

Issued Each Week—Only One Dollar a Year

VOL. XXVIII

NUMBER 8

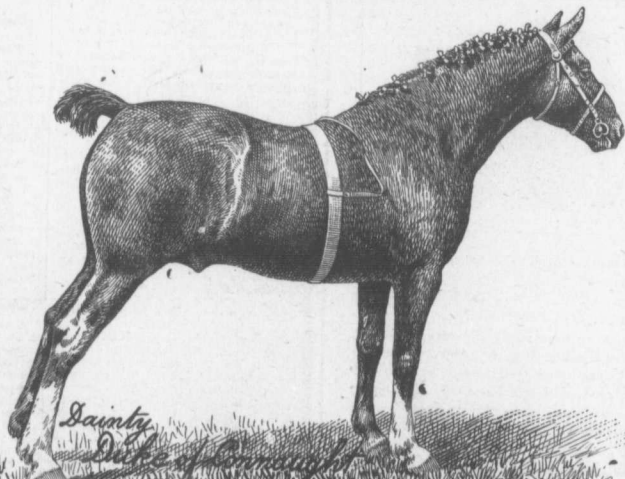
FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

FEBRUARY 25

1909



Dainty

Duke of Connaught

at four years

A TYPE OF HACKNEY THAT IS ALWAYS IN DEMAND
Note the oblique conformation of shoulders, the short strong back and the long powerful quarters and buttocks and the short upper and long lower lines, which make up the ideal sought for. This horse, Dainty Duke of Connaught was imported in 1907 and was first at the Central Fair, Ottawa that year. He is sired by the Great Garton Duke of Connaught, his dam is Dainty, by Denmark. He is owned by Mr. Ben. Rothwell, Carleton Co., Ont.

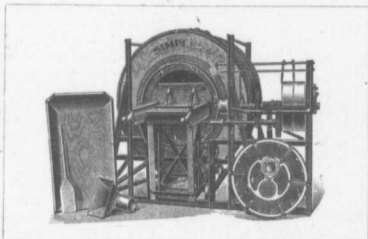
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matter of guesswork, but it is as certain as with the table butter workers.

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The Needs of Country Life

The country life commissioners appointed by President Roosevelt, after touring the United States investigating the conditions of country life, have sent in a report of their findings. Congress has received from the president a summary of the report, accompanying which was a special message by the president emphasizing the points made by the commission. Among the things needed by the farmers, it was asserted, are more co-operating improved schools, and better means of communication. The president's message begins with the announcement that not a dollar of the public money has been paid to any commissioner for his work. The report indicates the ways in which the government, national and state, may show the people how to solve some of the rural problems and suggests a continuance of the work which the commission has begun. The president's statement in brief of the three great general and immediate needs of country life is:

"First, effective co-operation among farmers to put them on the level with the organized interests with which they do business."

"Second, a new kind of schools in the country which shall teach the children as much outdoors as indoors and perhaps more so, that they will be prepared for country life, and not, as at present, mainly for life in town."

"Third, better means of communication, including good roads and a parcel post, which the country people are everywhere and rightly unanimous in demanding. To these may well be added better sanitation, for easily preventable diseases hold several million country people in the slavery of continuous sickness."

The commission points out, and the president concurs in the conclusion, that the most important help that the government, whether state or national, can give is to show the people how to go about the tasks of organization, education and communication with the best and quickest results. This can be done by the collection and spread of information. The only recommendation specifically made by the president is that an appropriation of \$25,000 be provided by Congress to enable the commission to digest the material it has collected and to digest much more than that is within its reach, and thus complete its work.

The president says: "Crop growing is the essential foundation of country life; but it is no less essential that the farmer should get an adequate return for what he grows; and it is vital that he and his wife and children should lead the right kind of life. The United States Department of Agriculture should become without delay, in fact, a department of country life, fitted to deal not only with crops, but also with the larger aspects of life in the open country."

THE CONDITIONS FOUND

The commission says that, broadly speaking, agriculture in the United States is prosperous, and the conditions in many of the great farming regions are improving. There has never been a time when the American farmer has been as well off as he is to-day. Yet, it is true that agriculture is not commercially as profitable as it is entitled to be for the labor and energy that the farmer expends and the risks that he assumes, and that the social conditions in the open country are far short of their possibilities. Rural society is lacking chiefly in a knowledge on the part of the farmers of the exact agricultural conditions and possibilities of their regions, resulting in a widespread depletion of soils in the proper training of the country life in school, in good highway facilities, and organization for buying and selling. There is an absence of adequate system of agricultural credit and shortage of labor and lack of institutions and incentives that tie the laboring man to the soil.

The life of the country woman is burdensome and narrow. There is need of adequate supervision of public health. The farmer is handicapped by the speculative holding of land, monopolistic control of the streams and forests, waste of natural resources, and by restraint of trade.

WHAT IS NEEDED

Much emphasis is laid upon the need of training toward the agricultural callings in the country schools; agricultural instruction should be a part of our regular public school work. Special agricultural schools should be organized. Better roads are needed, and rural free delivery should be extended, and there should be a parcel post. The commission says that each state college of agriculture should organize, as soon as practicable, a complete department of college extension. Local, state and national conferences on rural progress should be held to unite the interests of education, organization and religion. The suggestions of the commission only outline a general plan whereby the strong resident forces in the open country may themselves build up a new and better rural social structure. To accomplish this the entire people must be aroused. The time for this is at hand.

Dairy Ligation Wanted

At a meeting of the executive of the Eastern Ontario Dairymen's Association held at Kingston recently, a committee was appointed to wait upon the Minister of Agriculture and ask for legislation which will in future prevent the building of cheese or butter factories in any locality unless a certain number of cows is assured and the site of such building has been approved by the chief inspector or some other appointee of the government.

A resolution was also passed that the Department of Agriculture at Ottawa be requested to grant the same amount of money to cheese factories as is now granted to creameries providing the factories put in the appliances for the cooling curing in cheese.—R. G. Murphy, Secretary.

A Correction

A rather misleading error occurred in an article on the taxation question entitled "Proposed Change in Municipal Laws," by L. B. Walling, in our issue of Feb. 4th. The quotation from the petition should have read "so that municipalities may tax improvement values at a lower rate than land values; business assessments, incomes and salaries to be classed with improvement values, and the difference in the rates, in every case to be determined by the municipality." The words "at a lower rate than land values" were omitted.

Items of Interest

A case against Herman Beares and Thomas Howard, young men belonging to Blenheim Township, Oxford Co., Ont., who were charged with sowing rye in the wheat field belonging to Wm. Forman of the same township. Wm. Forman was tried recently, when the accused was ordered to pay \$25,000 damages to Forman with \$18,25 additional cost of the case. They were then released on suspended sentence.

W. B. Williamson, a Toronto horse dealer, was convicted, a few days ago, in Judge Winchester's court, Toronto, of entering a forged document in connection with a Clydesdale pedigree. Williamson sold a Canadian-bred Clydesdale mare to Messrs. Morgan & Irwin, of Ripley, Bruce Co., Ont., presenting a certificate of registration for an imported mare. Sentence was suspended, Judge Winchester remarking that if a similar case came before him that the penalty would be to the full extent prescribed in the statute.

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FARM AND DAIRY

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FORMERLY THE CANADIAN DAIRYMAN AND FARMING WORLD

Vol. XXVIII.

FOR WEEK ENDING FEBRUARY 25, 1909.

No. 8

FARMING IN THE MUSKOKA DISTRICT

Contrary to the Opinion held by many, Muskoka is not a land of Summer Resorts only; it has much Arable land on which Clovers, Potatoes and Cereal Crops excel, and upon which a high-class of Live Stock is kept

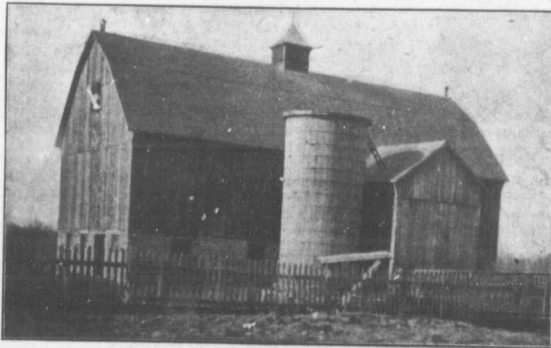
THAT the Muskoka District has large agricultural possibilities and is not simply a summer resort as many imagine, is evidenced by the well-kept farms, the comfortable residences and the fine appearance of the farmers of that portion of Ontario. That the country is by nature adapted to the production of live stock and dairying was brought home to one of the editors of Farm and Dairy while judging last fall at some of the fairs in the section. Horses, cattle, sheep, swine and poultry of a class and quality, of which any community might be proud, were found at the exhibitions throughout the district. The horses, in particular, especially those in the draught, agricultural and general purpose classes, would be hard to beat in any section. Dairying, in the form of home buttermaking, flourishes. The people are evidently masters of the art of buttermaking, if the quality and flavor of the butter exhibited at their fairs is any just criterion.

Possibly the natural advantages of the country can be set forth best by a reference to one of its farmers who has made a success of his business under adverse circumstances. Twenty years ago, Mr. J. J. Beaumont, a Norfolk farmer in England, who was operating a large farm, was struck by the hard times and was disposed of practically his last pound. Realizing that his chances of ever rising to his old level, were against him if he remained in the Old Country, his thoughts naturally turned to Canada. He accordingly headed for the Muskoka District and stopped at Bracebridge. Mr. Beaumont, as is the practice with landed gentry in the Old Country, had never been used to practical hard work on the farm. He was thoroughly conversant, however, with the ways of doing things as he had always been of an inquiring mind and wanted to learn and understand all things in connection with farming. He had worked for short intervals at all kinds of farm work, having done it in the spirit of fun as well as from his desire to acquaint himself with farm operations that he might the better direct his laborers.

FIRST EXPERIENCE

On reaching Bracebridge, he applied to a farmer for work. The farmer, noting that he was an Englishman, was rather loth to employ him. After assuring his prospective employer that if he

did not know much of farming he could at least learn, Mr. Beaumont was taken on and set to work mowing timothy with the scythe, along with some other workmen. The employer, wishing to make it as hard as possible for the new man, gave him the poorest scythe. His co-laborer, however, noting the inferior tool, traded with him and smashed the worn out implement in full view of his employer. This necessitated the purchase of a new scythe. The new man soon proved that he could do things and that he was in dead earnest. He continued with this farmer for four months, during which time, he had become acquainted with his surroundings and had proven at least that he knew something of farming.



A Barn Typifying Agricultural Progress in the Muskoka District

A special feature of this barn is its covered gangways or approaches to the barn floor, one of which may be seen beside the silo. The stables under this barn are well lighted and ventilated. Read the adjoining article.

A neglected nearby farm, which had been rented for some time, was, in the fall of the year, on the market for a tenant. The farm had a bad name in the neighborhood, however it appealed to Mr. Beaumont. He was advised by his best friends, and by all that knew him, that the farm was useless and that he would make a great mistake if he had anything to do with it. However, he thought he knew land when he saw it and he was satisfied that the farm could be made one of the best if not the best in the neighborhood. Accordingly, he took a five-year lease of this farm, with an option of buying. Ere the five years were up, he became thoroughly convinced of the value of the land and accordingly purchased it. To-day, Mr. Beaumont has the same 1,100 acres, 200 acres of which is under cultivation; a large part in rock pasture and the remainder in wood and timber.

It is as fine a farm as one could wish for.

CROPS GROWN

The principal grain crop grown is oats. Peas are sometimes grown successfully but of recent years they have been damaged owing to high water backing up from Muskoka Lake. No trouble of this kind was ever experienced until the last two years. When the C. N. R. built through on the west side of Muskoka Lake, they filled one of its outlets and erected a large swing bridge over another. The pier, on which this bridge swings, blocks up about one-third of the channel. With these two natural outlets, more or less stopped, the high water in the spring cannot get away fast enough. Consequently, it backs up into the river's mouth, doing much damage to the farm crops as well as being a constant menace to cottages and bathhouses on the islands. Mr. Beaumont is circulating a petition among the various property holders surrounding the lake and he hopes to have these waterways opened ere long by order of the Dominion Railway Commission.

Clover, the common red variety, grows luxuriantly wherever sown. On Mr. Beaumont's farm, all land devoted to cereals is seeded to clover. On all fields where crops had been removed was to be seen a catch of clover which would be the pride of any farmer in Older Ontario. So well is clover adapted to this country that it grows in profusion even along the roadside. The high water above referred to is its only detriment.

Several acres of corn are grown to furnish fodder for the cattle in winter. Last fall, a new tub silo 15 x 28 ft. was erected. At the time of our visit, this had just been filled. It seems impossible to grow mangolds with any degree of success. Turnips are grown instead. The soil is a sandy loam and it grows turnips to perfection. A large acreage of as fine turnips as one could wish for was to be seen in this section.

THE BARN AND STABLES

A few years ago, Mr. Beaumont re-modelled his old barn and made considerable additions to it. He now has a modern, improved barn, 80 x 42 ft. well laid out and equipped with labor-saving devices such as the hay fork, and litter carrier. A novel feature of this barn is its covered gangways or approaches to the barn floor. Under these are the root houses.

"These covered gangways are one of the best features of the barn," said Mr. Beaumont. "Although the barn has a basement under it, it is possible to drive in one side and out the other, and the gangway never becomes slippery in wet weather."

Everything grown in the shape of fodder is fed on the farm. When Mr. Beaumont started on

this farm, and put this idea into practice, as well as that of buying feed for his stock, his neighbors were of the opinion that it did not pay to hire men or to buy feed, but that a farmer could hope to make money only on that work which he could do himself and upon that feed which he could grow on his own farm. "A man should have a little of everything and then he is sure to have something right," said Mr. Beaumont, when speaking of the system of mixed farming which he practised. "A farmer should keep accounts, for in that way and in that way only can he know where he stands with his business."

Mr. Beaumont is a strong believer in knowing just what he is doing and where the profits come from. With this idea in mind, he is keeping individual daily records of his cows. In eight and a half months, since January 5, 1908, his best cow had given 8,500 lbs. of milk.

THE STOCK KEPT

Mr. Beaumont is a strong advocate of the dual purpose cow. He believes he obtains such a cow by crossing Ayrshire cows with a good Durham bull of milking strain. The 12 cows which we saw in his stable proved that he had met with a fair measure of success with his chosen cattle. A large flock of Shropshire sheep were seen grazing in the field. His idea is to raise as many early lambs as possible, which he slaughters and sells in connection with a boat that he runs on the lakes to supply the summer cottagers. This latter feature is the means used by this enterprising farmer to market a large part of the produce of his farm.

Large numbers of chickens, over 1,000 a year, are raised by means of incubators and brooders to supply the steady demand of the cottagers that purchase from his supply boat. A large flock of ducks also is kept for the same purpose.

FERTILITY OF THE SOIL

The fertility of the Muskoka soil, and especially the soil of this particular farm, was clearly demonstrated by a visit to Mr. Beaumont's truck garden. Three or four acres were devoted to the growing of carrots and beets. Aside from a thorough cultivation and keeping them free from weeds, the carrots and beets had received no extra care. Indeed they had not even been thinned. Our surprise was great when with two hands a bunch of from eight to 12 roots, all of marketable size, were pulled up from a single space in the row. It seemed incredible to one coming from Older Ontario, where a crop could not be expected unless it were carefully thinned. An acre of strawberries and an acre set out in raspberries, currants and other bush fruits are also devoted to supplying the demand of the cottagers.

THE TELEPHONE ON THE FARM

In keeping with all the departments of this well-managed farm is the telephone which Mr. Beaumont installed a few years ago. This phone is a private line out from Bracebridge, though it is owned by the Bell Telephone Co. For the privilege of this phone Mr. Beaumont pays \$65 a year. "I cannot see how it is that farmers do not go in more strongly for the telephone," said Mr. Beaumont. "I would not do without it for twice what it costs me. Where rural systems can be put in at a cost of from \$10 to \$15 or even \$20 a year, I feel certain that farmers would not do without the phone once they had experienced the great advantage that comes with the installation of a good telephone service."

The success that Mr. Beaumont has made of his business stands out as a shining example of what pluck, a desire to learn, and a determination to win, can do for a farmer. Many having been in his position in earlier years would have been content to remain there. Not so with this stalwart son of England's soil. He has triumphed over his hard luck, his difficulties and discouragements, and has made of himself a citizen of whom Canada may well be proud.—C. C. N.

More Comments on the Danish Commission

Thos. McFarlane, Carleton Co., Ont.

That the question of sending a commission to Denmark was the subject of considerable comment on the part of the Dominion Swine Breeders' Association that met in Toronto, recently, I was very glad to note in the issue of Farm and Dairy for February 11th. I was also pleased to hear that they took the step of appointing a committee to wait on the Minister of Agriculture, the Hon. Sydney A. Fisher.

The swine industry is a very important one to this country. It, like dairying is only in its infancy as yet in this country. If the government does not do something to further the bacon indus-

Allow me to commend you upon the admirable "make up" and contents of your paper, Farm and Dairy. It is a wonder to me, how you manage to furnish so much well selected and original reading matter for so little money a year. Farm and Dairy is well printed and in every department reflects lustre upon its management.—Maj. H. J. Snelgrove, Northumberland Co. Ont.

try, the loss of it will be a great one to the Dominion, especially to those engaged in the dairy business.

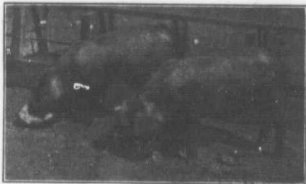
In your issue of Farm and Dairy for Feb. 11th, I also noted some questions asked by A. S. Renfrew Co., Ont., concerning swine, answered by J. H. G., where he selected four different breeds. I would like to know how we are going to get the uniform side of bacon from the many breeds that he has recommended.

I trust that the deputation from the Dominion Swine Breeders' Association will convince the Dominion Government of the necessity of taking action towards sending the proposed commission of farmers to Great Britain and Denmark to investigate conditions of bacon production there at first hand.

Bacon Type Do the Best

W. G. Telford, Peterboro Co., Ont.

Many people look upon the bacon type of hog with suspicion believing it to be a hard animal to feed. They prefer the shorter more snub-nosed type, claiming that these are easier to raise and



Large Blacks

A breed of pigs in considerable favor in England, but one that has not proven satisfactory in Canada.

are more easily fattened. Such has never been my view. I prefer the lengthy flop-eared white Yorkshire. I find they feed much better than do the shorter ones.

It may be interesting to some of the readers of Farm and Dairy to have the results of a lot of 12 that I fed off recently. Six in this lot were of the lengthy flop-eared sort; four others in the same lot, though a good stamp of bacon pigs were shorter with snub noses and fine ears. These 10 were all of the same litter. In with this same pen, were two other pigs of the Tamworth-Berkshire cross.

The twelve all had the same attention and the same advantage at the feed trough from the time

they were weaned. The six lengthy fellows of the best bacon type did much better than the rest. When we came to sell them, they averaged from 15 to 20 lbs. apiece heavier than the shorter ones or the cross-breeds. In addition to this extra weight, they would have been worth more money than the others had they been sold to a packing establishment that carried out an honest system of grading. From my experience, I believe the bacon hog of the best type is the only kind to feed and he will outdo shorter type every time in making economic gains.

The great thing in the management of bacon hogs is to get the right breed and to give them the right feed. Pigs must never be stunted. The pig once stunted or allowed to lag behind at the start will never catch up again and will be kept at a loss as long as he is fed. In order to get pigs started well, it is practically necessary to have a supply of skim-milk. Without the skim-milk it is a difficult proposition to keep them growing and in a thriving condition for the first month or more after weaning.

Selecting Mares and Stallions

W. Staley Spark, Manning Chambers, Toronto.

In selecting a mare for breeding purposes, you should get one well ribbed and wide with length, depth, ample heart room and a good constitution. The foals often take after their dams in constitution and stamina, therefore it is highly necessary to select mares possessing these qualifications. The head and neck should be well set on good sloping shoulders, the quarters big and muscular, and, above all, good legs and feet. The feet should be of good size, sound open ones, not abnormally large but hollow below, with strong heels and thick tough crusts. Big, flat, overgrown feet are often weak. They are the first place where a heavy horse is likely to go wrong, if overtaken by any serious illness.

THE STALLION

It depends greatly on the make and shape of your mare as to the stallion you should mate with her. You must always try to find a stallion which possesses in a marked degree the good qualities in which the mare is deficient. In the selection of a stallion the most particular attention must be paid to the size, quality and formation of his limbs and locomotive organs. It is not a question of weight and width of carcass only, he should in the first place have feet similar to those I have stated the mare should have, and his knees should be big, also his hocks. The bone must be of good quality, and the tendons fully developed.

A horse with weak and badly developed tendons stuck up against his cannon bones always measures badly below the knees and consequently is very liable to suffer from sprains and contractions of the back tendons. A stallion should have strong, muscular arms and thighs and powerful wide quarters.

Action is highly important in a stallion, and is undoubtedly likely to be hereditary, especially in the walking pace, which is the most important pace of all. Never use a stallion which is not free from hereditary disease. In my opinion all stallions should have a certificate of soundness before they are allowed to serve.

Tanning Skins

G. Smith, Brant Co., Ont.

Many of the methods used in tanning small skins and furs are so troublesome and require so much time and attention that they are in the end more costly than having the work done by a professional tanner. The following methods, however, have given satisfaction, are simple and inexpensive.

Remove all fat and flesh from the skin by careful scraping with a dull knife. If the skin is dry, soak it in cold water to soften it; then apply to the flesh side a mixture of salt, saltpetre and

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alum, in equal parts. Fold together, flesh side inward, and keep in a cool place where it will not freeze, as freezing delays the tanning. After two days wash the flesh side with cold water, and rub and work the skin with the hands to soften it; apply a fresh coating of the mixture and fold together as before. This process must be continued until tanning is complete; the time necessary varies with the thickness and density of the skin.

Another method is to apply an even coating of a good soft soap to the skin; with this, as with the first method, success depends largely on the proper handling and care of the skin, both in preparation for tanning and in the process itself.

Uniform results cannot be secured when one part of the skin is clean and free from flesh while another part is thickly covered with it. When tanning is complete the skin is thoroughly washed to remove every trace of the tanning mixture, after which it is dried carefully in a cool place. When nearly dry it should be oiled lightly to keep it soft and pliable.

In tanning skins with the hair on care should be taken to keep the hair as dry and free from the tanning mixture as possible. Should the fur be found dingy-looking when the tanning is done, sift into it some scorched bran and brush "with the grain" with a soft brush; remove the hair and the fur will be found bright and glossy. For tanning fine furs the process using the salt, saltpetre and alum will generally be found more satisfactory than the method requiring soap.

For tanning skins without the hair the process is the same except that the hair must be removed before tanning. This can be done by applying wood ashes and salt to the skin, after cleaning and soaking it; roll up and keep in a warm place. In a short time the hair will be so loosened as to be easy of removal by scraping with a dull knife, with the grain. The skin must be thoroughly washed before tanning.

Production of Maple Syrup

C. A. Westover, Missisquoi Co., Que.

Modern utensils are required in the production of maple syrup just as much as in any other branch of farming, if a first-class article is to be produced at a profit. The old way of boiling sap in an iron kettle hung from three poles over a fire, is no longer profitable. The increasing scarcity of wood compels us to adopt a more economical method of boiling, and the exacting tastes of the market demand a milder flavored syrup—reforms which can be effected by a modern evaporator and iron arch.

It is a difficult question to settle how many trees are necessary before an evaporator is a profitable investment. If from 300 to 400 or more trees are to be tapped a complete outfit is almost indispensable. An outfit should consist of an evaporator, arch, spouts, buckets, gathering tank mounted on a sled, storage vats for sap, settling cans for syrup, flannel or felt strainers, bits, etc., and last but not least, a good building in which to place the evaporator and arch, with a shed near by filled with dry wood.

There are several reliable firms which make evaporators and arches and they will advise intending purchasers what size to buy for a given number of trees. We have used one evaporator and iron arch (Grimm's Champion) 4 x 16 feet for several years to boil the sap from 1,500 spouts. It does all that was claimed for it when used according to directions. To get the best results thoroughly dry wood only should be used.

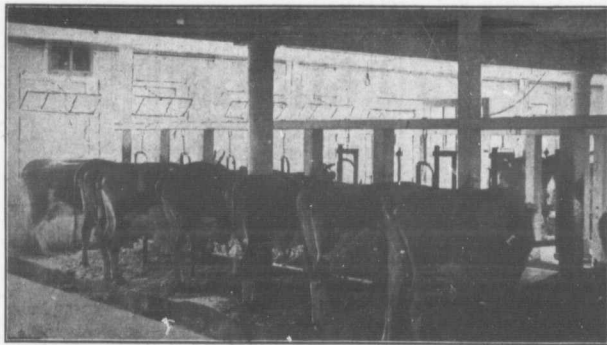
WOOD VS. METAL

With regard to spouts and buckets there is a difference of opinion as to whether wood or metal is better. Metallic spouts and tin buckets are generally recommended. Good syrup, however, can be, and is yearly produced, from wooden spouts and buckets. Wooden buckets should be

painted on the inside, and if possible, on the outside also, they being much easier to keep clean when so treated. One advantage claimed for wood over tin is that it is not so good a conductor of heat and consequently, sap is not likely to sour in the buckets if the sun strikes them fairly in the latter part of the sugaring. Galvanized iron buckets cannot be recommended because they are hard to keep clean. Cleanliness is essential to quality in syrup.

STANDARD SYRUP

After the sap begins to flow it should be gathered every day, drawn to the boiling place, strained and boiled down to syrup as rapidly as possible. Standard syrup weighs 13 lbs. two ozs. per gallon and will register 218 to 220 degrees F. when boiling. After reaching that temperature it should be removed from the evaporator, strained through a flannel or felt strainer into a large settling can and allowed to settle for at least 48 hours. It will then be ready to put into cans or bottles for the retail trade. For wholesale trade syrup is put into five gallon tin cans and wooden kegs holding from 15 to 30 gallons each.



Row of Guernsey Cows at Central Experimental Farm, Ottawa

These cattle have proven profitable butter cows at that institution. Note the abundance of light and the general sanitary arrangements of the stable.

Cleanliness is necessary during the whole process of syrup and sugar-making. All dippers, etc., should be washed, the scum that rises on the sap should be skimmed off and thrown away. The evaporator should be wiped off every day. When the season is over, all utensils should be thoroughly washed, scalded, and dried before being put away for the summer. During the winter everything should be put in good order so that when sugaring operations begin there will be no vexatious delays for repairs. A good supply of wood should be cut ready for the next year.

Fall Cultivation of Corn and Root Land

G. A. Brethen, Peterboro Co., Ont.

In reply to Mr. Fixter's further explanation as to his position as an advocate of deep cultivation of corn and root ground, I am glad that he has decided to discuss this matter and I hope we all as readers of Farm and Dairy may receive some benefit from the discussion of this very important subject of soil cultivation.

To Mr. Fixter who has had a practical experience of 22 years upon experimental farms, it may seem a little presumptuous for a young man, with the limited experiences that an 100 acre farm affords, to even question his method. However, I can say with Mr. Fixter that "I have given my personal experience and actual observation only" with the working out of the "shallow cultivation" of handling root ground. It would seem, however, from articles which have appeared in Farm and Dairy from time to time as though at least

some others in different parts of Ontario have drawn conclusions somewhat similar to my own. We have not all model farms to start with and that method, which (as one correspondent expresses it) will grow three bushels of grain where formerly two bushels grew, and one weed where formerly hundreds were in evidence, is certainly not to be condemned yet a while.

MR. RENNIE'S METHOD

It might be well just to remind Mr. Fixter that Mr. Wm. Rennie, whose own farm was a model for cleanliness from noxious weeds and who by the application of his methods was able to transform in two years, an annual deficit on a well known Ontario farm of \$5,000 into a dividend of \$2,000, was not able with his very wide experience in these matters to draw the conclusions, or after cultivation of root ground, that Mr. Fixter is advocating. When illustrious farmers like the above mentioned gentleman differ so widely in their methods and conclusions, is it any wonder that ordinary farmers like myself with no agricultural college or experimental farm advantages, begin to wonder where we are at? And who is

right anyway? For my part, I would like to see the advantage and disadvantages of each method so thoroughly discussed that we might be able to judge if either is best for all soils and if one method is best on one soil and the other is better for the other.

COMPARISONS IN THE SAME FIELD

Some farmers have so many, what we might call "natural resources," such as good underdrainage, depth of soil, etc., that almost any method of cultivation seems to insure success for a number of years. Sometimes such farms are a source of much discouragement to a farmer with a farm poor in the above mentioned attributes, for while farmer No. 2 may be practising the very best method and the increased yearly results on his own particular farm show progress, yet, when compared with the returns from the naturally good farm, even though farmed in slipshod manner, the results are apt (for a time) to prove discouraging. Our only safe guide in judging methods of cultivation is by a comparison upon the same fields or with land very similar in texture and quality. In this connection, the experience of Mr. Thos. McMillan, Huron Co. is certainly worthy of the most weighty consideration, when he concludes from a three-year trial of the plowing and cultivation of root ground in the same field that shallow cultivation is the better method in that it yielded 10 bushels more per acre of mixed grain and a better catch of clover, over the plowing method.

(Continued on page 7)



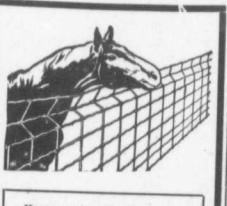
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A Profitable Cow
An Ayrshire cow, Marjorie 16536, at the Central Experimental Farm, Ottawa, has recently completed an extraordinary good record. A representative of West Farm and Dairy, while in Ottawa was informed by Mr. J. H. Gristle, of the Experimental Farm,



Horses and cattle have a habit of leaning and pressing down upon the top wire of a fencing. If persisted in, this continual pressure will ere long cause the top wire to sag on the ordinary fence to bend—then break. And your fence becomes disfigured.

DILLON Hinge-Stay Fence

Pressure of a horse or other animal on the top wire brings the short hinge-stays into action—As shown in the picture. When pressure is removed the fence springs back into place again. And for the same hinge-stay reason, heavy snow or clinging on the fence do not disfigure or injure the DILLON. Just write for catalogue containing the whole story of Dillon superiority.

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This is an all No. 9 Hard Drawn Steel Wire Fence. The lock is the twin of one that has been in use for years in the United States and pronounced the best lock on a stiff-stay fence. Each end of the Monarch lock is hooked securely over the lateral. Cannot spread or loosen. May we send catalogue with full description of this different kind of a stiff-stay fence?

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Our agents suggest the best because our line is the most complete. They have both a hinge-stay fence and a stiff-stay fence to offer prospective customers. As well as a complete line of ornamental fences and gates. Just write for our agency plan.

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that in seven days, Feb. 8 to Feb. 14, this cow had given 396 lbs. milk testing 5.1 per cent or 20.22 lbs. butterfat. The average daily production of milk was 56 1/2 lbs.

While the amount of milk produced was not exceptional it was produced at comparatively little cost, owing to the small amount of feed consumed. During the seven days this cow consumed 50 to 60 lbs. of roots, 25 lbs. ensilage, 5 lbs. clover hay and 15 lbs. meal. The meal was composed of 6 lbs. bran, 3 lbs. pea meal, 3 lbs. oil meal, 2 lbs. gluten and 1 lb. oats. The butter produced at the Experimental Farm has been selling at 85 cents a lb. The butter produced by this cow each day, therefore, was worth \$1.10. Allowing a value of 12 cents a day for skim milk, the total value of her product was \$1.22 a day. Mr. Gristle estimated that her feed cost 30 cents a day leaving a profit of 92 cents a day.

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.

Feed Molasses to Dairy Cattle

"Last winter we fed molasses to our dairy cows and they did well on it," said Mr. Hector Gordon, of Howick, Quebec, to a staff representative of Farm and Dairy who visited his place recently. "The cows were fed cut straw with ensilage on it, and some molasses diluted with water spread over all. The cows not only ate it up clean but they licked their mangers and looked for more. "The molasses cost us on an average 30 cents a gallon. It required about four gallons a week to feed 15 cows twice a day. Our grocer bought us the molasses last year by the horse-head, delivered in car loads at our station. This winter we are unable to feed it as the price of molasses has advanced."

Composition of Feeds Stuffs

On page 3 of Farm and Dairy, January 22nd issue, in an article on the Adulteration of Cattle Feeds, there is a table of compositions of foods. In this table correct as regards its amounts of protein contained in different feeds. For instance linseed meal contains only 9.4 crude protein while gluten meal contains 38.8 crude protein, and gluten feed contains 25.9 crude protein. Kindly advise me if this is correct and greatly oblige.—A. T. W., Beausoleil, Ont.

The average composition given in the table referred to was taken from the College bulletin 133, The Composition of Ontario Feeding-Stuffs, and is the average of thirteen samples of linseed meal analysed in our laboratory. The amount of protein in these thirteen samples varied from 23.57 to 33.94, average 30.41. The average for the gluten feed was also taken from the same bulletin and is, for seventeen samples sent in to us and named gluten feed, from 23.55 to 28.94 per cent., average 25.65 per cent. The analyses of twenty-two samples of so-called gluten meals are also given in the same bulletin. The variation in these was from 15.00 to 24.09 per cent., average 24.96 per cent. We cannot be certain that any of the samples were pure gluten meals and the average placed in the table referred to was secured from elsewhere. The Vermont and New York Experiment Stations record analyses of pure gluten meals at over 38.00 per cent.

Both the gluten meal and the gluten feed are by-products in the manufacture of starch and glucose from corn. The gluten meal is the best of the protein or glutinous part of the corn, and the gluten feed is a mixture of the corn bran and the true gluten

meals. There seems to be a tendency in this country to sell all glutes under the name gluten meal instead of gluten feed. The wide variation in products selling under the same name is certainly a good reason for the enactment of a law which makes it compulsory to sell these substances according to their true composition or under guarantee. Such a law would protect the purchaser against low grade and adulterated material, the manufacturer and dealer against dishonest practices, and assist in promoting the intelligent use of these valuable feeding stuffs.—R. Harcourt, Ontario Agricultural College, Guelph.

Our Legal Adviser

DAMAGES FOR BUSH FIRE—Can I claim damages in the case of a bush fire last fall? The case may be stated as follows: B put out fire in a slash at a time when the weather was very dry, though not in the month prohibited in the Act. A's bush is located beside this slash. B gives no notice whatever of his intentions to put out fire at that time. While both B and A are away to town a wind springs up and blows the fire into the line fence and spreads into A's bush and burns second growth maple and ash as well as considerable large timber. B made no effort to stop the fire in A's bush nor did he allow that it burned the fences. While A's bush was burning B continued to set more fire in his own slash. Can A do anything in the matter. We have a township by-law, but it says nothing about fire. Who steps would you advise A to take?—J. Mc, Bruce Co., Ont.

B has a right to set out fire on his own land for the purpose of clearing it, and is not responsible if the fire should happen to escape to a neighbor's land, if he (B), has set out the same at a suitable time, and has taken reasonable precautions afterwards, to confine the fire to his own property. If he fails to do this he would be liable to damages for his negligence. The question of negligence is ordinarily one which should be dealt with by a jury, who would have to take into consideration all the circumstances of the case. The nature of the weather, whether dry or wet, the condition of the wind, the time of the year, the help provided to prevent

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the fire circumstances to be enabled to prevent a riot. There are few more have been certain violation would, within a law rule. We were suit a laying out of st

At our attitude was her forest was cleared to such remarks, the process of creating few years grain per largely than be cleared. to the I. he was chief over sale of lumbermen would to renew a was practiced. What in this years of the decation was most needed (direction) for most for through yard man this attain graduates in the d cently est

If such is made lacks hurt any method the addition soil should this respect. Now, it is to get his the earth's nip tops not used the cultivation turning of corn and close connection using a being a student in here, as a correspondence ground in etc., that is to like to depth of with the p tivation etc. later during of roots a part of f manure be row you t the surface ordinary y summer, brought up surface soil

the fire from spreading, and all such circumstances, would be proper matters to submit to a jury in order to enable them to come to a proper conclusion.

There is no particular portion of the year recognized by the law in which fires may be set out. Municipalities have power to pass a by-law restricting the putting out of fires during certain periods of the year, but a violation of the by-law would not be conclusive evidence of negligence, nor would the putting out of the fire within the period permitted by the law relieve the person setting it out from taking proper precautions.

We would recommend you to consult a solicitor in your neighborhood, laying all the facts before him, and obtain his opinion as to your possibility of success if an action is brought.

Fall Cultivation of Corn and Root Land

(Continued from page 5)

At our recent annual Farmers' Institute meeting, one of the speakers was heralded as a man who had cleared his farm from the unbroken forest with his own hands. "All honor to such men." In the course of his remarks, however, he announced that the production of his farm was decreasing, making the statement that a few years ago, he could grow more grain per acre when his fields were largely taken up with pine stumps, than he could now on the same fields cleared. He attributed this decrease to the lack of forests. When, however, he explained a little later that he was not much of a stockman, his chief revenue being derived from the sale of timothy hay and oats to the lumberman, it was evident that it would take more than reforesting to renew a farm where such a system was practised.

What brought about the difference in his returns per acre? In the early years of his farming, the soil from the decaying leaves and forest vegetation was rich in humus (one of the most necessary elements in plant production). As his system did not provide for the addition of humus, through the agency of clover, farm yard manure, etc., the presence of this attribute to successful growth gradually disappeared and with it his big yields of cereals, etc., especially in the dry seasons that we have recently experienced.

SOILS LACK HUMUS

If such is the case, and the claim is made that nearly all worn out soil lacks humus more than anything else, any method that would interfere with the addition of humus to the surface soil should be considered defective in this respect at least.

Now, is not Mr. Fixter, in his zeal to get his corn stubble away down in the earth where it will see it (turnip tops likewise) and where it will not upset all his farm machinery from the cultivator to the farm cow, by turning down his surface soil after the corn and roots and bringing up the close compact and less fertile soil, using a method which is far from being a success in the accumulation of humus in the surface soil? Right here, as Mr. Christie, a Dundas Co. correspondent claims, he plows his root ground in order to bring up manure, etc., that he has turned down in his plowing previous to corn. I would like to ask where, in an ordinary depth of furrow plowed for corn and with the popular practice of deep cultivation early, and shallow cultivation later during the summer cultivation of roots and corn, will the greater part of the rotted clover sod and manure be? At the bottom of the furrow you turned in the spring or near the surface? It seems to me with any ordinary root cultivator working in summer, the most of it would be brought up and incorporated with the surface soil. Then what a serious mis-

take to turn it back down away from the shallow feeding cereals and near the top subsoil where it can reach away and the greater part of its fertility be lost to all other crops.

LUMPY SOIL

The fact of Mr. Fixter mentioning the root ground being torn up into lumps with the cultivator, etc., suggests that very lack of humus in the soil. The virgin soil of the older provinces and the prairie soil of the great West are not hard and lumpy when disturbed with the cultivator. They have not found even my clay loam soil to act in the way that Mr. Fixter describes, which is an additional recommendation for the surface application of manure and a short rotation of crops.

With reference to the weed side of the question, Mr. Fixter asserts "that the lower soils on the average corn field contain fewer weed seeds than the surface soil and that if the surface soil is kept perfectly clean the man need not worry about the lower soil." I heartily agree with Mr. Fixter in this, providing you leave the surface and lower soils in those positions. But, if Mr. Fixter's field before his root crop has been badly infested with herrick, wild oats, etc., would it be a very serious mistake to turn down the soil that has been thoroughly cleaned during the process of root cultivation and bring up the lower soil infested with the seeds to sprout and grow and seed in your grain crop?

ERADICATING WILD OATS

In this connection, a few years ago, that celebrated farmer and institute speaker Mr. Henry Glendenning, of Manilla, Ont., was advocating the growth of corn as a cleaning crop for weed-infested fields, paying special attention to "wild-oats." A farmer in the audience jumped up and exclaimed "I have been trying that method and have had no success apparently, as the wild-oats seem to come up just as thick as ever in my succeeding grain crop." Mr. Glendenning merely asked him "What did you do with your corn ground after crop was removed?" The farmer replied "I plowed it of course." Mr. Glendenning replied "I think there is the secret of your non-success, merely cultivate your root ground enough for a seed bed for your grain and thus turn up no fresh seeds to sprout in your grain crop and you will have better success in eradicating wild-oats." That farmer has lived long enough to verify Mr. Glendenning's statement and has practically rid his farm of the pest.

A QUESTION FOR MR. CHRISTIE
As Mr. Christie of Dundas Co., nas soil, I presume similar to that of Macdonald College Farm, I would like to know if he gave the shallow cultivation method a trial during the time he was practising his present rotation (four years), or was it previous to this; if he ever used a sub-soiler or sub-soil plow to loosen up his heavy clay sub-soil while practising the above method and wherein deep plowing of root ground has any advantages over ribbing it up as a means of killing remaining roots of twich grass and soon thistle by the action of frost?

I am glad to see this question so generally discussed and hope to see it thoroughly threshed out, as I am very much interested in good farm methods generally and soil cultivation in particular. Good results it is evident can be obtained by both methods. Fair, honest criticism will injure no one and I hope, I at least, know enough about this question to desire to know more.

Keeping Good Farm Help

When farmers keep their cows milking for ten months, difficulties of the farm labor problem are

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WHITE & GILLESPIE, Peterboro, Ont.

likely to begin to disappear. While at Napanee recently, Mr. Henry Glendenning, of Manilla, pointed out that six or seven months dairymen have not hired men employed all the year around. The result is that when they get a good man they have to let him

go when the work is done.

On the other hand, when farmers dairy all the year around they are able to keep their best men for year to year. In this way they avoid the necessity of having to scurry around each year to employ new men.

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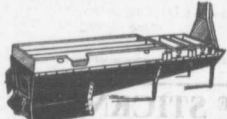
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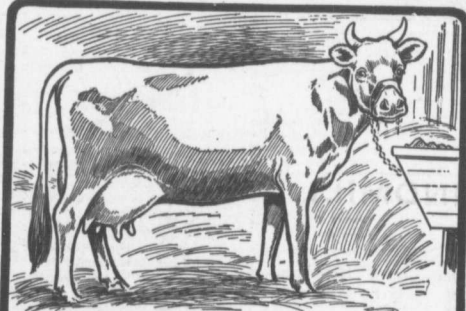
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If you want to make money out of your maple grove you have got to go about it in the right way. A "Champion" Evaporator will get more syrup out of a given amount of sap, with less trouble, than any other Evaporator on the market. If you are interested, write for our Booklet. It's free, and contains just the information you need to make your maple grove pay dividends.



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Livingston's Oil Cake is the cheapest feed for cows—cheaper than corn, shorts or even hay. Because it actually increases the richness of cream—and also increases the amount of butter that you get out of the milk.

Test your cows before and after feeding Livingston's Oil Cake for a month—and your "butter money" will show its economy.

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HORTICULTURE

Vegetable Growers Meeting

The annual meeting of the directors of the Ontario Vegetable Growers' Association was held recently in the office of the secretary-treasurer, Parliament buildings, Toronto. Mr. R. H. Lewis, Hamilton, president was in the chair. Among the directors present were: Messrs. Thos. Delworth, Weston; F. F. Reeves, Humber Bay; Jas. Dandridge, Mimico; J. W. R. Ralch, Humber Bay; C. Sharp, Braddon dale; E. J. Mahoney, Hamilton; C. W. Baker and F. W. Fuller, London; Wm. Parsons, Sarnia; P. Chappus and W. W. Weaver, Chatham; R. J. Bushell and J. N. Watts, Kingston.

The minutes of the previous meeting were read and approved. The branches at London and Sarnia were awarded the prizes offered for the largest increase in membership, London, receiving \$12 and Sarnia \$8.

A letter was read from W. O. Sealy, M.P., for Weston, and the following resolution re. increased protection to vegetable growers was taken up. Mr. Sealy's proposed resolution—

"That in the opinion of this House so long as the Canadian tariff affords, incidentally or otherwise, a considerable degree of protection to manufacturers some protection may fairly and properly be afforded by our tariff to Canadian agriculturists and stock raisers upon hogs, hog products, garden vegetables and such other items as it may appear possible to protect with advantage to the agriculturists and without undue injury to the Canadian consumer."

A copy of the bill respecting agricultural fertilizers was also laid before the meeting, and the clauses fully discussed, and many of them declared to be unworkable. A committee of the president, A. McMeans, F. F. Reeves, and the secretary were authorized to draft amendments and forward same to the government.

Notice of motion was given by F. F. Reeves, that he name of the association be changed to read "The Ontario Vegetable and Small Fruit Growers' Association." This matter will be considered at the next annual meeting. It was also decided to continue the experiments started last year with approved varieties of vegetables, by different branches.

Messrs. Delworth, Reeves, Mahoney and Sharpe were elected delegates to the Ontario Horticultural Exhibition for 1909. Mr. Delworth was appointed a member of the nomenclature committee of the Ontario Horticultural Association.

It was decided to continue the system of offering prizes to the branches securing the largest percentage of increase of membership during the year.

The following officers were elected: Pres., T. Delworth, Weston; 1st vice-pres., F. C. Fuller, London; 2nd vice-pres., W. W. Parsons, Sarnia; executive committee, T. Delworth, F. F. Reeves, J. Lockie Wilson, and R. H. Lewis.

Toronto Growers Hold Banquet

The members of the Toronto branch of the Ontario Vegetable Growers' Association held a well attended and successful banquet in Toronto, Feb. 9th. The principal speakers were Hon. J. S. Duff, Minister of Agriculture; Mr. J. Lockie Wilson, Secretary of the Ontario Association; Mr. Thos. Delworth, of Weston; H. B. Cowan, of Farm and Dairy; Mr. Jos. Rush, Humber Bay; Mr. R. J. Bushell, of Weston, and Mr. A. McMeans, of Ontario Agricultural College. The president of the provincial association, Mr. Thomas Delworth, of Weston, announced that the Ontario association, this year, purposes con-

ducting experiments in the growing of onion seed to find which seed gives the best results in Ontario. Seed from France and California will be tested as well as Ontario grown seed.

Mr. J. Rush announced that the vegetable growers around Toronto during the past year, have erected greenhouses and effected other improvements in their grounds and buildings amounting to about \$500,000. He assured the young vegetable growers present that if they would devote their attention to growing the best possible vegetables without thinking of the money return, they would find that the money would come of itself.

As a result of a trip he had had to six of the leading vegetable growing states in the American union, Mr. A. McMeans, of Guelph, announced that more is being done in Ontario for the advancement of the vegetable interests than in any other state or province on the continent.

At the short course held recently at the O.A.C., Guelph, the subject of varieties of apples was taken up. The best varieties for one section, it was concluded by all, would not necessarily find the best for other districts. Mr. J. E. Johnson, of Simcoe, named the following as his choice for Norfolk county: Baldwin, Spy, King, Snow, Greening and Melatoni. He deplored the old method of planting numerous varieties, a mixed lot of fruit being much harder to dispose of profitably than a few first class varieties. Mr. Kerry, of Northumberland, favored the Spy, Blenheim, Alexander, Wolf River, Gravenstein, and Hubbardston, all of which are hardy varieties, suitable to that section. He considered the Snow the best selling apple, but he would not recommend it because it required a more thorough method of culture than the majority of apple growers would give it, and second class Snows he considered valueless.

McCORMICK DRILLS

It will pay you to get acquainted with the McCormick Drill. It consists of hoe and single disk drills which will meet your requirements because they are built especially to meet Eastern Canadian conditions.

The disk drills are better adapted to hard and trashy ground than the hoe drills, and the hoe drills are more efficient in ground that is sandy, full of stumps and roots.

The frames of both drills are exceptionally solid—there is no danger of the frame becoming twisted or springing out of shape. The wheels are extra strong and built to stand rough usage.

Both styles of drill are equipped with a double run force feed. It is in reality two feeds in one, because one side is adapted to small kernels and the other to large. When requires a smaller size throat than peas, beans, barley, etc.; consequently, in making the double run feed, the different sizes of seed are handled to the best possible advantage. One revolution of the feed wheel carries out a certain amount, and two revolutions twice that amount; therefore, by speeding the wheel, different amounts can be sown. The feed wheel carries out its load. This insures that the grain will be handled with the greatest possible care. This feed does not bunch the seed and sows all kinds in just the quantities desired.

The hoes on the hoe drill are arranged so that they can be placed either zigzag or straight. This is an advantage in trashy ground, because when the hoes are placed zigzag there is more space for trash clearance, and the disk drill the hoe drill is made with 10, 11 and 13 markers, or hoes, and the disk drill with 11 and 13 markers, or disks.

In addition to grain drills, the McCormick line comprises broadcast seeders, combined cultivators and seeders, cultivators, land rollers, spring-tooth harrows, out throw and in throw harrows, smoothing harrows, and scufflers.

The International agent of your town will gladly show you these drills, and supply catalogs and full information. If you can wire direct to the nearest branch office.

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POULTRY YARD

Poultry Industry in Quebec

In dealing with the poultry industry of Quebec and Eastern Ontario at the Poultry Institute held at Guelph, Mr. Victor Fortier of C. E. F., Ottawa, was very optimistic. In 1901 the whole of Canada contained only 17,922,628 fowls. At present Ontario has 12,000,000 and Quebec has 5,000,000 birds. The industry is still growing. The outlook for the future is bright. Everywhere the demand for poultry products greatly exceeds the supply.

The climate of Quebec is not as favorable for poultry raising as the climate of Western Ontario. The farmers of Quebec however are improving the quality of their birds and are making rapid progress. Quebec has six Poultry Associations which hold yearly exhibitions at Montreal, Quebec, St. John, St. Jerome, Granby, and Victoriaville.

Besides these, Provincial and County exhibitions are held and these

first class is the more prevalent and by far the most successful. The colony house plan is used by most men. Instead of housing the birds all in one or two houses they are housed in small houses distributed all over the small farm and each containing about fifty birds. These houses are often portable and are moved from time to time thus placing the birds on new soil.

TOO MUCH EQUIPMENT

On such a plant as this a man must avoid trying up too much capital in equipment. The average poultryman invests about \$10 per fowl in equipment. This is entirely too much. The extent to which a man can lessen this investment in equipment and still maintain adequate and healthy quarters for his fowls will determine largely the extent of his profit.

A PROFIT OF \$3.50

Last year on such a plant as this one man with the aid of his daughter cared for 3,500 White Leghorn birds. He shipped his eggs daily to a nearby city.

His eggs were all of one color, by being careful to keep them clean, and to supply them strictly fresh, he

normally developed pullets hatched between May 16th and July 1st, began laying in February. They laid an average of 24 eggs a hen during the year. Contrary to this 14 normally developed pullets hatched in the beginning of May and fed and housed in exactly the same way as the former lot, began laying in December. They laid an average of 104 eggs a hen during the year. In another experiment birds hatched early but weak and not normally developed commenced laying the last of January. These only laid an average of 15 eggs a hen. These experiments show that for Eastern Ontario, at least, the egg yield could be increased at least 100 per cent if all pure, delicate and late hatched birds were discarded. At the same time more eggs would be received during the winter when the price is high, and a better quality of fowl for table use would be obtained.

JAREFUL HANDLING NECESSARY

A hen is a delicate machine. Like all delicate machinery she needs careful handling and he who would succeed with her must first of all use great care in selecting his breeding stock. Then he must have his pullets hatched early, and keep them in a healthy thrifty condition. Finally he must feed well and observe the Golden rules of hygiene.—P. E. A.

Diseases of Poultry

At the recent Poultry Institute held at the O. A. C., Guelph, Dr. Geo. Morse, of the Bureau of Animal Industry, Washington, D. C., made a strong plea for the practical poultry raisers to forsake the idea, that all diseases of chickens are caused by methods of feeding and management. Some diseases such as gout, might be caused by injudicious feeding, and not doubt many infectious or germ diseases are made worse by bad management of fowls. All infectious diseases, however, have as their primary cause micro-organisms or germs. These germs have the power of stirring and contaminating healthy tissue, and hence the germ of any disease may be transmitted from a diseased fowl to a healthy one and may produce the disease within it. Then if the poultrymen are to succeed in their battle with infectious diseases they must recognize these facts and co-operate with the scientists by adopting methods and bringing about conditions which are detrimental to the development of these germs.

Many of these germ diseases of poultry attack the liver. The liver when in a healthy condition produces certain substances which destroy and overthrow the effects of many disease producing germs. If through carelessness in feeding or in some other way the liver becomes inactive and sluggish, the disease progresses rapidly. Not only should care be taken in the feeding of the fowls but cleanliness and antiseptic measures should be strictly observed in combating germ diseases.

WHITE DIARRHOEA

It has lately been shown that white diarrhoea is one of these germ diseases. Means of successfully combating it have not yet been discovered. Gapes, cankers, rook, blackhead in turkeys, and tuberculosis, are other germ diseases. Great care should be observed in feeding birds affected with them in order to prevent its spreading through the flock.—P. E. A.

In egg production a careful system of selection and rejection, together with scientific feeding, proper housing and general care, increases the number of eggs until it reaches a maximum beyond which it is not safe to venture. It is not so much a matter of breed as of individuality.

When the supply of eggs fall, feed less meat. It will be found superior to anything that can be used. It is cheaper than grain, because it will make eggs. Hens may have plenty of grain, yet they need a change.

Hatch Chickens by Steam

Stahl's "Wood on Heat" and "Steam" are the best methods for hatching. Well-built, reliable, and long-lasting. Book and plans for guaranteed fertile eggs at \$2.00 per dozen. Write for particulars. **BRANT PULTRY YARDS, Brantford, Ont.**

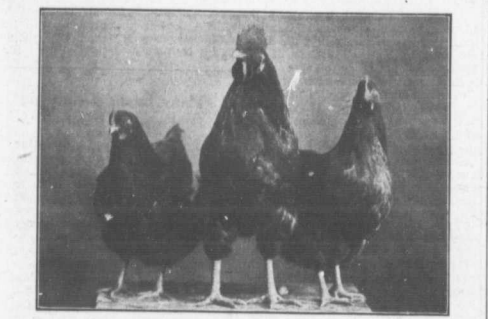
242 EGG STRAIN (Kulp)

Brown Leghorns—their biggest and biggest layers of big eggs (up to 32 oz. per doz). Best blood in America. Hardy, handling some and laying early. Write for some and plans for guaranteed fertile eggs at \$2.00 per dozen. Write for particulars. **BRANT PULTRY YARDS, Brantford, Ont.**

CANADA'S CHAMPION BARRED PLYMOUTH ROCKS

At Toronto, 1898, we won 1st, 2nd and 3rd cock birds; 1st, 2nd and 3rd hens; 1st, 2nd, 3rd and 4th cockerels; 1st, 2nd and 3rd pullets. 100 silver challenge cups. 1st birds scored 39 points, all others 28. Hens only 27 points, 1st cockerels from our best matings for sale at \$5 each, 100 pullets \$2 each, or \$25 per doz.

JNO. FRINGLE, London, Ont.



A Trio of Buff Orpingtons

Imported by J. W. Clark, Brant Co., Ont. Note the low-set blocky type of these birds, the width between the legs, and their short shanks. Note also their heads, which are of a type indicating strong constitutions.

are influencing the farmers to breed better stock. The Agricultural School at Oka and the Macdonald College at St. Anne de Bellevue have strong poultry departments which are doing much for the poultry industry.

START WITH SMALL FLOCK

In addition to this the Government sends expert poultrymen through the country to give practical poultry lectures to the farmers. They advise men start with a small flock of 50 or 100 hens, and to build up their flock as they learn by experience. Without experience a man will surely fail with poultry. They advise cheap houses which are not too warm but are well ventilated, using cotton windows and straw lofts.

Profitable Poultry Farms

Prof. C. K. Graham at the recent Poultry Institute at Guelph drew his observations on "Profitable Poultry Farms" almost wholly from the state of Connecticut. More people he says obtain a living from the poultry industry in that state than from all the other branches of agriculture combined. Land in cheap and markets are good and very convenient. Where the land is more valuable and expensive, intensive poultry culture is not practised.

There are two classes of poultry men; those using a large amount of land and allowing fowls free range, and those using small areas of land and closed runs for their birds. The

obtained the top price during the year.

After allowing himself \$15 and his daughter \$10 a week for their labor, he received a net profit from his poultry for the year of \$3,500.

LET HENS SET

It was Mr. Graham's experience that hens permitted to set layed more eggs than those which were broken up when they became broody. He would advise that a hen be allowed to hatch a setting of eggs when she became broody, even though she were not allowed to raise her chickens. She would be more profitable for the rest of the year.

Mr. Graham reported an experiment that he had performed to test the relative value of cold water, warm water, and snow, as drink for fowls in winter. The results are very interesting. Their value was tested by their effect in the egg yield. Between the cold water and the snow there was no noticeable difference but with the warm water there was a decided drop in the egg yield. This result was uniform when carried on through cold weather but in warm weather the difference was not so marked and in fact became almost eliminated.

Early Hatched Pullets Best

In a climate such as prevails at Ottawa much will be gained by early hatching of the pullets. In experiments carefully performed at the Experimental Farm at Ottawa eight

Hamilton Incubator Hatches Every Fertile Egg

You can succeed with the first hatch in a Hamilton Incubator. Our directions are simple and accurate. You cannot go wrong. And the Hamilton will hatch every fertile egg. It does so because its system of ventilating, heating and regulating are absolutely perfect.

Our Free Booklet

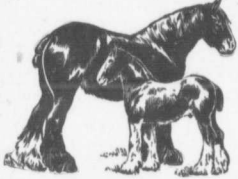
will tell you many surprising things about incubator construction. After reading it you will understand why chicks die in the shell in many incubators—why they stay alive in the Hamilton—why all fertile eggs placed in the Hamilton hatch big, robust, lively, perfectly-formed chicks—the kind that you are proud to exhibit to your neighbors. You should have a copy of the free booklet and study it carefully. Many experienced poultrymen have told us they were mighty glad they asked for a copy. Send for your copy to-day.

The Hamilton Incubator Co., Ltd., HAMILTON, ONTARIO.

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INSURE

YOUR
IN FOAL MARES

Why risk the loss of a valuable Mare or Foal or both of them when a payment of a few dollars would indemnify you for such loss should it happen.

The General issues policies for 30 days, 6 months or 12 months covering the mare with or without the foal.

Farm Horses, Stallions,
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Prospectuses sent Free on demand.
Agents wanted in unrepresented districts where resides a Veterinary Surgeon.

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NEW YORK LIFE BUILDING, DEPT. C
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FARM MANAGEMENT

Care of Idle Horses in Winter

A. H. Tople, Oxford Co., Ont.

My idle horses, every fair day throughout the winter, are turned loose into a yard. Being used to their liberty, they will not run and frolic as much as they would were they turned out but once or twice a week. In this way, they get the exercise so necessary for their good health.

Care must be taken not to change the feed too quickly. The horses, having been used to plenty of good, strong food, must not be put on a totally different ration at once. I gradually take away part of the heavy grain and replace it with bran and a few roots once a day. I make use of a home-made condiment for my horses at this time. It is made of 10 quarts of salt, five pounds of stock salt, four pounds of sulphur. I feed a teaspoonful of this mixture to a horse each day for at least one month after they are stabled. I always exercise care not to feed too much hay but just sufficient that they will clean it up well.

After the horses have been stabled for some time and have been accustomed to the change from outdoor to indoor life, from green to dry feed and from heavy to lighter feed, I cut equal amounts of straw, hay and corn stalks together. The floor in the passage in front of the horses being cement, I place the cut food, sufficient for one day's feeding, about a foot deep on this. The mixture is dampened well and about two quarts of rolled oats and bran for each horse placed on top and the whole mixed well together. By practicing this method of feeding and caring for horses, I can keep them in good health, good flesh and in good spirits.

Management of Range Lambs

I intend buying a maraud of range lambs next fall with the intention of winter feeding them and having them ready for the spring market. I wish to provide a quantity of fodder for them, but as I have not had much experience with sheep I thought you might be able to give some advice on the subject. I am thinking of sowing a lot of oats and mixed, also a plot of oats and millet mixed, both lots to be cut some time before maturity to make them palatable. What would you think of these mixtures? Any advice you may be able to give me on this subject will be fully appreciated.

—G. H. B., Morden, Man.

I would suggest the following crops as suitable for fall and winter feeding of 100 lambs:

Turnips, two acres. Varieties, purple top Swedes.

Peas and oats, six acres. Sow two bushels oats, and two bushels peas, that is four bushels of mixture, equal parts by measure of peas and oats per acre.

Peas, oats and millet (Hungarian grass), four acres. Sow two bushels oats, 20 lbs. millet (Hungarian grass), one bushel peas per acre.

Rape, one acre. Sow broadcast in July, five lbs. Dwarf Essex rape per acre.

I have estimated that turnips yield 15 tons an acre; peas and oats, two tons; peas and millet the same amount per acre. My idea of the operation would be as follows:

Buy lambs in September or early October. Turn on pasture field, giving access to rape when the rape was not wet so as to remove any chance of bloating. Feed a little dry feed at the same time, say in the mornings before turning out. When the rape got frozen, which would render it dangerous except in very small quantities, begin to feed turnips, say two lbs. per diem.

This amount might be increased if turnip supply was large. In addition feed about two lbs. per diem of pea and oat hay, and one lb. of pea, oat millet hay. Begin to feed meal in very small quantities, say one lb. to ten lambs to start with. A mixture of oats, peas, bran, wheat, wheat seeds, and barley all cracked or coarsely ground will prove satisfactory. Grind weed seeds finely before adding to mixture.

The lambs should be allowed an acre or two whereon to run during feeding period. They should have an abundance of dry straw for bedding. Salt should be always available and they should be watered every day, unless getting lots of turnips. It is of course possible to get along without turnips, but chances are better when turnips are fed. Do not feed mangels in any considerable quantities. Dip lambs before starting to feed.—J. H. Grisdale, Agriculturist, C.E.F., Ottawa.

Building up Poor Land

I have bought a piece of land which is light soil and in run down condition, some distance away. How is the best way to build it up? Would it be advisable to plow in the spring, sow to buckwheat, and plow down as a fertilizer, then sow a second lot of buckwheat for a crop?—A Subscriber.

Soil as described is difficult to build up without barnyard manure. Sowing buckwheat thereon to be plowed under is a possible and practicable method. Attempting to grow a crop of buckwheat to harvest after the first crop has been turned under, does not seem to me very advisable. I would suggest rather that in plowing, preparatory to sowing to buckwheat, a very shallow furrow be turned, say, three to three inches and a half. Work the land well before sowing to buckwheat, allow the crop to grow till about one foot high, then roll and plow with a furrow about the same depth as before or very slightly deeper if necessary.

Work thoroughly by disc harrow—harrowing and rolling, then, if not later than July 30th, sow clover seed at rate of 10 lbs. an acre. Sow broadcast by hand, then harrow and roll. Roll twice if the land is very loose or dry.

If later than July 30th before land is ready to sow, hold for three or four weeks, and sow fall rye on the field at the rate of one bushel per acre. This might be allowed to grow till fairly late in the fall, when it might be pastured for a time. The next spring plow with a shallow furrow again and sow oats or spring rye and seed down with clover, 10 lbs. an acre.

GROW CLOVER

In any case, if you wish to get your land into good shape, at an early date, do not think of trying to crop a crop off in the first year. Devote the first year to retting the soil into such shape as will permit of its growing clover.

The clover and timothy should be allowed to stand for two years, if possible. It would be better to pasture for that period, but, if necessary, a crop of hay might be taken off the spring of the first year. The cattle should be turned on too soon after the hay is cut, and then the clover should be left under pasture till the following August, when it should again be plowed with a shallow fur-

Many Inquiries through
Farm and Dairy

Ed. Farm and Dairy.—Our advertisements in different papers have been such that it has been very difficult for us to trace direct results, but owing to the policy of your paper, we have been able to trace a very considerable percentage of our inquiries direct to Farm and Dairy.

It is one of the best paying mediums that we can use at the present time, and owing to the steady improvement in the character of the paper, we are confident that the results in the future will be even better than in the past.—The Empire Cream Separator Co. of Canada, Ltd., H. C. Sparring, Manager.

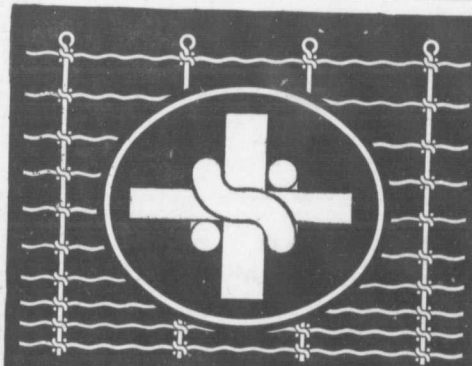
row (not over four inches deep), harrowed to insure retting of the sod. Harrow with smoothing harrow, when necessary to level and fill in holes. In October ridge up with double mould board plow as though preparing land for roots.

During the winter apply a light dressing of barnyard manure and sow to corn the next spring. If no manure is available, sow to corn in the spring, then sow to oats and seed down with 10 lbs. of clover and 10 lbs. timothy per acre. Repeat the rotation described above. The results will most certainly be highly satisfactory.—J. H. Grisdale, C. E. F., Ottawa.

PLANKING HORSE STALLS.—Is it injurious to horses to have a floor raised 4 inches in the front of the stall, giving a slope back to the cement floor of the stable?

No; although four inches is more of a raise than is necessary. Two inches of a fall should prove ample and the effect would be less noticeable.

I received the fountain pen which I got for obtaining one new subscriber to Farm and Dairy. I have given it a thorough test and it gives the best of satisfaction.—Irvin Shepherd, Waterloo Co., Ont.



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are just a little Heavier, Stronger, Stiffer, More Secure and Serviceable than any other by comparison. They are the Best and Most Economical to Use and Buy, and the Most Profitable to the Agent.

THE SELKIRK Lock, although cheaper than any other independent lock, is the only one that grips tight enough to justify the use of High Grade Wire. The best metal fence lock will cost 40% more and will not hold half as much. Fill out the blank below and mail it to us and we will send you proof of the above statements, a handsome catalogue and full particulars.

Selkirk Fence Company, Hamilton, Can.

I want to examine for myself the merits of Selkirk Stiff Stay Fencing and Gates. Send me a free sample piece of the fence with descriptive catalogue and Agent's terms.

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Corn Growers Meet

The corn growers' convention and exhibition, held in Essex recently, was in every respect a remarkable success. In spite of the bad weather, and the equally bad condition of the roads, over 3,000 attended the meetings. The attendance at every session was good, but that of Feb. 12 was phenomenal. In the morning 800 farmers were present. At the afternoon session over 100 farmers were turned away from the town hall, where the convention was held, there being not even standing room.

The forenoon of each day were spent in the study of Prof. Klinck, who is the direction of Prof. Klinck, who illustrated his lecture by means of charts and samples of seed corn. This feature of the work proved so popular with the farmers that after the first session it was almost impossible to carry on the practical corn sowing feature on account of the large attendance.

The afternoons of each day were spent in discussing special problems of interest to the corn growers, such as methods of cultivation, selection of seed corn, etc. Prof. Klinck, Prof. Zavitz, J. S. Biggar, J. O. Duke and others assisted in this work. The attendance throughout was a sufficient indication of the interest manifested. No other subjects were discussed except those bearing on corn.

AN ASSOCIATION FORMED

On the afternoon of Feb. 11, after a discussion upon Corn Growers' Associations in the United States, led by J. S. Biggar and Prof. Klinck, the chairman, Mr. A. McKenney, suggested the advisability of forming a similar association in Ontario. The object of the association would be to stimulate an interest in corn growing in Ontario, and Essex, Kent and Elgin in particular, by publishing information of an educational nature, and by holding a convention and exhibition annually similar to the one held this year.

A motion to organize such an association to be called the Ontario Corn Growers' Association, was carried, and the following officers were elected: Pres., J. O. Duke; Vice: First Vice-Pres., H. Smith, Ruven; Second Vice-Pres., P. Mariette, Walkerville; Sec., A. McKenney, B. S. A. Essex; Treas., J. H. Coatsworth, Ruthven.

A municipal director was elected for each municipality in Essex, Kent and Elgin. The following day a meeting of the members was held, and a constitution was adopted. Steps will be taken at once to have the association incorporated under the Agricultural Association Act. The membership is at present over 200.

THE EXHIBITION

The exhibition feature was equally as successful as the convention. There were over 800 entries in the different varieties of dent and flint corns, making the greatest exhibition of corn that many of those in attendance had ever seen. The judge, Prof. Klinck, stated in his remarks that it was the best he had ever seen outside the corn belt.

The White Cap Yellow Dent Class was the largest of any, there being 12 entries in it alone. The majority of the entries were of excellent quality. The remainder of the show was made up of Reed's Yellow Dent and other Yellow and White varieties.—A. McKenney.

Milking Machines

The practicability of milking by the use of mechanical milkers has been a very important question in the economy of the dairy farm since the first introduction of such machinery, and their operation has been watched

with the keenest interest by everyone associated with agricultural advancement. A milking machine plant was installed at the Nebraska Agricultural Experiment Station for the purpose of investigation in October, 1906. Since that time a number of experimental trials have been made with the milking machines and careful records have been kept of their use in the University dairy. Bulletin No. 108 of the Agricultural Experiment Station contains full report of these data and discusses the use of the milking machines in all places of their operation.

The conclusions drawn from the experiments were:

Heifers in their first lactation apparently give better results by machine milking than do aged cows that have been accustomed to hand milking for one or more years.

Some cows are not adapted to machine milking.

Alternate hand and machine methods of milking have a detrimental effect upon the milk flow.

Manipulation of the udder is absolutely necessary in some instances before all the milk can be drawn by the machine.

One man operating one machine can milk about the same number of cows per hour as one man milking by hand.

Two men operating four machines can practically do the work of three men milking by hand.

Two operators with four machines milked twenty-one cows per hour in the University dairy.

It was found necessary to thoroughly wash and boil the milking machine parts after each usage in order to produce milk with as low a bacterial content as that resulting from careful methods of hand milking.

Washing the machines at irregular intervals or simply drawing water

through them will increase the bacterial content of the milk even above poor methods of hand milking.

The man operating the milkers must thoroughly understand the care and management of dairy stock. He should also be persistent in the attention to details in order to obtain the best results.

From these studies it would appear that the milking machine is fitted for large herds rather than small ones, and we believe it would be impracticable to install them where fewer than 30 cows are milked the year round.

Bulletin No. 108, containing the complete records from which these conclusions are drawn, though not sent to the general mailing list may be obtained free of cost by making application to the Nebraska Experiment Station, Lincoln, Nebr.—A. L. Haecker.

Renew Your Subscription Now.

Farmer Stout learns about seeding right

"Ran across one o' these school-taught farmers at the Toronto Exhibition last summer. Got talkin' about growin' wheat in Ontario.

"He claimed that the Ontario farmers lost more than a million dollars last year alone, simply because the seeding was done wrong. I laughed at him.

"Well," says he, "you just figure it out when you git home; and," he says, "here's some facts that'll help you figure right." Well, sir, I figured. And I got my eyes opened,—you bet I did.

"Got 'em opened wide enough to see I needed a Cockshutt Disc Drill; and I've got one now. Look here:

"I'd had what I counted a real good seeder. But the closest plantin' it could do was seven inches apart. The Cockshutt plants six inches apart—and doesn't use any more seed to the acre. D'ye realize what that means?

"It means anywhere from two to five bushels more yield an acre with any kind of grain!

"Now, when you come to know that Ontario seeded 821,766 acres to wheat last year; and when you come to figure what even two bushels more an acre mean—in cold cash dollars—

"That school-taught lad wasn't so far out, was he? I would have meant just about 640,000 bushels more Ontario-raised wheat in one year—not to speak of all the other grains.



"Quite a difference between six-inch drills and seven-inch ones, you see. I'm letting the other fellows do the seven-inch seedin' nowadays. The Cockshutt way is good enough for friend Stout.

"Good enough for me anyway, seeing that I've got a drill in this 15-disc seeding machine of Cockshutt's that draws lighter than any ten-hoe drill I ever saw; and never clogs; and is dead sure to plant any kind of drilled seed right, every time.

"Good enough for me, because it pays me better to own a Cockshutt Disc Drill than to seed any other way. I can't see why it wouldn't pay you, too."

THE Cockshutt New Disc Drill seeds accurately any drill-planted crop, and works as perfectly with flax seed as with beans because of its positive force-feed. It is built extra strong, with a rivetted frame of high-carbon I-beam angle steel. The Discs will not clog on the trashiest ground; the grain will be sowed right even in wet and sticky soils. The Cockshutt chain-drive hardened steel, with the direct centre draft from the discs, insures easy running and the lightest possible draft, with the minimum of friction. The axle bearings are fitted with compression grease cups (all other such machines use merely oil) that no grit nor dust can work into nor any lubricant work out of. You ought to read the booklet quoting actual experiences of practical farmers with this drill; it will prove to you that this is the drill that's ten years ahead of all the rest in practical value to any farmer. Please ask for illustrated details—address as below.

THE COCKSHUTT LINE OF IMPLEMENTS

built right to farm right, includes not only more than 120 styles of plows—ranging from light garden plows to huge 12-furrow engine gangs—but also all styles of seeders, cultivators, and harrows. Write us for details of the kind of implements the business farmer ought to buy.

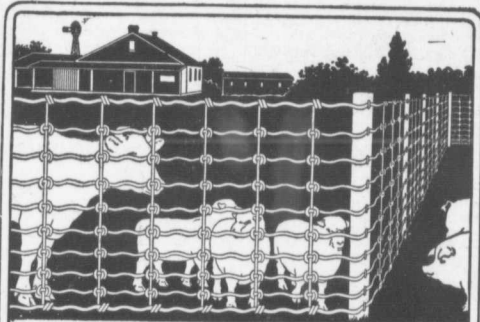


This is an End View of The Cockshutt New Disc Drill

Made in 13 and 15-Disc Models for Ontario

COCKSHUTT COMPANY
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IMPORTANT TO FARMERS

Your fences are your fortress against loss and damage. They must be strong enough to resist invasion from without, and to keep within bounds your flocks and herds. You can't afford to take chances on soft, slack, or brittle wire fences, which may fall just when most needed.

Peerless Woven Wire Fence

has the elastic springiness and resisting qualities that make an A 1 farm fence. Once up it lasts—no breaking—no falling down. There are reasons why. We can't tell them all in this ad, but if you will write to us we will send you some valuable fence facts.

The Banwell Hozie Wire Fence Co. Ltd.

Dept. G, Hamilton, Ont.
Winnipeg, Manitoba.

Success Manure Spreader

Has Light Draft Roller Bearings

When purchasing a manure spreader you naturally look for the lightest draft machine, but you need look no farther than the "Success" spreader. The "Success" has always been the lightest draft manure spreader, and the recent introduction of Five Sets of Roller Bearings still further decreases the draft—places the "Success" far ahead of its competitors.

The arrows show you where these draft-reducing Roller Bearings are located—one set on either end of the rear axle, one on either end of cylinder shaft, one in the combination gear and sprocket. Thus, you see, the "business end" of the spreader—the mechanism that has the work to do—is made to run with the greatest ease and smoothness.

These "Roller Bearings" prevent the wearing out of boxes and other bearings—and add years to the life of the machine. They decrease the draft at least the equal of a horse.

These "Roller Bearings" are accurately cut out of cold rolled steel and rivetted together in substantial, durable boxes. They can be removed from the machine without coming apart. If you want the easiest running, most durable, greatest improved manure spreader in the world buy the New 1909 "Success."

A Simple instantaneous change of Feed Device. One lever moves a pinion from one row of teeth to another on a Disc Gear, without separating pinion and gear and no ground is skipped.



ARROWS ALL POINT TO ROLLER BEARINGS ON BUSINESS END OF "SUCCESS" SPREADER.

B Force Feed Worm and Gear Drive guarantee smooth and positive motion of the apron whether going up or down hill, or on level.

C Beater of "Success" is driven by Direct Steel Pinion Chain Drive. This method makes "Success" lighter draft than any other spreader.

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Western Agents: The John Deere Plow Co., Ltd., Winnipeg, Regina, Calgary and Edmonton Agents for Quebec and Maritime Provinces: Frost & Wood Co., Ltd., Montreal, Quebec, St. John, N.B.

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Short Course at Ayr

On February 8th, 9th and 10th, the Ayr and Roseville Farmers' Clubs, with the assistance of the District Department of Agriculture, Galt, held a very successful short course in stock and seed judging at Ayr. It comprised the judging of hogs and beef cattle, under the direction of Prof. G. E. Day; horses, by Dr. J. H. Reed; the common field grains, by Prof. C. A. Zavitz; and the identification of weed seeds, by Mr. T. G. Raynor, of the Seed Division, Ottawa.

The live stock judging was conducted in the old Knox Church, which proved to be a very suitable building for the purpose. Tiers of seats, sufficient for 250 people, were arranged along the sides, and a fair sized ring was left in the centre. Each day this building was taxed to its utmost capacity, 400 farmers being present on Wednesday afternoon, when the horses were being judged.

In hog judging the animals used were five Yorkshires, owned by J. J. Hodgson, Secretary of the Ayr Farmers' Club and four Tanworths belonging to Alex. Hall. In beef cattle, a steer owned by Kyle Bros. was used for scoring, and two Shorthorn heifers and four feeding steers were used for judging. For horses, a Clydesdale stallion, a Clydesdale mare and four agricultural horses were obtained.

The seed judging was held in McGeague's Hall, from 8:30 to 10:30 on Tuesday and Wednesday mornings. Although there was desk room for only 85, yet 125 men were present each morning. Professor Zavitz took up the judging of barley and oats, and Mr. Raynor, the weed seeds usually occurring in timothy and clovers.

EVENING LECTURES

There were held also in connection with the short course, evening lectures in Reid's Hall. The Monday evening meeting was addressed by Prof. G. E. Day, on "Feed Beef Cattle," and Prof. Zavitz, on "Varieties." Tuesday evening, Professor Harcourt talked on "Cattle Feeds" and Mr. Raynor on "The Seed Trade." Very interesting and instructive lectures were given in every instance. The Wednesday evening meeting was of a more public character, and was under the joint auspices of the Ayr and Roseville Farmers' Clubs and the Ayr Women's Institute. Upwards of 400 people were present on this occasion to hear President Creelman, of the O. A. C., Mr. G. A. Putnam, Superintendent of Farmers' Institutes, and Mr. F. C. Hart, Department of Agriculture, Galt. President Creelman gave a very interesting address on "Improving the Condition of the Farm Home," and laid particular emphasis on the proper education of the boys and girls.

The whole course was certainly a pronounced success and the Ayr and Roseville Farmers' Clubs are to be congratulated upon the way in which they handled it.—F. B. Warren.

A Loyal Worker

While on a long Institute trip through Western Canada during January and February, Mr. W. G. J. Tregillus ably represented Farm and Dairy at a series of some 20 or 25 meetings. Mr. Tregillus is a successful breeder of Holstein cattle and Yorkshire swine in Calgary, Alta. He was one of the principal speakers at this series of meetings. He writes regarding his work for us on these occasions, in part, as follows:

"At every meeting I distributed a bundle of Farm and Dairy that you so kindly sent me for samples. I could heartily recommend Farm and Dairy as being the best paper I knew of for any one to take, who was interested in dairying. My object was only to get dairy farmers to take some good paper and learn more about their own business."—W. J. Tregillus, Calgary.

Canadian Ayrshire Breeders' Meeting

Confidence in the outlook for the dairy industry and in the merits of Ayrshire cattle as economical producers of high grade milk were features of the annual convention of the Canadian Ayrshire Breeders' Association held last week in Montreal. The presence of Pres. E. J. Fletcher, Greenfield, N. H., and of Sec. C. M. Winslow, of Brandon, Vt., of the American Ayrshire Breeders' Association, added to the interest of the proceedings.

"I am glad to see that you are testing the Ayrshire cow," said Mr. Fletcher. "The farmers are now demanding cows of large producing capacity. In the United States we are just beginning to realize the possibilities of the Ayrshire. Within five years I expect that we will have Ayrshire cows with records of 20,000 lbs. of milk and 1,500 lbs. of butter in a year. The Ayrshire has no peer as a producer of market milk. The outlook for Ayrshires as well as for all other breeds of dairy cattle was never brighter than at this year."

"We are parts of a three-legged stool," said Mr. Winslow. "The legs are the Ayrshire breeders of Scotland, Canada and the United States. What helps the breed in one country helps it in the other countries as well and, therefore, we should all pull together. The trouble with us is that we do not brag enough. We must use more printers' ink and lead points in our Ayrshire cow become better known. I am constantly receiving letters from people living in all parts of the United States who have heard of the merits of Ayrshire cows as economical producers of milk and who are anxious to know more about the breed." The future of our breed is bright."

OFFICERS FOR 1909

The following officers were elected: Pres., W. W. Ballantyne, Stratford, Vt.; Vice-pres., James Bryson, Brysonville.

Sec.-treas., W. F. Stephen, Huntingdon, Que.

Directors (seven from Quebec appointed) Senator W. Owens, Montreal; James Bryson, Brysonville, Que.; Nap. Lachapelle, St. Paul; Hector Guion, Howick, Que.; James Boden, Danville, Que.; Gus Langlois, Cap Rouge, Que.; R. R. Ness, Howick, Que.

Executive committee: eastern division, R. R. Ness, Howick, Que.; Nap. Lachapelle, St. Paul, L'Ermitte, Que.; Senator W. Owens, Montreal, Que.; western division, A. Kains, Bryson; Wm. Stewart, Menie, W. W. Ballantyne.

Registration Committee: Robert Hunter, Maxville; W. F. Stephen.

VICE-PRESIDENTS FOR PROVINCES Ontario—Wm. Thorn, Lyndoch, Ont.; Quebec—Robert Ness, Howick, Ont.; Manitoba—Wellington Hardy, Reliance, Man.; Saskatchewan—Man. J. C. Pope, Regina, S. Alberta—A. H., Trimble, Red Deer, Alta.; British Columbia—A. C. Wells, Chilliwack, B. C.; Prince Edward Island, W. H. H. Simmons, Charlottetown, P. E. I.; Nova Scotia, P. S. Black, Amherst, N. S.; New Brunswick—Geo. C. P. McIntyre, Sussex, N. B.

Delegates to exhibitions were ap-

pointed: Ontario—Hill, Max, Dan, McE., C. J., Lott, Dem, tylene; Man.—Th., Y.; Que.—Wm., Geo., Serv, New, Res, James, Max; P. E. I.—Prate, being, the, from, long, ing, tropy, crop, in so, larly, ally, Sever, had, in, high, Ness, will, a, tris, solids, cow, econo, met, of, pr, summed, not, least, ness, Tend, more, Record, of, 10, 400, to, cows, 15,000, ter in, fore, Ayr, ing, e, own v.

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pointed as follows: Toronto Industrial, W. W. Ballantyne, Stratford, Ont.; London, A. Kains, Byron; Geo. Hill, Delaware; Ottawa, Wm. Hunter, Maxville; Sherbrooke, Jas. Boden, Danville, Que.; St. John, Geo. C. P. McIntyre, Sussex, N. B.; Halifax, C. A. Archibald, Truro, N. S.; Charlottetown, P. E. I.; Jtsa. Easton, Charlottetown, P. E. I.; Ottawa Winter Fair, James Beuning, Williamstown, Dominion Cattle Breeders' Association, W. F. Stephen, W. W. Ballantyne.

JUDGES AT EXHIBITIONS

The following judges were recommended for the exhibitions named: Toronto, W. P. Schank, Avon, N. Y.; Reserve, James Boden, Danville, Que. Ottawa, Jas. Boden, Reserve, Wm. Hay, Lachute, Que. London, Geo. McCormack, Rockton, Ont.; Reserve, John McKee, Norwich, Winnipeg; Brandon and Winnipeg, W. F. Stephen; Reserve, W. W. Ballantyne, New Westminster, W. W. Ballantyne; Reserve, A. Kains, Byron, Sherbrooke, James Bryson; Reserve, Louis Laval, St. Berthier, Halifax, Wm. Stewart, Menie; Reserve, Wm. Hunter, Maxville.

PRESIDENT'S ADDRESS

Pres. R. R. Ness, Howick, Que., stated that requests for Ayrshires are being received from every section of the United States and Canada and from Japan. He believed that before long other countries would be ordering them as well. Owing to the poor crops of 1907 and to the money stringency the demand for Ayrshires fell off in some sections. In others, particularly in Western Canada and especially in Alberta, it showed an increase. Several car lots of selected Ayrshires had been shipped to Western Canada during the past few months and sold at good prices. "Type, symmetry and vigor of constitution, combined with high milking qualities," said Mr. Ness, "must be the stamp of cow that will win hereafter." In the dairy test a true estimate of the butter-fat and solids demonstrated the ability of the cow or heifer to assimilate food and economically convert it into milk. No dairy test is complete unless the cost of production (amount of food consumed) is taken into consideration, not only during the test but for at least two days previous to the commencement of the test, when it extends for only 48 or 72 hours. Mr. Ness urged Ayrshire breeders to enter more animals than they have in the Record of Performance test. Records of 10,000 to 12,000 lbs. of milk and of 400 to 500 lbs. of butter for Ayrshire cows now are not uncommon. In the United States one cow has given over 15,000 lbs. of milk and 700 lbs. of butter in a year. It may not be long before Ayrshire cows have a milk producing capacity of 15 to 20 times their own weight in 12 months.

SECRETARY'S REPORT

"In spite of the financial depression and short crops," reported Secretary W. F. Stephen, "sales have been numerous and at remunerative prices. The Ayrshire is noted as a hardy, vigorous animal, capable of high production under adverse conditions and these

qualities make her excel as the best all-round farmer's cow.

"The success of those dairy breeds, that do not give milk of as high quality as the Ayrshires, have become very wise. They seek to inform the consumers that they are throwing away money in buying high-class milk of from 3.5 to 4 per cent. fat. They tell us that it is indigestible and one of the chief causes of infant mortality. They would have us believe that milk testing 3 per cent and less of fat is much superior as an article of diet, especially for invalids and infants. The city fellow is going to have the best he can get. That is why the milk from Ayrshire herds is much sought after to-day in all our leading cities.

ROOM FOR ALL

"I am not deprecating any other breed. There is need and room for all the dairy breeds we have in Canada. Should the increase in demand as quickly as nature will allow, we will not be in a position to supply the wide areas of this Dominion with required stock as fast as they are required to improve the live stock of the country. I am no prophet, but I have strong convictions that the farmers, of Eastern Canada especially, will more and more turn their attention to intensive farming and dairying as the chief factor. With our cities growing at a rapid pace a larger supply of milk is required each year. As the demand for good, wholesome, well balanced milk increases so will the demand for the Ayrshire cow increase, provided our breeders are alive to their opportunities and ready to meet these conditions. All we ask for the Ayrshire cow is that she be given a "square deal." She will do her part if we do ours."

INCREASED MEMBERSHIP

There was an increase in the membership during the year but a slight falling off in the number of registrations. The latter was due to the fact that last year a number of breeders rushed in their registrations before an increase in the rates took place. Three car lots of Ayrshires have been shipped to Alberta since Nov. 1, and the association now has a number of members in the West.

RECORD OF PERFORMANCE

Quite a few heifers that competed in the Record of Performance test last year gave over the amount of fat required to qualify but did not give the required amount of milk. Others gave over the required amount of milk and fat but did not freshen within 15 months from the commencement of the test. Mr. Stephen advocated that when a cow makes a good record and does not freshen within the time required her name and record should be published but no certificate issued.

During the past year the secretary distributed several thousand pieces of literature describing the strong points of Ayrshire cattle. These were sent where it was believed that they would do the most good.

Last year, again, Canada imported more Ayrshire cattle from Scotland than any other country, bringing out 65 as compared with 61 sent to Sweden the next largest importing country. The Canadian importers were Messrs. R. R. Ness, Howick, Que., 20; A. Hume & Co., Menie, Que., 1; W. W. Ballantyne, Stratford, Ont., the Agricultural College, Truro, N. S., and C. A. Archibald, Truro, N. S., one each.

FINANCIAL STATEMENT

The treasurer's report showed total receipts of \$3,800 including \$2,303.98 from registrations and \$1,496.02 from membership fees, \$544.91 balance from last year and \$174.30 received from the publication of cuts in the herd book. The expenditures amounted to \$3,575.78. The principal items of expenses were \$930.00 salaries for record office for 1908; \$757 for printing and

FENCE TALK No. 4

Before you buy any fence—even Page Fence—make it prove its value. Then you'll know what you're getting. Test it two ways, thus;

Have the dealer cut for you, before your eyes, a piece of horizontal wire from the roll of Page Fence and any other fence. Now for the fire-test. Heat both pieces cherry-red; cool them in cold water, and start to bend them.

The Page wire will have taken such a temper that after breaking off a piece the fresh end will cut glass—because it is "high-carbon" steel that takes a temper. That proves its toughness, its hardness, its power to stretch farther, stay tighter, and sag never.

The other wire will bend like copper wire—because it is only hard drawn steel, that won't take a temper. That shows it up as soft, weak—breaks at 1,800 lbs. compared with Page wire that stands 2,400 lbs. tensile strain. Shows it up, too, as sure to sag, hard to make tight, certain to give out sooner by far.

And then the eye-test—look at the locks of the other fence. Have the man give you one to cut apart. Study it where the wires cross; look for marred surface where the crosses come—that means weakness. Then look at the cut-apart Page lock—positive, cannot slip a little bit, shows no sign of squeezing or pinching.

Look, too, that the running wires are wavy enough to allow amply for expansion and contraction—as the Page does.

Last, the third test—the cost-test. A Page Fence stands up and stands tight on two posts to any other fence's three. Figure the fence-posts saved, digging labor saved, and the time saved in putting up the fence.

Apply every test—and you will choose Page Fence every time. Send now for valuable free book that teaches how to make sure of fence value before you buy. Write for it to the Page Wire Fence Co. Ltd., Walkerville, Toronto, Montreal, St. John, Vancouver, Victoria, and find out why.

"PAGE FENCES WEAR BEST"

binding the herd book; \$291.65 for directors' travelling expenses while attending the annual meeting in Toronto; \$400 to secretary on account of salary; \$276 for printing 2,000 copies of the annual; \$298 in exhibition grants; \$227.20 for 1,100 illuminated certificates to be issued in connection with the Record of Performance test, and \$124.82 balance on hand. Registrar J. W. Nimmo reported 1,653 registrations, 694 transfers and 242 memberships received. Of the registrations, 1,693 were from Quebec, 412 from Ontario, 63 from New Brunswick, 39 from Manitoba, 35 from British Columbia, 33 from Nova Scotia, 27 from Prince Edward Island, 15 from the United States, 12 from Alberta, and 11 from Saskatchewan. Mr. Alex. Hume, of Menie, claimed that the cow testing associations, as at present conducted call attention

(Continued on page 17)

POTASH

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Hints on Storing Ice

The accompanying plan shows a convenient arrangement for the storing of ice in connection with a milk stand. It is designed to meet the needs of patrons of cheese factories and creameries. Many of the progressive farmers in Hastings and Prince Edward Counties, Ont., have adopted this plan. This combined arrangement, which affords both protection from the weather and dust, and also from animals or insects, if all openings are provided with screens, and convenience for the cooling of the milk, cannot be too highly recommended. Very great improvement would be made in our hot weather or cheese if the night's milk was always properly cooled. The saving of loss in cases where the milk turns sour before reaching the factory would also amount to a very considerable sum.

To those who have had but little experience in the storing and handling of ice the following extracts from Bulletin No. 10 of the Dairy and Cold Storage Commissioners series will prove helpful.

1. Provide for drainage by filling the area of the ice-house with broken stones or cobble stones, covered with cinders or gravel. A few inches will do on the top of a gravelly and porous soil. On a heavy clay soil a greater depth will be necessary. A tile drain should be laid in the earth, under the gravel, along the centre of the building.

2. Before putting in the ice cover the stones or gravel in the ice-house with 12 inches of dry saw-dust.

3. Pack the ice directly on the saw-dust. Leave a space of 12 inches between the walls and the ice. Place the cakes of ice as close together as possible, and fill in all unavoidable spaces with crushed ice or snow, well rammed. Never use any sawdust between the tiers.

4. Fill the 12-inch space between the

ice and the wall with dry saw-dust. Be careful that the saw-dust does not contain any ice chips or snow. When no saw-dust is available, cut hay or cut

(24 inches instead of 12) and care should be taken to have the hay or straw packed as well as possible. 5. Cover the ice on top with saw-

an equally good covering, if used in proper quantities.

When saw-dust is used, put on 2 feet thick at first. This will leave 12 inches to spare to fill in the sides in the spring, when the saw-dust along the sides has settled.

6. A loft floor over the ice-house does more harm than good, as it prevents circulation of air and keeps the covering damp. Have an opening at each end of the gable fitted with louvre boards, and have a ventilator 18-inch square going through the middle of the roof to create a thorough circulation of air and thus prevent accumulation of heat under roof.

7. Bank the ice-house up above the sill with earth or saw-dust, in order to prevent any entrance of air around the sill.

Send Good Stock Only

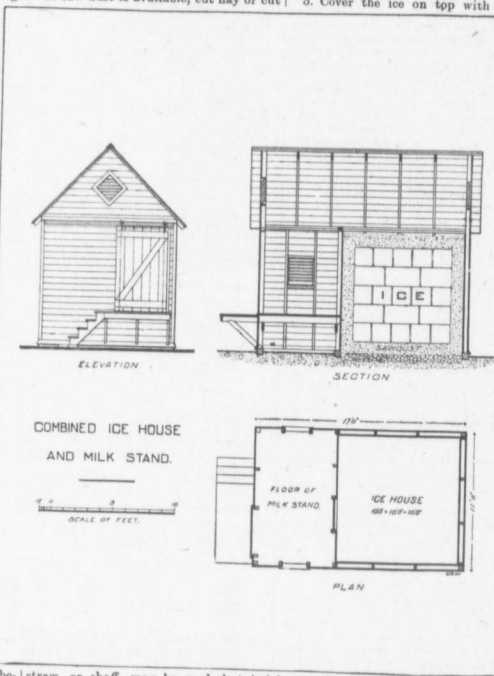
Ed. Farm and Dairy.—Dairying is steadily gaining ground in this province of Alberta. The demand for good dairy stock has become quite brisk. Eastern breeders will have an excellent market in Alberta if it is encouraged by the careful selection of the animals to send here.

Animals of the best merit only, of uniform size, of vigorous constitutions and of prepotent dairying quality can be handled to advantage. Any inferior stock sent here at the present stage of development will work incalculable injury to all concerned.

Investments in dairy stock are closely watched in every district. When they prove successful, others are quick to note the improvement and to benefit by their neighbors' experience. I have given several inquiries to eastern breeders, and I wish to urge upon all breeders to cultivate the Alberta market by sending nothing but what will serve to whet the purchasers' appetite for more.

Nothing is too good for Alberta. I hope to bring another carload of Ayrshires out for sale in March if I can secure them in time to have them distributed before seeding time.—J. G. Clark, Strathcona Co., Alta.

Renew Your Subscription Now.



straw, or chaff, may be used, but in this case the space between the wall and the ice should be twice as large as dust or long hay; 12 inches of saw-dust will do. Hay should be put on 2 feet thick. Hay and saw-dust make

HELP US - - - HELP YOURSELF

CUT OUT THE BLANK FORM BELOW AND FILL IT IN

There must be several of your neighbors who are not now taking **Farm and Dairy**. If they knew what a good paper **Farm and Dairy** was, we are sure they would be glad to subscribe for it. Show them your copy and induce them to subscribe.

Fill in the form below with the names and addresses of ten persons whom you know who are not now subscribers to **Farm and Dairy**. We will send them sample copies free. If you can induce any one of the parties whose names you send us to subscribe we will renew your own subscription free for 6 months; if two subscribe we will renew your own subscription free for one year.

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Farmers' Telephones

J. J. G., York Co., Ont.

Most of us who have not taken the trouble to look into the question, think of the telephone and the telephone exchange as being a complicated mechanism, which only experts can install and operate. To a large degree this is true of the sort of system that is required by a city having a population of over four or five thousand, but with the rural system—fortunately for the farmer—it is different.

With the rural system there may or may not be a central switchboard. As a rule, a rural system starts with just one line about as follows:

A number of farmers living on the same side of a town get together and decide to build, for their mutual benefit, a telephone line. Each man agrees to cut, peel and haul a given number of poles—30 poles about 22 feet or 25 feet long being required for each mile of line.

Before the poles, which are set in the ground three or a half feet, are erected, two brackets, on the end of each of which is fastened a glass insulator, are nailed to the pole, one 18 inches over the other. Having set the poles, two double galvanized iron telephone wires are strung the entire length of the line. Branch lines, taking care of the farmers living off the main route, can be fastened to the main line wires at any point.

When the wire is all strung, each joint being carefully soldered, in order to be sure of having a good, tight contact between each section, two wires are run, one from each of the main line wires, to two binding posts located on the telephone set which the farmer has installed in his residence.

So far has the telephone been perfected as to make it possible for as many as 35 or 40 telephones to be installed on such a line as that described, and the total length of the line, including the length of the branch lines, may be 40 or 45 miles.

What we have described, is a so-called "full metallic" system. While costing at the outset somewhat more than the one-wire "grounded" system, it gives better results under all conditions.

The total cost of all the material (less poles) required to build a mile of "full metallic" line is but \$13.74, and the very best telephone on the market, with all material for installing it ready for use, can be had for \$13.00. If we assume, therefore, that there will be on an average one telephone for every mile of line, the grand total initial cost for each farmer for the very best system, is but \$20.74.

The maintenance expense on such a line, including wear and tear on the equipment, should be less than \$3 a year. Just think of it—for 25 cents a month the farmer can have telephone service with his neighbor, doctor, broker and merchant. At a slightly larger expense he can usually have access to the town exchange and toll lines, through those reaching all of their local subscribers and long distance points.

What other agency than the rural telephone can more economically or efficiently increase the earning power of our farms and farmers, or increase the pleasure of farm life? Perhaps we are not far wrong in believing that the general use of the rural telephone will, aside from increasing wonderfully the value of our farm property, do more towards protecting the home than any or all other agencies combined.

The cost is insignificant as compared with the benefits secured. Certainly this is a subject worthy of your most careful consideration.

British Columbia in Line

Among the many subscriptions received in our office during the past week has been a large list of new subscriptions from British Columbia. This list comprises the entire membership of the British Columbia Dairy Men's Association, all of whom this year will receive Farm and Dairy. We are glad to know that Farm and Dairy is so well known as to win such an association as the above subscribing for it for all its members.

This means that the dairymen of British Columbia will be kept fully posted with all dairy news throughout Canada. Farm and Dairy aims to promote the dairy interests of the Dominion in every way possible. The two dairymen's associations of Ontario have recently sent us their entire list of members as subscribers to Farm and Dairy for a year and the other provincial associations have given us assurance that at the time of their annual meeting they will do likewise.

Jersey Register of Merit

A complimentary copy of the new edition of the "Register of Merit of Jersey Cattle," has recently come to hand. It contains the records of the animals entered to June 30, 1908, a list of their breeders and owners, and a list of sires having daughters in this advanced register. It is illustrated with 151 portraits of Jerseys. The purpose of this Register of Merit is to raise to a still higher standard the average excellence of the Jersey cow, and to secure an additional authoritative and permanent record to which reference can be

made in the selection of breeding animals. It is expected that it will be of great value to both present and prospective breeders and owners of Jersey cattle. Copies will be sent free on application to the secretary of the club, Mr. J. J. Hemingway, No. 8, West Seventeenth street, New York. Ten cents in stamps for postage should accompany the application.

Our Fountain Pen Offer.—Our offer to give a 14kt gold fountain pen as a premium for the securing of only one new subscription to Farm and Dairy at \$1 a year is proving very popular. We have disposed of several dozen of these fountain pens and in every instance they have proved satisfactory. Have you won one yet?

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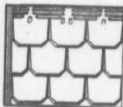
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"Perhaps" such shingles will last.

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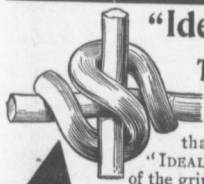
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AND RURAL HOME

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FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia and Alberta Farmers and Western Ontario, and Bedford District Quebec Dairyman's Associations, and of the Canadian Horse, Arabian and Jersey Cattle Breeders Associations.

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6. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles.

CIRCULATION STATEMENT

The paid-in-advance subscriptions to Farm and Dairy exceed \$800. The actual circulation of the paper is included in the figures of the paper sent subscribers who are but slightly in arrears, and sample copies, issued in arrears, and sample copies, distributed at the expense of the publishers, are accepted at less than the full subscription rates. Thus our mailing lists do not contain any doubtful circulation.

Sworn detailed statements of the circulation of the paper, showing its distribution by countries and provinces, will be mailed free on request.

OUR PROTECTIVE POLICY

We want the readers of Farm and Dairy to feel that they can deal with our advertisers with our usual confidence and our advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber have cause to be dissatisfied with the treatment he receives from any of our advertisers, we will investigate the circumstances fully. Should we find reason to believe that any of our advertisers are unreliable, even in the slightest degree, we will discontinue immediately the publication of their advertisements. Should the circumstances warrant, we will expose them through the medium of the paper. Thus we will not only protect our readers, but our reputable advertisers as well. All that is necessary to enable you to the benefits of this Protective Policy is that you include in all your letters to advertisers the words "I am your ad in Farm and Dairy." Complaints should be sent to us as soon as possible after reason for dissatisfaction has been found.

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TORONTO OFFICE:

Room 366 Manning Chambers, 72 Queen St., West, Toronto.

THE AUTOMOBILE QUESTION

What are the farmers of Ontario going to do about the automobile question? In spite of their desires it has been played with for several years by the members of both political parties in the Ontario Legislature. The Legislature is again in session. Unless the farmers of the province get busy immediately and make their desires known in unmistakable terms, it is altogether likely that another session will go by without anything being done.

As farmers we do not desire that any legislation shall be enacted that will be unfair to the owners of automobiles. The time may not be far distant when many of us will be using automobiles of our own, as is now the case with farmers in numerous sections of the United States. What we do desire is that we shall be protected from reckless parties who

race their automobiles over the country roads without any regard to the rights or convenience of others. We would like to see the Government detail special officers to apprehend such persons. We would like to see them made liable for any damages they may cause through their disregard of the law. We would like to have the penalties increased and to see these people sent to gaol without the option of a fine, in the case of a second conviction.

These foregoing are reasonable requests. The Government should grant them. The Government is not likely to grant them unless the farmers of the province make a united demand for such legislation. This demand can best be made by the signing and forwarding of petitions. Farm and Dairy has a large circulation in all parts of Ontario. We will be glad to publish a petition form if our readers will agree to circulate it among their neighbors for signatures. Are you willing to do your part? If only twenty of our readers will write us that they will undertake to push this matter in their new country, how he profited by the experience of others, and how he mastered the problems which confronted him, as outlined on page three of this issue, should give encouragement to all, and inspire them to put forth greater efforts and to make the most of every opportunity.

With many of us to-day, our best-selling sin is indifference. Too many are satisfied with what they have. We need to take advantage of, and apply the information about our business that is available. We must not look to the Government and to others to help us further. Our principal help must come from ourselves. When utilized in the proper spirit, how great that help can be is well illustrated by the success of such men as Mr. Beaumont.

COLLEGE EXTENSION WORK

The growing popularity of the district branches of the Department of Agriculture, that have been inaugurated in six different counties of Ontario, is a sign of the times, and is most encouraging. The short course in stock and grain judging held at Lindsay recently, and which was reported in Farm and Dairy for Feb. 11th, was an unqualified success. A similar course conducted at Ayr, under the direction of the Galt branch, and which is reported in another column, also proved highly successful, the attendance being so great as seriously tax the capacity of the accommodation provided.

The Corn Growers' Convention and Exhibition arranged by the Essex branch and held recently, proved to be of a most valuable educational nature. So great was the attendance, that on one day many had to be turned away.

The value of a course in stock judging is more or less recognized by all. The same cannot be said of a course in grain judging. Let us consider the possibilities that lie within the kernels that we plant annually in the soil. It has been shown that an increase of one bushel an acre would mean an increase of 150,000 bushels in the counties of Essex and Kent alone. Recent discoveries indicate that if proper methods of selection are practised, an increase of five or more bushels on the average may be expected. This means much to the farmer, the merchant and the manufacturer; in fact, every man, woman and child in those countries.

When we consider that these results may largely be accomplished through the medium of corn shows, conventions and judging classes, such as have recently been held, we gain some slight conception of what this movement in secondary education means to the province of Ontario.

That these several branches should meet with such abounding success, augurs well for the continuance and the extension of this work. The spirit of earnestness and inquiry with which those attending these courses have been imbued, has been most gratifying to those in charge, and seems to show that the time is ripe for a rapid extension of this educational work, which is to mean so much to our farmers in the years to come.

AN ILLUSTRIOUS EXAMPLE

To a desire to learn, to enthusiasm and to business methods, can be attributed the success of the Muskoka farmer, Mr. J. J. Beaumont. The story of how he gained a footing in a new country, how he profited by the experience of others, and how he mastered the problems which confronted him, as outlined on page three of this issue, should give encouragement to all, and inspire them to put forth greater efforts and to make the most of every opportunity.

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PROVIDE A FARM OFFICE

What manufacturer would attempt to run his business without an office? We, as farmers, being business men, should have an office in which to transact the many items of business connected with the farm. We are inclined at times to look enviously towards the manufacturer as having made a great success, as well as money, in his business. How did he do it? Was not his business office a large factor?

In every farm house there should be, if possible, a separate room, which could be termed the office. Failing this, there should, at least, be some corner wherein could be kept the books and papers relating to the farm. A separate room is much to be preferred. Such a room, when furnished, and conveniently arranged, will form a den in which the farmer and his son will retreat in their leisure moments to talk over matters and read the newspapers and agricultural journals. Cannot many cases of the boy leaving the farm be traced directly to the lack of a proper understanding between father and son? An office or den would tend to bring them together more, away from the other members of the family, where

the many things relating to the farm could be discussed and talked over together.

Go into the average farm home to-day and where do we find the current literature and farm periodicals? Generally, they are anywhere but in that place where they can be picked up on a moment's notice. They may be on the table from whence the busy housewife hustles them when preparing the meals. More likely they are behind the cupboard or under the stove, where they have been flung when last used.

The information, going to the average farmer weekly in the form of agricultural journals and bulletins as they are generally made use of, serves largely as a pastime only. These may, and should, be made valuable works of reference. Some place such as can be provided in the office should be available on all farms in which to file all agricultural literature. This when indexed becomes invaluable.

A system of indexing, which is simple, yet effective and satisfactory, is to blue pencil on its cover each paper or bulletin as it is read. For instance, with those containing a valuable receipt, notes on alfalfa, plans of buildings, chicken houses, etc.; these subjects can be marked in bold writing on the covers; then in going hurriedly through the file one may pick out the issue containing the information desired. An office on the farm is a crying necessity. It should be provided at the earliest opportunity.

AN ESSENTIAL TO HEALTH

Fresh air is one of the first essentials of life. An abundant supply is necessary at all times. Its value in earlier days was little understood if such a conclusion might be drawn from the lack of provisions made for supplying it to houses and to live stock when in winter quarters. Winter is a severe tax upon the health of any life that is maintained within unventilated buildings.

Our Canadian winter is one of the most healthful of seasons. With plenty of fresh air supplied at all times by some adequate means of ventilation, the winter need have no terrors. It is when we seal ourselves up in heated rooms from which the outside air has been excluded that health begins to wane.

If one would cope with the pulmonary affections to which man is heir he should aim to breathe pure air at all times. Such can readily be obtained, though true, frequently at a loss of heat. Any increase in the fuel bill, however, as a result of ventilating will be largely offset by better health and fewer calls from the doctor. Make fresh air your watchword. It will lengthen your days.

Do you receive your paper regularly? If not, let us know about it. If we do not know that you are missing a copy now and then, we cannot rectify any error which may be accountable for your not receiving your paper.

Be up-to-date. Renew your subscription to Farm and Dairy.

Canadian Ayrshire Breeders' Meeting

(Continued from page 13)

only to the milk production of the cows under test and not to the net profit they give. Were due attention drawn to the profit per cow it would, he believed, lead the members of the cow-testing associations to give more consideration to the economical feeding of their cattle.

On motion of Mr. Hume, seconded by Mr. Ballantyne, the president and secretary were instructed to jointly sign a letter and send it to Hon. Sydney Fisher, urging that in connection with the work of the cow-testing associations the Department of Agriculture shall take steps to gather information in regard to the cost of producing milk and the net profit per cow. A number of the members of the association, while discussing this matter between sessions spoke strongly in favor of having the work of the cow-testing associations so extended as to include the gathering of information about the cost of production.

THE 15-MONTH RESTRICTION

Mr. W. W. Ballantyne, of Stratford, suggested that the rule governing the Record of Performance, requiring a cow to be tested 15 months previous to the commencement of the test, be dropped. A cow that makes a good test but fails to qualify through not calving within 15 months after the commencement of the test, on account of the previous rule is prevented from taking part in another test until she has calved twice within the 15 months. The suggestion did not meet with general approval and was finally dropped.

It was pointed out by several that the matter had been thoroughly discussed at the time the rules governing the Record of Performance were adopted some four years ago. Messrs. P. D. McArthur, Georgetown, Que., and Mr. Dymont, of Clappison, claimed that there was no such restriction placed on the breeders of Ayrshire cattle in the United States who were thereby enabled to make larger yearly records. Attention was drawn to the fact that some of the large milk records that have been made by cattle of other dairy breeds, have been made by cows that were dry for one or two years before they commenced the yearly test. Their records, thus, were made under conditions not practical for the average farmer and breeder to follow.

OBJECTS OF TEST

According to Mr. D. Drummond, of the Dominion Department of Agriculture, there is a likelihood of the Minister of Agriculture consenting to any change in the present rules. The Record of Performance Test has two objects; first, to encourage the production of large quantities of milk per cow yearly, under ordinary farm conditions, and, second, to encourage the training of cows that, besides being producers of large quantities of milk, will be, also, sure breeders. The 15-month clause is a sort of penalty clause that hits those breeders who put off the breeding of their cows until the last possible moment in their desire to have their cows make large records. The Department is averse to making changes in the regulations unless such changes are of great necessity. Mr. Drummond said that for his part he would like to see the limit reduced from 15 months to 13 months.

It was thought by Mr. Drummond, that more attention should be given to the milking periods in which the records, in the Record of Performance Tests, are made. Animals may not give as much milk as other animals in their class and yet really do much better work, everything considered, owing to the fact that their test extended over a shorter period. As it would be necessary to gain the approval of the members of the Holstein and

Jersey Cattle Breeders' Associations before any change in the regulations could be secured it was decided to let the matter drop.

THE SEATTLE EXPOSITION

The representatives of the association on the Canadian National Record Board, were instructed to consult with the other members of the board at their annual meeting in May in regard to making an exhibit of Canadian pure-bred stock at the Alaska-Yukon-Pacific Exposition at Seattle next fall. If the other members of the Record Board are favorable the Dominion Minister of Agriculture will be asked for assistance in making such exhibits.

DAIRY TEST AT OTTAWA

On motion of Mr. Hume, seconded by Mr. Dymont, it was decided to recommend to the directors of the Ottawa Live Stock and Poultry Show that, in computing the results in the dairy test, at the Ottawa Winter Fair be the same as at Guelph, viz., 25 points for every pound of butter-fat and three points for every pound of total solids. At present 20 points are allowed for every pound of fat and 4 points for every pound of solids not fat.

LIFE MEMBERS

A proposal that life members be accepted upon payment of a membership fee of \$25 was put over for further consideration. Messrs. Robt. Ness, Robt. Hunter, and one or two others favored it. They claimed that it should be of benefit to the association because it always some who join the association and drop out at the end of a few years. Were these men to become life members, as some of them would be sure to, the association would be benefited.

Senator Owens, Mr. Bjorkland, of Ste. Anne, Que., and others contended that such a step might prove disastrous. The association might get rich at first, and be poor afterwards. Later on, the yearly membership fee of the association which is two dollars may be increased, when it would become a burden to carry life members accepted at \$25. Senator Owens claimed that the association now gives the members more value than the membership fee represents.

THE LIVE STOCK COMMISSION

The officers were instructed to inform Hon. Sydney Fisher, Dominion Minister of Agriculture, that it is the strong desire of the association that the Dominion Government shall do all in its power to induce Dr. J. G. Rutherford to withdraw his resignation as Dominion Live Stock Commission member. It was a unanimous in its recognition of the valuable work that has been done for the live stock interests of Canada by Dr. Rutherford.

NOTES

A letter was read from Hon. Sydney Fisher, announcing that the Dominion Government purposes making a Canadian exhibit at the Alaska-Yukon-Pacific Exhibition at Seattle this year but that the government does not purpose assisting the breeders of pure-bred stock to make exhibits.

Owing to the unsatisfactory character of some of the cuts of Ayrshire cattle published in the Record of Performance it was decided to discontinue the publication of such cuts. Where breeders have good cuts that they would like to have published they will be allowed to publish them but not with the pedigree of the Record of Performance.

It was decided to pay the expenses of the delegates from the association while attending meetings of the Fair Boards where the fair boards do not pay such expenses.

A resolution was passed requesting the various experimental farms and agricultural colleges to enter their

LIKE A THIEF AT NIGHT THE CREAM SEPARATOR THAT CAN'T SKIM CLEAN

Dairy authorities the world over agree that the centrifugal separator is indispensable to the man who owns milk cows. And why? Simply because it saves his cream, hence his money. The more cream saved, the more money, that's sure. But unfortunately many separators do not save all the cream. And worse still the biggest claims are made for these machines. Such separators are like a thief at night or the pickpocket who with an innocent face rubs our elbow and then robs us of our wallet. Because of inferior and out-of-date bowl construction, these separators, unknown to the users of them, daily lose a big percentage of the cream.

It is easy to be deceived into buying a "pickpocket" separator, but it is just as easy to avoid buying one if we will but take the advice of those whom we know are experienced separator judges. 99½ per cent. of all expert creamer-men, butter manufacturers, and real separator authorities living to-day use DE LAVAL separators exclusively, for they have learned by experience that the DE LAVAL is the only separator that will save all the cream all the time under all conditions. And the reason for this fact is plain. It is found in the improved patent protected DE LAVAL "Alpha-Disc separating bowl. It is different from any other bowl and its peculiar construction is the secret of DE LAVAL clean skimming. Ask for our illustrated catalog which explains the DE LAVAL bowl in detail as well as many other interesting features.

The De Laval Separator Co.

173-177 William Street
MONTREAL

14 and 16 Princess St.
WINNIPEG

Ayrshire cows in the Record of Performance test as conducted by the association.

Work that Pays Well

Work that pays good returns is never irksome and, indeed, becomes a pleasure. Another subscriber to Farm and Dairy has made good use of spare moments of late by securing for us three clubs of seven new subscriptions each, for which he received three pure bred pigs.

Two of these pigs were pure bred Yorkshires, purchased by us of Mr.

Alex. Hume, of Menie, and the third, was a Berkshire sow, bought from Mr. W. W. Brownridge. Mr. James Douglas of Hastings Co., who received these three pigs, writes us as follows regarding them:

"I received the three pigs for securing the three clubs of seven new yearly subscriptions to Farm and Dairy, at \$1 a year each, and must say that I am highly pleased with them. The two Yorkshires that I obtained from Mr. Alex. Hume are nice growing pigs. The Berkshire from Mr. W. W. Brownridge is a beauty, and of good size for its age. I received its pedigree I surely wish Farm and Dairy every success."—Jas. Douglas, Hastings Co., Ont.

NITRAGIN is a liquid fertilizer at the low price of \$2 per acre. Beats all other bacteria cultures on the market. Increases the yield of Alfalfa, clover, peas, beans and other leguminous crops. Enriches the soil in nitrogen. Effect on crops of the following year surprising. Corn, potatoes, wheat, tobacco and vegetables will gain thereby.

NITRAGIN is ready for use. Mix it with milk, sprinkle the seed and sow.

What the Experiment Stations write. The Kentucky Agricultural Experiment Station writes on Feb. 6, '09: "We had very satisfactory results with Nitragin." The Department of Agriculture, Canada, writes on Aug. 14, '08: "In many instances indeed a very marked increase in yield was obtained with nitragin."

Untreated PEAS Treated

JUST NOW is the time to make a test in your home.

Send us 20 cts. for a TRIAL BOTTLE. The results will convince you that your fields will give similar yield when Nitragin is applied to them.

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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.

Making Prize Farm Dairy Butter

Editor, Farm and Dairy:—I was an exhibitor at Toronto Exhibition last year and won first prize on my butter in the farm dairy class. This butter was made from the milk of thirteen grade Shorthorn cows. The cows were pasturing in a field of second growth clover, and had no grain. Their milk would average about 25 lbs of milk to a lb of butter. The Mellotte Separator was used and it has never missed a skimming in over eight years.

After separating the cream was placed in ice water to cool. I always use a portion of ripe cream as a start-up, I pint to 1 quart, according to the temperature of the cream at the time used and keep the cream well stirred. I always put in the starter when I churn so that the ripening process is going on when the cream is at a low temperature; and always have the fresh cream at the same temperature.

Then I let it raise to 55 or 60 degrees and keep it at that temperature for 24 hours after the last cream has been added. I usually churn about 12 gallons in a No. 4 Daisy churn. It takes about one hour when the cows are on the grass as it is harder to get butter than when the cows are in the barn. I use a little butter color according to the season of the year. But it takes less in summer.

When the butter breaks or separates I add, if the weather is warm, a pail of cold water at about 50 degrees. Then I turn the churn until the butter is well up above the milk and is in grains about the size of shot and looks like hail and will fall over in the churn just as hail would do in winch. I then put in a pail of water carefully pouring it all over the surface of the butter. Then rock the churn back and forth 3 or 4 times. I then run off this water and put in 2 full pails of water, turn the churn 10 times round, then run off the water. When there is a very small stream I stop. I weigh the churn and butter together. Knowing the weight of my churn I deduct that from the total. I usually have about from 32 to 36 lbs. butter at a churning. I use one ounce of salt to the lb with one ounce extra for the churn. I then turn the churn until the butter is collected from the sides of the churn and a brine has formed in the churn. One must salt to suit the churning.

TIME TO STOP CHURNING

I have found that the time to stop churning is one of the most important points in making butter. Prof. Dean says: "It is a nice thing to know when to stop churning." I will give you one of my experiences in this matter. Some years ago I had a niece who came to live with me for a time and she helped me with my work. She was a bright clever girl. We worked together at all there was to do, churning as well as other work. We were at that time sending our butter to a grocer in Toronto who gave us a good price for it. All went well until my niece began to do some churning alone. Then complaints came that our butter was not as good as usual. We could not tell why. Every detail was looked into. The cows' feed, uten-

sils, everything were made perfectly clean, the cream was kept at an even temperature. Yet the complaints came that our butter was not as good as it used to be. It turned out that we all took La Grippe and my niece went home for a time. I then did all the churning myself. When the next tub of butter he received for a long time. I could not for the life of me tell what I had done to make the butter good. Then my niece came back and was doing the churning again.

STOPPED TOO SOON

We determined to watch and find out if there was any difference in our work. All was the same. One day when she had finished churning, she called me to come and see it. The butter was about 3/4 or 1/2 of an inch raised out of the milk. It was cold and in fine condition. I asked her if she thought it was finished. She said yes. This explained all the trouble. I then took the churn, turned it 200 times before I said it was finished. The butter was then raised about 3 inches out of the milk. There has never been a complaint since that time.

I work the butter and put it away as soon as churned. I find it is better every way than when it is left for any length of time. It ought to be kept in a refrigerator or some cold place until it is consumed.

A good way, if you have nothing better in to place a piece of zinc over the tub or box, set a tin dish over that filled with ice. This keeps the butter in good condition. We use one of C. Richardson's refrigerator butter carriers. It is a good thing in summer. Try as we may to make good

butter it is very much as Prof. Dean says: "It takes good common sense mixed up along with it all." I trust this letter may be helpful to some beginner. We are never done learning.—Mrs. Wm. Whitelaw, Grey Co., Ont.

Pasteurization

Mr. Barr discussed the pasteurising of whey at the Bedford district Dairy-men's convention held at Cowansville. His one year's experience as referee in Montreal had shown him that much cheese was made in the province of Quebec and that there was in that much preventable evil. Mr. Barr told what had been done in Ontario to pasteurizing whey and stated that it had been advocated for eight years, but that it was only now being put in operation. He then outlined the advantages of pasteurizing.

Applying the remarks made by Mr. Barr, Mr. J. A. Hayes, of West Shoford, stated that the skim-milk should be heated to 180 degrees. This hot milk would sterilize the cans on the way home. He pointed out that there was no excuse for hand separators to-day if the creameries had always pasteurized or heated their skim-milk, as it would then remain sweet for a much longer period for feeding calves. A separator was besides more likely to do better work in skimming after the milk had been pasteurized.

If all cream in Canada was pasteurized there would be no poor butter. Every creamery in Denmark pasteurizes both the cream and the skim-milk. The ideal way of course would be to use unpasteurized pure milk, but that kind of milk does not often show up. In order to stamp out tuberculosis pasteurization must be resorted to.

29 Yrs



Don't Back Down

When you understand why Sharples Dairy Tubular Cream Separators are simplest and best, why even think of taking some other make just to please some fellow with some other machine to sell? What if he does want your money—want it so badly that he will even try to confuse you with talk and change your mind from right to wrong? **Don't back down.** Stick to your decision to buy a Tubular. No talk can lessen the superiority of the Tubular over every other separator, or overcome the disadvantages found in every separator except the Tubular. By sticking to your decision now—by getting a Tubular and no other—you will save yourself constant regret, later on, that you did not follow your own good judgment.

Tubulars are Different

Tubulars are strictly modern separators, built on the latest scientific discoveries. These discoveries are patented and can not be used in any machine made by other manufacturers. You thus understand why all other manufacturers make separators that are old style, out of date and undesirable as compared to Tubulars.

The manufacture of Tubulars is one of Canada's leading industries. Tubulars have been on the market ten years, 1908 sales, throughout the Dominion, far exceeded 1907—were way ahead of any other make, if not all other makes combined.

Better hurrah with your neighbor, now, for the Tubular than envy your neighbor his Tubular later on. Write to-day for Catalog No. 146.

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Sharples Dairy Tubulars have the lightest, simplest, cleanest skimming, most durable, easiest washed bowl in existence. It is only half as heavy as other machines in their simple pieces—the bowl itself, the bowl bottom, from closing the lower end of the bowl, and the tiny smooth dividing wall that goes inside. Other separators contain many parts—some as high as 40 or 50.



This picture, made from an actual photograph, shows the oiling of the Sharples Dairy Tubular Cream Separator. The gears and the single frictionless ball bearing supporting the bowl are all enclosed in a dust proof case. Once or twice a week, you lift the gear case lid and pour a spoonful or two of oil down among the gears. When running, the gears spray this oil over themselves and the bearings. The lubricating of Tubulars is perfect, easy, never neglected. You must go after other separators with an oil can every time they are used.

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Cheese Department

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

Advice from a Montreal Exporter

It was pointed out by Mr. A. A. Ayer, the president of the Montreal Produce Merchants' Association, at the recent convention of the Eastern Ontario Dairymen's Association at Prescott, that the number of cheese that are rejected each year at Montreal, because of inferior quality, is very small compared with the total number of cheese handled. This cheese, it has been found, is nearly all made in small, badly equipped factories. There is need that dairymen should use strong, large boxes, and that the weights should be stenciled distinctly on each box.

Owing to the extra moisture that is now being left in cheese, the exporters have suffered considerable loss with the result that it has become necessary that factorymen shall either allow for shrinkage in the weight of the cheese, or keep the cheese longer themselves, or accept a lower price for it. New Zealand allows for the shrinkage in the cheese exported from that country, and is becoming a serious competitor of Canada in the cheese markets of Great Britain.

Mr. Ayer agreed with Mr. Burgess, the official referee of Montreal, that cheese makers should number their vats in order that inferior cheese can be singled out and not mixed with the good lots. Factories that did this last year, obtained better results.

Referring to the agitation that has been conducted by a paper in Eastern Ontario in favor of dairymen exporting their cheese direct to merchants in the old country, Mr. Ayer endorsed what had been said by Dairy Commissioner J. A. Ruddick, to the effect that where cheese is exported direct by the factorymen, it would cause a glut on the British market and force down the price one or two cents a pound. Such a glut is now prevented by the Montreal exporters who every year store large quantities of cheese in Montreal for months at a time and sell them when the market is most favorable.

Instruction in Western Ontario 1908*

Frank Hearn, Chief Instructor, London, Ont. The past season will be remembered for continued high prices for dairy products. It was a successful season from the patron's standpoint, and a somewhat more successful one for the maker. The patrons of a number of factories have shown their appreciation of the work done by the makers by increasing the price for manufacture. There are still many factory men underpaid. Many patrons are beginning to realize the importance of giving summer soiling crops, or silage, to supplement the pastures during the dry season. More silos have been built and more corn raised in our dairy districts during the past

*Read at the Annual Meeting of the Western Ontario Dairyman's Association.

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year than for many previous years. This is a good sign of progress.

The instruction work was carried on along practically the same lines as last year. The same number of instructors were employed, and very little change made in the grouping of factories. The instructors as usual spent a few days at the O. A. C., Guelph, before beginning work and appreciated very much the lectures given by the professors of the college, considerable time was given to discussing the work for the season, and uniform methods of instruction decided upon.

The quality of the cheese up to the end of June was fine but when hot weather came in July, we had the same difficulty as last year at a few factories with small round holes in the cheese. This difficulty was discussed at the district meetings and the general opinion seemed to be that the remedy was to get a better quality of milk, cut the curds fine, using the 1/4-inch curd knife, get the curds firm before acid came on, not draw the whey to the surface of the curd too soon, get rid of all surplus moisture in the cooking if possible and by stirring the curds sufficiently in the sink before piling, holding a little longer before milling, getting the curds well flaked, and give plenty of time before salting to get the curds well matured and free from moisture.

Some of the late fall cheese do not get sufficient attention in the matter of curing before being shipped. Some of the buyers complained bitterly of the neglect on the part of some of the makers along this line. The fall cheese should not be allowed to get below a temperature of 58 or 60. The boxes in one section were also complained of by the buyers.

Very few actives cheese were reported and with the exception of a few weeks

during the hot weather the quality was maintained and in a number of cases improved. September was an exceptionally hot month and the quality of the cheese suffered accordingly. When will the time come that changes in temperature will not have such an effect on the milk supply? The finish of the cheese is improving and the August and October cheeses were exceptionally fine. If we can ever get the milk in hot weather, coming in good condition, and cool-curing rooms established, there is no reason why finest cheeses could not be made during the whole season. In visiting cool-curing rooms during the very hottest weather one could not help but notice the fine smooth texture of the cheese, while in curing rooms that were not protected from the heat the cheese were not nearly so fine. It seems to me cool-curing would have as much to do with improving hot weather cheese as the milk supply.

COOL CURED CHEESE

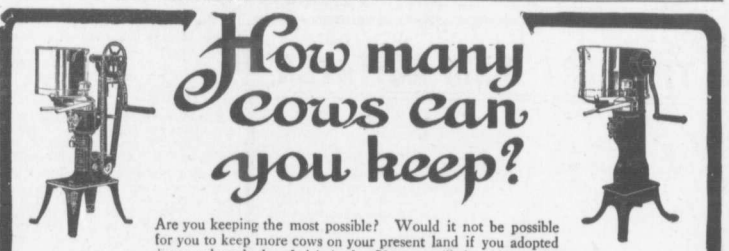
It is discouraging to see thousands of cheese during hot weather well made, nicely finished, then placed in curing rooms where the temperature of which injures the texture and flavor. Evidently buyers will have to pay more money for cool-cured cheese if cool-curing rooms are to increase in number. Considerable improvement is shown at the factories in the matter of new and cleaner whey tanks, new floors, inside and outside appearances, cast walls, better equipment, but we still have a few factories that are not kept up-to-date, and a few makers that do not keep clean and tidy what they do have. The owners and makers in these cases do not seem to realize the effect on the patron of having things in and about the factory clean and tidy. It is inconsistent for us to suppose that the patrons will improve the care of the milk if the personal appearance

of the maker, the unclean whey tanks and the untidy condition of the factory in general is a direct invitation for the patron to do likewise, and be untidy and careless in his methods of producing the milk.

REMEDYING ABUSES

I visited a number of factories where the sanitary condition in the way of sewage disposal, impure water supply, and so on was very bad, and in every case these conditions were made satisfactory without compulsion. It did not seem to have much difficulty in getting some of the worst abuses remedied, but there is such a wide difference in men that it seems very difficult to get all the makers up to a point where all the factories can be pointed out with some pride as being kept absolutely tidy and clean, and fit places for making dairy products. There are a few factories that although they cannot be said to be unsanitary yet they are kept in such an untidy condition that it is certainly discouraging to the instructors in their work.

The question of shipping green immature cheese is important and the cool-curing of cheese and the cooling of milk is no doubt the most important problem in our dairy work today. Yet there seem to be two conditions very slow to improve. It is to be feared that the continuous shipping of green cheese will have a tendency to lower the standard of milk taken in at some of our factories, some makers reasoning that the cheese are going out early, defects caused by the milk will not show before the cheese are shipped, therefore a more inferior quality of milk is often accepted. Again buyers ask for the cheese to break down early and in order that the maker may get green cheese and not break down factor he is inclined to leave more moisture in the



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The Bluebell is a gear drive machine and made in four sizes: 350, 450, 650 and 850 pounds capacity per hour. The gears are accurately cut from the finest material procurable. All oiling facilities are provided, making the machine long-lived. The frame is constructed so that it is absolutely impossible for milk or dust to gain access to the gears—this eliminates about 90 per cent of ordinary separator troubles. Yet the gears are easily accessible. The supply can and crank shaft are in the most convenient locations.

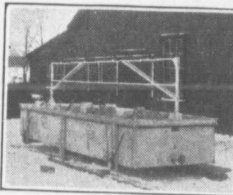
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curd and since the cheese are going out quickly he salts the curd too early, thus giving rise to open webbed cheese. The efforts of isolated individuals can have very little effect on these conditions, improvements must be brought about by the united efforts of every one in the business.

ICE ON THE FARMS

The storing of ice on the farm is not increasing as rapidly as it should, neither is the building of cool-curing rooms, these are two points where a

determined effort should be made to secure an incentive for improvement. The benefit of storing ice on the farm does not seem to be well understood by the average patron, he needs ice as well as the city resident, to preserve food products. If some co-operative system of handling ice should be devised by which patrons could more easily get a supply for themselves and fill the ice-house at the cool-curing room, it would be a great step in advance. Ice put up by a few patrons

THE BEST CURD AGITATOR



This Agitator has been in operation in Eastern Townships, Lake St. John and Eastern Ontario cheese factories during the past season, and by actual use it has proven its superiority over every other agitator made. It saves the salary of one man in three, and does the work better. It gives a more uniform quality and a better body to the cheese. Send to-day for full particulars.

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does accomplish some good, but it does not seem fair that a few should put up ice while the majority are negligent in this matter. Some such system if it could be worked out would encourage everyone to put up ice, build a milk-stand near the ice-house, and the benefits could soon be realized. A determined effort along this line is certainly important for until such time as the milk is cooled and the cheese cured in cool-curing rooms further improvement in quality will be slow. Considerable improvement is reported in the quality of the milk, but when the hot weather arrives, too much gassy overripe milk is still sent to the factories.

There are 200 cheese factories in the 6 groups, and 7 outside factories, making the same total as last year. There are 16,295 patrons producing milk for these 200 factories, 16,297 tons of cheese made in 1907. This would average 81 patrons to the factory, 83 tons of cheese to the factory, 1.02 tons of cheese to the patron.

COMPARISON OF GROUPS

31 factories Simcoo Group, 64 patrons to the factory, 92 tons of cheese to the factory, 98 tons of cheese to the patron.

34 factories London Group, 78 patrons to the factory, 72 tons of cheese to the factory, .88 tons of cheese to the patron.

35 factories Listowel Group, 86 patrons to the factory, 67 tons of cheese to the factory, .75 tons of cheese to the patron.

36 factories Ingersoll & Woodstock Group, 59 patrons to the factory, 110.5 tons of cheese to the factory, 1.89 tons of cheese to the patron.

36 factories Stratford Group, 86 patrons to the factory, 100 tons of cheese to the factory, 1.1 tons of cheese to the patron.

38 factories Brantford Group, 124 patrons to the factory, 65 tons of cheese to the factory, .5 tons of cheese to the patron.

The average per cent. of fat in the milk for 1908 was 3.5 per cent., for May 3.3 per cent., June 3.37 per cent., for July 3.38 per cent., August 3.5 per cent., September 3.65 per cent., October 3.8 per cent.

The average loss of fat in the whey for season was 25 per cent. For May 25, June 23, July 22, August 23, September 23, October 24 per cent.

INSTRUCTOR'S VISITS

There were 637 full day visits, 540 call visits, making a total of 1,186 visits to the factories. 1,143 curd tests made, 545 of these samples were tainted, 441 patrons were visited, 34,224 lactometer tests were made, 856 less than for adulteration, 565 Babcock tests made for adulteration, 897 less than last year, 223 samples were found deteriorated, 180 on one test, 43 on several tests, 17 less than last year, showing that the system adopted last year of dealing with cases of adulteration by prosecution is having a marked effect in stamping out adulterated milk. 3,206 Babcock tests made other than for adulteration, 565 Babcock made for loss of fat in the whey, 2,272 new milk cans bought, 584 more than last year. This is rapidly getting rid of old rusty cans. Twenty-three factories are paying by test, 4 more than last year, 13 factories have a cool-curing room, only one more than last year. There are 19 factories where the whey is fed at the factory. One hundred and thirty-seven factories have milk-testing equipment. There are 141 makers qualified to test milk. Seventy-four factories were repaired. Thirty-five factories adopted the 1/2-inch curd knife. Thirty factories put in new whey tanks, 19 put in new vats. Ten factories were painted. Numerous other improvements are reported. Total expenditure for improvements \$34,092.00.

District meetings were held during November and December in the dif-

ferent groups, where many points of interest to the industry were discussed. The majority of these meetings were better attended than last year. Since the last convention 129 annual meetings of patrons have been attended by the instructors and myself with an average attendance of 40, reaching in for spoken patrons. Applications are being made to attend a number of annual meetings during this winter.

There were 43 cases of adulteration of milk reported by the instructors. These were looked after by the special officer appointed for this work and fines ranging from \$10.00 to \$25.00 were imposed on the patrons. One case was defended, but the conviction was finally secured. This system of handling cases of adulteration seems to give general satisfaction.

The Art of Cheese Making

In considering the question of granting certificates to make the nature of the work the maker performs must not be lost sight of. Skill, intelligence and those application are necessary. Upon the proportion of these qualities a maker's success will depend his success and the service he can render to his employers. There are things where superior intelligence, skill and careful attention to duty will give a better return than in cheese and butter-making. There is no chance or rule of thumb methods about the business. The maker who does not know his business cannot succeed, or at least he cannot make a first-class product every day in the year.

In conversation with an individual recently, who has travelled about the country considerably, and who in the course of his travels had occasion to drop into several cheese factories, he thought he would go through the routine of cheese-making with any difficulty. In the course of his travels he had learned, or thought he had learned the temperature at which the rennet is added, the amount of rennet to add, the finger test to show when the milk was sufficiently coagulated to be cut, the temperature when the curd would be sufficiently cooked, the time for running off the whey, the amount of stirring given the curd before allowing it to matt together the number of turnings required before it was ready for the grinder, the amount of salt used and the methods by which the curd was put in the presses. From this knowledge obtained in a casual way he concluded that it was not such a difficult matter to make cheese after all.

Important as all these things are in cheese-making they are only on the surface, as it were, of the business. It is the knowledge of the condition of the milk and the curd at the different stages in the process, when the rennet is added, when the whey is run off, when the curd is ready for grinding and salting that is the important thing in cheese-making. This knowledge cannot be learned in a day. In fact there are men, who have been making cheese for years, who have not yet thoroughly learned the varied conditions affecting milk and curd, and have such a knowledge of the business as to do the right thing at the right time. A beginner can soon learn to allow the milk to be at a proper temperature, to add the right amount of rennet, and to do the other things which our friend mentioned. But no manager of a factory would think of allowing an apprentice to even several months' standing to take charge of a vat of milk and run it through till ready for the press. It may be done occasionally, but the maker taken such a great risk in so doing and is liable to have some inferior cheese on his hands.

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WHEN we humor our weaknesses they force them selves continually upon our attention, like spoiled children. When we assert our mastery of our selves and compel its recognition, we stand secure in our sovereign rights.

C. B. Newcomb

The Domestic Adventures

By Joshua Daskam Bacon
(Continued from last week)

SO I have left them alone, and sat here writing all the afternoon, with the subdued sound of voices below me on the porch, and a strong odor of tobacco smoke drifting downward through the hall—oh, yes, it is from Maria's room; it is useless to deny it! She dragged herself heavily up the stairs an hour ago, and I heard the bed creak as she flung herself down on it.

I do not seem able to decide definitely what to do; of course something must be done. But I am glad Chloe had such a nice luncheon before the break came.

The late afternoon is chilly now; the leaves and the dusk are falling together. My head really does ache, and I think I will take a little nap. I wonder if Maria's dreams are as troubled as mine will be.

For she is such a good servant—though she is so bad!

Perhaps the strangest thing of all is that I should still have this book. Indeed, I have very little else! Through all that wild, confused, unbelieving night I clutched this absurd, fat account book; no king's messenger trusted with the crown jewels could have guarded them more devotedly than I this fragmentary record of our life here—my poor Character Study! Not that I intended to protect it so jealously, of course; there were a hundred things I needed more, a dozen things I wept over when I realized that I had neglected them in its favor. But at the time I had no choice.

And yet, what does it matter? What does anything matter now? It was only a week ago, and it might have been centuries, life is such a different thing. If any-one had told me, a week ago, that I should soon be recording the loss of my two new dresses, my mother's silver, and my Whistler etching with such philosophical placidity, I should have thought that person mad; and yet I felt more miserable a week ago, when I had them, than I can ever feel again, I am sure. For now, whatever may happen to me, I shall know—but I must try and tell it all just as it happened.

I was not very happy last Sunday. The excitement of the luncheon, the worry about Maria, the dread of hunting for someone to take her place, when I was conscious of never having so little interest to bring to the task, all combined to verify the headache I had pleaded when I left Chloe; and I got out of my pretty new flock wearing, slipped on a heavy bath wrapper,

for the dusk was chilly, and there were no fires upstairs, and relinquish of myself to the sleep I hoped would come.

At first, I remember, it seemed impossible to lose myself. A procession of curiosities tramped through my brain: What was Sabina thinking of there in the study by herself? What was it that had shut us up from each other? Once or twice lately, I had caught her looking at me so intently, so doubtfully, but just as she might have spoken she had glanced away and the moment had passed.

What were Chloe and Mr. Ogden saying together in the living room? With the terrible headache that had drawn her face into those unmistakable lines? Chloe had been right—it was the lull before the tornado; was the tornado passed, then, or would she round out her experience and murder us in our beds that night? Had our humble bottle of cooking sherry been responsible?

"Chloe foresaw it," I thought vaguely; "she said Maria would kill us in our beds," and I knew my heart was slowing, slowing, slowing, and that it would not start again.

"So people do die in nightmares, after all—I wonder if Mr. Ogden knows that?" was my last clear thought.

"Wake up! Wake up! Wake up!"—a noisy bell clanged that in my ear—a bell, and yet it was a voice and spoke and had hands that pulled and slapped me, while it rang.

My lungs stirred and a sharp pain shot through my chest. Something cold and clammy wrapped around my face, that strengthened me even while it stifled, but I protested weakly. I knew that I was dead, and that was the judgment day, but I wanted to stay where I was; it was less trouble.

"I didn't think it would be so rough," I thought, as the bell scolded and slapped me and the pain stabbed my chest.

"Give her the pain right in the face," said the bell gruffly, "and if she don't come round, we'll pass her out of the window—the stairs is too far gone for carrying her down."

An icy flood poured over my face and neck, and spluttering, gasping, crying, I fought back to life.

Oh, yes, I remember—Maria—she was killing me with smoke. But what was that shiny, boat-like hat on her head? Was she really a man—had she always been? Had Mr. Ogden

always known it, and was that what made him so white? He was pulling me to my feet.

"Can you climb through the window out on the roof?" he said quickly. "That will be so much easier—That's it—hurry now! Here—hold this towel over your mouth."

It was not Maria—it was a fireman. The roof was dense with choking smoke; a confused clang and whistle and hiss, as of water on flames, deafened me.

Mr. Ogden jumped through the window—his coat was off and his collar was very soiled—and pulled me through after him. I had only one hand free to reach to him, for the other held fast to something that I felt that I must never give up, though I was not quite sure what it was.

"Here's the ladder," he called suddenly. "Don't look at it, only with it down there! There's plenty of time"—as he turned to me. "Can you put your foot just there, and come down slowly after me? I'm right below you. Don't look down please—just watch the top of the ladder."

I slipped over the edge, clumsily, because my left hand still grasped the thing I must be careful not to lose. But still I did not know what it was.

It seemed to me that I travelled down that shaking ladder for hours. From time to time I heard an anxious voice behind me, and I stopped for breath:

"That's good! That's it! Just a few more—you're doing finely!"

At last I stepped into a cold pool of water that reached over my ankle, and I remembered that I had only knitted bed slippers on my feet. Somebody half carried me through a wet, chattering crowd of strangers and seated me on a pile of Anne Stuyvesant's brocade pillows.

"Pretty close shave, eh?" a man beside me called out. "I didn't think you'd get her!"

"Hush!" said Mr. Ogden angrily. "They got the piano all right, I see," said the man. "And eight dining room chairs. Pretty good work, I call that, with the walls eaten through like they were. What was the matter with you all anyway? Wasn't you away? Sunday a bad day for a fire here, you know."

Suddenly everything cleared before me; I remembered perfectly. He and Chloe had been talking, talking, talking. I had dropped asleep to the steady murmur of their voices. No wonder they had not noticed the fire. The pain drove through my chest again.

"Mr. Ogden, where is Sabina?" demanded the man.

He shook his head. "I—I don't know!" he said.

I gave one glance into the hissing, blackened furnace behind me; the scurrying people were like dancing demons around it.

"There goes the roof—there she goes!" cried the strange man. "Whatever's in there now, stays!"

A roaring crash seemed to drown me, like dark waters, and I faintly for the first time in my life.

Later—it might have been minutes or months—I was aware of a soft, rumbling jar, a sense of motion, and quiet voices very near me.

"It will be all right, I am sure," said one voice. "It is only the shock. The man said she was talking and sitting up easily, and he saw her come down the ladder—she can't be hurt."

"I am very glad." This was a man's voice. "She is a dear creature—I have grown much attached to her, really."

"I wish she reciprocated the attachment." Just then this voice grew a little louder, and I knew it for Sabina's. That soft movement under my head must be Sabina's shoulder,

and I was half sitting, half lying against her.

"The trouble is, she is afraid of you!"

"Of me? Impossible!"

That was Mr. Van Ness. I could never seem to move nor open my eyes, but I knew now where I was. I was propped against Sabina on the back seat of the English cart, and Mr. Van Ness must be leaning over toward us from the front, while he drove slowly along.

"You didn't tell her, then, this afternoon?"

I felt Sabina's head shake.

"I couldn't," she murmured. "I can't seem to find a suitable opportunity—"

"My dear Sabina! And you have been close friends for seven years!"

"That may be the reason." I have never heard Sabina's voice so meek.

"And I am to stay away indefinitely, then?"

"Oh, no! Oh, Hunter, I am so glad you came!"

The stumble stopped suddenly at a soft word to the horses, and I felt that we were no longer moving. Something, someone, was bending over me.

"Be careful!" Sabina breathed—but it was surely not her voice, so close to mine—"she is fast asleep!"

"Then why need I be careful?"

I tried to move, but warm rugs covered me to the chin and weakness bowed my head and feet. Besides, I was crowded tightly against Sabina's shoulder as she leaned over me.

"It was ten days, my dear, ten long days." The whisper was close in my ear.

"But I wrote you every day!"

I could not distinguish one whisper from the other now. My head whirled. I knew that I must open my eyes or lose my consciousness again.

Someday that I clutched in my hand began to bruise it, and the hurt helped to awaken me. With a long breath I forced my eyes open and stared into the black sky sprinkled with stars.

We began to move slowly along a country road; I saw the arching trees. A broad, square-shouldered back rose straight before me, and I was no longer pressed against Sabina's shoulder.

"Are you better, dear?"

Her voice was again the voice I knew, and was sure of. "This is Mr. Ness."

"I see," I said briefly.

"He—he drove over to call on us just before the fire was discovered, and—and I went with him for a little drive. So I was not there when it broke out so terribly."

"I see," I said again.

And, indeed, I saw. All my past blindness rolled away like mist before me, and I knew I had never wanted to. No wonder he had not come to see us when Solly was sick; Sabina was not there. He could see her in town. No wonder he had taken Pluto to drive through the night of the new knowledge everything perplexing in the last weeks fell into its simple place.

What a fool I had been! Of course he would not marry Chloe—he did not want to. Perhaps he had never wanted to. No wonder he had not come to see us when Solly was sick; Sabina was not there. He could see her in town. No wonder he had taken Pluto to drive through the night of the new knowledge everything perplexing in the last weeks fell into its simple place.

"I heard you talking that morning ago, Sabina," I said softly, under the rumble of the wheels, "before I could tell you so. I know about it now. I must have seemed very stupid. I hope you will be very happy. I wanted you to learn to like him."

"Just then this voice grew a little louder, and I knew it for Sabina's. That soft movement under my head must be Sabina's shoulder,

and I was half sitting, half lying against her. "The trouble is, she is afraid of you!"

seem to explain to you—you were so—so difficult.

"Was I? I am sorry. I have always admired him very much!" I said wearily.

"Why don't I care more? It is the end of seven years," I thought, in a sort of dull amazement.

But, perhaps, I am difficult, I thought sadly; I was really very tired.

"Where are we going, Sabina?" I whispered.

"Why, you know, my dear, there isn't any house," she told me gently. "It went like tinder—the walls must have been smouldering all the afternoon. Hunter has stationed half a dozen men there to guard everything there is left, and we'll come over in the morning if you feel strong enough. We are going to his sister's. It is only nine now, and you can get a good night's rest and be well taken care of."

"Oh, no, no!" I cried. "I can't go there, Sabina—I don't want to! I mean I was not very polite, but I had not strength enough for politeness; and the idea of that big, elaborate house, with its corridors of formal guest rooms, shook my last shred of self-control."

"You go, Sabina, pray do, but don't take me!" I wailed. "Oh, don't!"

"But where will you go, my dear?" she asked patiently. "I particularly thought you wouldn't care for any of the neighbor's houses, there are any quiet place you can think of where we could be comfortable?"

There flashed into my mind the picture of a clean and quiet kitchen, bright, with a scorched, red-washed stove, fragrant of new bread, hospitable and peaceful; through the open door I glimpsed the company bed, with a fringed counterpane, and the deep rocking chair and geranium pot beside it. It had been my refuge in more than one season of despair, that little cottage on the outskirts of the village, and it would take me in now, I thought him to drive to Mamie's aunt," I begged her, and there he drove.

She had just returned from the fire, and she had a cup of steaming, fragrant tea for me and some buttered toast.

"It's me that thought you'd be along, miss," she said cheerfully. "She'll just know there's the loan of a bed ready for her, says I—and Miss Archibold, too, if she'll take the half of it."

Sabina hesitated, but I seized her hand.

"Please go with Mr. Van Ness, Sabina," I begged her. "I am just where I want to be and—Oh, please go!"

She looked at me steadily a moment—was there pity in her handsome eyes?—then nodded her head.

"I don't think you could do better than stay, my dear," she said, in her competent, sagacious way. "And I'll come in early to-morrow. Mamie's aunt will do everything—Good heavens, who is that?"

A wild, dishevelled figure dashed into the little kitchen. Collarless, vestless, grimy and black with smoke, Mr. Ogden turned his white face with its burned mustache toward Mamie's aunt.

"Is she there? I ran all the way—nobody knew—oh, thank God!" he cried.

It burst on me suddenly that I was responsible for her, and that he had taken it for granted that I had her with me—perhaps he had told her to stay by me, and trusted her to do it.

I got up, stumbling in wet bed-room slippers.

"Chloe isn't here, Mr. Ogden," I said unsteadily. "I am afraid you are lost here in helping me. But she is surely safe—she was on the piazza with you—"

"Oh, she's all right," he interrupted irritably. "What happened to you? You nearly frightened me to death! I thought—I thought you might have gone back into that—Oh, I don't know what I thought!"

He seized my wrists and pushed me against the wall. His face worked nervously. Something in his eyes made my heart beat to suffocation.

"His 'Chloe,' I repeated like a parrot. "Chloe—"

His eyes frightened me. "Will you stop muttering 'Chloe' at me?" he stormed, shaking my wrists.

"You little idiot, don't you know it's you, you, you, you!"

Nobody need try to tease me with descriptions of how stupidly I gazed at him; I knew at the time that my eyes were perfectly blank, though I really don't believe that my jaw dropped as they say.

"Me?" I said vaguely. "Me?"

His eyes were too near; I could not see them.

When I opened my own, we were alone in the room. I remember there had been a quick rustle of skirts just before—before I shut them, and the sound of a closing door. But if Sabina and Mamie's aunt had foreseen what was about to happen, it was more than I had. You see it had never happened to me before.

lieve this, but oh, I am quite young enough to enjoy it! I think I shall never be so old that the memory of it will not make me happy.

"But, at the first—the very first, surely you came to see her?"

He nodded. "Why, yes," he said honestly, "she is an awfully jolly girl—I came to call. The way you go to call on girls, you know. She's certainly a mighty entertaining young woman," he added reflectively.

"But you—oh, you're different!" His eyes caught mine again, and again they frightened me (but this time I knew what happened).

(Continued next week)

The Upward Look

The Need of Prayer

And it came to pass in those days that He went out into a mountain to pray and continued all night in prayer to God.—Luke 6, 12.

What a lesson we should draw from those words. Not long since a young man remarked to me that it must have been easy for the Lord not to sin. He was the Son of God and knew that He had been sent into the

ter, we find that He "went up into a mountain to pray and as He prayed the fashion of His countenance was altered." We are told also, (Luke 22, 44) how "being in agony He prayed as often as He said, His sweat was as it were great drops of blood falling down to the ground."

When we see how great was the dependence of the Lord who was the power of prayer, how He was in the habit of going off by Himself to be alone with God, and when we realize the effect that His prayers had on Him, that they altered the fashion of His countenance, we need not seek far to find the reason why our lives are not more fruitful. We do not pray as often or as earnestly as we should. To rattle off a few petitions and jump into bed at night is not praying.

We are apt to think that we are too busy that we have no time to pray as we should. That is where we make our great mistake. Were we to spend more time communing with God we would lose that sting of the little things in life that bother us. Our view of life would be broadened, that we would become better masters of our impulses, that the fashion of our lives day would be altered, that day by day we would become more like Christ.—I.H.N.

Aunt Patty and Fireless Cooking

"Yes," said Aunt Patty, as she laid down her knitting and pushed up her spectacles, which happened to be the wrong pair and disturbed her view of anything as far across the room as the young minister had chosen to sit down. He had chosen it deliberately, for he had something to tell her, the very thought of which brought a warm color to his rather pale and studious countenance; and now Aunt Patty, other pair, settled them firmly and went on, while her aunt, with the thought that had been in her mind as she opened the door for him.

"You see, if it had been anybody but the schoolmaster, I wouldn't have believed it, and if I'd known he was carrying hay up to his room and hiding it under the bed, I will say I should have called him crazy, and he came down to me early in the morning, smiling the way he has, with a pail in his hand and says to me, 'Aunt Patty, this is a chemical experiment, and you won't mind my using your fire a little?'"

"Long as you like," I says. "Is it anything that might go off sudden like the last one?" It had better not be touched," he says, looking a little queer, and was off, but he called back to me, "I'll be down again in half an hour or so, to show again in 'ing.' Now, I don't meddle with folks' concerns in my house or out, and I smell you'd choose to mention, for his experiments mostly 'bout things you'd smell from here to the county town, maybe. I was ready for that, whatever it was, for it actually did smell like chicken. He'd told me a man in New York had given him a from even to me, and I was preserved blessed thing in it, and every time that he called it, and says to myself, 'What smells like chicken most likely'll turn out, maybe, some kind of a tin, or else gas and a bang just the way some of his things have done.'"

"He come in after a while, and says, 'Has it boiled?' and I says, 'Yes; has it cooled?' and he says with small that 'I'll fill the house with it.' And he said, 'I'm much I know.' He auzed and went off, and I didn't hear any more till supper time when he'd been home an hour or two, and in he come with the pail when I rung the bell, and says, 'You won't like a little ste-wel



Poor Little Children at the Day Nursery, Toronto

The above illustration shows a small group of little wails, brought into the Day Nursery at Toronto, to be cared for during the day, while their mothers homes for mothers who are obliged to work out, and enable them to help themselves to a better life. Seven cents a day is the fee charged for keeping the little ones. There are 350 women connected with this nursery.

It happened frequently just then, however, for, as Mr. Ogden explained to me, it was the only thing that could stop my explaining to him why he must have meant Chloe all the time.

"Why, Sabina thought so!" I assured him.

He smiled cheerfully. "She does not think so, now, does she?" he inquired; and again I blushed, as I thought of myself pushed against the wall, and again it happened.

"But I—I am thirty-four, and I cried. "It's all wrong—I am old enough to be—"

"Are you going to say my mother?" he interrupted me quickly. "Because I am thirty-one, and I believe I was older than you when I was born! I am not old enough to know when a man is head over ears in love with you—why, see here, I should never marry anybody else, if you were forty-four!"

I may not be young enough to be-

world to be his Saviour. And yet what the Scriptures teach us? That Christ felt his weakness and his dependence on God to such an extent that He went out into a mountain and prayed to God all night. Again we read, (Mark 1, 35) where, although the day "in the morning, rising up one, Christ, while before day, went out and departed into a solitary place and there prayed." Thus we see, that instead of minutes rest that so many of us are inclined to take Christ felt the cares of this world to such an extent that, sometimes, He found it necessary to shorten His hours of sleep in order that He might need draw himself from those around Him and be with His heavenly Father alone in prayer.

Much of Christ's early life was spent in prayer. In Luke 9, 18, we read "As He was alone praying." Further on in the twenty-eighth and twenty-ninth verses of the same chap-

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chicken for supper, will you, Aunt Patty? "Don't you fool me," I says; but he had the cover off, and sure enough it wasn't no hot tablet, but a four-pounder or more, plump and white, and smelling good enough to eat that minute.

"For the land's sake!" I said, "who give it to you, and who cooked it for you, and what's got into you to be bringing home things to eat as if I skimped you?" "You skimp, Aunt Patty?" he says and laughed. "That's a good one. I followed directions, and got an old hen that turns to a chicken this way of handling;" and by this time he had it out, legs and wings just falling off of it most for tenderness, and a lot of gravy in the bottom, that I took and thickened before we eat a bite, for we had baked potatoes that night, and baked potatoes and chicken gravy. If it's good, is fit for a king. I was kind suspicious, but I never eat a better flavored leg or wing than he give me, and the breast just melting in your mouth, but who knew what stuff might be in it. But he eat along so easy and cheerful like seemed as if I oughtn't to be more particular than he was.

"By George!" he said presently, "I wasn't sure how it would turn out, but this beats anything I'd expected. It's a fact too," and he took out a bit of newspaper from his pocketbook. "I wasn't sure, you know, but here's the direction, and you needn't stew over a hot stove in trying to get more, Aunt Patty. All you need is a box full of hay and start the thing till it boils, and then you pack it in the hay and just let it alone, all day or all night, or both if you like." "Don't talk to me," I said, for really I thought he might be crazy. "Come upstairs," he says, and he sort of pulled me along, for I held back, being kind of suspicious again, and wondering if he was going to be sick and so was kind of flighty. I thought so worse than ever when I saw his room, for he'd his trunk in one corner and the things all out on the bed, that mostly he made himself, to save me trouble, and it was full of hay, just as he had said, so that I sat down sudden, for he really must be out of his head.

"But there was the round hole in the hay where the pall had been, and the schoolmaster stood there laughing. 'It's a fact, Aunt Patty; no joke about it, and she's been trying to find out me this newspaper slip that tells just how. That's the way we shall manage after a while when—we're married you know. Do lots of things that way.'"

"Well, I couldn't believe it and wouldn't hardly, but next day he rigged up a covered box for me, and I started a piece of beef so tough I'd just given it up most, for we'd had

steak off it that had to stew two hours and then wasn't decent eating, and I'd corned the piece. He started it and we got it into the pall and left it there. "I wouldn't be no great loss if nothing came of it, and it just stayed till next morning. And if you believe it that thing was tender as chicken. You couldn't beat it. It's the Norwegian Box he says, and now folks are making them for sale. It's easy enough to just pack good and tight a covered box or an old trunk with hay close packed down and put in whatever you want to after it's been started on a stove. Fireless ovens he went on telling me about; soupstons inside and felt outside, but law, I said, "Our Indians know that, for they get stones red hot and then set 'em up like a box and cover 'em over with moss, and then inside they put a bear's hump, maybe, or some ducks or a saddle of venison, and just leave it till morning, for there's wood guides that have told me that, and next morning the smell just makes your mouth water, and it's done to a turn. But you'll have to study it out for yourself, or you would if you was in his situation—promised, you know, and married most likely in the fall."

"Will you give me the written directions?" the young minister said. "I should like to try the experiment or have it tried; and now he rose and Aunt Patty faced him for a moment, then he cut her hand.

"I was kind of ashamed," she said, "to think how I had run on, but now I don't care, for sure's you live you and the schoolmaster has the very same reason for your experimenting. There's always a woman somewhere at the bottom of everything."

"This woman is at the top," the young minister said firmly, and pulled out a photograph case, framing a face that did not belie the words. "I came to tell you, Aunt Patty, for you've always mothered me, and I know you will be good to her when I bring her home." But Aunt Patty was crying a little, as was her way with very good news, yet laughing also and holding out the slip.

"Start her on that," she said. "She looks like one that ought to have things made easy for her, and, if hay-cooking ain't easy, why nothing is. The best of it is that it's tasty too, and you'll find it out."

 Allow me to say that I think that part of your paper in the Household Department which is devoted to the "Upward Look" is very fine. I find a great many comforting things in it and I always read every word of that column.—Mrs. J. McKay, York Co., Ont.

Talks with Mothers

Take Care of the Boys

Are you sure you know where your boys are evenings—positively know, or just that they are "in the neighborhood somewhere"?

Every boy is a live wire that, unless properly insulated, will do mischief to himself and others. Even when the wires are cut, there are all sorts of complications.

Of course your girls are safely indoors under the parental eye, or properly chaperoned elsewhere; you would not dream of allowing them out after night had fallen; but "the boys can take care of themselves," you say. That is one of the greatest mistakes parents make. Our boys are as tender plants as your girls.

The old idea that a daughter is more of a responsibility than a son is a mistake. If anything, the boys are more of a charge, for a girl is put on the defensive from the time she is born; she is made aware of the raging lion on every street-corner seeking to devour her; but the boy, in many cases, is totally unarmed with advice of the right nature and is sent out to do battle with the monster whose habitat is the corner and the loafing place, in city, and country.

Boys are not so quick to recognize wickedness as their sisters, and it soaks into them thoroughly and surely, and sometimes a whole lifetime is insufficient to eradicate the harmful impressions received in childhood. Therefore, the mother's duty is as absolute to her son as to her daughter, and does not end in simply providing him with food and an education, and in sending him to Sunday school.

Training Daughters In Household Duties

The ignorance of young housekeepers has long been the subject of many jokes, but the matter is not humorous; it is very serious, as the trials and troubles in many otherwise happy households can testify. It may be an old-fashioned idea, but it is backed by the opinion of many husbands whose wives' helplessness has driven them almost to despair, that a co-operative housekeeping plan should be established from the time the little daughter is able to walk. Let her have her little duties to attend to, from filling the salt cellars and unimportant dusting, up to the study of scientific cookery. Let the child progress step by step through the culinary department, the management of

the home, the keeping of accounts, the art of entertaining, and every other detail that comes into an competent housekeeper's life, and then when she is called upon to go to market, or cook a dinner for her own home, her husband need not have any fears as to what will be set before his guests, or as to the manner of its preparation. The mother who assesses the neglect of her daughter's education in household duties on the ground that she "cannot afford to have her waste the food in learning to cook" forgets the possibility of future trouble for her daughter, who can afford it even less. No matter how good the prospects of young people are when they begin housekeeping unless the bride is able to study out for herself the best and most economical methods of "running" her home, there will be waste, followed by discord, both of which could far better have been afforded by the experienced mother before the daughter left her father's roof, than by the young wife to whom the first years of married life mean so much.

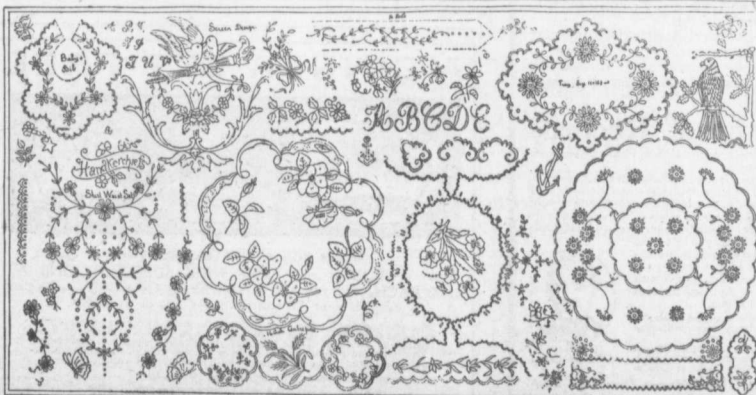
If the small daughter is taught from mere babyhood to hold herself responsible for certain duties each day—from the putting away of toys to the cutting of tiny garments for dolls—she will soon learn to regard household duties as pleasures, and will unconsciously learn the best methods of working as the years go by, so that in time she will become a capable, practical woman of whom her mother may be proud.

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 and all irritated, inflamed conditions of the skin are annoying, disfiguring and embarrassing. Don't worry, these affections are curable. We have the most effective and natural Cosmoline Cream, personally or by letter.

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No. 571. Special Perforated Stamping Patterns. This splendid outfit consists of about fifty up-to-date and handsome full-size designs, including a Shirt Waist, Corset Cover, Lingerie Hat, two Complete Alphabets (one 2 1/2 in. and one 1 in.), Corner-piece (size 16 in.), two Doilies (5 1/2 in.), two Turnovers, Borders, Belt, Book Cover, Sofa Pillow, and many other useful designs in all the modern styles of embroidery. The above designs are perforated on a good quality of paper. We also include a cover for the blue and white of the "Ideal" two Pencettes, and full directions for using the stamping preparation, at the special price of 75c for all.

These Perforated Patterns can be used an unlimited number of times.

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 sent free for two new yearly subscriptions at \$1.00 each. Address, Household Editor, this paper.

HAM OR MEAT ROLLS

Make a rich pie crust, roll thin, out in strips 3 in. wide and 4 in. long; spread with finely minced boiled ham or meat, moisten with egg and milk, season to taste, and roll up like a jelly roll, pinching the edges together. Bake in hot oven 20 to 30 minutes.

CREAMED BEEF

Cut left-over rare beef in small pieces and fry brown in a little lard or butter, then add some milk, thickened

with a little flour, let boil up a few minutes, and serve.

MINGED STEAK

Chop round steak, season with pepper and salt, shape into flat little cakes, and fry brown on both sides in hot drippings over a hot fire. Put on a hot platter with melted butter, and serve at once.

CORN MEAL PUDDING (NO EGGS, NO MILK)

Mix together $1\frac{1}{2}$ cups yellow corn meal and 1 cup finely chopped suet. Scald this with boiling water until it is as thick as a cake batter, then add 1 cup molasses, 1 cup flour sifted with 1 teaspoon cinnamon, $\frac{1}{2}$ teaspoon salt and 1 teaspoon soda. Lastly, stir in 1 cup seeded raisins dredged with flour. Steam 3 hours.

MOLASSES PUDDING

To 1 beaten egg add 1 cup milk in

which dissolve 1 teaspoon soda, 1 cup molasses, pinch salt, 1 cup seeded raisins, 1 cup finely chopped suet and flour enough to make a thick batter. Steam 2 hours.

HARD TIMES PUDDING

To 1 cup cold water add 1 cup molasses, 1 teaspoon each salt and soda, and flour enough to make a batter. Steam 3 hours and serve with cream.

LEMON BREAD PIE

Soak 1 pt. stale bread crumbs in milk, then add $\frac{1}{2}$ cup cream, 1 cup sugar, 2 beaten eggs, and the juice and grated rind of 2 lemons. Bake in an under crust.

SOUR CREAM RAISIN PIE

To 1 cup sour cream add 1 cup sugar, 1 egg, 1 cup seeded raisins and 1 tablespoon flour, salt and spices to suit taste. Bake between two crusts.

CRUST FOR ONE PIE

Work 1 heaping tablespoon cold lard and $\frac{1}{2}$ teaspoon salt into 1 cup flour; then stir in cold water until you have a smooth, soft dough.

NEW FLAKY PIE CRUST

To 3 cups flour add $\frac{1}{2}$ teaspoon salt and 1 teaspoon baking powder, and chop in 1 cup lard. Into a cup break 1 egg, beat thoroughly, and fill three-quarters full with cold water. Add this to the flour and lard mixture, using more or less water as seems necessary. The dough should be as soft as can be handled and rolled, and the less handling it gets the better.

PUMPKIN PIE

To 2 cups boiled and dry strained pumpkin add $\frac{1}{2}$ cup sugar, 2 well-beaten eggs, 2 tablespoons molasses, 1 tablespoon melted butter, $\frac{1}{2}$ teaspoon each ginger and cinnamon, small pinch of salt, and 2 cups milk. This is enough for two pies.

Our Big Four Offer

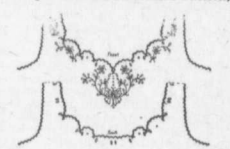
Our big four subscription offer on page 25 of this issue has proved to be one of the most popular subscription offers we have ever made. Hundreds of subscriptions for this offer have been received at our office during the short period it has been out. We are advised, however, that the management of the Home Journal intends to enlarge and otherwise improve the Journal with the March issue, thereby necessitating a slight increase in the price of the "Big Four" Combination offer. During the balance of February, however, we will continue to accept subscriptions for the "Big Four" at the price of \$1.70. The new price will go into effect with the May issue and the new price will be announced at that time. Subscribe now for the "Big Four" and get it at the low price of \$1.70 per year, for four of Canada's best agricultural and home magazines.

ART EMBROIDERY

If we do not publish designs you desire, write and ask for the kind you would like. This department is for the benefit of our readers. Address, Art Editor, Farm and Dairy, Peterboro, Ont.

A hand-embroidered corset cover is the desire of all women who dress from underneath rather than for appearance only. The design No. 104 illustrated below is a dainty and up-to-date pattern, in the new French effect it is intended for Eyelet Embroidery and button-hole stitches.

The prices of the Perforated Pattern,

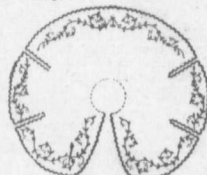


No. 104

including Stamping Materials is 25c. Ideal Transfer Pattern, (the simplest hot iron transfer out), is 10c. Design Stamped on 1 yd. of good quality Utopia, is 45c. Twelve Skeins of White Utopia Silky Cotton is 25c extra.

A Baby's Useful Present

The baby kimona as shown is a simple and graceful forget-me-not design, easily embroidered and the kimona will prove a much appreciated gift when finished. We would suggest using solid French embroidery for the flowers and button-hole stitches for the scallop.



Baby's Kimona No. 102

The price of the Perforated pattern, which can be used an unlimited number of times, with all necessary materials for stamping is 25 cents.

Transfer pattern 10 cents.
Design stamped in Imported Linen 50 cents extra. Twelve skeins of White Utopia cotton for working is 25 cents extra. All above prices include postage.

The EDISON PHONOGRAPH

YOUNG and old can enjoy an Edison Phonograph, but if there is any choice, it is especially the children's entertainer.

What human entertainer, what mother or nurse doesn't become tired of singing a song over and over, of telling a story again and again at the demand of a group of interested children?

The Edison Phonograph never gets tired; it will keep the children amused for hours, but an Edison Phonograph bought for the nursery pretty soon finds its way to the drawing-room because the grown-ups are not content to allow the children to have all the fun.

That is why an Edison Phonograph should be in every home. Because it entertains the whole family, it can be enjoyed by the entire family circle at once. It is just as good on popular music as it is on classic music. It is easily used. It plays for all.

Edison Amberol Records

A new Record has been made for the Edison Phonograph which plays twice as long as the old one.

All owners of Edison Phonographs can have an attachment put on their present Phonographs which will play the new Records. All new Phonographs are now made to play both the two-minute and the four-minute Records. You can have both kinds of Records, and thus have a very wide range of music. The four-minute Record is especially good for long pieces of music, too long to be played on the shorter Records, and also for dances, accompaniments to songs and things of that kind.

Your dealer has the Edison Phonograph with attachment, and he has the new Amberol Records which he will be glad to play for you.

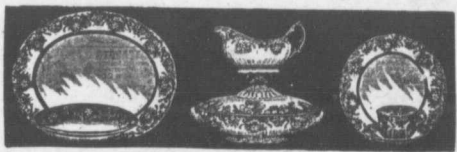
FREE. Ask your dealer or write to us for illustrated catalogue of Edison Phonographs, also catalogue containing complete lists of Edison Records, old and new.

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Secure a CLUB of only NINE NEW SUBSCRIPTIONS AT \$1.00 EACH, and you will be sent FREE OF COST, an elegant English Semi-Porcelain Dinner Set of 95 pieces.

This set consists of the following pieces: 12 tea plates, 12 dinner plates, 12 soup plates, 12 fruit dishes, 12 butter pats, 12 cups, 12 saucers, 1 platter (10 inch), 1 platter (14 inch), 1 gravy boat, 1 pick dish, 2 covered vegetable dishes, 1 beaker, 1 soup bowl, and 1 cream jug. This set is genuine English semi-porcelain, decorated in a dainty green floral border, with embossed and scalloped edges.

Sample copies on request. Write Circulation Department:

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Your own subscription if not already renewed, could be, free of cost, for securing the small club of only two new yearly subscriptions. A good way to secure your own subscription free. Write our Circulation Department, if you are interested. Does your neighbor take Farm and Dairy? If not, better get him to sub-

scribe to-day. He would make one new subscriber to begin with. His neighbor, would be another.

Pictures for Children

Pictures are educators. I save all the pretty and interesting ones from papers, magazines and catalogues. I paste them smoothly upon cardboard, sometimes three or four on one board, and finish with a cord or ribbon to hang it against the wall of the children's playroom. Sometimes I paste pretty paper around the cardboard to imitate a frame. I change the pictures often, although there are always some that the children beg to have remain all the time. You have no idea how such pictures interest and amuse the little ones.

Often, with pictures of the right size, I make puzzles by cutting them in irregular pieces after they have dried on the cardboard. It amuses the children to try and make complete pictures of the pieces. It is not very much work and whatever helps with a child's education pays big interest. Of course the pictures must be carefully selected, for some subjects would do more harm than good. Pretty, restful landscapes, especially if you can tell them where located; animal pictures, bird pictures, also flowers and fruits, all serve the purpose well, and the more "stories" you can tell with them as a text, the better. Try this, sister mothers, and see how the plan works with your little flock.—Mrs. Jennie McFarland, Frontenac Co., Ontario.



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The Sewing Room

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

FANCY WAIST 6229.



The fancy waist with long draped sleeves is one that is greatly in demand. The blouse is made with a fitting lining, and this lining is faced to form the yoke.

Material required for medium size is 3 1/2 yds 21, 2 1/2 yds 27, or 1 1/2 yds 44 in wide, with 1 1/2 yds of all-over lace. 3/4 yd tuckings.

The pattern is cut for a 32, 34, 36, 38 and 40 in bust, and will be mailed to any address on receipt of ten cents.

PLAIN SHIRT WAIST 6230.



The plain shirt waist is one which every woman needs. If it were cut from tucked material and made with the plain sleeves shown in the rear view it would take on an entirely different aspect.

Material required for medium size is 3 1/2 yds 21 or 24, 2 1/2 yds 32 or 1 1/2 yds 44 in wide.

The pattern is cut for a 32, 34, 35, 36, 38, 40, 42, 44 and 46 in bust, and will be mailed on receipt of ten cents.

PRINCESS APRON 6149.



The very small amount of labor which is involved in the making of this princess apron is certain to make it a very general favorite. It is becoming and practical, and can be made from any apron material, cross barred muslin, and the more Janey ones as well as the plain lawn illustrated.

Material required for medium size is 6 1/2 yds 24, 4 1/2 yds 36 or 44 in wide, with

5 1/2 yds of insertion. The pattern is cut in three sizes, small 32 or 34, medium 38 or 36, and large, 40 or 42 in bust and will be mailed on receipt of 10 cents.

GIRL'S OVER DRESS 6150.



There is no style of dress that suits girls more perfectly than the one in gimpé style. It is practical for the gimpés can be made from washable material and in sufficient numbers to meet a frequent change, and every mother knows that it is the sleeves that soil and wear out, while the rest of the dress is in good condition.

Material required for medium size (12 years) is 6 1/2 yds 24, 4 1/2 yds 32 or 3 1/2 yds 44 in wide.

The pattern is cut for girls of 8, 10, 12, and 14 yrs and will be mailed on receipt of 10 cents.

Renew Your Subscription Now.

MARKET REVIEW AND FORECAST

Toronto, Monday, Feb. 22, 1909.—There are signs of spring in trade circles, if not in climatic conditions. It is to be seen in the increasing volume of orders being received by wholesale houses, in hardware, in paints and oils, better business is reported. Travellers report conditions improving in the country. Money keeps in good demand for mercantile purposes and also for building and land investment. Call loans rule at about 4 per cent, regular loan at 5½ to 6 per cent, and discounts at 6 to 7 per cent.

WHEAT

Patten still holds the upper hand in the speculative market. He has raised the price of May wheat at Chicago to \$1.15½, which was Friday's quotation as compared with \$1.01 for July option. Whether he will be able to keep his promise of putting May wheat at \$1.01 remains to be seen. We are approaching, however, when crop conditions will play a more important part in the game. By manipulating these, the price may be advanced to a still higher fictitious value. The present price of \$1.15½ a bush is a fictitious one and is not warranted by market conditions generally. The Argentine and Australia continue to export in large quantities, which keeps the European market from advancing. That market has ruled fairly steady during the week with some fluctuations, and Liverpool closed on Friday ¼d. higher. Manitoba wheat continues strong, and the good milling wheats are in demand. On Friday the February option at Winnipeg was \$1.08. Locally the market rules strong in spite of the heavier deliveries during the week. A considerable portion of the deliveries, it is said, is being stored in country elevators by farmers. Dealers here quote Ontario wheat at \$1.01 to \$1.03 a bush, at outside point. On Toronto farmers' market, fall wheat sells at \$1.02 to \$1.03 and goose wheat at 97c a bush. In spite of the strength of the wheat market some of the large milling companies are cutting the price of

four. Some are selling first patents at \$3.50, which is claimed to be 60c a bush below the cost of production.

COARSE GRAINS

The oat market continues firm and prices are steadily advancing. No export business is being done as prices on this side are too high. The demand seems to be general, both the large centres and country towns are asking for supplies. Ontario oats are quoted at Montreal 67c to 69c and Manitoba at 49½ to 50½ a bush. The market here is strong, though oats are being marketed a little more freely. Dealers quote 46c to 46c outside and 49c to 50c a bush, on the local farmers' market. Barley is on the quiet outside, dealers here quoting 51c to 52c as to quality outside, and 56c to 60c on Toronto farmers' market. Peas are quoted at 88c outside.

FEEDS

Millfeeds continue firm at slightly higher prices. Montreal quotations are—shorts, 82½; Ontario bran, 82½ to 83½; shorts, 82½ to 83½; middlings, 82½ to 83½ a ton in car lots in bags. Ontario bran is quoted here at 82½, and shorts at 82½ to 83½ a ton in car lots here. The corn market rules firm. American corn is quoted at Montreal at 75½ to 76c in car lots here. Here the market rules firm at 75c to 75½ for American and 82c to 83c for Canadian Toronto freight. Feed barley is quoted at Montreal at 56c to 57c in store.

SEEDS

There is no change in the seed market situation. Dealers here quote alike at \$7.75 to \$8.25, red clover at 8c, and timothy at \$1.75 to \$2.25 a bush. Dealers are paying 8c to 8½ for Alkic; 84c to 85c for red clover, and \$1.50 to \$2.10 for timothy seed as to quality at local country points.

HAY AND STRAW

There is no change in the hay market. A good steady local supply is reported at Montreal, which helps to keep down the

price of baled hay shipped there. The demand is reported fair for car lots, and the English markets rule fairly steady. Montreal quotations for baled hay in car lots are: No. 1, \$11 to \$11.50; No. 2, \$9 to \$10; No. 3, \$8 to \$9; clover mixed, \$7.50 to \$8.50; clover, 87 to \$7.50 a ton. Baled hay quotes at Montreal to \$11 for No. 1 timothy; inferior 9 to \$10; and baled straw \$6.50 to \$7.50 a ton in car lots at Toronto. Dealers at Liverpool on the farmers' market here are reported rather light during the week. Timothy, \$10 ½; straw in bundles, 8½ to 9½; and loose straw, 87 to 88 a ton.

POTATOES AND BEANS

The potato market is firmer though there is quiet as dealers do not feel inclined to pay the price shippers are asking. Shippers in Western Ontario quote beans at \$1.18 a bush, in car lots at Montreal. Dealers here quote beans at \$1.90 for primes and \$2.10 to \$2.20 a bush for hand picked.

EGGS AND POULTRY

Eggs are beginning to arrive in larger quantities and prices are gradually getting lower. At Montreal 25c to 30c a do. are the quotations for straight receipts of new laid and on Toronto farmers' market prices. Stocks of held eggs, however, are very light and if new laid do not arrive in too large quantities present prices may be fairly well maintained as at while yet. The milder weather has brought out larger receipts here and at the moment the market rules steady. At Montreal being quoted at 27c to 28c and storage at 25c to 26c in case lots. On Toronto farmers' market new laid sell at 30c to 35c a do.

The dressed poultry trade is quiet at steady prices. In a jobbing way, chickens sell at 14c to 15c, turkeys at 18c to 19c a lb. dressed. On Toronto farmers' market dressed chickens sell at 16c to 18c for the best, and turkeys at 22c to 25c a lb.

DAIRY PRODUCTS

The cheese market continues firm and it looks now as if all the cheese made in 1909 will be sold. The butter, too, before the make of 1909 begins to appear in marketable quantities. Holders at Montreal are now asking 13½ to 13¾ for finest pure cream, and 12½ to 13c for medium colored, and 12c for the lowest whites. Canadian cheese is quoted in England at 4½ to 6½; New Zealand, 2s in level. Dealers here quote cheese to the trade at 12c to 13¼ for large and 15½ to 13¼ for twins.

The butter market is not so strong as that of cheese. Choice grades of dairy creamery are scarce but there appears to be a plentiful supply of other grades. It is reported that there are considerable stocks of creamery held at country points and until these are worked off the market is not expected to improve very much. Choice fall creamery is reported at Montreal at 25c to 26c and fresh receipts at 22c to 24c. Choice grades of butter are scarce here and in the West and these are firm. There is, however, a plentiful supply of inferior stock which is easier. Dealers quote choice creamery prints at 35c to 28c; choice dairy prints 22c to 24c; dairy tubs and large rolls at 30c to 24c; and inferior at 17c to 18c in a wholesale way. On Toronto farmers' market dairy prints sell at 25c to 27c and solids at 22c to 25c a lb.

UNION STOCK YARDS HORSE EXCHANGE

While the horse trade shows considerable activity, there is not much change in prices. At the Union Stock Yards Horse Exchange last week about 100 horses were disposed of. Good medium turnouts seem to be in the most demand for the North-west and farm work. Drivers also are in more demand. From the North-west and Ontario shipped to the West. Prices rule about as follows: Drivers, \$150 to \$185, with a few extra choice quality selling at \$200 to \$250; general purpose and wagon horses, \$100 to \$150; farm blacks, \$100 to \$150; seconds in this class, \$75 to \$100; drivers, \$100 to \$150, and services to \$100; horses of all classes at \$40 to \$85 each.

UNION STOCK YARDS PRICES

West Toronto, Monday, Feb. 22.—There was a light run at the Union Stock Yards this morning and prices ruled

Better
Butter comes
when

Windsor Dairy Salt

is used. It's so pure
and well-savoured.
At all grocers'.

105

steadily with choice cattle higher. Choice export cattle sold up to \$5.60; export cows at \$4 to \$4.50; export bulls at \$4 to \$4.50; choice butchers' cattle sold as high as \$3.5 a cwt; medium, \$4 to \$4.50; heifers, 83½ to 84½; yearlings, 81 to 82½; calves, 81 to 82½; cow calves sold at \$3 to \$5.50; spot cows at \$4.25 to \$4.50; rams at \$2.50 to \$3.50 and lambs at \$5.50 to \$6.50 a cwt. Hops are scarce and packers can not get all they want. They are quoted at \$6.50 f. o. b. at country points, and at \$6.65 f. d. and watered on the market here.—J. W. W.

THIS WEEK'S HOG PRICES

The Wm. Davies Co., Toronto, is not giving quotations this week for hogs. They explain that live hogs this week offered did not know definitely what the price would be. They report a slight improving in the quality of the hogs coming in over a couple of weeks ago, but there are still too many over fat hogs arriving at the moment to make the market firm. Wildshire sides, Danish killings last week totalled 42,000 hogs.

MONTREAL HOG MARKET

Montreal, Saturday, February 20.—The market for live hogs this week opened weak owing to the heavy offering and the difficulty of finding a buyer at the prices current the previous week. The best price obtainable was in the neighborhood of \$7.25 a cwt. for selected low weighed off cars. Towards the close of the week, however, the market firmed up with a falling off in the supplies, and

FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD, CASH WITH ORDER

YOUNG MARRIED ENGLISHMAN, abnormally tall, five feet high, with a stainer, seeks situation. Used to market gardening. A. Waller, Ontario Gardens, Port Hope, Ont.

ARTICLES FOR SALE.—Ginseng roots and herbs. Referenced. Toronto, Ont. R. McCreger & Co., 99 Gladstone avenue, Toronto.

WANTED.—A good cheese or butter factory to run this winter. Fourteen years experience. Best of references. Box 151, Amherst, Ont.

DESIRE BUY CHEESE FACTORY. Good locality. Mile and station. Box 151, local River, Ont. E-54-09

CREAMERY WANTED.—To buy a small creamery in a town or village in West-ern Ontario. State full particulars and lowest price. Address, Box "E," Farm and Dairy, Ont.

POSITION WANTED.—By first class creamery manager. Eight years experience. Won over \$500 in prize money. Good medium turnouts. Apply to Box 36, Kingston Station, Nova Scotia.

RHODE ISLAND REDS, Single and Rose-combed, Single Comb Black Minorcas, and other breeds with full pedigree and line papers; stock; \$1.50 and \$2.00. Write J. Logan, North Glasgow, Ont.

WHITE WYANDOTTES.—Eggs, Pullets and hoppers \$1.00 to \$1.50. Write to the following strain of H. Lush. Will make winners. Robert Mattland, Fowlers Corners, Ont.

BARRED PLYMOUTH ROCKS exclusively. At Toronto Industrial and Western Fair, London, Ont. Write for more facts and catalogue. All other exhibitors combined. See them all for sale; eggs in season. Let me know your wants. Leslie Kerns, Freeman, Ont.

ONTARIO DEPARTMENT OF AGRICULTURE

SPRING CATALOGUE SALES

OF REGISTERED PURE-BRED CATTLE

MALES AND FEMALES OF BEEF BREEDS

WILL BE HELD AT THE FOLLOWING POINTS

GUELPH, MARCH 3rd

PORT PERRY, MARCH 11th, 1909

All Stock inspected before being accepted. Only good representatives of the various breeds will be offered.

SPECIAL INDUCEMENT TO PURCHASERS IN ONTARIO

Freight Paid.—The freight on any animals purchased at these sales by residents of Ontario, shipped to purchaser's station in Ontario, will be paid by the Ontario Department of Agriculture. The original receipted freight bill containing the point of shipment and destination, name and registration number rate of the animal purchased and shipped, the estimated weight for billing and the price charged per cwt., should be sent immediately to the Live Stock Branch, Ontario Department of Agriculture, Toronto.

For Catalogues and particulars regarding the Sales, address the Secretary at the point of Sale, or make application to:—

LIVE STOCK BRANCH

ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO

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dealers were able to get as high as \$7.50 a cwt. some cases. The market for dressed hogs closed firm...

PETERBORO HOG MARKET

Peterboro, Feb. 22, 1909.—The delivery of hogs on the local markets last week was very light.

LIVE STOCK

The live stock market here maintains a fairly steady tone all week, especially where the quality was good.

900 to 1000 lbs. each, \$3.75 to \$4.25; medium \$3.50 to \$4., and stockers, \$2.75 to \$3 a cwt.

Lambs were easier and were quoted slow of sale on Thursday at \$5.50 to \$6.75 a cwt.

(Continued on page 30)



ROCK SALT for Horses and cattle, in tons and carloads. Toronto Salt Works, Toronto.

GEO. JACKSON, Auctioneer, Live stock a specialty. Address Post Perry, 'Phone 31.

For Farms, Houses, Lots CONSULT BELL AND TAYLOR 378 Water St. - - - - - Peterboro

FARMS, HOUSES AND LOTS FOR SALE BLEWETT & MIDDLETON, 421 George St., Peterboro.

JERSEYS DON JERSEY HERD Can furnish you with young bulls bred by Golden Lad of Thorncliffe, who was sire of the 1st prize herd at the Toronto Exhibition, 1907.

MISCELLANEOUS JOS. FEATHERSTONE & SON, Streetsville, Ont. Large Yorkshire Hogs for sale. E-1-1009

PONIES FOR SALE Exmor and Shetlands of all ages and sexes, broken and unbroken. P. A. BEAUDOIN, 167 St. James st., Montreal. 9-6-09

HOLSTEINS

FOR SALE—30 HEAD OF HOLSTEINS If you are wanting a choice young cow or heifer it will pay you to write me before making your selection, or better come and look them out.

SUNNYSIDE HOLSTEINS Book your order now for grandsons and daughters of Peteric Hengerveld's Court Dick, champion of the breed.

LYNDALD HOLSTEINS Head your Heifer with a son of Sara Hengerveld Korndyke who was recently sold for \$2,000.

SPRINGBROOK HOLSTEINS AND TAMWORTHS 32 Choice Young Tamworths, from imported sows and bred by Imported Know King David.

HOMÉ-BRED AND IMPORTED HOLSTEINS We must sell at least 25 cows and heifers at once.

AYRSHIRES JAS. BEGG, ST. THOMAS, AYRSHIRES, Standard for this herd is 40 lbs. milk per day.

SPRINGBROOK AYRSHIRES are large product of milk, testing high in butterfat. Young stock for sale.

NEIDPATH AYRSHIRES Bull Gales dropped this spring. By imported Bull First prize Toronto, Ottawa, and Halifax.

LAKESIDE STOCK FARM Ayrshire, Clydesdale and Yorkshires. Write for special prices on Bull.

SPRINGHILL AYRSHIRES Imported and home bred stock of a ages for sale.

ROBT. HUNTER & SONS Long distance phone. 9-6-23-09

STOCKWOOD HERD OF AYRSHIRES stands for everything that is best in this Dairy Breed.

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The Great Wholesale and Retail Horse Commission Market Auction Sales of Horses, Carriages and Harnesses every Monday and Wednesday.

HERBERT SMITH (LATE GRAND REPORTER) Manager

AYRSHIRES

DAVID A. MACFARLANE, Kelso, Ont. milkers, good testers and good lookers. Several young bulls for sale; prices right. 9-9-09

SUNNYSIDE AYRSHIRES Have been bred and imported with a view to combine quality with production.

J. W. LOGAN, HICK STATION, Ont. 9-6-19-09

AYRSHIRES FOR SALE A fine lot of young bulls and calves; also the famous stock bull, 'Not Likely of Ste. Anne, 1907'.

D. BODDEN, Manager, Riverside Farm, Montebello, Que. Hon. W. Owens, proprietor. 9-6-19-09

RAVENSDALE STOCK FARM

Ayrshire, Clydesdale and Yorkshires. If in need of good stock write for prices which are always reasonable.

W. F. KAY, Phillipsburg, Que. 9-6-19-09

BURNSIDE AYRSHIRES

Are in such demand I will make another importation, will attend great depression sale at the world famous Burnside Herd of Mr. Ant. Mitchell.

HUME FARM AYRSHIRES On hand young bulls for service. Several very choice Angus 1908, also for sale in calf, young cows, and cows any desired age.

ALEX. HUME & CO., Mont. P.O. 9-9-19-09

STONECROFT STOCK FARM

Harold M. Morgan, prop. Ste. Anne de Bellevue. Choice Young Ayrshire Bulls and heifers for sale.

STADACONA AYRSHIRES THE CHAMPION AYRSHIRE COW of Canada, for milk, according to the last Herd Book.

GUS. LANGELIER, Cap. Rouge, Que. 9-6-24-09

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Here may be seen some of the best Ayrshires in Canada, Imported and home bred.

HECTOR GORDON, Rowick, Que. 9-9-24-09

WELL DRILLING MACHINES Over 70 sizes and styles, for drilling either deep or shallow wells in rock or soft earth.

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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.

THOS. BOUTHWORTH, Director of Colonization, Toronto. HON. JAMES S. DUFF, Minister of Agriculture.

DISPERSION SALE OF 31 HEAD OF REGISTERED AND 19 HEAD OF HIGH GRADE JERSEY CATTLE

Also 11 HORSES, 6 of them brood mares in foal, 16 Pure-Bred YORKSHIRE HOGS, at Bridgeport, near Berlin, Thursday, March 4th, 1909.

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OUR FARMERS' CLUB

Contributions Invited.

NOVA SCOTIA

ANTIGONISH CO., N. S.

ANTIGONISH.—We have had a very fine winter; splendid hauling up till Feb. 10, when a heavy rain broke up the roads. Most of our farmers have their year's supply of wood hauled. A number of our young men have been taking in the short course at the Agricultural College. An attendance of over 230, including about 30 ladies, took advantage of the course. Our farmers are now getting interested in a seed fair which is to be held on Feb. 26, under the auspices of the Antigonish County Farmers' Association.—Tom Brown.

KING'S CO., N. S.

WATERVILLE.—Eggs are getting more plentiful and have dropped from 30c to 25c. Butter sells for 16c, pork 14c to 15c; hay, 81c a ton; hides, 8c a lb; corn meal, \$1.70; linseed, \$1.25; cordwood, \$4.25 a cord for dry wood, and \$4 for green, but in the western part of the country wood is almost a dollar cheaper. Apples have been selling well in the English markets but prices have declined slightly. There has been good sledding for about a fortnight, but a heavy rain with south winds on Feb. 14th melted most of the snow. The thaw was quickly followed by frosts and as a result the roads are in an icy condition. The roads are in a favorable state. While the roads were in the woods, stave wood, hoop poles and firewood. Chopping is the chief occupation but doors. Indeed, the farmers are studying catalogues, and making inquiries with regard to the "hired man" for the coming season.—Eunice Watts.

QUEBEC

RICHMOND CO., QUE.

DANVILLE.—The Shipton creamery is running this winter and is getting more feed than was expected. Owing to the feed shortage and the high prices of bran and other meal, a small supply was looked for. Beef cattle are selling at fair prices. Dressed pork from nice pigs is selling at 38c a lb. The supply is not equal to the demand and our village butcher has been sending to Montreal for pork. Milk is selling in Danville at 56¢ a quart. These are the highest prices ever paid for milk in this township. Good hired boys are selling at \$14 a 1000 feet, Government scale.—E. J.

ONTARIO

HASTINGS CO., ONT.

THE RIDGE.—Our factory settled up with the stockholders and patrons on Dec. 31st. Everyone seemed pleased with the returns of the summer's sale of cheese. It seems that we are going to lose our genial cheese maker, as he has bought a farm and is going to try his farming instead of cheese making. We are sorry to lose him. Feed seems to be plentiful, and cattle are in good shape. A few of the farmers are still feeding some cattle to sell to the butchers. We have plenty of snow for good sleighing, and the water is coming up in all the springs and little creeks around so there will be no scarcity of water for cattle.—A. B. C.

SIDNEY CROSSING.—The land has been exposed to the frosts. Treats well all winter, the frost has gone well into it, thus insuring good crops next year, weather conditions being favorable. Fall grain conditions are all right yet. We have little to fear from this condition of things as compared with an unfavorable spring. Hay sells for \$12 and \$14. Pork has made a marked advance, live hogs

selling at 87¢, and \$9.50 dressed. Strictly fresh eggs are 55c to 58c. Apples are scarce and sell for 30c to 40c a peck, Spies \$4.50 a bbl. Clover seed (red) from 86¢ to 87¢, white, 85¢ to 86¢; hawley, 95¢; corn, 56¢; potato, 40¢, bran, \$2.25 a ton; wheat, 50¢; potatoes, 75c to 80c a bag. Cows sell anywhere from \$30 to \$100 each, and are very scarce. Sales of good and plentiful and stock sells well. Horses bring good prices and are scarce.—J. K.

DURHAM CO., ONT.

SOLINA.—Winter is rapidly wearing away and is smiling upon the farmer with pleasant days. The stock is coming through a record of plentiful and good, although many of the farmers have nearly finished feeding their turnips, which were a poor crop of last year. Prices for all kinds of stock appear to be good and are likely to advance. There seems to be a good demand for first class heavy horses and prices range from \$150 to \$225. Export cattle are not plentiful but there are many good butchers' cattle being fed. After the record slaughter of Shorthorn in Toronto local breeders are a little more sanguine. Good seed grain is much in demand but scarce, owing to the short crop of last year. The combined winter and low price of red clover seed, is somewhat of a disappointment to seed growers.—J. B.

PETERBORO CO., ONT.

LASSWADE.—Wells, streams, swamps and marshes are all flooded since the last drop of the record snow. The weather which has frozen the swamps, and made them in good shape for the farmer. Lumbering is booming. There has been a great deal of work which is very scarce. Feed for stock is plentiful so far, although hay is very high, about \$15 a ton.—W.

VICTORIA CO., ONT.

MARIPOSA TOWNSHIP.—Just now the poultry business is in full swing, and those who sell are doing well. The price of making a good thing. Spring chickens from 7c to 8c a lb live weight, and from 10c to 12c lb dressed. Other fowl sell in proportion. Fresh eggs also command a good price, but the supply is rather limited. About 30c a doz is the usual price. Creameries are reporting a slight decrease in the quantity of cream. There is no doubt to the scarcity of feed and to the scarcity of the water supply in many cases. Cowmen are getting the average of milk if their food supply is cut off in any way.—B. W. H.

WELLINGTON CO., ONT.

LIVINGSTONE.—The people here soon be preparing to move. Grain here is a good price, as really good grain was scarce last winter. Being plentiful, it is not a very good price. The price of neighbors are getting a hay press and are commencing to bale the hay.—A. M.

BELWOOD.—The farmers are getting out their winter food. Many have been getting it out with circular threshers. Before the recent thaw water was very scarce some having to drive their cattle to the river, others taking a wheelbarrow and drawing water from the river and emptying it into their wells.—J. H.

BRANT CO., ONT.

FALKLAND.—Buyers are offering \$1 a bush for wheat. Some are still holding. There is considerable wheat at higher yields. Other grains stand the same as last winter. The price of wheat has risen in price. Hogs are \$5.50 to \$5.75 live in price. The price of corn is 27c, and eggs 27c to 30c; eggs are in good demand. The recent rains have added dryness, and there is some ice on the held on February 15th. There was some dissatisfaction amongst the farmers as to the returns they have been receiving from cream sent to the factory.—T.

OXFORD CO., ONT.

GOLSPLE.—We had our farmers' institute meeting recently. It was well attended. We had good speakers, and it was very interesting to hear them. They were well posted on their subjects. Grains of all kinds are well. Wheat is \$1 a bush; butter and eggs have sold high all winter.—A. M. M.

MIDDLESEX CO., ONT.

TEMPO.—The poultry number was a good one, and gave much valuable instruction which if followed out, must increase the egg and poultry output wonderfully. Our hens took the hint and began to lay the very day that issue of Farm and Dairy came, and have attended strictly to business since. A firm nearby who have for years bred splendid hoes, have

LIVE HOGS

We are buyers each week of Live Hogs at market prices. For delivery at our Packing House in Peterborough, we will pay equal to Toronto market prices. If you cannot deliver to our Packing House, kindly write us and we will instruct our buyer at your nearest railroad station, to call on you.

THIS WEEK'S PRICES FOR HOGS DELIVERED AT FACTORY

\$6.60 a Cwt.
FOR HOGS WEIGHING 160 TO 220 LBS.

THE GEO. MATTHEWS CO., LIMITED

PETERBOROUGH, - HULL, - BRANTFORD

had the misfortune to lose four fine young horses, and have four others still sick. The cause, so the vet says, is from the horses eating the chaff and straw, from which clover seed has been threshed, thus on heating formed a poison, which acts similar to wood alcohol, and is fatal.—J. E. O.

CALDER.—I had the pleasure of driving around in this part recently. On every hand there were signs of prosperity, and I saw in a number of places where preparations were being made to add greatly to the already fine buildings on the farms. Around Calder the grade Shorthorns appear to take the lead in the cattle line, the principal heads of the herds weighing over a ton. In all the stables visited a number of steers were being prepared for a future market. I saw on the farm of Wm. Vicary three beautiful fields of wheat, perhaps 50 acres, and although late in February they appeared green and nice, and more like June. Every drill mark and furrow, seemingly, had been placed there by a carpenter's line. On many of the farms I saw handsome flocks of sheep; the shrophires appear to predominate.—J. E. O.

LAMBTON CO., ONT.

WYOMING.—Feed is quite plentiful. First class hay can be procured at 88 a ton. Coarse grains and mill feeds are firm in price. Many farmers do not favor the idea of raising pork at the present prices of grain. Butchers' cattle are very scarce, costing the butcher over \$7 a cwt. Young pigs are not plentiful; the result will be a continued high price. Heavy hogs are in good demand; light ones are rather dull. The great need in this level, fertile country is underdrainage. There are

yet thousands of acres of drowned or partly drowned crops yearly.—D. N. A.

BRUCE CO., ONT.

CLUNY.—Clover is suffering from the constant freezing and thawing. Grass cattle seem to be scarce. A number of farms that were used for pasturing cattle, were broken up for crop last year. The acreage for spring crops will be much larger than for the last three years. There were a favorable crop with us last year, and a good part of the sod broken will be sowed in peas. Some excellent crops of spring wheat have been grown of late but the yield in some cases being better than that of fall wheat.—J. M.

GOSSIP

IMPORTANT TO BREEDERS. George Rice of Tillsonburg, of Holstein-Friesian cattle fame, is about to retire from business, and take a long rest. Mr. Rice has secured a piece of property in Tillsonburg, on a beautiful elevation overlooking the lake, and purposes building a new house. On March 11 and 12 next, Mr. Rice will offer all his thoroughbred stock and farm implements for sale. This will probably be the most for sale in Canada, and will attract buyers from all parts of Canada and the United States. Mr. Rice having a continental reputation as a breeder of pure-bred cattle.

Can Safely Recommend Castile Balsam. I have been using your Gombault's Castile Balsam and find it very successful. I have also been recommending it to my friends with success.—CHAS. H. KERR, Millerville, Alta., Can.

RAW FURS and HIDES

Write for Weekly Price Lists.

JOHN HALLAM

Shipments Solicited.

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Corn and Straw Cutters

are the safest, strongest, easiest to operate and best cutters made.

PLOWS
Farmers everywhere testify to the splendid work of our plows

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HOLSTEIN FRIESIAN NEWS

The Canadian Dairyman and Farming World is the official organ of the Canadian Holstein-Friesian Association...

Copies of the photograph taken at the banquet of these transfers is paid for by the Holstein Friesian Breeders' Association...

BULL TRANSFERS FOR JANUARY, 1909.

The publication of these transfers is paid for by the Holstein Friesian Breeders' Association. Alberskirk Sam A. B. Hulet to Ira Thiele...

Clothilde Posch, L. Abbott to Donald F. Smith, Camlachie, Ont. Cobequid Sir Rooker, Samuel Dickie to W. J. Lyden...

Hilton Belle's Sir Jacob, Frank Terry to Thad N. Gunter, Frankford, Ont. Homestead De Ko, Andrew Thompson to T. A. Brock...

Rue de Cloine, John Hoppe to Thomas Dunham, Campbellford, Ont. Hupner De Kol Posch, Moses Morley to C. Brock...

AYRSHIRE AND HOLSTEIN SALE

Byrd Farm and Dairy—Regarding the Ayrshires in my forthcoming sale, March 11th and 12th, the first one Jean Armour...

Great Dispersion Sale

At Annandale Stock Farm

ON THURSDAY AND FRIDAY, MARCH 11 AND 12, 1909

100 Registered Holsteins and Ayrshires 100, 20 Brood Sows and 20 Shoats...

THE HOLSTEINS.—There is one daughter of Calamy King, one daughter of Calamy King 2nd...

AYRSHIRES include public test cows Jean Armour and Annie Lagoda 2nd, their sons and daughters. There will be 13 Ayrshire cows...

THE HORSES include a Clyde mare, 6 years old, weight 1700 lbs. with foal; span of Hackneys, two and three years old...

ALL THE FARM MACHINERY. Potato engine, planter, sorter, sprayer and digger, upright horse saw, two 1/2 horse and one 1/3 horse lawnmowers...

TERMS.—Time to be paid to suit purchaser, on approved notes bearing six per cent. interest. Sale of stock under cover...

AUCTIONEERS

Mrs. E. Italiana, Norwich. Col. D. L. Perry (The Only). E. H. Moore, Tillsonburg. L. G. Pearce, Tillsonburg. E. J. House, Tillsonburg.

Catalogues by 26th February. Write—GEO. REICE, Tillsonburg, Ont., Proprietor.

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

LIVE STOCK

(Continued from page 27)

don cable of Feb. 18 quotes bacon as follows: "Market is quiet with prices about as last quoted. Canadian, 58c to 66c."

EXPORT BUTTER AND CHEESE

Montreal, Saturday, Feb. 20.—The cheese trade is very quiet with orders at a premium, and the stock of unsold cheese here is gradually dwindling away. Mail ad-

vice from the other side indicate fairly strong markets there with prices about a shilling up all around. The arrivals of New Zealand cheese are steadily increasing, and the British dealers are devoting more of their attention to the disposal of these goods than to the remnants of the Canadian make. New Zealand cheese do not bring as good prices as Canadian, our cheese commanding a premium of fully 1/2c a lb. over the other. The large quantity of New Zealand's offering, however, is

likely to keep prices from advancing any further. Shipments from here during the past week totalled nearly 5,000 boxes and it is expected that fully as many more will be shipped out this week. This will reduce the stock here considerably, and at the end of the month there should not be more than 50,000 boxes in Canada. Dealers here will be glad to see the last of them as the season has not been a very profitable one.

The butter market has steadied itself somewhat since the recent decline in prices, and there has been no downward movement to note. There seems to be a little more demand at the lower prices asked and this seems to be maintaining the market at present. Prices are likely to be maintained at the present level for a week or two provided there is no falling off in the present demand, or a sudden increase in the receipts from the country.

Every safe Lock Shingle is made to meet the rigid requirements of the British Government for Admiralty and other Public Service



to proper size for Safe Lock Shingles. The only shingle with galvanized edges.

The only shingle sold with a positive protective guaranty against lightning, backed up by a free insurance policy signed and sealed by the manufacturers, the Metal Shingles & Siding Company, a \$200,000.00 Canadian corporation.

Every Canadian farmer who expects to put up a new barn or house or to re-roof old buildings is directly interested in this extraordinary free offer.

Think of it! A straight-out lightning insurance policy free from conditions of any kind. It is the most liberal offering ever made to Canadian farmers.

Insurance records show that one-half the fire losses on barns in Canada result from lightning. The property loss in these cases amounts to many thousands of dollars every year.

Safe Lock Shingles have been on the market for more than ten years, and in all that time no building covered with them has ever been harmed by lightning.

This proves to us that Safe Lock roofing is a positive guaranty against lightning.

Anyway, we are willing to show our faith in Safe Lock Shingles and will protect you from lightning without one cent additional cost to you, directly or indirectly.

Safe Lock Shingles are sold at the same price as shingles known to be inferior in quality of steel, galvanizing and construction.

Safe Lock Shingles lock positively and securely on all four sides. They cannot be blown off, nor can they be pulled apart through the warping of the sheeting, or in any other way.

And remember this—No other shingle is a Safe Lock Shingle.

Safe Lock Shingles can be found in every part of the Dominion of Canada where they have been subject to storms of all degrees of severity, or in any other way.

No building covered with Safe Lock Shingles has ever been unroofed.

We want you to know what some of the users of Safe Lock Shingles say of them.

R. T. McLAUGHLIN, Fair View Farm, Alton, Ont.—"The 'Safe Lock' makes your shingles absolutely wind and water proof. They are the best shingles on the market to-day."

F. B. DOUB, Branchton, Ont.—"The Galvanized Steel roof is apparently as good as when put on in 1898. The 'Safe Lock' Shingles make a lasting, storm-tight roof, and give clean easter water. 'I am satisfied that I put on a good roof.'"

W. J. McPHERSON, Berryton, Ont.—"The 'Safe Lock' Shingles that I purchased from you ten years ago have given splendid satisfaction. The roof has never leaked a drop, and they seem to be just as good as the day they were put on."

J. C. PAYNE, Cayuga, Ont.—"It must be ten years now since I bought the metal 'Safe Lock' Shingles, and up to this time I have no reason to regret their purchase. We have had wooden roofs put on shingles. No difficulty in spots from the splitting and shrinkage of shingles. So far as I have been able to see, I have seen no wear or injury to roof is just as good as when it went on."

MURDOCK MCKENZIE, Dear Line, Ont.—"The 'Safe Lock' Shingles have never given me any trouble, and they appear to be as good to-day as the day I put them on. I am well satisfied with them, and I believe them to be the best roofing that can be used on barn buildings."

GEO. HARDY, Ashgrove, Ont.—"It will be eight years in June since the barn was shingled. I never had any trouble with it in any way, and it appears to be as good as when put on. I have been recommending your shingles as the best that can be got."

MRS. JAMES STEWART, Pendleton, Ont.—"In reply to your letter asking about shingles I bought from you over five years ago. I looked the roof all over to-day, and they seem to be in as good condition as when they were put on the roof. The shingles don't seem to be any the worse for wear, and they will last for years."

Send to-day for our book, "The Truth about Roofing," and full details of our Fire Insurance Policy payable in cash if your Safe Lock Roof is damaged by lightning.

The Metal Shingle and Siding Co. Ltd.

"Roofers to the Farmers of Canada"

Dover Street Factory, Preston, Ontario

Branch Factory, Montreal

CUT OFF THIS COUPON AND MAIL TO US

My roof measures.....ft.....in. long.

The Metal Shingle and Siding Company, Limited

Dover Street Factory, Preston, Ontario

Please send me your booklet "Truth about Roofing," with full particulars of your Free Safe Lock Lightning Insurance Policy.

I expect to build.....

Kind of building.....

Size of Roof.....

If interested in any other Metal Building.....

such fact here.....

Name.....

P.O.....

Province.....

My roof measures.....ft.....in.

The Right Kind of a Roof



Long years before you could find a sign of wear-out about an "Oshawa"-shingled roof, any wood-shingled roof would be rotted to dust. Any ordinary metal-shingle roof would be pitted with thousands of rust holes. Any patent paper-and-tar roof would be ragged pulp. Even a slate roof would be dangerously out of repair—

Long, long before any "Oshawa"-shingled roof needed a single thing done to it.

Because, as you can easily see for yourself, there is simply nothing TO year out about a shingle of heavy (28-gauge) toughened steel, special galvanized to defy



moisture — "Oshawa" Galvanized Steel Shingles are like that.

We are safe enough in guaranteeing these shingles for twenty-five years, as we do, in plain English, with a quarter-million dollars back of the written guarantee, which says:

If any roof that's "Oshawa"-shingled in 1909 leaks at all by 1934, we will put on a new roof for nothing.

Honestly, we believe an "Oshawa"-shingled roof will last a century, let alone twenty-five years. Why shouldn't it?

These heavy steel galvanized shingles lock underneath on all four sides in such a way that the whole roof is practically one sheer sheet of steel—without a crevice or a seam to catch moisture or to let wet get through.

You need never put a brushful of paint on an "Oshawa"-shingled roof, the special galvanizing makes paint entirely needless, and it won't wear off nor flake nor peel. Yet that roof will be Rain-proof, Snow-proof, Wind-proof, Weather-TIGHT as long as the buildings stand.

Fire-proof, of course. How



could a seamless sheet of tough steel catch fire? That alone is worth the whole price of these Oshawa Galvanized Steel Shin-

**Lasts a Century
Never Needs Painting
Can't Catch Fire
Makes Buildings Lightning Proof**

Half a million dollars doesn't cover the damage lightning did last year to Canadian farm buildings alone, and "Oshawa"-shingling would have saved all that loss.

Yet, with all these things to show you that an "Oshawa"-shingled roof is the RIGHT roof for you, "Oshawa" Galvanized Steel Shingles cost no more than wood shingles to start with. Let me tell you just what it would cost to roof any building right. You needn't figure the labor, for anybody who can use a



hammer can put these shingles on easily and quickly.

Will you let me send you sample shingles, an estimate, and book that tells all about "Roofing Right"? It would pay you, I think, to read the book. It's free, of course.

Just address our nearest place Ask for Roofing Right Booklet No. 9.

G. A. Pedlar.

PEDLAR PRODUCTS include every kind of sheet metal building materials—500 many items to even mention here. You can have a catalog—estimate—prices—advice—just for the asking. We'd like especially to interest you in our Art Steel Ceilings and Side Walls—they are a revelation to many people. More than 2,000 designs. May we send you booklet and pictures of some of them?

**"OSHAWA"
GALVANIZED STEEL
SHINGLES**

A new roof for nothing if they leak by 1934

gles. Count the saving in insurance rates (any company makes a lower rate on buildings so shingled). Count the freedom



from anxiety, the safety of your houses and barns.

And, a most important fact to you, an "Oshawa"-shingled roof is LIGHTNING-proof! Positively proof against lightning — insulated far better than if it bristled with lightning rods.

The PEDLAR PEOPLE of Oshawa

ADDRESS OUR NEAREST WAREHOUSE:

MONTREAL
321-3 Craig St. W.

OTTAWA
423 Sussex St.

TORONTO
11 Colborne St.

LONDON
86 King St.

CHATHAM
300 King W.

WINNIPEG
76 Lombard St.

QUEBEC
117 Rue du Pont

ST. JOHN, N. B.
43-46 Prince William St.

HALIFAX
16 Prince St.

WE WANT AGENTS IN SOME SECTIONS.

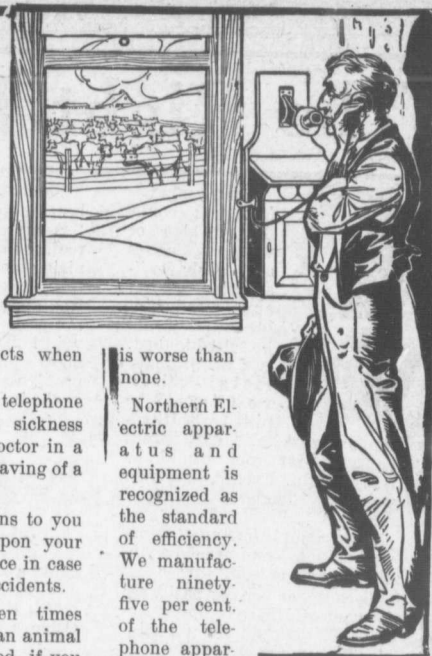
WRITE FOR DETAILS.

MENTION THIS PAPER.

ESTABLISHED
1861

1230

Do you realize exactly what a telephone means to you, and at what little cost you can have an efficient service—



HAVE you ever gone carelessly into the advantages of having a telephone on your farm?

Have you ever considered what help it would be to you? What money and worry it would save you?

Let us just see what it does mean to you.

When you want something from town—a new part for your reaper, a particular kind of wire fencing, or any of the many things that you may want from time to time which requires a special explanation—under ordinary circumstances you have to go into town yourself and lose a half-day that could be profitably spent on your farm.

Over the telephone you can explain exactly what you want, make sure your dealer has it and then send a boy for it.

When you are ready to sell your cattle, grain, hay, etc., you stand to lose considerable money unless you know what the current prices are before you ship your produce into town. With a telephone it takes you but a moment to find out how the market stands and you

can sell your products when prices are highest.

Just think what a telephone means to you when sickness comes—getting the doctor in a hurry may mean the saving of a priceless life.

Think what it means to you to be able to call upon your neighbors for assistance in case of fire, violence or accidents.

Haven't there been times when you could save an animal that could be ill spared, if you could get a veterinarian in time?

Besides this, think what it means to your women folk—social chats that brighten the day, arranging of visits, getting up parties—the telephone puts you in close, intimate touch with your neighbors in spite of the distance that separates your homes.

You can have this valuable service at very little cost.

But the only way to get the right service is to get the right telephone. You must have one that you can depend upon day in and day out—one that will always give you perfect service. A reliable telephone is of inestimable value—a poor telephone

is worse than none.

Northern Electric apparatus and equipment is recognized as the standard of efficiency. We manufacture ninety-five per cent. of the telephone apparatus used in Canada—the kind that is in use from Halifax to Vancouver. So, if you want accurate, dependable service, buy and use only Northern Electric apparatus and equipment.

The first step towards getting such a service is to write for our book "Rural Telephone Equipment" and talk it over with your neighbors.

Write us and say you are interested getting the right telephone service in your community and we will send you full particulars. Ask for Bulletin No. 1516 and we will send you detailed particulars.

Write to-day.

THE NORTHERN ELECTRIC AND MANUFACTURING CO. LIMITED

**MONTREAL
TORONTO**

Manufacturers and suppliers of all apparatus and equipment used in the construction, operation and maintenance of Telephone and Power Plants

**WINNIPEG
VANCOUVER**