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VOL. XXVIII

NUMBER 39

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

SEPTEMBER

1909



DIGGING THE FAMOUS "STADACONA" POTATO AT STADACONA FARM

Modern machinery and lots of horse power save the wage bill. The growing of potatoes on large areas is becoming more and more difficult on account of lack of labor. This condition of affairs can be overcome by the use of up-to-date machinery, including potato planters and potato diggers. Some growers think that the potato digger does not do its work well. One test with a good machine is sufficient to show otherwise. A glance at the illustration will show that it does its work successfully on Stadacona Farm, the property of Mr. Gus. A. Langelier, Cap Rouge, Que.

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CANADIAN COUNTRY LIFE

Never Out of Balance

The Self-Balancing Bowl!

in the Simplex Separator overcomes the greatest weakness previously met with in cream separators, namely: the liability of the bowl to get out of balance. If a bowl be ever so slightly out of balance it will not separate cleanly. This has been proved again and again by actual test. Remember that when you lose part of the cream you are losing money. Nor is this the only loss when a bowl is out of balance. A great deal of extra wear and tear is thrown upon it, thus greatly shortening its life, as well as lessening its usefulness.

No trouble of this kind ever occurs when the new Simplex Separator is used with the Self-Balancing Bowl. It is made with a system of bearings so that it will run evenly and quietly, even if out of mechanical balance. A weight several times greater than what would throw an ordinary bowl out of balance, will not in the least affect the smooth running of a Simplex Self-Balancing Bowl. In fact, a Simplex Self-Balancing Bowl

CANNOT GET OUT OF BALANCE

You do not want to make any mistakes when you buy a cream separator. You want one that will get all the cream all the time. This machine is the Simplex Link Blade Machine with the Self-Balancing Bowl. It does not commence to cause you trouble after you have used it a short time. Instead of that it improves with use. Have one sent to you for a free trial and be convinced.

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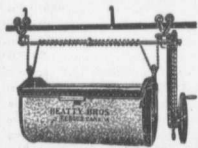
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2nd Because they are the best machines made for handling Litter and Feed. Let us tell you what they will do and why they are better. We also build Cow Stanchions, Steel Stalls, Hay Carriers, Forks and Slings.

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Corn Exhibit at Toronto

The most striking feature of the Ontario exhibit at the Toronto Fair was the corn display of the Ontario Corn Growers' Association. The object of the exhibit was to show the growers of ensilage corn, the type, and varieties of seed grown in the counties of Essex and Kent. Hills of Howey, Bailey, White Cap, Yellow Dent and Golden White Cap, grown from American seed, alongside the same varieties grown from Canadian seed at the Essex Experimental Station were dug up and displayed in trenches, giving the farmers a chance to see how much earlier the corn obtained from the Canadian seed matured. The corn from the Canadian seed was at least two weeks in advance, which proved beyond a doubt the advantage of Canadian corn for ensilage purposes.

Howey, Bailey, White Cap, Yellow Dent and Golden White Cap, are good varieties of ensilage corn, and are well suited for ensilage in Eastern Ontario. The hills of these varieties showed to great advantage over seeds of Yellow Dent, Mammoth Southern Sweet and other late varieties, the ears being more mature, thus showing the advantage of growing these early maturing varieties, which will produce ensilage more palatable, and of a higher feeding value.

Fifteen varieties of the leading dent and flint corns were shown on a large pyramid erected in the centre of the enclosure, which showed the corn in a very attractive manner. The large full ears were so arranged that they could be examined with ease, and thousands of farmers enquired as to the qualities of the various kinds of corn shown.

Circulars containing the names of prominent growers of seed corn were distributed, thus giving the eastern farmers a chance to get in touch with the growers in Essex and Kent.

The exhibit was something new at the exhibition, and was a surprise to many, who never thought corn of that quality could be grown and matured in Ontario. The Ontario Corn Growers' Association certainly deserve credit for their beautiful and instructive display.

A Well Managed Farm

What may be accomplished in the preservation of a forest is well illustrated on the farm of Messrs. L. S. Hall & Son, near Churchville, Peel Co., Ont., who are competitors in the Farm and Dairy's Prize Farms Competition. There is about 12 acres of bush upon this farm, in two blocks. Stock has been kept from pasturing in this bush for 25 years. Valuable young trees of ash, maple, elm, beech and white pine are growing very thickly and are from 30 to 50 feet high. A representative of the Farm and Dairy who visited this farm was told that the grandfather of Mr. L. S. Hall, took up this land from the Crown in 1824 when this part of the country was a primal forest. The farm consists of 150 acres and had been covered with large white pine when in the natural state, as is shown by the pine stump fences and pine rails that would be worth thousands of dollars if standing in timber today.

There is a fine bank barn and other buildings such as implement house, piggery, henney and ice house. The barn has stone stables and cement floors and is ventilated by sub-earth ducts that have the fresh air come in the feed room in front of each animal. This has given good satisfaction by keeping up the supply of fresh air. The dwelling is a fine substantial brick structure built in 1859 with fine lawn in front. There are two orchards consisting principally of apple trees. The land is fairly level but with sufficient fall to carry off surface water.

A spring creek runs across the farm which supplies the stock in the pastured fields and at the barns with water. No underdraining has been done on this farm.

There is a good herd of Jersey cattle of the utility type kept, that give a good account of themselves.

The crop rotation followed is a five year one as far as possible. A good system if farm accounts is kept. That part in connection with their rotation is worth special mention. Each year a map is made of the farm and each field thereon is marked with the crop grown upon it that season. These maps are kept in a book. By turning up any year, it can be seen at a glance what the crop was in any particular field. Messrs. Hall & Son have a phone in their house which they find of great convenience to them.—H. G.

Sow Thistle a Menace

Editor, Farm and Dairy.—In the last paragraph of an editorial on "Sow Thistle" in a recent issue of Farm and Dairy you say, "something more radical than has yet been attempted must be done." In this you have expressed my views more clearly than I could have done.

We have some sow thistle, fortunately not as much as some sections,

Ample Repaid for his Efforts

Have just received from Mr. Methew Standish, of Rougemont, Que., the Chester White pig with pedigree which you gave me as a premium for securing seven new subscribers to Farm and Dairy. The pig was seven weeks old. We think it a good specimen of the Chester White breed which I wish to accept my thanks for this valuable premium, which has amply repaid the effort to secure the subscribers. — John Manson, Compton Co., Que.

but very unfortunately it is gaining on us. Nearly any farmer one may talk with here will seem to be the worst we have to deal with, but this lack of initiative, common to us as a class, manifests itself very clearly, as I have yet to hear of farmers themselves making any organized effort to get rid of the pest. Our own way of keeping, or rather trying to keep it in check, is perhaps much like some of the methods described in Farm and Dairy. If you can in any way be instrumental in getting not only the farmers but even some indirectly interested in agriculture to get busy, even to the extent of legislation, so that they would not under obligations to you.—Frank Webster, Victoria Co., Ont.

Butter-making Competition at London

Strictly amateur, open only to persons who have never spent any time in a dairy school or creamery—1. Mrs. A. A. Simpson, Atterton; 2. Miss M. Johnston, Bowood; 3. Nettie Carrish, Roseville; 4. Mrs. W. Hill, Parkhill; 5. Ruth Patton, Newton Brook; 6. Miss T. A. Gregory, Poplar Hill. Dues on any lady or gentleman in the Dominion of Canada—1. M. L. Carrish, Roseville; 2. Miss M. Johnston, Bowood; 3. Nettie Carrish, Roseville; 4. Katie M. Wolfe, Guelph; 5. Mrs. A. Simpson, Atterton; 6. G. E. Knight, Nulton.

Special sweetstakes open to all except 1st and 2nd prize winners in above classes, prizes to be awarded entirely on the basis of this competition: 1. Katie M. Wolfe, Guelph; 2. Nettie Carrish, Roseville; 3. Annie Green, Lovel; 4. Mrs. W. Hill, Parkhill; 5. Ruth Patton, Newton Brook; 6. L. R. Pond, Sparta.

Issued Each Week

Vol. XXVIII.

A Bright Future for Market for What Co.



J. R. Hutchison, B.S.A.

reference is also Mr. A., the proprietor Farm," in order others may be encouraged to grasp the opportunities in this, or other parts of New Ontario that await them.

As one leaves the more settled part of Ontario travelling westward by train along northern shores of Huron and Superior is impressed with the amount of waste lands from the farm. This is not for culture though it has an evidence of being in mineral wealth, and there a clearing farm in this vast reminds one of an in a desert. Westward, as it is often becomes apparent until the twin cities of Fort William and Arthur are reached.

THE TWIN CITIES. Fort William is a dourly active. It doubled and trebled its few years. It is a center at the head of the lake termini of the ways, C. P. R., G. T. liam has the essential cessful operation of

The city has 35,000 or developed and 100 elevators have a capacity total elevator capacity under construction—is Fort William handles between eastern and west. As we look upon the

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&
RURAL HOME

Only \$1.00
a Year

FORMERLY THE CANADIAN DAIRYMAN AND FARMING WORLD

Vol. XXVIII.

FOR WEEK ENDING SEPTEMBER 30, 1909.

No. 39.

AGRICULTURE IN THE SLATE RIVER VALLEY

A Bright Future for the Valley is Assured. The Rapidly Growing Twin Cities Provide an Unlimited Market for Farm Products.—Comments on General Conditions with Special Reference to What One Man is Doing. Written by a Special Farm and Dairy Correspondent.



J. R. Hutchison, B.S.A.

AGRICULTURE, the greatest of all Canadian industries, must always command the attention of all engaged therein, and outsiders as well, they being so largely dependent upon agriculture for their own prosperity. This article seeks to enlighten its readers on conditions in the Slate River Valley with some forecasts as to its future; special reference is also made to J. R. Hutchison, B.S.A., the proprietor and manager of "The Valley Farm," in order that others may be encouraged to grasp the opportunities in this, or other sections of New Ontario, that await them.

As one leaves the older and more settled parts of Ontario travelling westward by train along the northern shores of lakes Huron and Superior, he is impressed with the vast amount of waste land visible from the train. Much of this is not fit for agriculture though it has given evidence of being rich in mineral wealth. Here and there a clearing or a farm in this vast area reminds one of an oasis in a desert. Western activity, as it is often termed, becomes apparent not until the twin cities of Fort William and Port Arthur are reached.

THE TWIN CITIES.

Fort William is wonderfully active. It has doubled and trebled its population during the last few years. It is a center of commerce. Situated at the head of navigation and possessing the lake termini of the three Transcontinental Railways, C. P. R., G. T. P. and C. N. R., Fort William has the essential features to ensure the successful operation of every kind of industry.

The city has 35,000 H. P. Hydro-electric power developed and 100,000 H. P. in reserve. Its elevators have a capacity of 14,250,000 bushels; its total elevator capacity—receiving grain and under construction—is over 60,000,000 bushels. Fort William handles practically all traffic between eastern and western Canada.

As we look upon these cities of extensive and

rapidly increasing population, we are bound to ask ourselves, "Whence is their source of farm produce supply?" The most productive center of agriculture, in the immediate vicinity of Fort William and Port Arthur, is the Slate River Valley. This Valley is situated almost directly west of the city of Fort William. The Valley proper is made up almost entirely of the township of Paipoonge, though it takes in a small portion of the northern part of Blake township. It is in every sense of the word a Valley, it being surrounded on the Southwest and North by a somewhat broken range of hills. These abound in minerals and are the natural home of moose and red deer. The small lakes in these hills, or mountains



A Comfortable Farm House in the Slate River Valley, Thunder Bay District.

The average traveller passing through Fort William on the G.P.R., gains the erroneous impression that there is practically no agricultural land in the vicinity. Considerable valuable land is situated in the Slate River Valley, back of this city. The adjoining article, by a special Farm and Dairy correspondent, deals with the agriculture of this district.

as they are locally termed, abound with fish, mostly trout. The Kaministikwia River passes through the northern part of the Valley. The Kakabeka Falls is on the "Kam.", only 10 miles west of Slate River station. It is from these falls that the electric power is produced for the twin cities. The falls themselves and the rapids above are a beautiful sight. They are surrounded by parks and are a very popular summer resort.

SOIL IN THE VALLEY.

The Valley has a most excellent fertile soil, which is free from stone. The soil varies from a light sand to the heaviest clay. Much of it has a clay sub-soil with a cover of sandy loam on top. The township of Paipoonge alone contains about

40,000 acres of land suitable for agriculture. The medium or lighter soils seem to be the best suited to the climate. Owing to the comparatively short season the lighter and warmer soils mature the crop more quickly. Of the 40,000 acres there are about 33,000 under cultivation. Much of the land is not hard to clear. The more easily cleared and the best located properties however, are held by speculators who do not reside in the locality. Up to the present the farmers have made a practice of selling practically all their farm produce such as hay, and grains, thus robbing the soil of its natural fertility. The excellent market in Fort William has been largely to blame for this.

During the last couple of years farmers have been paying more attention to the dairy industry. In order to put the dairy business on a better basis and to carry it on more extensively a number of farmers have formed themselves in a co-operative association with a distributing depot at Fort William. This Slate River Valley market depot in the city is well equipped and has done quite an extensive trade in ice cream, butter and cottage cheese, besides carrying on a retail milk trade.

RETURNS FROM THE DAIRY.

Some idea of the profitability of the dairy may be gained from figures given in the following, which are those from the Valley Farm owned by J. R. Hutchison. The exact weight of milk produced by each cow is recorded on the Valley Farm, tests for fat being made several times during the year. A complete outfit of Babcock testing apparatus is kept for the purpose. The Simplex Cream Separator is used. Skim milk is all fed on the farm and cream sold in the city. The following figures for June, July and August, will give the reader some idea of the market value of dairy products in Fort William.

Number of cows12
Amount of milk during June10,467½ lbs.
Cream sold for\$227.50
Amount of milk during July10,319 lbs.
Cream sold for\$224.50
Amount of milk during August9,176 lbs.
Cream sold for\$209.00

Mr. J. R. Hutchison purchased 1,000 acres of what is now called "The Valley Farm," three years ago. It is nine miles west of Fort William. The farm was not cleared and had no improvements. Mr. Hutchison has now under cultivation 150 acres. The Kaministikwia River runs through the farm giving an abundance of pure water besides greatly adding to its beauty. The

soil of this particular farm is mostly clay loam.

The principal crops grown are clover, oats and potatoes and garden crops. The clover plant is practically a weed in this district. It is doubtful if there is any section in Ontario that can parallel the Slate River Valley for growing clover; the illustration on this page, will give some idea of its luxuriant growth. It would appear that clover seed could be grown here to perfection as there is no trouble with insects, and as shown in the illustration, the plants are practically covered with blossoms. Potatoes and all garden crops grow well.

All produce, without any exception, finds a ready market in the cities of Fort William and Port Arthur. Owing to the rapidly increasing population of these cities a very large percentage of their farm produce is imported. The development of the cities is far more rapid than that of the country. Butter seldom falls below 35 cents a lb., while milk is never less than 10 cents a quart.

DAIRYING A SPECIALTY.

Dairying is becoming a specialty with some farmers and as just indicated the outlook is bright. Mr. Hutchison intends to make dairying the chief branch of his farming operations. At present he has a herd of only 12 grade cows—Holsteins. He has recently secured an exceptionally well bred Holstein bull from Mr. G. A. Brethen, of Norwich, Ont. The clover previously mentioned, in addition to oat hay is relied upon for fodder. Very little corn has as yet been grown, though it would do well in most seasons. Buildings on the farm at present consist of house, and a large hay barn, with a one story stable attached—capacity for 60 cows.

The Slate River Valley in general affords an excellent field to any energetic young man to engage in any one of the following lines of farming: Dairying, market gardening, growing of small fruits, poultry raising, swine raising, agriculture. Markets in Fort William right at one's door, as previously indicated, are not to be surpassed in Canada. The amount of farming land that has been developed is insufficient to supply more than a mere fraction of the needs of the twin cities, hence the excellent prices for perishable goods. The greater part of the produce for the twin cities is shipped in from outside points such as Owen Sound and Duluth. There is not the slightest danger of there being an over-production of farm products in this vicinity as the cities are making such rapid progress.

TRANSPORTATION FACILITIES.

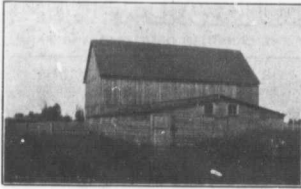
An important factor in any farming community is the facilities for transportation and the marketing of the soil products. Slate River Valley, in the more settled parts, is particularly well favored, with good roads. Nature has favored this section with excellent road making material, which is at hand in the nearby hills. The enterprise and the unceasing efforts of the municipal councils have put at least the main roads in such a state that it is doubtful if any section in Ontario, either Eastern or Western, can boast of as fine roads as are to be found in the Slate River Valley. The Valley is also connected with the cities by the main lines of the Canadian Pacific, the Canadian Northern and the Port Arthur and Duluth lines of railways. An electric road, to connect Fort William and Kababeka Falls, passing through the Valley, is under construction. Three miles of the road have already been built. Farmers are expecting that this electric road will lend a great boom to agriculture locally.

A number of farmers have formed a company and have constructed a telephone system, which gives residents in the Valley telephone connection with Fort William and Port Arthur and with other outside points. The company has taken every precaution to have an up-to-date system. They have a local exchange. The system locally

has over 50 miles of wire besides the trunk line extensions.

NEED EXPERIMENT STATION.

A percentage of the farming community in the Slate River Valley is made up of persons who have previously been engaged in some occupation other than farming. An experimental station could be made of great benefit to these people. It is evident that there is great room for im-



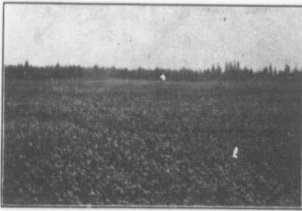
Hay Barn and Stables on "The Valley Farm."

The Valley Farm, situated in the Slate River Valley, near Fort William, Ont., and which receives mention in the article on page 4, is admirably adapted for dairying, and has been fitted up with a view to that industry.

provement in the way of using better varieties of grains, etc.

Climatic conditions in the Valley seem to be somewhat different than in most other sections. The climate is nearly ideal with the exception of there being rather long winters. The roads to the cities, however, are nearly always good and are never blocked with snow. The winter weather is cold and steady, with plenty of sunshine. The summer climate is delightful. Growth is very rapid owing to the warm bright days.

The Slate River Valley, located as it is close to the two growing cities of Port Arthur and Fort William, and with all its natural beauty, present developments and bright prospects, is



A Luxuriant Crop on "The Valley Farm."

A corner of a red clover field on J. B. Hutchison's farm, showing the second crop in full bloom. Photo taken especially for Farm and Dairy by our own correspondent.

not only a fine place in that to reside, but it affords an excellent opportunity for ambitious young men and their sweethearts. The future prosperity of the Slate River Valley is assured. —M. E. N.

A Concrete Cistern for Rainwater*

Peter De Linde, Zion City, Ill.

There should be a good cistern near the kitchen floor of every dwelling house in the land, as good water from the clouds is indispensable in every household. The materials for a good concrete cistern cost very little, and any workman can construct it; when once constructed it will do good service for many generations.

The disease-breeding rainwater barrels at the house corners, half full of stinking water, are a nuisance which should be prohibited. Another nuisance is a cistern consisting of a round hole dug in the ground and covered with an old door,

*Reproduced from "Cement," by permission of the author.

the sides of the hole may have been plastered once, but if inspected, we find most of the plaster lying in the bottom of the hole and the remains of dead mice, rats and frogs can also be found in it. Instead of rain water, which it was intended for, it is nothing but poisonous surface water. Such cisterns or pestholes should be prohibited by law.

A 75 BBL. CISTERN.

The size of the cistern should depend somewhat on the size of the family. I will here describe a cistern that will hold about 75 barrels of water. Dig a hole seven feet wide, seven feet long and 10 feet six inches deep. If the soil is loose, the sides must be curbed up with boards. If it is clay or hard ground, the boards will not be needed. For floor put in a layer of mortar six inches in thickness, stamping it firmly together. Then put up 2-inch planks all round for boxing. Carefully sweep and remove any earth that may have fallen down from the sides. Put a layer of mortar into the box eight inches in thickness, stamping it firmly together with a square wood block. Continue to fill in mortar, layer after layer stamping it firmly together. The walls should be 11 feet high, that will be one foot above the surface of the ground.

BUILDING THE ARCH.

Now make a strong arch-shaped floor from planks, on which to build the arch. Be sure to have it strongly braced below and make a hole two feet square in the center of the arch shaped floor. Place a strong frame two feet square over the hole; make a strong door two feet square fastened into the frame with hinges. Take a round block four inches in diameter and place it into the side of the cistern next to the house for the inflow pipe. Now cover the arch-shaped floor with a layer of paper, then put on a layer of mortar one inch in thickness. Take two pieces of iron lengthwise on the arch, one piece on each side of the frame or door. Then take two more pieces of iron eight feet long, one inch wide, one-half inch thick and place them crosswise over the arch, one piece on each side of the frame or door. Then put on another layer of mortar one inch in thickness and place wire netting on it. Then put on another layer of mortar two inches in thickness. Stamp it firmly together and finish it nicely on top with a trowel. Such a six foot arch need only be one foot high. Now leave it for a week or ten days, then open the square door on top and remove the arch-shaped plank floor and remove all the boxing. Then put on a finishing coat of mortar made from one part Portland cement to two parts of fine sand. Finish the cistern inside as smoothly as if it was a parlor.

OTHER DETAILS.

The mortar for the arch should be made from one part Portland cement to three parts clean, coarse sand. The mortar for the floors and walls should be one part cement, three parts sand and three parts gravel. It takes about eight barrels of cement and four yards of sand and four yards of crushed stones or gravel to construct such a cistern. After all is ready, remove that round wood block and put in the water pipe and the cistern is ready for use. The water pipe should be arranged in such a way that the water can be turned off, as it is sometimes not desirable to have the water run into the cistern. For instance when it has not rained for some time, the roof of the house is more or less dirty; when it has been raining for an hour or so, when the roof has been washed clean, and not until then, should the water be turned into the cistern.

I am only keeping eight cows this summer. I would rather have them than the 23 that I kept in former seasons. Many cows are kept on the average farm that return no profit. By selecting the best ones and keeping them only, much labor is saved and the returns are approximately as large.—G. Fowler, Peterboro Co., Ont

Bertie C

J. E.

Some time ago a record of the milk herd, and how the butter produced to this conclusion of milk produced was compared with a few, if not a dozen, of the milk low choice factory milk by where the it was decided testing associated upon the Government was the farmers got Government reporting Association

It consists of orange seven cow member was also necessary utensils and a Babcock of the members of the association at the end of each require more of it might seem reasonable derived through and labor involved in operation men have become work. Some real feeding cows who no profit whatever far more remunerable previously known stood. While the connection with the bred by some before the unanimous of nothings when c derived.

Ayoturia-

Ayoturia usually been standing idle are then taken care of in the case if during fairly well fed of certain amount of Sometimes very little to water has been at other times sevelled before the horse standing in not to develop the disease to allow a horse a able to guard again. In the early his tically unknown a regularly at work wood or lumbering clearing the land. sent conditions in often left standing without exercise of in, and the result become comparatively season.

As would naturally without any expect to work will be off in a spirited and freely and the own his appearance, but not gone very far his gaiety of man depressed, his action in the hind quarter

Bertie Cow Testing Association

J. E. Jewson, Welland Co., Ont.

Some time ago a few farmers, who kept a record of the milk produced by each cow in their herd, and who also determined the amount of butter produced by the herd as a whole, came to this conclusion, that, for the average amount of milk produced per cow, the quantity of butter was comparatively low, which indicated that a few, if not all of the cows in the herd, were giving milk low in per cent. of butter fat. No cheese factory or creamery being in operation near by where the milk might be frequently tested, it was decided if possible to try and form a cow testing association. Other farmers were approached upon the subject and became interested. The Government was communicated with and finally the farmers got together, and ably assisted by the Government representative, the Bertie Cow Testing Association was organized.

It consists of fifteen dairies testing on an average seven cows each. The average cost per member was about \$2.00 covering the cost of necessary utensils used in weighing and sampling, and a Babcock tester. The testing is done by one of the members who resides near the centre of the association to whom the samples are delivered at the end of each month. The testing need not require more than one day and, while to many it might seem rather troublesome, yet the experience derived therefrom is well worth the time and labor involved. Although this association has been in operation but for a few months, the dairymen have become very much interested in the work. Some realize the fact, that they have been feeding cows which have brought them little or no profit whatever, while others would have a far more remunerative herd to-day if they had previously known just where the best producers stood. While the cost and labor involved in connection with the association was seriously considered by some before becoming members, it is now the unanimous opinion that these amount to mere nothings when compared with the actual benefit derived.

Ayoturia—A Disease of Horses

Ayoturia usually develops in horses which have been standing idle in the stable for a few days and are then taken out to work. This is especially the case if during their idleness they have been fairly well fed on a grain ration. It requires a certain amount of exercise to develop the trouble. Sometimes very little will do it, even being led out to water has been known to set up the disease; at other times several miles may have been travelled before the disease manifests itself. A horse standing in the stable continuously will not develop the disease, but as it is impracticable to allow a horse absolutely no exercise it is impossible to guard against it in that way.

In the early history of the country it was practically unknown among farm horses as they were regularly at work during the winter drawing cord wood or lumbering or some other work incident to clearing the land. But unfortunately under present conditions in Ontario farm life horses are often left standing for days together in the stable without exercise of any kind after the winter sets in, and the result has been that the disease has become comparatively prevalent during the winter season.

SYMPTOMS.

As would naturally be expected, a horse standing without any exercise for a few days and then put to work will feel pretty good; he will start off in a spirited manner, drive promptly and freely and the owner is impressed favorably with his appearance, but as too often happens he has not gone very far on his journey till he loses all his gayety of manner and becomes sluggish and depressed, his action will become stiff, especially in the hind quarters, he will stagger, and if kept

on his journey will eventually fall down and be unable to rise again. It is in this stage that veterinary help is usually called in and if the life of the animal is valued by the owner a competent veterinary surgeon should certainly be consulted. There is complete loss of power, the animal is suffering more or less pain and the bladder will be found to be engorged with a dark coffee colored urine which looks as if it were bloody, although such is not really the case and it is almost always necessary to draw off the urine by the use of an instrument which requires a man of experience to operate. But while curative treatment is often uncertain even in professional hands preventive treatment is easy and effective.

A horse which is regularly exercised every day is most unlikely to suffer from an attack of this disease. Horses which are turned into a yard every day will take exercise enough to prevent an attack. But supposing an animal has been exposed to the conditions just described and as a result shows symptoms of an attack, the careful owner will stop his journey on the very first sign of trouble, and will get him into the nearest barn or shelter of some kind. Cover him with two or three heavy blankets, apply heat to the joints, make him sweat as freely as possible, the more the better, and this will in all probability

cretary calls the shareholders together and divides up the profits after deducting all expenses. We hire our machine to anyone who wants it, always of course, sending a man who understands it.

We find no difficulty in getting power to fill. We make an agreement with the man who does our threshing to come with his engine and fill our silos. He is generally willing to do this rather than let some one else do your threshing. About the time the silos are being filled is a slack time with the threshers and they are willing to hitch their engines to anything there is a dollar in.

The cost of filling silos, I presume, will vary in different localities, but we find the cost to be about the same as threshing. Those having silos exchange work with each other during filling season as when threshing.

Our silo is 15 feet by 28 made of Norway pine, with a stone foundation of 3 feet under ground and cemented on inside. We can fill this in about 13 hours with a good steady run. This silo has been up about 12 years and is in a fair state of preservation, but if we were erecting another it would be of cement. We are of the opinion that they keep the ensilage just as good as the wood structure and they never need replacing.

Quite a number of silos have gone up in this section this summer. Farmers are beginning to



A Commission at Work Inspecting Different Types of Mail Boxes

It is announced that over 100 rural mail delivery routes have now been established in Canada, most of them in Ontario and Manitoba. The Dominion Government has selected a special form of mail box and farmers living on mail roads are required to equip themselves with this type of box, which costs about \$150. In the United States farmers are allowed to choose different kinds of mail boxes but the boxes must all have been approved by the government. So many boxes were submitted for approval, the United States government appointed a commission to decide what types of boxes should and should not be used. The illustration shows the commission study free rural mail delivery.

be an arrest of the disease, and in the course of a few hours the animal may become all right again, although it would be better—especially in the case of a valuable animal—to employ veterinary assistance. But if the patient is down and unable to rise then professional treatment is a necessity if the animal's life is valued. However, the man who feeds carefully and exercises regularly will not likely have a case of this disease on his hands, and will also, to a great extent, safeguard his horses against numerous other troubles to which horses are prone during their periods of idleness.—Centaur.

Silo Filling

Editor, Farm and Dairy.—Three farmers, having silos, including ourselves, co-operated in purchasing a Wilkinson blower. More could go in if desired, which would make the first cost considerably less to each farmer and would no doubt be equally satisfactory.

Each member of the company pays so much an hour for the use of the blower during the time he is filling and at the end of the season the se-

realize that it is a little against the weeds and that it is either hoe, summer fallow or get out of business, and the former seems to be the most profitable.—Webster Bros., Ontario Co., Ont.

Wherever situated, no farmer is rightly prepared to raise hogs profitably in any considerable numbers unless well provided with pasture and grass or facilities for providing acceptable substitutes. In the economical growing of pork there is no more important factor to be considered than that of pasture. Range in pasture affords growing animals the exercise so necessary to health and proper development; and the succulent grasses, while rich in muscle and bone-forming materials, tend to prevent disease and to counteract the heating and fever-imparting properties of corn. This latter quality, and exercise, annually save many thousands of dollars to hog-raisers in the United States, yet the loss that results every day to farmers who do not act upon the fact that the hog is, in his normal conditions, a ranging and grass-eating animal, is still enormous.—From Coburn's "Swine in America."

LAND AT FORT WILLIAM FOR SALE

100 acres of the finest garden soil in Western Canada, only five miles west of the prosperous City of Fort William, on the line of the new street railway, now under construction, will run through the property, also only 1/2 mile from the junction of the C. N. Railway and P. D. and W. Ry. Price \$100 per acre, one-third cash, balance extended over nine years, payable in nine equal instalments, all bearing interest at 5 per cent.

100 acres of choice garden land, only four miles west from the City of Fort William, on Arthur street, which is the main thoroughfare from the city to the country, and also only one mile from Nesbitt Sliding on the C. P. Ry. Line. The above property is also well adapted for dairy farm as it has a fine spring creek running through the property. It is high and dry and free from stones. The price is \$30 per acre, one-third cash, and the balance in four years payable in four equal instalments, within one, two, three and four years, with interest at the rate of 5 per cent. per annum.

ALF. COOPER & CO.
Agents
FORT WILLIAM - ONT.

OWN YOUR OWN 360 ACRES OR EASY TERMS

Many farmers with small capital, tenants and others, would take up land in the Canadian West, but homesteads are now hard to select, and the conditions are exacting, while lands for sale are usually stringent in first cash payments, and for short terms.

Holding considerable areas of splendid land, well situated near stations, from one hundred feet upwards to five miles along the main line of the Canadian Northern Railway, between Battleford and Minburn, it is my wish to dispose of the same to the benefit of both myself and the purchasers.

Recognizing that it takes even the best farmer with small capital some time to get a fair start, I WILL SELL ON VERY EASY TERMS, AND GIVE LONG TIME FOR PAYMENT.

But no lax or intemperate farmer need offer to buy, while married men with families are preferred.

Certain improvements will require to be made annually, from the outset, and there are other terms and conditions to be complied with.

For particulars, address:
SAM HUGHES
Lindsay, Ont.
Sept. 1909.

FARMS FOR SALE

If you want to sell your farm, place an advertisement in *Farm and Dairy*. The cost is only two cents a word in our classified columns, and \$1.00 an inch for display advertisements. Tell people about it, if you want to get a good price.

Our Veterinary Adviser

BLOODY MILK.—For the last month my heifer has given bloody milk. About every third day the milk is good, but next milking it is bloody again. G. C. Ont.

This indicates a congenital weakness of the small blood vessels of the udder and the recurrence of the trouble may be impossible to check. Bathe the udder frequently with cold water and give one ounce tincture of iron in a pint of cow's milk as a drachm three times daily until the milk becomes clear. If this fails to effect a cure it will be better to dry her and fit for the butcher.

Our Legal Adviser

LINE FENCE AND TREES.—In the case of a line fence not being in proper shape, who is the proper person to notify, the owner or tenant, the owner being a woman and living on the other side of the fence? What length of time has to elapse before she can take action? After you notify them when the action is to be taken, what time is given to them to fix the fence, who do you look to for your pay? Have you to sue the parties who do not fix it? If the fence viewers to look after the pay?

(2) In the case of trees growing along a fence on the south side of your land, and under which nothing will grow for a couple of rods, the trees not being on your land but on the other side of the fence, can you force your neighbor to cut them down when they grew naturally, or if you are building the fence over again can you cut them down for the full width of the fence, say six feet, it being a crooked fence.

(3) If your neighbor does not fix his part of the line fence and your cat gets in, can he collect damages?—Reader, Grey Co.

(1) Owners of occupied adjoining lands are required to make, keep up and repair a just proportion of the fence, marking the boundary between them, and if there is any dispute between the owners about the proportion which each should complete, or the condition, or quality of the fence, either of the owners can give a notice to the other owner, that he will, at expiry of one week, from the service of such notice, cause three fence viewers of the locality, to arbitrate about the matter. He will also notify the fence viewers, specifying in each case, the time and place of the meeting for the arbitration.

The fence viewers will examine the premises, and make an award, which award will specify the quantity and kind of the fence to be made, and the time within which the work is to be done, and shall state by what means the parties to the proceedings should bear the costs of the proceedings, or to have been grossly negligent in the management of the business.

Dairymen's Association of Western Canada.
At a meeting of the board of directors of the Dairymen's Association of Western Ontario held recently in Toronto, it was decided to accept the very cordial invitation of the city of St. Thomas to hold the 43rd annual convention and winter dairy exhibition in that city. Committees were appointed and preliminary arrangements concluded. Several important resolutions were passed, copies of which were sent to the Dominion Department of Agriculture, and to the management of the Canadian National Exhibition. The judges of cheese will be Messrs. W. W. Gray, Jas. Bristow, and Robt. Johnston. The judges of butter will be Messrs. J. B. Muir, L. W. Steinhoff, and Jas. Binfin. Those present were Geo. A. Putnam, director of dairy instruction; J. J. Parsons, president; Jno. H. Scott, 1st

vice-president; Wm. Waddell, 2nd vice-president; D. A. Dempsey, 3rd vice-president; and directors, J. N. Page, S. E. Facey, S. R. Wallace, Geo. H. McKenzie, W. S. Stocks, and F. Hems, sec.-treas.

The programme committee met in the secretary's office, London, when a very interesting and instructive programme was outlined, which it is hoped will not only interest the cheese and butter makers but also the patrons of cheese factories and creameries, and everyone interested in dairying.

In addition to the \$300 offered by the association in cash prizes to exhibitors of cheese and butter at the winter dairy exhibition, a large list of valuable special prizes have been donated by Heller and Merz Co., New York, \$15 in cash; R. M. Ballantyne Limited, Stratford, and C. H. Slavson & Co., Ingersoll, each one case of Hansens' Komet Extract and cheese color; The J. B. Ford Co., Wyandotte, Mich., two handsome gold watches; The Canadian Salt Co., Windsor, \$50 in cash; The Western Salt Co., Mooretown, four barrels of Eurity Dairy Salt; the Imperial Bank of Canada, a silver cup; the Cheese Buyers' Trophy, consisting also of a silver cup.

The patrons of cheese and butter factories were not forgotten, the association donating \$100 in cash prizes.

No definite agreement as to terms having been entered into, we do not think you could successfully claim as for a year's engagement, but the circumstances would justify a finding



One of Numerous Gambling Outlets Operated at the Central Canada Exhibition, Ottawa.
Wheels of fortune and draw lotteries were operated openly at the Ottawa exhibition this month, and nothing was done to stop them, although they are prohibited by law. When this photograph was secured a policeman was standing only a few feet away. His attention was drawn to it, but he refused to do anything. What is the Superintendent of Agricultural Societies and the Department of Agriculture doing to stop these frauds? They are operating at too many fairs.

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that yours was a monthly engagement terminable on either side on giving one month's notice. You are not responsible if bad debts are incurred, or for failure to obtain return of ice cream freezers, etc., unless you were apportion to have clearly exceeded your instructions, or to have been grossly negligent in the management of the business.

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FARM

Gang Plot

Editor *Farm and Dairy*.—I have a number of advantages in my single furrow convinced the horses and of our home city furrow plan that is possible row plows.

Crown gang plows from a local source the best of work quickly sowing, and is sturdy and stable and light.

We have all our potatoes well worth having in it at a deep or as deep drills are just for this country.

Before you used a single furrow plan, it was a good product too well known to the Crown gang plow and made in it has dust-pan lever for wider use at the will of its good for the Parker, King.

The Gasoline

Ed. *Farm and Dairy*.—I tried three different pumps. First, a hand pump. Then we changed to a gas mill. Our stockmen found it unreliable and cutting feed a gasoline engine satisfaction.

A nine horse size is right for where threshing done. Our engine chopper a busy looking keeping grain winter, we cut at the same time plenty of power so arranged also. All told we recommend you to any man who have a line shaft so handy.

When installed eight feet away, cutting is 8 by 4 posts and a ripper outside with limit with galvanized roof. In the spring house and for the belt too is covered with engine to chopper have a line shaft and run our engine different sized plow along the line shaft whatever we may cutting box with engine and building Clement & Son, N.

Successful

Provided with suitable feed some things are not their growth by that have been denied the mother's milk taken away from we had their crop ponded for weeks cessfully let the s

ABSORBINE

will reduce inflamed, swollen joints, rheumatism, neuralgia, sciatica, lumbago, etc. It is a powerful antiseptic and disinfectant. It is pleasant to use, does not blister, and you can use it on the face, neck, and hands. It is a powerful antiseptic and disinfectant. It is pleasant to use, does not blister, and you can use it on the face, neck, and hands.

Horse Dose: 1/2 Teaspoon
Human Dose: 1/2 Teaspoon

Prepared by W. F. Young, F.R.S., 123 Temple St., London, W.

FARM MANAGEMENT

Gang Plow Does Good Work

Editor Farm and Dairy.—For several years I have been studying the advantages of a gang plow over the single furrow plow and I have become convinced that a gang plow with three horses and one man can do the work of four horses and two men with single furrow plows, and do better work than is possible with the single furrow plows. Last year I purchased a Crown gang plow (Frost & Wood) from a local agent. It has given us the best of satisfaction, doing its work quickly and turning nice even sods, edging them up in an attractive way. We have used this plow in both stubble and leas.

We have also used it for planting our potatoes and for this alone it is well worth having, as it puts the potatoes in at a nice even depth, as light or as deep as one wishes, and the drills are just the right distance apart for this country.

Before purchasing this gang plow we used a single furrow plow manufactured on the Island which while it was a good plow, was too slow and turned too wide a sod in lea. I like the crown gang because it is light in draft and makes a pretty job in lea. It has dust-proof axles and a side lever for widening the outside furrows at the will of the driver, which is one of its good features. — Horace W. Parker, Kings Co., P.E.I.

The Gasoline Engine a Favorite

Ed. Farm and Dairy.—We have tried three different kinds of farm power. First, a two horse tread power mill. Our stock was heavy and we found it unreliable for chopping and cutting feed. Lastly we bought a gasoline engine. It has given good satisfaction.

A nine horse power engine is about the right size for any farm outside of where threshing or silo filling is to be done. Our engine will run a 10 inch plate chopper and will keep a man busy looking after the engine and keeping grain in the hopper. In winter, we cut feed and pump water at the same time, the engine furnishing plenty of power. We have things also. All told we would not hesitate to recommend gasoline engine power to any man who will use judgment and be careful. There is no other power so handy.

When installing our engine, we erected a building, outside of the barn eight feet away, especially for it. This building is 8 by 8 feet with seven foot posts and a ridge pole. It is boarded outside with lumber and is covered with galvanized iron as is also the roof. In the space between the engine and the barn, we built a box for the belt to run through. This box too is covered with galvanized iron. Our belt is not run direct from the engine to chopper or cutting box. We have a line shaft inside of the barn and run our engine belt to that. Different sized pulleys are arranged along the line shaft to accommodate whatever we may wish to run. In this way we can speed up our chopper or cutting box with larger pulleys. Our engine and building cost \$450.—J. D. Clement & Son, Norfolk Co., Ont.

Successful Pig Weaning

Provided with and taught to eat suitable feed some weeks before-hand, pigs are not noticeably checked in their growth by weaning, but those that have been dependent mainly upon the mother's milk, when abruptly taken away from it, frequently seem to lose their growth partially suspended for weeks by their breeders consequently let the sow wean her pigs,

as she will in time, and the change is so gradual that no pause in growth indicates when the milk diet ceased. A modified application of this, in so far as allowing their feeding and the convenience of the breeder, will not infrequently be found desirable, but by no means should the pigs be allowed remain with a sow that she is virtually devoured by them as is sometimes done.

It is not a good plan to take all the pigs from the sow, unless one or two of them can be turned with her milk she will have, that time, and again, say after a lapse of 24 hours. The preferred way is to leave about one of the smallest with her for several days and after that leave only one or two for two or three days more by which time the flow of milk will have been so gradually diminished that no injury to the sow will result by keeping them entirely away from her. This extra supply of milk helps also to push the smaller pigs along her growth and put them more nearly on an equality in size with their thriffter mates.—Tom Coburn's "Swine in America."

Dairying and Soil Fertility

There are many examples of restoring the fertility of soils impoverished by continued market-tram dairying. There is no fact in agriculture better authenticated than that of improving production by dairy farming, and the keeping of open stock on the farm to consume nearly all that is grown on it. It was Prof. Woll of the Wisconsin experiment station, who stated from actual experience and observation that \$8.30 worth of fertility was removed from the land when ton of wheat was sold from it, and worth of corn sold took \$6.50 when the dairy industry got it. But when the dairy industry got it, and the skim milk and other by-products are fed to the pigs and calves and the manure returned to the soil by feeding the crops, constant improvement is made sure. Take this illustration from the work on soils by Prof. C. W. Burkett, director of agriculture experiment station of Kansas. As given in the following on soils, published by the Orange, Judd Co., of New York.

Prof. Burkett says: "A great source of profit in dairying lies in the fact that it remedies the soil. When you purchase feed for the cow that more milk may be produced, you add fertility to the land. Such feeds as linseed meal, cotton-seed meal and bran are exceptionally rich in fertilizing elements. It is not unusual to purchase the form of seeds than in the form of fertilizers, and the feed is paid for by the milk. The milk pays for the labor, and allows in every case, fair margin of profit. In this way the fertility of the soil is restored at practically no cost.

"While soil building can be accomplished by using other classes of animals, it is, however, the fact that dairy cow produces more real fertility than any other farm animal. A cow dredged from twelve to thirteen hundred pounds, fed to produce milk during the year produces about twenty-eight hundred pounds of manure. Nearly one half of this is liquid and should be saved for it is exceedingly rich in fertilizing elements. But rich here comes a great lesson. But rich from the land. The liquid waste is the case were it not for its importance valuable than there is even when it is used as a fertilizer. And if proper arrangements are made, it will take care of itself and will not should be passed, but may be used for irrigation the land at the same time.

"The loss of manure ought to be guarded against with zealous care; certainly with as much as is given to farm product. For it must be borne in mind that the manurial value of foods like bran, after it has passed through the cow, is worth \$10.50 per ton; of red clover, the same condition, approximately \$7.30 per ton; of linseed meal, \$16.77 per ton; and of cotton seed meal, \$10.70 per ton."

CITY MILK SUPPLY DEPARTMENT

Producing Cream For City Use

The shipping of milk and cream to the cities of Montreal and Ottawa is proving a profitable line of farming to many hundreds of farmers living within shipping distance of these cities. The demand for these cities for milk and cream has been increasing rapidly of late years, with the result that hundreds of farmers are now a few years ago, sent their milk to these factories and creameries. On some of the farms, considerable expense has been incurred to ensure the milk and cream produced, reaching the cities to which it is shipped in the best possible condition. One of these farms is that owned by Senator W. Owens, of Monte Bell, Quebec. It is situated about half way between Montreal and Ottawa and within shipping distance of either city. Senator Owens has one of the best equipped dairy farms in Canada and a splendid herd of pure bred Ayshire cattle.

COWS FRESHEN IN OCTOBER

"I find," said Senator Owens to a representative of Farm and Dairy who visited his farm, "that the most profitable time for me to have my cows freshen is about the first of October. We have them freshen, however, from September to November. The high prices for milk and cream are from October 1st to May 1st. By having our cows freshen in the fall, we are able to ship the most of our milk at the time when we get the best price for it. We separate our milk and ship cream testing out 40 per cent, for which we receive \$1.80 a gallon. From this must be deducted 5 to 7 cents a gallon for shipping charges. Compared with the prices paid for milk, this price is equal to about \$2.00 for 100 pounds of milk.

"When the first of May comes, we go on strike and send our milk to a butter and cheese factory at our door. In the spring their production of milk increases and for some time, they give almost as much pasture as they give dry, the cows are through milking or they give so little milk that it is not necessary for the hired man to leave the fields and go to the barns to milk. The wife of my foreman and his children are able to do the most of the milking. In this way, our cows are resting during the busiest season of the year. It is the season also when the prices of milk are the lowest.

"In winter we feed clover hay or mixed timothy and clover, with corn and ensilage. For dairy stock, we both in the morning and evening after milking. About nine o'clock in the morning, we feed some clover hay after which the cows are not disturbed until three or four o'clock in the afternoon, when they get another feeding. We clover hay or straw before milking, and we generally give a feed of bran and ground oil cake with the ensilage or other such other concentrates. The ensilage or bran is bought to fit best advantage. A year ago, we fed bran and gluten meal. Last winter, we fed bran and oil meal."

POWDR PAINT

Use of Special Value to Farmers. Off Outside and Inside Buildings. These are the best of OLD WEATHER-HOUSES, BRATS, barns, sheds, hogpens, hen-houses, etc., throughout the country that never saw a drop of paint, and it is the class of buildings that Powder Paint is especially adapted.

Such weather-beaten surfaces are rough, sun-checked and very porous, and are allowed to get unreasonably EXPENSIVE TO OWNERS AND NEIGHBOR ALIKE, because the cover makes its use less expensive to be practical.

But not so with Powder Paint, it has so much body that one coat will fill the cracks and prevent even and smooth up the surfaces more perfectly than two coats of oil paint. This means that you can keep every mark of prosperity at a cost less than to remember.

Seeking suggests thrift and prosperity so much as well painted buildings. Full information and catalogue mailed on request to

THE POWDR PAINT CO., Toronto

BETTER AND LARGER THAN EVER

THE ONTARIO PROVINCIAL

WINTER FARE

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DECEMBER 6 TO 10, 1909

OVER \$13,000.00 IN PRIZES

HORSES, CATTLE, SHEEP, SWINE AND POULTRY SEEDS, JUDGING COMPETITION

\$50,000.00 is being spent in order to give more space for live stock and poultry and to provide accommodation for an exhibit of HORSES.

SINGLE FARE ON ALL RAILWAYS For prize list or program of lectures apply to

A. P. WESTERVELT, Sec. Parliament Bldg. - Toronto

WINDMILLS



Towers fitted every five feet apart and double braced

Grain Grinders Pumps Tanks Gas and Gasoline Engines Concrete Mixers Write for Catalogue

GOOLD, SHAPLEY & WAIR CO., LIMITED

BRANTFORD, CANADA

THE UTILIZATION OF WOOD WASTE BY DISTILLATION

A general consideration of the NEW DISTILLERY including a full description of the distilling apparatus used and the principle involved, also methods of chemical control and disposal of the products, first and second editions, 150 pages. The book is cloth-bound and will be sent to any address by mail on receipt of \$3.00. Every Farm, Ranch and Merchant needs a Distillation Tax-Free denatured alcohol distillery apparatus; agents price \$95.50. A 100-gallon distilling apparatus costs \$750.00.

WOOD WASTE DISTILLING CO. 213 to 217 St. Clair Ave., Cleveland, Ohio

HORTICULTURE

English Gooseberries

At the conference of the American Pomological Society that was held in St. Catharines, Ont., Sept. 15-17, an interesting address, illustrated by specimen fruits in bottles, was given by Mr. R. B. Whyte, of Ottawa, on the subject "How to Grow English Gooseberries Free from Mildew." The speaker said that our native varieties, the Houghton being an example, are free from mildew and can be grown anywhere. The hybrids, such as Downing, Pearl and Red Jacket also are free from mildew and are superior in size and quality to the natives; they are the commercial berries of America. The English varieties, such as the Whitesmith and Industry, have not been grown with much success in this country owing to their susceptibility to mildew and sun-scald. To grow them successfully they must be planted in loam soil, well fertilized, and cultivated. To equalize the temperature, which is ne-



Central Experimental Farm Exhibit that won a Wilder Silver Medal at Niagara Falls triennial exhibition.

cessary in the prevention of mildew, plant in partial shade of trees, but not directly under them. In very dry weather, water must be applied, or mulching resorted to. A pruning system must be adopted that will keep the bushes off the ground, so as to insure a free circulation of air. Prune fairly closely; if too close, liable to mildew; if too open, liable to sun scald. Prune in September. Among the varieties of English gooseberries, recommended by Mr. Whyte are the following: Red-Sportsman, Sloughman, London Red, Victoria, Crowsley, white-Whitesmith, Triumph, Keswick, yellow-Weatherall, Alma; green-Lofty, Green Ocean and Conn.

Fruit Packing and Marketing

One of the sessions of the American Pomological meeting in St. Catharines, Ont., was devoted to fruit packing and marketing and was in charge of Mr. A. McNeill, Chief, Fruit Division, Ottawa. The chief referred briefly to the co-operative fruit growers' associations of Canada. He said that the best one is the St. Catharines Cold Storage and Forwarding Company. There has been much progress in co-operation in the past 15 years. "Box-necking" was dealt with by Dr. S. W. Fletcher, of Blacksburg, Va. A paper on "Co-operation in Fruit Products" by Mr. J. B.

Dargitz, Campio, Cal., was read at the meeting, the writer not being present. Mr. Dargitz is secretary of the California Fruit Exchange. An example of the value of co-operation was published in part or in full in a later issue.

In a paper on "Co-operative Marketing," Mr. W. H. Reid, of Trenton, N.J., told of an organization in his state, only one and a half years old, which had been most successful. He cited an instance where the organization had prevented a crash in the market. On July 30th, the manager had 35 cars of potatoes on the track for sale. He knew from reports of the conditions in New York, that there was danger of breaking the market. To prevent this he told the agents of the organization in the various localities to ask the members to stop digging. He shipped 22 cars and held the remaining 13 for two days, when they were sold profitably and the market sustained. This organization has increased prices all around and has made the local buyers come up. In the year's work, notwithstanding some mistakes, draw-

smoother or leveler, leaving the surface perfectly smooth. When the ground is very cloddy it is advisable to crush the clods with a roller, taking care not to pack the soil too firmly. Where the soil is very sandy it should be thoroughly firmed, as the plants will root much better than if left loose. Ground with numerous air spaces such as are found in cloddy soil, forms a very poor bed for setting plants, as has been found out by experience.

If turf land is to be used for strawberry culture it would be advisable to cultivate to some such crops as potatoes or corn the preceding year. This will break up the sod and put it in good condition to receive the plants. Sod land is often infested with numerous insect pests which are disastrous to the newly set plants. By cultivating to some other crop first the insects will be given a chance to starve out.

Orchard and Garden in Fall

Prof. W. Lockhead, Macdonald College

Intelligent fall cleaning of the orchard and gardens is now recognized as a most important factor in successful fruit culture. After the rush of the shipping and storing of the fruit there is usually week or two of fine weather when rubbish can be raked up and burned, and the necessary late plowing done. The value of careful fall cleaning lies chiefly in the fact that many of our most destructive insects and fungi are destroyed in the process. A few observations during the fall and winter will show how many insects pass the cold period of the year. The eggs of most of the tent caterpillar, for example, will be found encircling the smaller branches. If these bracelets of eggs be removed whenever seen, much serious injury will be averted the following spring, for each bracelet of eggs destroyed means the removal of 200 to 300 caterpillars. The egg masses of the fall canker worm also may be found in small leaf masses near the forks of the smaller branches and twigs.

The codling worm of the apple passes the winter in a cocoon under bark and boards and crevices.

Birds destroy many of the cocoons concealed on the trunks, but it is always advisable to scrape off the scaly bark, especially that near the ground, and to cut off all dead and cracked limbs. Codling worms are often carried into fruit cellars and store houses in the autumn. In the spring such cellars should be cleaned out thoroughly and the debris burned before the moths escape to the orchard.

Many species of cutworms pass the winter under old boards, clods, or other protection. A thorough cleaning in late fall will reveal many of these cut worms. Poultry are valuable helpers at this time. If these are not available, a poisoned bran bait scattered over the soil will produce good results.

White grubs, when present in the soil, may be destroyed in large numbers by late fall plowing. Tarnished plant bugs, the various leaf-hoppers, squash bugs, the cucumber beetle, Colorado potato beetles, grape vine leaf beetles, plum curculios and others pass the winter in or under vegetable trash, and a thorough cleaning often works wonders in ridding the garden of these undesirable guests.

A thorough cleaning of the orchard and garden in late fall will also destroy many of the fungi which remain on the ground in diseased leaves and fruit. It is a well-known fact that many injurious fungi produce winter spores, which the leaves decay, the spores do up in the spring and these will produce other spores which soon spread to the early leaves. The various mildews, cankers, leaf-spots, and rot and scale are reproduced in this manner. The fruit, plants and leaves should be gathered

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together and burned. They should not be thrown on the manure pile, for then the spores will be able to survive the winter and reproduce the disease the following season. Moreover many fungi persist in the leaves as delicate threads, which develop rapidly in the spring and produce spores. If a cover or mulch is prevented to lessen root injury and prevent winter-killing, it can be applied after the cleaning has been done. If more care were taken in the annual fall cleaning of gardens and orchards, there would not be that urgent need for summer spraying to control the insects and fungous diseases. Another important factor in successful fall cleaning is to convince our neighbor that he also must clean his garden and orchard. Then what is left undone by the careful gardener will often be done by the winter birds. The chickadee, the nut-hatch, the golden-crowned knight, and the woodpecker, are most valuable agents in the destruction of insects. All winter long they hunt diligently over every limb for hibernating insects and insect eggs.

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POULTRY

Seasonable

By Gladys Trent

This is the time when you will want to take draughts of perches in goodly liberal and periwalls and give every good spray made of fresh added a quantity of water and add to go into water are sure to produce if, any fowls legs, apply combs may be affected good plan to with coal oil in that the hens walk through out or come into

Money

Mrs. A. R.,
There is money in the right people's hands. If people apply for a loan to make it pay, they have found poor pleasant way to get it. We keep about a million of them and try to make it pay, the have found poor pleasant way to get it. We keep about a million of them and try to make it pay, the have found poor pleasant way to get it. We keep about a million of them and try to make it pay, the have found poor pleasant way to get it.

Poultry raising is a general rule, men's interest in it. The nation to their purse. But some women in the business are doing better than men with the egg market. A farmer's wife who has some flock of hens were supplied with them children. She never allowed them and never allows them water in winter. Specially and tries to do it when the neighbor's hen's lay straight customers know the her word, and she sell fresh eggs on readily.

A Well-sized Poultry

Your Stock a

POULTRY YARD

Seasonable Poultry Pointers

Ily, Glensiding, Ontario Co., Ont.

This is the time of the year that the henhouse should be looked after. See that all broken windows are repaired. See that the fowls are not subjected to draughts of cold damp air, but all perches in good repair. Use coal oil liberally in all of the cracks in the walls and perches to destroy mites, and give every bird a good wash with a good spraying with a whitewash made of fresh lime to which there is added a quantity of crude carbolic acid. See that no old hens are allowed to go into winter quarters, as they are sure to prove to be boarders.

If any fowls show signs of scabby legs, apply coal oil to the parts. If mites are affected with scabs, it is a good plan to have a shallow vessel with coal oil in it at the entrance, so that the hens will be compelled to walk through it every time they go out or come into the house.

Money in Poultry

Mrs. A. B., Queen's Co., P.E.I.

There is money in poultry, if the right people have hold of the business. If people take an interest in any vocation and are determined to make it pay, they get it done so I have found poultry raising a very pleasant way to earn some ready cash. We keep about 50 hens. I am fond of them and try to make them comfortable in every respect. I like often to surprise them with something nice, something they relish well. They are very fond of turnips, cabbage and potatoes sliced up. It is a good plan to hang up a cabbage on the wall of the hen house, so that the fowls will find it necessary to jump up for each mouthful. We used to get a good sized patch for their exclusive use last year, and we were paid for our trouble.

I raised quite a lot of chickens last year, but more than half were cockerins. Those I liked and set in the market. It is a good plan to fatten and kill the old hens in March. I set one hen in June on 16 eggs. She had 16 chicks and proved to be an admirable mother. Good attendance, a variety of food, milk and plenty of grit is the way to persuade Biddy to fill the egg basket. It certainly pays to attend to them properly, when eggs sell from 24c to 25c a dozen.

Poultry raising is women's work. As a general rule, men do not take much interest in it. They pay more attention to their pigs, sheep, horses, etc. But some women succeed admirably in the business and, besides having with the egg money, they buy all the groceries farmer's wife who just love her handsome flock of hens, almost as if they were children. She always keeps them supplied with fresh clean water, and never allows them to drink frozen water in winter. She feeds them regularly and tries to make them comfortable in every way possible. And her's lay straight along and, as her customers know they can depend on her word, and she always offers for sale fresh eggs only, she sells them readily.

We believe that from 50 to 60 hens pay better than a larger number. If they are overcrowded they are more liable to disease. Ventilation should

be supplied, for impure air invites disease. The key note to success in the poultry business is "Keep the hens busy." The hen house must be kept clean and the fowls should have a varied diet. Some meat and a mash have some vegetables either cabbage or turnips raw. In the evening give them a good meal of oats or wheat. And they must be supplied with grit, and some salt be supplied with their dust bath. To keep them free from lice dust them once a week with fine dust powder or sulphur. The Wyandottes are good general purpose fowls though they are very determined layers. I have some Minorcas. They are non-sitters, and excellent layers.

Where the Poultry Producer Stands To-day

Prof. F. C. Elford, Macdonald College.

The Dominion as well as the Provincial governments are beginning to encourage the farmer to produce a better class of poultry. They have also shown him how to prepare it for the market, but the marketing of both poultry and eggs to do for himself. As a result his eggs require several weeks' time to reach the consumer's table, passing through the hands of many middlemen, each taking his share of the price. The dressed poultry has to be sold when the market is glutted thereby getting a small price, the large market price and the price the consumer pays for it goes to the middlemen. The fact that each producer, be he small or large, markets his own stuff without any recognized

Sell Your Poultry

Have you some pure bred poultry for sale? Why not place an advertisement in our "Poultry for sale" column. The cost is only two cents a word for each insertion. In December 95 per cent. of our readers buy poultry and are possible purchasers of your stock. Tell them what you have to sell. Our display advertising rate for poultry advertisements is \$1.00 an inch.

grading results in a lack of uniformity that hurts the trade.

The remedy for these evils might consist in: (a) Some system of marketing that will equalize the supply and demand. (b) A co-operative system of gathering and shipping the eggs, killing, grading and marketing the dressed poultry. (c) Through play advertising rate of cold storage.

THE MARKET.

The prospects for a good market in Canada are very good. Every year the demand is greater for a good quality of poultry. It is several years since we had any to export. The market is growing. Those in the business realize that the limitations consist in the lack of supply of the proper quality and not in the demand, which is considered practically limitless.

Wholesale dealers say they will take all the poultry of good quality that can be produced and are willing to contract ahead at good prices. Several firms in Great Britain would place orders for tons and tons of dressed poultry if it could be produced. Canadian shippers cannot attempt to take orders as our supply is such that there is practically no poultry available for export. Should we place orders to be regulated as to assist the producer to get what he produces is worth, and more of the consumer's price reach the producer, the farm of Canada could be made to produce an enormously increased

revenue and the export trade might in time equal that of any other branch of agriculture.

Cull the Flock

There will be a number of the hens in the flock that will not pay to feed over winter. They had better be culled off and their places given to pullets.

Make it a rule to keep no old hens, none over two years. Kill those that are continually broody; some hens spend a good deal of their time on the nest, and lay very few eggs.

A few hens will moult late and not until next spring—too late for the high priced eggs in the early part of the winter.

Don't keep hens around the place that are always cutting; like some people they are never well. Such hens lack in constitution, and will never be bred.

As soon as a hen ceases to pay she should be gotten rid of. It is not the few good layers in a flock but the way that gives the good average is to cull out the good average.

Where the trap nest is not used the best way to do this is to be careful and keep the old ones killed off and put in their places pullets well matured, vigorous, strong in constitution and as near as you can tell from your best hens.—F. C. E.

Co-operative Selling in Denmark

Prof. F. C. Elford, Macdonald College.

Prior to 1895 poultry conditions among the Danes were not far different to conditions here except that they had several poultry societies for the promotion of breeding. The market end of the industry was unsatisfactory. The Co-operative Egg Export Society was formed to assist in the putting of the eggs on the market. It acts in conjunction with the existing societies. By means of local societies it collects the eggs from the members and forwards them to one of the nine export packing stations. At these stations they are tested, graded and repacked in wooden boxes holding 1,440 eggs in which they are shipped to Great Britain. These packing stations are so well equipped for determining the freshness of eggs and the system works so well that even attempts at fraud are rare. Boxes are all stamped with the brand or trade mark of the society, the grade, weight, and number of eggs contained.

The co-operative societies in other countries have been copied more or less from Denmark and are giving satisfactory results.

Selecting the Breeders

Mark the early laying pullets with leg bands and use the first eggs secured from them the coming season as early as January or February. The pullet that does not begin to lay until late is not the right sort for a breeder. A chick with a wedge-shaped body and legs placed well should be weeded out of the flock, as she will not make a good thrifty hen. Fowls with a narrow head, long neck and legs set far back, should be avoided. Choose those having a deep chest, erect carriage, wide head and bright eyes.

Save the feathers; geese feathers are always high and duck feathers are worth almost as much. Turkey tail feathers bring from 30 to 40 cents a pound, being used in making feather dusters. Even chick feathers are worth saving, although they some times get down to five cents a pound. The white chicken feathers are worth 30 to 35 cents a pound.

Attend the Poultry Shows

Fanciers who wish to attract attention to their fowls can do so by placing them in the show. A blue ribbon is a splendid advertisement. It is also an incentive to all breeders to improve their stock, because people can see for themselves and learn what points. Many a person may have a prize winner in the back yard and not know it, consequently all true fanciers who are in love with the work should not only attend the fowls poultry shows, but also place their best fowls on exhibition. It is true the intrinsic value of the premiums awarded at poultry shows is not great. However, there is the honor of winning, and the advertising, which are well worth the effort and amply repay the exhibitor.

Hens will go without drink rather than drink dirty water. Have it clean for them, and plenty of it, too.

There is a good deal of human nature about old roosters. They will have a life miserable for the younger members of the flock of the same persuasion. Better separate them, even if you have to do it with a good sharp axe.

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We want the readers of Farm and Dairy to feel that they can deal with our advertisers with the assurance of our advertisers' reliability. We try to admit to our columns only such 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. No subscriber should 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 columns of the paper. Thus we will not only protect our readers, but our reputable advertisers as well. All that is necessary to entitle you to the benefit of this protective policy is that you include in all your orders to advertisers the words, "I saw your ad. in Farm and Dairy." Complaints should be sent to us as soon as possible after reason for dissatisfaction has been found.

FARM AND DAIRY

PETERBORO, ONT.

THE ONTARIO AGRICULTURAL COLLEGE

The Ontario Agricultural College is filled to overflowing. So great is the overflow, which is far in excess of all previous records for the Guelph institution, that President Creelman has found it both necessary and advisable to interview the Minister of Agriculture regarding the providing of additional accommodation for those who seek to enter these halls of learning.

It is gratifying to note that the course, as given at the College, has become so popular. The time was, and not many years ago, when the College went begging for students. The attendance this year is but another sign of the times, indicating that our farmers have found that it is good to follow scientific instruction in their farm operations. All encouragement should be given to the work of this institution—the farmers' university. The Legislature will, no doubt, not be backward in providing, at the next session, the additional accommodation that is needed.

STABLE THE COWS EARLY

The organism of the dairy cow is of a delicate nature. Severe changes in the weather and the cool nights of early fall affect her adversely. The dairyman who understands his cattle knows that to consider the comfort of his cows means increased, or at least sustained production. Accordingly he stables his cows on such nights as he himself would be uncomfortable in the open chilly air.

Failure to provide comfortable quarters and an abundance of feed at this season of the year causes much falling off in milk-flow and shrinkage in the dairy output, which spells loss to our farmers and to our country. It is unreasonable to expect any cow to milk well when she is not protected on cold nights from chilly winds, and all cow owners know from own experience that whether they expect it or not, the cow simply will not milk her normal production under adverse conditions. It pays to be good to the cow. Stable her on the approach of inclement weather, and when you would not care to be outside yourself.

PASTURE

More acres in Canada are devoted to pasture than to any other crop. Net profits from these acres are probably the least. Against this, we must set low that much of this pasture area is of poor, rocky, swampy or broken land. It is a fact, however, that we have little good pasture in Canada, if the comparison is made with Great Britain. How comes this about? Is it the soil, the climate, the kinds of grass, or the manner of treatment, that is at fault? More than one of these factors are responsible.

As to soil, we have, perhaps, as good average soil as that in any country. Our climate, however, is dry and hot at certain seasons, which is against us. We have hard frosts that often injure the plants in winter and in spring, when the fields are bare of snow. The kinds of grass sown are principally red and alsike clovers and timothy. Let us examine these and note results.

Red and alsike clovers are both biennials. They usually die at the end of the second year, provided they have gone to seed. Red clover is a continuous grower during the summer of the second year; but alsike grows only until about July the first. After that its growth is practically nil. Both of these clovers furnish nutritious feed. Timothy is a perennial and grows well until about the middle of July. It flourishes again when the moist weather comes in autumn. Two years after seeding, there is practically nothing left in a clover and timothy meadow but the timothy, and it, at best, is a plant of low feeding value.

Contrast these conditions with those of British meadows or pastures. Farmers in Great Britain sow in mixtures usually about 22 varieties of grasses and clovers, the natural characteristics of some of these being to produce a luxuriant growth at some certain period of the year, all not being at their best at any one time. In our older sections, pastures are mostly of the temporary kind. Fields are pastured after being one or two years

in hay. These would not compare with the old permanent pastures of Great Britain that have been continually grazed for hundreds of years. Such pastures in the Old Land rent for several times as much per acre as well tilled land adjoining them. The grass on the fields is so close and fine that in walking over them the foot sinks, not unlike one's hand when placed on fine velvet.

The best pastures that we can boast of are natural grass that never have been plowed. These get scant justice, considering the amount of feed they have contributed towards milk and beef production. They seldom get a coat of manure. Club moss is allowed to take possession of the ground. The whole field becomes hide-bound for lack of harrowing or discing. Many allow stock to graze upon them until snow comes. Were our pastures treated properly, seeded to well selected grasses, manured as they should be, and harrowed as seemed advisable, they would compare with others much more favorably, and would yield far in excess of their present returns.

PROVISION FOR NEXT YEAR'S CORN CROP

Much of the success of the Ontario dairyman depends upon his corn crop. Experience in the past has taught us all too plainly that the success of the corn crop is largely dependent on the vitality of the seed planted. The seed, which will be used next spring, is now in the making. It will be of strong or weak vitality, good seed, or bad, depending on the care that is exercised in its selection and in storing it for the winter.

Specific instructions for harvesting and storing seed corn have been given in Farm and Dairy by those who make a business of seed corn. These need to be applied in saving seed for next year's corn and for the most part the success of next year's crop is assured. Well matured ears from desirable stocks are the kinds to save. Braid these by means of their husks, or tie them together loosely, and hang them up in the kitchen garret or other dry warm place and you will have seed of good vitality when planting time comes around again next spring.

Dishonest Apple Packers

(The Toronto Globe.)

A despatch from Glasgow by the Canadian Associated Press reports complaints against the packing of apples from Canada for the British market. The largest fruit dealer in the north of Scotland asserts that formerly the low grade apples were packed in the bottom of the barrel, which necessitated the opening of both ends. This year they are packed in the middle, and every barrel must be emptied for inspection. The despatch adds that Canadian apples hold the first place in the Glasgow market, and when honestly packed they command the best prices.

These complaints should increase the zeal of all Government officials in Canada having to do with the fruit trade. It is not only a scandal and a disgrace to Canada that a Cana-

dian fruit mark cannot be accepted as honest on the British market, but it is also ruinous to Canadian trade. Every inspector and every honest fruit merchant should join hands in a persistent effort to expose and punish the dishonesty of such as bring the trade into disrepute.

Publicity is a great deterrent. Every instance of bad packing or false marking should be punished severely and published widely. The experience of The Globe in a suit for libel brought by a dishonest packer several years ago resulted in an amendment of the Ontario law so as to allow as privileged the publication of such official announcements. Advantage should be taken of that amendment to put the fear not only of a fine but also of public reputation on all who for dishonest and selfish purposes destroy business confidence either in Canada or abroad. No leniency should be shown to such short-sighted dishonesty, either by the officials, by the courts, or by the Press.

The Art of Showing Live Stock

(The Breeders' Gazette.)

It requires outstanding entries to win the top prizes in close competitions at our shows, and it takes grit and self-control in exhibitors either to win or lose. An embittered, long-faced, talkative loser injures himself and his business; his loss of prizes is as nothing compared with the effect of his childish conduct on spectators and himself. A boastful and arrogant winner is equally unpopular among onlookers. Whoever has witnessed competitive live stock judging with eyes and ears knows that the exhibitor must pass through a more trying ordeal than the judge. To administer bitter pills may be comely; to take them is tragedy. Men who are fortified with the quiet inner power that reflects character are sportsmanlike losers. They take their protest, without visible or audible protest, and their attitude is of larger value than the honor that lurks in a bit of blue silk. Judges, however, do not take an irresponsible delight in rendering stinging verdicts; most of them have been in exhibitors' uncomfortable shoes, and are consequently full of a manly regard for the feelings of those on whose animals they pass judgment.

At the same time no judge worthy of the office will allow this wholesome undercurrent of human sympathy or a type of professional friendship to dim his vision of what is right. Failing to please himself he cannot hope to satisfy others. But almost every important class at a show includes two or more entries whose differences in merit often dwindle down to the attenuated predilections of the judge. In such cases there is an opportunity for him to give someone the benefit of a doubt. If he is human, he is not likely to favor an exhibitor who on other occasions or in preceding classes has condemned him with countenance or tongue. Let no man fear a judge, but if he is of good repute his work should be respected and accepted.

Some men have not mastered the fine art of showing live stock. It is easier to breed and fit winners than it

is for some men as dignified rivalry. So subtle conduct and at exhibitors that judges may judge their animals.

Such a decision that official's criticisms. Exhibitors accustomed to the white feather turned. Success habit and they breaking up with mind and animal have the right to must be wrapped at a show, but enough to see has. When the maintain an inde defeat and a mood or in triumph, their art of showing live which have risen which keeps the turmoil during o

Creamery

Butter Makers are in this department matters relative to get subjects for drawn to the Creamery

Creamery I

(Continued from page 10) As a second in class that cream managers be more of men that patrons the system of gathering happens that the only representative of this patron me try is often judicious impression of the good intelligent exercise a splendid patrons on his room improve the quality but a poor drawer the opposite effect, noticeable on different same creamery. To be done to instruct each spring, it would official effect to-day

MORE EFFICIENT As a third improve advocate more creamness amongst our business that I may be wise when I say a butter maker. The ers are good, well we still have some of the fine arts of their some makers do test properly, who less and do their work. With our well equipped there is no excuse ledge in ordinary major should see to proper training for about to undertake say that this criticism a small percentage of it should not have any. Another point the makers upon is pare. It is an un to speak about, but their patrons a had dressed in a dirty a ner around the er should also remember manufacturing a ta dress accordingly

MORE EFFICIENT The fourth improve

is for some men to acquit themselves as dignified rivals in victory or defeat. So subtle is the influence of conduct and attitude on the part of exhibitors that without knowing it judges may judge men as well as their animals. Contempt for a judge's decisions breeds contempt in that official's mind for his vituperative critics. Exhibitors who have been accustomed to blue ribbons often show the white feather when the tables are turned. Success with them becomes a habit and they cannot endure its breaking up without protest, resentment and animosity. Stockmen who have the right interest in their work must be wrapped up in their entries at a show, but they must also be big enough to see what the other man has. When they can do that and maintain an inoffensive bearing in defeat add a modest, quiet good humor in triumph, they have mastered the art of showing live stock. Moreover, they have risen above the pettiness which keeps the most of us in a futile turmoil during our short lives.

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.

Creamery Improvement*

(Continued from last week.)

As a second improvement I would suggest that creamery directors and managers be more particular in the class of men they hire for cream drawers. Owing to our present system of gathering cream it very often happens that the cream drawer is the only representative of the creamery that the patron meets, and the creamery is often judged from the patron's impression of the cream drawer. A good intelligent cream drawer can exercise a splendid influence over the patrons on his route and do much to improve the quality of the cream, but a poor drawer will have exactly the opposite effect. This is often very noticeable on different routes at the same creamery. If something could be done to instruct cream drawers each spring, it would have a very beneficial effect to-day.

MORE EFFICIENT MAKERS NEEDED.

As a third improvement I would advocate more efficiency and carelessness amongst our buttermakers. I realize that I may be treading on thin ice when I say anything criticizing butter makers, but the majority of makers are good, well-trained men, but we still have some who are deficient in the fine arts of their trade.

Some makers do not know how to test properly, while others are careless and do their work too hurriedly. With our well equipped Dairy Schools there is no excuse for lack of knowledge in ordinary details and each maker should see to it that he has the proper training for the work he is about to undertake. I am glad to say that this criticism only applies to a small percentage of our makers, but it should not have to be said about any. Another point I must criticize the makers upon is their wearing apparel. It is an unpleasant subject to speak about, but many makers set their patrons and example by being dressed in a dirty and slovenly manner around the creamery. Makers should also remember that they are manufacturing a table delicacy and dress accordingly.

MORE EQUIPMENT NEEDED.

The fourth improvement I would read at the Creamery Meeting, O.A.C., Guelph, Dec. 9, 1908, by Mack Robertson.

suggest is some additions to the present equipment of our factories. While many are well equipped, some are lacking in important apparatus. The lack of a cooler in some creameries for quickly and thoroughly cooling the cream as it arrives at the factory is a great drawback and no creamery should be without one. Then, again, while most of our creameries have good cold storages, some still have very poor ones, and it is very discouraging to a buttermaker, after taking great pains to manufacture a good article, to have to store it in a poor place or inferior cold storage. Still another important part in the equipment is the need of scales for weighing cream samples for testing. I believe that scales should be used, as they give more accurate tests and anything we can do towards being more accurate is worth doing. On account of cream weighing lighter than milk and the great variation in the quality of cream as regards the amount of butter fat in it, it is more difficult to measure with the pipette. Then, again, when the cream is gassy, as it sometimes is after being kept for a month, it is hard to measure out eighteen grams. With the scale at hand it can be easily weighed. We are continually advocating the sending of a rich cream by the patrons, but again we find that the pipette will not measure out eighteen grams of a rich cream properly, while the scales will weigh it out accurately. It is worth our patrons to send thick cream we must test it accurately. As a comparison of testing with scales and with pipette are given below, we sample carefully tested by each method:

Test	No Scales	Pipette	No. Scales	Pipette
6	37	35	12	40
7	26	29	13	38
8	32	31	14	27
10	35	33	27	21
11	25	25	28	49

MORE UNIFORM METHODS REQUIRED.

The fifth improvement I would suggest is more uniformity in creamery methods. If I were to introduce two creamery patrons of two different creameries, I might name to each other, and they began discussing creamery affairs, the one would hardly know what the other was talking about. One would be accustomed to the oil test and measuring by inches, while the other would be used to the Babcock, and weighing by pounds. Now both of these methods are not the best; one must be better than the other and one must be more accurate. I am glad to say that in so far as the oil test is concerned, our creamery men have practically decided against it. There are only ten creameries left in Ontario still using the oil test, but with the measuring of cream by inches it is different. Many creameries which have adopted the Babcock test are still using the rule for measuring the cream. Measuring cream with a pipette is not accurate. It is like the oil test, it all depends on the way it is done. It is different. Many of them credit the patron with too much cream, therefore I hold that the cream should not be measured but weighed. Measuring cream with a rule is in many cases a premium for poor cream. Why cannot we all agree which is the proper method and follow some standard of doing things.

Another matter which is a lack of uniformity is in paying patrons. Some creameries pay for butterfat while other creameries pay for butter. It is not uniform in some sections especially, are not uniform in being paid for. It is butterfat that the patrons



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supply to the creamery and it is but rarely that they should be paid for. Many hesitate to pay for butterfat because patrons do not understand it, but they will never understand it if the creameries do not assist them by paying for butterfat and doing their best to explain it to their patrons.

Separation of Cream

The thickness or density of cream depends upon two things, the centrifugal force used, and the regulation of the cream outlet. In the separation by centrifugal force, the milk is thrown to the outside of the bowl, because it is heavier than the butter fat, the latter works in towards the centre, and is known as cream; the nearer the centre of the bowl the thicker the cream, providing uniform feed and speed are maintained.

Most separators have what is known as a cream screw that has an opening in the centre. When a thick cream is desired the screw is turned in, which carries the opening nearer the centre of the bowl, giving you a thicker cream.

Separators have different devices for the removal of the cream, but in all cases the density of the cream provided the inlet of milk and speed are kept uniform.

The cause of the variation in tests, in most cases, is due to the variation of speed in running the separator. If the machine is run a little slowly or below speed the result is a lessening of the centrifugal force, consequently more milk will be retained in the so-called cream, which will mean a low per cent. of butter fat. In addition to this the separator will not skim clean and the result will be that some fat and patrons in some sections especially, are not uniform in being paid for. It is butterfat that the patrons

separators that had been operated at a low rate of speed and found the fat content in the skim milk to average over 1 per cent., or one pound of butter fat in each 100 pounds of skim milk. Butter fat is too valuable a product to be wasted like this.—Prof. G. L. McKay.

I have received the Fountain Pen, and I am well pleased with it, and I will try to get more new subscribers for Farm and Dairy.—Willie Jackson, Carleton Co., Que.

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THE LAWRENCE-WILLIAMS COMPANY, Toronto, Ont.

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.

Dairy Building at London

Editor, Farm and Dairy.—I have noticed that when you take a subject and present it to the readers of Farm and Dairy for discussion, you are generally successful in carrying it through. I have a complaint to make with the Western Fair Association as regards their dairy building, and should you think it a subject not to be dealt with lightly, I should like very much for you to bring it up before the public, and try and better conditions for exhibitions in the dairy building next season.

When visiting the dairy building I was disgusted to find the cheese on exhibition in a very hot condition. The cheese were sitting in a veritable great box, which was easily seen by their greasy and puffed condition. This should be remedied by the association at once.

When makers go to the trouble and expense of putting their product in a neat and attractive style on exhibition, it is certainly the duty of the Western Fair, or any other association, to provide a means, whereby such products may be shown in the best condition, while in their hands. Through your paper, in the interests of the dairy business of Canada, I trust this condition will be remedied.—Wm. Reid, Lambton Co., Ont.

Some Views on Makers' Certificates

Considerable talk and much exchange of opinion is prevalent amongst cheese makers concerning the matter of granting certificates. The point in particular that is raised by those who grant certificates is that of granting equal certificates of any lower grade than that given to the dairy school graduates of say two years' experience. The older makers who lack the qualifications given by a dairy school claim that the better way for the Department to do in this matter would be to grant yearly permits. These permits to be subjected to examination at any time should the holders of the same prove to be inefficient and not doing good work. Then if a maker took a factory and did not successfully manage it, his certificate could be cancelled at any time that the Instructor should report him inefficient and not doing good work. Such a system would cut all makers on the same grade. Under a system as suggested any maker who had been out of work for say two years could go back to a factory and in a short time get his permit from year to year, if not his permit would be cancelled by the ruling of the Chief Instructor.

In marked contrast to the older men, the young makers think that they should have a certificate granted for life after they have proven themselves efficient and have qualified as regards dairy school instruction.

Caring for Milk for Cheese Making

Editor, Farm and Dairy.—In reply to your request for a brief outline of my opinion concerning the method of caring for milk, recommended by Mr. Barr, Dairy Instructor, and what arrangement we have installed for giving this attention to our milk, I will say, in the first place, that we are well satisfied with the quality of the milk, and that it has been commented upon very favorably by our cheese maker. As we supply a large quantity of milk, we have had some difficulty in former years to deliver it in

prime condition, by the use of the aerator and cold water process, so that we have made fresh use of ice for years in caring for milk.

An ice house convenient to the milk stand with at least 100 blocks of ice, is of the utmost importance to all dairymen, with an average amount of milk. We use a box lined with galvanized iron, say 20 inches deep, with room for two cans and plenty of ice around them for 15 cows. We stir the milk once or twice to get the milk from centre of the can in contact with the cold from the ice water. We add milk to keep in fine condition over Sunday, by putting on the lid and covering closely to keep out hot air in the rays of the sun.

Another very important point is great care in washing cans and pails. Our plan is to first wash in cold water as soon as possible to get all milk out, then add one tablespoonful of baking soda to each can and wash thoroughly in boiling water, then rinse in cold water.

Being secretary as well as salesman of a cheese factory, I have every opportunity of comparing results, and I would say that the best cheese factories, by all means send good milk and send the best milk you possibly can. As there is a heavy loss over patrons sending over-ripe, gassy milk, the time coming when patrons will insist that no such milk be allowed in cheese factories, as a few careless patrons may spoil the parts of the rest.—R. Bullock, Peterboro Co., Ont.

More About Whey Butter

Editor, Farm and Dairy.—It was decided at our last annual cheese meeting that the patrons would put in a butter plant and manufacture whey butter, and so far this season we have had good patron and every encouragement to go into making whey butter. The butter has all been of a good even quality and is liked well by all of our patrons, as well as the general public. Customers other than the patrons. The butter has all been sold at 25c. a pound at the factory in one pound prints.

The factory has a basement under the wooden shed where the vat which receives the whey direct from the cheese vat above. From the vat below, the whey is lifted with an elevator sufficiently fast to feed the separator and into the separator. Its full capacity, which is 5500 lbs. of milk per hour. After separation the whey is carried off to the whey tank outside the factory.

The most important point in this whey butter manufacture is the immediate skimming of the whey after it leaves the curd and that the whey must be skimmed before the development of much acid, and best keeping qualities in our butter.

After the skimming is completed the cream is allowed to 30 per cent. butter fat, is immediately skimmed, 46 deg. and kept at this point until churned, which is anywhere from 24 to 48 hours. I add no starter to the cream whatsoever, except when I have had a tainted curd, usually on Monday, and this cream is pasteurized to a temperature of 180 deg. After cooling I add from 40 to 50 per cent. of good flavor, which is skimmed on Saturday, and on Tuesday morning this cream is in fine condition for churning and of good flavor. I find this method far ahead of a whole milk culture as the cream culture has a better control of the pasteurized cream than the whole milk culture has.

When the cream is different vats or of two days' standing it is being mixed and churned at the same time the mixing should never be done while the cream is yet warm, especially if one batch is cold and the other one warm, but should be well cooled and,

after it is thoroughly mixed, be allowed to ripen together for at least 10 or 12 hours before churning at a low temperature. Thus we will have the same amount of acidity in all the cream to be churned and avoid streakiness or any mottling in the butter. This matter of mixing the cream is only second in importance to the advisability of quick skimming of the whey after it leaves the cheese vat.

My lowest yield of butter has been 4½ lbs. of butter from the whey of one ton of milk and my highest yield 7 lbs., this latter from a vat of very over-ripe milk. The average yield has been 5 lbs., which will increase as the season advances to about 6 lbs. For the past week (mid-August) the yield has been 5½ lbs. of whey per one ton of milk.

The whey is still good for hogs and in much better condition to be carried home in the milk cans, owing to the fact that there is not any of the fat that normally accumulated on the whey left to become rancid with yeast germs, etc., and the whey tank is always clean and easily kept clean.—W. R. Kaiser, proprietor and maker, Mitchellville Cheese Factory, Leeds Co., Ont.

The Maker and His Patrons

A maker strengthens himself and makes his position surer by coming in direct with his patrons as much as possible. When tied up in the factory during the making season a maker has little opportunity to visit his patrons. After the factory closes for the season he has ample time for such work.

The visiting of patrons is frequently postponed till a few weeks before the factory opens in the spring. The visit at that time is mostly hurried and are more in the nature of a canvass for milk by the manufacturer or maker. The work of the coming season is rarely discussed, little information is given, and the quality of the milk, and nothing very much is accomplished in the way of bettering the milk supply or improving the relations between patrons and makers generally.

It would pay makers to visit their patrons in the fall, when the work of the season is over. Everything is fresh in the memory and the quality of the milk received from each patron can be discussed and information given, if necessary, as to how it may be improved the following season. If a patron has any grievance a remedy can be sought during the winter. If a patron is left to nurse his grievance during the winter season, the maker has to deal with it. This is how new factories are formed adjacent to existing ones. Patrons often have grievances, sometimes real, sometimes imaginary. If left alone, and no explanation is given, the maker, these grievances sometimes grow to large proportions, and the maker would drop in on them at every opportunity might be explained to their satisfaction, and good customer of the factory retained. Otherwise a small grievance may develop into a mutiny against the maker and the factory, resulting in a competitive factory being erected, a business disorganized, and what had been a paying investment, ruined.

There are, of course, people who are always complaining for a grievance. These people are hard to manage, and a factory is often better without them than with them. Generally speaking, however, the majority of patrons who have grievances are open to reason, and if visited in a friendly way by the maker and the grievances discussed, they will soon disappear. At any rate a maker who does not harm, and the sooner it is made and the factory closes the better; and it will pay to visit all patrons, whether they have a grievance or not.—J. W. W.

Big Contrast

You would not bother with a cultivator that had 40 to 60 useless shovels.

Then why bother with a disk-filled cream separator with 40 to 60 useless disks in the bowl, when the Sharples Dairy Tubular has nothing in the bowl except the piece here shown on the thumb?

The only place to buy a Sharples Dairy Tubular is at the factory. 50 Disks from one Common Bowl. Sharples Dairy Tubulars are the only modern, simple, sanitary, easy-to-clean cream separators. Most efficient, most durable, light running. The manufacture of Tubulars is one of Canada's leading industries. Sales exceed most, if not all, of others combined.

Write for catalogue No 253

THE SHARPLES SEPARATOR CO. Toronto, Ont. Winnipeg, Man.

Milk from Silage

The Illinois Experiment Station reports: For the past nine years the department of dairy husbandry at the University has delivered from 100 to 150 quarts of milk a day to people in the two cities. During this time the cows have been fed an average of about forty pounds of silage per day, the balance on pasture, and no complaints of a bad flavor or smell have been received. Mr. H. B. Gurler of DeKalb, who is one of the most progressive dairymen of the state, has been producing certified milk for the past ten years and selling it in Chicago at 12 cents a quart. All of this time Mr. Gurler has been feeding silage to his cows, excepting during the season of the year when silage was abundant, and with the best of results. This is strong evidence that if the silage is of good quality and used in reasonable amounts, it is one of the best feeds obtainable for dairy cows when pasturage is not available.

Dairymen all over the country are beginning to find that the advantage of cooling the milk is in the way we advocated last winter. Our work during the present summer is confirming the work of last year in connection with cooling milk.—Geo. H. Barr, Chief, Dairy Division.

I like Farm and Dairy well, and trust it will meet with the success its efforts deserve.—John Keenan, Frontenac Co., Ont.

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FOR SALE.—Warrimster cheese and butter factory, township of Dummer, Peterboro Co.—David Taylor, Warras, Ont.

WANTED.—Cheesemakers and dairymen to represent us during the fall and winter months, on full or part time. Salaries: pay weekly. Start now at best selling time.—Toronto, Ontario, The Ponthill Nurseries, Ltd.

CHEESEMAKERS—Can secure good winter employment by working for Farm and Dairy. If you mean business and are anxious to earn a good week weekly, write at once to—Glenora Manufacturing Co., Peterboro, Ont.

“T”
ting to
S
SHE was telling that she had for. Not a about a friend, tion, nor what has occasion, and she lived to find that not seem to have I circumstances of Ab.
“Oh, I tell ye, fellow,” she said, with enthusiasm. “I was wrong with. He clapped his eyes open his little salt chloroform into his knives and slay as ma would in front of Jimmie there, a them.”
“Look at that no! claimed, pulling out the store and spirit of Camilla was not wherever he goes.”
A knock sounded by opened it and and Jim Russell.
“I’ve got a letter Jim said from the over.” “When Tom this evening this le in life before an brough it over to bring it in. I didn come, but seeing as Pearl, I came.”
Camilla was not at all.
“Pearl took the letter.” “Read it, Camilla,” it to her friend.
Camilla broke the It was from Alfred Rector of St. Agnes County, Kent, Eng.
It was a stately le rector dignified an language. It was in unity of the Church and obscure child in but it told of a faith grateful for every breathed an admirati her's devotion and l love for her that wo in life itself.
Camilla in muta illa road—that could We do not mean to payment for what you child.” (Camilla read of love can be lov; but we ask you us this little gift of ter would accept it if we will be glad to h been a help to you an education. Our brot wishes you to take fr



OUR FARM TIMES

"THERE is nothing ridiculous in seeming to be what you really are, but a good deal in affecting to be what you are not."

Lubbock

Sowing Seeds in Danny

By Nellie L. McClung

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(Continued from last week)

SHE was telling about the night that she had watched for the doctor. Not a word did she tell about her friend, the doctor's agitation, nor what had caused on that occasion, and she was very much relieved to find that her listeners did not seem to have heard about the circumstances of Ab, Coster's death.

"Oh, I tell you, Doctor Clay's the fellow," she said, her eyes sparkling with enthusiasm. "He knew what was wrong with Arthur the minute he clapped his eyes on him — tore open his little satchel, slapped the chloroform into his face, whisked out his knives and slashed into him as any man would into a pair of pants for Jimmie there, and him waitin' for them."

"Look at that now!" her father exclaimed, pulling out the damper of the stove and spitting in the ashes. "You's a man'll make his mark wherever he goes."

A knock sounded on the door. Teddy opened it and admitted Camilla and Jim Russell.

"I've got a letter for you, Pearl," Jim said in the greetings. "It's over." "When Tom brought the mail this evening this letter for you was in with the others, and Mr. Arthur brought it over to see if I would bring it in. I didn't really want to come, but seeing as it was for you, Pearl, I came."

Camilla was not listening to him at all.

Pearl took the letter wonderingly. "Read it, Camilla," she said, handing it to her friend.

Camilla broke the seal and read it. It was from Alfred Austin Wemyss, Rector of St. Agnes, Tilbury Road, County of Kent, England.

It was a stately letter, becoming a rector, dignified and chaste in its language. It was a letter of a dignitary of the Church to an unknown and obscure child in a distant land, but it told of a father and mother's gratitude for a son's life saved, it breathed an admiration for the little girl's devotion and heroism, and a love for her that would last as long as life itself.

Pearl sat in mute wonder as Camilla read—that could not mean her! "We do not mean to offer money as a payment for what you have done, dear child (Camilla read on), for such a service of love can only be paid in love; but we ask you to accept from us this little gift as our own daughter would accept it if we had one, and we will be glad to think that it has been a help to you in the securing of an education. Our brother, the bishop, wishes you to take from him a gift

of £20, and it is his desire that you should spend it in whatever way will give you the most pleasure. We are, dear Pearl

Your grateful friends,

ALFRED A. and MARY WEMYSS. "Here is a Bank of England draft for £120, nearly \$600," Camilla said, as she finished the letter.

The Watson family sat dumb with astonishment.

"God help us!" Mrs. Watson cried at last.

"He has," Camilla said reverently. Then Pearl threw her arms around

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We have just issued a new premium catalogue which will interest you. More than 100 splendid premiums are listed in this catalogue. It is illustrated, and full descriptions are given of the various premiums. Write for a copy. You will be surprised when you see the splendid articles we are giving away. Send us a postal card and the catalogue will be sent you by return mail. Full instructions are given for securing these premiums.

Circulation Department, FARM AND DAIRY, Peterboro, Ont.

her mother's neck and kissed her over and over again.

"Ma, don't," she cried, "ye'll git it now, what I always wanted ye to have, a fur-lined cape, and not lined with rabbit or squirrel or skunk either, but with the real vermin! and it wasn't bad luck to have Mrs. McGuire cross me path when I was going out. But they can't name me, Camilla sure what did I do?"

But Camilla and Jim stood firm the money was for her and her only. Everyone knew, Jim said, that if she had not stayed with Arthur that long night and watched for the doctor, that Arthur would have been dead in the morning. And Arthur had told him a dozen times, Jim said, that Pearl had saved his life.

"Well then, 'twas aisy saved," Pearl declared, "if I saved it."

"Yes, then Doctor Clay came in with a letter in his hand.

"My business is with this young lady, he said, as he sat on the chair drew Pearl gently toward him, and

"Pearl, I got some money to-night that doesn't belong to me."

"So did I," Pearl said.

"So, you deserve all yours, but I don't deserve a cent. If it hadn't been for this little girl of yours, Mr. Watson, that young Englishman would have been a dead man."

"Faith, that's what they do be sayin', but I don't see how that wuz,

You're the man yerself, Doc," John replied, taking his pipe from his mouth.

"No," the doctor went on. "I would have let him die if Pearl hadn't held me up to it and made me operate."

Pearl sprung up, almost in tears. "Doc," she cried indignantly, "haven't I told ye a dozen times now to say that? Where's yer sense, Doc?"

The doctor laughed. He could had quite excoriated him from blame in the matter, and given to him the professional opinion that young Cowan would have died anyway — the lancing of his throat having perhaps hastened, but did not cause his death.

"Pearl," the doctor said smiling, "Arthur's father sent me \$50 and a letter that will make me blush every time I think of it. Now, I cannot take the money. The operation, no doubt, saved his life, but if it hadn't, no been for your there would have been the money. If you do not, I will have to send it back to Arthur's father and tell him about it."

Pearl looked at him in real distress.

"And I'll tell everyone else, too, what kind of a man I am—Jim here, knows it already!"—the doctor's eyes were smiling as he watched her

troubled little face.

"Oh, Dr. Clay," she cried, you're worse'n Danny yerhead. What kin I do with ye?"

"I do not know," the doctor laughed, "unless you marry me when you grow up."

"Well," Pearl answered gravely, the family raised, but I'm thinkin' maybe Mr. Barner might take ye."

"I thought of that, too," the doctor

answered, while a slight shadow passed over his face, "but she seems to think not. However, I'm not in a hurry, Pearl, and I just think I'll wait for you."

After Camilla and Jim and the doctor had gone that night, and Teddy and Billy and Jimmy had gone to bed, Pearl crept into her father's arms and laid her head on his broad shoulder.

"Pa," she said, drowsily, "I'm glad I'm home."

Her father patted her little brown hand.

"So am I, acushla," he said; after a pause he whispered, "yer a good little girl, Pearlie," but Pearl's tired little eyes had closed in sleep.

Mrs. Watson laid more wood on the chimney, which crackled merrily up the

"Lay her down, John dear," she whispered, "yer arms'll ache, man."

On the back of the stove the teakettle simmered drowsily. There was no sound in the house but the regular breathing of the sleeping children. The fire burned low, but John Watson still sat holding his

side the snow was beginning to fall.

CONCLUSION

Convincing Camilla,

If you can convince me, Jim, that you are more irresponsible and more in need of a guiding hand than Mrs. Francis—why then I'll—

I'll be—"

"You'll be what, Camilla? Tell me quick," he cried, eagerly.

"I'll be—convinced," she said demurely, looking down.

Jim sat down and sighed.

"Will you be anything else?" he asked.

"Convince me first," she said firmly.

"I think I can do it," he said, "I always have to write down what I want to do each day, and what I need to buy when I come in here, and once, when I wrote my list, nails, coffee, ploughshare, mail, and perhaps put on it 'come back', and I forgot to say you may remember I came here that evening and stayed and stayed—I was trying to think what to do next."

"That need not worry you again, Jim," she said sweetly. "I can easily remember that, and will tell you every time."

"To 'come back'?" he said. "Thank you, Camilla, and I will do it too." She laughed.

"Having to make a list isn't anything. Poor Mrs. Francis makes a list and then loses it, a ways—well, that; and Jim, she once made biscuits and forgot the shortening."

"I made biscuits one time and forgot the flour," Jim declared proudly. "Camilla shook her head."

"And, Camilla," Jim said gravely, "I am really very irresponsible, you know Nellie Slater—she is a pretty girl, isn't she?"

"A very pretty girl," Camilla agreed.

"About your size—fluffy hair—"

"Wavy, Jim, yours is a ways," Jim said firmly—"lovely dark eyes—well, she was standing by the window; just read the lamps were lighted, and I really am not a know-nothing person—I don't know what happened that I mistook her for you."

Camilla reached out her hand. He seized it eagerly.

"Jim—I am convinced," she said softly.

Fifteen minutes afterwards Camilla said:

"I cannot tell her, Jim, I really cannot. I don't know how to begin to tell her."

"Why do you need to tell her?" Jim asked. Hasn't the lady eyes and understanding? What does she think I come for?"

"She doesn't know you come. She sees somebody here, but she thinks it's the grocery boy waiting until I empty his basket."

"Indeed," Jim said a little stiffly, "which one, I wonder."

"Don't you remember the night she said to me 'And what did you say this young man's name is, Camilla—no, no, Jim, she hasn't noticed you at all."

Jim was silent a moment.

"Well now," he said at last, "she seemed to be taking notice that morning I came in without any good excuse, and she said 'How does it happen that you are not harassing this beautiful day, Mr. Russell?'"

"Yes, and what did you say?" Camilla asked a trifle severely.

Jim looked a little embarrassed.

"I said—I had not felt well lately, and I had come in to see the doctor."

"And what was that?" Camilla was still stern.

"The ingenious device of an ardent lover," he replied quickly.

"Articled since you mean, Jim," she laughed. "But the next very good message from Pearl. Was my new suit done?"

"Yes, and then I came to see—"

There was a front-row of skirts in the hall. Camilla made a quick move and Jim became busy with the books on the table.

Mrs. Francis entered.

"Camilla," she began after she had spoken cordially to Jim, "Mr. Francis is in need of a young man to manage

his business for him, and he has made up his mind—quite made up his mind, Camilla, to take Mr. Russell into partnership with him if Mr. Russell will agree. Mr. Francis needs just such a young man, one of education, good habits and business ability and so, Camilla, I see no reason why your marriage should not take place at once."

"Marriage?" Camilla gasped.
"Yes," Mrs. Francis said in her richest tones. "Your marriage, Camilla, at once. You are engaged are you not?"

"I am—convinced," Camilla said irreverently.

"And then it was Mrs Francis who laughed as she held out a hand to each of them.

"I do see—things—sometimes," she said.

The End.

The Upward Look

Have Faith and Patience

Delight thyself, also, in the Lord, and He shall give thee the desires of thine heart. Commit thy way into the Lord; trust also in Him, and He shall bring it to pass. Rest in the Lord and wait patiently for Him.—Psalm 37, 4, 5, 7.

For the Lord God is a sun and shield; the Lord will give grace and glory, no good thing will He withhold from them that walk uprightly. O Lord of hosts, blessed is the man that trusteth in thee.—Psalm 84: 11, 12.

Our difficulties and troubles are what we fashion them. They can be the burdens that crush us or they can be transformed into the stepping stones by which we can climb higher and higher in strength of character and in fellowship with God. God poured out his grace and the good things of the world on David in a wonderful manner. But David was, also, tempted and tried as few men have been. Time and again his friends deserted him. He was hunted from place to place by powerful enemies. He was forced to flee from home and to hide in caves and in deserted places. Mighty armies advanced against him and threatened to crush him. Again and again it must have seemed to him that God had deserted him and that he was doomed to destruction. Always, however, his despair was chased away by his faith in God and thus he triumphed over his fears and over his enemies.

There are many beautiful psalms that show the extremes of feeling that David passed. One of these is Psalm 13, which starts with the cry, "How long will thou forget me, O Lord, forever? how long will thou hide thy face from me?" and which ends with the song, "But I have trusted in thy mercy; my heart shall rejoice in thy salvation. I will sing unto the Lord because He has dealt bountifully with me."

David's life should be to us what God intended that it should be, a lesson. If we have the same faith in God, if we will ask God for help with the same intensity of desire, if we will submit our ways unto God for His approval then we may rest assured that God will do His part and that He will grant us the desires of our hearts and that no good thing will He withhold from us. But we must rest our trust in His word and wait patiently for Him.

In his book, "In touch with the Infinite," Ralph Waldo Trine brings out

many helpful thoughts. He says "Thoughts of strength both build strength from within and attract it from without. Thoughts of weakness actualize weakness from within and attract it from without. Courage begets strength, fear begets weakness. And so courage begets success, fear begets failure. It is the man or the woman of faith, and hence of courage, who is the master of circumstances, and who makes his or her power felt in the world."

"And oh, the thousands all about us who are continually living in the slavery of fear. The spirits within that should be strong and powerful are rendered weak and impotent. Their energies are crippled, their efforts are paralyzed. Fear is everywhere—fear of want, fear of starvation, fear of public opinion, fear of private opinion, fear that what we own to-day may not be ours to-morrow, fear of sickness, fear of death. Fear has become with millions a fixed habit."

"We need more faith in everyday life,—faith in the power that works for good, faith in the Infinite God, and hence faith in ourselves created in His image. However things at times may seem to go, however



Snapshot taken at the Women's Institute Picnic, at Wellington, Ont. We shall be glad to send photos of any institute picnics, Institute officers, etc., that are sent to us.

dark at times, appearances may be, the knowledge of the fact that the Supreme Power has us in its charge as it has the suns and endless systems of worlds in space, will give us the supreme faith that all is well with us, the same as all is well with the world. "Thou wilt keep him in perfect peace"

whose mind is stayed on Thee." "Such is the man of power. Centred in the Infinite, he has thereby, so to speak, connected himself with, he has attached his bells to the great power house of the universe. He is constantly drawing power to himself from all sources." His strong, positive, and hence constructive thought is continually working success for him along all lines, and continually bringing help to him from all directions. Silent, unseen forces are at work which will sooner or later be made manifest in the visible.—I. H. N.

Saving to Good Citizenship

During the past fourteen years a great and important work for the neglected or homeless boys and girls of Ontario, has been carried on by a circle of Children's Aid Societies, acting under the direction and inspiration of Mr. J. J. Kelso, who has been so long identified with philanthropic work for children.

The Children's Protection Act passed by the Legislature in 1893, has accomplished untold good for the rising generation, and thousands of boys and girls have been helped, encouraged and protected. This Act provides for the organization of Societies, which, when formed, shall have power to bring cases of child neglect or cruelty, etc., before the courts, and when sufficient evidence of neglect is adduced, the guardianship of such children shall be transferred to the society. There are about forty of these branch societies.

The Act also arranged for the establishment of a department in connection with the Government, presided over by a provincial superintendent whose duties include a supervision of the work done by the various Children's Aid Societies in Ontario, the keeping of the records of children placed out in homes, the explanation of points of law, etc., and the securing of homes for children. Over three thousand children are under supervision.

As the Government officials having to do with the reform institutions, Mr. Kelso has been able to do a remarkable work. Over eighty boys were taken out of the State Reformatory and placed in situations under good influence. Forty girls, fifteen to eighteen years of age were taken from the Girls' Reformatory, and over fifty were taken out of the Industrial Schools. All these young people with hardly an exception are now growing up respectable, and largely because their better na-

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HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association...

COW TRANSFERS FOR JUNE, 1909.

The publication of these transfers is paid for by the Holstein-Friesian Breeders' Association:

(Continued from our last issue.)

- Sadie De Kol Jane, Alvie Whitley to Wesley M. McLean, Roebuck, Ont. Seven Spot De Kol, Gordon H. Manhard to George Shields, Smith's Falls, Ont. Shawville Beauty, Gordon H. Manhard to T. A. Goodenow, Manhard, Ont. Sir Johanna Burdette, estate of James H. Wylie to John B. Priddy, Perth, Ont. Speckle Abbecker De Kol, Gordon H. Manhard to George E. Sherwood, Buckville, Ont. Summer Hill Josephine, Charles H. Willoughby to D. C. Platt & Son, Millgrove, Ont. Sunshine B. 2nd, Fred Hilliker to A. E. Hulet, Norwich, Ont. Sunshine B. 2nd, A. E. Hulet to Thomas King, Golden, B. Susannah Snake 4th, Miles Wood to Elgin Wood, Kivlin, Ont. Sweet Marie Thirza, Frank Stroubinger to E. J. Foster, Ingersoll, Ont. Tania Rooker 2nd, W. V. Pines to Logan Bros., Sherburne, Ont. Tessa May, George H. Coughall to E. C. Gilbert, Payson's Mills, Ont. Venus Princess, Joseph Barry to Walter Barry, Claybank, Ont. Thelma Akkrum De Kol, G. A. Gilroy to John Greenham, Addison, Ont. Tildie De Kol of Col. J. M. Steves to M. C. Stevenson, B.D. Ont. Thirza Pauline De Kol, Thomas Hoskins Priddy, Fryer, Ont. Tina Korndyke's Countess, Wilbur Morris to Wm. Higgins, Inkeram, Ont. Una Korndyke's Countess, Wm. Higgins,

- son to David E. Summers, Winchester, Ont. Ulica Teake De Kol, George Black to James Scott, Winchester, Ont. Vaskiti of Portage Ways, H. E. George to W. E. Wallace, Fergusburg, N. B. White Rose Jacobs, John Tweedy to J. M. Laird, Kivlin Grove, E. I. White Rose Sylvia, John Cruise to Peter C. Stevens, Purville, Ont. Zenobia B., Gordon H. Manhard to Wm. C. Zozolin De Kol, Alec S. Blackwood to O. S. Krefling, Asker, Alta. C. CLEMONS, Secretary.

BULL TRANSFERS FOR JULY, 1909

- Angie Grace Cornucopia Lad, Lakeview Farm to C. R. Gies, Heidelberg, Ont. Adrian Lad, George A. Ferguson to Lewis Crosscut, Tillsonburg, Ont. Arabella's Clyde De Kol, H. J. Gilbert to Frank Mitchell, Mt. Eglin, Ont. Asphodel Count, Calamity, Geo. H. Coughall to Arthur Watson, Middlemarch, Ont. Banner Boy Ormsby, Daniel Knapp to Alex. Kelly, Merrickville, Ont. Bell Crosscut Lad, L. Dunkin to J. C. Bryerly, Courtland, Ont. Black Knight of Ayrton, George W. Dennis to Henry Dennis, Sparta, Ont. Boss-a-Rue Lad, W. E. McKillip to Peter Primes, Fitzville, Ont. Buckey Pieterette Keyes, R. Hopkins to W. J. Higgins, Cummings' Bridge, Ont. Buzier, Estate of J. Richardson to Robert Owens, Antrim, Ont. Canary Lad, Lakeview Farm to J. B. Ecker, Beausville, Ont. Canary Lad, Lakeview Farm to J. W. Cameron, Perth, Ont. Canary Sir Howtie De Kol, L. N. Howe to W. J. Howard, Fort Saskatchewan, Alta. Centre View Butte Baron 6th, F. D. Eds to Charles H. Harris, Rockwood, Ont. Clearview Count De Kol, Dig Wood to James T. Mackenzie, West Konkton, Ont. Count Faforit Abbecker, C. H. Shaver to W. T. Hood, Tutville, Ont. Count Mercedes Posh 2nd, John Heppes to James A. Stewart, Sr., Menie, Ont. Count Pioterette Pride, G. C. Fry to W. Motheral, Drumbo, Ont. Cronie Paul, F. W. C. Nase to Henry Tedlie, Lower Brighton, N. B. De Kol Brook, H. E. George to Harry Foster, Honeywood, Ont. De Kol King, Stanley Stephenson to Wm. Higginson, Inkeram, Ont. De Kol Model Prince, L. J. Tregillus to J. W. Plozman, Evars, Alta. Doriska Willis Count, George H. Coughall to Arthur Watson, Middlemarch, Ont. Duke Alba, Alex. Barron to Nelson Franklin, Barry, Ont. Duke Napoleon Korndyke, I. N. Howe to Jas. Cassidy, Verschole, Ont. Duke of Rice Lake View, Robert J. Jibb to Albert Steele, Harwood, Ont. Duke of Rice Lake View 2nd, Estate of A. J. Richardson to Addison Hand, Hazeldean, Ont. Fanny Abberker Prince, George A. Ferguson to Jas. Walker Potter, Brownsville, Ont. Fanny Abberker Vayne, E. T. Mains to John W. Berry, Berryton, Ont. Franco Bernegger Waynes, Mulloy Bros. to J. H. McLean, Inkeram, Ont. Gamin des Landes, Ludger Besette to George Arns, Marleville, Que. George Mercedes De Kol, Benj. Holby to Foraiside Bros., Harrow, Ont. Glanworth Chief, Benj. Holby to Angus Taylor, Glanworth, Ont. Helbon Beauty's Johanna Lad, Howard Wilson to W. B. Coekburn, Watertown, Ont. Helbon Beauty's Johanna Lad, W. B. Coekburn to Edman Brown, Hamilton, Ont. Highland Chief Paul, F. W. C. Nase to Frank Allan, Adelaide, N. S. Hillview Statesman De Kol, Walter S. Scheil to Walker Sons, Walkerville, Ont. Hilda's Heir, James A. Stewart, Sr. to John Hoppes, Campbellford, Ont. Inferno of Laprairie, N. Bangster to Medrie Lefevre, Laprairie, Que. Inka Sarcastic Lad, Peter Macdonald to John Russell, Byitono, Ont. Isabella's Duke, B. G. Thomas to A. D. McGuigan, Rodney, Ont. Island King De Kol, Frank Eston to James Wamsley, Waupoos, Ont. Johanna De Kol Sir Teake, Manrice Pare Milk Co. to Gertrude Lowe, Ninette, Man. Keyes De Kol Rhea Count, H. E. George to J. C. Wylie, Sanford, Man. Keyes Mercedes De Kol, H. E. George to Lewis Walsh, Marston, Ont. Wm. Gowing, Mankawata, Man. King Abbecker Beauty, George A. Ferguson to Lenna Sarcastic Prince, G. D. George to King Carmes, John Willoughby to James Gardiner, Franklinville, Ont. King Grasses, Wm. S. Shearer to Walter Jickling, Listowel, Ont. King George, Wm. S. Shearer to Andrew to Charles E. Armstrong, Vars, Ont. Korndyke De Kol Prince, E. T. Mains to William Green, Sweet's Corners, Ont. Lenna Sarcastic Prince, E. D. George to Thos. Lane, Arundel, Que. Lenna's Johanna Prince, E. D. George to A. A. McLean, Lime Hill N.S. Little Arkie's Abbecker, T. J. Dunkin

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One of the most successful breeders in the county, although at present only on a small scale, is Mr. J. Foster, of Bloomfield. He has three cows, including two pure bred, one of which is likely to form to put in the Canadian milk records. The undersigned while our editor was at the farm. One measured 5 feet 2 inches in circumference, 5 feet 6 inches in height, and the third of its presence our editor, were milked 60 lbs. of milk, another 75 lbs. and the third 77 lbs. Mr. Foster recently sold a grade Holstein cow for \$125. The man who bought her has declared since that a farmer recently offered to give Mr. Foster the man who he thought he would place where he would only have three cows. Mr. Foster has concluded he had made a mistake.

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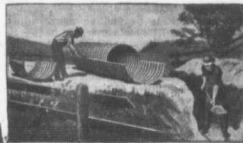
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or locking-ribs, engage easily, as you see in Fig. 2. The joints between one length and another are "broken"—no over-lap reaches more than half-way round the culvert's diameter; and this is possible with NO OTHER metal culvert made. It is a most valuable feature, for it reduces the chance of leakage to the very least minimum.



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