

Issued Each Week—Only One Dollar a Year

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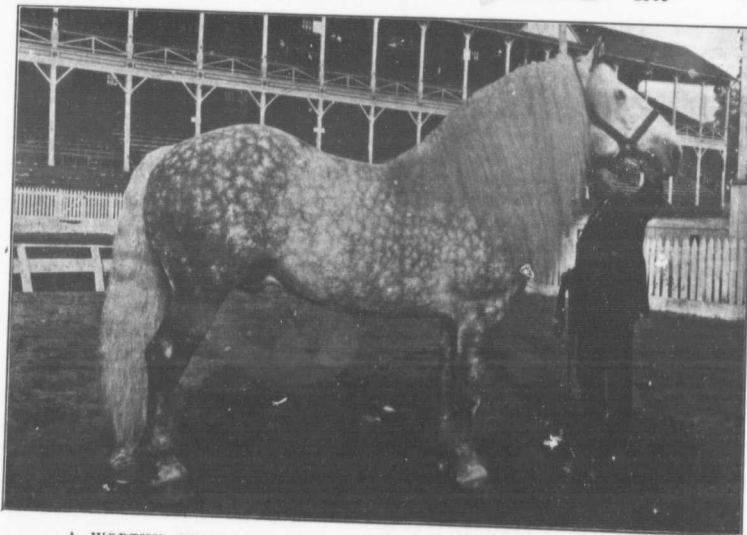
NUMBER 16

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

APRIL 22 1909



A WORTHY REPRESENTATIVE OF HIS CLASS AND OF HIS BREED

The horse breeding season, as it is commonly known, is again with us. What breed to select must rest with the breeder himself. It will depend upon his natural inclinations, his mares and upon the demand of the market on which he hopes to sell the progeny. In selecting a stallion, make sure that he is worthy of your patronage, and don't permit his service fee to bar you from realizing the additional value of his get. The illustration shows the champion Percheron stallion at the London, Ont., Fair, 1908, as exhibited by Messrs. Hamilton & Hawthorne, of Norfolk Co., Ont.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

TAKE NOTICE

Every Farmer
Every Farmer's Wife
Every Dairymaid
Every Person Interested
in Dairying

Should take notice that to make a success of dairying it is necessary to have cows that give an abundance of milk, and more important still is the kind of a separator they use to separate the cream from the milk. Now, we do not want to dictate to any person, but if you are open to receive advice on the separator question, we can give it to you. The advice we will give you has been gained from the experience of thousands of separator users. They know that there are some very good separators, but when it comes down to advising their neighbors which separator is the best, they all agree that for all-round efficiency, there is no separator to equal the **SIMPLEX LINK-BLADE**. They are simple in construction, easy to clean, and made in the "last for ever" manner that has made them popular, even with those who purchased their machines years ago.

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HUDSON, N.Y. CHICAGO, ILL. ARLINGTON, MASS.

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

Dairy Herd Competition

The Dairymen's Association of Western Ontario will conduct a Dairy Herd competition during 1909 along similar lines to that of 1908, offering \$100.00 in cash prizes. 1st, prize to the patron sending the largest amount of milk per cow to any cheese factory in Western Ontario from May 1st, to Oct. 31st, 1909—\$15.00 in cash, and possibly a cup or medal, 2nd, \$15.00, 3rd, \$10.00, 4th, \$6.00, 5th, \$4.00. Also 1st prize to the patron who furnishes the largest amount of butter fat per cow to any creamery in Western Ontario from May 1st to October 31st, 1909—\$15.00 in cash, and possibly a cup or medal, 2nd, \$15.00, 3rd, \$10.00, 4th, \$6.00, 5th, \$4.00.

The rules of competition will be the same as last year. This early notice is given so that patrons may make such preparations as they desire before the 1st of May. Later in the season prize lists and entry forms will be sent out to the different cheese and butter makers for distribution among their patrons. We believe these competitions have been the means of stimulating the production of milk, and we trust that a larger number of entries will be received this year.

Spring Care of Winter Wheat

From cultivation experiments carried on at the Nebraska Experiment Station with winter wheat it was shown that no increased yield could be secured from harrowing it in the spring. Harrowing broadcasted wheat resulted in an average loss of almost three bushels per acre, while harrowing drilled wheat resulted in a loss of nine-tenths of a bushel an acre.

It should not be assumed that the cultivation of wheat would not be of value in drier regions. Cultivation is for the purpose of conserving moisture, but in the years in which these experiments were made on wheat there was no lack of moisture. In fact in the two seasons when spring rainfall was below normal (1905 and 1906) there was some increase from cultivation.

Rolling winter wheat in the spring has not failed in any of the four years to give an increased yield, the average increase being 5.1 bushels per acre. The rolling was given early in the spring, soon after frost was out, and about the time growth started. Harrowing after rolling was not as good as rolling alone, probably due to loosening up the plants again after the roller had pressed them firmly into the soil.

Early spring rolling of winter grain, pressing the earth as it does firmly about the plant roots, produces good results. When frost comes out in the spring it is very apt to leave the soil filled with small cracks or checks, especially around the plants. If these checks are examined closely, it will be seen that a large number of roots are thus exposed, and if the weather continues dry they are killed or at least injured. Plants have been taken up in the spring where half of the roots were injured in this manner. If the soil is not wet at the time of rolling—and it should never be rolled when wet—rolling aids in no small degree to form a surface mulch. It does this rather than compact the surface.

Highest Priced Canadian Cow

When Brown Bros., of Leeds Co., Ont., received \$2,000. for their record breaking Holstein cow, it was thought by many to be the highest price ever paid for a Canadian cow. A correspondent of the Truro News disputes this claim stating that the highest price was for Mermaid, of St. Lambert, a Jersey, bred in Hamilton, Ont., brought to Bedford by G. W. Baggs, afterwards sold to John C. Spence, and sold by him to Geo. W. McCully, now Conductor on the D.

A. R., and sold by him to an Upper Canada man, who sold her for \$4,000. She was afterwards sold in Kilgogue's sale in New York for \$25,000. Her two year old heifer was sold at the same sale for \$10,000. The milk and butter record for Mermaid also raised her price, and together with her breeding was what made her valuable.

Cobourg Horse Show

The Cobourg Summer Horse Show will now become an incorporated body, under the name of the Cobourg Horse Show Association. This was the decision reached recently at an important and well-attended meeting of officers, directors and interested citizens. Preliminary arrangements were made also for the show this year, which will be held on Aug. 17, 18, 19 and 20. A large barn to give accommodation to some 70 or 100 horses is to be erected in order to provide increased accommodation to larger exhibitors from a distance. No pains will be spared by the horse show committee to make the coming show in August, the biggest show of its kind in Canada, and they are undertaking the work with the hearty cooperation of Cobourg citizens. It will be held again in Donegan Park, where there is a fine track and seating accommodation for several thousands of people. Improvements made to the grounds last year involved an expense of between one and two thousand dollars, but the biggest increase in gate, grand stand and box receipts, entry fees, etc., justified the committee in their work.

The Cobourg Horse Show, since its inception in 1908, has had an appreciably good effect upon the breeding industry in the Midland district, and last year was the means of gathering together many of the most celebrated horses in Canada. Wills, Galt; Dr. W. A. Young, Crow & Murray, H. C. Cox, Geo. Pepper, Toronto; Senator Beith, Bowmanville; T. H. Hassard, Millbrook, were among the well-known names.

The new organization will meet shortly to appoint officers and make further arrangements for this year's show. The 1908 officers were: Hon. president, D. F. Donagan; president, J. H. Daylen; vice-president, Chas. E. Speer, sr.; treasurer, E. W. Hargraf; secretary, John H. Davidson.

Rural Mail Delivery Boxes

Kindly advise me where I can get one of the Government rural mail delivery boxes? What do they cost? The mail goes past our house every evening. I wish to secure one of the boxes that I may have my mail delivered at my gate.—A. C. R. Russell Co., Ont.

Rural mail delivery routes are only inaugurated upon already existing routes. Any person living on or contiguous to a rural mail route and not within one quarter of a mile of the corporate limits of any city, town or village who desires his mail deposited in a box authorized by the Department at a given point on the line of the route by the rural mail courier may take advantage of the opportunity afforded.

Such a person shall provide and erect a box known as the King Edward mail box on the road side, located in such a manner as to be reached by the courier without dismantling from his vehicle or horse. This box can only be obtained from the Post Office Department of Canada. It is supplied at cost price, namely \$3.00.

The usual procedure for the establishment of a rural delivery route is the forwarding of a petition to the Postmaster General, on a form supplied by the Department. Any person wishing to take advantage of the system signs the form, thereby guaranteeing to erect a box. On receipt of this petition, the matter is taken up with the contractor and the Postmasters on route.—A. Bolden, P.O. Inspector.

ISSUE
Each

Vol. 3

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Each Week

FARM AND DAIRY

RURAL HOME

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a Year

Vol. XXVIII.

FOR WEEK ENDING APRIL 22, 1909.

No. 16.

PREPARATIONS FOR SUMMER DAIRYING

J. H. Grisdale, Agriculturist, C.E.F., Ottawa

Cows are frequently badly fed, hence they prove unprofitable. Provide supplementary feed for the days that will surely come when pastures are not as good as under June conditions.
Suggestions on suitable soiling Crops.

THE great majority of our Canadian Dairy Farmers are interested in Summer Dairying, and in Summer Dairying alone to the exclusion of that other brand of the industry commonly called Winter Dairying, and mistakenly considered well nigh impossible, or at least quite impracticable in most parts of Eastern Canada. The season for Summer Dairying, however is rather short. It starts out with a month or so of uncertain feeding in the spring. It ends up too often with eight or ten weeks of bare cold pastures, odds and ends of roughage, scant care and rapidly drying off cows, so that December usually sees the final dying effort of even the most truly altruistic cow.

This too often neglectful treatment of the dairy cow is due most commonly to the rather poor returns the average dairy cow makes to her owner for the food he does manage to give her. The poor returns from the average dairy cow in Canada are in almost every case due to the too often meagre supply of rather inferior food that falls to her lot. So there you are. Cows are unprofitable, hence badly fed; cows are badly fed, hence unprofitable.

TIME FOR A CHANGE.

It is time for a change in this matter. Surely we "the intelligent animals" should be willing to do our part. Our part is, give our cows lots of suitable feed when needed. Such feed is needed throughout the lactation period. We may not be ready to start right now this spring and make a revolution or a marked improvement in our feeding methods, but there is absolutely no reason why we cannot, every one of us, make a radical and most profitable change in our Summer Feeding this year.

SUPPLEMENT THE PASTURES.

After the cows are on grass there is usually no scarcity of forage for a month or six weeks. This shows itself in the groaning docile cow and the liberal milk flow. Shortly after Dominion Day, however, a change may be noted. The milk goes into smaller space and the docile cow becomes uneasy and a roamer. Even before the first hint of such a change is the time to begin to prevent it. An abundance of good succulent and nutritious forage is the thing to ward it off. Supplement the pasture even while yet it seems ample. It is surprising how much forage a good dairy cow will consume in addition to what looks like a plentiful grass supply. Every pound she eats under such conditions is clear profit to the farmer. The final part is the profit yielding part of the ration. The Dairyman's every look and touch and act should say to the cow in full flow of milk, "Just a little more won't you?" It's "just a little more" that makes the money. Let us all get busy and be ready to say even to the worst old cow in the herd next July, "Just a

little more won't you?" We'll all be astonished at what she will do, but we'll more than be astonished at the way the good ones will respond.

There's always lots of feed on the farm in July. The trouble is one hates to enter a field of rolling clover, growing grain or waving corn and cut therefrom a section to save the daily needs of the dairy cow. It very seldom has been done and is little likely to become a practice widely spread. It is folly to count on such action on one's own part. May resolutions are very certain to succumb to fears for February forage when the hot July sun wilts things down. Yes, to depend upon utilizing a part of the regular crops to supplement failing pastures would be a most mistaken policy, although it is quite certainly the policy, which not a few well meaning dairymen attempt to follow and fail to carry out.

A SPECIAL CROP SECTION.

The proper policy, the right thing to do is, set aside a portion of the farm whereon crops shall

Words of Congratulation

I must congratulate you upon the constant improvement of Farm and Dairy. It should be read by all who have the industry at heart and wish to make a profit out of it.—H. Bollert, Oxford Co., Ont.

be especially grown for supplementary summer feeding or soiling purposes. This area should include about one acre for each three dairy cows in the herd, that is for a herd of 15 cows in milk, there should be five or six acres devoted to soiling crops. The area selected should, generally speaking, be located near the buildings. It should be divided into three or four nearly equal parts. A regular rotation should be followed.

SOME REQUIREMENTS OF SOILING CROPS.

In deciding upon the crops to grow some essential points or requirements of successful feeding must be kept in mind (1) An abundance of forage, (2) Quality should be such as to insure milk production, (3) It should be ready at the time needed, and (4) there should be such crops as will allow of a rotation in order to permit of the same land being used continually.

SOME SUITABLE SOILING CROPS.

As crops capable of filling these requirements one might name Red Western Clover, Mammoth Clover, Peas and Oats mixture, Corn, Millet, Vetches, Alfalfa, Sugar Cane and Fall Rye. Red Western Clover is peculiarly well suited for Eastern parts of Ontario, Quebec and Maritime provinces. It gives a very early cut, and if desired will give a second crop or furnish good aftermath.

Mammoth Clover gives a later and possibly

somewhat heavier crop and is probably somewhat better suited for Western Ontario where climatic conditions do not often favor a second crop of clover.

Peas and Oats Mixture. These two mixed in equal parts by weight and sown at the rate of 3½ bushels an acre usually prove very satisfactory both as to quality and quantity of feed produced. By exercising a little care at cutting time it is possible to leave a good stand of clover if the right amount of that kind of seed has been sown along with the grain. This mixture should be cut as soon as it falls and whenever it falls in order to give the clover a chance. If it should stand till the oats are in the milk stage, it should then be cut in any case since leaving it stand after that date means loss of feeding value and palatability. The addition of wheat or barley or both these cereals in moderate quantities to the seed mixture will improve the feed. This is more likely to be true if the soil is rich and strong. The substitution of vetches for peas would prove quite satisfactory.

Corn. to prove of material value as a soiling crop should be sown early and in such a way as to assure ears developing. Sowing broadcast or in rows close together will, of course, produce considerable forage that will be eaten up well by cows. This feed will, however, have very little milk producing value. Better to select an early variety such as Longfellow or Angel of Midnight and sow in rows about three feet apart. This will insure a good supply of valuable forage for the latter part of August and early September.

Millets are rather uncertain in Canada, but where it is desired to sow some land as late as early July then Hungarian Grass will quite possibly prove successful. It should be sown on warm, well prepared land at the rate of 40 lbs. per acre.

Sugar Cane if sown late in June on warm dry soil that has been well fertilized is likely to be ready to use in August and will prove a palatable and valuable feed. It may be sown in rows about 30 inches apart at the rate of six or eight lbs. seed an acre.

Fall Rye. Where one fails to get a catch of clover the land may be broken up early in September and sown to Fall Rye at the rate of 1½ bushel an acre. This will be cut in June and might be followed by millet or white turnips or sugar cane for September feed.

Vetches of various kinds are usually satisfactory whether sown alone or mixed with some cereal. If sown fairly quickly, they have the happy peculiarity of growing up again after they have once been cut. The hairy vetch is probably the best variety but the cost of the seed is prohibitive.

Alfalfa. Where it can be successfully grown, no crop is likely to prove more satisfactory as a soiling crop than lucern or alfalfa. A suitable field seeded to this crop is certain to give excellent returns in the way of forage and the forage will be of a character to insure a most liberal milk flow if fed at all freely. Alfalfa requires a good rich, well drained soil and a field that never for

even a few hours lies under water summer or winter. It is better to sow it on roof or corn land without a nurse crop. Keep the field cultivated till early June, then seed down at the rate of 25 lbs. an acre. Cut any weeds that may grow up. Do not pasture it in the fall. It may be expected to give two or three crops the first season and three or four crops each succeeding year. It must be top dressed every two or three years.

A ROTATION.

If at all possible as already stated a rotation should be followed on the land given over to soiling crops. To begin with alfalfa must not be considered one of the rotating crops. Pick out the most suitable field or plot and keep it in alfalfa if alfalfa will grow. On the balance of the land a three course rotation is the best.

1st year.—Corn or sugar cane or white turnips, (manured.)

2nd year.—Peas and oats mixture, seed down 10 lbs. clover an acre.

3rd year.—Clover, manure in summer ready for corn or roots next year.

There will thus be each year a plot of clover, a plot of peas and oats and a plot of corn or hoed crop.

The clover field should receive the summer manure as it is hauled out and is likely to give a fair second crop to feed along with the corn in September. The clover sod and the manure turned under the next May and thoroughly worked provide ideal conditions for corn. Part of the corn area, say one third, should be sown as early as possible to, say Longfellow and the balance equally to Longfellow and White Cap, Yellow Dent or Leaming later in May. Sow in rows 3½ ft. apart and eight inches apart in the row.

The corn land fall ploughed should be sown to the oats and pea mixture and seeded down with clover 10 lbs. an acre. Sow one third plot as early as possible, one third ten days later and balance ten days later still. If the clover fails from any cause the field might be seeded to ryegrass for early spring feed next year and again to Hungarian grass after the ryegrass is harvested.

PLAN OF CROPS FOR NEXT FOUR YEARS.

PLOT I	PLOT II	PLOT III
1909.—Corn.	1909.—Peas and oats 1909.—Clover	
1910.—Peas and oats 1910.—Clover	1910.—Corn	
1911.—Clover	1911.—Corn	1911.—Peas and oats
1912.—Corn	1912.—Peas and oats 1912.—Clover	

The area for soiling crops should be near the buildings and thus always convenient for feeding and for receiving summer manure. To the man who has silo capacity and chooses to grow more corn than sufficient for his winter needs, the best solution of the problem is ensilage for summer as well as winter.

An Experience With Cement Silos

M. E. Maybee, Northumberland Co., Ont.

In giving my experiences relative to silo construction and filling, I take it for granted that nearly all dairymen are convinced of the paramount importance of silage. In all probability many are thinking seriously of building a silo this coming season. My experience in building a cement silo last summer will probably serve as helpful information to some.

I gave the contract to a man in a nearby town who has the rings made especially for building round silos. He sent two men and I provided three more, with an extra one for raising the rings morning and noon.

My silo wall is 16 inches thick at the bottom tapering to eight inches at the top. It is 12½ feet inside diameter and 30 feet high. I purpose continuing it three feet higher with lumber this summer when I shall roof it. It stands five feet in the ground. I required to build this silo 35 barrels of cement, 40 yards of gravel and sand, 12 loads of stone and 80 pounds of 1-4 inch iron, besides a quantity of planks, lumber, scantling and poles for scaffolding.

We built just five feet a day by filling two sets of rings of two and a half feet each. It required one day for scaffolding and one for plastering the inside and laying the floor. One man can whitewash it in a day. I paid transportation charges for rings and men, from their home to mine, both ways, also wages for the men while they were travelling and \$10 for the use of the rings. When I get the roof on the whole silo complete will have cost me \$175.

I have my own outfit for filling the silo. This I consider a decided advantage. It consists of a 5 H.P. gasoline engine and a cutting box with 36 feet of carriers. We cut the corn down by hand and lay it down in sheaves without binding. It requires two teams with drivers and one man in the field to keep the cutting box going, one man to feed and one in the silo. Although it takes from two and a half to three days to fill the silo in this way one can get much more into the silo than were it filled in one day by means of a larger outfit, which later also requires more men. A man is practically independent when he owns his own outfit as he requires only a few extra hands and he does not require to cut his corn all down at once and take the risk of a heavy rain or having it lie too long in the sun. It requires about ten acres of hill corn to fill our silo. The silage has kept perfectly.

Some Points in Stallion Selection

T. R. James, Middlesex Co., Ont.

No matter what type of horse is decided upon, the animal should have a strong, well knit body, large sound joints and good action. Tendons should be prominent with fine silky hair; the latter indicating that the bone is of a dense texture, hence of a good, lasting quality. Where this is the case the temperament of the animal is likely to be vigorous and the constitution hardy and healthy. On the other hand when coarse profuse hair is present it is usually an indication of spongy bone and a tendency to disease, such as grease.

It is advisable therefore to select sires that have clean, wide flat legs, which denote large conformation of bone and well developed tendons. As the wearing qualifications of the horse depends largely upon the animal having strong, well developed hoofs, sound hoofs should also be especially considered.

The general principle of heredity is that "like begets like." There are departures from this rule it may be urged, but, however, it proves true in the majority of instances. It should be remembered that bad points and qualities are as likely to be transmitted and reproduced as the reverse. Stallions should be selected that are of the right type for the production of the class of horse desired, care being taken to reject unsound, and imperfect animals, those of bad temper, and intractable disposition. Other objectionable traits should likewise be avoided.

Horse Breeding

Dr. H. G. Reed, V.S., Halton Co., Ont.

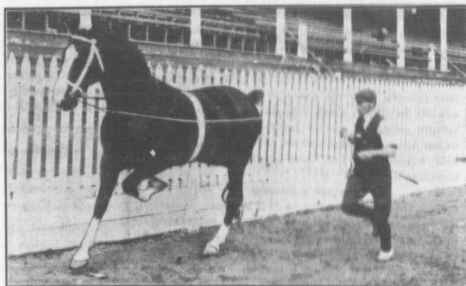
Horse breeding is the most attractive branch of agriculture to many farmers in Ontario. During the last four or five years in the hands of the careful breeder it has proved not only very attractive but very profitable. It is to be feared,

however, that the prevailing high prices for horses may have induced men to start breeding who have not a sufficient knowledge of horse conditions to make it a success.

The raising of horses is like every other branch of farming in that in order to get the best results a superior article must be produced. A man to be a successful breeder must be a good judge of the stock he is producing. He ought to be quite familiar with the latest ideals in type and conformation in the different breeds and to possess some ability—the more the better—in the matter of selecting stallions that will "nick" with the different mares, thus giving his females a chance of producing progeny that will be an improvement in the date. In the hands of a skilful breeder each succeeding generation should be an improvement on the last, but it requires a lot of thought and study as well as some natural ability to enable a man to do this. Unfortunately far too few farmers have the necessary ability while many give the science of breeding no thought at all, but go at it in a "happy go lucky" way, which renders success an impossibility.

MODERN IDEALS.

The successful breeder must be up-to-date. Horse ideals, like everything else in the world, change. The high-class draught horse of to-day differs considerably in type from the horse of 20 years ago. In the older fashioned horse weight was the prime consideration, he had coarser legs with great quantities of hair growing all around the limb and often covering almost the whole of the hoof. He was short and upright in the pastern and shoulder and often different in action. To-day while weight is certainly very much to be



A Champion High Stepping Stallion

The Hackney represents the carriage horse of Ontario. Brigham Radiant, the champion hackney at the Canadian National Exhibition, Toronto, 1906, is shown in the illustration.

be desired we are willing to sacrifice a little of it for quality. We want the clean, flat, flinty bone with a fringe of nice silky hair—when present at all—growing up the back tendons, and not all around the leg. We want the sloping shoulder and somewhat springy pastern, which together with a brisk, prompt, vigorous action, the feet being lifted well from the ground and extended in a straight line with the hoofs well together, add very much to the appearance as well as to the value of a draught horse.

Great change has also taken place in the carriage horse. It is not very long since a carriage horse was supposed to be 16 hands high or over, and those most highly thought of and most likely to win in the show ring are often 16½ hands high and even higher. The popular horse of to-day is not over 16 hands and some of the very best have been only 15½ or even slightly under that. The strong points of excellence in the up-to-date carriage horse are conformation, style, and action. He must be stylish in all respects, whether standing or in action, must have high neck and back action, must be square gaited, and if

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he has along with these the ability to go fast all the better, although speed does not count for as much as a stylish, trappy way of going. Then a carriage horse ought to have good manners. Of course this may be said of all horses, but it applies with special force to the carriage horse, because he is usually employed to draw women and children in a gentleman's rig through the streets and parks of the larger cities.

CARRIAGE HORSE OF ONTARIO.

The hackney represents the carriage horse of Ontario and the qualities just described are more likely to appear in this breed than in others. Some high class carriage horses are produced from the Standard bred, but he is essentially a road horse and the percentage of really good carriage horses from this breed is comparatively small, while the percentage of good Hackney bred carriage horses is relatively high.

No pronounced change has taken place in the type of the Standard bred and the Thoroughbred. Speed at the trotting and running gait are prime factors in those breeds. Most of our really good road horses are produced from the Standard bred, while our best saddle horses have always a strong dash of the Thoroughbred in them.

The farmer who is ambitious to breed high class horses of any breed has a grand field of operations open before him and he can engage in no calling which will give him a better chance to put into practice any mental powers he may have or give him greater scope to exercise any skill he may have acquired than in an effort to improve the quality of the horses he is producing on his farm.

Varying Percentages of Butter Fat

Prof. G. E. Day, O. A. C., Guelph.

I have no desire to engage in any controversy regarding the matter of feeding fat into milk as set forth in Farm and Dairy for April 8th by Mr. Mann, but can speak only from experience, just as the writer of the article in question has done. It is a very common experience to find cows that vary in the per cent. of fat in their milk when changed from one food to another, but if the change is from a lower to a higher percentage it is difficult to maintain that higher percentage through an extended period of feeding. When a person comes to observe carefully the results from a large number of cows, he will find a tendency for each cow to produce during a period of lactation, milk of a certain average quality, which is difficult to alter. The per cent. of fat may go temporarily up or down under different kinds of food, or even on the same food, but it is generally found that the milk produced during a given period of lactation will correspond in average per cent. of fat very closely with the milk of other periods of lactation. Cows during their first period of lactation seldom give as rich milk as they do during subsequent periods.

The case quoted in the article under consideration is a very interesting one and looks as if the food had caused the alteration in the per cent. of fat in the milk. The question, however, may well be raised as to whether the per cent. of fat, which dropped during August to 2.3 per cent. would have remained the same had the bran feeding been continued for several months. It is quite possible that it might have gone up again when the cow became thoroughly accustomed to the food. It is not always safe to compare one period of lactation with another, for the reason that we sometimes find cows will give slightly richer milk one year than they did during the preceding year, even when the conditions are as nearly alike as it is possible to get them, though, as previously stated, the tendency is for the average to be about the same for different periods of lactation.

Changes of this kind, however, seldom are so marked as they appear to be in the case quoted, which makes this case especially interesting. It

is worthy of note that this cow varied all the way from three per cent. to four per cent. upon the same food. It would seem, therefore, that there are influences at work which may alter the per cent. of fat in milk quite independently of the rations, otherwise we cannot account for these variations. If Mr. Mann would conduct similar experiments with all the cows in his herd, he might find that they would act differently under similar treatment. This, at any rate, has been our experience. It would seem also as if some cows were more susceptible to influences from changes in foods than are others. This cow appears to have been particularly sensitive to changes in her

Dairy Farms Competition

Definite arrangements in connection with the Dairy Farms competition announced in our issue of April 8th are fast nearing completion. Full particulars will be given next week. Watch for the announcement on April 29th. Tell your neighbors about it.

food. What is true of this cow may not be true of all cows, nor of cows in general, and it is unsafe to draw conclusions from a single instance.

I am very glad indeed that Mr. Mann has contributed this very interesting article to Farm and Dairy, and I trust that he will go on making similar investigations, because work of this kind is of value in throwing light upon many problems which are not yet fully understood.

Our Way of Dairying

Frank Webster, Victoria Co., Ont.

We have confined ourselves strictly to a butter business. We ship all our product in pound prints, to one customer, except in the case of a few private customers who desire a supply packed for the season. Our business might be called Winter Dairying. We rarely, or never, breed our cows until December. We try to have them all settled in March, consequently they begin freshening in September, and are mostly all in by New Year's.

Were we asked for our reasons for winter dairying we would say we have more time to attend

to the work in winter; the price of butter is generally higher than in summer, the cows are dry at a time when flies are plentiful and pasture is scarce; and we can get a larger yield per cow by this system than to have them freshen in the spring.

For the bulky part of the feed we rely on ensilage and alfalfa. These two crops give a large yield per acre and are relished by stock of all kinds. For concentrates, we depend mostly on our farm grown grains. We endeavor to feed a balanced ration. To do this we sometimes use oil cake meal. Bran is very hard to get, and is expensive as well. We leave it out of our calculations. We have found that when feeding alfalfa we can get very fair yields without feeding a heavy grain ration. Thus we cheapen the cost of production.

Our cows are tested at intervals, so that we have a fair idea of what they do in butter fat. As we weigh the milk from each can we can feed as we think each cow requires. In a general way we think one pound of concentrates to four or six pounds of milk produced. To the cow giving a large flow of milk, relatively low in butter-fat, we do not feed as great a proportion of concentrates to total bulk, as we try to give the cow with perhaps a smaller flow of milk, but sometimes a larger production of butter-fat, an allowance to meet her needs.

For the increase of the herd, we use a registered sire, of a family of heavy producers. We keep heifers from our best cows. Undesirables, we get rid of as soon as possible. Any surplus skim milk goes to pigs, colts, cows, or anything that needs it. Often we raise one litter only from our brood sows in a year. At such times we try to have them farrow about the time the cows freshen.

This is a brief outline of the dairy business, as we have followed it. We experience the usual ment, that is connected with any business. Our herd after nine years of breeding from sires of one breed, perhaps, does not show the uniformity of type that one might wish to see, owing to having used, for foundation, any cow that was a good producer. Our average production per cow, however, has increased quite noticeably.



Danish and Irish Farmer.—"If those Canadian Packers and Farmers will only keep on quarrelling among themselves, we'll soon have this all to ourselves."

Well DRILLING MACHINES

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on skids. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

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The Dain Hay Loader being a raker bar loader, will meet all the requirements of a Hay Loader. It will handle the hay from the swath, windrow or coil under any reasonable conditions. It is a Rake as well as a loader, as the hay can be taken up very clean right after the mower, it is durable, easily handled, generally called the one man loader.

Ask your agent about it, or write us for special information.

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Lands are offered for settlement in some cases FREE, in others at 50 CENTS per acre, in various districts in NORTHERN ONTARIO.

Write for information as to terms, homestead regulations, special railway rates, etc.

DONALD SUTHERLAND,

Director of Colonization, Toronto

HON. JAMES S. DUFF,

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Special Trains from Toronto April 20th and Every 2nd Tuesday until Sept. 21st.

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CHEESE FACTORIES FOR SALE SHOULD BE ADVERTISED IN FARM AND DAIRY.

Some Peterboro County Farmers Interviewed

In company with Dr. Hucho an agricultural attaché of the Imperial German Consulate at Montreal an editorial representative of Farm and Dairy recently visited some of the leading farmers in the vicinity of Peterboro. Questions asked by the doctor of one of the farmers called on brought out the following information. The main crops grown on this particular farm are barley and a few peas. Roots are grown for the cattle. He had no silo and grows no corn. He has been in the milk business over 20 years, selling the milk for the most part to dealers in the city who come to the farm for it. For the winter he realizes four cents a quart, and in summer three cents. Not unlike many farmers, he keeps no particular breed of cattle. "Anything that will milk," said he, "fills our requirements." Such stock he assured us was selling at the present time from \$40 to \$50 a head. When aged these cows are sold to some one else that wants them, or are disposed of to the butcher.

At the next place called on, as at other places we found some fair specimens of grade cattle. The herd was headed by a Durham bull. We were informed that Holsteins are gaining favor in this stable and that soon the Durham sire will be replaced by a Holstein. The city trade also takes the milk from this farm. The stables are fitted up very conveniently and water basins were installed. As grain was scarce the cattle are being fed on roots, mixed hay, and straw. There is no silo on the place. Asked if a silo would not pay, we were informed that probably it would, but that there is a lot of hard work about corn. A few hogs are kept on this farm. Sheep are not stocked, dogs and hounds from the nearby city being given as reason for not keeping them.

A farm outside the range of the city milkman was next called on. A cream separator had been installed, and the cream is being sent to the Peterboro creamery. The skim milk is utilized at home for feeding pigs and calves. The cream business, we were informed, had proved quite profitable during the past winter as they have received an average of 29 cents a pound for butter. Here again no silo was in evidence. Hay and chop formed the basis of the ration for the dairy cows. When asked as to the profits of winter dairying, the farmer replied that as the milk was richer in fat when the cows were stabled and fed fodder, he believed that dairying paid about the same in winter as in summer. He kept no records so could not be sure. One half acre was the extent of his land annually devoted to corn.

WHY SHEEP ARE NOT RAISED.

Dr. Hucho made a particular point of enquiring into why sheep were not raised. In every city he brought us to the question "Why do you not keep sheep?" was "it is hard to keep them. There are too many dogs straying around the country from the city." "In Germany," said the Doctor, "such an excuse would not be sufficient reason for not keeping sheep. Dogs are not allowed to run loose at all. Their owner would be fined or the dogs killed. All dogs are tied and when allowed to run, they must be muzzled, thus there is no danger from them." Asked by the farmer of what use would the dogs be if the dogs killed, "They are kept for watching and as pets as in other countries. At home all cattle are tethered. There are few fences. We have boys to watch the cows. There are far too many dogs in this country. Farmers should keep sheep instead of dogs."

Another farmer called on was an admirer of Percheron horses. Several good ones were in his stable. Asked

as to why he preferred the Percheron, the farmer replied "they are more of a general purpose horse. The Clydes are all right in town or for heavy loads but you have got to let them walk. With the Percheron, they can be trotted. They can be used for any purpose." Questioned further as to the Percheron, the farmer said that he had always admired the Percherons and was told in reply that they were the best tempered, possessed the best legs and feet of all breeds of horses and thus could best stand the travel in cars. "It pays to raise good horses," continued the farmer. "We believe in raising good ones. We have got tired of the poor scrub stallions that still travel. We select the best and pay a fee of \$15."

COW STABLES NEAR LIGHT.

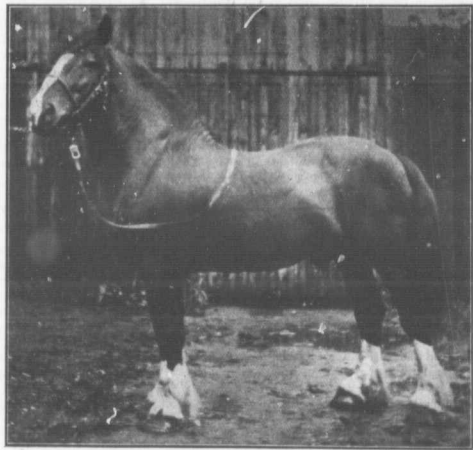
The cow stable on this farm like many others was dark and gloomy. In fact we could not discover the cows until a door had been opened to admit light. In remodelling the barn recently, the small windows that were

and they had to turn to dairying. "Our farmers," he stated, "should recognize that it would be to their great advantage to get right into dairying, grow corn and clover more abundantly and put up silos."

The Business of Dairying

While much has been written on the subject of dairying, there is a lack of simple, practical, common sense information in connection with this great industry. "The Business of Dairying," by Clarence Lane, B. S., Assistant Chief of the Dairy Division, U. S. Department of Agriculture, a book recently published, is intended to meet the needs of the average dairy farmer. It presents in a clear and concise manner various business methods and systems which will assist the dairyman to reap greater profits. It aims to meet the needs of the average dairy farmer.

The book teaches, that the farmer's occupation must be conducted on business principles, and that in this busi-



A Home-bred Clydesdale—A Credit to our Horse Industry

Merriman 3286, owned by Messrs. Nichols & McIlmoyne, of Peterboro Co., Ont., is a bright bay. He weighs 1970 lbs. He has that strong, short back that horsemen like to see. High quality is indicated in his flat nose, his feet, and in the fine silky feather on his legs. He has carried off premier honors on several occasions in very strong company.

thought to be sufficient in olden days had not been enlarged. Though no silo was on the farm, one is to be built this summer. Speaking of the silo, the farmer said, "Every farmer should have a silo, if he keeps cows. I shall put up a stave silo as I believe it to be about the best. It is the cheapest and about as good as any." Modern improvements in the way of stanchions, water basins, cement floors are a part of the stable. The cattle kept are a mixed lot of grades, showing strong dashes of Shorthorn and Jersey blood. "A few Jerseys," said the farmer, "should be in every herd. They tend to keep the best up to a good average." The milk on this farm is separated at the house and the cream sent to the creamery. The main crops grown are mostly barley and oats, and roots for the cows, although this coming summer considerable corn will be grown to fill the proposed new silo.

An Elgin Co., Ont., man that we called on, speaking of the agricultural conditions in the neighborhood of Peterboro said that our farmers do not grow enough corn. He likened the farm conditions of Peterboro Co. to those of Elgin Co. 20 years ago. The latter had cropped the land with grain until they could get no more

business as in any other, an accurate account of receipts and expenditures must be kept in order to determine where profits are made or losses occur. Simple methods for keeping these records and accounts of all kinds needed on the farm have been presented, and in as many instances as possible the forms and methods themselves have been used instead of descriptions of them. No other book has been written that touches upon so many practicable phases of dairying as does this volume. It may be secured through Farm and Dairy for \$1.25 net.

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WEEKLY

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FARM MANAGEMENT

Improving Poor Land

I have some run out land that I would like to improve and I cannot spare any stable manure from my other crops. I plowed about one acre last fall to try experiments in green manuring. It is too poor to produce a crop of clover without fertilizing and I intend to put a light dressing of fertilizer on it. I would be very much obliged if you would give me some advice about what crops to sow and what fertilizer. The land is a medium heavy clay loam.—J. McE. Churchville, N. S.

Two lines of effort might be suggested for the improvement of the field in question.

1. Work the land very thoroughly and sow buckwheat. This should be ploughed under in August and the seed sown down to fall rye. The next spring the fall rye should be ploughed under and the land sown to oats and clover. At the same time a dressing of say 20 bushels lime and 300 lbs. land plaster an acre would almost certainly insure a fair

Well Pleased

I am a subscriber to Farm and Dairy, and am well pleased with the paper. I wish there were many more farmers in this section taking it. As I am a chessman, I am sure it would profit both themselves and me.—H. G. Grim, Hastings Co., Ont.

catch for clover and a decent crop of oats. Work the land very thoroughly.

2. The other line of work would be to start in at once with heavier dressings of lime and land plaster, say 30 bus. of lime and 300 lbs. plaster an acre applied on the surface at seeding time when the land has been very thoroughly worked. Sow about acre. Leave one year in clover then break up again and again seed down to clover and timothy, leaving two years in pasture.—J. H. Grisdale, Agriculturist, C. E. F., Ottawa.

Our Legal Adviser

RECOVERING PURCHASE PRICE.—A Clyde mare out of a recent importation that was sold directly after they had been landed from the boat, had a heavy cold when sold. Shortly after she developed pneumonia, and died. Many of the others were suffering from colds when sold. Have I any chance of recovering purchase price or any part of it from the importers?—J. L. Durham Co., Ont.

Your investment has turned out unfortunately, but you have no remedy against the vendor, in the absence of an express warranty, or of a false representation on his part, which he knew to be untrue. You might have protected yourself by having the mare examined by a veterinarian before purchasing.

PAYING FOR BOARD.—About seven years ago grandparents took charge of three boys. The oldest boy was adopted. The son-in-law, who was father of the three children, agreed to pay board for the other two at the rate of \$1 a week, and also to clothe them. This agreement continued until the first of March, 1908. The father then offered to take the second boy. The boy refused to go, and the grandparents adopted him. The father has not paid anything for the board of the youngest child since then. About the middle of March, 1909, the father offered to take the youngest child. The grandparents desire to know if they can compel agreed upon, from March, 1908, until his farm of his address. There was no written agreement.—H. L.

If the grand-parents can prove an express agreement on the part of

their son-in-law, to pay for the board of the children, they would certainly have a right to recover the amount. It would not be necessary that the agreement should be evidenced by a writing.

RETURNING CRIB-BITER.—A sells a horse to B at an auction sale for \$300. Nothing was said about the quality of the horse. He was a fine looking horse, horse began cribbiting. Can B make A take the horse back?—L. B. Talbotville, Ont.

There being no warranty or misrepresentation the maxim "Caveat emptor" applies to this case, and B cannot compel A to take horse back or to refund the purchase money.

DAMAGES ON BURNT FOREST TREES.—Two years ago I returned my steep hillsides near the railway. When steep hillsides near the railway. When burning the grass recently the sectionmen allowed the fire to run over those hillsides, completely destroying upwards of 1,000 trees. Can I claim damages for the loss. To whom, and how, shall I proceed to make a claim? The trees were obtained through the Government co-operative reforestation works, and hence did not cost much initial outlay, however. I have lost the two years growth and the use of the land, besides a good stand of trees should I replant this area.—H. R. N., Brant Co., Ont.

The law requires the Railway Company to remove the weeds and other inflammable material from their roadway, but does not authorize them to dispose of the same by fire. Having deliberately set out the fire, they are responsible for any damage which you have been thereby subjected to.

You should consult a solicitor, and have him place your action in court, if the Company declines to settle. Your action should be brought within six months after the injuries were sustained.

RIGHT TO WOOD AND SLASH.—A rented a farm to B on 18 cords of fire wood each and every year. A died and the farm was sold in September, 1907. The lease expired the first of April, 1908. The creditors reserved for B on the day of the sale 25 cords of wood. The purchaser of the farm said nothing about the wood until five months after sale. When B went to cut the wood he was put off with half cords. Can he take the 25 cords in full? A also sold to B some slash. The new purchaser of the farm was told that this slash belonged to B, but after the sale B

was forbidden to remove any timber, some of which was cut. Can B hold the man that bought the place responsible for this timber?—W. C. Grey Co., Ont.

The right to take the fire wood granted by the lease, would come to an end at the expiry of the lease, unless it expressly provided for the cutting and removal at a later date, and if such express provision existed, B would have to prove either the reg-

istration of the lease, or direct notice to the purchaser, of such provision.

The purchase of the piece of slash was, as we understand from the question, a separate transaction. The purchase would not be valid against the purchaser of the farm, unless it was evidenced by a written document containing all the terms of the transaction, and unless the purchaser had express notice of its provisions.

BY APPOINTMENT TO H.M. THE KING



WORMS

SUCCESSFUL EVERY TIME

An Infallible Remedy for all Intestinal Worms in Horses, Sheep, Cattle, Hogs, and Dogs.

COOPER'S WORM TABLETS

Boxes of 100 Tablets \$1.00, postpaid

(Copy) Clarendon, Ont. March 3rd, 1909.

To MESSRS WM. COOPER & NEPHEWS, Toronto.

DEAR SIR, I have used your worm tablets on a Clyde Stallion, the Favorite (1882) and have such pleasure in stating that after trying many other it was a very bad case, indeed so bad that I thought the colic would kill. I afterwards sold him for a big price, so can, confidently recommend your cure for worms.

Yours truly,
(Sgd.) THOMAS GRAHAM.

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A \$5,000 DAN PATCH STALLION FREE

This New Picture of DAN PATCH 1:55 in Six Brilliant Colors

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This new picture of Dan Patch 1:55, is the finest I have ever gotten out for framing. It is printed in six brilliant colors and is free of advertising. It gives his age and a list of all the fast miles paced by Dan. Being made from a "Speed Photograph" it shows Dan as lifelike as if you stood on the track and saw him in one of his marvellous and thrilling speed exhibitions. You ought to have a fine picture of the King of all Horses Horse Creation and the Beautiful, Colored Pictures of Dan Patch 1:55 Free With Postage Prepaid and full particulars concerning my plan of Giving Away a \$5,000.00 Dan Patch Stallion if you will simply write me.

AN ABSOLUTELY FREE HAIR COUNTING CONTEST WITHOUT MONEY OR PURCHASE CONSIDERATION AND OPEN TO ANY FARMER, STOCKMAN OR POULTRY BREEDER. Consider the number of hairs drawn in a picture of "Forest Patch," bred by Dan Patch, and a photo engraving of "Forest Patch," the fine Registered Stallion to be given away and means a small fortune for someone. We paid \$20,000 for Dan Patch and have been offered \$100,000. We would have lost money if we had sold Dan for One Million Dollars.

YOU MAY SECURE THIS \$5,000 DAN PATCH STALLION ABSOLUTELY FREE. "FOREST PATCH" might make you a fortune of \$50,000 to \$50,000 as a great stock horse for any community because he will make a 1:55 stallion, with great style and beautiful conformation. E. B. SAVAGE, Toronto, Can.

SEND Mail this Free Coupon To-Day to E. B. SAVAGE, International Stock Food Co.
"YOU MUST FILL IN THESE BLANK LINES IN THIS FREE COUPON"

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E. B. Savage, International Stock Food Co., Toronto. Will you please mail me Postage paid one of the Beautiful Six Color Pictures of Dan Patch 1:55. I will give you my name and address. I have filled out the coupon, giving the number of my stock I own, and I own.....Cattle.....Hogs.....Horses.....Sheep

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DAN PATCH 1:55

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

HORTICULTURE

Celery in the Home Garden

A. V. Main, Lanark Co., Ont.

Celery should be cultivated in small gardens more than it is. It is one of our best vegetables for winter use. We ought to grow more of this. The first week of April is about the right time for sowing and the selection of three varieties will supply an early sort and two kinds with keeping qualities for winter. I recommend 'Paris Golden Yellow,' 'White Plume' and 'Giant Pascal,' the latter variety keeping crisp and sweet till March.

Sow in boxes or pots of finely sifted loam, leaf mould and sand, cover the seed thinly and water cautiously with a fine rose can. A holed will cause germination in twenty days. With sowing in a cold frame or in the open, celery is slow to grow and often remains in a stagnant state till the season gets too advanced and the young plants are too heady. Transplant the seedlings in good time, several inches apart in boxes of good rich loam with decayed manure incorporated with it, add a small quantity of seed to promote good healthy leaves. Keep moist and near the glass.

Towards the end of May, set the boxes outside in a position not too exposed to the hot sun. Supply with water in the evening and look over your plants well to have fine individual plants for planting out the last week of June. Where several thousand and celery plants are required, the most practical procedure is to fill garden frames with six inches of manure, then four inches of soil made firm, then transplant the seedlings watering and shading for a few days. When the day for planting arrives, remove the frames and cut out each plant with soil into a square, the plant will have a fine basement of manure and get no check in the open field.

PREPARING THE TRENCHES.

Celery adapts itself in a moist situation and seldom attains anything on thin, dry, exposed soils. To conserve moisture and for the purpose of blanching the stalks, throw out trenches two feet wide and eighteen inches deep. A space of three and a half feet should be allowed between the trenches to accommodate the soil that is thrown out. A good thick stratum of manure should be mixed with the soil in the bottom of the trench. Use some of the soil that has been thrown out, if the subsoil is shallow or heavy. A good foundation of decayed manure is indispensable for good celery. Plant two rows in the trench a foot apart each way, selecting a dull afternoon if possible. In dry weather no plant seems to suffer more for water, and it therefore pays to apply plenty of liquid manure occasionally. Weak root water is a first class fertilizer and preventive of insect pests.

As growth gets under way, commence to bleach the stalks. Clean out all the weeds and remove side suckers and damaged leaves from the plants. With only a few hundred in small gardens, it is a wise method to gather the stalks together, and tie loosely to just a little beneath the growing points. Raffle is splendid for tying. This plan prevents soil

from reaching the interior parts of the celery and facilitates the work of filling the trenches with soil. Soil is the best material for bleaching. Three "things up" are required, the last one at the end of September. In celery cultivation, we should remember that 500 plants will grow give more returns than 1500 plants of poor quality.

Potatoes Mostly Mud

Mr. R. H. Curry, Canadian Commercial Agent at Nassau, has forwarded the following letter regarding Canadian shipments to an importer in the Bahamas. It is not advanced that this complaint is characteristic of the exports to that colony, but it will serve to illustrate the manner in which the importer views such laxity in business.

"Being a Canadian and therefore interested in the development of trade between Canada and the Bahamas, I would like to call your attention to some shipments that have come here from that country, which are not only a detriment to Canada, but will utterly ruin the trade. One, some time ago, was a lot of Nova Scotia potatoes, which were mixed, some so small as to be worthless, others far too large, badly shaped, full of lumps and to cap the climax covered with mud, so that by weight we paid at least one tenth for mud.

"More lately we saw a lot of apples, some out of a barrel of which only two were not absolutely rotten, and those full of worm holes and bruised all over. Of another lot of potatoes, a few were of good table size but the greater part about the size of a large marble, which no one would buy. In each of these cases the importer said he would never buy more."

The Catalpa For Reforestation

Would Catalpa speciosa be suitable for reforesting a district and where could it secure plants or seeds?—K. J. F. Northumberland Co., Ont.

Catalpa speciosa is often referred to in American journals, is found growing naturally in the region of the Wahash River. It grows in bottom lands of the very finest soil and the accounts of the remarkable growth in plantations are usually derived from planting, that has been done in Ohio and other middle south western States where it has been planted in good agricultural soil. In Ontario I would not consider it of any value for reforesting light soils, and I doubt whether the growth will make it a good investment on good soils, unless it be along the southern part of the Province. Seed and plants of the catalpa speciosa may be obtained from D. Hill, Dundee, Illinois.

For poor soils in Ontario the Black Locust will give much better results.

Strawberries and Currants

1. I am thinking of setting out about 30 strawberry plants. Which is the best method for planting? What is the best kind of soil for them? Do they need two kinds of plants—perfect and imperfect? 2. I have seven three year old black currant bushes, and would like to get slips off of them. What is the best time and methods?—Mrs. A. H. C., Oxford Co., Ont.

1.—Strawberries should be planted in spring as soon as the old bud has produced new plants strong enough for transplanting or as soon as plants can be secured from the nurseryman. It is difficult to say which is the best variety of strawberries for any particular soil. There are many good varieties, but each of them is lacking in one or more particulars. The Clyde is a good yielder and large in size but being light in color and not firm as others, it is not a good shipper. It makes an excellent berry for home use and for the home mar-

ket. The Williams is the most popular commercial variety in the province. Persons who propose planting should ask their neighbors, that have been successful with strawberries, to tell them the varieties that have done best in that place. If either the Clyde or the Williams is grown, it will not be necessary to grow a variety to fertilize them as each of these varieties is perfect. Should some other variety be chosen find out whether it is perfect or imperfect. If imperfect, some perfect sort that blooms about the same time should be planted with it.

2.—It will soon be too late to take cuttings from currant bushes. Take them at once and store them in sand for a couple of weeks to cause the buds to calt. Store with the butts uppermost. When taking the cuttings, select last year's growth and cut the butt end off squarely just below the joint and the top end between

joins, leaving the cutting about six to eight inches long. If you purpose growing your bushes in tree form, remove all the buds on the cutting except the top one when planting and place the cutting in the ground to the full depth leaving only this one bud above the ground. If the bush form is desired, plant the cutting intact. Currant cuttings may be planted with more or less success as soon as taken from the old bush, but it is best first to induce them to callus.

Pleased With Premium.—I am today in receipt of the alarm clock you sent me for securing one new subscription to Farm and Dairy. The clock arrived in good shape and I am pleased with it. I think the clock alone is well worth more than you charged for the paper and clock together. It runs nicely and I see no reason why it will not keep good time.—Geo. Jacques, Perth Co., Ont.



The EDISON PHONOGRAPH

Is there anything that will give more pleasure to a house full of children than an Edison Phonograph?

Is there anything that will add to the entertainment of grown folks better than an Edison Phonograph?

It is the plaything of young and old, although it is a scientific invention of the world's greatest scientific man.

For the Edison Phonograph you can now secure Edison Amberol Records

which play twice as long as the Gramophones. Your present Phonograph can be equipped to play the new Records in addition to the Records you have. Many selections each month for both Records.

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POULTRY YARD

Dropping Board and Nesting Arrangement

My hen house is divided into two parts. Each part is 9 feet by 12 feet, with a place for roosts at the north end or side, which is made warm, and arranged to hang a curtain. Each roosting compartment is 9 x 4 1/2 feet, and is seven feet from floor to ceiling.

I have been using swing roosts such as I saw in an issue of your paper described as being used at Macdonald College. I find this inconvenient as requiring too regular attention to put up and lower the roosts at the proper time.

Can you describe to me how I can put in a dropping board, so as to have the what height should the dropping board be it slope to the front, and at what angle should I put the nests, whether at the north wall or at the front just back of the curtain—G. E. Grey Co., Ont.

From 20 inches to two feet is high enough for a drop board and the board. Make a section of nests, as shown, having six nests, each 12 inches wide and 12 to 15 inches deep and 20 inches high. Place under the outside edge of drop board and allow it to support same. Thus you would have 18 inches on either end of the nests for the

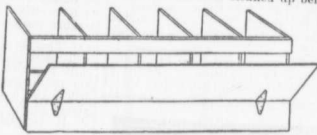


Fig 1.—To Be Placed Under Dropping Board

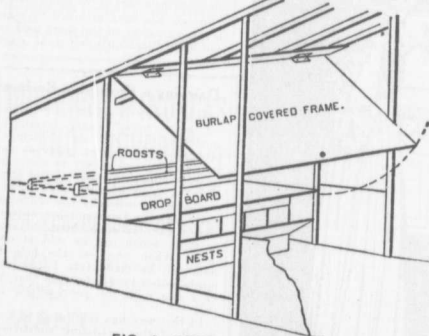


FIG 2.—ROOSTS AND NESTS

Showing Arrangement of Dropping Board, Curtain, Etc.

hens to get in under drop board. From there they could enter the nests over the three-inch strip. The horizontal door is opened to secure the eggs. This arrangement is shown in Fig 2. Have the drop board level and hinged to the wall at the back.—F. C. E.

Pointers on Incubation

Wilbur Bennet, Peterboro Co., Ont.

The incubator is at its best only a necessary evil. Where one requires a large number of chicks hatched early one must depend on the incubator.

An essential part of incubation is the breeding stock. They must be in the very pink of condition, lean and active. One can never secure good results from over-fat fowl, that have been pampered for egg production.

If possible breed from two year old fowl, mated to vigorous cockerels. One is more likely to retain the vitality of the flock by so doing. In any case watch the vitality, as when one loses that, failure is sure to follow.

The following is the method of hatching, which I follow:

1st. Moisture—One can not have too much moisture in a machine. Fill up the pans with water at the start, and keep it there until the machine is closed up the 15th day.

2nd. Ventilation—Do not open at all for the first 10 days, after which the ventilators may be gradually opened up, till the date of closing the machine, when they must be closed to retain the moisture. There is nothing in the air cell motion to go by in controlling ventilation and moisture. Eggs of different ages vary in their air cells any way. The egg can not be dried out too little, it is nearly always dried out more in incubators than under broody hens.

3rd. Temperature—Run at a high temperature from the start; in winter 103-4 degrees on eggs. You do not need it quite as high in summer. One will find there is not as much difference then between top and bottom of eggs.

4th. Cooling—Do not cool at all in winter that is any more than they get while being turned. It will very likely prolong the hatch if one does. The hatch should be cleaned up before

the wick renewed occasionally. I consider a hatch satisfactory if I get 50 per cent. to 60 per cent. of the up eggs set, in chickens—that is on an average. Sometimes if one's fertility is high, one will go away above this, but more often not. Eggs should go 85 per cent. to 90 per cent. fertile on the first test.

Raising Chicks in Winter

"It is not a difficult matter to hatch chickens in January," said Professor Graham while lecturing before the Peterboro Poultry Association recently. "They hatch as



An Early Clutch

Early hatched pullets make the most profitable winter layers. Plan to have your hatches all off before the end of May.

well in March or April. The trouble comes in raising them. The January chicks grow well for about three weeks, then they get weak on their legs, their bodies seem to get too heavy and they sit down. Afterwards their attendant goes into the undertaking business."

An experiment was carried on at the College during the past winter in raising January chicks. It proved very successful. It seems most important that the chicks shall get out of doors and on the ground. Small runs were provided from the brooder and out of doors the chicks had to go. They were driven out daily whether they wanted to go or

FREE EGGS

For only two new yearly subscriptions to Farm & Dairy, at \$1 each, we will send a setting of eggs, of any of the standard varieties of fowl. Replenish your flock. Add to it. It will cost you nothing but a little time. New subscriptions to Farm & Dairy are easily obtained.

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not and allowed to go in as soon as they cared to. This method kept them from going over on their legs.

Improve Your Flock.—Poultrymen wishing to increase their flock, or to obtain new stock should avail themselves of the opportunity that we offer, to get new stock absolutely free of cost. We will send a pair of the best pure bred fowls, to any one sending us only four new yearly subscriptions to Farm & Dairy, at \$1.00 each. Your choice of any of the standard breeds. Our circulation department will be glad to send sample copies free, for the asking. Get the boys to work on this offer, if you have not the time yourself.

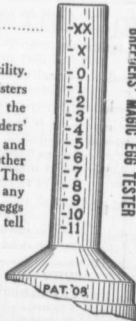
Prof. W. R. Graham in his illustrated lecture on "Poultry Raising," given recently before the Peterboro Poultry Association showed a poultry plant where 10,000 laying hens had been kept. It was not a success. It went out of business in three years. On such plants the hens lay all right, the trouble is to raise them. The birds get smaller and smaller each year. They develop long heads and lower tails and partly are subjects for the undertaker.

A NEW DISCOVERY!
WHICH WILL POSITIVELY DETERMINE THE FERTILE EGG BEFORE INCUBATION



"XX" means fertility. Every good egg registers at some point on the scale of "The Breeders' Magic Egg Tester," according to its condition, and this wonderful little instrument tells instantly whether an egg is fertile or not BEFORE incubation. The scale reads like a thermometer and so easy that any 10-year old child can test eggs. The fertile eggs register at "XX" and the tester never fails to tell whether fertility is strong, weak or absent.

A well-known poultryman of Western New York says:
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The Feeders' Corner

The Feeders' Corner is for the use of our subscribers. Any interested are invited to ask questions, or send items of interest. All questions will receive prompt attention.

Feeding Young Heifers—Retention of Afterbirth

The young heifer that I bought at Mr. Rice's sale is doing fine. As I hope she will make a good producer, and as there is a great deal in raising young heifers in the way they are fed, and also how they are fed after they freshen, I would like to get your helpful advice how to feed them, or if I may ask Mr. Rice how he got his cattle from calf-hood up till they are cows. I would also like to get from him how he treated his cows (if he ever had any thus afflicted) if their afterbirth did not come away. My pure bred Holstein cow calved recently and she did not clean. I got a man to take it away. I washed her out with a syringe pump with a one per cent. solution of Zenolium in warm water, at first once a day, now once in two days. How soon would you advise me to breed my young heifer?—G. A. Grey Co., Ont.

In the case of a cow not cleaning properly, I do not advise or allow anyone to take the cleaning way by insertion of the hand, as there is danger of injuring the womb. Simply give the cow in her feed or water or give the cow 25 drops carbolic acid (full strength). Give this in a pint or more of water three times a day

for four days. That would be 75 drops of carbolic acid each day. Give this internally, and no external or other treatment is required. If the afterbirth is hanging out after two days of calving, get two sticks and place the afterbirth between them; grasp both ends of stick and roll it around pulling gently. This will take away considerably of it. The rest will come away itself in a week by giving the carbolic treatment. Sprinkle zenoleum diluted behind the cow to keep any odors from affecting others.

Any time after two years old is a good time to have a heifer drop her first calf. Perhaps between 25 and 30 months is best. It will depend upon whether you are practising summer or winter dairying. If the latter you can have her calve in January, when she is two years old if not more. March is a good time to have a cow calve when it is desired to raise the calf, as it gets a good start before fly time.

To develop a heifer for the dairy is simply to keep her growing and in a healthy condition. Neither too fat nor too thin. As grass will soon be here good pasture is all that is required, but if the heifer is to freshen in January, see that there is something for her to eat next fall so she will not have to roam over pastures that give very little nourishment. Start to stable early in the winter, and feed succulent feed, ensilage roots with straw and a little meal.—Geo. Rice.

Fattening Heifers—Dairy Form

I have read with much interest the articles relative to the injury done to dairy heifers by becoming fat. What are we to do with our heifers during a summer of plentiful rainfall when the pastures are luxuriant? It appears to me that an animal that will not get fat is a menace to society. Is a bull injured to the same extent for the production of high record daughters by becoming fat? Should a dairy bull (Holstein) be of the same angular form to correspond with the so-called dairy form in cows?—R. M. Fonthill, Ont.

There is a great deal of truth in the contention very often advanced that heifers kept in high flesh are apt to make poor milkers. I have seen apparent instances of it on many occasions and have had several rather unpleasant experiences in our herd which lead me to think that the ground, that over-feeding or high fitting permanently injures dairy heifers, is well taken. High fitting, however, and the fat or flesh that heifers will lay on when grass is good are quite different things. The heifer that does not do well on good grass is not likely to amount to much as a dairy cow. Yet the heifer that gets excessively fat even on grass rather than grows and develops as she should is likely to prove unsatisfactory as a dairy cow. The happy medium of lots of growth and good condition when grass is plentiful is the right thing.

I am not prepared to say that a bull will be so injuriously affected by high feeding as is the heifer, but I

do not like to see the bull in very high fit either. Any tendency encouraged in the sire is apt to be transmitted to the offspring to a greater or less extent.

Dairy bulls are not expected to be so "angular" or scant of flesh as the dairy cow. They are, however, expected to show more or less dairy conformation. The records behind the bull count for more or should count for more in making a selection than so called dairy form.—J. H. Grisdale, Agriculturist, C. E., Ottawa.

Feeding for a Record

Kindly inform me what you consider the best feed for a cow to give the most butter. One of my cows has a record of giving 15 lbs. of butter a week on the poorest pasturage. We wish to put her up to a test in May or June.—Mr. H. B. Colebrook, Ont.

Any cow on milk test or butter test in late May or June should by all means have access to good pasture grass. She should not be expected to walk too far to get all the grass she cares to eat. In addition she should have what she will eat of the following mixture:

Oats	200 lbs.
Barley	100 lbs.
Bran	100 lbs.
Corn meal	200 lbs.

say five or six pounds a day. She will possibly not give much more milk to much more than barely pay for the amount of this, but she will make a better showing and the strain on her will be less marked.—J. H. Grisdale.

Substitutes for Milk

In feeding young calves the milk supply is short, what would recommend as a substitute for a part of the ration?—J.C.M.

Success has been attained by many in raising calves on the short milk ration when by Blackfords calf meal is substituted.

Dairying a Profitable Business

R. E. Lampkin, Brant Co., Ont.

I have found dairy farming a good way to build up a farm. If proper feed is grown such as corn for the silo, and plenty of clover hay in rotation with the regular grain crops, a good herd of cows furnishes the means whereby the crude products of the farm can be converted into a more saleable commodity such as milk, which can be sold at one's door. When one has the help the milk can be made into butter at a much better profit, because then you have the milk for your calves and pigs.

In this way one retains all or nearly all of the fertilizing constituents that it takes to grow our crops. The ordinary farmer does not keep enough stock. The more stock kept on a farm the more profit there will be, as stock enriches the soil and the land will produce larger and better crops. By weeding out all the cows that do not return a good profit and are only boarders, I have found that I can make from \$60 to \$70 a cow.

Those boarders sold together with 10 or 12 head of fat cattle and turned off in the spring say in May or June at about \$50 a head, along with what pigs can be raised and sold from having the milk at home, is much better for the farm and gives larger returns than can be got out of the farm in any other way. My stock bull turns his spare time to good account on the treading power for pumping water running the cream separator, cutting box, root pulper, also the emery wheel.

I find Farm and Dairy very interesting. It is a very good paper.—Allen J. Rogers, Saskatchewan Co., Sask.



Rural Telephones for Family Protection.

It's not an unusual thing for tramps or burglars to get into country houses and, while the men are away, frighten the women.

Often they don't stop at merely frightening, but sometimes steal and occasionally commit murder.

Unless immediate assistance can be summoned, the women are practically at the mercy of these ruffians.

With a telephone in the house neighbors can, at a moment's notice, be called in.

Or, in case of a sudden illness, during the night, to go for a doctor might mean the loss of a dear one's life.

With a telephone at hand, the doctor can, without loss of time, be summoned and, in the meantime, advise what to do.

It's every farmer's duty to himself and family to have a telephone.

He can never tell at what moment it may be the means of saving a life.

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Farm Fire Protection

The one great fault to be found with water as a fire fighting agent, even though one is fortunate enough to have it always at hand for instant use, is the fact that water will not only not extinguish a blaze caused by oil, as oil will always float on the surface of water, but it will cause it to spread.

For this reason we would strongly advocate the use of dry-powder fire-extinguishers as we are safe in stating that at least 70 per cent. of fires in rural districts are caused by exploding lamps or lanterns.

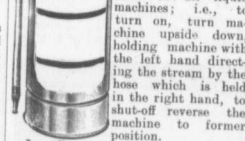
Another advantage claimed for dry-powder over liquid extinguishers is that in case of a fire in the chimney case of a stove, all that is necessary to do is to remove the stove-pipe from the chimney hole a few inches and throw in some of the powder, the draught carries the powder upwards, instantly extinguishing the blaze. The powder, in the best dry-powder machines, will not injure the most delicate fabric; never corrodes; will not deteriorate from age or climatic changes.

DRY POWDER EXTINGUISHERS.
The dry powder extinguisher as shown by illustration 1 is a metal tube some 18 inches in length by 2 in diameter and weighs when loaded from one and three quarters to two and one quarter pounds. It is suspended by a ring on the cap, from a strong hook or nail and to operate all that is necessary is to give the tube a sharp downward pull, thereby removing the cap; throw, not sprinkle the contents forcibly at the base of the blaze.

The number of concerns using this type of extinguisher can only be com-

puted by the thousand and when the writer called on a number of Toronto firms he found each and every user a strong endorser. The writer has himself tested the efficiency of dry-powder and has, with about a hand-ful of the mixture, extinguished a fire built of cotton, coal tar and gasoline. When anything more be said? Need a fire has been extinguished it can readily be seen how much powder remains and if only a small portion has been used the cap can be replaced and the powder used at some future date. Directions for refilling, etc., are sent out by the manufacturers of the machines.

LIQUID EXTINGUISHERS.
As the foregoing has been exclusively in reference to dry-powder extinguishers let us now turn our attention to the larger though more expensive liquid chemical fire-extinguisher as shown in illustration 2. This machine is made of copper, 24 inches high, seven inches in diameter and weighs about 17 pounds when loaded. This mode of operation is practically the same in all liquid machines; i.e., to turn on, turn machine upside down, holding machine with the left hand directing the stream of the hose which is held in the right hand, to shut-off reverse the machine to former position.



In all cases it is necessary to then take the machine out of doors and allow it to discharge itself as it is impossible to discharge the quantity of chemical remaining in the machine. The cost of the average is very slight; being less than 25, and is as follows: One and one-half pounds of Bi-Carbonate of Soda dissolved in two and one-half gallons of water, placed in the body of the machine, four fluid ounces of Commercial Sulphuric Acid, placed in the glass bottle in the neck of the machine. In all cases the manufacturer sends full instructions. The advantage of a machine of this nature is readily realized when the fire is over-head or in fact any place where it is impossible to use dry powder, as the force generated by the chemicals when they come in contact with each other is sufficient to throw a stream some 40 or 50 ft., thus enabling the operator to extinguish a fire of greater magnitude than perhaps the dry powder could cope with.

INSURANCE RATES.
In the larger centres the insurance companies grant a reduced rate where fire-extinguishers are installed. However, as this only applies to machines which are approved by the "Board of Underwriters", and then only when a certain number of machines are installed (governable by the size of the building) this phase of the matter will hardly affect those in the outlying districts. It might be mentioned that the "Board of Underwriters" do not recognize the dry powder machine as it is impossible, as already stated, to effectually reach fires having their origin near the high ceilings of office buildings, etc., as fires often originate from defective wiring overhead. However, as the rural districts are not troubled with fires originating in this manner we feel safe in recommending the careful consideration of the dry powder machines as from four to six of them can be purchased for the price of one chemical extinguisher.

An ounce of prevention is worth a pound of cure. Did the insurance you received bring back that valuable mare you lost in the fire last year? The barn was insured but did the in-

urance company offer to pay you for the injuries you received while attempting to saving the fire-crazed horses? And so on down a long list of such questions and invariably the answer is in the negative and you begin to realize that "an ounce of prevention is worth a pound of cure" is so in every case.—W. G. C. R., York Co., Ont.

Clydesdale Association

An important meeting of the Executive Committee of the Clydesdale Horse Association of Canada was held last week. The principal subject under discussion was that of Clydesdale records in this country and in the United States. Reports were presented showing that the present season had been unprecedented as far as activity in this regard is concerned. The numerous registrations for the first three months of this year had without precedent, and far surpass the returns for the same period of the year 1907, a year ahead of all previous years by 200 per cent.

Some time ago Mr. J. W. Brant, accountant of the National Live Stock records of Ottawa and Mr. William Smith of Columbus, Ont., visited Chicago to confer with President Alex. Galbraith and Secretary H. B. Ogilvie of the American Association in regard to the facilitation of registration of American horses in Canada and Canadian horses in the United States. Mr. Brant was present at the meeting, and reported that the matter will be thoroughly thrashed out at a meeting of the American Association in December.

Production and Care of Milk

Cecil R. Lloyd, Hastings Co., Ont.
While taking sufficiently good care of his stock during the winter, the average farmer turns his cows out in the spring long before the grass has received a good start. The consequence is, that the milk supply fails very often during the cold wet spring, when it should be at its height. In the middle of the summer often happens that long continued dry weather destroys the pastures. The average farmer having made no provision for such an emergency, finds his cows steadily decreasing. A great deal of such a decrease reduces the profits to a minimum. By autumn they will not even have gained up, owing to the cold weather and lack of shelter. Our farmers will never be worthy of their calling until they make as much provision for the drought blasted pasture of summer, as they do for the cold winter, and also till they provide shelter for these cattle during the inclement weather of spring and fall.

PURE MILK ESSENTIAL.
That the milk should be delivered at the cheese factories in good condition is very important. A great deal of milk arrives at the factory in condition that leaves the cheese maker no alternative but to send it home. But the patron thinks that the cheese maker should have taken care in regard to consequences. The main trouble lies in the fact that the farmer does not know the real importance of having the milk in first-class condition, while the average cheese maker is too ignorant or too indignant to explain the matter to him. First of all it should be remembered that an inferior quality of milk means a decreased yield of cheese. Besides it materially lowers the quality. It places the cheese maker in an embarrassing and difficult position. If he accepts the impure or overripe milk, he is in danger of spoiling the entire output, and

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then losing a considerable amount of money. Then also it is not fair to the careful patrons for him to accept the milk which would lower the standard of his product and reduce the quantity of cheese that can be made from a given amount of milk, thus reducing the price per hundred. This loss may be caused by the negligence of a few, but it affects all the patrons equally.

CAREFUL OF CONTAMINATION.
The principal causes of bad or tainted milk are, impure food or water, dirty utensils, exposing the milk to dust or other sources of infection,

TRY THIS

Oil Cake Meal 100 lbs. - Better
Shorts or Middlings 300 " - Cheaper
Salt 1 " - 11 " - than any
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Scald and Feed Warm

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VENTILATION

For Dwellings, Rural Schools and Stables By Prof. F. H. KING

This is a new book issued December 1908, which treats in a concise, practical way, the question of Ventilation in all its details. It shows the necessity of ventilation, and tells how to do it. The book is profusely illustrated by new cuts never before used. Special chapters are given on the ventilation of the heating and cooling of rural school-houses and churches, and of stables, poultry houses, etc. Send for copy.

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AUCTION SALE

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Under instructions from the creditors of the Dauphin Creamery and Produce Company, Limited, the lands, buildings and plant of the said company, situate in the Town of Dauphin, in the Province of Manitoba, on the following premises: Lots 19 and 20, in Block 1, as shown on a duly registered plan, No. 245, of the Town of Dauphin, will be offered for sale by public auction, at the KING'S HOTEL, at DAUPHIN, aforesaid, on Saturday, the 21st day of April, 1909, at the hour of 3 o'clock in the afternoon, by Mr. S. A. McLean, Auctioneer.

The Assignee is informed that there is in the creamery on the above premises a complete butter plant, and also a complete set of machinery for pasteurising milk. The property will be offered for sale en bloc or in separate parcels as may be further directed by the creditors.

Terms of sale, one third cash, one third in three months, and balance in six months.

The property will be sold subject to a reserve bid.

Further particulars will be made known at the time of sale, or may be had from

R. C. SPARLING, Assignee, or Messrs. Harvey, Edwards & Bowman, (His Solicitors, Dauphin, Manitoba.

WANTED

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both during and after milking, and to keeping it at too high a temperature after milking. All these causes can be remedied by a little care and forethought. Great precaution must be taken to have the milk pails and other utensils in a clean and sanitary condition. See that all loose dirt is carefully brushed from the udder before commencing to milk. Remove the milk as quickly as possible after milking to a place where it will be comparatively free from contamination.

The temperature at which the milk is kept is another important point. Germ life thrives best at a temperature of 70 degrees or over. The milk should be cooled immediately after being drawn to at least 50 degrees in the summer and 60 degrees in the fall. To accomplish this ice is almost an indispensable necessity.

CITY MILK SUPPLY DEPARTMENT

Standard for Certified Milk

A circular of information for dairymen, concerning the requirements for certified milk, has recently been issued by the milk commission of the Toronto Academy of Medicine. The standard is as follows:

I. The herd milk shall contain

not higher than 45 degrees F. until delivered.

VIII. It shall not be more than 24 hours old when delivered to the consumer.

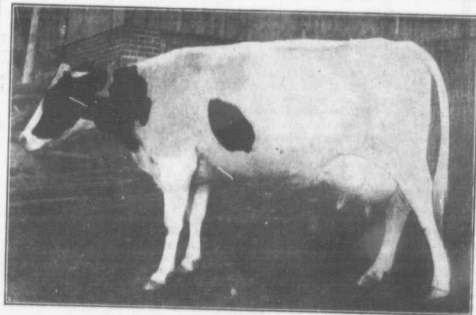
IX. It shall not contain during the months of June, July, August and September more than 10,000 bacteria per cubic centimeter, as shown by a 48-hour culture on nutrient agar medium at 37 degrees C, nor in the remaining months of the year more than 5,000 bacteria per cubic centimeter as demonstrated by the same tests.

X. The veterinary inspector and the physician of the Commission shall each month inspect the herd, the health of the employees, and the hygienic conditions of the dairy generally.

XI. All bearers of a physician's prescription for certified milk shall be deemed preferred customers. In order that this standard may be obtained the Commission makes the following recommendations.

I.—THE BARNYARD.

The barnyard should be free from manure and well drained, so that it may be free from stagnant water. The manure which collects each day should not be piled near the barn, but should be taken several hundred feet away. Observation of these rules frees the barnyard of objectionable smells and diminishes the number of flies. These flies are an element of danger, for they are fond of and



Rideon Della's Lens DeKal 3893

This cow is yet another demonstration of the value of good ancestry. In a seven day official test, she produced 30 lbs. butter, as did her dam before her. She is sired by a grandson of De Kal 2nd. She demonstrates also that the so-called dairy bull of the last summer, when the photo was taken, are responsible for that. By actual sale at the regular wholesale price paid by Toronto milk dealers, her product in March, 1908, amounted to \$36.60, and in four months, \$120.54. She is owned by R. F. Hicks, York Co., Ont.

12-13 per cent. of total solids, of which 3½-4½ shall be of butter fat.

II. It shall contain no coloring matter, preservatives or other foreign substances.

III. It shall be free from food, pus or disease-producing organisms.

IV. It shall be free from all disagreeable odours and tastes.

V. It shall not have been heated in any way, nor frozen.

VI. It shall be derived only from cows which have been tuberculin tested by the veterinarian of the Commission before entering the herd, and have been found healthy, and which shall have been so tested every six months thereafter.

VII. It shall have been cooled to 45 degrees F. within one half hour after milking, and shall be kept at

milk, and are liable to get into the milk after having soiled their bodies and legs in recently-visited filth, thus carrying it into the milk.

II.—THE STABLER.

The stables should be well ventilated, lighted and drained, and should have tight ceilings to prevent the sifting of dust from above, and tight floors, preferably of cement. They should be whitewashed inside at least twice a year, unless the walls are painted or of smooth cement finish, which can be washed down frequently, and the air should always be fresh and free from bad odours. There should be an adequate water supply, and necessary wash-basins soap and towels. The manure should be removed from the stalls twice daily, except when the cows are in the fields the entire time, between morning and evening milkings. The manure gutter must be kept in a sanitary condition, and all sweeping and cleaning should be done at least one hour before milking, so that at the milking time the air may be free from dust.

III.—WATER SUPPLY.

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purposes, as well as the barn, should have an abundant and easily accessible water supply, absolutely free from any danger of pollution with animal matter.

IV.—THE COWS.

The cows should be examined by a skilled veterinarian at least once a month. Any animal suspected of being in bad health must be promptly removed from the herd and the cow rejected. Never add an animal to the herd until it has been tested with tuberculin, and it is certain that it is free from disease. All cows shall be tuberculin tested every six months at least. Do not allow the cows to be excited by hard driving, abuse, loud talking or any unnecessary disturbances. Do not allow any strongly-flavored food, which will affect the flavor of the milk, to be eaten by the cows. Groom the entire body of the cow daily. Before each milking wash the udder and inside of the thighs with water and dry carefully with a clean towel. If the hair in the region of the udder is long it should be clipped. Cows must not be allowed to lie down after being cleaned for milking until the milking is finished. A chain or rope stretched under the neck will prevent this. All milk from cows 21 days before and seven days after calving should be rejected.

The regulations governing the milkers, dealers other than milkers, the milk, the dairy, and other regulations required by the commission will be given in a subsequent issue.

Items of Interest

The high-stepping carriage team illustrated in Farm and Dairy, April 8th, and owned by Mr. T. A. Cox, has since been sold to Mr. McMillan of Winnipeg, for the snug sum of \$1400.

Messrs. Manhard & Gilroy intend holding their second sale of registered and tested Holsteins on Tuesday, May 25th, on the Brockville fair grounds. The animals to be sold number 50 head.

Continuous growth is necessary to make swine profitable and this cannot be obtained without plenty of feed.

A few pigs are often more profitable on the farm than a large number, but every farm should have a few.

Where alsike grows too rank, for the best production of seed, this rank growth may be overcome by sowing this will answer much better than clipping the clover, or pasturing.—T. G. Kaynor, B.S.A., Seed Dept., Ottawa.

I am very much interested in Farm and Dairy. It is the best paper I have ever taken.—H. Bertram, Peterboro Co., Ont.

Possibilities in Cow Testing

In addressing the patrons of the Maple Leaf cheese factory, Peterboro Co., last fall, Mr. C. F. Whitley, Supt. of Cow Testing Association, stated that the Department of Agriculture was endeavoring to give assistance to the farmers through several fields; the work of cow testing was but one branch. "Over 80 associations now exist in the Dominion," said Mr. Whitley, "whereas five years ago there were none. Even then we were 10 years behind the times in Denmark and have run successfully ever since."

"Cow testing associations aim to develop better strains of cows. Their work consists in finding out exactly what each cow is doing individually or personally. Only about one heifer in five turns out to be a good milker. Therefore, we see how essential it is to test the cows. Eternal vigilance is the price of success in obtaining a good by-product herd. It costs from \$30 to \$35 to feed each cow for a year, saying nothing of the labor expended on their care. We should therefore see that each cow is producing economically. We should know whether she is producing milk at a cost of 38 cents or at a cost of \$2 a cwt. At this latter figure, and it is not an uncommon one, there can be no profit in producing milk."

"The work in connection with the testing of the cows is small. The milk is weighed, night and morning, for three days each, thirty days. Blank forms are provided by the government for entering up the weights. The cost is very low. The spring scale can be had for \$1.25, the sample bottles cost \$2.50 for 10 cows or \$3.50 for 20 cows. The cost in time is 10 minutes a cow per month. The samples are tested once a month by the maker at the factory."

Mr. Whitley gave an example of the benefits of the cow testing association. Near Ingersoll, Ont., a member of an association had a cow for which he would have been glad to have taken \$35. She was giving but 35 lbs. a day and as his standard was 6,000 lbs. of milk a year, he said to himself that she must go. His maturer judgment, however, told him to keep the cow a little longer and to see just what she would do. By actual weight, that cow produced 11,100 lbs. of milk in a year. She is worth easily \$150 today. She was found out by cow testing.

Another cow in another association gave 1,000 lbs. of butter in a year. The man who sold her knew nothing about her, and sold her at a sacrifice. "Cow testing helps one to get rid of the average cows producing no profit," said Mr. Whitley. "By knowing what each cow is doing, it is possible to work up the whole average of the herd and the best of all, it prevents one selling his best cows that he knows nothing about."

"There has been a general increase of 66 per cent in the production of the cows in Denmark, due to the practice of testing. What would an increase of 66 per cent mean in Peterboro County? A cow giving 5,000 lbs. now

would give 8,300 lbs. after. Surely this is worth working for, is it not? It is estimated that 22,000 cows are kept in Peterboro County. Taking less than half that number, say 10,000 cows, and did we increase their output 50 per cent, it would mean an increased return of over \$165,000. These are big figures but they are facts.

"Where one is keeping 20 cows at present, three of which are no good and are producing no profit, it would mean a saving of \$200 a year at least if he were rid of them. Cow testing has proven good in hundreds of cases. Many have doubled their production in five years through following out the work of the Cow Testing Association."

Asks for a Fair Deal

H. A. Drummond, Wentworth Co., Ont.

It is possible to revive the hog business? I think it is but not under existing conditions. I have read through the columns of our agricultural papers many articles on this important question and almost every writer seems to have a different idea. To my mind that, which is most influencing the price of hogs on foot and causing the fluctuations in the market is the importing of American hog products in very large quantities, by our packers. This, controlled by the American market.

Our packers are shrewd business men and buy the American hog products on a low glutted market, thus enabling them to fill their cellars with all kinds of hog products which puts them in a position to dictate the price for hogs on foot to the Canadian farmer.

On account of the cheap corn the Americans are able to produce a certain class of hogs cheaper than we can in Canada. The Canadian farmer in the production of live stock has demonstrated the fact that he needs no preference, but is it fair to assume that this American pork should come into our country at two cents a pound duty, while, when we as Canadians wish to ship our pork back into the United States by the same port through which theirs came, we are obliged to pay five cents a pound duty. I understand that a deputation from the Swine Breeders' Association waited upon the Dominion Government and asked to have the difficulty remedied by increasing the tariff on all American hog products coming into Canada.

This question is a live one and I believe the farmers will stand in a body for it in the future. The majority of farmers might favor free trade but as all manufacturing industries have high protection, why should the farmer which is the source from which all other industries exist have practically none? The answer to this is. The farmer has been asleep and has not properly made his request known to the proper source.

There is one thing we ensure both the packer and the Government for: They have never put a brand on our hog products going to the British market, and the result is that other countries that do not attempt to produce as good a class of goods as we do can ship their thick fat product to the British market and it is put on the retail counter and sold as Canadian, thus injuring our reputation.

It seems to me that the packer does not care what becomes of the export business and is catering to the home trade where competition is not as keen and profits naturally larger. We might ask: "What does it mean to see one firm controlling 20 stores or more in Toronto?"

If the Government and the packer will give us a fair deal we will produce the goods to fill all requirements:

Statute labor should be abolished and the labor commuted. The money

could be spent better by employing laboring men to keep the roads in a good state of repair instead of calling out the farmers to work on the roads, when their time could be spent to

better advantage on their farms.—P. Farley, Peterboro Co., Ont.

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FARM AND DAIRY

PETERBORO, ONT.

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DAIRY FARMS COMPETITION

The beneficial results of a dairy farms competition are practically beyond estimation. The competition to be held this year in Ontario as outlined in Farm and Dairy for April 28th will have far reaching effects. It will have the effect of leading those who take part to put forth a special effort to improve their farms and methods of management generally. Neighbors of the competitors will become interested and watch closely what is done. The best methods followed on the competing farms will quickly be noted by other farmers in the section and be adopted by them more or less readily. Competitions of this nature have the effect of establishing illustration farms throughout the Province and as the farms are managed by practical farmers the object lessons they teach are correspondingly more valuable.

The great objection to the manner in which prizes are awarded by local

agricultural exhibitions lies in the fact that they are frequently won by men who are not the best class of farmers. A man may win a prize for a few cattle or sheep or for seed grain or for farm products and yet be one of the poorest farmers in his section. It happens only too often that exhibitors purchase their exhibits before the fair with the object of winning a few prizes. Where, however, whole farms are entered and the judges visit the farms at different seasons of the year, it is necessary that the competitors shall be all round good farmers before they can win a prize. Farm and Dairy hopes that farmers generally will assist in making the proposed competition a great success.

FIRE PROTECTION

Every man who tills the soil and who owns buildings of any description is interested in adequate fire protection. Who in these latter days would think of doing without fire insurance upon their houses, and the contents of the home, and insurance upon the more valuable farm buildings, as well as upon their contents? With few exceptions, the insurance carried is far from an amount equal to the value of the buildings insured. In case of fire, much loss and inconvenience is bound to result.

While most people in rural districts place more or less confidence in fire insurance, there is another form of protection from fire which has been overlooked. On but few farms, is there any well planned means of extinguishing a blaze should such a misfortune happen. In all public places, and in hotels in cities, where, owing to civic fire fighting organizations, supplementary means of fighting fire would seem unnecessary, we find in convenient places, reliable hand chemical extinguishers. Why should similar facilities not be at hand upon all farms, and those living thereon be acquainted with their use? A simple and reliable chemical fire extinguisher can be had at small cost. Should occasion arise to bring it into use, it would instantly be worth many times its purchase price.

The great value of such protection was forcibly brought home to an editorial representative of Farm and Dairy recently, while visiting at "Dunain," the country home of Mr. Barlow Cumberland, at Port Hope. Mr. Cumberland keeps a fire extinguisher, with an extra charge for it, close by, in a convenient place both upstairs and down, in his home. One is also kept in the barn. Not long ago, when descending the stairs with a lighted coal oil lamp in hand, one of the members of the household missing her footing, dropped the lamp over the stairs. In a moment all was in flames. The timely use of this fire extinguisher prevented what would have otherwise resulted in a costly conflagration.

On another occasion, its value was demonstrated at the barns. Smoke was seen to be issuing from under the floor in the driving barn. The extinguisher was brought into use, and without tearing up any boards, and without giving the smouldering

fire the necessary draft to waft it into flames, the extinguisher readily disposed of the danger. In this particular case water would have been of little use, as the fire could not have been located on the instant. Those who have their own best interests at heart will see to it that some adequate protection against fire is installed, and acquaint all hands about the place with its use.

PREPARE FOR SUMMER DAIRYING

In spite of many previous experiences with shortage of summer feed and the falling off of the milk supply that is inevitable under such conditions, many of our dairymen in the past have failed to make preparations to keep up the milk flow after the luxuriant pastures have been eaten down and June conditions have set in. Let us not be caught napping this year. Now is the time to plan what supplementary feed we will furnish our cows this coming summer. Under normal conditions, the cows will not lack for pasture during June. After that date, however, with few exceptions, supplementary feed can with profit be furnished to the cows.

Those who previously have allowed their dairy cows to rustle for themselves during the summer, as well as provident dairymen of long experience, will find suggestions of value in the article on page 3 of this issue dealing with summer dairying and soiling crops by Mr. J. H. Griedale, Agriculturist at the Central Experimental Farm. If we will but be not only hearers of the word but doers in connection with the suggestions made by Mr. Griedale, the dairy industry from the producers end at least will receive great impetus this coming summer.

EARLY SEEDING

We all realize that upon the seed time depends the harvest. We should note also that the yield per acre at harvest time depends much upon the date of seeding. Experiments conducted at the Ontario Agricultural College for a long period of years with sowing grain at different dates after the land was fit to work have shown conclusively that grain should be sown in the following order: spring wheat, barley, oats, and peas. By actual experiment it has been shown also that an average decrease in yield per acre of 56 pounds of oats, 53 pounds of barley, 29 pounds of spring wheat and 23 pounds of peas resulted for each day's delay in seeding after the first week in which the ground was fit.

It is apparent that delays in seeding time are costly. While it is not advisable under any circumstances to work land before it is fit, all attention should be given to getting the seed in after the proper time has arrived. It would be a poor policy, however, to give adequate cultivation for the sake of getting the seed in hastily. Much of the loss as indicated may safely be attributed to loss of moisture through evaporation. Where it is found that seeding has to be unduly delayed benefit will result in conserving moisture by sim-

ply giving the fields a stroke with the ordinary drag. In average years the rains of summer are insufficient to meet the needs of the growing crops. We must rely upon stored up moisture. Hence the great need of early seeding or cultivation to conserve all the moisture possible.

OUR HORSE INTERESTS

It is unfortunate for the horse interests of our country that many of those who breed horses have not a higher appreciation of the value of a good horse. We are all familiar with horse breeding practices as they are commonly carried on. The owner of the stud, the groom and probably the greatest of all the service fee enter into the considerations of the prospective breeder, rather than the breed, the breeding, or the individual merit of the stallion. Much of this indifference to a superior sire can be charged up to the practice of breeding from old, worn out, crippled and unsound mares.

That old and oft repeated adage, "The best is none too good," is doubly applicable when it comes to selecting horses and mares for breeding purposes. The best mares at our disposal are not too good to breed, and the best stallion available will not be any too good to mate with our best mares. In mating mares this season let us realize that our responsibility is not only personal but national. Let us breed from the best, that the offspring will be of high merit and such that will command a ready market at a profitable price when it has reached a saleable age.

One or two mares at least, on the average farm, can just as well be used for breeding purposes. When carefully handled they will do practically as much work, and the colts can be raised to a working age at a cost that will scarcely be noticeable. Those who have a young horse or two to sell each year find such sales a pleasing addition to their income, and when bred right there is always sure sale awaiting them.

PRODUCTS THAT SELL THEMSELVES

Marketable products of a quality superior to what is commonly rated first-class find ready sale. Especially is this so with products of the maple. Mr. Wellington Sager, of Wentworth Co., Ont., a user of a Champion Evaporator, has been interviewed by an editorial representative of Farm and Dairy in Western Ontario recently, said that there was no trouble about the demand for syrup, when it was made thick. He counted on making his syrup sell itself. It was not his policy to ask a man to buy, yet he assured us that he could sell 75 gallons to-day to people that have asked for it.

Although the standard for maple syrup is 15.2, Mr. Sager required his to weigh 15 pounds. The syrup, though it would sell as it comes from the evaporator, is all taken to the house and clarified. When put through a clarifying process it is that much better. Commenting upon the question, Mr. Sager informed our re-

present his entire current season another his product had to

What equally ductile any market, readily obvious so far as be produced

In view in shown in ments dation of the Lin Station this issue results a indicate in except wheat in cated, he pronounce many cases wheat that tate the chinery, in a

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presentative that last year he sold his entire output at an advance over current market prices. When the season was over, he was informed by another prominent syrup maker that his product was the only batch he had to compete against.

What is true of maple products is equally applicable to many other products of the farm. While the ordinary output is often a drag on the market, the high class article sells readily at a premium. The moral is obvious. Turn out an article that is, so far as possible, the best that can be produced.

In view of the unfavorable condition in which much fall wheat was sown in Ontario last fall the experiments dealing with the spring cultivation of fall wheat as carried on by the Lincoln, Nebraska Experiment Station and outlined elsewhere in this issue are of especial value. The results of these experiments would indicate that it is not advisable, save in exceptional cases, to harrow fall wheat in spring. It is clearly indicated, however, that rolling gives pronounced beneficial results. In many cases it will be well to roll the wheat this season if only to facilitate the work of the harvesting machinery, as many of the wheat fields are in a very lumpy condition.

Three Foes of Quebec Dairying

Three foes are doing much damage to dairying in the province of Quebec and also in many other parts of the Dominion. Those foes are: Bad roads, small factories, and poor milk. They are all of one family, being generated one by the other. Bad roads are the grandfather and the father of whom small factories are the son and poor milk the grandson. Although the province of Quebec is ahead of the other provinces for the production of first class butter and is making great strides in the path of the making of good cheese, it has to suffer much from the attack of those three foes.

BAD ROADS.

Bad roads are an impediment to progress in everything pertaining to agriculture, but more specially its dairying. When a farmer has drawn during a good while his milk to a factory on many miles of poor roads, he soon becomes tired of that task and instead of workings on the road to make it better, he begins to think of building a factory at the nearest corner and, soon, his thought becomes a reality. Most of the numerous small factories in existence have been built to counteract the evil resulting from having to draw milk to factories on bad roads.

Small factories then go on increasing. Everybody knows, except, it seems, those who build them, what harm is done to the whole dairy industry on account of their existence. Many small factories mean very little milk for each one and poor profits. Those scant profits bring with them poor buildings, cheap supplies, third class apparatuses, unskilful because poorly paid labor, hence poor dairy products.

POOR MILK.

Poor milk is the worst evil resulting from the existence of so many small factories. When a maker receives only a few hundred pounds of milk, he can't be and is not very appreciative about the quality of the milk he receives. A great number of farmers are far too negligent in the care of their milk. When the maker who has to receive milk badly cared for

is at the head of a large factory supplied with a good quality of fair milk he is independent of negligent farmers and sends back all bad milk that is brought to him. This can not be done by the poor maker of a poor factory who would soon, by so doing, be obliged to close the door of his establishment. This explains why so many poor dairy products come from districts where the makers are obliged to receive all the milk, bad or good, brought to them, on account of the competition that reigns amongst all the small factories of such districts.

THE REMEDY.

What is to be done against those three foes? The first one to be fought is surely bad roads, since they are the generators of the two others. This has been well understood by the Quebec local government which has enacted a law which favors the building of good roads by grants being offered to all municipalities who consent to follow the regulations of that law.

As to the unwanted small factories, two things should be undertaken to make them disappear. The first is to work to the centralization of many poor ones, in one strong and well equipped. This can be done by the co-operation of farmers who, first, would take the resolution of making better roads under the operation of the law mentioned above. The second is to fight against these factories by the aid of the laws relative to hygiene which, well applied, should make them fall under their application and close their doors. The Quebec local government is, we are recently informed, studying this question and may soon give it a satisfactory solution.

Then, with good roads and strong factories, poor milk will soon disappear and we will have no more of the three foes we have to fight against, just now.

Swine in America

"Swine in America" by F. D. Coburn, of Kansas, treats of this vast industry in a most exhaustive manner. The work is handsomely printed on fine paper, from large, clear type and is profusely illustrated, containing a large number of magnificent half-tone illustrations and drawings, printed on a special plate paper. A unique feature of the book is the frontispiece, this being an anatomical and physiological model of the hog. This model consists of a series of superposed plates, colored to nature, on heavy, serviceable paper, showing all the skeleton, muscles, internal organs, etc., in their relative positions. This model is accompanied by an elaborate explanatory key showing just how to use it.

The volume contains 701 pages (6 x 9 inches) and is bound in fine silk cloth with gold lettering. It embodies a summary of many years of thorough investigation on the part of the author. Every phase of hog raising is fully described. The book is indispensable to any hog raiser whether on a large or small scale. The volume should form a standard authority on the subject. It may be secured through Farm and Dairy for \$2.50 net.

A Good Worker

I secured the list of five subscribers I sent you for Farm and Dairy, within one and a half miles of my own home. I have more now to send you. I did not even have a copy of Farm and Dairy with me when I canvassed my friends. They took my word for the paper. I explained the good merits of the paper, and they all took it.

I fully believe that every farm home in Canada ought to have Farm and Dairy, and if I had my own business arranged I would like to spend 12 months towards that end.—A. F. P.



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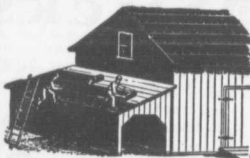
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Dominion Offices of the Potash Syndicate
1102-1105 Temple Building, Toronto, Ont.

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.

Notes On Alberta Dairying

C. Marker, Dairy Commissioner, Alta. The dairy industry of Alberta is making steady, substantial progress. Never, perhaps, in the history of the Province has dairying commanded more attention from the farmers than it does at the present time. The dairy cow is gently but firmly pushing her way to the front to take the important place she deserves in the economy of the farm. Her number last year exceeded that of the previous year by more than ten per cent., reaching a total of 110,357. The annual value of her milk products is estimated to be \$3,000,000. Probably a shade over two thirds of this sum represents the value of the milk, cream, butter and cheese used for home consumption, leaving nearly \$1,000,000 worth of butter and cheese for shipment to outside markets, mainly to British Columbia and to the Yukon.

CREAMERIES AND CHEESE FACTORIES.
The development of factory dairying is shown concisely in the following table, upon which is recorded the comparative number of factories, the butter and cheese output, the value of product, and average selling price per pound for the years 1900, 1907 and 1908.

The figures for 1900 and 1907 are taken from Bulletin VII, Census and Statistics, Dominion of Canada, and those for 1908 are based upon returns received at this office as to quantity of production. The values given for

1908 are based upon an estimated average price for both butter and cheese.

OUTPUT OF CREAMERIES IN ALBERTA.

Year.	Creameries Operated.	Lbs. of butter Manufactured.	Value as Creameries.	Average price per pound.
1900	16	601,489	\$123,306	20.50
1907	45	1,607,697	\$362,782	24.90
1908	51	1,707,465	\$585,871	35.00

OUTPUT OF CHEESE FACTORIES IN ALBERTA.

Year.	Factories Operated.	Lbs. of cheese Manufactured.	Value at Factories.	Average price per pound.
1900	3	21,693	\$ 3,102	14.30
1907	10	137,911	\$24,468	12.50
1908	10	190,000	\$23,750	12.50

Through the establishment of butter and cheese factories during the past few years the quality of our dairy products has become greatly improved and, as a result, the demand and the selling price considerably enhanced.

Thus, by the application of improved methods in the handling of the dairy stock and of the milk and cheese on the farms; by the employment of skilled workers in our creameries and cheese factories and in the safe transportation to market of the finished products, the butter and cheese of Alberta, the creamery butter particularly, has won and now enjoys the confidence of the trade, appeals to the fancy and pleases the palate of a discriminating consuming public.

ORGANIZED CO-OPERATION.

An interesting and valuable experiment in co-operative dairying

has for some years been carried on in the form of the so-called Government creameries. There is an interesting history attached to this movement, but suffice it to say here that early in 1905 the directors of the co-operative associations, whose creameries had been operated by the Dominion Department of Agriculture since their inception, were advised that the Dominion Government found it necessary to withdraw from that work in the Province, more especially as the business of the creameries had then been placed upon a sound basis.

This announcement having been made, the associations unanimously requested the Provincial Government to continue the work which had been commenced under the auspices of the Dominion and conducted to the evident satisfaction of the patrons of the creameries. The request was granted and the Provincial Government made the necessary provision not only to continue the work that had been commenced but also to undertake new work.

CREAMERIES IN 1908.

During 1908 21 co-operative creameries were operated by the Department, having a butter output of 850,000 pounds representing a selling value of \$220,000, making an average price of 25.9 cents a pound at the creameries.

Aside from the commercial aspect there can be little doubt that the co-operative creamery work has done much towards establishing a public sentiment in favor of the principle of co-operation. As an instance I may mention that during the past few months applications have been received from some 40 different districts for Government operated co-operative creameries.

The evidence taken last year by the pork commission throughout the Pro-

vince showed very clearly that the farmers have confidence in that principle, and it is further emphasized in the report which that commission recently presented to the Legislature.

Dairy Notes

Nova Scotia's cheese output in 1900 was 668,147 lbs. of the value of \$56,321, and in 1907, 181,956 lbs. of the value of \$22,096.

The factory or creamery should be an example of neatness and cleanliness, with all utensils in first-class condition.

Ontario's cheese production decreased 1.72 per cent in the years 1900 and 1907, but the value of the product increased by 12.39 per cent. in the seven years.

Milk should be bought on its merits, by some satisfactory arrangement following well founded sanitary and hygienic rules, by which the production of milk of superior quality is encouraged, and milk of low grade either rejected or gradually improved.

In 1900 the number of employees in butter and cheese factories in Canada was 6,586. In 1907 it was only 6,362. Though the number of employees decreased there was an increase in the total amount of salaries and wages paid, from \$1,464,110 in 1900 to \$1,719,978 in 1907, the average per employee in 1900 being \$219.62, and in 1907, \$270.14, an increase of 26.85 per cent.

In 1907 the average price of creamery butter for all Canada was 24c, and of cheese 12c a lb. For the same year in Manitoba the average price of cheese was 11c, and butter 25c; in Saskatchewan, 13c for cheese and 28c for butter; in Alberta, 12c for cheese and 24c for butter; and in British Columbia, 13c for cheese and 32c for butter.



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Cream Separators stick in your eye. You simply can't forget them.
The supply can is so steady and easy to fill. It need never be moved to take the Tubular apart. All separators, except the Sharples, have cans set right above the bowls—such cans must be lifted

off before the machine can be taken apart, which is doubly unhandy if the can happens to be full. The few, simple running parts are all enclosed in a dust proof case in the head of the Tubular. They are entirely self oiling, needing only a spoonful of oil poured right into the gear case once a week. The gear case cap lifts off without unfastening anything. This makes Tubulars very neat.

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The top of the supply can, on the largest dairy Tubular, is only 3 feet 3 inches above the floor. Easy to fill, steady, need never be moved to take out the bowl. An exclusive Tubular advantage.

are built remarkably well and in the only right way. They skim twice as clean because they develop twice as much skimming force.

Avoid wishing you had bought a Tubular by buying a Tubular.

The manufacture of Tubulars is one of Canada's leading industries. 1908 sales way ahead of 1907—out of sight of most, if not all, competitors combined. 1909 is doing still better. Write for Catalog 253



To oil the Tubular, simply pour a spoonful of oil into the gear case once a week. The gear wheels throw this over themselves, and the ball bearing supporting the bowl.

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Cheese Department

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

Experiments with Whey Butter

G. A. Putnam, Supt. of Dairy Instruction

In 1895 experiments were carried on at Cornell University, New York, to determine if possible, whether or not it was advisable to attempt to recover the butter-fat which was lost in the whey from cheese factories, and manufacture it into commercial butter. Since then a number of factories in New York State have found it profitable to recover this fat by use of centrifugal separators, and have been making whey-butter on a commercial scale.

Experiments were made more recently by Prof. H. H. Dean, at the Guelph Dairy School. Within the last year or two the question of butter-making from the fat lost in whey has been receiving increased attention, and both the Agricultural College and the Dairy Branch of the Department of Agriculture decided to carry on further experiments.

As former experiments have shown that an average of about 2½ lbs. of butter could be procured from 1,000 lbs. of whey, it is thought this question of whey-butter was an important matter when the figures for the entire industry for the Province of Ontario were taken into account.

At the present season, however, and whey-butter has become an important matter when the figures for the fat which was lost in the whey from the cheese factories of the Province of Ontario, being manufactured there, it would have increased the revenue to the cheese industry by 3.64 per cent. When the cost of manufacture as shown below is taken into consideration the net increased revenue from the cheese industry would have been 1.64 per cent. This appears to be quite a small percentage, but is a large sum in the aggregate, and if this whey-butter could have been procured at a cost which was appreciably smaller than the selling price of the same, the investigation would give us data which would be well worth considering.

EXPERIMENTS CONDUCTED
So, during the season of 1908 experiments of a fairly exhaustive nature were carried on by J. W. Mitchell, Superintendent of the Eastern Dairy School, Kingston, and Frank Hertz, Chief Dairy Instructor for Western Ontario, under factory conditions; and by H. H. Dean, Professor of Dairying at the Agricultural College in the Experimental Dairy. These experiments were carried on to see whether or not this question of manufacturing butter from whey would be profitable to the average cheese factory of Ontario. The data secured dealt with the yield, cost of manufacture, the quality of the product, and the profit. The direct ratio, of course, would be in direct ratio to the amount of butter-fat lost in the whey, and this factor varies considerably in different factories, and at different seasons.

Mr. J. W. Mitchell reports the loss from two cheese factories, Baldwin and Harrowsmith. The Balder-

son factory throughout the season, June to October, yielded three pounds of butter per 1,000 pounds of whey, while the Harrowsmith factory for the same period yielded only one and one-half pounds of butter per 1,000 pounds of whey. The average of these two factories is 2.25 pounds of butter per 1,000 pounds of whey. The Babcock Test for fat in the whey in the vats in many factories shows that there is a wide difference in whey in different factories.

The report of Mr. Frank Hertz shows that there was a wide difference also in the factories under his investigation. He reports that the fat in whey varied from as high as .33 per cent. to as low as .15 per cent., and when the milk was always greater in an over-ripe or greasy condition. He places the average mechanical loss tests at 23 per cent., and concludes that two and one-half pounds of butter can be made from 1,000 pounds of whey.

Prof. Dean from his experiments of the past season also proves that the average yield of butter per 1,000 pounds of whey under their conditions at Guelph was two and one-half pounds.

YIELD

Conclusions of—J. W. Mitchell, 2½ pounds of butter per 1,000 pounds of whey; Frank Hertz, 2½ pounds of butter per 1,000 pounds of whey; Prof. H. H. Dean, 2½ pounds of butter per 1,000 pounds of whey.

It must be borne in mind by factory owners and cheesemakers, who are interested in these experiments, that this data regarding yield can only be taken as a basis for them to work out their own problems. If a factory has a larger loss of fat in whey than .23 per cent., then the

returns from making whey-butter will be more profitable than is shown from these experiments, and if their loss of butter-fat in the whey is less than .23 per cent., their products in the manufacture of whey-butter will be correspondingly lower.

COST OF MANUFACTURE

The cost of manufacturing whey-butter from whey is fully as important a factor as the yield. Mr. Mitchell in arriving at his cost took into consideration every item of expense in connection with the work, such as cost of fuel, wages for work, interest on investments, and allowance for deterioration, and he found that it cost 11.5 cents a pound to manufacture whey-butter. There is one factor in Mr. Mitchell's estimate which is rather high for ordinary conditions, namely the factor of wages, for which he allowed \$50.00 a month, and the butter manufactured averaged 25 lbs. a day.

Mr. Hertz estimates the cost of manufacturing whey-butter in the Kerwood factory at seven cents a lb. Taking an average of these two estimates it would make the cost of manufacturing whey-butter under best factory conditions, nine cents a lb.

(Concluded next week)

New Book on Cheesemaking

"The Science and Practice of Cheese Making," by L. L. VanSlyde, Ph.D., chemist, New York Experiment Station, and Charles A. Pablow, A.B., M.D., C.M., Assistant Professor of Dairy Industry at Cornell University, is a treatise on the manufacture of Cheddar cheese and some other varieties. It is a work that should be in the hands of all practical cheese makers.

Cheese makers, dairy teachers, students and others, will appreciate this work, as it is an unusual contribution

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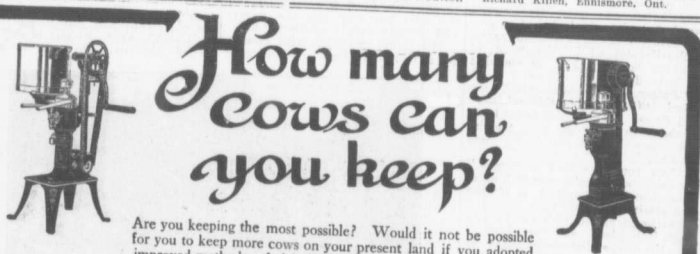
PETERBORO - ONTARIO

to dairy literature. It contains a surprising amount of new material, systematically arranged and clearly presented. The work, which is profusely illustrated, contains 480 pages (5 inches x 7 inches). It can be had through Farm and Dairy for \$1.75 net.

The Season's Opening.—At Belleville, Ont., the first cheese board session of the season was held in April 15th when 50 boxes colored were sold at 12½c, and 110 boxes of white were offered; but as only 11½c was bid, factorymen refused to sell, 12c. being demanded.

In ten years I have known of only one case of milk being adulterated in factories where the milk has been paid for by the test. I have known of scores of such cases in factories where the milk has been paid for by weight. —Dairy Instructor R. W. Ward, Peterboro Co., Ont.

WANTED.—Cheesemaker, capable of taking full control of 50 ton factory in Peterboro County. Apply April 23rd at cheesemakers' convention. Peterboro—Richard Killen, Ennismore, Ont.



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Are you keeping the most possible? Would it not be possible for you to keep more cows on your present land if you adopted improved methods of dairying? If you will investigate the

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you will almost certainly find that you can increase your dairy herd, making greater profits with even less labor and less expense than you require under present conditions. I. H. C. Cream Harvesters are enabling hundreds of dairymen to enlarge their operations. They get all the butter fat, skimming closer than you can by hand. They save work, worry, time and trouble.

They give you the warm skim milk, fresh and sweet, as a nourishing food for your calves, pigs and chickens. It requires only the addition of a little oil meal to take the place of the butter fat extracted to make it an excellent feed.

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3 ALWAYS seek the good that is in people and leave the bad to Him who made mankind and knows how to round off the corners.

Goethe's Mother.

Sowing Seeds in Danny

By Nellie L. McClung.
(Continued from last week.)

"CHOCKALUTS?" asked Danny, to be sure that he hadn't been mistaken.

"Yes," went on Pearlie to keep him still while she fixed his shock of red hair into stubborn little curls, and she told again with ever-growing enthusiasm the story of the pink lady, and the wonderful things she had in the box tied with store string.

At last Danny was completed and stood on a chair for inspection. But here a digression from the main issue occurred, for Bugsey had grown tired of his temporary confinement and complained that Patsy had not contributed one thing to Danny's wardrobe while he had had to give up both his stockings and his pants. Pearlie stopped and looked at him, combing her own hair to see what could be done.

"Patsy, where's your gum?" she asked. "Git it for me this minute," and Patsy went to the "fallen leaf" of the table and found it on the inside where he had put it for safe keeping.

"Now you give that to Bugsey," she said, "and that'll make it kind a even though it does look as if you wuz gettin' off pretty light."

Pearlie struggled with her hair to make it lie down and "act decent," but the tangle that looked back at her from the cracked glass was not encouraging, even after making allowance for the crack, but she comforted herself by saying, "Sure it'll fall Danny she wants to see, and she won't be lookin' much at me anyway."

Then the question arose, and for a while looked serious, that was Danny to wear on his head? Danny had no cap, nor ever had one. There was one little red toque in the house that Patsy wore, but by an unfortunate accident, it had that very morning fallen into the milk pail and was now drying on the oven door. For a while it seemed as if the visit would have to be postponed until it dried, when Mary had an inspiration.

"Wrap yer cloud around his head and sav son wuz feart of the earache, the day is so cold."

This was done and a blanket off one of the beds was pressed into service as an outer wrap for Danny. He was in such very bad humor at being wrapped up so tight that Pearlie had to set him down on the bed again to get a fresh grin on him.

"It's just as well I have no mits," she said as she lifted her heavy burden. "I couldn't howl him at all if I was bothered with mits. Onen the duns, Patsy, and mind nor shut it tight again. Keep up the fire, Marv,

Bugsey, lie still and chew your gum, and don't fixt any of yez."

When Pearlie and her heavy burden arrived at Mrs. Francis's back door they were admitted by the dark-haired Camilla, who set a rocking-chair beside the kitchen stove for Pearlie to sit in while she rolled Danny, and when Danny in his rather remarkable costume stood up on Pearlie's knee, Camilla laughed so good humoredly that Danny felt the necessity of showing her all of his accomplishments and so made the face that Patsy had taught him by drawing down his eyes and putting his fingers in his mouth. Danny thought she liked it very much, for he went hurriedly into the pantry and brought back a cookie for him.

The savory smell of fried salmon, for it was near lunch time, increased

her right, "it was just this blanket I had him rolled in." At which Camilla again retired to the pantry with precipitate haste.

"Did you see the blue, blue sky, Daniel, and the white, white snow, and did you see the little snow-birds whirling a-bye like brown leaves?" Mrs. Francis asked with an air of great childlikeness.

"Nope," said Danny, shortly, "didn't see again." "Fesse, ma'am," began Pearlie again, "it was the cloud around his head on account of the earache that done it."

"It is sweet to look into his innocent eyes and wonder what visions they will some day see," went on Mrs. Francis, dreamily, but there she stopped with a look of horror from her own face, for at the mention of his eyes Danny remembered his best trick and how well it had worked on Camilla, and in a flash his eyes were drawn down and his mouth stretched to its utmost limit.

"What ails the child?" Mrs. Francis cried in alarm. "Camilla, come here."

Camilla came out of the pantry and gazed at Danny with sparkling eyes, while Pearlie, on the verge of tears, vainly tried to awaken in him some sense of the shame he was bringing on her. Camilla hurried to the pantry again, and brought another cookie. "I believe, Mrs. Francis, that Danny is hungry," she said. "Children sometimes act that way," she added, laughing.

"Really how very interesting; I must see if Dr. Parker mentions this strange phenomenon in his book."

"Please, ma'am, I think I had better take him home now," said Pearlie. She knew what Danny was, and was afraid that greater distance might await her. But when she tried to get him back into the blanket he lost every joint in his body and slipped to the floor. This is what she had feared—Danny had gone limber. "I don't want to go home" he wailed dismally. "I want to stay

every change Danny screamed his disapproval, and held her to the original proposal, and when it was done, he looked up, with his sweet little smile, and said to Mrs. Francis nodding his head, "You're the lovely pink lady." There was a strong flush on Mrs. Francis's face, and a strange feeling stirring in her heart, as she hurriedly rose from her chair and clasped Danny in her arms. "Danny! Danny!" she cried, "you shall see the yellow birds, and the stall, and the chocolate on the dresser, and the pink lady will come to-morrow with the big parcel."

Danny's little arms tightened around her neck.

"It's her," he shouted. It's her." When Mrs. Burton Francis went up to her sitting room, a few hours later to get the "satchel" powder to put in the box she was to tie with the store string, the sun was shining on the face of the Madonna on the wall, and it seemed to smile at her.

The little red book lay on the table forgotten. She tossed it into the waste-paper basket.

CHAPTER II.

The Old Doctor.

Close beside Mrs. Francis's comfortable home stood another large weather-beaten and dreary looking, a house that seemed to be rickety and broken fence clearly indicated that its good days had gone by. In the summer time vines and acacia grew around it to hide its scars and relieve its grimness, patting as a brave smile on a sad face.

Dr. Harner, brilliant, witty and skilful, had for many years been a victim of intemperance, but being Scotch to the backbone, he could see how good, pure Kilmarnoch made in Glasgow, could hurt anyone. He knew that his hand shook, and he blazed; but he never blamed the whiskey. He knew that his patients sometimes died while he was enjoying protracted drink, but of course, accidents will happen, and a doctor's accidents are soon buried and forgotten. Even in his worst moments, if he could be induced to come to the sick bed, he would sober up wonderfully, and make a recovery from death by his gentle and skilful, though trembling hands. He might not be able to walk across the room, but he could diagnose correctly and prescribe successfully.

When he came to Millford, years ago, his practice grew rapidly. People sought him to come to such a small place, for his skill, wit, his wonderful presence would have won distinction anywhere.

His wife, a frail though very beautiful woman, was first thought nothing of his drinking habits—she was never anything but gentlemanly in her presence. But the time came when she saw humor and manhood slowly but surely dying in him, and on her heart there fell the terrible weight of a powerless despair. Her health had never been robust and she quickly sank into invalidism.

The specialist who came from Winnipeg diagnosed her case as chronic anaemia, and prescribed port wine, which she refused with a queer little sobbing cry and a sudden rush of tears. But she put up a good fight nevertheless. She wanted to live so much, for the sake of her beautiful fifteen-year-old daughter. Mrs. Burton Francis did not live to see the whole work of death done in her, and she came in the early spring, swift and sudden and kind.

Her doctor's grief for his wife was sincere. He is often referred to as "my poor Mildred," and he never spoke of her except when comparatively sober.

(To be continued.)



Evenly tinned trees, good lawn, and smooth, well-kept road of a kind that should be more numerous. This country is in Petersboro County and more rural in character, its care and management could be copied by small, and although in some respects, with small expense and not much effort. See article in April 15th issue. We will be glad to publish photographs of similar nature.

Danny's interest in his surroundings, and his eyes were big with wonder when Mrs. Francis herself came in.

"And is this little Daniel?" she cried rapturously. "So sweet; so innocent; so pure! Did Big Sister carry him all the way? Kind Big Sister. Does on love Big Sister?"

"Nope," Danny spoke so quickly, "just like chockaluts." "How sweet of him, isn't it, really?" she said, "with the world all before him, the great untiring future lying vast and prophetic waiting for his baby feet to enter. Well has Dr. Parker said: 'A little child is a handle of possibilities and responsibilities.'"

"If ye please, ma'am," Pearlie said timidly, not wishing to contradict the lady, but still anxious to set

with her, and her; want to see the yalla birds, want a chockalut."

"Plead Pearlie, and I'll tell you all about the lovely pink lady when we go home, and I'll get Bugsey's gum for ye and I'll—"

"No," Danny roared, "tell me now about the pink lady, tell her, and her."

"Wait till we get home, Danny may see Pearlie's grief flowed aches. Disgrace had fallen on the Watsons, and Pearlie knew it."

"It would be interesting to know what mental food this little mind has been receiving. Please to tell him the story," Pearlie said.

Thus admonished, Pearlie, with flaming cheeks, began the story. She tried to make it less personal, but at

The selecting their suit or shade to succeed to position, was possibly for a man not successful position, and he borne

Box

filled by a to the is one of success or whether or a shaded box filled.

The tall suited for the low growing habit for intermediated between the necessary, and hanging growing plants, is no plants, but as to as far as looking up a bright an select chiefly

ance plants, of the most of flowering mixture of low should I and relieve green foliage of scarlet glass window boxes the main part of the effective baskets and

lowing list of the varieties used for sun shades. Plants, lanterns, coleums, ivy-leaves, Low Ground Vinca Japonica

Box Filled

minor) nasturtium, annual, dwarf, Charlie dusty, sun, petunia, and other fanciful lantern, present from every year

Window Boxes

The Canadian Horticulturist.
By Wm. Hunt

The main point to be considered in selecting plants for a window box, is their suitability for the position they are to occupy as regards a sunny or shaded position. As a rule, plants that succeed well in a shaded position, will succeed to some extent in a shaded position, with poorer flowering results possibly. Plants suited particularly for a shaded position, however, will not succeed well in a burning, sunny position, even with the best possible care and culture. This fact should be borne in mind when selecting a box



Box Filled for Sunny Position

filled by a florist or in selecting plants to fill the box or stand yourself, as it is one of the main points leading to success or failure. Tell the florist whether the plants are for a sunny or a shaded position when getting a box filled.

The tall growing plants are best suited for the back row of the box, the low growing and those of a trailing habit for the front and ends, and intermediate sized plants for filling in between the back and front row if necessary. In filling rustic stands and hanging baskets, place the taller growing plants in the centre.

Another point in the selection of plants, is not only to have good sized plants, but to have plenty of them, so as to furnish the box well at once, planting so that there are no bare spots when finished. To have looking and pleasing effect, select chiefly bright, light-colored foliage plants, as well as a preponderance of flowering plants and colors of the lighter shades and colors of flowering plants. A good addition should be used to brighten up and relieve the ground-work of dark green foliage and the heavier shades of scarlet flowers, so often seen in window boxes. Brightness is one of the main points to be considered in the effectiveness of window boxes, baskets and rustic stands. The following list of plants includes most of the varieties that can be effectively used for sunny or shaded positions:

Tall Plants for Sunny and Slightly Shaded Position.—Dwarf cannas, lanterns, coleus, salvia, iris, geraniums, ivy-leaved geranium.

Low Growing and Trailing Plants.—*Vinca japonica*, periwinkle (*Vinca*

cheveria, agaves, *Sansevieria zeylanica*, aloes and other succulent plants can often be made use of.

Tall Plants for Shaded Position.—Palms, dracaenas, *Syngonium*, *Ficus elastica*, *Asparagus plumosus*, *Pandanus Veitchii*, *Pandanus utilis* and crotons.

Sweet peas, convolvulids, climbing nasturtiums can also be used very effectively in some positions as a background, as well as forming a shade for the window.

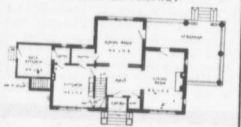
Low Growing Trailing Plants for Shaded Position.—*Lobelia*, cigar plant (*Cyrtus*) *nasturtium*, *Tropaeolum canariense*, *tradescantia*, *senecio* or German ivy *Lophospermum scandens*, *Campanula isolepis*, *Convolvulus minor*, leopard plant (*Forjuzum*) *Anthurium variegatum*, *Asparagus Sprengeri*, *Festuca glauca*, *Scirpus riparius*.

Many of the plants mentioned, such as salvia, ageratum, petunia, verbenas, centreas, *Cobea scandens*, lobelia and tropaeolum can be grown from seed. Sow the seed indoors about the end of March or early in April, and grow indoors until the end of May or early June. Sow nasturtium, *Cobea scandens* and tropaeolum seeds, two or three seeds in a small pot, as they do not transplant very well. There is probably no one kind of plant better suited for window boxes than both the dwarf and tall nasturtiums. They are indispensable for this class of plant decorative work. Seeds of this last named sown in the window box about the end of May will of themselves make a pleasing effect in a box or stand, but are later in flowering.

Farm House Plans

From time to time we have had the pleasure of publishing in Farm and Dairy, plans of up-to-date and attractive farm houses. We purpose publishing two or more sets of plans furnished us recently by a competent architect in Ontario, together with brief descriptions of the plans. We wish our good housewives to criticise these plans and let us know what they think of them. Any suggestions for improving these plans, or any plans of farm houses, that are thought to be better adapted for farm homes, will be gladly received, and if suitable will be published in this department of Farm and Dairy. A brief description of the plans should accompany drawings. All drawings should be made with black ink, and on unruled paper. Do not roll drawings when sending them; send flat between cardboard. Address Household Editor, Farm and Dairy, Peterboro, Ont.

A description of the two floor plans herewith illustrated follows:



Suggested Plans for a Model Country Home. First Floor Plans.

In the house illustrated, the first story walls are of grey-white plaster, the upper side walls being shingled and stained in silvery grey. Stepping from front entry, one finds well-lighted hall. Near the door is

a roomy coat-closet, with outside light. At one side, convenient to the kitchen, are the stairs to the second floor. At the right is a pleasant living room, having a large open fireplace front directly opposite the hall. The front wall is centred by three windows grouped together, and opposite is a French door opening to the spacious verandah.

Beyond the living room is a cheerful dining room. This room is connected with the kitchen by a commodious pantry, having built-in cupboards and shelves which add materially to the housekeeper's comfort.

We had a definite aim in placing the kitchen in the front of the house.

Don't Throw It Away

USE **MEDETS**

They remove all lumps in all soaps—lith, brass, copper, granulated, hot-water boxes, etc. Remove all dirt, grease, or rivet. Anyone can use the machine. It is the only machine in use. Send for more sizes. 50c. PORTLAND. Agents: PACKER ASSOCIATES, 1000 BROADWAY, N.Y.C. Collectors: Mr. Geo. J. L. U. Colburn, Ont.

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Is always admired and mostly desired. How is yours? We cure or remove all complexion troubles. Don't go about with a puffed, blotched, muddy or discolored complexion, when our CLEAR SKIN TREATMENT will cure you. It has cured many thousands. Consultation free.

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HISCOCK DERMATOLOGICAL INSTITUTE
61 COLLEGE STREET, TORONTO, ONT.

This Washer Must Pay for Itself

A MAN tried to sell me a horse once. He said it was a fine horse, and had nothing the matter with it. I wanted a fine horse, but I did not want anything about horses much. And I didn't know the man very well, either.

So I told him I wanted to try the horse for a month. He said, "All right," but pay me first, and I'll give back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse wasn't "all right," and didn't like the horse, though I wanted it badly. Now, this set me thinking. You see, I make Washing Machines—the "190 Gravity" Washer.

And, as I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it. But I'd never try to cry because they wouldn't write and tell me. You see I sell all my Washing Machines by mail. (I've sold 20,000 that way already).

So, though I, it's only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse. Now, I know what our "190 Gravity" Washer will do. I know it will wash clothes, without wearing them, in less than half the time they can be washed by hand, or by any other machine.

When I say half the time I mean half—not a little quicker, but twice as quickly.

I know it will wash a tubful of dirty clothes in six minutes. I know no other machine ever invented can do that in less than 12 minutes, without wearing out the clothes.

I'm in the Washing Machine business for keeps. There's why I know these things so surely. Because I have known them, and there isn't a Washing Machine made that I haven't seen and studied.

Our "190 Gravity" Washer does the work so easily that a child can run it almost as well as a strong woman. And it doesn't wear the clothes, nor fray the edges, nor break buttons, the way all other washing machines do.

It just drives soapy water clear through the threads of the clothes like a Force Pump might.

If people only knew how much hard work the "190 Gravity" Washer saves every week for ten years, and how much longer their clothes would last, they would fall over each other trying to buy it. And if you don't want to waste the man to do with the horse. Only, I won't wait for people to ask me. I'll offer to do it first, and I'll "make good" the offer every time. That's how I sold 200,000 Washers.

I will send any reliable person a "190 Gravity" Washer on a full month's free trial! I'll pay the freight out of my own pocket. And if you don't want the machine after you have used it for a month I'll take it back and pay the freight that way, too. Surely, that's fair enough, isn't it?

Doesn't it prove that the "190 Gravity" Washer must be all that I say it is? How could I make anything out of such a deal as that if I hadn't the finest thing that ever happened for Washing Clothes—the quickest, easiest and handiest washer on earth. It will save its whole cost in a few months, even in West and the most northern regions. And then it will save 50 cents to every cent a week over that in winter months. And then it will save 50 cents to every cent after a month's trial, I'll tell you pay for it out of its own pocket. If that's not a deal, what is? If that cheerfully, and I'll wait for the money until the machine itself earns the balance.



Now, don't be suspicious; I'm making you a simple, straightforward offer. You don't risk anything, any more. I'm willing to do all the risking myself! Drop me a line today and let me send you a book about the "190 Gravity" Washer that washes clothes in 5 minutes. Or I'll send the machine on to you, if you say so, and TAKE ALL THE RISK MYSELF. Address me this way—F. D. V. Bach, Manager "190" Washer Company, 387 Yonge Street, Toronto, Ont. Don't delay. Write me a post card now, while you think of it.

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

Box Filled for Shaded Position

nasturtium, *Othonna crassifolia*, annual and perennial sweet Charlie dusty miller (*Centaurea cyanocarpa*) *Mentha*, *riensne*, *geranium*, *petunia*, *verbena*, *Mimulus*, *Saxifraga* and other fancy geraniums, *Gnaphalium lanatum*, *Gazania splendens* and *propagula* tropaeolum.

For very Sunny Position.—Cacti,

The women of the farm home must necessarily pass the greater portion of the daylight hours in the kitchen. The summer kitchen is separate from the main kitchen. This will prove an advantage, both summer and winter. In winter meals can be prepared in the outside kitchen and the winter kitchen utilized as a dining room, with an entire absence of heat and unpleasant odors of cooking, while, during the winter, the entry will act as a buffer to the cold.



Attractive Second Floor.

SECOND FLOOR PLANS.

On the second floor are four good bedrooms, a sewing room and a bathroom. The owners' room can be directly over the dining-room, and is provided with a closet, each, for the mistress and the master. Each of the other bedrooms has a good closet and windows facing in two directions.

With the exception of the hall, the woodwork throughout this floor is finished in white enamel, than which there is no better or more sanitary finish for bedrooms and bathrooms, as it may readily be cleaned.

The future of Canada lies to a great extent with the agricultural world, the farm being without a doubt the backbone of the country. Is it not then our duty to make life on the farm more pleasant and attractive and our farm houses "homes" in the truest and best sense of the word, so that the advantages of city life will be equalled by the attractions of "the old home down on the farm?"

The cost of this house is estimated at about \$4500.00.—C. Stevenson, Wentworth Co., Ont.

The Upward Look

A Lesson From the Israelites

But the Egyptians pursued after them x x and when Pharaoh drew nigh the children of Israel lifted up their eyes x x and they said unto Moses, because there were no graves in Egypt, hast thou taken us away to die in the wilderness?—Exodus,

10; 9, 10, 11.

As we read the history of the children of Israel there is one thought that must come to us all: That is, how wonderfully God revealed Himself unto them. What a fortunate people they were. While they were still in bondage in Egypt God manifested His love for them by protecting them from the plagues that played such havoc with the Egyptians. He promised them to lead them into a land flowing with milk and honey. Later He revealed His power by saving them from the Egyptians, without injury or loss to them of any kind, just when their destruction seemed inevitable. God not only fed them with special food, while they were in the wilderness, but He sent His cloud to lead them by day and a pillar of fire to guide them by night. And yet! although these and many other miracles were performed for their benefit, the Israelites appear to have grown accustomed to the special mercies that were showered upon them and to have come to look upon them as their right. This may account for the fact that whenever anything happened that seemed to them to be out of the ordinary they were ready to give up in despair and to find fault with God, and even to forget Him and to run after strange

Gods, just as they are shown to have done by our text. How natural it is for us to think that if God would only reveal Himself to-day, as in days of old, foolish indeed would the nation, or individual, be that neglected His teachings.

And yet! how like we, each of us, are to the Israelites. We enjoy advantages that few people have. We are surrounded with mercies on every side. The Bible is full of promises and blessings for all who love and serve God. Those, however, are apt to be all forgotten whenever trouble crosses our path. When our plans are thwarted and our cherished hopes seem blighted we are only too quick like the Israelites of old, to forget that God knows better than we do ourselves what is for our own good, and to complain about the hardness of our lot. Our thoughts are so centered on the affairs of this life that we forget that they are only temporal. When, on the other hand, our lives fall in pleasant places we are inclined to look on our blessings as our right and to forget to give God thanks for them. Only by being faithful in prayer and by earnest study and meditation on God's word can we keep ourselves free from being even more forgetful of God's love than were the Israelites.—I. H. N.

EATON'S CATALOGUE

FOR SPRING AND SUMMER

Nov 2, 1908

Sir
I received the goods quite safe and am very pleased with them. I consider them good value and will be pleased to recommend your firm to my friends. Thanking you for your prompt attention.
Faithfully Yours.

Would You

Save Money?

And Be Pleased With Your Purchases

Write For this Catalogue To-Day

Why not consult the Catalogue every time you want to buy an article?

Buy from this Catalogue as you would from a store—you'll be better satisfied, is the testimony of thousands.

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THE T. EATON CO LIMITED TORONTO CANADA

It's good business ability to buy the best at the lowest price.

THE Send publication will be after re will fre tions at

Wash colery, n pt. boil with w 1 qt. mil Brown: tablesp ed, add 1 til tender milk, stir the desir cooked cel into this and 1 t. on. If the flour

One can colander boiler. Run and 1 of fl add corn. whipped or soup dishes

Wash an split peas. cis. cold w 1 stalk cel and pepper and rub th

Drain off mon, and fine; pick o fish add 1 of 4 eggs be ed butter; 2 teasp peppe parsley, and eggs beaten into a butte

To a 1/2-lb ing bones a mashed pota fine, pepper ly, make int fry in deep

When a li left over, ad salt, and for the baking tablesp in fry brown, l

For this th but it may the top just cheese is not ed with the o of the chee of cheese apr

Give ti

The bes Shears th thing. The Best nick ONE NEW CIRCULATION

THE COOK'S CORNER

Send in your favorite recipes, for publication in this column. Inquiries pertaining to cooking are solicited, and will be replied to, as soon as possible after receipt of same. Our Cook Book will be ready for two new ready subscribers at \$1.00 each. Address, Household Editor, this paper.

CREAM OF CELERY SOUP.

Wash and cut fine 4 small heads celery, and put in a stew pan with 1 pt. boiling water; cook until tender, with water below boiling point. Put 1 qt. milk over fire in double boiler. Brown 3 tablesp. flour, add 1 tablesp. butter, stir until blended, add 1 onion, sliced, and cook until tender. Now mix carefully with milk, stirring constantly till it is of the desired consistency. Rub the cooked celery through a puree sieve into this cream sauce, add pepper and 1 teasp. salt, and serve at once. If you do not wish to brown the flour use 1 tablesp. less.

CORN SOUP.

One can corn rubbed through a colander. Heat 1 qt. milk in a double boiler. Rub together 2 tablesp. butter and 1 of flour, and add to milk. Then add corn. To make extra good, add whipped cream after it is put into the soup dishes, 1 tablesp. to each dish.

SPLIT PEA SOUP.

Wash and soak over night 2 cups split peas. Put into kettle with 4 qts. cold water, 1/2 lb. lean salt pork, 1 stalk celery, cut up, an onion, salt and pepper. Boil gently 4 or 5 hours, and rub through a sieve.

SALMON LOAF.

Drain off liquor from a can of salmon, and with a fork pick the fish fine; pick out skin and bones. To the fish add 1 cup bread crumbs, yolks of 4 eggs beaten light, 4 tablesp. melted butter, 1/2 teasp. salt, a scant 1/2 teasp. pepper, 1 teasp. finely chopped parsley, and lastly the whites of the eggs beaten stiff. Turn the mixture into a buttered loaf. Bake 1/2 hour.

SALMON QUINOTTES.

To a 1/2-lb. can salmon, after picking bones and skin out, add 1 cup cold mashed potatoes, 1 egg, 1 onion cut fine, pepper and salt. Mix thoroughly, make into balls, roll in cornmeal, fry in deep fat, and serve hot.

CORN FRITTERS.

When a little canned corn has been left over, add to it some sweet milk, salt, and flour to thicken, with a little baking powder. Drop heaping tablesp. in hot fat, flatten, and fry brown, like pancakes.

CHEESE OMELET.

For this the cheese must be grated, but it may be either sprinkled over the top just before folding, or, if the cheese is not too strong in flavor, mixed with the omelet; or it may be mixed with the omelet, and another sort of cheese sprinkled on top.

Talks with Mothers

Mothers are requested to write the Household Editor on any matters they would like to see discussed relating to questions of most interest to them. We will endeavor to publish short letters or articles on any subjects most desired by our Canadian mothers. Contributions for this column are solicited.

Day After Day

Some one has said, "It is the daily grind of small worries that kills women," and I guess it is so. The faithful housewife always finds so much work to do at home that she cannot visit much—the same task over and over again, day in and day out. But they must all be done for the good of the home. Well, never mind, dear sister, you only have to do one thing at a time, you know.

Don't pile up work in your mind, and fret over it, but take up the task that needs first attention, and do that, then take the next important one. "Make your head save your heels" as much as possible, and don't think of what is waiting to be done until its turn comes. You will be surprised to find how much more work can be accomplished in this way, and what a saving on your poor nerves! I have tried it and speak from experience.

Then, again, what if you cannot get done all that you have planned? There is another day coming, and haste often makes waste. I never "take a stint." I used to, but I do it no longer. Some women that I know give themselves tasks enough for two to perform and then fret because they fall short; others are a little easier in the giving out, but when what they planned is finished, they do as much more as they can, to get ahead of the next day's work, but they begin the next morning with a clean slate, and never give themselves credit for what extra they accomplish! Such women are generally "fretty" and nervous. This does not pay, in the long run, my dear sisters.

We owe our best to our home and we can not give it when every moment is one of hurry and worry.

Nature Studies

Every boy and girl is interested, or should be, in Nature studies. Why not try and learn more about the birds and flowers this year than you did last? We will send you a beautifully illustrated set of Nature Study post cards, 50 in each set, absolutely free, for only one new subscription to Farm and Dairy, at \$1 a year. These cards give you the names of birds, flowers, and some fruits, and are true to nature in every respect. Address: Circulation Department, Farm and Dairy, Peterborough.

GREASE YOUR MACHINERY
But NOT your Dishes or Clothes

The maker of one of the best known soaps says that his soap is a fine thing for greasing bicycles and automobile chains. Then he tells how good this same machine grease is for washing the dishes you eat from and the clothes you wear. This doesn't sound very clean.

But you must have something for your household and dairy cleaning. The ideal cleaner should not only clean, but sweeten and purify. It should be perfectly harmless, absolutely thorough and should produce the best results with the least labor.

You get all of these qualities and others equally unusual and desirable in every sack of



You cannot grease your machinery with this harmless washing and cleaning powder because it contains no grease and no greasy soap or soap powder.

What you can do with it is to wash and clean everything, everything about the house and dairy more thoroughly and more easily than with anything else.

The dishes come out shiny and unstreaked. Clothes are easily made white, soft and sweet. They last their life out, because there is nothing to injure them. Milk cans, pails, separators, churns, etc., are sweetened and purified. Floors and tables, tubs, bowls, sinks, kitchen utensils, all come out from a bath in Wyandotte Cleaner and Cleanser as clean and fresh as a May morning.

Its remarkable cleaning powers are not due to acids or other harmful chemicals for it contains none. It harmlessly loosens and dissolves dirt and grease so that it is all rinsed away leaving only sweetness and purity. The qualities of Wyandotte Cleaner and Cleanser are so unusual that you will scarcely believe what a boon it is without seeing for yourself. Therefore, we ask you to

TRY IT AT OUR RISK

Get a sack from your dealer. Use it all. If it does not do all we claim, take back the empty sack. The dealer will return your money.

TRY IT TO-DAY



THE J. B. FORD COMPANY, Sole Manfrs. WYANDOTTE, MICH., U.S.A.

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The best premium offer yet. Patent nickel Tension Shears

Shears that are always sharp; always ready to cut anything and everything. The best shears for every purpose in the household. Best nickel 5 inch Tension Shears given away absolutely FREE for only ONE NEW SUBSCRIPTION to Farm and Dairy.

CIRCULATION DEPT. FARM AND DAIRY, PETERBOROUGH, ONT

OUR HOME CLUB

SHOULD THE FARMER AND HIS WIFE TAKE A HOLIDAY, AND WHEN?

Farmers with their wives should take a vacation, above all other people. There are several reasons why. First, because it can afford to do so. Also while they are away, the farm and stock, etc., is still growing into money. Not as rapidly as when watched carefully by the husband and wife, but nevertheless they are making fairly good progress.

The health of every man, woman and child should be studied most carefully. If health is gone, practically all is gone. A vacation of from two weeks to one month rests the body and soul from constant worry; gives the system time to rebuild what has been overtaxed during the hard work of months or perhaps years.

A change of scenery has a wonderful effect on mankind. It brings into activity, brain cells which have been lying down and out for many years. The power of mind over matter is of vastly more importance than we often think, and by keeping the mind bright and cheerful the natural body is greatly benefited. Often people express a wish for more grace, etc., (when they are already leading a very consecrated life.) I think that they need most is either an improved condition of health or something in the way of a holiday.

When should this holiday be taken? Probably the best time to suit the greatest number of farmers would be June, just after the spring work is completed and before haying and harvest. Do not wait until you have a time with nothing to do at home, or you will wait until you are too old to enjoy holidays.—"The Doctor."

THE FARMER'S HOLIDAY

Should the farmer and his wife take a holiday and when? Of course, why not? Who is more worthy of a good holiday and who takes them less seldom than the farmer and especially his wife? But then the difficulty always presents itself when the farmer wants a holiday; who is to look after the stock, milk the cows, feed the hogs, etc., etc. The old adage, "Where there's a will there's a way," I have found to work out every time it is put into practice.

My good wife and I have done some travelling in our day and we don't regret it. True, it cost us some money and time, but it was time and money well spent. It gave us a

broader vision, a better opportunity to turn our little means to good account and it gave us a greater scope of usefulness. If you want to live a narrow, lean life, just stay at home and work and slave and save—and then die and leave your hard earnings to others to squander. (Tis too often the case.)

I believe farmers and their wives ought to travel more than they do, in order that they may observe how other people do things. We are apt, if we remain perpetually in our small circle to become opinionated and possessed with the feeling that ours is the only neighborhood in which there are good farms and farming. But we have to disabuse our minds of this misconception if we go even 50 miles away from home into the next county. We sometimes get erroneous ideas of another locality, state or province by hearing invidious remarks concerning that part of the country. I will say more later on this subject.—"Father."

HELPING THE HUSBANDS

Where one wife would help her husband another would fail entirely. A woman's sphere is the home. The Bible says, "she looketh well to the ways of her household," and in doing this she is helping her husband. In going about her work cheerfully, meeting the little difficulties brightly, she is helping him more but, best of all can she help him in learning the smallest details of his business, discussing, planning and counselling together. This brings them closer together and she will be a helpmeet in the truest sense of the term, helping herself even more than she is helping her husband.

When we hear of a home where the husband and wife do not agree, our heart aches for them both; it is perhaps caused some little thing that has caused the breach. Those little things which seem so big in the early married days, will, if not dwelt on, soon become mole hills and the future is almost assured. "The house that is divided cannot stand."

It is a mistaken idea for a wife to suppose she is helping her husband in doing his work. It is like successfully bringing up children—each must do his or her share. Should the husband become "pushed" for time, then she will gladly assist him over the busy spool, and he will learn that one good deed deserves another, or when the wife has extra work he will gladly put his shoulder to the wheel—then when evening sets in—the evening of a life well spent, "these two will be twain."—"Mother."

A Flower Garden Free

If you can secure for us two new subscriptions for Farm and Dairy, at \$1 a year, we will send you any option in Class A. For one new subscription sent us for one year, at \$1 each you may have your choice of any option in Class B. Address, Household Editor, Peterboro, Ont.

CLASS A

- Option 1
- 1 doz. Gladiolus bulbs, mixed.
- 3 (only) Dahlias, mixed.
- Option 2
- 1 Asparagus Plumose Fern.
- 1 Boston Fern.
- 1 Half Hardy Tea Rose.

- Option 3
- 1 Root Violets.
- 1 Hardy Phlox.
- 1 Iris.

Option 4
Packages of seed, as follows:

- Alyssum, Little Gem.
- Aster, Crown Prinos, mixed.
- Aster, Blanche Lyon, branching.
- Aster, Giant Comet, mixed.
- Aster, Improved Victoria, mixed.
- Balsam, Improved Camella.
- Dianthus, Double Fringed.
- Mignonette, Sweet.
- Nasturtium, Gunther's.
- Nasturtium, Tom Thumb, mixed.
- Pansy, Giant, mixed.
- Petunia, Giant of California.
- Phlox, Grandiflora, (mixed).
- Sweet Pea, selected.
- Stocks, Colossal, mixed.
- Verbena, Mammoth.

Option 4 is one choice only. Anyone choosing this option will be sent all the seeds mentioned in this option.

CLASS B

- Option 1
- 1 lb. Special Mixed Sweet Pea seed.

- Option 2
- 1 oz. Special Mixed Nasturtium seed, tall.

- Option 3
- 1 oz. Special Mixed Nasturtium Seed, short.
- 1 oz. Morning Glory seed.

Option 4
Collection Garden Vegetable Seeds.

- Option 5
- 1 Bulb, Lilium Speciosum Album.
- 1 Bulb, Lilium Speciosum Rubrum.
- 1 Bulb, Lilium Atratum.

Option 6
One year's subscription to The Canadian Horticulturist, the only horticultural magazine published in Canada, and dealing with Canadian conditions.

Have you forgotten to renew your subscription to Farm and Dairy?

The Sewing Room

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

DOUBLE BREASTED COAT 6162

This coat is chic and smart yet quite simple and is adapted to seasonable cloaking material. There is the slightly shortened waist line and there are the close sleeves and patch pockets. The coat is made with fronts, side fronts, backs and side-backs.

Material required for medium size is 6 yds 27, 3½ yds 41 or 2½ yds 52 in. with ¾ yd of velvet. The pattern is cut for a 34, 36, 38, 40 and 42 in. bust and will be mailed on receipt of 10 cts.

GIRL'S NIGHT GOWN 6262

This gown is comfortably full night-gown, that is slipped on and fastened without any opening, and drawn up by means of a ribbon. It is made of a beading, is a favorite. This one can be made either with long sleeves gathered into bands or with short ones as liked. It is appropriate for all materials.

Material required for medium size (19 yrs) is 4½ yds 27, 3½ yds 36 or 3½ yds 44 in wide, 2 yds of beading, 2½ yds of edging for long sleeves, 2½ yds of beading and edging for short sleeves.

The pattern is cut for girls of 6, 8, 10 and 12 yrs of age and will be mailed on receipt of 10c.

SECTIONAL SKIRT 6272

The skirt with straight lower edge is always in demand for washable materials. This one can be made from flannel, from bordered material or from plain material trimmed.

The skirt is made in three sections, the two outer ones being really loose so that are joined one to the other, then both to the skirt.

Material required for medium size is 2½ yds of flannel, 24 with 7½ yds. 11 in. wide, or 2½ yds of plain material 24, 5½ yds. 33 or 4 yds. 44 in. wide.

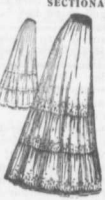
The pattern is cut for a 22, 24, 26, 28, and 30 in. waist and will be mailed on receipt of 10 cts.

CHEMISE WITH SQUARE OR ROUND

The simple, plain chemise is always a favorite one. It involves very little labor in the making and it is most comfortable and satisfactory. The chemise is made with front and back portions, and the sleeves are cut in one with it.

Material required for medium size is 2½ yds 36 or 44 in wide with 2½ yds of beading and 3½ yds of edging.

The pattern is cut in sizes for a 22, 24, 26, 28, 30, 32, 34, 36, 38, 40 and 42 in bust and will be mailed on receipt of ten cents.



Toronto, 30

eral schools and is likely opens up in the business to lines the a not been the outlook doubt but times has still have gone and there is for legitima curity. Call cent., and d as to nature money is bet to 6 per cent

There has wheat during market both the middle of were losses a profits would lived and by was nearly Friday May 17-27. The weekly has been now buying fery. At Win sold \$1.24, two cents to Thursday. It turned to seri ket situation prices for wh Europe is shor the Argentine up to the level of wheat in and Canada is ago at this time poor growing need cool wea has on good shape but low soon good along. Spring been delayed. That the area wherever it is grow wheat, 4 good prices for some reason. Some are figur 75,900 acres in this season. It has forced up 36c to 60c a bush. The prices are what market the fluctuation considerable as Dealers here qu outside, some end of the we for prices to rem on. Toron wheat sells at \$1.09 to \$1.10 a CO.

There is little milners have been year as they a Ontario axes. above an exper mand is for the are quoted at and here at 40c 50c a bush on The barley mar is quoted at food barley at 30c. In the quote barley a 36c to 60c on t are quoted here and 56c to \$1 a market.

Although supp urchase at Mont no so keen qu

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WATERVILLE—Spring work has again commenced in the Annapolis Valley. The rains are unusually plentiful this season...

QUEBEC

COMPTON CENTRE.—The farmer of Quebec as a rule sows more seed to the acre than the man in the west...

ONTARIO

SIDNEY CHASTING, Ont.—A terrific wind storm swept through last Wednesday (April 7) doing considerable damage to windmills and farm property in general...

CHAPMAN—Maple syrup making is getting the attention of most farmers. The maple tree has not been so late in coming out as the prospects are that this will not be a bad year...

VICTORIA CO., ONT.

BOBCAYGEON.—Some of our farmers started to plow a few days ago, but a fall of snow and cold weather has put a stop to it for a few days longer...

WOODVILLE.—Seedling has not come wintered yet. The weather has turned quite operations somewhat. Most of the land is fairly dry and as soon as the weather turns warmer again seed will not be far distant...

HALIBURTON CO., ONT.

KINMOUNT.—The heavy snow which fell on the 9th was followed by two nights of rain on the 10th and 11th...

stallions have been brought into Kinmount, a Clyde and a half bred Percheron. The Clyde was bought by a syndicate.—L. T.

BRANT CO., ONT.

FALKLAND—A severe wind storm passed through this section recently and did considerable damage. The wind was seen partly taken off; doors were blown off, and shingles were demolished and scattered...

ST. GEORGE.—Warm weather, south west winds, roads drying rapidly and fields nearly ready for the spring...

OXFORD CO., ONT.

GOLESPIE.—We had one of the worst winters recently that the oldest settlers can remember. The winter was a deal of damage. A number of windmills are badly damaged and ruined...

NORWICH.—Clover seems to have wintered well and fall wheat appears to have come through all right considering the unfavorable weather and conditions last fall...

GOSSIP

RECORD OF PERFORMANCE Five more Holstein-Friesian cows and heifers have been accepted in the Record of Performance with the following records: Malahide Princess (4615), at 7 years and 291 days of age...

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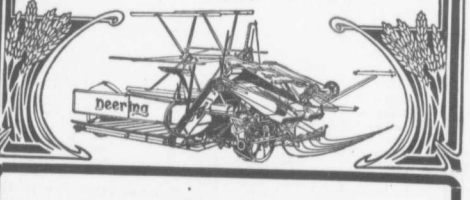
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