

TORONTO, CANADA

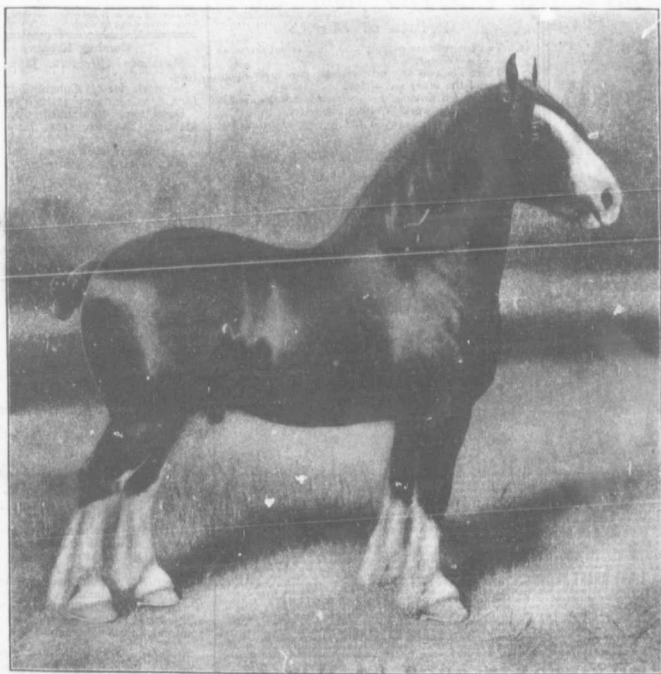
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The Farming World

A Paper for Farmers and Stockmen



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(See page 75.)

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A handbook for poultry keepers on the standard and improved methods of feeding and marketing all kinds of poultry.

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Thrifty Growth, Expert Chicken Feeding, Broiler Raising, Nutrition for Layers, Special Foods, To Finish and Dress Capons, The Art of Poultry Fattening, Lessons from Foreign Experts, American Fattening Methods, At Killing Time, Preparing for Market, Marketing Turkeys and Water-Fowl, Finish and Shipping.

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 J. W. WHEATON, B.A. - Editor
 D. T. MCAINISH, Manager

The **Farming World** is a paper for farmers and stockmen, devoted to country life in Canada, published on the 1st and 15th of each month, with illustrations.

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Coming Events

Shorthorn Directors, January 16, 1905.

Western Dairy Convention, Stratford, Ont., January 17-19, 1905.

Dominion Shorthorn Breeders' Meeting, Toronto, Oct., January 17, 1905.

New Brunswick Farmers' and Dairy-men's Association, Fredericton, January 25-27, 1905.

Canadian Stallion Show, February 1-4, 1905. The following associations will hold their annual meetings during show week: Harness Hunter and Saddle Horse Society; Shire Horse Breeders, Hackney Horse Society, Clydesdale Horse Breeders, Canadian Horse-breeders' Association, Canadian Pony Society.

Ayrshire Breeders' Annual Meetings, Montreal, February, 1905.

Holstein-Friesian meeting, Feb. 1st, 1905.

Nova Scotia Farmers' Association, Truro, N.S., Feb. 6-8, 1905.

Horse Fair, Calgary, 3rd week of March, 1905.

PUBLISHER'S DESK

Attention is called to the new book just issued, **Poultry Feeding and Fattening**.

We will send it postpaid to any subscribers who send us two new subscriptions to THE FARMING WORLD.

Advertisers should get into line for our Annual Special Poultry number, which will be published on Feb. 1st, and which reaches all the important poultrymen in the Dominion.

Do you read **CANADIAN GOOD HOUSEKEEPING**? If not, ask us to send you a free sample copy.

We would call attention to the announcement of Mr. Alfred Hall, in our Farmers' Exchange column this issue. This will be a great opportunity for anybody wishing to go into stockraising and dairying.

Poland Chinas Wanted

We have several inquiries for Poland China boars from St. Joseph and Manitowlin Islands.

Farm Help

Mr. Robert Verity, an experienced farmer, is selecting farm help at his office, in Leeds, Ontario, and sending out the class of men that farmers require. Any one wishing to procure help, single or married, for the coming season should apply at once to 65 Front St. East, Toronto.

The World's Champions

We are indebted to the Wilbur Stock Food Company for a copy of their book, "Blue Ribbon Frize Winners and Champions of the World's Live Stock." This is an interesting volume full of illustrations of famous champions of the big show rings of the world. Among them are several Canadian animals that have won distinction at International shows.

Feeding and Fattening Poultry

Poultry Feeding and Fattening, by George B. Fiske, Morang & Co., 50 Wellington West Toronto. Price 50 cents.

As the title suggests, this book treats of a most practical subject. It is one thing to breed poultry but it is another thing to feed and fatten it properly for market. It is the latter subject which Mr. Fiske takes up in his admirable work. Not only is the reader given valuable information as to feeding and fattening poultry, but particulars of special finishing methods as practiced by American and foreign experts are given, and also advice as to the best way of handling broilers, capons, water-fowl, etc. The illustrations are of a high order, many of them explanatory of the context. They are numerous as well.

This book should supply a long felt want among poultry raisers. It deals with the end of the business about which least is known, and gives the information in practical form. The book is bound in cloth, contains 160 pages, and at 50 cents is one of the best investments in books about poultry and the farm.

About Field Crops

The Cereals in America, by Thomas F. Hunt, Professor of Agronomy in Cornell University, Morang & Co., 50 Wellington West, Toronto. Price \$1.75.

This is a most valuable work, in which every Canadian farmer should be interested. To produce large yields of good quality the farmer must not only know his soil and how to prepare it for the coming crop, but should have an intimate knowledge of the crop itself. This knowledge Prof. Hunt, who is well known to many Canadians, has arranged in convenient form, and in such shape that any farmer can grasp it. The chief cereals grown on this continent are dealt with. For example, wheat is taken up in the following order: Structure, composition, botanical relations, classification of varieties, culture of wheat, enemies (insects, etc.) of wheat, harvesting, uses of wheat, production and grades of wheat.

The book contains 420 pages; is well illustrated and should form a valuable addition to every farmer's library.

A number of subscriptions expire with this issue. Unless renewed at once the paper will be stopped.

A Great Success

Success is in no other business more dependent upon quality than it is in dairying. The best prices are possible only for that perfect flavor and superior quality of butter that the best methods alone can produce. The use of

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(Signed) NATHANIEL THOMPSON,

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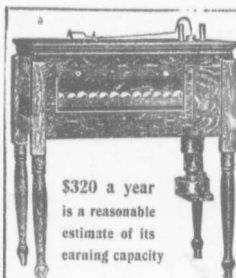
WINNIPEG

TORONTO

Orangeville, Ont., Nov. 3rd, 1904.

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Earn a Comfortable Living WITH A Chatham Incubator

Poultry raising with a Chatham Incubator is a very profitable and easily managed occupation. Unless you want to go into it extensively it need take out very little of your time. Government records show that the demand for chickens in Canada is greater by 25% of the supply, and that it is always clamoring for more. That means a steady market and good prices for chickens.

You cannot raise chickens successfully with a setting hen, she is wasting live setting when she should be laying. While she is hatching and brooding a few chickens she could be laying five or six dozen eggs. The percentage of chickens she hatches is much less than that produced by the Chatham Incubator.

It will pay you to own a Chatham Incubator.

Chatham Incubators contain every improvement of importance to incubator construction that has been produced. They are made of thoroughly seasoned wood, with two walls, one within case. Between these walls mineral wool is packed, forming the very best insulation. Each piece of the case is mortised and grooved and secured, making the whole as solid as a rock. Chatham Incubators are equipped with scientifically perfect regulators, which are an infallible means of regulating the temperature.

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We will start you raising poultry for profit with a Chatham Incubator without one cent of money from you until next fall. That means that you can take off seven or eight hatches and make considerable money out of the incubator before the first payment becomes due.

We couldn't make this offer if we were not certain that if you accept it you will get complete satisfaction. If we were not positive that the Chatham Incubator will pay you a handsome yearly income.

This is a straightforward offer. We make it to show our supreme confidence in the Chatham Incubator. We want you to accept this offer, so we are sure of the satisfaction our Incubator will give. Every machine we have put out so far has made other sales in the same or shorter time.

One egg is to send you a Chatham Incubator at once, freight prepaid by us, without one cent of cash from you. You make your first payment in October, 1905. The balance to be paid in October, 1906, or if a Cash Buyer you get it cheaper, would any offer be fairer or more generous?

The incubator and brooder that I bought from your agent, on time, I wish now to pay the whole amount this fall, if you will give me a discount. I am very much pleased with both incubator and brooder, and would not be without them, because I cleared this sum on more than the incubator and brooder cost me.

I wish to let you know of my success with your incubator. Out of 124 eggs I got 74 chicks, and out of my second hatch I got 94 from 106 eggs. I had the machine a poor success, it run according to directions. The brooder is a wonder, and I have not lost a chick as yet, and they almost feathered.

Yours truly, JOHN H. McKINNON, Collingwood.

Write us to-day for full particulars of our offer and mention this paper. Don't put it aside for another time, as this special proposition may be withdrawn at any time.

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The Farming World

And Canadian Farm and Home

Vol. XXIV

TORONTO, 16 JANUARY, 1905

No. 2

Practical Articles Wanted

NOTHING is of more value to the reader of a farm journal than the practical experience of brother farmers. The experience of others will aid him in doing his own work better. To encourage more farmers to send in their experiences or views we are prepared to pay liberally for any practical and original articles dealing with live farm topics, which we publish. They should not be long, but brief and to the point. Any farmer of an evening can prepare such an article.

There are a number of topics upon which the practical experience of farmers would be timely just now, such as the winter feeding of horses, cattle, sheep and swine, handling manure in winter, feeding the bacon hog, winter butter, conveniences on the farm, soil cultivation, use of fertilizers, growing clover, the farm fence, stable ventilation, home waterworks, power on the farm, the wood lot, preparing for spring, up-to-date barns, house plants, and any other subject that is of interest to farmers. Let us have a liberal response to this request. We are prepared to do our share if you will do yours.

Changes in the Act Needed

During the past year Supt. Cowan has made a careful investigation of the work being carried on by the various agricultural and horticultural societies in Ontario, with a view to obtaining information that would be helpful in dealing with any changes that might be advisable in the Agricultural and Arts Act. In a comprehensive statement of the results of his investigations recently made public Mr. Cowan advances some very strong reasons why a change in the Act is urgently needed at the present time, and why some things should be done to improve the work being carried on by the majority of the district and township fairs of this province.

That important changes are required in the operation of this Act every unprejudiced agriculturist will agree. As at present constituted the act permits of an unjust distribution of the Government grants—a most serious grievance. Then there are many societies that are neglecting their agricultural departments and devoting too much attention to undesirable features, and a change in the Act is required in order to compel these societies to live up to the objects for which they receive grants of public money. There are also in many sections too many societies, resulting in inferior shows and a rivalry that is neither conducive to wholesome exhibitions nor to the moral elevation of the community.

It is surely time that something were done to remedy matters. In the face of

the information supplied by Mr. Cowan in regard to horse-racing, fakirs, and questionable attractions at many of the local fairs, there can be no excuse for further delay in changing the Act. Prompt and decisive measures are needed if the local fall fair is to fulfill its mission—that of advancing the agricultural interests of this country.

Is It Worth Two Cents per lb. More?

At the Dairymen's Convention at Brockville, Mr. J. W. Mitchell, Superintendent of the Kingston Dairy School is credited with the statement that the very best butter made from gathered cream is worth about two cents per lb. less than the finest butter made at the whole milk separator creamery.

Although Mr. Mitchell is a painstaking,

PLEASE REMEMBER

That our annual poultry number will be issued on Feb. 1st next. Tell your neighbors and friends about it, and have them send in their names for a copy. If you have poultry or eggs for sale an announcement in this special number will reach many buyers.

On May 1st the annual dairy number of THE FARMING WORLD will appear. Last year's dairy number was a most valuable one and received many flattering comments. We can promise that the one for 1905 will be equally as good, if not better.

These special issues, with the Exhibition number in September, help to make THE FARMING WORLD the best value in agricultural journalism in Canada today. Kindly see that your neighbor knows about it. Liberal premiums are given for new subscribers.

ing, careful and conscientious dairy authority, we question his power to back up the foregoing statement. In fact, the burden of proof, if we have regard to the awards at the leading exhibitions, and the prices paid for the butter made on the cream gathered and separator creamery systems in this province is against it. Taking a period of several years back we venture the assertion that as many of the highest awards in the creamery classes at the Toronto Exhibition have gone to cream gathered butter as to butter made at the whole milk creamery. Moreover, we believe that if a record of the values obtained by the best whole milk and cream gathered creameries in Ontario were published there would be no such difference as two cents per lb. in the values which the former obtained over the latter. In fact, in many instances, it could be shown that cream gathered butter

has sold as high as butter made at the whole milk creamery.

However, we have no desire to advance one method of operating a creamery over another. If dairymen prefer to operate a whole milk creamery, by all means let them do so, as they will get good returns by so doing. But farmers have shown a marked preference for the cream gathered creamery in recent years and it would be idle to persuade them otherwise. This being the case the aim of the dairy teacher should be, not to decry the system, but to improve it as much as possible. If the same attention were given to instructing the farmer how to care for cream as is given to instructing him how to care for milk for the cheese factory, etc., there would be less complaint as to the quality of the product of the cream gathered creamery. As Mr. Ruddick stated at a dairy meeting not long ago, there is nothing inherent in the cream gathered system to prevent first-class butter from being made. It is the coming system and the sooner our dairy authorities realize this and endeavor to improve the system the better for the butter industry of this country.

Hitting Back at the "Yankee"

Prof. W. J. Kennedy, of the Iowa Agricultural College, who is absent in Europe studying agricultural conditions, recently addressed a gathering at the Scottish National Fat Stock Club, Edinburgh, in which he apparently indulged in a little too much "Yankee Spread Eagleism" to suit the canny Scot. The *North British Agriculturist's* comment on the speaker and his address makes interesting reading. It says:

"His nationality is a trifle mixed, for although he is of pure Scottish blood, he is a Canadian by birth and an American by location. But the Scottish and Canadian elements in his intellectual constitution appear to have been completely subordinated to the genuinely American spirit which has taken possession of him since he shook the dust of Ontario off his feet, and settled down in Iowa. His speech on Wednesday last was a fine specimen of Spread Eagleism. He told the Scottish breeders that while the motto of Scotsmen was to "go one better" than every one else, the motto of the Americans was to "go one better" than the Scotsmen; and while the Scottish breeders were rightly enough aiming at producing the best possible class of farm live stock, they were doing so for the glory of America, because the Americans came over and took away the cream of the Scottish cattle. In regard to that, one may well ask the Professor how much "cream" of that description have the Americans taken away from Scotland or from anywhere else during the last two years. One could almost count on the fingers of one hand all the pedigreed cattle that the Americans have taken from Great Britain within the last two years, and

the few that they have taken could hardly be warranted to show a high analysis as "cream." As compared with Argentine, in the importation of the cream of Scottish cattle the Americans are simply "not in it." Besides, the Americans appear to be holding the cream of pedigreed stock at a very low rate just now, for at all the sales of pedigreed cattle in America within the last two years the prices obtained have been very low, and much under the prices ruling in this country. The Professor also told the Scottish breeders that the Americans not only took the cream of Scottish cattle to America, but they also took out the cream of Scottish breeders to adjudicate in the fat cattle classes at the Chicago International Exposition. He said they began by taking out Mr. Biggar to judge there two years ago; then they took out Col. Ferguson last year; and they had taken out Mr. Ross, Meikle Tarrel, to judge there this year. Now, in regard to this we must correct the Professor, for Mr. Biggar was not the first Scotsman taken out to judge at the Chicago "International." The first Scotsman taken out to judge at that show was Mr. Jas. Paton, who, although long located among the Shorthorns, at Berkeley, where the 4,500 guinea bull, Duke of Connaught, served his day, was by birth and training an Angus man, and he "calved" the original Erismair, the great foundress of the family for which the Americans in their craze

stock in this country. From all this it would seem that the Americans have not yet been able to "go one better" than Scotland has gone.

Readjustment of the Commissioner's Branch

Last week an order-in-council was signed providing for a division of the work of the Agricultural and Dairy Commissioner's Department following upon the resignation of Prof. Robertson. The live stock, dairy and seed divisions, which were formerly under his supervision, will have a special commissioner for each, who will be responsible only to the Minister of Agriculture.

The live stock department will be continued under Mr. F. W. Hodson's charge as commissioner. He will also have supervision over the poultry division. Mr. Hodson's work in the interest of Canadian live stock is so well known to the readers of THE FARMING WORLD that any extended reference to it here is unnecessary. Suffice it to say, that since taking up work at Ottawa he has brought the live stock interests of all the provinces into closer touch with each other and been the medium

by which inter-provincial trade has been greatly extended. Mr. Hodson is just in the prime of life, with many years of usefulness before him.

Mr. J. A. Ruddick, for several years Chief of the Dairy Division, becomes Dairy Commissioner, and will have full control of that important branch under the Minister's direction. For this he is well fitted. Good judgment, skill and intelligence have been shown by him in his quarter of a century of dairy work in Canada. A couple of years sojourn in New Zealand, and an intimate knowledge of dairying as it is practiced in all the provinces of the Dominion, have given him an experience in matters pertaining to dairying that few men at his time of life possess. We are assured that under his direction progressive dairy work in Canada will not suffer. Like Mr. Hodson, Mr. Ruddick is just in the prime of life.



F. W. Hodson, Live Stock Commissioner.



J. A. Ruddick, Dairy Commissioner.

G. H. Clark, Seed Commissioner.

for pedigrees were wont to pay fabulous prices. The Professor also gave a glowing account of the great work that was being done for the advancement of agriculture at the American Colleges, at each of which the students could be numbered by the thousand. But, although the Agricultural Colleges in America are most liberally supported by the American Government, and although that great continent is littered with bulletins giving the results of agricultural experiments carried out by the teaching staffs of these colleges, yet the fact remains that, according to the official statistics of both countries, the average yield per acre of wheat in America is only 13 bushels, while that of Great Britain is 29 bushels. And how would Professor Kennedy explain the fact that while America held for many years the premier place among the nations of the world as exporters of wheat, the land of the Stars and Stripes has now dropped to a fourth-rate place as an exporter of wheat? And with all their experiments in the growing of crops and the breeding, rearing, and feeding of live stock in America, the Iowa College have deemed it advisable and necessary to send Professor Kennedy on a mission to the land of his ancestors to make an exhaustive study for the information of American agriculturists of the system of farming and of breeding, rearing, and feeding live

held in the eastern provinces. Mr. Clark is secretary of the Canadian Seed Growers' Association, and has charge of the records of the history of seed of wheat, oats, barley, maize, flax, millet, peas and beans, and also seed potatoes produced by its members.

There are several other important branches of work of the Agricultural Department, such as fruit, cold storage, and markets extension, with regard to which, no announcement has yet been made. Cold storage and markets will probably come under the supervision of the Dairy Commissioner. The fruit growers have strongly opposed making the fruit division a branch of the Dairy Department, as was first proposed. What decision the Minister has come to on this point has not yet been made public.

Prof. Day continues his discussion upon the feeding of steers in this issue. It will bear careful reading.

Prof. Robertson, who retired from the position of Agricultural and Dairy Commissioner on Dec. 31st, was presented by the staff with a handsome hall clock.

Some Notes on Steer Feeding

By PROF. G. E. DAV, O.A.C., Guelph.

In a previous article, the question of selected steers for feeding was discussed in a general way. In the present one, a few suggestions relative to feeding steers will be offered.

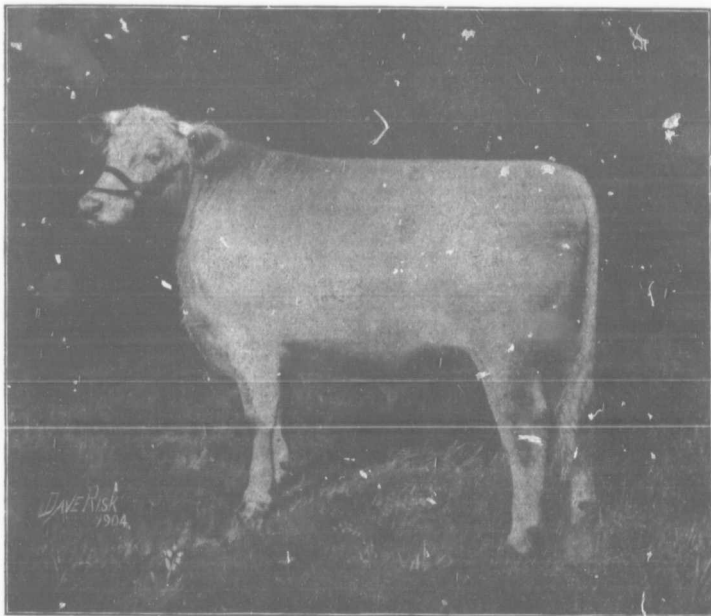
Those who read the last article would probably be impressed with the fact that a very small error in judgment in purchasing would cause a loss, in place of a profit, to the feeder. If this is true in regard to selection, it is even more so in connection with feeding. Errors in judgment in feeding cattle are extremely common, and result in a large financial loss to farmers every year. It is true that the most skillful feeder is liable to make mistakes occa-

breeding, such steers will often give a good account of themselves. If the farmer has a field of rape into which to turn them, especially if there is a pasture field adjacent to it, these thin steers will make good gains on rape during September and October, and come into the stable in the best possible condition for winter feeding. The main objection to this plan is the fact that feeding steers are often higher in price during August and September than they are later in the season. When they can be bought worth the money, however, the plan is a good one, for rape is not only a good food for steers, but it will also take the place of a

thoroughly, and hence a serious waste is incurred. The probability is, also, that it will interfere with their subsequent gains, and that the feeder will be disappointed in the gains made by his cattle when he sells them in the spring.

FEEDING THE MEAL

Long-keep steers are all the better to receive practically no meal during the first month they are in the stable, or, at most, merely a sprinkling of meal on their other food, say, between one and two pounds per day. Thus they become accustomed to meal, and the quantity may be gradually increased until, by the end of the second month, they may reach as high as four pounds each per day. An increase in the amount of meal should be made gradually, and the extent to which it should be increased after



The yearling Shorthorn steer [Fruit Creek Wanderer, 1st in his class at the Chicago International, 1904. Property of W. D. Flatt, Hamilton, Ont.

sionally, for no man is infallible in matters pertaining to stock feeding. At the same time, there are certain general principles in connection with feeding steers with which it is well to be familiar, and from which it is not safe to depart. When the margin is so small as it is at present, we must aim to get every available ounce of nutriment out of the foods we use, if we wish to see a profit upon our operations. Economy must be our watchword, and economical feeding means getting the largest gain in weight from a given amount of food.

LONG-KEEP STEERS

By long-keep steers is meant steers which, on account of light weight or thin condition, have to be fed five or six months before they are ready for market. If they are young and of good

summer fallow, so far as cleaning the land of weeds is concerned.

When the steers are taken into the stable, the greatest care is necessary to prevent bad effects from the change. Hard and fast rules cannot be laid down in connection with feeding animals of any kind, but the feeder must remember that these animals, fresh from the pasture, are used to bulky, succulent food, and he must make an effort to give them a ration approaching as closely as possible to the one to which they are accustomed. Some feeders, anxious for large gains in weight, commence feeding a heavy meal ration as soon as the steers are stabled. By doing so they are simply throwing away a large part of the meal they are feeding, for the steers, not being accustomed to concentrated foods, do not digest the meal

the point just mentioned, will depend upon the condition of the steers. As a rule, reasonably good long-keep steers can be finished for market by feeding, on an average, about half a pound of meal per day for every 100 pounds of their live weight. That is to say, if the average live weight of a steer for the whole feeding period is 1,200 pounds, the amount of meal required to fatten him will average about 6 pounds per day. Of course, towards the close of the feeding period, it may be necessary to increase the meal ration to nearly a pound per day per 100 pounds of live weight, but since the ration was extremely small at the beginning, and was very gradually increased, the average daily ration will not exceed, to any considerable extent, the quantity stated. The feeder must ever bear in mind

that meal is the expensive part of the ration, and that the profits depend very largely upon the skill with which this important factor in fattening is handled. Light meal rations to start with, and very gradual increase, are two general guides which should never be lost sight of in fattening cattle.

SILAGE AND ROOTS

The meal ration has been dealt with first because of its importance, but it is not by any means the only thing to be considered. It has already been stated that the ration should at first be bulky and succulent. Roots or silage are of great value as a means of furnishing succulence during the first stages of feeding. A steer should receive at least 30 pounds per day of roots, and a fair-sized steer will take 50 or 60 pounds without injury. As to silage, there are many who believe that silage is good for dairy cows, but that it is of no use for fattening cattle. As in the case of roots, practice varies very much in regard to the quantity of silage used. Probably from 30 to 40 pounds per day is as much as it is advisable to feed a steer. The main objection to silage is the fact that, occasionally, steers will be found that will not eat satisfactorily, but as a rule, they eat it readily. It is seldom that any difficulty will be experienced when the silage is mixed with cut hay, cut straw or chaff. As to the remainder of bulky food, chaff or cut oat straw will answer very well for the first two or three months, after which it is better to add some cut hay to the mixture. As the steers become fatter, it becomes important to stimulate their appetite by striving to make the food as palatable as possible, and for this reason it is advisable to increase the proportion of hay in the mixture. If hay is available, it is as well to drop the straw or chaff entirely during the last six or eight weeks of feeding.

The method of feeding described is that which is frequently used for pressure feeding. The gains in weight are not large, but they are secured at low cost. In our experiments at the Agricultural College we have obtained very much cheaper gains by this method than when we attempted to force steers from the start, and in some instances we secured just as large gains as we did under heavier feeding.

SHORT-KEEP STEERS

The same general principles apply in the case of short-keep steers as in the case of long-keep, with the exception that, since the short-keep steers are to be finished in three or four months, it is necessary to increase the meal ration more rapidly. Even in this case, it is easy to injure the steers very seriously by feeding too heavy a meal ration at the start. Three or four pounds of meal per day is a heavy enough ration with which to start, and the increase should be gradual. In the course of a month, they may be nearly to their limit, though just what the limit should be, depends upon circumstances. There are successful feeders who seldom exceed half a pound of meal per day per hundred pounds weight of the steers. When it is required to have the steers finished by a certain time, it may be necessary to crowd a little, but when the meal ration approaches a pound per day per hundred pounds live weight, it is becoming very expensive. The amount of meal will also be influenced by the character of the bulky fodders used. If straw and chaff are fed, more meal will be necessary than when good hay is used, so that the quantity of meal must be left largely to the judgment of the feeder. It is a fact, however, that a great deal of meal is wasted through over-feeding, and the feeder must ever keep this fact clearly in mind.

He must remember, also, that he is not dealing with machines, but with living creatures, and if he would feed to the best advantage, he must study his animals and strive to accommodate his methods to their individual requirements.

QUIET AND COMFORT

Small gains are sure to be the result, if animals are not comfortable and contented. They must be freed from vermin at any cost. Persistent use of almost any of the standard sheep dips, will eventually destroy lice, but it requires several applications at intervals of seven or eight days. Noise, or rough handling should never be tolerated. The man who cannot win the confidence of the animals under his care, should never attempt to feed cattle. Clean managers are essential to success. The steers should be fed only what they will eat up clean. To leave stale food in a manger with the object of compelling the animal to eat it before receiving more, is a sure way of ruining a steer's appetite. If a steer should leave some of his food, it should be removed as soon as noticed, and a fresh start made with the next meal. Perhaps the ideal method of watering is to have water where they can drink at will. If roots are fed liberally, watering once a day is sufficient, otherwise twice a day is preferable. To turn steers out in a cold yard to drink ice water is not conducive to the best gains.

LOOSE OR TIED?

There is a difference of opinion regarding the relative merits of feeding steers loose or tied, and there is no conclusive evidence in the experimental work to date on this point. Good results can be obtained from both methods under skillful management, and it is largely a question of which method is most suitable for the condition of each individual farmer. To feed loose, it is necessary to dehorn, and occasionally there will be found some sore heads from the operation, and this tells against getting the best results. There is no question, however, that in suitable sheds the steers are more comfortable when running loose than when tied, but in some experiments it would seem as though the extra exercise they took caused the consumption of more food for a pound of gain, whereas other experiments show the reverse. Steers fed loose will ship somewhat better than those kept tied, and the method also gives a better quality of manure, though, as a rule, more straw is required. It is a question which each man must work out largely for himself, being guided by the question of convenience.

KINDS OF MEAL

Corn is one of the very best single foods for fattening. It is better, however, mixed with oats, or even bran, to improve its texture, as it is a heavy, close textured meal, that is not easily digested unless mixed with something to lighten it.

Peas are also excellent, but not suitable for feeding alone, being even heavier than corn and requiring to be mixed with something more open in texture, such as oats or bran.

Barley is usually considered somewhat "heating," and liable to cause skin troubles. When combined with other grains, however, it gives good results. Oats are not regarded as a fattening food, but are easily digested and are excellent for mixing with other grains.

As a matter of fact, the greater the mixture of grains used for meal, the better the results.

The question of weight must never be lost sight of in feeding meal. Many men feed entirely by measure, and are

inclined to form their opinions of different foods by the effects produced by equal measures, instead of by equal weights. A gallon of ground oats is a very different thing from a gallon of pea meal, and when feeding the lighter classes of meal, the bulk should be increased as compared with the heavier kinds. If this point is not lost sight of the feeder will be surprised to find, after all, how little difference there is in the feeding value of different kinds of meal. The man with good judgment will get good results from almost any meal mixture, provided it is palatable. He must see to it that it is palatable, that it is mixed in such a way as to be digestible, and that the guide as to quantity is weight, not measure.

A good deal might be said in this connection, but space forbids. Feeding animals, as stated before, is a matter of judgment, and the object of this paper is to stimulate the use of this all essential faculty.

A Grand Champion Carcase

Funk's Choice, a fifteen-sixteenths pure-bred Angus was the grand champion over all competitors in the dressed carcass competition at the International. He was thirty months old. He, with twenty-five others, was put into the feed lot on January 1, 1904. He was fed twice a day and allowed the range of a twenty-five acre pasture. This steer was not halter broken till ten days before the show, and at no time was he



picked out from the others for any special attention. He was not pampered or stall-fed, but was fed as thousands of other cattle are fed on the Funk farms in central Illinois. He sold for \$150.00 per cwt., and dressed out as follows:

Live wt. of Funk's Choice, 1,235 lbs.	
Dressed weight	824 lbs.
Per cent. of yield	66-7-10.
Weight of fat	107 lbs.
Weight of hide	71 lb.

Treatment of Heaves

In all cases of heaves it is desirable to change the ration for a time, and all water given the horse should be given before he eats. All food should be mixed with lime water, and if considerable hay is used this should be well moistened before being fed. Use care in keeping the stall and manger free from anything which will create dust, and have the stable well ventilated at all times.

As a medicine give the horse one-half ounce doses of a solution of arsenic at night and morning. This can be obtained at any drug store. An ordinary case of heaves will succumb to this treatment, but in bad cases add to the treatment advised ounce doses of glyco-heroin, given three times daily in the month, using a syringe. If the combined treatment does not complete the cure the case is hopeless.

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Sheep on the Alberta Range

J. McCAG.

There is no doubt but that, measured by its fitness with respect to climate, soil and grass, Southern Alberta should number a much larger sheep stock than it has at present. The total count is not above seventy-five thousand, and conditions generally favor the industry. The land of the third prairie steppe in which Southern Alberta is situated is in most places rolling and dry and is covered with a good sod of mixed feed such as the buffalo and bunch grasses, blue joint, white sage, wild pea and other herbs. The flocks in the country are free from foot, skin or liver troubles. Euzootic troubles do not take hold easily and are easily stamped out. The climate permits open grazing throughout the year, which greatly reduces the cost of running sheep. If hay is put up it is only as a safeguard against starvation in case of a tie-up during a spell of very bad weather or deep-crueted snow. It would no doubt be wiser to do more feeding. By the expenditure of a little more

be an advantage; otherwise the sheep are better outside than in. A range lamb under ordinary conditions is no weakling and gets up and follows soon after dropping. It should be remembered that the natural thing for the lamb to do is to survive in the environment native to its parents and so suited to it. Open lambing, if properly managed, is free from the confusion and filth of the shed. Mature sheep do not suffer from severe weather, but there are some times losses from sheep being scattered in a storm and split up and worried by coyotes and wolves. If sheep bunch up or frequently if they are driven in a storm, they pile up and a good many smother. Another source of danger is being driven over a cutbank in a storm and piled up in the deep snows accumulated there, and once the band is started it is difficult to stop the rest from following. These are scarcely worth mentioning. The grass came early and there was no bad weather during lambing time. The summer has been rather too dry, and it has affected the hay unfavorably by lessening the quantity of it from too quick ripening of it, and making it less substantial in quality. Hay will be a high price in the range country before spring. A good deal has already had to be imported for town use by rail to supplement the small local offerings, and the price of baled is now from \$11 to \$13 per ton. Grain will be equally dear. Owing to the drought the oat crop in the southern part of Alberta was rather light, and the price at the opening of the grain season was an easy forty cents per hundred above the opening prices for the past two years. The prospective high cost of feed for the winter does not alter the fact that sheep men are prospering. In addition to the weather favoring their work, markets have been satisfactory. Wool went at 14 and a tenth cents this year, which is three or four cents above the ruling prices for the past four or five years. Mutton started well, but followed the slump in beef down to about the same price per pound. It will undoubtedly

be good in a month or so, and touch the five cent mark or over by spring. The local market for it is proportionately larger than the local market for beef, in view of limited production. The mutton of the West is practically all Territorial, Manitoba has little and British Columbia almost none, while sheep keeping in the Territories is almost exclusively ranching and is limited to Southern Alberta and Western Assiniboia.

Shipping Live Stock to Argentina.

For several months Mr. F. W. Hodson, Live Stock Commissioner, Ottawa, has been investigating the possibilities of the Argentine Republic as a market for Canadian live stock. A good deal of information has been secured, and the time seems ripe for more active measures. If two or three leading Canadian breeders were to visit Buenos Ayres, make themselves familiar with the conditions of the trade, and arrange for the handling of shipments by a trustworthy Canadian agent, there would seem to be little doubt of establishing a profitable market for our pure-bred cattle and sheep, particularly Short-horns and Lincolns.



Yearling Lincoln Ewe—1st at Toronto, London, St. Louis and Chicago, 1904. Owned by J. T. Gibson, Denfield, Ont.

Grade Wether, 1st Prize at London and 1st and Champion at St. Louis and Chicago, 1904. Weight, 260 lbs. at 18 months. Owned by J. T. Gibson, Denfield, Ont.

labor, ewes could be brought through in stronger condition, and quite a number of weak late lambs of the previous year saved. In heavy snow, accompanied by hard frosts, little late lambs cannot keep up on the coarse, poor feed that mature sheep can thrive on, their fleeces are light and they die of absolute cold. If they had a good quality of hay, with some oats, and little traveling except for three or four hours a day, they would repay the extra care. The weak lambs should be taken out of the bunch as they seem to need it and put back when they have gained strength again. A little more care and labor would put the sheep business on a better basis.

Many shepherds run their bands without either hay or shelter except natural shelter. They have their lambs come about the first of May, and when the lambing season begins they just hold the ewes in a sheltered valley or along the slopes of a sunny coulee with water along its little depressions. The ewes dropping lambs as the flock grazes, stay back and they are bunched by the shepherd as the lambs get old enough to move a little. If it comes snow or a very cold rain during lambing, lambing in the open will involve some loss. A tight-roofed shed and feed will then

The present season has been highly favorable to shepherds on the range. The spring losses are scarcely worth mentioning. The grass came early and there was no bad weather during lambing time. The summer has been rather too dry, and it has affected the hay unfavorably by lessening the quantity of it from too quick ripening of it, and making it less substantial in quality. Hay will be a high price in the range country before spring. A good deal has already had to be imported for town use by rail to supplement the small local offerings, and the price of baled is now from \$11 to \$13 per ton. Grain will be equally dear. Owing to the drought the oat crop in the southern part of Alberta was rather light, and the price at the opening of the grain season was an easy forty cents per hundred above the opening prices for the past two years. The prospective high cost of feed for the winter does not alter the fact that sheep men are prospering. In addition to the weather favoring their work, markets have been satisfactory. Wool went at 14 and a tenth cents this year, which is three or four cents above the ruling prices for the past four or five years. Mutton started well, but followed the slump in beef down to about the same price per pound. It will undoubtedly

It is reported on good authority that 20 per cent. of the bulls sent from Great Britain are slaughtered in quarantine at Buenos Ayres for tuberculosis. Many that fail to pass the test in Britain are bought by speculators and heavily insured till after the test on arrival in South America, the rate of insurance being 25 per cent. Though the speculators are coinng money, such methods cannot fail to create an unfavorable impression, and if Canadian breeders will send only first-class animals that are sure to pass the tuberculin test they ought to win the confidence of the Argentine breeders.

HANDLING THE STOCK

The following interesting statement of how consignments of live stock are handled at Buenos Ayres is furnished by Messrs. Bullrich & Co., the leading auctioneers of that city:

We enclose herewith statement of all the expenses to which live stock is subjected after landing, which we should pay and charge in the account sales of the animals consigned to us, sending net proceeds in draft at sight on any important place in Canada.

WITH REGARD TO CATTLE

It is advisable to send only Short-horns, each consignment consisting of

not over fifteen animals. The preferred ages are: bulls, from two to three years; cows, from four to six years; heifers, from eighteen months to two years. Cows are preferred with calf at foot, and heifers served—if possible only a short time before leading them—as it is not advisable to ship them when far advanced in pregnancy. All the cattle must be heavy-fleshed, blocky and short-legged, of early maturing qualities, and roan, dark roan or red in color (the two colors last mentioned preferred). The best season for sale is from August to the middle of November; at said time animals ought to be in our premises, so that prospective shippers will have to take into consideration the sea voyage of about one month, the forty days' quarantine, and ten days' exhibition in our yard before the sale. We do not advise sending them out of season.

We enclose a list specifying all the documents required by our authorities and pedigrees and all documents required to be legalized by the Argentine Consul at the port of loading—and in the case of Shorthorn pedigrees they must be absolutely eligible for our herd book; for this purpose it is necessary that the last male and female named in the pedigree, which may not show any interruption, have to be entered in the English or North American herd book, with date of birth in or before the year 1850.

THE CHIEF BREEDS OF SHEEP

Imported are pure-bred and pedigreed Lincolns and a few Merinos and Black Faces. It is not advisable to send horses and pigs on consignment for private sale or public auction, because our breeders order these animals almost exclusively from the farms.

The greatest risk importers have to face is the sanitary inspection (quarantine, tuberculin test, etc.) to which imported stock is subjected, and it is, consequently, convenient and advisable to insure the animals while in quarantine, and if possible, cattle against the test, on your side. Quarantine lasts as follows: cattle, 40 days; sheep and pigs, 15 days; horses, 8 days.

Finally, we beg to state that the commission of six per cent. on all the sales of live stock is paid by the buyer, with the exception of poultry, for which we charge twelve per cent., keeping included, to the seller.

EXPENSES.

At the landing stage or embarcadero:—

Unloading, per head—

Cattle \$2.00 currency.

Horses 2.00 "

Sheep50 "

Pigs40 "

Each coop of poultry 1.00 "

Feed, per head and diem—

Cattle 2.00 "

Horses 2.00 "

Sheep40 "

Pigs 1.00 "

Poultry (1 day quarantine)03 "

Entrance and crane fee per head—

Cattle and horses05 gold.

Sheep and pigs01 "

Halter, per head—

Cattle and horses60 currency.

Clearing at the custom house:—

Stamps for clearing, \$1.00 for \$1,000, declared value.

Stamps for documents, etc., \$16.50.

Fee of custom house broker, according to shipment.

Driving from landing stage pens to auction mart:

Cattle and horses, per head \$2.00 currency.

Cattle and horses in bull float 10.00 "

Sheep, pigs and poultry in carts, per cart 4.00 "

At the auction house:—

Feed per head per diem—

Cattle and horses \$2.00 currency.

Sheep50 "

Large pigs80 "

Small pigs40 "

Receiving animals and delivery at auction mart is gratis.

One dollar Argentine currency is equivalent to 44 cents Canadian money.

DOCUMENTS REQUIRED BY CANADIAN GOVERNMENT

Certificate made out by the Minister of Agriculture and legalized by the Argentine Consul, showing that the cattle plague has not existed for ten years in the country from which they proceed; and that neither pleuropneumonia nor foot-and-mouth disease has existed there during the last six months; as regards sheep it must be shown that no case of smallpox in sheep has occurred during six months; as regards horses a similar certificate in reference to glanders and lampas. Provision is made for the inspection of ships bringing live stock, and for sequestration and quarantine, or destruction if they have the prescribed diseases of animals not found in perfect sanitary condition.

The captain of any vessel with live stock on board, or the agents of the respective steamship companies, must present on arrival of the steamer a list specifying the number, variety, sex, breed, owner and consignee of the animals, and the port and date of embarkation. Besides there must be specified in the said list the number of animals that died during the voyage and the cause of death; there must also be presented a statement signed by the captain stating that the vessel has not loaded, during the thirty days before shipping, the animals on board, any class of live stock in any country from which importation is prohibited by our authorities, that the vessel has not been in contact with prohibited countries after loading and has not called at any port of such country, that the animals have not been in contact with any animal proceeding from any prohibited country during the voyage, and that the remarks regarding the stock that died during the voyage are truthful.

W. A. C.

Suggestions for Colt Breakers

As we usually have from ten to fifteen head of draft-bred horses, I will try to tell how they are broken. We always halter-break when young, and handle frequently until three years old, when their harness education commences.

First, the colt is quietly harnessed in the stall and left awhile to view himself.

Then a strap is fastened on the end of the harness tugs, and the breaker stands behind the colt far enough to be out of reach of his heels and rubs him with the tug, as he would be rubbed when hitched.

We found this a good thing. If the colt is going to kick in harness, we thus find it out before hitching.

When he will stand around and behave nicely in the stall he is bridled, leaving the halter under the bridle.

Next is the leading.

This is beside a well broken horse, also harnessed; the colt always on the off side.

The halter strap is securely tied in the hame ring of the older horse, so the horse cannot break away.

The breaker mounts the older horse and leads the colt by a strap on his bridle.

We mostly hitch to a sled; the colt is still tied to the lead horse and the breaker mounts.

One takes the lines and another leads the colt until he gets well started.

We seldom have any trouble and soon have the colt driving nicely.

We well remember one mottled, rather nervous colt, that at first harnessing could not be induced to leave the stable until a quick move rattled his harness; then his conclusion to go was so sudden that no one went with him.

Finding himself loose, his first gesture was to jump over a twenty-foot bank, then cavort on an acre lot at a gait that was wonderful.

He was soon captured and seemed to forget his caper, and made a good work horse of his order.

On the other extreme, a 1600-pound three-year-old paid no attention to harness, or anything except feed.

So much confidence had we in his sluggishness that his first trip was made in the land roller, to which he paid no more attention than had it not been there.

Their dispositions are like people's—no two exactly alike.—The Horseman.

Crushed Grain for Horses

The following suggestive remarks on the preparing and feeding of horses is taken from Hayes' book on stable management, and will be found helpful to horsemen:

My experience in countries where the soaking in water of grain given as food for horses is generally adopted has convinced me that this practice is hurtful to digestion, because it not only saturates the grain with water, but also facilitates the swallowing of the food before the grain has been fully masticated. Grain in India and corn in South Africa are the chief grains that are soaked in water before being given to horses. Both are best prepared by being broken and being given mixed with bran, chop, or, in the case of maize, with the cob cut up. Bruising is especially applicable to oats, as it increases the difficulty of swallowing this grain without thorough mastication, and by breaking it up it increases the interior of the grain to the full action of the digestive juices. Owing to the smoothness of the surface of almost all the grains given to horses, they can be much more easily swallowed without being properly masticated when given whole than when bruised; hence the advisability of this process. If the horse was in a state of nature, the covering of the grain would oblige him to chew the ear, cob, or pod before he could swallow its contents. There can be no question as to the advantage of bruising oats and other grain for old horses, and for those whose chewing powers are impaired by age. In several experiments that in ordinary cases the bruising of corn does not improve the digestibility of grain. Nevertheless we find that, in the experiments from which he drew his conclusions, the period of mastication was 45 per cent. longer, and the amount of saliva secreted was 17 per cent. greater with bruised oats than with whole oats. I have found, especially in training racehorses, that horses do better on whole than on the latter food. I feel strengthened in this conclusion by the fact that, when such animals are fed on bruised oats, less husk is found in their dung than when they are given whole oats. Leaving oats out of the question, there is no doubt that the crushing or coarse grinding of many kinds of grain—corn and barley, for instance—greatly improves their digestibility and wholesomeness.

The breaking or grinding of grain should be strictly limited to that which is sufficient to nullify the protective action of the husk; for the smaller the particles of the broken corn, the less will the horses relish it, and probably the less saliva will be secreted.



First Prize Shearing Outwold Room at the World's Fair, St. Louis.
Owned by J. C. Ross, Jarvis, Ont.

Farm Conditions in the West

FROM OUR WESTERN CORRESPONDENT

THE HOLIDAY SEASON

Standing on the station platform almost any day during December at the time of the departure of the eastbound through trains one would think that the population of the prairies was of a migratory nature, flitting to milder climes at the approach of winter. The three month holiday excursions annually organized by the railroad companies have been more largely patronized than ever this season. This policy of the railroads, interested as they are in building up the country, is certainly a wise one, for several reasons; first, because there is no better immigration agent than the successful settler himself; second, because there is no better way of making the settlers thoroughly contented than by giving them an opportunity of seeing the conditions others are living under, and lastly, but perhaps the most far-reaching benefit, is the excellent opportunity thus afforded for the curing of the "bachelor" evil. Year by year the settlers are becoming better able to afford a holiday, and many who started with little or no capital a few years ago are now visiting the old homes in the east, and perhaps introducing to grandparents whole families of prairie born youngsters, the hope of Canada.

This year a very large number have taken advantage of the excursion rates to the Pacific province, and not a few wheat growers who have grown wealthy have been lured away by the greenness of distant pastures and the odor of fruit blossoms made so realistic in the advertisements of the land speculator. Manitoba and the Territories have, however, no reason to feel jealous if a few of their sons act again on the advice of Horace Greely and "Go West." The success of fruit growing in British Columbia means the bringing of this luxury so much nearer the prairie settler, and the development of her great lumber industry the cheapening of that most necessary material for the proper development of farm life on the plains.

A SPIRIT OF RESTLESSNESS AND "ITS CURE"

There is undoubtedly a prevailing notion that the crop of 1904 has not been a profitable one to the producer. Blame is being variously placed, but a deal of criticism is bestowed upon the grading of the wheat. Results, however, as tabulated by the several crop statistics do not show cause for much dissatisfaction. At the beginning of harvest great things were expected, crops looked like 40 bushels of one hard, but they did not pan out, and so there was disappointment.

In spite of the favorable reports issued by crop statisticians we farmers have a hard-up feeling. We have not made as much money out of the crop as we had hoped for. The estimate of the *Free Press* of 75 cents per bushel as the average price received by the farmer for his wheat seems too high. There is a lot of dissatisfaction in some localities this year over the grading of the wheat, and the Grain Growers' Associations have a lot of work yet ahead of them. Referring again to the *Free Press* estimate, which has no doubt been carefully compiled, 35,000,000 bushels of wheat at their estimate of 75 cents to the farmer equals forty-one and a quarter million of dollars of money created by the comparatively few farmers of Manitoba and the Territories in wheat alone. Coarse grains not yet marketed to any great extent have been a fair crop, and hay and feed is plentiful. Land values too have tended steadily upward, but of course a man does not actually have any more cash in his pocket because the land he occupies has increased in value from \$15.00 to \$30.00 per acre. In the face of all these facts it does seem rather strange that money is so scarce and that we are all "hard-up," but it's reality all the same. Of course nearly all of us have been buying more land in order to secure enough for each of the boys before values get too high, and some who had borrowed money from the banks know they have been collecting very close this past year.

Speaking generally the districts making the least money out of this crop, owing to rust or other drawbacks, are among the oldest settled and usually most successful, and consequently where the settlers are best able to withstand a temporary check. The country as a whole is prosperous, and the outlook even more full of promise than ever before.

Any local discontent there may be can be attributed largely to the lack of home environment. Wheat growing does not tend to home building. The farm work is done with a rush in a mechanical sort of way, the only object being to get money and to get it quick. No permanency or settled plan of building up the home life, or thought for the country's future. Such conditions breed a spirit of restlessness.

A change will most surely come, however, better buildings are being erected and the homes surrounded with more modern conveniences and comforts. Trees and shelter belts are being planted, grass rotations are being introduced, fencing is coming more and more into favor and the more general introduction of live stock is bound to follow, and with it the whole situation will change and our people become a people of home builders.

GRAIN GROWERS' CONVENTION.

The Manitoba Grain Growers' Association hold their annual meeting at Brandon on February 8 and 9. An excellent programme has been arranged, including addresses by Chief Farm Inspector Horn; Experimental Farm Superintendent Bedford; James Murray, of the Seed Grain Division, and Mr. Wm. Whyte, 2nd vice-president of the C.P.R. and others. This association has already a membership of over 5,500 and is accomplishing excellent work.

LIVE STOCK CONVENTIONS.

In the Territories, where Dr. Elliot is proving himself a most efficient Commissioner of Agriculture, plans are being matured for an extended series of live stock judging institutes. A large number of local meetings are to be held and then to wind up the series and instruct and enthuse the workers fat stock shows are to be held at Regina and Calgary.

In Manitoba no Institute work has been done for the past year or so, but under the auspices of the provincial Live Stock Associations stock judging schools have been held at a number of central points. The meetings are to be held again this year about the end of February.

A NEW DEPUTY MINISTER OF AGRICULTURE.

According to press reports a change is being made in the Manitoba Department of Agriculture. Hugh McKellar, who has been Chief of the Department for 12 or 13 years, retiring and W. J. Blair, B.S.A., receiving the appointment of Deputy Minister. Mr. Blair who has been on the editorial staff of the *Farmers' Advocate* in Winnipeg for a couple of years, is young, energetic and in many ways well qualified for the post.

Agricultural societies, farmers' institutes and such like institutions will not make much progress unless systematically assisted. A vigorous campaign along this line of work is now in order and will doubtless receive the immediate attention of the new Deputy head of the Department of Agriculture.

In the Territories liberal assistance is being given to the Grain Growers' Association, the farmers' institutes, local fairs and live stock associations.

Expert judges of live stock are being supplied to all local shows asking for them. Schools of stock judging are being held at all farmers' institutes, and Manitoba should not be behind.

The Clydesdales

'Mid the Belgians of beauty and the
Percherons of pride
There is nothing in the showyard that
can match you, bonny Clyde,
For you take me back in fancy to the
Scottish Borderside.
And I see you in the stubble drawing
cannily and slow
With your strong neck arching double
to the hand you love and know,
And a cloud of white behind you where
the feeding sea-gulls go.

And you take me back in fancy to the
things that I would learn
To the long ploughs creaking over from
the braeside to the burn,
To the flash of feathered fetlocks on the
headlands when you turn.
It is this that makes me watch you
with a mingled joy and pride.
For if others step as highly still you
take the biggest stride
For you bridge the broad Atlantic to
the bonny Borderside!

WILL H. OGDEN.

Shoeing the Horse

The following timely hints on shoeing the horse are given in one of our exchanges by an American horseman:
"Farmers should study their horses' feet, examine the hoofs, and become acquainted with the sort of shoe that each animal demands. There is a diversity of opinion as to the manner in which a shoe should be placed on the horse's hoof. Some think that the frog should be placed on the ground and with the wall of the hoof should bear the weight of the horse; and there are others who believe that the frog should not be on a level with the surface of the shoe. There are good things to be said in favor of either method, but however they may differ on these two methods, there are certain salient points that constitute proper horseshoeing, and with which every farmer and horseman and every man who drives a horse should become acquainted.

"It has been found that a heavy shoe, which keeps the frog from the ground, will wear out as soon as a light one that allows the frog to touch the surface; that the heavy shoe is much more likely to come off and be lost, and that it greatly increases the labor of the horse in traveling. Light nails should always be used. They will hold the shoe as long as it ought to remain, and will not injure the hoof as much as large and heavy ones. As the shoe protects that part of the hoof which it covers, while the remainder is constantly wearing away, it becomes necessary to remove it occasionally, and by paring off the more rapidly growing part to bring the different portions into their proper relative positions. Some horses need more frequent shoeing than others, but the average is once every four or five weeks, where the animal is continually on the road. Of course, where the horse is not worked constantly, it is not necessary to have him shod as often as this. Neither the frog nor the sole should be removed, and the wall of the hoof should be cut away only enough to take off its surplus growth. The rasp should never be used on the wall of the foot, either for making a groove in which to sink the nail clinches, or for the purpose of improving the looks. The nails must not be too tightly driven, and in removing an old shoe, care is needed to prevent injury to the foot.

"In recent years patented and specially devised shoes for horses with feet of peculiar forms, have come upon the market, and many of these are good. In this way horses that have suffered with foot diseases which were aggravated

ed by the ordinary shoe, were given relief by these shoes of special pattern."

An Exalted Profession

The farmer should feel proud of his profession, as it is one of the most useful and necessary occupations. He does not sit on the ragged edge of doubt as to the permanency of his position. No master has a mortgage on his labor or his products. He is a king among men and his home is the abode of contentment. He studies the laws of nature and derives maintenance from her bounteous stores. When times are hard and laborers are clamoring for work he has plenty of business to occupy his time. If the farmer commences with small capital his investment is sure to increase, for the earth often rewards the husbandman a hundred fold. The proper management of small undertakings leads to larger enterprises. The well-tilled farm produces abundantly and the farmer always has a surplus to sell that makes him independent even in strenuous times. The farmer is the foundation of the commercial prosperity of the country.—Drovers' Journal.

He Stopped the Paper

I've stopped my paper, yes I hev;
I didn't like to do it,
But the editor he got too smart
And I allow he'll rue it.

I am a man as pays his debts,
And I won't be insulted,
So when an editor gits smart,
I want to be consulted.

I took his paper 'leven years,
An' helped him all I could, sir,
An' when it comes to dunnin' me,
I didn't think he would, sir.

But that he did an' you kin bet
It made me hot as thunder,
Says I, I'll stop that sheet, I will,
If the cussed thing goes under!

I hunted up the measly whelp,
An' for his cummin' caper,
I paid them 'leven years an' quit!
Yes, sir, I've stopped his paper.

Manson (La.) Democrat.

In the Ring

"Would you like the date put in our engagement ring?"

"By all means; and then, if there's room, run in some little motto like 'Any port in a storm,' or 'A bird in the hand,' or something pretty like that, you know."

"Faith, he's a mighty fine docter. He attended O'Pheelan when he was sick av h' appendicitis. 'Poke out yez tongue,' he says; 'bedad, O'll have th' opprate on ye,' he says. 'Divil a bit will O' be opprated on,' says Pheelan. 'Then ye'll be a dead man b' two o'clock,' he says. So he operated."

"An' saved O'Pheelan's loife?"

"An' saved O'Pheelan's loife—wan hour. He died at thray."—Kansas City Journal.

First Scot—What kin' o' man is McPherson?

Second Scot—A gey quyer kin' o' man. I went to his hoose and he askit me to take some whiskey. When he began to poor it out I said, "Stop! Stop! And he stonnit! That's the kin' o' man he is.—The Tattler.

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BANK OF TORONTO

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Reserve Fund . . . 3,300,000
Total Assets . . . 27,000,000

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A dollar (or more) and a few minutes with our Teller will secure you one, and then add to your balance regularly. The result will delight and surprise you.

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The GRIMM MFG. Co.
84 Wellington Street
MONTREAL, Que.



A trio of Thin-Rind or Hampshire hogs. Winners at St. Louis. Owned by John Goodwine, Jr., Potomac, Ill.

Some Interesting Farm Topics

Belted Thin-Rind Swine

A breed of swine that was represented at the late International Show, at Chicago, was the old Hampshire, or belted Thin-Rinds, a breed that most people in Canada seem to have forgotten. The accompanying cut is an illustration of a group of full-grown Thin-Rinds. Originally bred in the County of Hampshire, Eng., they were one of the early breeds introduced into Canada, and as early as the year 1835 they were sent over to the State of New York, where they were a popular breed for some time. Imported to the west of the Alleghenies as early as 1835, into the then partially settled State of Kentucky, they were a great improvement on the common breeds of that country.

The characteristics of the breed are a thick, low-set conformation, a fine head with nose of medium length, ears small and pointing slightly forward, shoulders deep and of medium width, ribs well sprung, with back of medium width, the whole being about equal width from shoulder to ham. The skin is fine, thin and smooth, the coat fine and straight, the color is black with a band of white running over the shoulder. They are claimed to be hardy, active, prolific, able to stand feeding without breaking down, and to be of docile, quiet disposition. When from five to six months of age they are said to be excellent for bacon purposes, and this claim was to some extent vindicated at the Chicago Exposition, 1901, when they won second prize on bacon type and a hog of the breed dressed 86.9 per cent. meat and lard.

A fine herd of these hogs were shown this year at the International, by Mr. John Goodwine, of Potomac, Ill., who besides these is also quite an extensive breeder of Shorthorn and Polled Durham cattle and several breeds of fowls including Golden Seabright chickens and domesticated wild geese.

Selection of Seed Potatoes

The Illinois Experiment Station has recently issued some valuable information on the selection of seed in potato growing that is well worth considering. After dealing with the question of propagating new varieties the circular says: Leaving the question of originating new breeds from seed and artificially hybridizing choice varieties, the thing for the farmer to do is to select his seed with the greatest care and then give it the best possible culture, by which we are satisfied he can easily double his crop and perhaps treble or quadruple it. This may seem like drawing a long bow, but we call their attention to the experience of Professor Girard, of France, who has probably done more scientific work in potato culture than any other man. He has been experimenting eleven years with the idea of increasing the potato yield of France from an average of about 125 bushels per acre to the yield in

Saxony, where a common harvest is from 450 to 540 bushels per acre. He worked out rules of culture and enlisted about 600 worthy co-operators who pledged themselves to follow his rules, and the results were that 231 of these 600 obtained crops of 450 bushels or more per acre in a year of prolonged drought. Our readers may, therefore, be interested in knowing by what magic such results were obtained. We can only give them Professor's Girard's directions:

First, planting should be done as soon as it is practicable after the danger of hard frost is past; second, the ground should be heavily manured; third, the seed bed should be prepared to sixteen inches in depth and the ground well worked during the season, care being taken to keep the growing potatoes covered; fourth, whole, medium sized tubers were planted nineteen inches apart in the row and the rows twenty-four inches apart; fifth, Bordeaux mixture was used as a preventive of blight and the crop allowed to grow until every portion of the vine was dead.

How many of our readers will test this method, say on an acre or half an acre, next year, and thus determine the possibilities of potato growing on their soil?

To show how little chance even a good variety has for success we were informed last spring that it was cheaper to buy seed potatoes in one of the best growing potato sections of Minnesota than it was to buy potatoes for the table; in other words, the farmers in that section sold their best potatoes and planted the poorest.

Then again, farmers are too stingy of seed and cut frequently to two eyes and perhaps one. We visited three years ago some of the best potato growers in England and Scotland. We found that they uniformly planted what they called "big seed" and often as high as twenty and even thirty bushels per acre. By "big seed" they mean a medium or over medium sized potato planted whole, cutting only the very largest potatoes in two.

We think Professor Girard's success, however, is due as much as anything else to the deep and thorough cultivation and heavy manuring. We saw a field of potatoes on Lord Rosebery's estate the yield of which was estimated when in full bloom at 600 bushels per acre. The Scotch papers reported the yield later as 800 bushels, and that on a large field. How were these potatoes grown? On very rich land, heavily manured both with barn yard manure and by commercial fertilizers selected by the chemist with reference to the wants of that particular field, and then planted with the very choicest whole seed and given thorough cultivation.

Home Waterworks

The new system of underground "air pressure" water tanks for farm and vil-

lages, promises to revolutionize that class of homes as much as did the wire fence telephones, as it gives to the farmers all the water privileges enjoyed by their city cousins. With a small outlay, from \$40 to \$140, everyone in the country may have water under pressure, i. e., for the bathroom, closet, kitchen, sink, stock water, lawn sprinkling, and last but not least, for fire protection.

The principle involved in this new luxury is as old as the "penstock" of 1840, by which our grandfathers conveyed water from the spring on the hillside to the watering trough at the house through hollow logs. The windmill or gasoline engine now takes the place of the hillside spring; iron pipes displace the wooden logs and the faucet holds the water in reserve until it is needed. Science has, however, added a new feature, viz. the air tight underground iron tank, either new or second-hand. Into this from the under side, the water is forced by the windmill until the air is compressed into one-half its normal volume. This furnishes a pressure of from 25 to 50 pounds per square inch, equal to the normal pressure of the elevated tank. Again, from the under side of this iron boiler, the water is taken in iron pipes underground below frost to the barn, kitchen, truck patch or through the fire hose to the top of the house. Any plumber, who can cut a thread or wipe a joint, is capable of fitting up a practical plant of this kind. Indeed, if the plumbers are awake to their opportunities they will find an unlimited amount of this kind of work, as every man who owns a windmill must soon see the advantage of this plan over that of the open trough or elevated tank. The material and labor needed to carry the water a hundred feet from the windmill into the house should not cost over \$100. It consists of a one-inch galvanized pipe, a plain ordinary "cut off" and an iron boiler of any size, the dimensions of which must depend upon the size of the pocket-book. A small one will act as perfectly as a larger one will, the only advantage the latter has over the former is that



"When the wind blows" (not)
"The waters will flow" (still).

Supposing the windmill is in operation, a hundred feet of iron pipe should not cost to exceed \$16, the boiler, 3 x 7, capable of sustaining a hundred pounds per square inch, should not cost more than \$46, and automatic cut off \$15, four faucets \$5, a steam water gauge to register the pressure \$16, the labor of digging should be but little and a plumber's time may cost \$12, making a total of \$105, which will add to the convenience and protection of the home more than a like amount expended almost any other direction. There is no good reason why every windmill owner should not enjoy this luxury. At some later date I will explain how the hand force pump proposition will give a constant and even pressure of water from the cistern when forced through an air-tight chamber to different parts of the house or barn. So far as I know now, there is no patent to bar any one from enjoying this greatest of blessings—free water.

CLARENCE D. SKINNER.

Correspondence

Barred Rocks Lead

Editor THE FARMING WORLD:

My attention has been drawn to a statement in your report of the poultry exhibit at the Winter Fair, Guelph, in which you say that "the show of White Wyandottes was larger than that of any other single breed."

The following are some of the entries in the classes for varieties most largely represented at the show:—Barred Rocks 151, White Rocks 148, Buff Orpingtons 129, White Wyandottes 125, S. C. White Leghorns 116, and S. C. Brown Leghorns 112.

A. P. WESTERVELT, Sec.
Parliament Buildings, Toronto, Ont.

The Holstein Has Come to Stay

Editor THE FARMING WORLD:

Twenty years ago the Holstein cow was practically unknown to the dairymen of Canada. The first arrivals in this country found the field already occupied for many years by the Ayrshire, the Jersey and the Shorthorn grade. Every cry that ignorance and prejudice could devise was directed against the black-and-white milk machines, but all without avail. Little by little prejudice was uprooted and farmers were induced to try the new breed. In nearly every case a trial was sufficient to convince a man that he was on the right track. The average Canadian dairyman wants a cow that will give a good flow of milk of average quality, suitable for the cheese factory in summer and the creamery in winter, and yielding in the latter case plenty of skim milk for feeding pigs and calves. The Holstein has proved that she can fill the bill to a nicety. Consequently, we find all the best dairy districts thickly dotted with grade Holsteins. Indeed, dairy instructors, who are in the best position to know the facts, say that during the past season of low prices the owners of black-and-whites were the only factory patrons who made any money at all. Economical milk production necessitates the use of the very best cows, and this means that the Holstein has come to stay.

One of the most potent factors in bringing the Holstein cow to the attention of the practical farmer has been the public test. Probably three-fourths of all the honors in show-ground dairy tests during the past fifteen years have been carried off by cows of this breed. At the present time the leading public test in Canada is that conducted at the Ontario Provincial Winter Fair at Guelph. Holsteins have always stood remarkably high in these Provincial competitions, and this year they made practically a clean sweep. The following list gives the records for 48 hours of the best six cows in the show, everyone a pure-bred or grade Holstein:

Cow.	Lbs. milk.	Per ct. fat.	Points.
Pearl	127.14	3.65	140.64
Ianthe Jewel			
Mechthilde ...	118.15	3.95	140.20
Queen De Kol			
3rd	105.08	4.65	137.48
Queen Pietertje			
Mercedes	129.02	3.35	135.58
Adelaide Brooks			
DeKol	122.01	3.45	132.20
Violet	107.02	3.90	124.88

Points were allowed for amount of fat and of solids not fat, also for length of time in milk. Twenty-

three cows were in the test, including Holsteins, Jerseys, Shorthorns and grades. The best Shorthorn scored 129.92 points and the best Jersey 79.06 points.

St. George, Ont. G. W. CLEMONS,
Secretary, Holstein-Friesian Association.

Prizes for Milk Production

The prizes were awarded on Dec. 30, by the Prince Edward Island Dairy Association, for the largest amount of milk produced per acre under cultivation and the winners were as follows: Prince County—Colin T. Wright, Kinkora; J. A. Woodside, Kensington; Bruce Dawson, Tyron; J. Cadigan, Palmer Road; A. A. McPhee, Lot 16.

Queen's County—James Inman, Victoria; J. Howatt, French River; Margaret Jick, Mayfield; R. Edwards, North Wilshire; J. A. Ferguson, Marshfield.

King's County—J. Graham, Gasperaux; J. A. McKinnon, Rollo Bay; Charles McNeill, Lower Montague.

The prizes were as follows: The sum of \$364.00 divided equally among the three counties to the patrons contributing the largest amount of milk to cheese and butter factories per acre of land under cultivation. Forty-six dollars for the cheese season and \$22 for the butter season to each county.

Cheese season from June 1st to Nov. 1st. Prizes—1st \$20.00, 2nd \$10.00, 3rd \$7.00, 4th \$6.00, 5th \$5.00.

Butter season from Nov. 1st to June 1st, 1905. Prizes—1st \$10.00, 2nd \$7.00, 3rd \$5.00. Each patron competing must have at least 15 acres of land under cultivation, and the milk produced an average of at least 3.5 per cent. of fat.—A. R.

Is the Cow in Calf

In these days when dairying must be managed skillfully and methodically it is important that the cows be bred with reference to the time when they will be fresh at season when the greatest profit can be realized from the milk. It is always a source of anxiety to the dairyman who plans to have the cows in his herd freshen at a certain season, as to whether his cows were successfully served at the time intended.

The cow to be tested is milked separately and as soon as possible after the milk is drawn we dip a straw or timothy stem in the bucket of milk. Have a glass of pure water at hand and allow one drop of the milk to fall in the water—only one; if the milk quickly dissipates and renders the water murky, the cow is not in calf, but if the milk drop sinks to the bottom of the glass before mixing with the water, she is pregnant.


If you are not sufficiently expert, take the milk of another cow that has newly calved, and pursue the same treatment with both, at the same time, and you will not fail to note the difference in the way the drop of milk will mix with the water. I have practiced this method of determining pregnancy in my herd for years and I never knew it to fail.—Kate M. Busick, in H. P. Register.

M. Crapaud—"Ah! Sozis ees your leetle son? He looks to be simlaira to you."

Popey—"Yes, he's very much like me." M. Crapaud—"Ah! How do you call eet? 'A cheep of ze old blockhead,' ees eet not?"—Philadelphia Press.

Melotte

CREAM SEPARATORS



are not fitted with a nest of tubes and dark breeding places for bacteria—every part of the bowl opens to the sunlight and pure breezes.

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R. A. LISTER & Co., Ltd.
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Patent Foot and Lever Drive	No. Holds	LIST
Patent Steel Roller Bearings	0 1/2 gal. to 2 gal.	1 10 - 2 10 - 3 10 - 4 10 - 5 10 - 6 10 - 7 10 - 8 10 - 9 10 - 10 10 -
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on faith, but we do suggest that it is the part of wisdom to investigate our claims before buying any other.

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Empire Cream Separator Co.,
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St. W. G.
Toronto, Ontario.

In the Dairy

Bacteria

The students stared, amazed, aghast,
As through the Dairy School there
passed

A youth who bore mid cream and ice
A banner with this strange device:

Bacteria.

His face was pale, and very sad,
He had not heard of Koch's new fad,
With trembling voice, and many a sigh,
He gasped that weird and awful cry:

Bacteria.

"Use not the milk," the "Doc" advised,
"Unless it has been sterilized,
And bottled, drugged, closed from the
air,

Until to come would never dare,

Bacteria."

"Oh, stay," the maiden said, "explain";
"You must have got it on the brain";
"Such things are only in your eye,"
But still came only this reply,

Bacteria.

"E'gosh," the farmer said, "young man,"
"If you say there's no milk in my can
"Or in my cow, I'll thump ye, see,"
But still that voice pealed fearlessly,

Bacteria.

That youth did travel far and wide,
He travelled until he died,
And everywhere, both far and near,
He shrieked that awful word of fear,

Bacteria.

But as he lay upon his bier,
Upon his face no sign of fear,
The students whispered that where he
Had gone, he never would see:

Bacteria.

Cheese, Butter and Bacon

The Dairymen's Association of Eastern Ontario have another successful convention to add to the many that have gone before. Brockville was the place selected for holding the 25th annual meeting and January 4 to 6, 1905, the time.

The feature of the opening session was the address of President Derbyshire. After bestowing liberal praise upon the instructors and both the Provincial and Dominion Ministers of Agriculture, he gave some interesting figures regarding last season's trade.

The total make of cheese in Canada during 1904 was about 2,700,000 boxes, valued at about \$20,000,000, as compared with 3,000,000 boxes in 1903, valued at \$27,000,000. There were exported 350,000 packages of butter, valued at \$7,000,000, an increase of nearly \$2,000,000 over 1903. The bacon exports were \$14,000,000, thus making the total receipts from cheese, butter and bacon, \$41,500,000 or \$6,500,000 short of 1903.

Messrs. J. H. Grisdale and C. F. Whitley, of Ottawa, gave some valuable data upon the building up of a dairy herd and the testing of cows. The former stated that the average Canadian cow gave about 2,000 lbs. of milk during the season, thus showing that the best cash return from her could not be more than \$30. The average milking season was seven months, and if the average cow did milk for nine months she could not possibly give a return of more than \$30 for the season. Mr. Whitley gave the results of a test made of seventy-two dairy herds. The total yield of twenty-two cows for last June was 17,845 lbs. of milk, or 725.5 lbs. of butter fat. The average per cow was 811 lbs. of milk, testing 4 per cent, or 32.4 lbs. of butter fat.

MANAGEMENT OF A DAIRY HERD

was the topic chosen by Henry Glendinning, Manila, for a good practical talk. Profits in dairying depended in a very large measure upon the cost of production. Among other difficulties the dairyman had to contend with were the horns-fly and a shortage of pasture in July and August. The former could be kept in check by spraying with petroleum, the shortage in pasture could be overcome by growing supplementary feed. Silage was a good food for dairy cows. A cow should receive the same care as a horse. Clippers should be used regularly on the lower portions of the body, and less dirt would adhere to trouble the milker.

The evening session of the first day was taken up with addresses by John Gould, of Ohio, and Prof. J. W. Robertson, of a more or less general character. Prof. Robertson gave the experience of a farmer in Ontario County, who raised the income of his farm from \$800 in 1887, up to \$4,486 in 1903, with a net profit of \$2,400.

KEEP UP THE QUALITY.

Thursday, January 5 was the practical day of the convention. Chief

be worth about two cents per pound less than the finest separator butter. This is a pretty strong statement, and we doubt if it can be backed up by facts. Mr. James Stonehouse stated that farmers had decided to use separators, and consequently the system should be improved as much as possible. A. W. Woodward urged that cream be made into butter as early as possible. Daily delivery to the creamery was desirable. The holding of cream before churning affected the flavor of the butter.

For the "steenth" time the old officers were re-elected. The only new name was that of G. G. Publow, who was made and vice-president. But he did not replace anyone else, as a new office, that of 4th vice-president, was created. Mr. Publow will do excellent work on the board.

Guelph Dairy School Notes

For the creamery butter-makers' class at the school in December cream was collected twice a week so as to give students practice with the method of conducting creameries. We regret that the quality of butter made from this cream was wholly unsatisfactory. Experiments were made to see the effect of pasteurization. One-half a delivery was pasteurized and ripened, and the other half was ripened without pasteurization. In the judgment of the instructors and class the pasteurization added at least one cent per pound to the value of the butter. However, this butter was worth at least five cents per pound less than the butter made from the whole milk delivered. From our experience during several winters we should judge it a very doubtful matter to make first class butter from cream collected twice a week. We should not care to risk our reputation on such butter.

The creamery class made an experiment, using borax and three commercial preservatives at the rate of one-quarter and one-half per cent, and one print with salt at the rate of three-quarter ounce per pound of butter. The seven prints of butter were put in a room where the temperature was about 70 degrees F. At the end of about three weeks they were judged. The sample in which salt alone was used had a decided "off" flavor, while those with preservatives were sweet and nice. Those with one-half per cent preservative had a "preservative" smell and taste. Those with one-quarter per cent were quite as good in flavor and lacked the objectionable flavor of preservative. The results agree with experiments conducted during the past season in which it was found that one-quarter per cent preservative was sufficient to hold the flavor of the butter, and that one-half per cent is liable to impart an objectionable flavor. These are valuable points for creamery men who use this method of preparing saltless butter, for which there is a growing demand in the British markets.

MILK INSPECTORS, DEALERS AND PRODUCERS

The city of Ottawa has the honor of being the only city in the province where the Board of Health took sufficient interest in the milk supply of the city to send their inspector, Mr. George C. LaFlamme, for instruction in up-to-date methods of producing milk, testing milk, the bacterial contamination of milk, etc. We feel quite sure that nearly all the men whose duty it is to inspect dairies, offer suggestions as to improvements, see that milk sold to consumers is of proper quality and not adulterated with impure water, skim milk, etc., would be glad to avail themselves of a short dairy course along these lines.

It is expected that the course will



J. N. Paget, Canboro, Ont., President of the Western Dairymen's Association, who will preside at the Association's Convention at Stratford this week.

Instructor Publow reported that 615 factories had been visited by the instructors during the season of 1904. In the 450 tests of milk made 305 cases of adulteration were detected. Fines amounting to \$857 had been imposed upon 54 men.

Practical addresses were also given by Supt. Putnam, Dr. Connell, Prof. Dean and J. A. Ruddick, who strongly advised the general adoption of cool-curing by the factories. Prof. Dean stated that he had experimented during the past season with 23 cows, weighing from 811 pounds up to 1,436 pounds, and the net profit on each cow varied from 98c. up to \$39. Emphasis was laid upon the need of improving the dairy products of eastern Ontario.

The Hon. Mr. Fisher, and C. C. James, Toronto, were among the speakers of the day.

WITH THE BUTTER MAKER.

Friday morning was butter-makers' day. Supt. Mitchell, of the Kingston Dairy School, discussed the merits of the cream-gathering system as compared with the separator creamery system. He stated that it was quite impossible to get pure flavored butter from ordinary cream gathered. The best of gathered cream butter would

be repeated during the latter part of April, 1905. As it is absolutely free of cost, except for board and railway fare, it is hoped that a larger number will attend the next course.

We should like to emphasize the fact that this course is for the benefit of every person who is producing milk for sale in town or village, and also for sale at creameries and creameries. A part of each day is spent in the dairy stable, feeding and caring for the cows, and noting cleanly methods of milking and proper means of caring for milk.

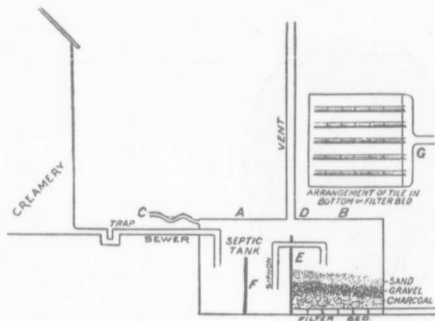
H. H. DEAN.

Cheese Factory and Creamery Sewage

An important part of every cheese factory or creamery equipment is an arrangement for disposing of waste. Unless this can be discharged into flowing water, some suitable sewage system is necessary.

The accompanying diagram is that of a septic tank, in which the waste is oxidized or decomposed by bacterial action. The scheme is not a new one, but if properly managed in a very effective way of disposing of all cheese factory and creamery waste.

It will be seen from the diagram that this system of sewage disposal consists chiefly of a septic tank, A and B, with



a water-tight partition in the middle, making in reality a double tank.

This tank may be located either above or below ground, near the factory, and may be constructed of wood or cement. As already mentioned, it serves the purpose of a germ incubator, the germs causing a rapid decomposition or oxidation of the waste that flows into it.

The tank should be built air-tight, except in two places, C and D. At C is an air-inlet, consisting of a goose-neck pipe, which renders the vent or air outlet at D more effective. This vent consists of a long shaft extending beyond the top of the factory, thus carrying off the foul gases caused by the decomposition of the material within the tank. Through the partition E is placed a siphon in the manner shown in the illustration. The object of this siphon is to withdraw the liquid from near the bottom, leaving the sediment and flocculent material undisturbed in the tank, to be subsequently decomposed through the continued action of the germs or bacteria that work upon it.

The partition at F simply serves to hold the larger portion of the coarse, undissolved material in the first half of tank A.

The decomposition is not complete as the liquid flows from tank A into tank B. The latter tank therefore serves to complete the purification of the waste, either by further oxidation or by processes of filtration as shown in the

illustration. Of course, where there is little slope the method of filtration would not be practical. In that case the liquid would have to be discharged near the top of tank B, and preferably in the manner in which tank A is emptied into tank B.

The liquid from tank B should be conducted away by means of 4 or 6-inch drain tile laid underground. The liquid thus conducted away will not give rise to bad odors after undergoing the process of purification herein explained. Diagram G shows the arrangement of the tile in bottom of tank B. The tile is covered preferably with sand, gravel and charcoal. The cost of putting in such a tank as here described is about \$25.—*New York Creamery.*

Feeding Refuse Apples to Milch Cows

Every season the disposition to be made of low grade apples is a matter of more or less moment to many farmers. To be in a position to give some exact data as to their value as food for at least some class of live stock, a few experiments in feeding them were conducted here in the autumn. Among others was one to study their effect upon milk secretion and upon the health of dairy cattle.

Value of feed in average two weeks, \$7.78; cost to feed one cow one day, 13.9 cents; milk yielded by group in average two weeks, 2,233 lbs.; daily average for cow during two weeks, 24.2 lbs.

Average ration for each cow during two weeks on experiment:—Apples, 25 lbs.; ensilage and roots, 20 lbs.; hay, 4 lbs.; meal, 7½ lbs.

Feed consumed by group in two weeks while experiment lasted:—Apples 1,400 lbs.; ensilage and roots, 1,120 lbs.; hay, 224 lbs.; meal 420 lbs.

Value of feed, other than apples, fed during two weeks, \$6.10; cost to feed one cow one day (apples not valued), 10.9 cents; milk yielded by group in two weeks, while eating apples, 1,395 lbs.; daily average for cow during two weeks, 24.9 lbs. Difference in milk yield in favor of apple ration, 42 lbs.

Average weight of cow going on apple feeding period, 955 lbs., average weight of cow at end of apple feeding period, 1,008 lbs. Gain in weight, on average, 23 lbs.

Average weight at end of last two weeks, 992 lbs. Loss in average weight during two weeks, 16 lbs.

It is only fair to credit the refuse apples as being worth the value of the food saved in the two weeks. On such a basis, therefore, refuse apples may be valued at \$2.40 per ton or about 7 cents per bushel when roots and ensilage are valued at \$2.00 per ton for cattle feed.

By way of comment, it might be added that the cows seemed to relish the apples, which were of different sorts, and to thrive upon them as shown by the quite considerable gain of 23 pounds per cow made in 14 days while on apples; whereas during the subsequent two weeks a loss of 16 pounds per cow is shown. The health of the cows seemed to be very favorably affected by the apples, as might be inferred from the above.

Calves given a few of the apples each day seemed to like them, and did well on them.—J. H. Grisle, Agriculturist, Central Experimental Farm, Ottawa.

Well Worth the Money

We are taking THE FARMING WORLD and think it a good farm journal, and well worth the money.

CHAS. H. FOSTER,
Middlesex Co., Ont.

When the Rev. Dr. B.— obtained the honorary degree of Doctor of Divinity, a farmer in the parish took an early opportunity of stating the news to his shepherd, with whom the minister was particularly intimate. "You vori fster was a particular favorite." "You'll be glad to hear, John, that the University has conferred on our minister a doctor's degree." "Weel," said the shepherd, "I'm no the least surprised at that, for mar thair twenty years since he cured a dog o' mine a colic."

The Conservative Path

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THE HOME WORLD

The art of saying appropriate words in a kindly way is one that never goes out of fashion, never ceases to please, and is within the reach of the humblest.
—F. W. Faber.

There is joy in forgetfulness. So I try to make the light in others' eyes my sun, the music in others' ears my symphony, the smile on others' lips my happiness.—Helen Keller.

Be Patient

When trials have clouded your day
Be patient
When sorrows have saddened your way.
Be patient
Though hopes have departed, though fortune has fled;
Though storms have extinguished the stars overhead;
Though life with its grief bids you long for the dead;
Be patient, He understands all.

Be patient.
Thy God hath a star for thy night.
Be patient.
The end of all darkness is light.
Thy orials, though their purpose be hid from their eyes,
Shall yet be revealed in the bliss of the skies
When thou in His likeness at length shall arise.
Be patient, He understands all.

Mistakes of Women

ONE of the mistakes of women is not knowing how to eat. If a man is not to be fed when she is, she thinks a cup of tea and anything handy is good enough. If she needs to save money, she does it at the butcher's cost. If she is busy, she will not waste time in eating. If she is unhappy, she goes without food. A man eats if the sheriff is at the door, if his work drives, if the undertaker interrupts, and he is rich; a woman will choose ice cream instead of beefsteak, and a man will not.

Another of her mistakes is in not knowing when to rest. If she is tired, she may sit down, but she will darn stockings, crochet, shawls, embroider doilies. Does she not know that hard work tires? If she is exhausted, she will write letters or figure her accounts. She will laugh at you if you hinted that reading or writing could fail to rest her. All over the country women's hospitals flourish because women do not know how to rest.

Another mistake on the list is their constant worrying. Worry and hurry are their enemies, and yet they lug them to their bosoms. Women cross bridges before they come to them, and even build bridges to cross. They imagine misfortune and run out to meet it. Women are not jolly enough. They make too serious business of life, and laugh at its little humors too seldom. Men can stop in the midst of perplexities and have a hearty laugh, and it keeps them young. Women cannot, and that is one reason why they fade so early—there are other reasons, but we will pass them now. Worry not only wrinkles the face, but it wrinkles and withers the mind.

Both Bothered

The neighbor leaned upon her garden-rake and called over the fence.
"I noticed a light in your house last night, Mr. Dimley," she said
"Are your baby's teeth bothering him again?"

"Don't know how much they're bothering him," he answered, shortly; "but they're bothering the life out of me."

How to Save Coal

Every stove and every chimney has a way of its own, and one must know all about those "ways" first. I never put a poker in the top of the fire, but do all my clearing from the bottom. In the evening, if the furnace fire is poor, we put on a little coal, turn on all the draughts, and when the coal is half burned, poke ashes and cinders out from the bottom grate, thus giving it plenty of air, and then we put on first a layer of stove coal, packing it down solid, and top off with a layer of nut coal to fill in the hollows. Over all we put on a thin layer of cinders or ashes, and when the little blue flames leap merrily through these we know it is time to shut off the main draughts, a little later closing them all for the night. You have then a good, clear, solidly packed fire, well banked, which will last and give warmth all night. In the morning it

chimney. Use stove coal with a fine top dressing, and pack even and solid—that is the most economical method. Use much less coal in preparation than do some of my friends.—Canadian Good Housekeeping.

New Year's in Russia

The peasants of White Russia keep up a strange custom, by which they symbolically convey the idea that the New Year brings to every man his allotted share of weal and woe. On New Year's Eve they take about from house to house two youths. One, called the "Rich Kolyada," is clad in festive attire, and wears a wreath woven from ears of rye. The other, the "Poor Kolyada," is dressed in rags, and his wreath is made of threshed-out straw. When they come to a cottage, they wrap up both youths in cloth, and tell the owner of the house to choose one of them. Then the visitors sing a song predicting a good harvest or poverty and death, according as his choice turns out. The singers receive gifts, which take the place of the ancient sacrifice to the gods. On New Year's Eve, boys go about from house to house, scattering grains of different kinds, chiefly oats.

All labor during the "Holy Evenings" or *Svyatki* between Christmas and the Epiphany, is regarded as a sin; because the new-born divinity is said to come down upon the earth, and wander



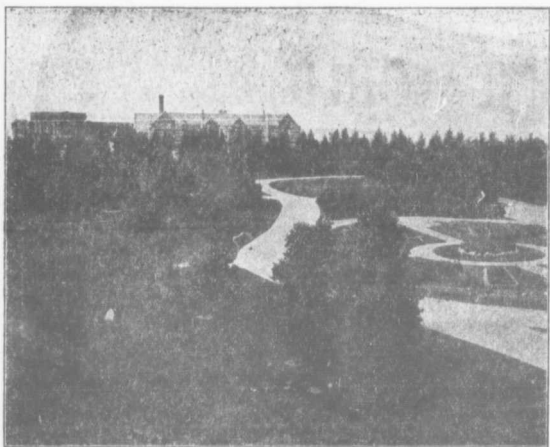
[An Ontario woman hunter in the Rockies and what she got.

may look dead, but when all the draughts are turned on, in five or ten minutes the furnace is ready for another good feed of black diamonds. Of course, during the day we do not bank the fire. It is only in very, very cold weather that we find it necessary to attend to the fire in the middle of the day; generally mornings and evenings suffice. My range fire I treat about the same. It is a mistake to use large (egg) coal, though dealers often urge its use, for it requires a lot of draught to keep it alive, and more than half the heat is thus lost up the

about; and all sorts of hidden treasures are revealed during that period, it is believed. The *svyatki* end with the feast of the Epiphany. On the eve, a curious custom is observed. The young girls go out into the open air, and address this prayer to the stars:

O, Stars, Stars,
Dear little Stars!
All ye, O Stars,
Are the fair children,
Ruddy and white,
Of one mother.

Send forth through the christened world.
Proposers of marriage.



The O.A.C. Grounds and new MacDonald buildings at Guelph. (Courtesy of the O.A.C. Review.)

WHEN GREEK MEETS GREEK

By Carroll W. Rankin, in *The Youths' Companion*

"I HATE a collar-band that's too wide!" muttered Alma, critically inspecting the neatly made waist, the result of her mother's three days of patient labor. These sleeves aren't half full enough, and I wanted hooks, not buttons; I never get what I want."

Wearily Mrs. Boyce, however, paid no heed. An open letter fluttered from her hand. She dropped it simply into the nearest chair. "It's your Granduncle Timothy!" she gasped.

"Dead?" asked Alma.

"No," replied Mrs. Boyce. "He's coming to spend six weeks with us."

"Is it our turn?" asked Alma.

"Yes," said Mrs. Boyce, "its past our turn."

Poor Mrs. Boyce was greatly perturbed. She had spent a trying morning with grumbling Alma, and although trying mornings with that inconsiderate young person were no novelty, their frequent recurrence made them no easier to bear. Granduncle Timothy's news found the poor badgered lady quite unfitted for the receiving of unexpected evil tidings.

Indeed, close association with Alma when the girl was having her wardrobe replenished, would have unfitted anybody for anything. In the first place, there was the choosing of the goods, a fearfully trying process, for no material, however, beautiful, was precisely the shade that Alma had set her affections on. Mrs. Boyce, who had supposed herself, until disillusioned by Alma, fairly skilful with her needle, always did the family dress-making. For sweet-tempered, easily pleased Ruth, two years older than Alma, the task was a genuine pleasure; but sewing for the younger girl was a burden almost too great to be borne.

During her small girlhood Alma had been delicate, and, it must be confessed, decidedly ill-tempered.

As she grew older she grew

stronger, but, unfortunately, so did her temper. There were moments—usually when she was among strangers—when she was fairly amiable, but there were other moments when the girl's outbursts of acute dissatisfaction drove harassed Mrs. Boyce to the verge of nervous prostration.

"I'd rather have every tooth in my head extracted," the poor lady had confided to Ruth that morning, "than make that tan etamine for Alma, but she was so dissatisfied the last time I employed a seamstress that I'm simply afraid to try it again."

"Are you going to make it like my blue taffeta?" Ruth had asked.

"No," Alma says she doesn't like the pleats, that she won't have tucks, ruffles or bias folds, and that off-the-shoulder effects are going out."

"Well, so far," said discouraged Mrs. Boyce, "she has spent three hundred and sixty-four days a year mentioning things she doesn't want, so she hasn't had any time left to say what she does like. She's precisely like your father's Uncle Timothy. I suppose I spoiled her when she was little. If I had it all to do over again I'd bring her up very differently."

At that moment a peevish voice floated down the stairway, "Mother," it wailed, fretfully, "did I hear you say you were going to make tomato soup for dinner? I'm just sick of tomato soup!"

"What kind do you want?" asked far too tolerant Mrs. Boyce.

"Oh, I don't know!" Alma had returned, impatiently. "Anything but tomato or bean or pea or mutton or—"

"How would you like potato soup?" "I hate potato soup. Isn't there some kind we've never had?"

Afterward, for almost two hours, Mrs. Boyce, with fashion-plates and patterns all round her, had gazed despairingly at the tan etamine. For

the same length of time Alma had disapproved of every suggestion her mother had offered. Then came Uncle Timothy's unexpected letter.

Uncle Timothy was, if such a thing were possible, even lazier to please than was Alma. Possibly there was some slight excuse for irascibility in his case, for from infancy he had been troubled with nervous dyspepsia.

Naturally, he was not a desirable visitor, which was peculiarly unfortunate, for visiting was poor Uncle Timothy's only occupation.

Invariably it was Uncle Timothy's inconvenience to announce his coming by one train and to arrive on the next, giving the prospective host or hostess no opportunity to escape the threatened visit. His letters never failed to fill the recipient with consternation; yet Uncle Timothy led a respectable, upright life, had no vice except the one vice of universal dissatisfaction with everybody and everything, and was scrupulously neat in appearance. He was old, he had no children of his own, and each one of his flock of grown-up nieces and nephews felt he was entitled to consideration and tolerance; but entertaining Uncle Timothy was certainly more a duty than a pleasure.

Mrs. Boyce lived farthest from Uncle Timothy. He had spent some ever-to-be-forgotten weeks with the nervous little woman when Ruth was eight years old, but for eleven years she had, owing to distance, escaped a second visit.

Now she was to have six weeks of Uncle Timothy—too much for any woman to contemplate with equanimity. At first she sat limp and dejected. Presently Pegan absent-mindedly to snip Uncle Timothy's letter into tiny fragments. It looked to the two girls, who were busy with their embroidery, as if their dismayed mother were deeply engaged in making plans for the comfort of the coming guest, but they were mistaken.

"Girls," said Mrs. Boyce, rising suddenly, and in her agitation scattering a small snowdrift of paper on the rug, "I know it's cowardly, but I ought to be ashamed of myself,—but I'm all worn out. I haven't a scrap of courage, and—girls, I'm going to run away!"

"Run away!" echoed Alma.

"Yes—to your Aunt Emily's. Really, girls, I haven't the courage to plan meals for your Uncle Timothy. I—just can't do it. You've kept house before, and Hannah is perfectly competent to do all the cooking. I ought to—O, dear! I've been sewing too steadily, or something. It isn't right of me, but I'm not able to stand Uncle Timothy."

"You shan't have to," said Ruth, gathering her mother into her strong young arms and presenting a rounded shoulder to be wept upon. "You may be perfectly easy in your mind, mother. I'll look after Uncle Timothy. There, you've had a lovely cry. Now let's go pack your trunk. It'll certainly do you good to go to Aunt Emily's."

Mrs. Boyce departed at noon. When Uncle Timothy arrived, an hour later, he looked at Ruth and said, "Humph!" Then he looked at Alma, and said "Humph!" again, but there was a vast difference in the two "humphs."

"You've a sort of dried-apple countenance, haven't you?" said the always brutally frank old man, eyeing Alma with quick disapproval. "Got a peevish disposition, I guess?"

From the very first moment Alma's sullen eyes blued themselves with an odd, irresistible fascination upon Uncle Timothy's very countenance. It

(Continued on Page 61.)

THE BOYS AND GIRLS

Work and Play

The busy sun got up today.
"Now while the children are at play,
I'll do my work," he said.
At six their play was still not done.
"Tut, but I'm tired!" said the sun,
"It's time to go to bed."

When Snow First Came

BY DONALD A. FRAZER.

Many hundreds of years ago, so the Vancouver Indians say, when winter came around there would be plenty of cold weather, with wind and rain, but no snow. It is with the first arrival of snow that our story has to do.

In a village on the west coast of Vancouver Island the cold weather came on as usual and found the Indians prepared to receive it. Each house had its winter provisions in. Long rows of Salmon, split open and kept flat with little sticks, hung along the rafters, and everywhere were strings upon strings of dried clams, both fish and clams growing browner and browner every day with the smoke; for these Indians did not have stoves or chimneys in their houses, but built their fires on the earthen floor and the smoke wandered all over the house till it escaped through holes in the roof.

At one end of the village lived a young widow named Ayish. She was the finest-looking woman in the tribe, and all the young braves were continually making love to her. This, of course made her very vain. She began to think she was much better than all the rest, and that nobody could do anything as well as she. Her fish were always the best smoked, her mats the prettiest woven, and so on, till, you may be sure, nearly every other woman was jealous of her.

Away at the other end of the village lived Igwa, the oldest and ugliest woman in the village. Nobody ever spoke to her except to scold or growl at her. She never minded, however, but just went on with her own work and kept herself to herself.

One morning old Igwa, as usual, was the first one up in the village. She kindled her fire and then went outside. O, what a sight met her eyes! Everything was all white, white. She could not think what had happened. Stooping down she picked up some of the white stuff. How cold it was! She tasted it.

"Cold, cold," she said, "too cold to eat."

Taking a little into the house she

set it near the fire. It soon melted.

"It will not cook," she said. "The fire only turns it to water; it is no good." Then she went on getting her breakfast.

The village was soon astir, and great was the surprise at the new white substance that covered every-thing.

Some one looked towards Ayish's house and cried, "What is the matter with Ayish? She must be crazy."

She was throwing all her winter's provisions of salmon and clams outside. They all ran to her and inquired what she was doing.

"Why I am throwing away these old things," she said, "I am tired of eating them, and I am going to lay in a supply of this nice new food that the Great Spirit has sent down from the clouds in the night."

"O, how clever Ayish is to think of that!" they all cried. "We will do the same."

In a little while all the Indian houses were emptied of their winter supplies, and every one was busy carrying in baskets of snow, and ranging them on the rafters and around the walls.

All did this excepting old Igwa. When she saw what her neighbors were doing, she quietly went to work, gathered up the scattered fish and clams, and piled them up in her own house till it was so full that she had scarcely room enough left to turn around.

This went on all day, and at night the Indians went to bed as usual. During the night a thaw set in which, combined with the heat of the fires in the houses, caused the snow piled up inside to melt. Ayish was awakened by a cold drop falling on her face. She started up. The sound of dripping water could be heard all over the house.

"Surely the roof must be leaking," said Ayish to herself.

Getting up she peered through the darkness over her head. There, from every one of the baskets o' the new food that she had gathered so carefully the day before, the water was falling in tiny streams.

"O foolish woman that I am!" she cried; "I thought I had gathered food, but I have gathered nothing but frozen water."

In the other houses it was just the same. And when morning came, they all rushed to Ayish's house and reproached her for deluding them into throwing away their good food for this frozen water.

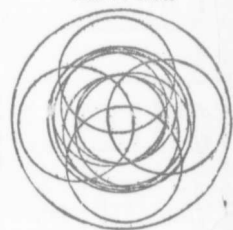
Then they went down to house and begged her to give back their food. But she said, "If you want it back, you will have to buy it back."

With that they began to thrash her; but she appealed to the who said that she was in the "She has taken that which you thrown away as useless," he said the people, "and now it belongs her."

So each man had to buy back clams and his salmon from old Igwa who thus became the richest person in the tribe, while poor Ayish learned a lesson and was not so proud of herself after that.

We, too, might learn this lesson from Ayish; never part with what until you are sure that the new better.

Count the Circles



Can you tell how many circles shown here?

Done to a Crisp

A small boy was undressing one evening before the open fire in his nursery. His mother gave him his nightshirt and told him to go to the fire to warm.

She left the room for a minute and returned quickly when she heard a boy's voice:

"Papa, is this shirt done when it's brown?"

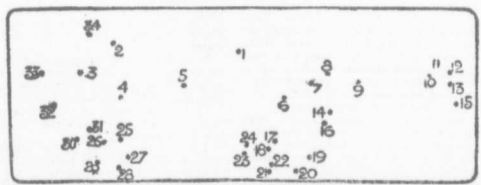
Sleeps in the Snow

A Minnesota mother puts her 18-months-old baby to sleep in the snow. She says: "Little Corinne sleeps out of doors every day. One day when it was ten degrees below zero she slept for six hours in her basket out on the upper porch overlooking the lake. Yesterday when the wind brought her in she was covered with about three inches of snow. The basket in which she was lying was completely covered with snow. She had a hot water bag at her feet and was well tucked in, and was perfectly happy. She seldom has a cold, and the strangest part of it is that she never takes cold except inside the house, and putting her outside will cure a cold immediately. She is a fine baby, and is always well and strong."

"You say you got rid of that counterfeit quarter I gave you, Sam?" "I never did, boss." "But don't you know it was wrong to pass it?" "I didn't 'zactly pass it, boss; you see, I was passin' round de plate in church las' Sunday, an' I jist exchanged it"

Fred—"What do you think of my argument?" Will—"Sound; it is certainly sound." Fred—"And what else?" Will—"Nothing else—merely sound."

A Drawing Puzzle



Join with a pencil line the dots shown in the picture, beginning with 1, then 2, and so on. When you have finished this a certain reptile will be revealed.

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Cranberries

Although cranberry sauce is cranberry sauce wherever the dish is known, it may not be amiss to put before even such skilled cooks as are our readers a few recipes for cooking cranberries. To a quart of well-washed berries add a little less than a pint of water, and stew for ten minutes. Add then one pound of loaf sugar and remove to back of range to simmer, without boiling, for fifteen minutes or so. Turn out to cool and that is all there is to it. Taking this sauce, our English cousins have a happy knack of adding to it when it is cool some whipped cream and then using it as a kind of filling for shortcake, to be served with the afternoon tea. Perhaps it needs a bit more sugar used in this way, but that may be added easily.

In making cranberry tarts, line the moulds with paste, fill with the cranberry sauce, cover with paste, bake, and serve with whipped cream.

To make cranberry jelly cook a quart of the berries in half a pint of water for twenty minutes, then sieve them through a fine sieve and add to the juice one pound of sugar. Cook for ten minutes, boiling hard all the time, and turn into a mould. Let stand for several hours before using. If it is not to be used with meats, but is to go to the table as a sweet, then surround it with whipped cream or a thick custard.

Four Good Ones

HUNTERS' PUDDING.—One cup of suet chopped fine, one cup of molasses, one cup of milk, three cups of flour, three level teaspoonfuls of baking powder, one-half teaspoon each of cloves, mace, and allspice, one teaspoonful of cinnamon, one-half cup of raisins chopped fine, one half cup of citron, chopped fine. Mix in order given. Steam three hours. Serve with lemon sauce.

BREAKFAST ROLLS.—Sift together a quart of flour and a teaspoonful of salt, and rub into the flour a tablespoonful of butter. Dissolve a third of a yeast cake in warm water, and stir it into a cup of fresh blood-warm water. Add a heaping tablespoonful of sugar and pour all into the flour. Mix to a sponge and set to rise for six hours. Stir thoroughly and set for two hours longer, then add just enough flour to allow you to knead it, turn upon a floured board and knead for three minutes. Cut into rounds, butter these lightly and fold over upon themselves, making a half-circle. Set to rise for two hours and bake in a hot oven.

WRENKLES.—Soak one pint of stale bread over night. Drain thoroughly in morning. Add two eggs, one-fourth teaspoon salt, one tablespoonful of lard and butter mixed, flour to make a stiff batter, and one teaspoon baking powder. Drop on a well buttered pan far enough apart so they will not touch. Bake in a quick oven. Eat with syrup.

PRUNE CORNSTARCH.—Soak the prunes over night, and boil them until just tender. Then make cornstarch of two eggs, three tablespoonfuls of sugar, one quart of milk, and two tablespoonfuls of cornstarch. Put the milk on in a double boiler and bring to a boil.

IN THE KITCHEN

Beat the eggs and sugar and add to them the cornstarch thinned with a little milk. Then add to the milk, stir until it thickens, and take from the fire, adding a little vanilla and the prunes, chopped into small bits. Stir well and pour out to cool.

Winter Hints

Winter shortcakes are easy desserts. They are made with a cake foundation, using canned apricots or preserved strawberries or other preserves. Whipped cream is served with the shortcake, and its appearance of the dish is improved if the cream is piped over the top in fancy forms.

Canned fruit may be used for desserts in many ways. The juice in the can should be heavily sweetened and boiled down to a syrup. This makes the fruit richer. Common canned peaches heated in a thick syrup and served with cream are very good indeed. Canned raspberries make a delicious charlotte russe.

A small ham may be steamed instead of boiled. Prepare the ham in the usual manner by soaking it in cold water for eighteen hours, and afterwards scrubbing and trimming it. Put it in the steamer over boiling water and cook, allowing half an hour to each pound of ham. The reason ham is so often indigestible is that it is underdone. In Vienna hospitals, where great attention is paid to the dietary, ham, boiled and baked until it falls to pieces under the fork, is given patients convalescing from typhoid fever.

Chalk for Dirty Spots

A friend has found a way to make her tablecloth do service for a little longer time, even after numerous spots disfigure its snowy whiteness. She rubs a piece of chalk over the spots as they appear. This has a magical effect, and completely conceals them from view. If the spots are of grease, the chalk has a tendency to absorb it, instead of simply concealing it, so that when the cloth at last goes into the wash tub, it is often impossible to find the spot, the chalk having entirely effaced it.

Worth Knowing

That a teaspoonful of sugar added to pancake batter will make the cakes a golden brown.

That salt fish are best and quickest freshened by soaking in sour milk.

That a glass of buttermilk taken the last thing at night will cure stomach troubles.

That fresh meat beginning to sour, will become sweet again if placed out of doors over night.

That kerosene will soften boots and shoes that have been hardened by water.

That a spoonful of raw cornmeal, moistened with water, taken on an empty stomach, will cure constipation, if persisted in for some time.

That a teaspoonful of turpentine put into the boiler with white clothes will aid the whitening.

That clear boiling water poured through tea stains will remove them.

That salt will curd new milk; hence in preparing dishes containing milk, the salt should not be added until they are cooked.

When Greek Meets Greek

(Continued from Page 58.)

seemed oddly familiar. Where had she seen that pucker, peevish mouth, those fretful eyes, the little, dissatisfied wrinkles in the forehead, the thin, pointed nose with its hair-scurri, wholly disappearing lip?

"When I was young," snapped Uncle Timothy, "it wasn't considered polite for young folks to stare their elders out of countenance! If that's coffee I smell, I don't want any."

"Would you rather have tea?" asked Ruth.

"No!" thundered the visitor. "I drink hot water, and I won't touch that if it isn't exactly right."

Ruth regarded the guest with an odd mixture of amusement and pity, but between Uncle Timothy and Alma there was certainly no love lost. It was evident that this belligerent pair were antagonistic from the moment of their meeting, but they preserved a kind of armistice. Ruth managed for several days, with Hannah's help, to keep the grumbling guest from the volcanic outbreaks for which he was famed, but the atmosphere was far from serene.

"I think," said Alma, one day, when the sisters were in the kitchen, trying to cut bread to a thickness that should meet with the nearest approach to approval that the visitor was able to feel, "that Uncle Timothy has the vilest disposition of anybody I ever knew, and such a sour-apple-and-vinegar expression! I wish I knew whom he reminds me of; it bothers me because I can't find out."

"Well, you needn't be bothered any longer," said outspoken Hannah, who had lived with the Boyces for twelve years, and was therefore privileged. "Go look in your glass, Miss Alma, and you'll see the living image of him. He's enough like you, barring age, to be your own twin."

But horrified Alma did not need to look. It was the disheartening truth, with no room for doubt. She herself was the unfortunate person of whom shriveled, vinegary-countenanced Uncle Timothy so unpleasantly reminded her.

"Of course, soothed Hannah, cheerfully, 'your face is smoother, the lines ain't so deep and pucker, like you'd been eating choke cherries, and your voice ain't quite so much like a rusty saw, but in another twenty years—"

"Well, maybe there is a family resemblance," admitted Alma, grudgingly, "but don't you dare to say that my disposition is his!"

"My saying so wouldn't make any difference," said candid Hannah, "but two dispositions more alike I never did see."

This was at noon. At six that night Hannah confessed to having felt ill all day. By midnight she feared she had quinsy. By morning, when the doctor was hastily summoned by Ruth, who had been called to the sufferer's bedside at daybreak, the faithful maid learned that her quinsy was that unusual and absurd malady, a case of grown-up mumps. In Hannah's case, however, the disease was aggravated by a severe cold. She was really ill and in need of careful attention.

Now delicate Alma had been sedulously safeguarded against all the usual childish ills, and it seemed far from wise to expose her now to mumps, so Ruth, who had survived a double attack, tried to sequester herself in Hannah's part of the house.

This, of course, left Uncle Timothy to Alma's tender mercies, Alma to Uncle Timothy's; and a worse arrangement could not be imagined.

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Electricity in the Flour Mill.

Something like that but minus the thunder and lightning,

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When the grinders—separators—sifters—air-filters, have ground and re-ground—purified and re-purified the

flour again and again, all down through the seven floors of the big "Royal Household" mill until it is nearer perfection than flour ever was before—electricity says—

"I can do more than that" and sending its mysterious charge of

Electrified Air

through the flour, removes the last, least trace of impurity—gives it new life and greater energy—makes a flour that is

pure enough,
sweet enough,
white enough,

to be worthy the name and fame of "Royal Household"—the flour that is more delicious—more healthful—more satisfying than any other flour in the world.

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"FLOURFAX."

Alma made an honest effort to provide Uncle Timothy with meals to his liking; but to her granduncle's mind, she failed so lamentably that relations very speedily became strained. The toast at breakfast-time was really excellent, the dainty luncheon was certainly palatable, the boiled water at night was of the proper temperature, and the cook was anxiously to please. But Uncle Timothy had been awakened during the night by Hannah's groans, he disliked Alma quite as thoroughly as Alma disliked him, and he flatly declined to be satisfied with anything she offered. He was perfectly candid, too. He said that in all his sixty-nine years he had never known such a disagreeable girl, nor had he attempted to worry down such absolutely detestable meals.

Alma, who was proud of her ability to cook, was at first dumb with amazement. She was doing her best for Uncle Timothy, and he grumbled, grumbled, grumbled. Very well, she would show him what she could do. She would do better than his best. He should have perfectly sumptuous meals.

But the perfectly sumptuous meals, too, failed to please him. In fact, they made him ill, and for twelve hours more Alma labored faithfully

if not altogether uncomplainingly, to make her querulous guest comortable. Her efforts, however, were not appreciated.

Just before dusk on the third day of Hannah's illness, Mrs. Boyce unexpectedly returned. Alma gave a delighted cry when her mother walked in.

"Where's Uncle Timothy?" asked the returned traveller, who appeared much benefited by her trip.

"On a feather bed on the sewing-room floor," returned Alma, in a tone of deep aversion.

"He said his bed was too soft, the couch too hard, the other spare-room bed was too springy, and that the wallpaper every place else made him dizzy. But what brought you home?"

"An accusing conscience, I

(Continued on Page 67.)

Liquor and Tobacco Habits

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SUNDAY AT HOME

O MY Guide, Thou knowest the perplexities of my life. I do not wish to hurt myself or others by my freedom, nor do I wish to make them think on a hard and narrow thing. So come to Thee, asking Thee always, you me what to do, what not to do. The world of joy let me never forego. In every denial and hardship let me think of Thee. And make me wish Thy freedom and bound Thy love. Amen.

The Hurrying Hours

often the thought comes home to me
the moments hurry away,
we many things I intended to do
yehow, some time, some day!

are promises that have not been kept,
Though I always meant to be true,
But time is too short for all the things

That a girl intends to do.
To-day is the only day we have;
Of to-morrow we can't be sure;

To seize the chance as it comes along
is the way to make it secure.

Love for the Church

We ought to have a love for the church that would lead us to labor in its advancement. We ought to have a love for the Church that would lead us to act consistently with its character. We ought to have a love for the Church that would lead us to unite ourselves with it. In the name of Christ you are invited to ally yourselves with the Church. "Come with us, and we will do thee good, for the Lord hath spoken good concerning Israel." Christ has the Church; He wants you in it. Unite yourselves with His people. Enroll yourselves on His side. Confess your sin. Do this for Christ's sake. Do it for the Church's sake. Do it for your own sake. Do it for others' sake.

We ought to have a love for the church that would lead us to pray for her prosperity, pray for its pastor, pray for its members, pray that many shall be added to it. There is no limit to the power of a praying Church. A great many people seem to forget that the Church is a divine institution, and will say the Church is too proud or that it is plenty good enough, and forget that it is spoken of as a beautiful temple, in which God delights to dwell. It is spoken of as a royal city, Mount Zion, where no expense has been spared to make it beautiful and attractive. Christ loved the Church and gave Himself for it, "that he might present it to himself, a glorious church, not having spot, or wrinkle, or any such thing; but that it should be holy and without blemish."

Eternity Monotonous?

There are people who look a little askance at the idea of eternal life, because they fear that after innumerable ages it may become monotonous. But think—does this life ever become monotonous to those who are all the time working, learning, and growing? Does the artist ever grow weary of painting, or the musician of

composing, or the singer of singing, as long as his powers are not only unimpaired, but steadily expanding? Even men of business get to be so enamored of their business as to be restless, lost, without it. Life never becomes monotonous, uninteresting, to those who are worthily and congenially employed. In the future life, with enlarged, possibly with additional, faculties, and with endless opportunity for their exercise and expansion, is it not likely that there will be continual joy, ever satisfied yet ever renewed, in using and improving them?

The Happy Life

One may live a life shut in
From God's sunshine and His flowers,
And close the eyes to all that's fair
In Nature's plains and bowers;
But the happy life is led by one
Who sees in darkest night
The rays of sunrise ere they come,
Before the morning bright.

Take the Days as They Come

The Master will mix the hours as it pleases Him, and so you should accept them with a murmurous spirit, if you are expecting Him to work out His own purpose in and through you. Bright and dark days will often stand close together, but each shall come to declare His message. In painting china the artist outlines the piece of work in a dull black, and then "fires and burnishes" it, and lo! it comes forth in the beautiful color of gold. God has golden thought and purpose back of each dark experience, and when He has tried us, He will bring us forth as gold. Yes, to take life as it comes; not to be so anxious about the form of the day as the life of the spirit it should enshrine—this is the secret of unfolding God's noble thought in terms of generous and Christlike living. The crown of the tomorrow lies in that approach to the Christ character which a life of faithfulness to-day makes real and abiding.

Cheer Up

Scowling and growling will make a man old;
Money and fame at the best are beguiling;
Don't be suspicious and selfish and cold—

Try smiling.

Happiness stands like a maid at your gate;
Why should you think you will find her by roving?
Never was greater mistake than to hate—

Try loving.

Your Reward

Your work will bring you love. You may meet with much ingratitude; some to whom you look for sympathy may pierce your hand like a broken staff. Your heart may be wounded by the serpent's tooth of unthankfulness; yet if you truly labor with the devoutness of an apostle and the heroism of a martyr, you will come into a large estate of love, and your name will be fragrant throughout the eternal summer of the heavens.



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IN THE SEWING ROOM

May Manton's Hints

GIRL'S DRESS WITH HANDKERCHIEF
BERTHA, 4852.

Simple frocks made with shaped berthas are exceedingly becoming to little girls and are as fashionable as they are attractive. This one shows the long waisted effect that is so popular, and is made of gendarme blue cashmere, combined with a yoke of lace and berthas and cuffs of the material embroidered in eyel style, but the design is equally as well suited to all simple and childish materials. And, when liked, the berthas can be made from embroidered edging, mitred at the points.

The dress consists of the body lining, which is faced to form the yoke the full waist and the skirt. The waist is gathered at both upper and lower edges and arranged over the lining and the two are joined to the skirt, the seam being concealed by the sash. The sleeves are in bishop style with straight cuffs and the berthas is arranged over the waist, outlining the shallow yoke.

BLOUSE OR SHIRT WAIST 4854.

Plain shirt waists always are in demand and always fill a need. This one shows the new sleeves, that are full at the shoulders, and include a wide box plait at the centre front. The model is made of Russian blue Sicilian mohair stitched with corticelli silk and is worn with a belt and tie of black taffeta. All waisting materi-



4852 Girl's Dress,
2 to 8 years.

4854 Blouse or
Shirt Waist,
32 to 42 bust.

als are, however, equally appropriate, the many mercerized cottons as well as wool and silk.

The waist consists of the fitted lining, which is optional, fronts and back. The back is plain across the shoulders, drawn down in gathers at the waist line, but the fronts are gathered at their upper edges also so forming becoming folds. The sleeves are in shirt style, gathered into straight cuffs, and at the neck is a regulation stock.

MISSER'S FANCY BLOUSE 4843.

Broad shoulders make the latest edict of fashion and are rendered exceedingly attractive in this very pretty blouse, which includes the shallow round yoke which also makes one of the latest and newest features. The model is made of tobacco brown veiling, with yoke and cuffs of ecru lace and the trimming band of silk embroidered with little circles and stitched with corticelli silk. It can, however, be reproduced in any seasonable material and is quite as well adapted to the odd waist as to the frock. The waist and sleeves are

both gathered at their upper edges and joined to the band which closes with a button at the centre front, while the yoke is closed at the left shoulder seam. The collar is one of the new ones, of the turn-over sort, and can be slashed and worn with a tie, as illustrated, or left plain as preferred.

The waist consists of the fitted lining, which is optional, fronts, back, sleeves, yoke and trimming band.



4843 Misses' Fancy
Blouse, 12 to 16 yrs.

4808 Collarettes and
Muff, One Size.

When the lining is used the sleeves are faced on indicated lines to form cuffs, but when it is omitted cuffs of the required depth are made separate and joined to the lower edges of the sleeves. The waist is gathered at its lower edge, made to blouse slightly at back as well as front, and is closed invisibly by means of buttons and loops.

COLLARETTES AND MUFF, 4908.

Collarettes and muffs are essential to the well dressed woman, and this season show almost unprecedented variety. The models illustrated are all correct and all admirable, while the suitable materials are many. As illustrated the collarette to the left, in pelerine style, is made of velvet edged with fur. The four-in-hand scarf is made of squirrel with ermine tails, and the muff is made of the squirrel dyed brown, but such materials as the many fur plushes and velvets are much in vogue for these last. The muff is particularly attractive made of any one of these with frills of lace at the ends, and the scarf can be fur trimmed whenever desired, although velvet with ruches of chiffon is much liked.

The collarette to the left is made with a seam at the centre back, which renders it in every way desirable for narrow material. The scarf also is made in two pieces, narrow at the neck and broader at the ends, and the muff includes both muff and lining.

The price of each of the above patterns postpaid is only 10 cents. Send orders to The Farming World, Morang Building, Toronto, giving size wanted.

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Elgin County, Ont.

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HEALTH IN THE HOME

Rheumatiz

When you've got the rheumatiz—
Spose you know 'em how it is—
All the fellers in the kentry wants to
make the case their biz;
Tellin' you
What to do
When you've got the rheumatiz.

"Tell you what!" says Elder Brown,
"Got ter git the swellin' down!
Brother Jks—he was that bad
Thought we couldn't save the lad.
Both his legs was full o' pain;
So I says to old Doc Haines,
"Doc, I reckon this won't do—
Got ter pull the youngster through!"
So I takes the case by my own
Gits some hicker off the shelf,
Sinks inter like fer fair—
Made him boozey, I declare.
Then I wraps his legs in wool,
Gives em quite a hefty pull,
And, by gray, the next day
He, he 'lowed he felt O. K."

"Rheumatiz?" says Jabez White.
"Cider'll fix you out all right,
Drink a gallon, good and hard,
Gallop up and down the yard—
Take a heap 'o exercise,
Use warm water fer your eyes;
Stuff your ears with cotton batten,
Git that dope—the name is Latin—
Somethin' like 'ideadene,'
An' you'll soon be feelin' fine!"
"Cider nuthin'!" says Lem Jones,
"Rheumatiz is in the mes,
Git a quart 'o catnip tea,
Jes' as hot as it can be,
Let it cool and drink it down
Nuthin' better in the town."

"No use talkin'," says Eph Law.
"What you want's a good big chaw
Off a plug o' niggerhead,
Then undress and go to bed,
In the mornin' fill your jaw
With another good big chaw!"

When you've got the rheumatiz—
Spose you know jes' how it is—
All the fellers in the kentry wants to
make the case their biz;
Tellin' you
What to do,
When you've got the rheumatiz.

Too Rapid Eating

One of the most fruitful causes of ill-health and bad complexion is the habit of rapid eating. It is growing more and more prevalent in this country. We really haven't time to eat properly, and we have very little time to sleep, yet we hope to retain youth and beauty.

With the habit of rapid eating comes an increase in the amount of liquids taken during the meals. Food properly masticated can be easily swallowed, but if ill chewed it must be washed down with liquid. This, of course, lessens the flow of saliva, dilutes the gastric juices and interferes greatly with the process of digestion.

Those who have tried thorough mastication of their food with no liquid, unless at the end or a half hour after the meal, have learned that the food tastes better, the meal is more satisfactory and the appetite is appeased with less food, the digestion is aided, leaving one much more comfortable than the hasty meal. A

few days trial will convince the most skeptical, for the stomach responds promptly to decent treatment. It expects it. It deserves it.

One of the greatest mistakes of the age is rapid eating, and one of the greatest curses is the nervous dyspepsia caused by it.

Sore Throat and Cough

Put a teaspoonful of powdered borax into one tablespoonful of honey. Dissolve over heat. When cool, apply it repeatedly with a camel's hair brush to the throat and roof of the mouth. This will soon effect a cure and allow the patient to swallow comfortably.

When tempted to cough, draw a long breath, holding it until it warms and so soothes every air-cell. Some benefit will soon be received, for the nitrogen which is thus refined, as it were, acts as an anodyne to the mucous membrane, stopping the desire to cough, so allows the throat and lungs a chance to heat. The incessant and constant hacking cough acts precisely as scratching a wound on the body—allows no time to heal up. This is the case with children, they keep it up, but sometimes by coaxing or promises of presents, you can succeed in having them hold their breath and so get a little relief. Nervousness helps it along, too.

Laugh

Learn to laugh. A good laugh is better than medicine. Learn how to tell a story. A well told story is as welcome as a sunbeam in a sickroom. Learn to keep your own troubles to yourself. The world is too busy to care for your ills and sorrows. Learn to stop croaking. If you cannot see any good in the world keep the bad to yourself. Learn to hide your pains and aches under a pleasant smile. No one cares to hear whether you have the carache, headache or rheumatism. Don't cry. Tears do well enough in novels, but they are out of place in real life. Learn to meet your friends with a smile. The good humored man or woman is always welcome, but the dyspeptic or hypochondriac is not wanted anywhere and is a nuisance as well.

Apples Are Healthful

A good ripe raw apple is one of the easiest substances for the stomach to manage, and while the apple is worth more as a health giver in its natural state it is also exceedingly wholesome cooked. Apple sauce eaten with pork assists in the digestion of the meat, and many persons who cannot eat pork without discomfort can do so if accompanied with plenty of well cooked apple sauce not too sweet.

Try a Bran Bath

Women who suffer from weak circulation of the blood are being recommended to take bran baths. A quantity of ordinary bran is put into a bath of tepid water, and the rubbing of the rough particles of bran not only cleanses the skin, but has the effect of causing a slight chafing that sets up a healthy glow.

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or Fruit Liver Tablets

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We will give any Lady, Gentleman, Boy or Girl an elegant Watch, nickel, silver or gold. (Business) warranted good time keepers, and in appearance, not equal to watches usually sold at \$25.00. We give this Watch Absolutely Free for sending 5c Packages of our celebrated Rexall Dyes & Co. each. These gifts are the best in the world. Every package will dye wool, cotton, mixed goods, silk, jute, straw, etc., with the one dye. Every lady does more or less dyeing and you can sell them in a very short time. Send Me Money. We will trust you. Send us your name and address, and we will mail the Dyes post paid. When sold return us the money and we will send you the handsome watch without further charge, and when you see the watch you will admit it is beyond expectation.

An Extra Present Free

If you will write us to day for the Dyes, and will be prompt in sending them and return the money, we will give you FREE in addition to the Watch a beautiful Silk Pin. Don't wait. Write us at once.

Pulvo Manufacturing Company
Toronto, Canada

Spavin and Ring-bone

Once hard to cure—easy now. A 45-minute treatment does it. No other method so easy, quick and painless. No other method sure.

Fleming's

Spavin and Ringbone Paste

cures even the worst worst cases—none too old or bad. Money back if it ever fails. Lots of information. Write for Free Book about Spavin, Ringbone, Curb, Splint, Box Spavin and other horse troubles sent free.

FLEMING BROS., Chemists,
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Nine Nations

Now Use Liquozone. Won't You Try It-Free?

Millions of people, of nine different nations, are constant users of Liquozone. Some are using it to get well; some to keep well. Some to cure germ diseases; some as a tonic. No medicine was ever so widely employed. These users are everywhere; your neighbors and friends are among them. And half the people you meet—wherever you are—know someone whom Liquozone has cured.

If you need help, please ask some of these users what Liquozone does. Don't blindly take medicine for what medicine cannot do. Drugs never kill germs. For your own sake, ask about Liquozone; then let us buy you a full-size bottle to try.

We Paid \$100,000

For the American rights to Liquozone. We did this after testing the product for two years, through physicians and hospitals, after proving, in thousands of difficult cases, that Liquozone destroys the cause of any germ disease.

Liquozone has, for more than 20 years, been the constant subject of scientific and chemical research. It is not made by compounding drugs, nor with alcohol. Its virtues are derived solely from gas—largely oxygen gas—by a process requiring immense apparatus and fourteen days' time. The result is a liquid that does what oxygen does. It is a nerve food and blood food—the most helpful thing in the world to you. Its effects are ex-

hilarating, vitalizing, purifying. Yet it is a germicide so certain that we publish on every bottle an offer of \$1,000 for a disease germ that it cannot kill. The reason is that germs are vegetables; and Liquozone—like an excess of oxygen—is deadly to vegetable matter.

There lies the great value of Liquozone. It is the only way known to kill germs in the body without killing the tissue, too. Any drug that kills germs is a poison and it cannot be taken internally. Every physician knows that medicine is almost helpless in any germ disease.

Germ Diseases.

These are the known germ diseases. All that medicine can do for these troubles is to help Nature overcome the germs, and such results are indirect and uncertain. Liquozone attacks the germs, wherever they are. And when the germs which cause a disease are destroyed, the disease must end, and forever. That is inevitable.

Asthma	Hay Fever—Influenza
Ascum—Anemia	Liver Disease
Bronchitis	La Grippe
Blood Poisons	Leucorrhea
Cancer—Cancer	Low Heart Trouble
Cholera—Cholera	Malaria—Scarlatina
Constipation	Measles—Typhoid
Croup—Croup	Pneumonia
Dysentery—Dysentery	Rheumatism
Diarrhea—Diarrhea	Rheumatoid—Syphilis
Diphtheria—Diphtheria	Rickets
Drugs—Drugs	Scarlet Fever
Drugs—Drugs	Stomach Trouble
Drugs—Drugs	Throat Trouble

Enema—Erysipelas
Fever—(all types)
Gonorrhea—Gonorrhea
Gonorrhea—Gonorrhea
Tuberculosis
Typhoid—Typhoid
Typhoid—Typhoid
Typhoid—Typhoid

All diseases that begin with fever—all inflammations—will yield to Liquozone. In severe cases Liquozone acts as a vitalizer, accomplishing what no drugs can do.

50c. Bottle Free.

If you need Liquozone, and have never tried it, please send us this coupon. We will then mail you an order on a local druggist for a full-size bottle, and we will pay the druggist ourselves for it. This is our free gift, made to convince you; to show you what Liquozone is, and what it can do. In justice to yourself, please accept it to-day, for it places you under no obligation whatever.

Liquozone costs 50c. and \$1.

CUT OUT THIS COUPON

For this offer may not appear again. Pull out the blank and mail it to the Liquozone Company, 405-406 Wabash Ave., Chicago.

My disease is _____

I have never tried Liquozone, but if you will supply me a 50c. bottle free I will take it.

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Prince Edward Island Fruit Growers

The Fruit Growers' Association of P.E.I. met in Charlottetown Hall, on Dec. 31. There was a large attendance of energetic, enthusiastic horticulturists. The meetings were pronounced a great success. The fruit experts present were A. McNeill, Chief of the Fruit Division; W. T. Macoun, Horticulturist, Experimental Farm, Ottawa; W. S. Blair, Nappan; and G. H. Vroom, Chief Fruit Inspector for N.S. Excellent addresses were delivered by the Lieut.-Governor, Senator Ferguson, A. Martin, M.P., and others.

The exhibit of apples was a very large one, and far outclassed not only in plate exhibits, but also in boxes and barrels packed for export, anything ever before shown here at this season of the year. A large number of different varieties of apples were exhibited.

ISLAND APPLES

As commercial apples for the Island Mr. McNeill especially recommended Alexander, Wolf River, Gravenstein, Baxter, Wealthy and Ribton Pippin. He would not grow the Spy here at all. Ben Davis and Shark will not do so well here as in other parts of Canada. The McIntosh Red does well here, also Russets and Bisk Pippins. Kings are not prolific enough.

Mr. Vroom claimed that the Baldwin could be successfully grown on P.E.I.

Mr. McNeill said that the McIntosh Red can be grown successfully here if handled with proper care and intelligence.

Senator Robertson said that he believed we should find a market for our fruit not only in Great Britain, but in the great Northwest. The Freed Orchard in King's County had been planted over 100 years ago, and trees in it are still bearing. The "Clarke Tree" is known to be over 110 years

old, and another tree at Newton, Belfast, is 93 years of age, and it bore fruit last year.

Mr. McNeill stated that by the exercise of brains and care \$50 to \$75 an acre, clear of expense, can be made out of apple growing, and he knew of no better or more profitable use to make of land.

SOME DIFFICULTIES

Mr. J. Johnstone read an excellent paper entitled "Some Difficulties of Island Horticulture." He advised the growing of windbreaks, as much injury is done to trees for want of shelter. Spraying and pruning should be attended to properly and more co-operation is needed. President Burke said that co-operation was the main thing before the Association.

GUIDES TO SUCCESS

Mr. Macoun followed with an address, "Guides to Success in Fruit Growing," showing the need of good marketing, best location for an orchard, selection of best varieties, careful planting, avoidance of over-pruning, proper spraying, protection of trees from mice by placing thick building paper around the trunks and from sun-scald, by wrapping birch bark around the tree. He considered all of P.E.I. one grand orchard site, and in the few acres where good apples cannot be grown, we should grow cranberries. He said we should plant more trees. In planting trees never let the roots get dry. Spraying is necessary.

CRANBERRY CULTURE

C. R. Dickie, in his address on cranberry culture, said that of late considerable attention is being paid to this branch of horticulture. There have been very bad seasons. The year 1903 was bad, owing to the drought. This year there was only a partial crop. He had

only 15 bbls. himself, when he should have had 100. In the whole neighborhood 150 bbls. were shipped, where there should have been 500. On every farm there are sections suitable for cranberry culture—low, swampy or barren places. The ground should be laid out in beds 50 or 100 feet or larger, but not too large to lose control of the water. These beds should be covered with 8 inches of dry, sharp sand. Flooding the cranberries ensures a crop every season and preserves the plants from frost. His oldest plantation is 32 years old, and the growth is still vigorous.

MODEL ORCHARDS

Mr. Ready submitted his report on model orchards. There are nine of them here, three in each county. A circular had been sent to the managers of each in order to find out the comparative climate adaptability of the various varieties, the causes and extent of the injuries, and also what educational work has been attempted, and what success attained. Winter killing was the most frequent cause of damage, with one or two reports of harm done by sun-scald and ice.

There is on the farm of Mr. Peter Martin an apple tree 93 years old, which is still bearing.

Senator Ferguson said that of the late fall or early winter varieties the Baxter or Le Rue is very promising. The McIntosh Red, is a beautiful apple of high quality and an excellent bearer. He advised fruit growers to plant the varieties which have proved most successful in Nova Scotia, where the climate resembles our own.

STRAWBERRIES AND PLUMS

Mr. Macoun delivered an excellent address on Strawberries. Among the most productive he mentioned Burbuck,

Greenville, Enhance, Glenmery, Williams, Lovette and Warfield.

Mr. D. J. Stewart, of Hazlehurst, read an interesting paper on "Plum Growing." He said that the plum thrives on the Island with excellent care. By the latter is meant: (1) A proper care in selecting a site for an orchard; the site ought to be sheltered on the north and west. (2) The purchase of a healthy stock from some reliable nursery. (3) Proper care and cultivation by manuring each year and growing a crop of roots or potatoes until the roots of the trees occupy all the ground. (4) Care of the tree. (5) The selection of suitable varieties.

Rev. Father Burke, the well-known and energetic president of the association, submitted a lengthy, interesting report.

Nearly all the old officers were re-elected.

Lieut.-Governor McKinnon becomes patron and Mr. D. P. Irving, Vernon River, and D. L. Stewart, Montague, directors.

President Burke was unanimously elected for another term, the general opinion being that no other could fill the position as well.—A. R.

Preventing Loss of Bees in Winter

Seeing that every colony has a fertile queen, of the best wintering strain, and thirty pounds of winter stores, would reduce the percentage of winter loss very much. The colder it is the more compactly bees cluster. If stores do not reach the cluster they may not be able to break the cluster to reach the stores, and starve. This is frequently the case during prolonged cold spells, and only a moderate amount of stores in the hive.

The moisture given off by the bees should be expelled from the hive. After allowing in outside wintering sufficient packing to protect from cold, there are two methods advocated. By means of one, the fresh air is brought in at the entrance of the hive, and the air laden with moisture and carbonic acid gas carried off at the same opening.

The other method is to bring in the pure air at the entrance and carry the foul air by the pressure from the fresh air entering the hive, and the natural tendency for the warmer air to rise, by these means to carry the exhausted air through the packing above.

Arthur C. Miller, in the Review, lays down in no uncertain tones that the entrance is the proper opening for fresh air, and that the bees should be in a stove we have the place where the fresh air enters, as in the hive we have the entrance to the wood and the fire we have combustion and oxidation, as with the bees and honey we have combustion and oxidation. When the fresh air entrance becomes the natural outlet for the smoke and carbonic acid gas, then the entrance to the hive will be the natural outlet for the exhausted air of the hive.

In the common entrance and outlet we have what is known in science as a friction of air currents, the bees wasting energy in expelling it, as they do in forcing the warmed atmosphere down. Another objection is that more or less of the exhausted, impure air, must be drawn back into the hive by what is known as diffusion of gases. But what makes this advice so dangerous in colder climates, and I have no doubt that this advice has led to the loss of many a colony all bees during the past winter, is that as the moisture-laden air returns to the colder part of the hive, it condenses and freezes, the distance inside the hive the moisture condenses depending upon the cluster, the size

of the hive, the size of the entrance and the efficiency of the packing. Such conditions were common, and the cold and damp atmosphere with the frozen entrance destroyed the bees. Let me say that cold alone rarely kills bees. I saw in Norfolk during the latter part of March bees alive and apparently in fair condition that had been standing out all winter in hives, with upper stores, and a $\frac{1}{2}$ inch hive cover, the combs and the bees in the lower chamber of the hive did not even have a thin cloth above them, the nearest protection was the warped $\frac{1}{8}$ board at the top of the upper story. Cold was there surely in abundance, but no moisture lingered in the atmosphere about the bees.

The right method is the chimney principle; the foul air carried away at the top, packing enough to keep the bees warm, but not so abundant or so compact that the foul air could not rise through the packing on the hive.

Here where the moisture leaves the hive the hive is warm, the heat of the cluster and the air rising and no condensation takes place until the moisture reaches the top of the packing, or until it strikes the under side of the outer case cover. Here it can be disposed of at favorable periods by allowing moderate ventilation under this cover. The common opening ventilator is wrong in principle in any climate, but particularly injurious and dangerous in a cold climate. I trust I have made this clear.

In inside wintering there have been heavy losses, chiefly in repositories which could not maintain an even and sufficiently high temperature. The moisture above mentioned has also not been carried off, this combination with low temperature resulting in heavy losses.

Our own repository, which will hold 1,000 colonies, and has this winter 700 in it, is specially built with the object of securing a uniform but sufficiently high temperature. The fresh and the foul air is not brought in at the same entrance, but for convenience and economy of space the back of the hive is raised two inches on the stand and $\frac{1}{2}$ inches from the bottom board. Through this rear opening the foul air escapes.—R. F. Holtermann, at Beekeepers' Convention.

The Brown Tail Moth

This destructive pest has reached Maine, and is now in close proximity to some of the lower provinces. In Bulletin 108 the Maine Experiment Station outlines the history of this moth and points out the danger of allowing it to get a foothold. It destroys hardwood trees as well as raspberry and blackberry bushes. The poisonous effects of the hairs are worse than "ivy" poisoning. Citizens of the State are urged to make themselves acquainted with the pest in order that they may recognize it and have it destroyed.

An attendant in one of the branches of the New York public library noticed that a little negro boy who came frequently to the library invariably went to the same shelf and took the same book which he seemed to enjoy immensely. Curious to know the name of the book, she followed him to the shelf, where she found him looking at a picture of an old dard being chased by a bull. A wide grin stretched from side to side of the little fellow's face. "What's the joke?" asked the surprised attendant. "Golly! he ain't ketch'd 'im yet!" replied the delighted child.

DEAFNESS CAN BE CURED

I Have made the Most Marvelous Discovery for the Positive Cure of Deafness and Head Noises and I Give the Secret Free.

With This Wonderful, Mysterious Power, I Have Made People Deaf For Years Hear The Tick of a Watch in a Few Minutes.

Send Me No Money—Simply Write Me About Your Case and I Send You the Secret by Return Mail Absolutely Free.

After years of research along the lines of the deeper scientific mysteries of the occult and invisible of Nature, I have found the cause and cure of deafness and head noises, and I have been enabled by this same mysterious knowledge and power to give to many unfortunate and suffering persons per-



I Have Demonstrated That Deafness Can Be Cured—Dr. Guy Clifford Powell.

fect hearing again; and I say to those who have thrown away their money on cheap apparatus, silver air pumps, washes, douches, and the list of innumerable trash that is offered the public through flimsy advertisements, I can and will cure you to stay cured. I ask no money. My treatment method is one that is so simple it can be used in your own home. You can investigate fully, absolutely free, and you may feel it only after you are thoroughly convinced that it will cure you, as it has others. It seems to make no difference with this marvelous new method how long you have been deaf nor what caused your deafness; this new treatment will restore your hearing quickly and permanently. No matter how many remedies have failed you, no matter how many doctors have pronounced your case hopeless—this new magic method of treatment will cure you. I prove this to your entire satisfaction by paying a cent for it. Write to-day and I will send you full information absolutely free by return mail. Address Dr. Guy Clifford Powell, 1750 Auditorium Building, Peoria, Ill. Remember, send no money—simply your name and address, for you will receive an immediate answer and full information by return mail.

Only Once

It was a pitiful mistake, an error sad and grim. I waited for the railway train, the light was low and dim. It came at last, and from a carriage stepped a dainty dame, and, looking up and down the place, she straight unto me came. "Oh, Jack!" she cried, "Oh, dear old Jack!" and kissed me as she spoke; then looked again, and, frightened, cried: "Oh, what a bad mistake!" I said, "Forgive me, maiden fair, for I am not your Jack; and as regards the kiss you gave, I'll straightaway give it back." And since that night I've often stood upon the platform dim; but only once in a man's whole life do such things come to him.—Tit-Bits.

QUESTIONS AND ANSWERS

Feeding a Colt in Winter

I have a young Clydesdale foal that I would like to winter well. I am giving it a quart of new milk, a little oatmeal porridge night and morning, and corn mixed with bran and linseed cake. Will the cow's milk make the hoofs brittle? Is my system of feeding all right?—C. R.

Well boiled oatmeal porridge and milk night and morning, in addition to the corn, bran and linseed cake make a splendid ration for a young colt. If you can get the colt to take this it should do well. It is all nonsense about cow's milk making brittle hoofs. Milk contains a large quantity of the elements necessary for horn formation. If such were the case what about the hoofs of calves? They would also become brittle.

Sows With Cold

I have a couple of sows that wheeze a lot, as though they had something in their nostrils. They eat heartily and have access to a well-bedded stable and a straw stack for sleeping quarters. They usually sleep about the stacks. Is the ailment contagious?—A. H.

The trouble is not likely to be contagious, and is probably caused by the sows catching cold or getting dust into their lungs from sleeping about the stack. Give each a dose of Epsom salts, and feed soft foods for a while.

Does Not Breed

I have a heifer that dropped a calf when she was two years old and has failed to get with calf since. She is in good condition. What would you advise me to do with her?—J. C. K.

Unless there is some important reason for doing otherwise, our advice, if the heifer is in good condition, is to sell her for beef, as treatment would necessitate thinning her down in flesh, and the possibilities of a permanent cure are uncertain. The treatment recommended is to feed spare rations, open the mouth of the womb when she is in heat and breed at time of next heat. Follow this plan until she is in calf.

ABOUT RURAL LAW

In this column will be answered for any paid-up subscriber free of charge, questions of law. Make your questions brief and to the point. This column is in charge of a competent lawyer, who will, from time to time, publish herein notes on current legal matters of interest to farmers. Address your communications to "Legal Column," The Farming World, Toronto.

Legality of a Marriage

Q.—1. If the bridegroom signed the bride's name, in the bride's absence, on the marriage certificate, would the marriage be legal? 2. Would it be a legal marriage if a girl were married by the name her mother bore, that is, after her mother had been divorced and married again?—A Subscriber.

A.—1. Yes. The certificate has nothing to do with the legality of the marriage, it is only proof of the marriage. The marriage would just be as legal if there were no certificate at all. 2. Yes. It is the person who is married,

not the name. The above fact would not affect the legality of the marriage, but might give rise in later years to difficulties as to proof, unless the girl had been in the habit of going by her mother's name.

Rights of Inheritance

Q.—1. Is an illegitimate child entitled to any share in his father's property as against his father's brothers and sisters?—J. L. C.

A.—1. No. He cannot inherit anything from his father, but his father may will his property to his illegitimate son.

Injured by Horse

Q.—A has a balky horse. He told his hired man to get on its back and try and ride it. It would not go and A struck it with the whip. The horse started off and despite the efforts of the hired man to stop it, it ran again and knocked over B, who was severely injured. The hired man called to B but he did not get out of the way in time. 1. Can B recover damages from A?—O. B. T.

A.—1. No. What A did could not be called negligence, and the hired man did all he could to avert the accident. Even if A's act had been negligent we would think the consequences were too remote to fix him with liability for the accident.

A counsel had been cross-examining a witness for some time with very little effect, and had sorely taxed the patience of the judge, the jury and everyone in court. At last the judge intervened with an imperative hint to the learned gentleman to conclude his cross-examination. The counsel, who received this judicial intimation with very bad grace, before telling the witness to stand down, accosted him with the parting sarcasm: "Ah, you're a clever fellow, a very clever fellow! We can all see that!" The witness bending over the box quietly retorted, "I would return the compliment if I were not on oath."

When Greek Meets Greek

(Continued from Page 61.)

shouldn't have run away, and I wasn't thoroughly happy until I had decided to run back again."

"Mother," demanded troubled Alma, "do you think I'm like Uncle Timothy? Of all grumbling, hypercritical mortals!"

"Well," admitted Mrs. Boyce, trying not to smile, "there have been moments when you've reminded me of your Granduncle Timothy. You certainly have characteristics—"

"Then I'll get over 'em!" declared Alma, grimly. "I don't like what I'm coming to—ugh! Uncle Timothy in petticoats! Ugh!"

Oddly enough, a few days later, Uncle Timothy, recovered from his illness, expressed a fear that he was growing like Alma, who for the moment had forgotten her intention of reforming,—a seventeen-year-old habit does not vanish in a moment,—and was grumbling bitterly because the etamine skirt sagged in the back.

"I abominate a skirt that hangs in scallops!" said Alma, twisting to cast a displeased glance over her shoulder at the long, graceful folds behind her. "All the skirts you make, mother, go up and down in waves."

"Ruth," demanded Uncle Timothy, in a loud whisper, "am I anything like as disagreeable as your sister?"

"I'm afraid you are, sometimes," confessed truthful Ruth, with the smile that came near to pleasing even captious Uncle Timothy.

"Well, if that's the case," he re-

turned, "I'd thank anybody that'd just say 'Alma' whenever I seem to be getting cantankerous. If I thought I was getting as hard to please as she is I'd—'d join a don't-gumble club."

It really seemed afterwards as if Granduncle Timothy's visit had proved generally beneficial, for it was noticed by all the large family connection that with time Alma certainly grew sweeter, far more considerate toward her mother, and decidedly less cantankerous; and that Uncle Timothy occasionally stopped short in the middle of some sharp tirade, exclaimed "Alma!" and then became, in his suddenly altered mind, almost lamblike.

Books and Bulletins

SILAGE VS. GRAIN FOR DAIRY COWS.—Bulletin 155. Experiment Station, Wooster, Ohio.

TRADE AND NAVIGATION, TABLES OF.—For the Dominion of Canada for the year ending June 30th, 1904.

VARIETIES OF STRAWBERRIES.—Bulletin 154. Experiment Station, Wooster, Ohio.

FORAGE TOMATOES.—Bulletin 153. Experiment Station, Wooster, Ohio.

TREES AND SHRUBS TEST IN MONITORS AND THE NORTH-WEST TERRITORIES.—Bulletin 47. Experimental Farm, Ottawa.

SOY BEANS, FEEDING EXPERIMENTS, ALFALFA.—Bulletin 106. Experiment Station, Orono, Maine.

FUMIGATION OF PLANCES.—Report of Inspector—Department of Agriculture, Toronto.

REPORT OF THE AGRICULTURIST.—Central Experimental Farm, Ottawa.

DISEASES OF PLANTS.—Bulletin 136. Department of Agriculture, Toronto.

DESTROYING BLACK FLIES.—Bulletin 112. Experiment Station, Durham, New Hampshire.

PROTECTING COWS FROM FLIES.—Bulletin 32. Experiment Station, Storrs, Connecticut.

FOOD VALUE OF MILK SOLIDS.—Bulletin 31. Experiment Station, Storrs, Connecticut.

REGISTRAR OF LIVE STOCK, REPORT OF, FOR 1903.—Dept. of Agriculture, Toronto.

REPORT OF THE HORTICULTURIST.—Central Experimental Farm, Ottawa.

NATIONAL LIVE STOCK CONVENTION, REPORT OF, FOR 1904.—Department of Agriculture, Ottawa.

FEEDING CATTLE.—Bulletin 85. Experiment Station, Lincoln, Nebraska.

DESTROYING PRAIRIE DOGS.—Bulletin 86. Experiment Station, Lincoln, Nebraska.

COW PEA IN THE NORTH.—Bulletin 130. State College, Pennsylvania.

GRAPE CULTURE.—Bulletin 128. State College, Pa.

ALFALFA CULTURE IN HUMID LANDS.—Bulletin 129. State College, Pa.

CENTRIFUGAL SOIL ELUTRIATOR.—Bulletin 89. Experiment Station, Logan, Utah.

HOME-GROWN PROTEIN, ETC.—Bulletin 98. Experiment Station, College Park, Md.

SWEET CORN.—Bulletin 96. Experiment Station, College Park, Md.

PEANUTS.—Bulletin 84. Experiment Station, Fayetteville, Arkansas.

BROWN TAIL MOTH, ETC.—Bulletin 103. Experiment Station, Orono, Maine.

REPLACING GRAIN WITH ALFALFA, ETC.—Bulletin Vol. XVII. No. 4. Experiment Station, Knoxville, Tennessee.

Farmers' Institute Meetings

Sup't. Geo. A. Putnam has announced the places and dates for the regular and supplementary meetings of the Farmers' Institutes as follows:

REGULAR MEETINGS

Division 1—Jan. 30th, Kincairdine; 31st, Ripley; Feb. 1st, Dunagan; 2nd, Auburn; 3rd, Brussels; 4th, Wroxeter; 6th, Teeswater; 7th, Lavery's School House; 8th, Lakelet; 9th, Cargill; 10th, Port Elgin; 11th, Tara; 13th, Hespworth; 14th, Warton; 15th, Hanson; 16th, Durham; 17th, Glenallen; 18th, Drayton; 20th, Palmerston; 21st, Farwell; 22nd, Cedarvale and Coun; 23rd, Cummock; 24th, Marsville; 25th, Erin; 27th, Honeywood; 28th, Fern; March 1st, Horning's Mills; 2nd, Riverview; 3rd, Rileys; 4th, Laurel. Speakers—W. F. Kydd, Simcoe; G. Barbour, Georgetown; Miss L. Gray, 606 Balthurst street, Toronto.

Division 2—Jan. 31st, Thamesville; Feb. 1st, Tecumseh; 2nd and 3rd Essex; 4th, Woodlee; 6th, Valetta; 7th, Romney; 8th, Rodney; 9th, Highgate; 10th, Dutton; 11th, Sheddin; 13th, Melbourne and Mileham; 14th, Walker's School House; 15th and 16th, Briden; 17th, Petrolia; 18th, Wyoming; 20th, Thedford; 21st, Brucefield; 22nd, Exeter; 23rd, Parkhill; 24th, Ailsa Craig; 25th, Beechwood; 27th, Colchester; 28th, Hilderton; March 1st, Wilton Grove; 2nd, Kintore; 3rd, St. Mary's; 6th, Mitchell; 7th, Bright. Speakers—Fred A. Sheppard, Queenstown; John Donaldson, Port Williams, N.S.; Miss Blanche Maddock, Guelph; A. B. McDonald, Appin.

Division 4—Jan. 21st, Scotland; Feb. 1st, Oshweken; 2nd, Ancaster; 3rd, Stoney Creek; 4th, Campden; 6th, St. David's; 7th, Niagara Falls; 8th, Hamberstone; 9th, Pelton Centre; 10th, Canboro; 11th, Kohler; 12th, Caledonia; 14th, Onondaga; 15th, St. George; 16th, Victoria; 17th, Langton; 18th, Delhi; 20th, Courtland; 21st and 22nd, Aylmer; 23rd, Watford; 24th, North Branch; 25th, Norwich; 27th, Mount Elgin; 28th, Morriston and Aberfoyle; March 1st, Speedside; 2nd, Breslau; 3rd, Waterloo; 4th, New Hamburg; 6th, Wellesley. Speakers—G. H. Hutton, Easton's orators; J. L. Hillbourn, Leamington; Ed. Miller, Stouffville; Miss Miller, Guelph; Mrs. Joy, 317 Brunswick Ave. Toronto.

Division 11—Jan. 31st and Feb. 1st, Vankeek Hill; 2nd, Glen Robertson; 3rd, Maxville; 4th, North Branch; 6th, South Branch; 7th, Northfield; 8th, Onabruk Creek; 9th, Newington; 10th, Russell; 11th, Kemmore; 13th, Chesterville; 14th, Inkerman. Speakers—C. W. Nash, 91 Lee Ave. Toronto; D. M. Wilson, Kemptonville.

Division 6—Jan. 31st, Faversham and Maxwell; Feb. 1st, Badgerow's; 2nd, Dundalk; 3rd, Ventry; 4th, Priceville; 6th, Markdale; 7th, Holland Centre; 8th, Walter's Falls; 9th, Rockton; 10th, Kimberley; 11th, Ravenna; 12th, Banks; 14th, Thornbury; 15th, Meaford; 16th, Snyder; 17th and 18th, Stayner; 20th, New Lowell; 21st, Midhurst; 22nd, Minessing; 23rd, Russellton; 24th; Phelps-ton; 25th, Elmvale; 27th, Alenwood; 28th, Wyevale; March 1st, Lafontaine; 2nd, Penetang; 3rd, Vasey; 6th, Georgetown; 7th, Nassagaweya; 8th, Waterdown; 9th, Rockton; 10th, Freelon. Speakers—I. H. Mason, Strathroyville; Harold Jones, Maitland; Anson Groh, Preston.

SUPPLEMENTARY MEETINGS

Division 3—Feb. 2nd, Tiverton; 3rd, Underwood; 4th, Burgoyne and Southampton; 6th, Allenford; 7th, Mar; 8th, Spry; 9th, Lion's Head; 11th, Eimwood; 13th, Midway; 15th, Walkerton; 15th, Belmore; 16th, Lucknow; 17th, Holy-

rood; 18th, Harriston; 20th, Clifford; 21st, Drew; 22nd, Ayton; 23rd, Holstein; 24th, Dromore; 25th, Kinville; 27th, Crediton; 28th, Grand Bend; March 1st, Zurich; 2nd, Hensall; 3rd, Bayfield; 4th, St. Columbian; 6th, Greives; 7th, Harlock; 8th, Bluevale; 9th, Ethel; 10th, Molesworth; 11th, Fonthill. Speakers—Dr. L. Reid, Georgetown; J. L. Warren, Acton; G. Murdie, Seaford; Mrs. Colin Campbell, Goderich.

Division 4—Jan. 31st, Tavistock; Feb. 1st, Schrippingville; 2nd, Fullerton; 3rd, Staffa; 4th, Kifle; 6th, Granton; 7th, Lucan; 8th, Lobo; 9th, Adelaide; 10th, Sylvan; 11th, West McGillivray; 12th, Greenway; 14th, Fuller's; 15th, Warwick; 16th, Forest; 17th, Camachie; 18th, Sarnia, and Burgary's School House; 20th, Courtwright; 21st, Wilkesport; 22nd, Becher; 23rd, Rutherford; 24th, Oakdale; 25th, Inwood; 27th, Sheland; 28th, Alvington. Speakers—Robt. Thompson, St. Catharines; D. James, Langstaff.

Division 6—Feb. 1st, Princeton; 2nd, Drumbo; 3rd, Innerkip; 4th, Hickson and Cassels; 6th, Brooksdale and Embro; 7th, Thamesford; 8th, Dorchester; 9th, Hartsiville; 10th, Glanworth; 11th, Lambeth; 12th, Hyde Park; 14th, Brynston; 15th, Wellburn; 16th, Thorndale; 17th, Mount Bridges; 18th, Appin; 20th, Glencoe; 21st, Wardsville; 22nd, Maybee; 23rd, Simcoe; 24th, Tyrrell; 25th, Windham Centre; 27th, Kelsey. Speakers—J. W. Clark, Cainsville; A. C. Hallman, Breslau; A. B. McDonald, Appin.

Division 7—Jan. 31st, Corinth; Feb. 1st, Port Burwell; 2nd, Mount Salem; 3rd, Mapleton; 4th, Cowal; 6th, Middlemarch; 7th, West Lorne; 8th, Duart; 9th, Ridgerton; 10th, Bleinheim; 11th, Croton; 13th, Tupperville; 14th, Ebert's; 15th, Dover Centre; 16th, Union; 17th, Colmar; 18th, Belle River; 20th, Old Castle; 21st, Canard; 22nd, Amherstburg; 23rd, Harrow; 24th, Kingsville; 25th, Leamington; 27th and 28th, Wheatley. Speakers—W. S. Fraser, Bradford; W. A. Peat, Freeman; L. N. Newman, Ottawa.

Division 8—Jan. 30th, Smithville; 31st, Wellandport; Feb. 1st, Marshville; 2nd, Dunnville; 3rd, Canfield; 4th, York; 6th, Clanbrassil; 7th, Decewville; 8th, Rainham; 9th, Chesapeake; 10th, Nanticoke; 11th, Garnet; 12th, Port Dover; 14th, St. Williams; 15th, Fairground; 16th, Tillsonburg; 17th, Brownsville; 18th, Springford; 20th, Otterville; 21st, Burgessville; 22nd, Oxford Centre; 23rd, Ingersoll; 24th, Beachville; 25th, Cathcart; 27th and 28th, Paris; March 1st and 2nd, Burford; 3rd, Harley. Speakers—G. C. Caston, Craighurst; Chas. F. Shearer, Victoria; George Carlow, Varkerville; Mrs. L. Gray, Toronto; Mrs. Jean Joy, Toronto.

Division 9—Feb. 1st, Allenburg; 2nd, Quacker Road; 3rd, Crowland; 4th, Air Line; 6th, Willoughby; 7th, Ridgeway; 8th, Stevensville; 9th, Brown's; 10th, Virgil; 11th, Grantham; 12th, Jordan Station; 14th, Beansville; 15th, Grimsby; 16th, Winona; 17th, Tapleton; 18th, Binbrook; 20th, Glanford; 21st, Carhoke; 22nd, Jerseyville; 23rd, Lyons; 24th, Scotts and Sheffield; 25th, Kirkwall; 27th, Westover; 28th, Milleroe; March 1st, Carlisle; 2nd, Islington; 3rd, Elias; 4th, Kleinburg; 6th, Maple; 7th, Thornhill; 8th, Unionville; 9th, Boxgrove; 10th, Wexford. Speakers—Elmer Lick, Oshawa; Erland Lee; 1st, Stoney Creek; Miss B. Miller, Guelph; Lt.-Col. McCrae, Guelph.

Division 10—Feb. 3rd, Millikan's; 4th, Lanford and Cainsville; 6th, White's; and Moyle's; 7th, Man's and Glenmorris.

(Continued on Page 7.)



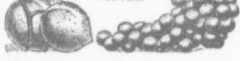
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Farm Implements and Conveniences

To Save an Axe Handle

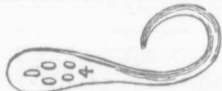
A simple device is shown in accompanying illustration to save an axe handle from wearing out at the weakest point, and is very easily made by taking



the end of a tin can, bending it at the dotted line and tacking it on the axe handle to letter A. It is easily and quickly done, and will well repay anyone for the time and trouble.

An Earmark for Sheep

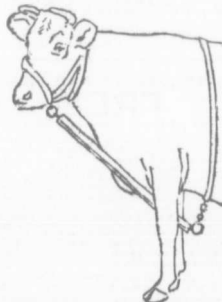
A French sheep farmer has invented a new form of metal earmark for sheep, which he has given to the country. It possesses several advantages, among which are that it is economical when made by a country smith or when turned out in large numbers in a factory. It may be altered in shape and in marking to suit individual requirements. It may be made in soft iron, in white metal, or in nickel. The flat portion is pierced with five holes, which are used by the



designer to have reference to lamb. The figure 4 relates to the year of birth of the sheep. The holes may be omitted and a letter or letters stamped on the flat surface to show the ownership or to refer to a record of pedigree. The mark is fixed to the sheep's ear close to the head in the following manner:—A hole is punched in the sheep's ear and the open end of the metal is passed through. By means of a pair of pinners the ring is formed, and the mark is securely fixed.—*Australasian*.

To Prevent a Cow Sucking Herself

A farmer, writing to the "Breeder's Gazette," gives the following mode of preventing a cow from sucking herself. Put on a strong halter and a surcingle round her body just behind her



front legs, as shown. Tie a stick—an old fork handle will do—to a ring in the halter, pass the stick between the cow's front legs, and tie the other end to the surcingle, letting this end

hang three inches or four inches below the surcingle. This will prove no inconvenience to the cow, and she will be unable to suck herself while she wears it.

A Handy Farm Ladder

This ladder is made in two sections, varying to any convenient height. The sections vary from 10 to 12 feet and are very desirable. These ladders are held together at the top with a strong wrought iron strap hinge, so placed that the two sections can be closed together or used singly, if desired.



This is a very convenient device to use in orchards for pruning trees. It is also handy at harvest time. With two ladders of this sort, a board can be placed from one to the other and make a very convenient platform of any desirable height. The device is simple, cheap and easily made at home.

Chaff Forks

Figure 1 represents a home-made fork with tines about 2 ft. long, and having a spread of 20 in. The teeth are straight above, and curved towards the point. They are fastened by screws to the 3 in. hardwood head, and strengthened by an iron rod near the head, and by a round wooden rod, which passes through them, and to which they are tacked fast. The head is strengthened by a similar piece of oak or ash, half-an-inch thick, screwed upon its edge, and through which the handle passes. This is of ash or hickory, large enough around to give the hand a good hold, and is fastened by

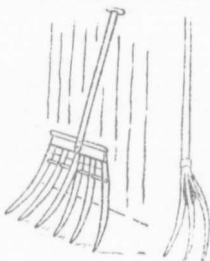


FIG. 1

wiring to the top side of the head. Such a fork may be made quite light, and the six tines being only 4 in. apart, will handle either chaff or light straw to good advantage. We give, by way of comparison, a simple chaff fork (fig. 2), made by first binding and then carefully splitting a single piece of hickory or ash, handles and tines being formed of the same stick. A ring-ferule or band of wire is placed at the point beyond which the splits may not go, and, after the splits are made, the tines are spread apart by wedge-shaped pieces of wood. These forks are easily made, and are the very best stable forks that can

be used. There is no danger of pricking horses or cattle with them, and if one be carelessly left in the stable, or falls down, neither man nor beast is likely to be hurt.

"Why did the congregation hurry out so suddenly after the benediction?"

"The sexton makes them leave their umbrellas in the vestibule, and those who get out late haven't much chance of a choice."

The rain it raineth every day

Upon the just and unjust fellows; But, chiefly on the just, because,

The unjust take the just's umbrellas.



The above is "Queen Ideal," fourteen months old, roan heifer, winner at Chicago International Exhibition, over all comers, including the World's Fair champion. It can safely be said this animal is not outclassed the world over. She is the property of R. A. and J. A. Watt, Salem, Ontario. Messrs. Watt feed Worthington's Canadian Stock Tonic. Read what they say of it:

Gentlemen:—We have used your Stock Food with much success. We find it especially good for animals out of condition, or for horses that are not working.

Yours truly,

R. A. & J. A. WATT,
Salem, Jan. 3, 1905.

W. H. Service, of Stayner, Ontario, in ordering a 50 lb. pail, Dec. 27th, says: "I am not sending for the pail of your Stock Food for a trial, I have had experience with it, please forward at once."

Adam N. Darling, Midway, Ontario, writing Dec. 30th, says: "I have fed a good deal of your Stock Food and I would like some more. Please send me 200 lbs. of Worthington's Stock Food. Have a large stock to winter over, and can easily feed 200 lbs. of it to 60 pigs and 38 cattle. I enclose money order for it."

We are determined to convince stockmen and farmers that we have the best Stock Food ever compounded, while it costs less than half the price of any other stock food. Take advantage of our special offer, good till 15th February. We will ship, all charges prepaid, two 25 lb. pails at \$1.50 each or one 50 lb. pail at \$2.75, and include with either order free of any charge a tin of McDougall's Original English Sheep Dip and Cattle Dressing for killing vermin on stock.

Farmers should avail themselves of this special offer while it lasts. Remember we guarantee Worthington's Stock Food to give entire satisfaction. If it does not we will refund money. Send in your order today, it will have our prompt attention. Write for free pamphlet of testimonials.

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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to supply the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Farming World Man on the Wing

MR. HOGATE'S SALE.

On January 6th a splendid consignment of Shire stallions and fillies left Liverpool, being shipped by Mr. J. B. Hogate, of Sarnia, Ont. They will form part of the string to be offered at auction sale on February 2nd at Bond's Horse Exchange, Toronto, Ont. They are reported to be without doubt the best shipment ever made into Canada by interested purchasers, whether for breeding or exhibition, or stallions to do a district credit, should not fail to see them. They are nearly every one a descendant of a London S. H. S. champion many of them on both sides. Notable among the sires are Bar None 2388, who was champion at London in 1882, and who was the sire of Rufford Champion, who won the championship at the Royal in Preston in 1885, Golden Drop, who was champion filly in 1888; Champion at the Royal in Plymouth in 1890, and champion filly in London in 1896. Barmaid was another by this sire, who won first at the Great Yorkshire and sold by auction for 800 guineas, and another, Trustee, 3rd in London, and sold afterwards for 2,000 guineas. Harold 3703, first S. H. S. champion at London, 1886, and first champion at London in 1887, has probably sired more winners than any other living horse, amongst them being the London champion Rokeby Harold, Marlborough Royal Harold, Queen of the Shires, and Dunsmore Gloaming.

Animals with such strains of blood as these possess should find a ready market anywhere. Parties requiring first class breeding animals will do well to take a sale, and not only bid, but bid well. A few of the pedigrees and descriptions of the individuals are: Nately Ronald, a yearling stallion sire the famous Gunthorpe Advance (1936), who was sired by Bar None (2388), dam Black, vol. 27, sired by Sir James II (6303). This is a great, upstanding colt of great promise, and should, from his great breeding and appearance grow into a stallion of the first order, descended as he is from the great Bar None, and on his dam's side from such a stallion as Sir James, who is once sold for 1,000 guineas. He is bound to do great credit to whoever gets him. Nately Orion is a yearling stallion, bay in color, and sired by Bodenham King (17177), g.s. Hesterton (15668), a get of the famous Carbon (3223), who was sired by the celebrated Lincolnshire Lad 2nd (1365). His dam was Daisy, vol. 27, by Brontes (6928), g.d. Lofy, vol. 19, by Lincoln (1346). He is thus descended from the heaviest strains of Shire blood in England, his sire, Bodenham King, though never shown, was sold in public at auction for £650. His dam was also noted as a great breeder, her progeny having sold at most remarkable prices in the old country. Judging from his parents this grand young horse should do great credit to any district where he may happen to fall.

Nately Triumph (vol. 26), a yearling Shire stallion, is also sired by Gunthorpe Advance, a get of the famous Bar None. He is a nice bright bay, dam Briton's Gem, vol. 29, got by the renowned Stroxtom's Tom (15871), g.d. Briton's Queen, by Protection (3960). He is a colt of great size and scale, and is just the sort to improve the stock of any district he may be sent into. His sire, Gunthorpe Advance, was the sire of many good prize winners in his day, and his grandsire, Bar None, was in his time unbeatable in England. His dam is also a great weighty mare, being sired by Stroxtom Tom, who has for the past few years won either first or championship at London Shire Horse Show, and was recognized as the best stallion in England.

Nately King, vol. 27, another yearling stallion, bay in color, is by the same noted sire, Gunthorpe Advance, and his dam is Jennet, vol. 23, a good daughter of Earlly Wynn (14620), g.d. by St. Kilda (10334), g.g.d. by celebrated Gardiner (2497). This colt is, therefore, a wonderfully well bred one, being from prize winners on both sides, as his dam has won several first prizes, while her sire Earllly Wynn is the greatest himself, an illustrious sire, two of his get being winners at the London Shire Horse Show in one year. With ordinary luck this colt should prove a stallion of the first rank, and a bonanza in any horse-breeding community. Monarch, vol. 26, a bay yearling stallion, is a bay, sired by Bodenham King (17177), g.s. Carbon, by Lincolnshire Lad 2nd, dam Star, vol. 25, by Samson of Willington (15859), g.d. Maritana vol. 18, by Viking 2nd (12594), g.g.d., vol. 18, by Cardinal (2704), is a great big growing colt, with tremendous power and activity, and should, with ordinary luck, grow into a great, good horse, with exceptional action and scale. He is undoubtedly one of the best colts that ever left England. His dam is a big weighty mare and she traces back to Cardinal, the sire of the renowned Vulcan (4245), Easlean Enterprise, vol. 27, is a grown two-year-old. He is sired by Gunthorpe Advance, which is all that is necessary to say of his breeding on that side. His dam is Pink, vol. 29, by King Goliath (7495), g.d., Star, by Simon Pure (2018), g.g.d. Gray, by Honest Tom (1105). This fellow, with his beautiful feet and fetlocks, his dash and courage, should grow into a great big good horse, if appearances and breeding are anything to go by, being the son of such an illustrious sire, and bred from a splendid and well-bred mare as Pink (26649).

Nately Swell (21702) is a two-year-old, bay in color, with white stripe on face. His sire is no less than the famous Timon (5394), g.s. Rupert (3297), g.s. Cromwell (2415). His dam is Mopsy, vol. 22 (33184), by King Arthur (7483), g.d. Brown, by Giant Emperor (4400). With ordinary luck this animal should grow into a great big good horse. He is bred from a strain of horses noted for soundness,

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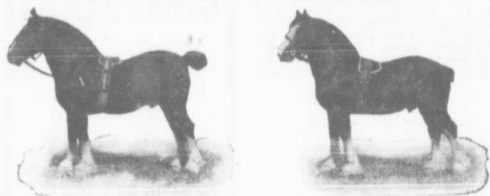
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At the 1904 Industrial held in Toronto, which is conceded to be the most attractive show of its kind in America, our recently imported Clydesdales were awarded prizes as follows:—

Stallions—4 years old and over,	1st and 2nd Prizes	Mares—2 years old and under 3,	2nd Prize
Stallions—3 years old and under 4,	1st and 2nd Prizes	Group of Ten Head—Any age or draught breed,	1st Prize
Stallions—2 years old and under 3,	2nd Prize	Sweepstake Stallion—Any age	
Stallions—1 year old and under 2,	1st Prize	Sweepstake Mare—Any age	
Mares—3 years old and under 4,	1st Prize	On ten head we won five firsts, four 2nds, three grand Champions	

If further reasons are requested as to why the public generally should regard ours as the Premier Clydesdale Stud of this continent, we will state that in the Canadian breed classes we won first in his class and champion honors on McArdle's Best (4320), while the get of our Matchless Macqueen won five firsts, one second, and one third, first for two animals under two years old, the produce of one dam, and first for family group under two years old. This is now the fourth year in succession that this much coveted award has been given to the get of our invincible son of McGregor (1487), who, in turn, was the most famous son of the renowned Darnley (222).

A personal examination of our Clydesdales is cordially invited. Correspondence with intending buyers solicited.

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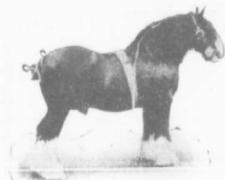
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CLYDESDALES AND HACKNEYS.

A new importation of Clydesdale Stallions has arrived here, and is of the same high class quality as usual, carefully selected from among the best Stud in Scotland. My old customers and all lovers of a good Clyde are invited to see them. I have Two First-Class Hackneys yet for sale, well worth the price put on them. Please to residence.

WM. COLQUHOUN,

MITCHELL, ONT.

and one which, as time goes on, keeps improving. His sire, now 20 years of age, is as fresh and sound as a two-year-old. His services are in great demand, and his dam also is a great, good mare. Nately Chieftain, vol. 20, is two years old, bay in color. His breeding is all that could be desired, being sired by the now very popular Gunthorpe Advance, and his dam is Briton's Gem, vol. 20, who is in turn sired by the renowned Stroton Tom (2352), g.g. Briton's Queen, vol. 19, by Protection (2060). He is a nice, good, all-round colt, and, from his breeding and appearance is bound to grow into a fine horse. His sire, Gunthorpe Advance, and his grandsire, Bar None, are too familiar to need any further comment. His dam, also, and her sire, Stroton Tom, would clearly show how popular a pedigree he can boast. He should certainly be one to come to the front and do well. Nately Captain (2056) is a fine old, black in color, with star in face and white hind fetlocks. He is sired by George Wellington (1673), g.g., Wellington Prince George (1447), g.g., Albert Edward (547). His dam is Tidy, vol. 25, by Don 2nd (1298), g.g., Black Bess, vol. 21, by Oliver (3243). This is a horse that will somewhat capture the residents of the district he happens to get into. He is bound to make a great big, good horse, with exceptional fire and dash about him. His sire is one of the biggest and best moving horses in England, and is siring any amount of good ones. His dam also is a famous breeder.

Esplan Gay Boy is a bay three-year-old Shire stallion sired by Gunthorpe Advance Tom (1103), who I already commented on, he being a full brother to Esplan Enterprise. He is a young stallion with all the fire and dash of a hackney. His ancestors on both sides are famous for soundness, a thing that has been noted on his sire's side back to old Champion (392), and on his dam's side to Honest Tom (1103), who was for five years champion of the Royal Show. Esplan Waggoner (2072), a three-year-old bay stallion, is also sired by Gunthorpe Advance. His dam is Hazel, vol. 22, by Duke of Clarence (13998). His g.d. is Sweep, by Brontes (6829), g.g.d., Pink, by British Tom (6224). This beautiful young horse, with his gay carriage, great big hard feet and sound legs, and with his shape and action, is one of the best ever imported into Canada. He will make a name wherever he goes, and his progeny are bound to show themselves in years to come. Nately Carbon, vol. 20, is a brown stallion, with stripe on face and one white hind leg. He is a son of Crossmoor Carbon (1924), g.g. Conquering Harold (1558), g.g.s. Lincolnshire Lad 2nd (1305). His dam is Nelly, vol. 25, by Jolly Tom (4094), g.d. Jet, by Ploughboy (664). He is a whole colored brown, rising four years of age, and just the sort to improve any district he gets into. His sire is a horse of exceptional weight and soundness, and his grandsire, Conquering Harold, was sold for £1,000 recently, and his dam, a great mare by Jolly Tom, is just the mare to breed a stallion from.

Among the mares are Jewel's Flower, vol. 27, a yearling roan by Harbiling Harold, g.g., Harold (3702), g.g.s. Lincolnshire Lad. Her dam is August Blossom, vol. 19, by London Fashion (1792), g.d. Jessie, vol. 5, by British Lion (272). She is a filly of great weight and power, and will prove a good investment to whoever purchases her; with ordinary luck she will make a mare of 1,800

42 HEAD 42

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lbs., and could her dam and sire be seen, bidding for her would be very spirited. Princess, vol. 20, is a bay yearling, sired also by Crossmoor Carbon, dam Hildah, vol. 23 (3728), by Cotgrave Harold (16077), g.d. Lofty, by Cressy (4339). It will be seen that this young mare is a descendant on both sides of the famous Harold (3703), the sire of many prize-winning animals. Crossmoor Carbon is a tremendous weighty and sound horse, while her dam is one of the biggest and best mares living, and a noted prize winner. This is a mare that should find many customers. Thornley Blue Bell is a blue roan, one year old. She is a daughter of Harbling Harold (15547) and Thornley Get, vol. 18, by Thornley Tom (13702), g.d. Polly, vol. 15. She is, without doubt, one of the best mares ever imported from England. She has never been exhibited, but is bound to win wherever shown. She is the ideal of what a mare should be, and whoever gets her will lay the foundation of a stock that will always command big prices. Her sire, the good horse Harbling Harold, is over



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Have only at present to offer my stock bull, Fancy's Pride Imp. (7803) - 3002. He is four years of age in April, a grand, thick, massive bull whose qualities as a herd bull have been proved in my herd. He is sired by the famous prize winner, Pride of the Main (7510), and his dam was Fancy Beth, who traces straight to Eucan Lassie (948). Pedigree and particulars furnished on application. W. J. Brouse, Prop., Clinton P. O. and Sta., G.T.R., Huron Co., Ont.

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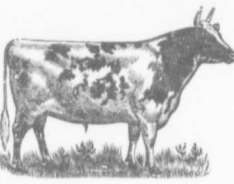
Manager.

H. CARGILL & SON,

Cargill, Ont.

2,200 lbs. in weight, and her dam will scale over 1800. Natchez, Depper, vol. 27, is a bay, two years of age. She is sired by Harbling Harold, her dam is Munchausen (6190), g.d. Jewel, vol. 3, by Prince of Wales (1809). She is a mare with a great amount of improvement about her, having been brought up on poor land, and with good treatment she will grow and do well, and develop into a fine brood mare. She is descended from good stock, and should be a money maker for her purchaser. Rosetta is a two-year-old bay, sired by D'Arcy Chancellor, g.s. Iron Chancellor (14677), dam Star, vol. 22, by Fen Champion (3885). This is a fine young mare with Clydesdale quality, and will lay the foundation to good stock. Princess Adelaide, vol. 27, is a bay mare, two years old. She is a daughter of Gunthorpe Advance (13136), dam Hazel, vol. 22, by Duke of Clarence 4th (3095). This fine young mare is own sister to the fine young stallion Natchez Waggoner. A description of him and his breeding appears. She will be found to have those good hard wearing legs, with feet, fetlocks and feather of the first order. She will make a valuable breeding mare. Nately Madge, vol. 26, is a fine chestnut, two years old, a daughter of Gunthorpe Advance, dam Lofty, by Cressy (4339). She should make a grand breeding mare, as she shows promise of great scale, and style, and is from a grand mare by Cressy, a half-brother of the famous Vulcan. Thornley Lass, is a beautiful bay mare by Gunthorpe Advance, and dam Thornley Lass, vol. 18, by Orange Prince (14786). She has the feet fetlocks and feather every horseman likes to see. She will make a good investment to whoever gets her, being bred on the right lines to make an ideal brood mare. Thornley Dolley is a dark brown mare, two years of age. Her sire is Harbling Harold, her dam Thornley Jet, vol. 18, by Thornley Tom (1327). She is of great weight and character. She is of comes from a famous strain of Shire blood, and traces back to the most noted horses in cart horse history. Mated with a good stallion she should produce something of exceptional merit. Nately Kitty, vol. 27, is a black three-year-old. She is a great big young mare, just the sort to breed a stallion from. She is descended from the best strains of Shire blood in England. Her sire, Tartar 2nd, is a winner at the London and many county shows. Her dam by Northerton King, he by What's Wanted is a great breeder, having bred many prize winners at leading shows. Rosalind, vol. 27, is by Gunthorpe Advance, dam Rosa, by Saxon Victor (14855). She is a fine brood mare, long low and wide, with fine legs and feet, the proper Bar None type. Many of her dam's produce have been winners, and at fourteen she is as fresh and sound as ever. She is bound to please whoever gets her. Princess May is a four-year-old bay mare, sired by Sunlight (1586). Her dam is Dinah, vol. 13, by Fen Champion (3085). She is one of the biggest mares ever imported into Canada. Mated with a thick, short-legged, powerful horse, she should produce prize winners. She is bred from strains of the best blood, obtainable, her dam being a most noted breeder.

All who are interested in a good draft horse or mare should not fail to attend this sale, which takes place at Bond's Horse Exchange, situated near the Repository, Toronto. The sale will be on the second day of the Stallion Show, February 2nd and 3rd, 1905. Write for catalogue to J. B. Hogate, Sarnia, Ont.



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America's Champion Clydesdale

The outside front cover illustration of this number is a true and life-like picture of the sensational Clydesdale stallion of the season, the three-year-old Baron Sterling, one of the best colts ever sired by the most famous sire of them all, Baron's Pride. His dam was by McGregor, in turn the best sire of his day, and a son of the world-famous Darnley. Baron Sterling thus combines in rich measure the best blood and breeding in the Clydesdale stud-books, and is a worthy representative of his breeding. As a yearling he won first prize and championship at Edinburgh, and at the Highland Show, at Aberdeen, where the very best horses in Scotland meet, he took second honors. Again, as a two-year-old he won first and championship at the famous show at Edinburgh. At numerous other shows he had it all his own way, and, after his first season in the stud in Scotland, he was purchased at a rather sensational figure by Mr. Thomas Graham, of Graham Bros., Claremont, Ont., and imported to Canada where he won championships at the Industrial, Toronto, the Central, at Ottawa, and other places. Owing to unfavorable reports of conditions at St. Louis he was not shown there, but at the International at Chicago, he vindicated himself as the champion of America, by winning the championship in the easiest way. He was one of the sensational features of the show.

Baron Sterling was recently disposed of to Mrs. Messers, Hodgkinson & Tisdale, of Beaverton, Ont., and these gentlemen are to be congratulated on their acquisition of so fine a stud to head their stable of imported and Canadian-bred Clydesdale mares and fillies.

Baron Sterling Captures the Crowd

The Chicago Daily Drovers' Journal in reporting the Clydesdale show at the International has this to say of Baron Sterling, Graham Bros' Champion stallion:

"From the instant that Baron Sterling stepped with lordly grace into the arena and flashed his brilliant eyes at the great crowd that filled the vast amphitheatre it was evident that he was a royal animal. If he was a true exponent of the blood lines of his distinguished sire, then he descends from an impressive strain of Clydesdale ancestors. In every convolution of his personality were lines of symmetry and elegance. Substance was harmoniously blended with faultless proportions, while every movement demonstrated agility and power. If an artist were commissioned to paint a show draft animal it would be difficult to find a more perfect Clydesdale model. Baron Sterling carried the audience by storm with his matchless beauty of contour and bold commanding action. Netherton and Prince Dauntless are superlative specimens, but paled before the critical perceptions of their powerful rival. They had won honors at other great live stock shows, but had never come into competition with the class that Baron Sterling exhibited. It was an example where the crowd encored the verdict of the judges.

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Prices consistent with quality.

Correspondence solicited.

Gossip

Mr. W. A. Kerr, Hamilton, Ont., writes:

"As a new subscriber I am taking the liberty of advising that Robt. T. Craig, V.S. of Market street, Hamilton, has purchased the imported Shire stallion, Jubilee Victor 17422. This grand specimen of the draft sire was bred by Baron Rothchilds and imported by that well-known importer, T. J. Berry, of Hensall, Ont. He is a horse standing fully 16½ hands high, in color black with small stripe on face and three white ankles, weighing when in stud condition about 2,000 lbs., closely coupled, short, strong back, excellent feet and legs beautifully feathered, good silky coat and actioned like a Hackney. He will make the season between his own stable and the counties of Wentworth and Halton. It is to be hoped that the enterprise shown by Dr. Craig in purchasing such a high-classed horse will be amply rewarded."

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Choose young stock of good quality and best strains. Pairs not akin. Prices right.

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Prices reasonable. Write or call. J. SLATER, Buttonville P.O., Unionville Sta., Midland, Ry.; Thornhill, Metropolitan Ry., Markham Tp., Ont.

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Years of careful breeding have made the Okak Lodge Yorkshires the Standard of Quality for IDEAL BACON HOGS.

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CHAMPION BERKSHIRE HERD OF CANADA. Winner of Championship at leading shows for several years. Splendid importations of new blood, the championship winners of England. Young pigs, imported and home-bred for sale. Pens at Islington, near Toronto. **W. H. DURHAM, Box 1052, Toronto.**

Oxford Down Sheep

Your correspondent lived for nearly 40 years in that part of England where Oxford Downs are the common sheep of the district, in fact, the home of the breed. He knew John Treadwell, of Upper Winchendon, intimately well, having often done business with him, and as this gentleman took first prize for rams at the Royal of England for twenty years in succession it must be admitted that his sheep were the true type of the breed, in addition to which descendants of his rams may be found in every sheep country in the world.

Mr. Treadwell won a twenty guinea prize offered by the writer at the Buckingham Show for the best pen of sheep. They were Oxford Down ewes of the very finest type, size and quality. The Oxford Down is derived from a cross between the Hampshire Down and Cotswold, and the main object of this cross was to produce a sheep that combined both wool and mutton in a greater ratio than either the Hamp, Shrops or South Downs. The breed is, comparatively speaking, a new one that requires considerable forcing to bring forth all its most excellent qualities of size, wool and mutton.—J. G. V. F. Johnson, B.C.

Manitoba Breeders

The annual conventions of the Manitoba Breeders' Associations will be held during the latter part of February. Stock judging courses will be made a special feature of these meetings. The speakers this year will likely be chosen from among local experts. Several prominent agricultural lecturers will also be brought in to assist in the meetings.

The Angus Breeders Meet

The Angus Breeders' Society of Canada met at the Commercial Hotel, Guelph, during the Winter Fair. The meeting was attended by members from different parts of the province, and each one seemed to have the same convictions that the days of the Angus are just about to dawn upon the people of Canada, especially upon those who have visited the International at Chicago, the greatest exhibition of fat stock on the American continent, where the Angus came out on top every time, just where we hope to see them in the near future at our own Winter Fair.

The additional \$50 given by this society to the sweepstakes prize at the Winter Fair at Guelph, should the winner be from an Angus sire, should induce some of the best breeders of Canada to experiment on the Angus, which would most certainly give good results. The few Angus grades shown in 1904 gave a fairly good account of themselves, especially in the block test.

J. W. BURT, Secretary.

Faith in the Shorthorn

In his address before the annual meeting of the American Shorthorn Breeders' Association, President S. F. Lockridge, in discussing the status of the breed for the year, said:

"The Shorthorn industry shares with other interests in the general confidence. Not since this association was incorporated, it seems to me, have we had such cause for faith in the future of the breed. While the average prices at public sales have declined from those of a few years ago, yet we should consider the fact that these prices represented inflated conditions that were not conducive to a healthy and regular trade. It has been unfortunate for the Shorthorn breeding interest that it has been subjected, within the last thirty years, to periods of inflated prices, at which times we have had an invasion of our ranks by a class of dealers who in the very nature of the case should not have the best interests of the breed at heart, but were influenced solely by the dollars and cents involved—mere speculators in pedigreed stock, who, when depressions came, deserted the colors as rapidly as sinking ships. One of the most damaging results of this booming process is the eliminating from our ranks of the small breeder and steer producer whose means will not permit of extreme prices, and who consequently seeks other sources for his sires or forsakes the field altogether. But the present conditions are such that this class of producers can obtain improved blood at a fair valuation, and the indications are that they are taking advantage of their opportunity in large and increasing numbers."

Deputy Minister for Manitoba

Mr. Hugh McKellar, who has held the office of Deputy Minister of Agriculture for Manitoba for a number of years, has resigned. W. J. Black, B.S.A., editor of the Western Edition of the Farmers' Advocate, has been appointed to succeed him. In Mr. Black the farmers of the prairie province will have an energetic and painstaking official.

The Guelph Sale

The Guelph Fat Stock Club held a meeting on Dec. 31st to arrange for the annual sale of pure-bred stock to be held during the early half of March. The report of the committee appointed to interview Mr. Hodson and Mr. Westervelt was presented. The live stock associations, Mr. Westervelt stated, would arrange for advertising the sale throughout the Northwest. The associations would also pay \$50.00 towards the freight on any point west of Lake Superior on any car of stock bought by one man at any of the auction sales held under the general rule. It was proposed that the Guelph Fat Stock Club guarantee anything required for these services over \$500. The number of animals to be offered at the sale would be 50 males and 25 females. In order to pay the expenses of the sale \$1.00 per head and 3 per cent. of the amount would be deducted from the selling price of the animal. All animals entered will be inspected before being accepted. Entries close on January 20th. Ten dollars must accompany each entry as a guarantee of good faith that the animal will be offered.

"I never see the iceman stop before your house any more, Mrs. Flipper-leigh." "No; since the Buxton's next door fell into their fortune they've been so cool to us that we don't need any help from the refrigerator."—Chicago Record-Herald.

Advertise in The Farming World.

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Market Review and Forecast

The Trend of Markets—Supply and Demand—The Outlook

Toronto, January 13.

Trade generally in wholesale circles is fair. Country trade reported to be fairly good, though farmers are not marketing grain very freely. The prospects for spring trade are bright, and the general outlook good. Money is somewhat tighter on call, with time loans steady.

WHEAT

The wheat markets have improved considerably since last writing, and higher values are the rule. Russian exports have fallen off, and with Australia about 20,000,000 bushels behind in the crop of 1904-05, values in Europe are likely to go higher instead of lower. The Argentine is to be heard from yet, however. The growing crop in the United States is reported to have greatly improved during the last month. May wheat has sold in Chicago recently at 114½¢. Much higher prices are looked for between now and May and one large operator has stated that we are bound to see \$1.50 wheat before next harvest. How far such statements can be relied upon no one can say. Both Winnipeg and Chicago prices are advancing and holders here are looking for advances. Red and White are quoted here at \$1.05, spring at 10c to 90c and goose at 88c.

COARSE GRAINS

The market for coarse grains has ruled on the dull side of late. At Montreal dealers are loaded up pretty well with oats, and the market is on the dull side. There are no export orders, so prices on this side are too high. Quotations here are 32c to 33½¢, as to quality and point of shipment. There have been some export orders for peas, but prices are too high. Barley continues dull. Corn has a easier tendency. New Canadian yellow is quoted here at 41½¢ and mixed at 41c f.o.b. Chatham freight.

HAY AND STRAW

There have been liberal exports of Canadian hay recently. The English market is steady. The demand from Nova Scotia has fallen off and consequently things are quieter in Quebec, where farmers are holding for higher values than the buyer is able to pay. The impression at Montreal is that prices will go lower. The market here is fairly firm at quotations. Straw quotations keep up to a high figure.

POTATOES AND BEANS

Under a good demand there is a better tone to the potato market at Montreal, where 75c per bag is freely paid for ear lots.

The bean market is quiet at Montreal and prices are unchanged. The market here rules steady at \$1.45 to \$1.50 for hand picked and \$1.40 to \$1.45 for prime.

EGGS AND POULTRY

The egg market rules steady, with the supply of new laid short. Stocks are said to be lighter than expected, and there will be no cheap eggs for a while. Prices here are about the same for held stock. On Toronto farmers' market fresh eggs bring 35c to 40c a dozen.

There was a big holiday trade in dressed poultry and quite a large stock of high priced turkeys was carried over, especially at Montreal, where an unsettled feeling has resulted and holders are selling out at about 12c for choice stock. Geese supplies were pretty well cleaned up. The market there is still glutted with chickens, while the demand for ducks is slack. Here trade is quiet, with light receipts. Turkeys are quoted

at 12c to 15c, ducks 11c to 12c, geese 10c to 11c and choice chickens at 12c to 14c per lb. in a jobbing way.

SEEDS

This is just between seasons in seeds, though it won't be very long, and prices are uncertain. At Montreal the demand is slow at timothy \$2.50 to \$3; red clover \$8.60 to \$12 and alsike \$9.50 to \$13 per cwt. and flaxseed \$1.25 to \$1.35 per bushel. Here alsike is quoted at \$9 to \$9.25 per bushel for prime, \$8.50 for medium and \$2 to \$4 for common, and \$6.25 to \$7.25 for red clover f.o.b. Toronto. Timothy is quoted at \$1 to \$1.25 per bushel.

DAIRY PRODUCTS

There is an upward movement in cheese and values have reached 11c. It looks now as if last season's trade would close out on a high level, leaving things in a satisfactory condition for beginning the season of 1905.

There are few export orders for butter coming across the water. New Zealand and Australia seem to have control of the English market at present. Some western dairy has recently been shipped to New York, where extra creamery is quoted at 28c to 28½¢ per lb. The local market here is firm at 22c to 24c for creamery prints, 22c to 23c for solids and dairy tubs at 16c to 17c.

LIVE STOCK

The live stock market has a better tone, especially sheep and hogs. The quality of the fat cattle offered has been better the past week than for some time. Trade for the better classes is firm. Exporters are quoted at from \$4.25 to \$5.00 per cwt. but the bulk sell at \$4.40 to \$4.75. Export bulls bring from \$3.50 to \$4 per cwt. Choice butchers' cattle are worth from \$4.20 to \$4.30, good cattle \$3.80 to \$4.10, medium \$3.40 to \$3.60, and inferior to common \$2.50 to \$3.25 per cwt. Feeders of choice quality 1,050 to 1,120 lbs. each, sell at \$3.60 to \$3.75, and feeders, 800 to 1,000 lbs. each, \$3.25 to \$3.50 per cwt. Stockers 500 to 700 lbs. each are worth \$2.50

to \$3 per cwt. Milch cows and springers are worth from \$30 to \$60 each. Calves are firm at \$3.50 to \$6.00 per cwt.

The run of sheep and lambs has been light of late and prices are firmer and higher. Sheep sell at \$4.50 to \$4.75 per cwt. for ewes and \$3.25 to \$3.75 for bucks and lambs at \$5.50 to \$6.25 per cwt.

Hog prices have advanced 10c, and quotations are \$4.90 per cwt. for selects and \$4.65 for lights and fats. The run has been light.

HORSES

There are signs of activity in the horse market, though buyers still hold back a bit in prices. Dealers, however, report a brisk enquiry for both heavy draught and high-class carriage horses. Good quality horses are reported scarce all over and prices are likely to continue high. The following are Burns & Sheppard's report for the week ending January 7th, at the Repository, Toronto:

Single roadsters, 15 to 16 hands, \$150 to \$225; single cobs and carriage horses 15 to 16.1 hands, \$200 to \$250; matched pairs and carriage horses, 15 to 16.1 hands, \$400 to \$600; delivery horses, 1,100 to 1,200 lbs., \$125 to \$170; general purpose and express horses, 1,300 to 1,350 lbs., \$135 to \$175; draught horses, 1,250 to 1,750 lbs., \$140 to \$280; serviceable second hand workers, \$80 to \$120; serviceable second hand drivers, \$75 to \$100.

MARITIME MARKETS

Halifax, N.S., Jan. 9th, 1905.

The markets here continue unchanged since last reporting. The general opinion is that everything is pretty dull in produce lines, with not much either coming in or going out. In eggs the market remains firm, under a quiet demand. Supplies here are not very large, but very few are coming forward. Dealers in the upper provinces are holding for higher prices. They say they would clean out their stock at present prices, but expect to do better later on. Cold storage stock is quoted there at 18c and 20c, and limited at 19c. Fresh eggs here are quoted at 25c, and limited at 23-24c.

The market for butter is firm, under a rather small demand. Cheese has made little change, there being but a

The Canadian Produce Markets at a Glance

The highest quotations of prevailing prices for standard grades of farm produce in the leading markets on the dates named. Poorer stuff lower.

Date	Toronto	Montreal	St. John	Halifax	Winnipeg
	12	10	10	10	9
Wheat, per bushel.....	\$ 1 05	\$ 1 08	\$ 1 01
Oats, per bushel.....	33½	39½	44	45	31
Barley, per bushel.....	45	44	52	53	35
Peas, per bushel.....	67	66½	76	76
Corn, per bushel.....	41½	50	60	61
Flour, per barrel.....	4 35	5 15	5 86	5 86*	4 80
Bran, per ton.....	18 00	18 00	21 50	22 00	14 00
Shorts, per ton.....	20 00	21 00	22 00	23 00	16 00
Potatoes, per bag.....	80	65	30bu	30bu	75
Beans, per bushel.....	1 45	1 40	1 65	1 70	1 50
Hay, per ton.....	8 00	8 00	13 50	14 00	7 00
Straw, per ton.....	6 50	6 00	9 00	9 50
Eggs, per dozen.....	21	25	25	25	29
Chickens, per pound, d.w.....	14	12	per 110	10	per 112½
Ducks, per pound, d.w.....	12	10	per 10	10	13
Turkeys, per pound, d.w.....	15	15	per 10	10	18
Geese, per pound, d.w.....	11	12	10	10	12
Apples, per barrel.....	2 50	3 00	3 50	3 50	4 00
Cheese, per pound, d.w.....	11½	11	10½	11	11
Butter, creamery, per pound.....	24	21½	23	23	25
Butter, dairy, per pound.....	18	17½	19	18	18
Cattle, per cwt.....	5 00	4 75	4 75	4 75	3 00
Sheep, per cwt.....	4 75	4 50	4 50	4 50	4 00
Hogs, per cwt.....	4 90	5 00	5 50	5 50	5 00
Veal Calves, per cwt.....	6 00	5 50	4 50	4 50

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SHOORTHORNES of choicest quality at low prices. **White Wyandottes**—**W. D. MONKMAN**, Bond Head, Ont.

TWELVE choice rose comb White Leghorn Cockerels, good laying strain, for sale at 10¢ per pair. Address **MRS. C. F. HILL**, Damascus P. O., Ont.

SALISBURN wanted for our hardy Nursery Stock. Choice specialties. Liberal terms. Elegant outfit free. Free weekly. **CAVERES BROS.**, Galt, Ont.

SHORTHORNS—The best and butter combining. Scotch origin from imported stock. Write for particulars. **H. C. GRAHAM**, Albia Craig, Ont.

WANTED—Energetic, responsible men to sell fruit trees, ornamental trees, etc. Arrange terms made for whole or part time. We also have a special line of seed potatoes never before offered for sale in Canada. For best terms apply **NOW**. **PELHAM NURSERY COMPANY**, Toronto, Ont.

GINSENG—Fortunes in little gardens. Easily grown; hardy everywhere. Goods and seeds for sale. Plant in spring or fall. Complete booklet and magazine etc. **OSKAR GINSENG CO.**, Joplin, Mo., U.S.A.

BUFF ORPINGTON EGGS FOR SALE—Pen No. 1 consists of 7 imported hens, 1st Chicago pullet 1903, 1st Industrial pullet, also 2nd, 4th, 5th hens 1903; headed by 2nd Ontario cock; eggs \$2.00 per 15. Pen No. 2—11 fully grown colored set of females, headed by 2nd Ontario Utility cock, sold for \$10.00; 1st Ontario set for \$15.00 per 100. **J. W. CLARK**, Importer and Breeder, Calverton, Ont.

FARM LABOR—The undersigned, late of the Ontario Bureau of Immigration, now in England, selecting experienced and inexperienced farm laborers. For information apply **R. VEHTY**, 65 Front St. E., Toronto.

\$83.00 for house and five acres in new Ontario Post Office, School and Sawmill within stone's throw. Address **R. A. HURHIS**, Port Arthur, Ont.

FOR SALE—One of Brant County's fine farms. First-class brick house, fine barns and outbuildings, 9 miles from Paris, 9 miles from City of Brantford. Price \$10,000. For full particulars and complete description apply to **S. G. READ & SON**, Brantford, Ont.

THE south east quarter of Sec. 10, Township 12, Range 11, 160 acres all in a good state of cultivation, 140 acres ready for crop, the rest pasture, all fenced with wire and oak posts; good house and brick barns; fine barns and outbuildings; 1/2 mile from school, 1 mile from church, 1/2 mile from town, 3/4 mile from good timber, lots of water for spring water close by. Will rent or sell cheap, apply to **D. A. SMITH**, Austin P. O., Manitoba.

FOR SALE Eight Registered Aberdeen Angus bulls from the best of the best choice animals. **ALEX. MCKINNON**, Hillsdale.

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small demand. Owing to the large shipments to England and the increasing demand for home consumption, the price of geese and turkeys is higher.

There is a small advance in the price of oats, on account of the shipping season being closed from Prince Edward Island. There is also a large increase in the price of hay, owing to similar reasons. Owing to the holiday season and the scarce supply, the price of apples is higher. The vegetable market remains unchanged.

Will Refine Cane Sugar

The Wallaceburg Sugar Company closed its campaign on Dec. 21st last, its plant having sliced 35,000 tons of beets and produced 8,000,000 pounds of sugar. It is reported that, beginning Feb. 15th next the plant will refine raw cane sugar and continue in operation throughout the year.

Practical Hints on Sugar Beet Culture

Last issue we published a brief report of some interesting information addressed by Dr. Shuttleworth and Mr. Simpson Rennie in the interest of sugar beet growers. At the Breslau meeting the question was asked whether there are some soils that will not produce typical beets. "Yes," said Dr. Shuttleworth, "on a black muck with a cold bottom, on sod plowed late in the fall, on land plowed and manured in the spring, not properly brought into fine condition of cultivation, particularly if sown on high ridges." Beets grown under such conditions will nearly always be unshapely and will be less profitable both to the grower and factory. The question was asked by Joseph Cressman whether timothy sod was as good as clover sod to plow down for beets. "Not as a rule," said Dr. Shuttleworth, "unless plowed very early in autumn, manured if possible worked on the surface with disc and cultivator and then plowed late in the fall the ordinary depth of about seven or eight inches, so that at the time of plowing it is a good plan to intend to secure a deep soil that will grow a long well formed beet, to run a narrow grub-hook or sub-soiler in the bottom of the furrow behind the plow that will stir the land to the depth of several inches below the plow.

Joseph B. Hagey remarked that he had a number of unshapely beets which he attributed to blanks. In order to secure a full heavy crop, early sowing is important, and it is highly necessary to sow plenty of seed; otherwise nine times out of ten the stand will be blanky. Joseph Cressman said that with the exception of the outside rows, his beets were well shaped.

Mr. Moses Devitt remarked that he sowed on ridges twenty-two inches apart, not sowing a very large quantity of seed, but the stand of plants was not very good, there being a number of blanks. He said he harvested early in September and his average test was a trifle better than 13 per cent. Mr. J. B. Hagey said: "I manured my land in the spring, which is probably the cause of a number of unshapely beets which were in my patch." Mr. Simpson Rennie in this connection stated that in his opinion, Kentville, N.S.; Miss Isabel Rife, Hespeler; C. W. McDougall, Guelph.

The chairman, Mr. A. C. Hallman, explained to the meeting that he had sown some of his beets on the flat, twenty inches apart, and another portion on ridges thirty inches apart, which was wider than he intended them to be.

The ridges, which were rolled before sowing, were gone over twice with a turnip seeder, which enabled me to use a fairly large amount of seed. The stand of plants as a result was splendid. My yield will be about eleven

to twelve tons per acre. My experience," said Mr. Hallman, "leads me to the conclusion that it is the length of the beet that adds largely to an increase of tonnage. My beets this year were not quite so good as last year, as they due to the wet, and, therefore, my tonnage was less than the previous year, when it reached fourteen tons to the acre, which I considered a very good crop. Beets, I think, are a good paying crop, but it is important not to take more acreage than one can handle well."

Joseph Cressman, who sowed on the flat, in rows twenty inches apart and spaced the plants in the row a distance of ten inches, received fifteen tons of clean beets per acre, testing an average of 15.7 per cent. In answer to the question, "Do beets pay you?" Mr. Cressman replied: "I received over \$72.00 per acre. Allowing myself \$30.00 an acre for my work—cultivating, delivering, etc.—it would still leave me a net profit of over \$42.00."

In answer to a question regarding depth of cultivation, Mr. Rennie replied that by deepening your fall cultivation and by the thorough stirring of the soil between the rows to form a row much to preserve moisture you can considerably lengthen your beets in form.

At the close of the Breslau meeting, which was interesting throughout, Messrs. J. B. Hagey, A. C. Hallman and A. S. Shoemaker, were selected to receive a barrel of the molasses each for experimental feeding.

Forestry Convention

The American Forestry Congress assembled at Washington on January 2nd. The following Canadians were in attendance: E. Stewart, John M. Macoun, W. T. Macoun, R. H. Campbell, Dr. Robert Bell, Dr. James Fletcher, N. M. Ross, Ottawa; J. H. White, J. J. Faulk, J. M. Clark, G. A. Drummond, W. H. Addison, Toronto; G. Y. Chow, Kingston.

Farmers Institute Meetings

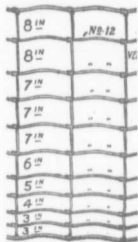
(Continued from Page 68.)

8th, Branchton; 9th, Galt; 10th, Hespeler; 11th, Preston; 12th, Kosuth; 14th, Ayr; 15th, Roseville; 16th, Straburg; 17th, Mannheim; 18th, New Dundee; 20th, Haysville; 21st, Baden; 22nd, Philipburg; 23rd, Crosshill; 24th, Hildenburg; 25th, Elmira; 27th, Winterville; 28th, Ennville; March 1st, Belwood; 2nd, Hintonburg. Speakers—Major James Sheppard, Queenston; J. S. Pearce, Leondard; Miss Isabel Rife, Hespeler.

Division 11—Jan. 31st, Everett; Feb. 1st, Creemore; 2nd, Dumtiron; 3rd, Singshampton; 4th, Nottawa; 6th Angus; 7th, Thornton; 8th, Adala; 9th, Grand Valley; 10th, Kenilworth; 11th, Damascus; 13th, Mount Forest; 14th, Lebanon; 15th, Moorefield; 16th, Rothsay; 17th, Arthur; 18th, Alma; 20th, Guelphwilliams; 21st, Gallinfall; 22nd, Appleby; 23rd, Nelson; 24th, Ashbridge; 25th, Campbellville; 27th, McCurdy's; 28th, Trafalgar; March 1st, Elmank; 2nd, Cooksville; 3rd and 4th, Brampton; 6th, Tullamore; 7th, Bolton; 8th, Caledon East; 9th, Caledon; 10th, Caledon; 11th, Reynolds; Scarborough; 12th, John Campbell, Woodville; Jos. McMillan, Seaforth; John Gardhouse, Highfield; Ralph S. Eaton, Kentville, N.S.; Miss Isabel Rife, Hespeler; C. W. McDougall, Guelph.

Division 13—Jan. 31st, Altona; Feb. 1st, Goodwood; 2nd, Zephyr; 3rd, Udora; 4th, Sunderland; 6th, Cannington; 7th, Brechin; 8th, Uphreight; 9th, Oakwood; 10th, Little Britain; 11th, Valentia; 13th, Kinnmount; 14th, Burnt River; 15th, Dundorf; 16th, Omeme; 17th, Manver's Station and Bethany; 18th, Cavanville and Mill-

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brook; 20th, Garden Hill; 21st, Canton; 22nd, Keneal and Oromo; 23rd, Solina; 24th, Cadmus and Sealton; 25th, Columbus; 27th, Greenbank; 28th, Kinsale; March 1st, Whitty; 2nd, Whitevale. Speakers—G. R. Cotterell, Milton; Alex. Vuill, Carleton Place; C. W. Nash, Toronto; Wm. Channon, Oakwood; S. Rennie, Ontario Street, Toronto; Mrs. Jean Joy, Toronto; Miss L. Gray, Toronto.

Division 14—Jan. 31st, 4th Line; Feb. 1st, Ennismore; 2nd, Stewart's; 3rd, Westwood; 4th, Havelock; 6th, Watsaw; 7th, Douro; 8th, Hillier; 9th, Wellington; 10th, Bloomfield; 11th, West Lake; 13th, Cressy and Waupoos; 14th, Milford; 15th, Cherry Valley; 16th, Demoreville; 17th, Ameliasburg; 18th, Wooler; 20th, Brighton; 21st, Colborne; 22nd, Castleton; 23rd, Fenelon; 24th, Baltimore; 25th, Besail's; 27th, Cobourg; Speakers—A. E. Sherrington, Walkerton; R. H. Field, Addison; Mrs. Jean Joy, Toronto.

Division 15—Jan. 31st, Bath; Feb. 1st, Odessa; 2nd, Sillsville; 3rd, Switzerland; 4th, Selby; 6th, Enterprise; 7th, Tamworth; 8th, Tweed; 9th, Queensmore; 10th, Eldorado; 11th, Marmora; 13th, Springbrook; 14th, Moira; 15th, Turner's; 16th, Harder's; 17th, Gilbert's; 18th, Foxboro; 20th, Plainsville; 21st, Moults' and Reed's; 22nd, Melrose; 23rd, Spencer's; 24th, Harrowsmith's; 25th, Sydenham; 27th, Sunbury; 28th, Wolfe Island; March 1st, Gananogue; 2nd, Landsdowne; 3rd, Delta; 4th, Stela; 6th, Emerald. Speakers—Henry Glendinning, Manilla; Alex. Hume, Menie; D. M. Wilson, Kempsville; F. R. Mallory, Frankford.

Division 16—Jan. 31st, Mountain Grove; Feb. 1st, Sharbot Lake; 2nd, Bradshaw's; 3rd, Piccadilly; 4th, Caintown; 6th, New Durham; 7th, Addison; 8th, Row's Corners and Fairfield East; 9th, Maitland and Algonquin; 10th, Maynard and Donville; 11th, Roebuck; 13th, Ventnor; 14th, Stanley; 15th, Mainsville and Cardinal; 16th, Briston's Corners; 17th, North Williamsburg; 18th, Aultsville; 20th, Moulintee; 21st, Cornwall Centre; 22nd, Lancaster; 23rd, North Lancaster; 24th, Apple Hill; 25th, Greenfield; 27th, Martintown; 28th, Monckland; March 1st, Avonmore; 2nd, Moose Creek; 3rd, Berwick; 4th, Haw-

thorne; 6th, Cumberland; 7th, Chute au Blondeau; 8th, Ste. Anne de Prescott; 9th, Dalgicth. Speakers—J. H. Smith, Preston; H. C. Emerson, Corbyville; W. C. Shearer, Bright.

Division 17—Jan. 31st, Toledo and Frankville; Feb. 1st, Ruston's Corners; 2nd, Bishop's Mills; 3rd, Hickston and Miller's; 4th, Burritt's Rapids; 6th, North Gower; 7th, Manotick; 8th, Mirivale; 9th, Stittsville; 10th, South March; 11th, Carp; 13th, Stewartville and Burnstown; 14th, Adamston and Northcote; 15th, Grattan and Eganville; 16th, Cobden; 17th, Beachburg; 18th, Almonte; 20th, Pakenham; 21st, Carleton Place; 22nd, Clayton; 23rd, Middleville; 24th, Watson's Corners and Lanark; 25th, Balderson; 27th, Innesville; 28th, Lombardy. Speakers—V. Elliott, Galt; W. C. Shearer, Bright.

Two Ways

There are two ways of conducting the subscription business of a paper. One is to continue to send the paper along at the expiration of subscription, whether the subscriber desires it or not, thus involving him in a debt which he may not wish to contract; the other is to discontinue the publication at the end of the contract unless the subscriber sends his renewal or requests to have his paper continued. THE FARMER'S WORLD follows the latter system. We stop our paper at the expiration of subscription.

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All expired and unrenwed subscriptions will be stopped after this issue.

RENEW AT ONCE

"John, what are the chief branches of education in your school?"

"Willow branches, sir; master's used up nearly a whole tree."

"That young man who calls on our Myrtilla reminds me of Patti," said the old man, in the dining room.

"Why so?" asked his wife.

"He has so many farewell performances in the vestibule."—Baltimore "Herald."

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