pig weed, motherwort, mallows, Canada thistles and may-weed were the most in evidence. In the corn and root crops, thistles, fox tail, lamb's

quarters, pig weed, wild buckwheat and others more or less injurious possessed the ground to a startling degree. In some instances, it appeared as if the farmers had lost all hope and had permitted the weeds to take full possession of such land.

It is regrettable that such conditions are permitted to exist. If such practices be followed for any length of time, we may rest assured that the more obnoxious weeds will soon become introduced and will gain a strong foothold. This comparative neglect on the part of what used to be very careful farmers is largely accounted for by the scarcity of labor. Frequently, during the past summer, many have been tempted to employ less labor which, of necessity, meant leaving weeds largely to themselves. The result of such folly, is already too evident. It will be more so in the years to come and it will take several seasons to undo the mischief that has already crept in. It is high time that our provincial government enacted some law to force negligent farmers to take care of their thistles. There is no excuse for allowing farms to become over-run with this pest. Where a farmer is not alive to the great danger of weeds, the Government should step in and cut these weeds for him, charging the cost to his tax account.

THE CENT THAT HIDES THE DOLLAR

Some men are so anxious to make money that they fail to recognize that in their anxiety to make a few dollars easily they are indirectly losing many more dollars than they are likely to gain. We have in mind an Ontario dairy farmer who last winter had a barn full of hay. The price of hay was advancing and he thought that he saw a chance to make a nice sum of money. With that object he fed his dairy cows on straw and held on to his hay. Unfortunately for him he held on to his hay until the price began to drop. Even then he did not begin to feed it to his cattle but held on to it hoping that the market would improve. He still has that hay on hand.

Because of the feed they received his cows did not do as well last winter as they might have and they went on to grass in thin condition. The result is that he has lost many dollars this year though the fact that his cows have not yielded what they would had been properly fed last winter. It is an old saying that you cannot fool a cow. A man who expects to make money in the dairy business must feed his cows liberally when the price of hay is advancing as well as when it is low. It does not pay to try and speculate in hay and keep dairy cows at the same time.

NEW POTATOE DISEASES

According to a bulletin recently issued by the Maine Agricultural Experiment Station, two new diseases of the potato stem and tuber not hitherto credited to the State have been found to exist in several localities. Since one of these is distributed by means of the seed and the other is probably

spread in the same manner, it is important that the growers at once learn to recognize them. The appearance of the affected plants, above ground, is somewhat similar in both diseases. The plants appear more or less unthrifty, varying with the severity of the attack. The branches and leaves, instead of spreading out normally, tend to grow backward, forming a somewhat more compact top, frequently with the young leaves incurled and folding up along the mid-rib. Later they may become lighter green and even yellow and the whole plant gradually dies. The disease is easily diagnosed by pulling up and examining the portions of the plant below the ground.

Growers of potatoes in New Brunswick or in the other maritime provinces should be on the look-out for the appearance of either of these diseases. Should one have reason to suspect that the disease is prevalent in his district, samples of diseased plants should be sent to the Agricultural College at Truro, where they may be identified.

THEY ARE AUTHENTIC

There seems, on the part of many, considerable disposition to doubt the authenticity of official records of dairy cows as compiled and published from time to time. Truly, it is hard for one accustomed to milking a cow that produces annually 3000 or 4000 lbs. of milk, or even 8000 lbs., to grasp the full significance of, aside from believing such records as published recently in The Canadian Dairyman and Farming World, where two cows owned by Brown Bros. of Leeds County, Ont., gave 1004 lbs. and 93 lbs. of milk respectively in one day. Some farmers state their doubt of such records.

Happily, the originators of official testing foresaw the scepticism with which such results would be received. Provision was made for guaranteeing the absolute correctness of the tests. The men who have charge of the tests are generally appointed by the Agricultural College. They are thoroughly capable and understand their business. They personally conduct the test; not the owners of the cows, thus there is no occasion for doubt. These records are positive facts, not mere hearsay, as a recent visitor to our office expressed it. We can place every confidence in them. When we fully appreciate the full significance of high or abnormal production we will then be in a fair way for putting our herds into such shape that they may do their best.

HORSE RING MANAGEMENT AT TORONTO

Reference to the ring management at The Canadian National Exhibition is necessary for the good of future shows. It is impossible to expect the interest in the horse judging there ought to be under present arrangements. With the judging of one breed spread out over several days of the show, with a couple of classes in the ring each day, it is very hard to follow, and the display of any one breed does not make the impression upon the public it should. Possibly some exhibitors

might be inconvenienced if, for example, the Clydesdale judging was begun one day and continued till finished, and then another breed brought on, but the public would be greatly benefited. This is done in the cattle ring. The dairy cattle are all judged first and followed by the beef cattle. This gives the lovers of the different breeds a chance to see their favorites judged without having to spend a week or more at the show. Then there are the facilities afforded the press for making a report of the show.

Whether from a desire to prevent criticism of the judging or what, press representatives were not allowed in to examine the horses, excepting when they were going out of the ring. They were kept "behind the bars" and forced to judge of the judging at long range. A board nailed to the fence and a "soft" hard wood bench was the accommodation for the "scribes." It reminded one of the desks and bench of the old log school-house of half a century ago. Surely the great Toronto fair should be above such small business. It needs the agricultural press more than the latter needs it.

FORM AN ASSOCIATION

Another word with reference to cow testing seems timely. Let us repeat clearly; there is no charge to the farmer, who joins a cow testing association, for the testing. The Dairy Division, Ottawa, pays each man who is making the tests, and supplies the chemicals, blank forms, etc., absolutely free. The dairyman has only to provide a small dipper, one sample bottle for each cow, and scales, should he have none at present, though there is plenty of use for them on any farm. This necessary outfit, including scales, will cost only about two dollars for ten cows, or three dollars for twenty cows. The time required to weigh and sample does not mean more than ten minutes a cow per month to the average handy man. Time and money thus saved down, let us emphasize this point, no one who is keeping cows for profit, not simply for pleasure, can afford now-days, in view of prices of all feed-stuffs, to be without definite knowledge as to each cow's capability and actual performance.

To reduce expenses means to increase profits. If a cow is producing fat, she is expensive and the profit is necessarily reduced to the vanishing point. With this simple means of selection, this easy co-operative method right at hand of checking up returns monthly (by means of the individual report and the complete summary of the association met regularly from the Department of Agriculture) there is no excuse for any dairyman not taking this initial step towards building up a profitable herd. The Government helps you to help yourself. Make use of the means provided. Form a cow testing association in your neighborhood. The Dominion Government is doing good work in forming these associations.

We assure our readers of the reliability of our advertisers. We refuse all kinds of questionable advertising.

Ontario Crop Statistics

The following statistics of the principal field crops of Ontario for 1908 show the acreage as computed from individual returns made by farmers to the Ontario Bureau of Industries, and the yield as estimated by a large and experienced staff of correspondents embracing every township. The wheat area is practically the same as that of 1907, but the yield is estimated at nearly a million bushels in excess of the final returns of last year. The area in barley shows a shrinkage of about five per cent., and is over a million bushels short of the crop of 1907. The poor crop of oats in 1907 caused a falling off in the area of 1908 of over five per cent., or 158,000 acres; the yield, however, shows an estimated increase of about 15,000,000 bushels, the yield per acre being seven bushels in excess of 1907 and equal to the average of the previous 26 years. The areas in rye and peas show substantial increases, but they are still below the annual averages. The bean crop differs but little from that of 1907. There is a slight reduction in the hay area, but the yield harvested a quarter of a ton to the acre over the light crop of last year. The following are the figures for 1908, in comparison with 1907 and the average of the previous 26 years, 1882-1907:

Field crops.	Area.	Bush.	Yield per Acre.
FALL WHEAT.			
1908	679,642	16,540,362	24.3
1907	676,164	15,645,491	23.0
1882-1907	909,813	17,932,068	20.6
WINTER WHEAT.			
1908	142,124	2,292,319	16.1
1907	144,824	2,473,651	17.1
1882-1907	403,156	6,379,290	15.9
BARLEY.			
1908	734,029	30,744,322	28.3
1907	766,901	31,716,332	28.3
1882-1907	646,814	17,946,229	27.7
OATS.			
1908	2,774,269	98,112,326	35.4
1907	2,828,292	83,524,261	29.5
1882-1907	2,140,897	76,627,266	35.8
RYE.			
1908	47,390	1,445,640	16.4
1907	47,188	1,439,051	15.8
1882-1907	119,301	1,933,979	16.3
PEAS.			
1908	396,642	7,204,625	19.7
1907	340,977	7,265,006	21.6
1882-1907	645,973	18,560,919	19.6
BEANS.			
1908	46,385	829,064	17.9
1907	47,662	790,269	16.6
1882-1907	11,762	715,338	17.1
HAY AND CLOVER.			
1908	1,333,141	4,635,287	1.42
1907	1,329,562	3,891,863	1.47
1882-1907	2,523,628	3,711,962	1.47

With the exception of hay and clover, the final estimates of yields will not be made until November of these and other crops, including roots.

Horses at Toronto

(Continued from page 7)

pionships went to John Gardhouse & Sons, Highfield, Ont. Their aged stallion, Royal King 3rd, is a good horse and well deserved his place, though competition was not strong. The champion mare, Holdenby Nicousis is a splendid type of the breed, grey in color with lots of quality. The Mercer's three-year-old came in for second place in the stallion class. J. M. Gardhouse, Weston, had a very good three-year-old filly out.

HEAVY DRAUGHTS

The heavy draft classes, which were all Canadian bred Clydesdales, were well filled, and made a show of the breed almost equal to that of Clydesdales proper. Some members of the Scottish Commission, who examined the Canadian bred Clydesdales in the stalls before judging, as guests of the Canadian Clydesdale Association, pronounced them a very fine lot indeed. One of the commissioners, Mr. Geo. A. Ferguson, one of Scotland's leading Clydesdale breeders expressed his appreciation in a very tangible way by offering a special prize of \$50 to be placed at the Toronto show as sue Secretary of the Clydesdale Asso-

ciation might think best. The show was a credit to the breed and reflects something of the kind of Clydesdales that are being produced in this country. Mr. R. Starr, Fort Williams, N. S., judged the heavy draughts.

Thos. Mercer, Markdale, had the champion Canadian bred Clydesdale stallion in his yearling, Royal Albion, by Breadaline and Hodgkinson & Tisdale, the champion mare in Queen of Quality, a Royal Baron mare of good quality. Other leading winners were, Geo. Davidson & Sons, Cherrywood; A. G. Gormley, Unionville; D. Gunn & Son, Beaverton; Graham Bros., Claremont, and Smith & Richardson, Columbus.

There was a good show of general-purpose horses and heavy draft teams. A special exhibit of Percheron and Belgian horses was made by the Little Missouri Horse Co., Meadville, Penn., and J. Crouch & Son, Indianapolis.

You Can Do It Too

Many boys have already won live stock premiums by canvassing for subscribers to The Canadian Dairyman and Farming World, and are well pleased with the premiums which we sent them. A boy always takes more interest in things when he owns part of them himself. Why not have some live stock of your own on your father's farm? You may not be able to afford the money to buy good stock, but here is a chance to win pure-bred stock without it costing you a cent in actual money. All it will cost you will be a little of the spare time which everyone has some-time or other during the week.

We will send you a pure-bred pig for seven new subscriptions and will give the express on it for two extra new subscriptions at only \$1.50 a year. For 30 new subscriptions, we will send you a pure bred calf, and a Holstein heifer for 45 new subscriptions. If you would like to win some fowl, you can secure a pair of pure bred fowls for only four new subscriptions. Think over these offers and then drop us a post card for sample copies, as many boys have already done. Here is one which we have just received.

"Seeing the success of so many boys in your paper, of winning live stock as premiums for obtaining new subscriptions, I decided to send for some sample copies. I would like to win a thorough bred sow."—Alex Wilson, Bruce Co., Ont.

Subscribers who have already started to canvass for subscriptions to secure various premiums, do not report any great difficulty in securing the necessary number of subscriptions. Do not ask anyone to subscribe for the paper the first time you call on them, but leave them a sample copy or two to look over. Draw their attention to the points of the paper which are likely to be of special interest to them and then call back again in a few days and ask for their subscription. If you do not succeed in getting a subscription from the first person you call on, do not be discouraged but go on to some other neighbor.

WHAT SOME SUBSCRIBERS THINK

"Enclosed you will find \$1.00 to pay my subscription to The Canadian Dairyman and Farming World for one year. I have got a few sample copies of it and like it very well."—Mr. Will. Wright, Hastings Co., Ont.

"Will you kindly send me some sample copies and also full particulars for canvassing for your valuable paper. I would like to take advantage of your grand offer."—Mr. A. Clarke, Brant Co., Ont.

"I can give The Canadian Dairyman and Farming World a good farm paper."—Mr. Chas. A. Johnston, Grenville Co., Ont.

"I appreciate your effort in supplying a good journal to farmers and wish you every success in your undertaking."—Mr. G. Stranger, Halton Co., Ont.



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THE CANADIAN DAIRYMAN AND FARMING WORLD

PETERBORO, ONT.

It is desirable to mention the name of this publication when writing to advertisers

Creamery Department

Butter Makers are invited to send contributions to this department, to ask questions on matters relating to butter making, and to suggest subjects for discussion. Address your letters to the Creamery Department.

Skim-Milk Supply at Creameries

Editor, The Canadian Dairyman and Farming World—The most effective means of bringing about improvement in regard to this in my opinion, is pasteurization, and I will endeavor to show how necessary is the adoption of this principle. The present system of home-separation, to which a majority of creamery patrons have been converted by the quality of skim-milk ensures a fresh warm uncontaminated food for calves and pigs, is largely responsible for the popularity of the cream gathering creamery. Nothing will be served by denying this fact. If our whole milk creameries are to meet it, it can only be done by giving back to the suppliers a skim-milk absolutely innocuous and which will be in a fit state to feed to the young stock and pigs and thus prevent the spread of contagious diseases. I will not deal with the advantages of pasteurization as a means of securing uniformity and increasing the keeping quality in our butter output. My purpose is to urge its adoption as a means of giving milk suppliers entire confidence in the whole milk creamery system of manufacture, confine any contagious disease which may appear in a district to the place of origin and give no handle for interested promoters of home separation to convert farmers to their system.

In the year 1884, the late Professor N. F. Fjord, in Denmark, carried out a series of experiments, in which he applied pasteurization to the separated milk. The reason was, as evaporators had just been introduced, and farmers were delivering their milk at a central skimming place where it was mixed with other suppliers' milk, and then separated, it would not keep sweet any length of time, calves and pigs did not thrive on being fed with it, and several kinds of diseases were spreading amongst the stock. Professor Fjord's experiment proved highly successful. Not alone did the milk keep sweet much longer, but calves and pigs thrived nearly as well as when fed on hand-skimmed milk. The co-operative system of dairying commenced at the same time, only slowly gaining favor, the farmers being unwilling to join on account of the unsatisfactory state of the separated milk. Pasteurization, however, overcame this trouble. Pasteurization, therefore, indirectly laid the foundation of Denmark's success as a butter producing country. It was found, however, that by heating the milk to 150 degrees or 160 degrees Fahr, the spreading of diseases amongst the stock did not stop altogether, and further experiment showed that heating to 180 degrees gave a more satisfactory result. Microscopic analysis showed the milk to be free from germs. The Danish Government, therefore, in 1898 passed an Act, compelling all dairy factories to pasteurize

the separated milk to at least 180 degrees Fahr, before it was delivered to suppliers, and since this act came in force, disease amongst calves and pigs, the origin of which could previously be traced to raw separated milk immediately stopped. The Act is most strictly enforced.

Pasteurization ensures wholesome milk being distributed at the factories, and if adopted in this country would help Canada to maintain the reputation of being the healthiest and cleanest live stock countries in the world.—Geo. Nielsen, York Co., Ont.

NOTE—It is rather late in the day to begin an agitation in favor of the whole milk creamery in this country. Had the operation of whole milk creameries some years ago adopted pasteurization, as advised by our correspondent, and supplied their patrons with a sweet, wholesome quality of skim-milk, instead of the sour ill-flavored stuff that many of them got, there is no doubt the cream gathering creamery would not have made the progress it has. But they did not do so and gave little or no attention to the skim-milk returned to their patrons. The result is that out of 110 creameries in operation in Ontario today, only three or four are purely whole milk with three or four more running both systems.

But the better quality of the skim-milk which the farmer has at home for his calves and pigs does not make account for the success of the cream-gathering creamery. It costs less to haul cream than milk, and cream can be gathered at a profit from a much wider area than milk can. As good quality of butter can be made by it as by the whole milk creamery, provided the cream is delivered in good condition.

As the above figures show the cream gathering system is here to stop. It is the only system workable in the West. Quebec has made the encroachments for many years, but the cream-gathering plant is gradually gaining a foothold there. What needs to be done is to get the patrons to insure a good quality of cream being delivered. Makers also should be induced to pasteurize all cream before churning. This will insure a more uniform and better quality of butter being made.—Editor.

Cheese and Butter at London

The commodious dairy building at the Western Fair was well filled with exhibits relating to this important industry. The butter-making competitions were well contested for and extended over the whole week of the show. The awards in this section had not been received up to time of going to press. There was the usual display of dairy machinery.

The cheese display was a very good one with the quality of a high order, as shown by the score. Last year the lowest score was 84. This year there were none below 90. There were three judges, each one scoring separately, and the averages taken in awarding the prize. This brought things down to a fine point and making only a difference of 1-1/2 between one set between some lots. The only defect was that some cheese showed a little openness. But this was not the fault of the cheese but that the waxes kept for several days in a warm temperature at the fair before judging. There is a need for cold storage for cheese as well as butter in the dairy building. There was an excellent exhibit of butter with the quality of both the creamery and dairy good. There were no serious defects to report, though some of the samples would have scored more had the packing been better. Quebec did not top the list at London, though some exhibits from the province were there. An interested visitor during the week was Mr. Lyons, President of the Texas State Dairyman's Association. He is interested in some creameries in that state. He examined several lots

of butter and pronounced them of good quality. The following are the awards in cheese and butter:

CHEESE.	
August Colored.	
Points	
J. K. Brown, Ethel, Ont.,	94 1-2
E. J. Phelps, Theford, Ont.,	94 1-6
R. A. Treleven, Rothsay, Ont.,	94 1-12
Clarence Donnelly, Scotlandville, Ont.,	94 1-12

R. A. Thompson, Alton, Ont.,	95 1-4
Chas. E. Baxter, Tavistock, Ont.,	95 1-6
W. S. Stock, Britton, Ont.,	95
H. W. Hamilton, Moncton, N.B.,	94 5-6

June and July Colored.	
R. A. Thompson, Alton, Ont.,	93 3-4
E. E. Stoeblhar, Listowel, Ont.,	93 1-2
Chas. Barker, Canboro, Ont.,	93 1-12
Jas. T. Grieves, Pond Mills, Ont.,	93

June and July White.	
R. A. Thompson, Alton, Ont.,	94 11-12
Miss M. Morrison, Alton, Ont.,	94 1-6
W. R. Rotch, Cambridge, Ont.,	94 1-6
Geo. M. McKenzie, Ingersoll, Ont.,	93 5-6

Best Collection of Cheese.	
Connolly Bros., Thamesford, Ont.,	93
J. H. Williams, Embro, Ont.,	90

Syndicate Instructors Prize.

James Burgess, Listowel, Ont.,	97
W. Hamilton, London, Ont.,	97

BUTTER.

W. G. Medd, Winchelsea, Ont.,	93
W. H. Stewart, Frontenac, Ont.,	93
J. H. Leclerc, Foster, Que.,	93
W. H. Waddell, Kerwood, Ont.,	93
W. H. Brubacher, Dresden, Ont.,	93

Creamery Prints.

A. G. Peterson, St. Thomas, Ont.,	93
Canadian Milk Products, Brownsville, Ont.,	93
W. H. Brubacher, Dresden, Ont.,	93
J. H. Leclerc, Foster, Que.,	93
W. H. Stewart, Frontenac, Que.,	93

Farm Dairy Packages.

Miss Maggie Johnston, Bowdoin, Ont.,	93
T. W. Crealy & Son, Strathroy, Ont.,	93
Miss Lena Hamilton, Carlou, Ont.,	93
Mrs. Walter Hill, Moray, Ont.,	93

Farm Dairy Prints.	
Mrs. Bert Lawson, Hyde Park, Ont.,	93
T. H. Gregory, Poplar Hill, Ont.,	93
Mrs. Walter Hill, Moray, Ont.,	93
Miss Maggie Johnston, Bowdoin, Ont.,	93

Special.	
Mrs. T. W. Crealy, Strathroy, Ont.,	93
Miss Maggie Johnston, Bowdoin, Ont.,	93
Mrs. Walter Gregory, Bowdoin, Ont.,	93
T. H. Gregory, Poplar Hill, Ont.,	93

A Good Word for Factories

After returning to New York State from his recent visit to Prince Edward and Hastings counties, in which he made a study of dairy conditions, Mr. W. W. Hall, referring to the factories in these districts states that they are all well equipped and so managed as to produce the best results. He describes in detail the Mountain View factory as typical of those in the district, and his description is worth reproducing. It is as follows:

"It stands very close to a highway in Prince Edward county, at a road crossing. The exterior has the appearance of a club house, or of a village library. The material from which it is made is cement, and the outside is very attractive. Flowers adorn the yard in front, facing both roadways, and the vey vat is situated close to the highway, 200 feet from the factory, and is elevated and enclosed in a small building. All floors, both in the manufacturing and curing rooms, are of cement and are so constructed that they can be flushed perfectly at any time, and all floor slop will rush to the opening in the corner, where it enters the tile leading to a tank or cesspool, a short distance from the factory. This is so constructed that no undesirable odors can be noticed even if one stands upon it. From the weigh

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105

stand to the little laboratory in the far corner, all necessary equipment is found. Nothing is left out that will add to the convenience of the maker, or to the yield or quality of the finished product. Power for hoisting milk, power curd agitators, latest and best equipped cheese vats, acidimeters, and Babcock tests are found. In fact no part is lacking.

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Cheese Department

Makers are invited to send contributions to this department, to ask questions on matters relating to cheesemaking and to suggest subjects for discussion. Address your letters to The Cheese Maker's Department.

The Home Cheese Trade—No. 4

What are called "twins" are becoming a feature in the local cheese trade. Especially is this true of Toronto. Wholesale dealers here report a growing demand for this kind of cheese and that the quantity being made is increasing every year.

A "twin" is just half the size of the regular factory cheese. They weigh about 40 pounds each. They are shipped two in a box, and are more convenient to handle than the full size, or, at least, because of the smaller weight, they can be handled in the warehouse and delivered to the retail trade to better advantage. There is also this advantage: a grocer can sell a 40 pound cheese quicker than an 80 pound one, and there is not so much cut surface exposed when on the counter. It also lends itself to selling by the pound or half pound better. A pound of cheese cut in this way through an 80 pound cheese is very thin and dries out quickly. It is twice the thickness in a "twin," and, therefore, suits the customer better. There is this disadvantage, however, that there is more rind or surface in the "twin" in proportion to the size than in the large cheese. This means more waste. Then there is the extra press work required in the making, all of which adds to the cost.

Twin cheese sell for about $\frac{1}{4}$ of a cent per pound more than large cheese, or, at least, this is the difference in the dealer's quotations to the retailer. For a retail trade, the larger size would serve the purpose better than the smaller ones. If a retail trade could be worked up here to buy this, and there is no reason why it might not be, an 80 pound cheese would suit all purposes. It would cost less to produce, and there would be less waste. This is interesting just here to compare the price of cheese on the local cheese boards and the quotations on a local market like Toronto. On August 13, for instance, cheese at the country basis sold at 12 1/2¢ to 12 3/4¢ per pound; on the same date dealers were quoted on Toronto wholesale market at 13¢ to 13 1/4¢ for large, and 13 1/2¢ to 13 3/4¢ per pound for twins. Here is a difference of 3¢ per pound between the price the factories sold for and what the retailer in the city could buy cheese for. Is this too large a margin for the dealer who handles for the local trade? It would be if our grocers sold as many cheese a day as the retailer does in England. But, under present conditions here, where the retailer buys in small lots, the margin the jobber gets for buying, storing and handling is, perhaps, none too large. It is a question, again, of the amount of business done. If Canadians were cheese eaters, and a larger share of the output "consumed" at home, business could be done on a smaller margin of profit for both the jobber and retailer, and the consumer would get better and cheaper cheese.

For a number of years a few of the better factories have made a limited quantity of cheese weighing from 10 to 15 pounds each. These have usually been made in September when the fancy cheese of the season is manufactured. They are about the same depth as the regular cheese, but are made in hoops small enough so that three will fit snugly in a box. Only about 30 pounds can be put in a box, as against 80 pounds in the regular size. Special hoops are required and

extra work and care is required in bandaging and pressing. The curd should be specially fine, free from bad flavors and of a kind that will produce a fine, meaty texture and body. The extra cost is, therefore, considerable. And as the product is required to be of the finest quality, factories get about one cent per pound more over the regular market price for making them.

So far, this trade is of the ordinary kind. That is, factories will not make these small cheeses unless they are ordered by some dealer. The output, therefore, is limited, and has never cut a large figure in the market. There is no reason, however, why a good trade could not be worked up in this line. The cheese should be well cured and made strictly fancy so as to cater to the best class of customers who are willing to pay a higher price for a small family cheese. They are not, as is often supposed, the larger size, for cutting on the counter. They had best be sold whole to the consumer. The grocer catering to the best class will be able to handle them to advantage.

One of the essentials in developing the trade is that the cheese should be well cured. The writer has some of these small cheeses in his cellar at the present time that were made last September. Even now they are none too well advanced in the curing, and will be better a couple of months hence. Such cheese are better a year old than six months old, and if properly cured for and cured at the right temperature, they will be better still a year and a half old. In fact, a kind of the quality that the writer has at present would keep under favorable conditions for a couple of years, and be better liked by the cheese "connoisseur" at the end of that period than at any other time. There is no reason why any limit to the keeping qualities of a well made, perfect flavored Cheddar cheese, if properly cured. Dairy Commissioner Rudwick had a number of small cheeses made two years ago. The last of these was cut a short time ago. Mr. Rudwick stated that they steadily improved up to two years of age, and were superior to anything he had ever eaten in this country. They were made in the month of September and were kept at a temperature of 60 degrees all summer, in a cool curing room, and in cold storage afterwards.

Mr. Rudwick's experience and that of others in the trade goes to show that if a trade in small ten pound cheese is to be built up, those caring to prepare to do so should hold the cheese for a year at least. This means that factory men will not do it, and that some middleman will have to undertake the responsibility of buying and holding the product till it is ready for the consumer. There have been certain large dealers doing this and, we understand, with considerable success. They should be little difficulty or risk in the matter if cold storage facilities are available. To get the best results the factories making them should have cooling-curing rooms and be able to keep the cheese at a temperature of 60 degrees for a few months after they are made, when they would be ready to go in cold storage.

If properly made, properly cured, and properly handled, till ready for the consumer, it should be possible to develop a high-class trade in this quality. Like everything else that is comparatively new on the market, it would need to be well advertised. Once established there would be no difficulty in holding the trade for all time. A farmer once accustomed to this kind of cheese would want no other, and the demand for it would grow among the more wealthy class, who are able and willing to pay a good price for what they want. The

average family would consume at least half a dozen of these small cheese in a year. This would mean a large market for a steady fancy quality, which it will pay dairymen to give some attention to.

Cheap at \$1 per Ton of Cheese

Ed. The Dairyman and Farming World.—In regard to pasteurizing whey, I might say that it is giving entire satisfaction to all concerned. I have had better flavored cheese than in former seasons and my patrons, without any exception, are well pleased with the increased feeding value of the whey.

Our whey tanks are always clean, as no grease gathers on the top as there was when we did not pasteurize.

My patrons all tell me that their milk cans are much easier to clean since the whey is heated. This fact may cause some to be a little careless about washing their cans, as they might be if the whey were not pasteurized. This is, in belief, all that can be said against pasteurizing the whey.

One patron told me he would vote to have the whey pasteurized if it were to cost \$1.00 per ton of cheese made.

I believe that pasteurized whey is worth double what it was before we pasteurized. The whey from an elevated tank the next morning after being pasteurized tested only 2-04 per cent of acid. I would advise every patron of a cheese factory to vote for having the whey pasteurized. It will pay the cost every time.

R. A. Treleven,
Cheese Maker,
Rothsay Factory, Wellington Co., Ont.

Gets Rid of the Bitter Flavor

Editor, The Dairyman and Farming World.—My experience with pasteurizing whey has been that it improves the flavor of the cheese. We separate the whey and make whey butter, so that there is no fat left in the whey. I have heard very little from the patrons for or against the system.

The whey tanks are much easier to keep clean when the whey is pasteurized. More of the solids of the whey settle to the bottom of the tanks. If all the whey is removed every day it is very much sweeter, but if not, I think it develops more acid than formerly and is not relished so well by the hogs, and is not in as good condition for feeding.

The New England factories have been troubled with the bitter or yeasty flavor to quite an extent in the past few years, but this year, so far, we have had none. I consider pasteurizing the whey is worth the time and trouble if it only rids the cheese of this flavor.—C. C. Travis, cheese-maker, New England factory, Norfolk Co., Ont.

No milk should be accepted at a factory which has been kept in iron exposed pails or cans.



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—Hippocrates.

Soldiers of the Queen

GENERAL Desmond Fitzgerald, K. C. B., V. C., etc., etc., stood before the pier-glass in his dressing-room in the clear light of an Irish May morning and surveyed the reflection of his figure with an angry and dissatisfied glare. His body-servant, Cagney, a veteran of as many campaigns and years as his master, surveyed the same reflection with an eye which seemed to say that, under the circumstances, he had done all that could be expected of him. If he had spoken he might have added that he derived as little pleasure from his own quiet livery as the General derived from the faultlessly-cut but somewhat sombre attire in which Fashion and a London tailor had increased his still upright figure. For it was only a few months since the General had retired from the Indian branch of Her Majesty's army, returned to his native land, leased the beautiful estate of Avonmore, and assumed the role of a country gentleman and Justice of the Peace. After thirty years of scarlet and gold he found it hard to reconcile himself to the conventional dress of his new character.

"Cagney," said he, and the other old soldier stood at attention, "you may lay out my dress uniform to-night. I shall dine in it." Through this astounding command Cagney's training held. There was the merest flicker of his eyelid as he saluted.

"I've promised my daughter," the General continued, "to put it on. She tells me she is very anxious to see me in it. She doesn't, of course, know the regulations. But there can be no harm in seeing it for an hour or two to give pleasure to a charming young lady. And my medals, too," he added; "get them all out of my dressing-case. She is refreshingly interested in all I can remember of the actions I was in. And she is an undeniably charming young woman, Cagney; the very image of my poor dear mother."

"She's a jewel of light," answered Cagney, in a Cork accent, which neither the heat nor the hills of India had modified one whit. "You'd think so if you was to see her and Mr. Desmond goin' off with themselves under her white parasol after breakfast. 'Cagney,' says she, as pleasant as if it was only yesterday she was ridin' round canteen-rooms on me shoulders with her little arms around me neck and me holdin' on to her little scraps of legs—'Cagney,' will you remind the General, my father that he has promised to ride with me after luncheon?"

"By-the-way," interrupted the General, "which of my riding suits is most becoming to me?"

"Your green, sir. It fits your figure

better an' gives you a youthful look altogether, sir."

"You may lay it out," said the General. "And look to the boots."

"I will, sir," answered Cagney, and the General had nearly reached the door before Cagney spoke again, "I'm wonderin'," he insinuated, "if it would be took in the light of a liberty if I was to put on my old red coat, too, this evening when you wear your uniform. A General," he pointed out, "had rightly ought to have a aide, and maybe ye wouldn't mind—for the want of a better—lettin' me stand behind you like I was goin' to go off of messages for you. The red would be a bit brighter," urged Cagney deferentially, "if there was two of us in it, an' Miss Shiela might get a better idea from it."



The commodious and comfortable farm home of Mr. J. W. Suddard, Frontenac County, Ont. Note the interior plans published on the following pages.

The General hesitated, undecided, and Cagney went on artfully: "An' as for the stories of the medals, sure who could be tellin' her them better nor me?"

"Very well," the General acquiesced suddenly. "We'll show those boys of mine that there's nothing a woman loves more than a red coat and a gold button."

The little review was a great success. Shortly before the dinner hour the General clanked into the drawing room in full uniform, followed by the hardly less resplendent Cagney. Shiela, in the prettiest and softest of white gowns, with white roses in her brown hair, made a most satisfactory audience. The gentle Lady Mary, dutiful consort to the General through the vicissitudes of his many campaigns, was an admirable chorus, and insisted with a fond pride upon such parts of the recital as redounded most to the honor and glory of her dear General. The four sons were properly

impressed and outshone. And Cagney threw in picturesque remarks.

One by one Shiela imperiously pointed out the medals on her father's breast, or on Cagney's and demanded the full and circumstantial story of why they changed to be there. And obediently the two old soldiers, urged by Lady Mary and cheered by the attention of the younger men, stormed red-walled cities, resisted night attacks, lurked in ambuscades, endured long marches and short rations, met fevers, tigers, natives, steaming darkness and blinding heat, all with an unconcern and bravery which made the adventures their own reward even without these glittering memorials.

"And now," commanded Shiela at last, "tell me why they gave you this scrubby little black one," and she pointed to a small creek cross hung on a party-colored ribbon.

"My dear Shiela," expostulated Lady Mary, "that's the Victoria Cross."

"I knew it." The girl laughed. "I was only joking. Tell me how you got it. I can read your name and the date: September 14, 1867. What happened then?"

"The fall of Delhi," whispered Lady Mary. No passage of time, no years of happiness, could dim her memory of that day.

"That's for nothing much," the General made hasty assurance. "You see, every one was a bit excited. John Nicholson, the greatest soldier we ever had in India, was commanding us. The siege was up: All those weary months of waiting were ended. And we rather made fools of ourselves in the excitement. That's how it was."

"Beggin' your pardon, sir," Cagney insinuated, "I know, and Lady Mary knows, and the young gentlemen ought to know, that the Victoria Cross isn't given for 'nothing much.'"

"Then you tell us how it was," urged Shiela; and Cagney, standing behind the General, told the tale.

day with only a slaughtered arm to show he was in it. As with the Queen heard of it she sent him the Victoria Cross."

"Oh, I'm so proud of you, papa," cried Shiela.

"And the third man?" questioned Owen, the General's youngest son.

"The poor fellow was killed," answered Lady Mary. "But when we heard that there was any of your father's being decorated he insisted that the third man deserved the same reward. So the Cross was sent to his people."

"What was his nationality?" asked Desmond, the eldest son.

"Irish, to be sure," responded Cagney promptly. "Nearly all them Crosses is given to the Irish. It's the most Catholic nation, ye see," he added with a grin.

"And the fondest of fighting," submitted Owen, as dinner was announced.

Lady Mary Fitzgerald loved the dinner hour. She sat at the table in glow of happiness and pride as she looked at her dear General and her handsome, clever, entirely satisfactory children. All the perils and parings of earlier life were compensated for by this blessed family circle which revolved so lovingly about her. She had been supported through the thirty years of the General's service in India by a vision of this time. She had borne separation from her children—when their health and education made it necessary to send them home to the care of various aunts and uncles—because she had looked forward to the time when she should gather them about her again and love them and make much of them. The time had been nearly long in coming, but it had come at last, and now life seemed fair and kind indeed to Lady Mary. But there were those in Ireland in that same year of 1867 to whom life was hard and bitter, and an echo of their unmet sometimes reached the family at Avonmore.

Continued next week

Paying Off the Mortgage

At some time or other it is almost necessary to mortgage the farm. Then the struggle begins to repay the debt. Usually the ways and means for getting together the necessary funds to meet the obligation falls to the part of the housewife, rather than any other member of the family. It is the woman on the farm who usually looks after the ends and it is the woman of the household to whom credit must be given in nearly every case for improving and bettering the surroundings of the home.

We are desirous of publishing an interesting article giving some experiences of Canadian housewives in assisting to reduce or cancel the mortgage on the farm home. We will therefore give prizes for the three best letters received giving the experiences as set forth above. The first prize will be \$5 worth of merchandise to be selected from any advertiser who advertises in our paper during the rest of this year. The second prize will be \$2.50 worth of merchandise to be selected from any advertiser in the paper during June and July of this year; the third prize will be one of our new Cook Books.

We on one side of the paper when sending in your letter, and give your personal experiences, or that of some one of your friends. This contest will close the last of December.

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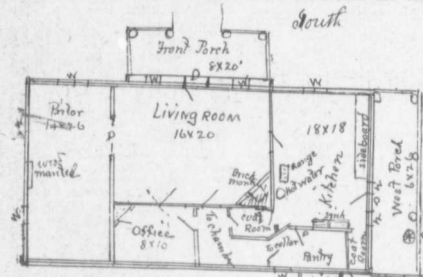
To destroy worms in flower pots, stick a quantity of slips of paper head downwards into the mold, and then water the plants. The matches will poison the worms.

An Up-to-Date Farm Home

The accompanying illustration shows the new farm home owned by J. W. Suddard, Frontenac County, Ont., with a stone tenant house to the right some distance in the rear. It is a comfortable and roomy farm home and one which any farmer is likely to be proud of. The end of one of the barns may be seen in the rear at the left. Mr. Suddard writes us that he considers his house one of the best

comfortable living room forms the chief feature of the first floor. A spacious brick mantel and fire place occupy one corner of this room. Mr. Suddard has a private office just off this living room.

Another mantel and fire place are seen in the parlor. The diagram below shows the arrangement and size of the sleeping rooms of which there are five. Each are provided with good closets room and within easy access to the commodious and convenient



First Floor Plan of Home of J. W. Suddard (See page 14)

constructed and most convenient farm house in Ontario and he has given much attention to the details in building the same.

The walls of this house have double air spaces and it has also double floors of clear lumber throughout the entire house. The house is finished entirely in hard-wood, with hard-wood floors. It is piped with gas, is heated with hot water and has the bath, closet and laundry. There is hot and cold water on both floors as well as in the laundry. The laundry is in the basement of the house.

Soft water is furnished both hot and cold to the bath-room, kitchen and laundry. Pure cold well water is furnished from a well through a pump on the west porch.

INTERIOR FINISH

The first floor stair-way and the bath room are finished in red birch. Building paper is placed between the floors throughout the entire house for warmth and deadening of the sound.

The first floor plan shows a convenient wood-shed from which one can go into a lobby adjoining. From this lobby entrance is had also to the cellar, which is a most convenient arrangement. The kitchen is on the west side of the house and near it is a coat-room, from which is an entrance, also, to the outside porch. A second entrance to the cellar can be had through the pantry. A large com-

bath room. A roomy linen closet is a feature of this floor. The main part of the house is 28 x 55 feet with an addition of 18 x 38 feet.

COST OF HOME

Mr. Suddard writes that the cost of his house with water service, heat, plumbing, decorations, and all complete was about \$6,000. While very few can afford as elaborate a house as Mr. Suddard's, the arrangement of the house and conveniences can be obtained on a much less expensive scale and thus lend attractiveness and convenience to many farm homes.

THE CELLAR

The soft water in Mr. Suddard's house is supplied by a wind-mill while the well water is drawn as required. The cellar plan is not shown to scale but shows the arrangement and divisions of the cellar. The walls are stone and are 22 inches thick. The cross walls are brick and are eight inches thick. The small circles in the diagram shows the piers that support the floor. The main and cross walls are built up to the floor which are laid in soft mortar to make tight. Twenty-eight inch beams run the length of the house, separated by cross walls and piers to support the floors. The laundry has stationary tubs with hot and cold water connections. A novel feature of this arrangement for the cellar is a roomy fruit kitchen.

We certainly congratulate Mr. Suddard on the admirable arrangement he has given his home and wish there were more farm homes in Ontario of a similar nature. We feel however, that there are many and we would be glad to receive photographs and plans of the same.

Whenever you get a new broom pull out a dozen or more straws to have whenever you want to try a cake.

Managing and Caring for Bees

N. C. Campbell, Brant County, Ont.

With fall and winter approaching, one of the first considerations for the amateur in keeping bees, is to see that they are properly cared for. There are many kinds of hives. Probably the best and the one most universally used is the eight-frame Langstroth. Many are content to keep bees in any old kind of a box or hive that is convenient. It will pay to get the proper hive with adjustable frames at the outset. Then no difficulty will be experienced in extracting and the whole operation is easily performed.

FEEDING THE BEES

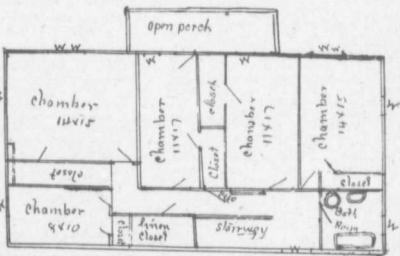
With the bees properly hived, it is then important to see that they have sufficient stores to carry them through the winter. The bees will gather but little honey throughout the remainder of the season. Too often this fact is lost sight of and the bees are left with too little honey at wintering time. Honey should never be taken from the super or lower hive. The bees require all they can store in this space to care for the brood and keep them over the winter. Should they be short of stores they should be fed. Various kinds of feeders are made for this purpose. For the amateur with a colony or two, it is not necessary to invest in these. A cake of candy made from pure granulated sugar placed on top of the frames under the extracting time, will replenish the stores. Precautions must be taken to prevent the bees robbing.

to set the orange on. To make the jelly, soak half a box of gelatine in half a cupful of cold water until dissolved. Then add one cupful of sugar, the juice of one lemon, and three oranges and one cupful of boiling water. Strain and when partly cool, turn into the baskets and let cool.

FANCY CAKES

Next make domino cookies. Cut the cookies twice as long as wide; put white frosting on them after they are baked and place the dots and mark across the middle with chocolate, marking them the same as a set of dominoes. You can make small round cookies not over two inches across when baked. On these, in the centre, after putting frosting, place a large raisin; at one end put a clove, so the end is under the large part, to show for the head, at each side place cloves to form the feet, having the most of the clove show. This will look like a mud-turtle.

Make ginger snaps very small so that when they are baked they will not be larger than a six silver piece. Ginger buttons we call them. If you want fried cakes, cut small ones the size you cut out of the centre of large ones. When cold, put pulverized sugar in a bowl and roll them in it. Then you can make one cake in a square tin so it will be about an



Second Floor Plan of Home of J. W. Suddard (See page 14)

This is done by closing a portion of the entrance so that only a few bees can get in or out of the colony.

BEES SHOULD FILL SPACE

The bees should fill all the available space in the hive before the cold weather approaches. Should they not fill the space it is advisable to use a division board in the hive, giving the bees only such room as they require. Fill the space on the other side of the division board with some old clothes or rags. If the Langstroth hive is used, it will be necessary to pack it in sawdust for winter unless the bees are wintered in a cellar or under shelter. The chief concern just now is to make sure of the bees having plenty of food for winter.

Happy Memorab Birthdays

You can make the children very happy on their birthday with a little trouble and not much expense. Of course they would like a few of their best friends to help them enjoy it.

First, their oranges can be made into baskets. Take as many oranges as desired and cut them the round way just in the middle of the orange, all the way round, except two places about 1/2 inch wide on opposite sides. Then cut this narrow strip the other way, so as to have a perfectly round basket with handle. Carefully remove all the pulp, fill these baskets with orange jelly, and place green leaves in the dish

inch thick. When cold cut in one-half inch squares, then frost the pieces on top and sides. The easiest way to make the frosting is to take pulverized sugar and add enough milk to moisten. It will soon set.

Wall paper that has been soiled by a smoky fire or lamp may be cleaned by using a hard dry sponge; the stiffer and harder, the better. Rub the wall briskly with it.

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Pears and Quinces

CHIPPED OR SPICED PEAR.

Cut 8 lbs. pears into small dice or chips, cover with 4 lbs. sugar, and let stand over night. Next morning add the grated rind and juice of 3 lemons and 2 ozs. white ginger root. Simmer slowly about 3 hours and can while hot.—Mrs. L. G. Small, Hastings Co., Ont.

CANNED PEARS

When I can pears, I first wash, peel and core the fruit and then put the cores and parings into a preserving kettle and pour in enough water to almost cover. Boil until the juices in all extracted, then strain through a jelly bag, add 1 cup sugar for each qt. fruit, let boil up and then drop in the pears and boil them until tender.

QUINCE PRESERVES

Use 8 lbs. sugar to 10 lbs. quinces. Pare, quarter and core the fruit, saving skins and cores for further use. Put the quinces into a preserving kettle, cover with water, and let them simmer until they are almost tender, or half done. Take out the fruit, add the parings and cores to the water, boil slowly for an hour, and strain the juices through a jelly bag. Return the strained juice to the kettle, add the sugar, let boil for 20 minutes, skimming as it boils, then add the fruit and cook until sufficiently soft to pierce with a straw. If the juice is not a syrup, take out the fruit with a perforated skimmer, boil the juice down, put the fruit in jars, making them two-thirds full, fill with the syrup and seal when cool.—Mary E. Underwood, Man.

Orange peel, dried and grated, makes a very fine yellow powder that is delicious flavoring for cakes and puddings.

Homemade Mattresses

I make my own mattresses to sleep on, as the day is fast approaching when the "old dusty straw tick" must be relegated to the past. Besides, I then feel I can afford a little more money for springs, which should be of the best woven wire—those which have the spiral under the woven ones, this preventing sagging in the centre.

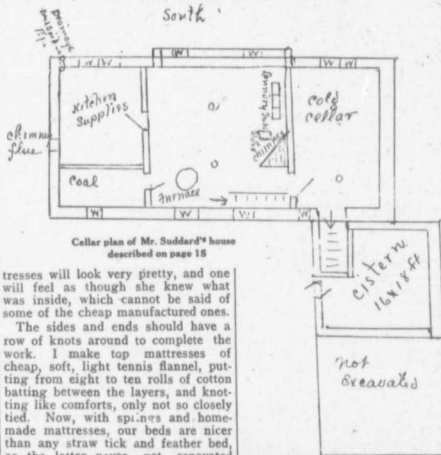
I take the best fancy blue striped ticking, cut the desired length and width, with side and end pieces two fingers wide. When sewed up, with an opening in the top piece, fill with as much excelsior as can be pressed in, sew up the opening, and tie just as the store ones are. Use an upholsterer's needle. The work is easily done then, and by using bunches of colored warp to knot with, the mat-

trass is easily kept clean by just putting it in a barrel kept for such use, and washed with a "pounder" machine. I have one of the first ones which cost \$5.00, but any tinmith will make one for 60 cents. That is all I paid for mine.—A Canadian Housewife.

Bee-keeping

My little boy 11 years old is much interested in bees. He has been picking raspberries and earned considerable money that way. What he earned we put with \$5 and bought a hive of bees.

We like the bees and think they like us. If any of your readers have had experience in beekeeping I would be much pleased to have them write me how to care for the bees.—Mrs. A. Marshall, Monk Co., Ont.



The Sewing Room

Patterns 10 each. Order by number and size. If for children, give age; for adults, give bust measure for waists, and waist measure for skirts. Address all orders to the Pattern Department.



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6109 Fancy Blouse Waist, 22 to 40 Bust.



6111 Child's Night Drawers with Foot, 2 to 8 years.



6112 Tucked or Gathered Sleeves, Small 22 or 24, Medium 26 or 28, Large 40 or 42 bust.



6113 Nurse's Bath Robe, 12, 14 and 16 years.



6114 Girl's Tucked Dress, 8 to 14 years.

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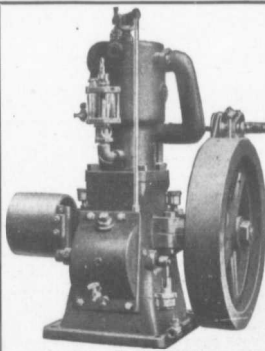
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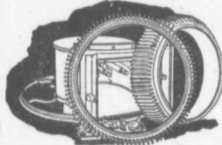
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