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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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LONDON, ONTARIO, NOVEMBER 18, 1920.

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LV.

One thought dominates M'Clary's

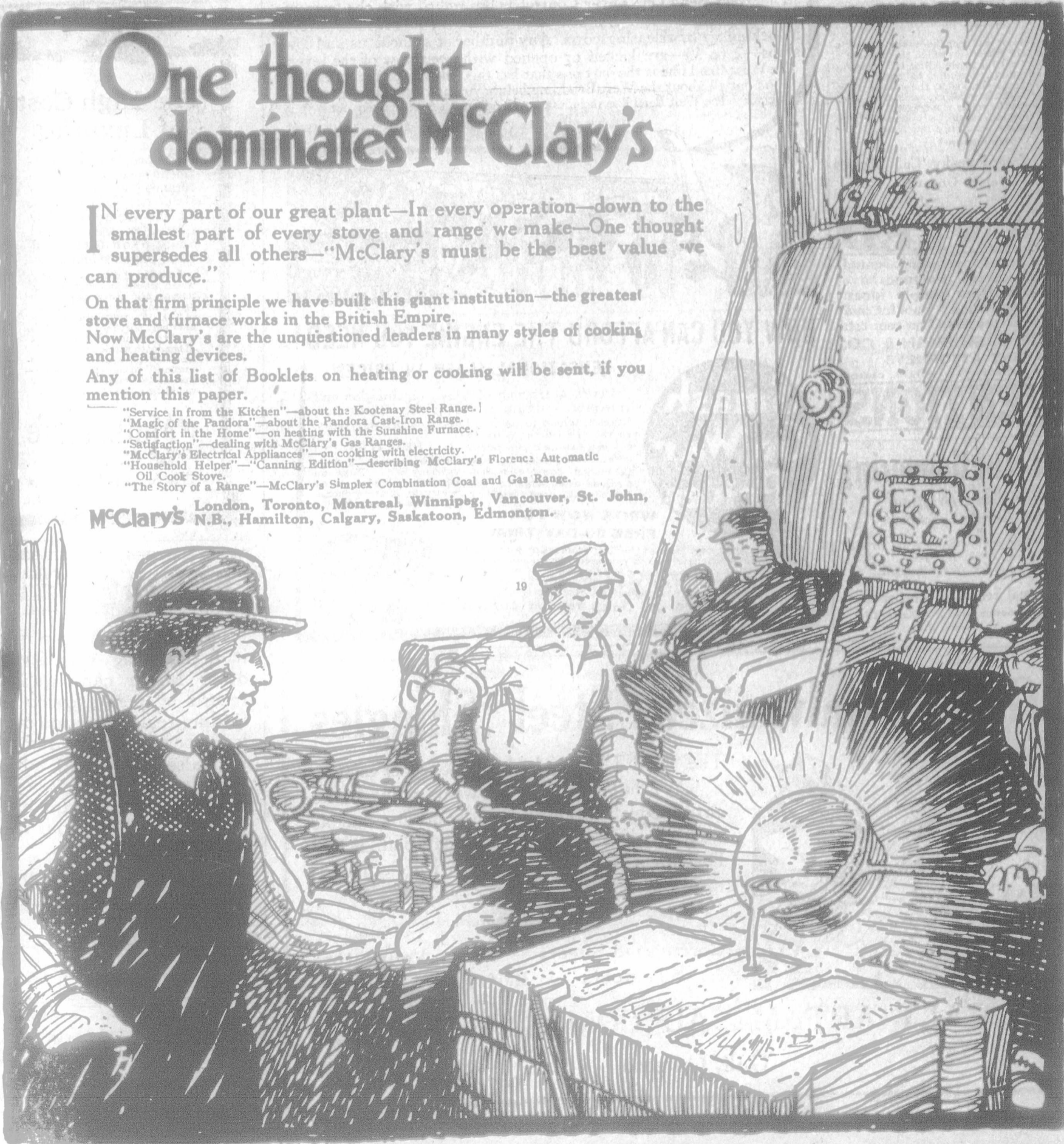
In every part of our great plant—In every operation—down to the smallest part of every stove and range we make—One thought supersedes all others—"M'Clary's must be the best value we can produce."

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- "Satisfaction"—dealing with M'Clary's Gas Ranges.
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- "Household Helper"—"Canning Edition"—describing M'Clary's Florence Automatic Oil Cook Stove.
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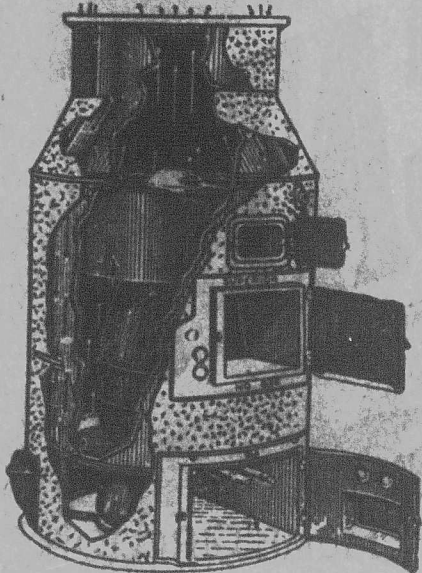
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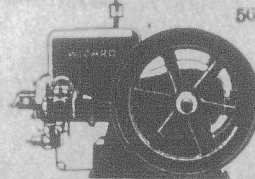
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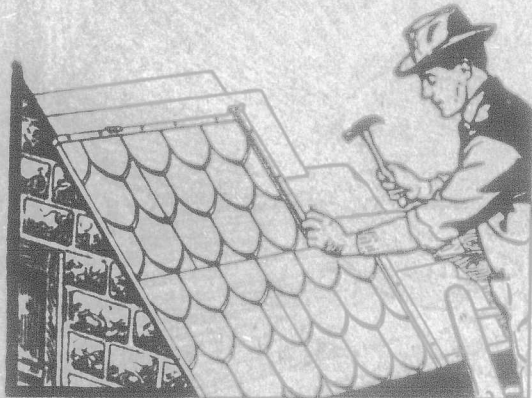
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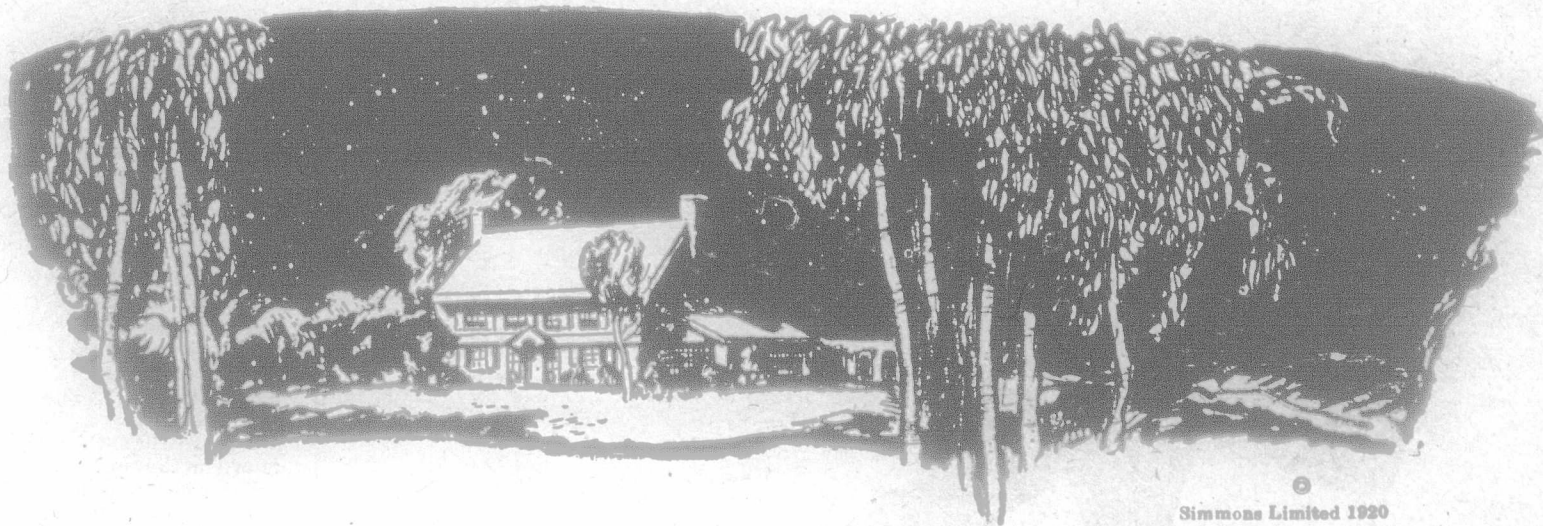
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Lack of Sleep may be the Fault of Your Bed

THE normal healthy person should never have any trouble in sleeping soundly. Neither work nor worry can keep you awake night after night if your bed invites complete repose.

If your bed is quiet, your spring resilient, your mattress and pillows sanitary and restful, the very fatigue of the day will make your nerves relax.

But it only takes the slight creak of a wooden bed, the rattle of an ordinary metal bed, to startle the nerves—and the irritation from uncomfortable spring, mattress or pillows causes dreams and restlessness.

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Simmons Limited is a pioneer maker of Metal Beds built for sleep.

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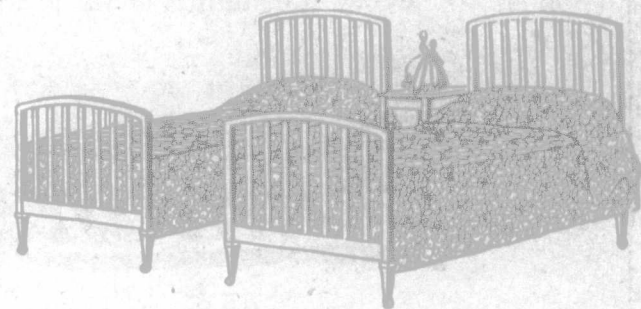
Ask the leading dealer in your section about Simmons Steel Beds, Brass Beds, Children's Cribs, Springs, Mattresses and Pillows—the most popular sleeping equipment in his store.

They cost little if any more than the ordinary.

And when you are selecting your Simmons Beds with an eye to their appearance in the

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Design 1961—In Twin Pair

Made of Simmons new Square Steel Tubing—seamless, smooth and beautifully finished.
Exquisitely enameled in the accepted Decorative Colors.
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Penmans have realized that this popularity can only be retained by backing up style and color with quality; and have accordingly knit comfort and durability into every garment.

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Penmans Limited, Paris.

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11

Virginian Tobacco Production in Norfolk County.

EDITOR "THE FARMER'S ADVOCATE":

Virginian flue-cured tobacco has been successfully produced for the first time in Norfolk County this season, samples of which have been compared with the best Virginian tobacco grown in Leamington and Colchester South, districts in Essex County, where the production of this type of tobacco in Canada has been exclusively grown in the past. The Virginian leaf produced in Norfolk County is far superior in color and texture to the average crop grown in those districts this season.

The color and quality of this type of tobacco depends upon the soil conditions. Almost all the available land suitable for the production of first-class Virginian tobacco is taken up for its production in Essex County. The supply of this type of tobacco is greatly below the demand, and there should be good prospects for its production in Norfolk County.

The conditions in Norfolk County are ideal for the production of this type of tobacco. In those districts where the soil is suitable for its production, there is abundance of timber for fuel and building purposes. Natural gas is also available.

There are thousands of acres of land suitable for the production of Virginian tobacco of first-class quality. Most of the sandy soil which produces but an average crop of rye, would produce if properly handled, at present prices, a crop of Virginian tobacco averaging \$500 per acre.

Barns for the curing of this type of tobacco are usually built small and tight, with flues running across a short distance from the floor, and returning to an outlet on the side next the furnace, the barns average from 16 to 24 feet square, and about the same to the plate. The tobacco is hung in the barn in as fresh a state as possible, and the firing immediately begins so that the heat will ascend into the tobacco, while the leaves are stiff, so that the heat will be evenly distributed throughout the space. From three and a half to five days are needed to cure out a kiln. The duration of the curing is governed by the condition of the tobacco when harvested.

Many formulas and rules are written on the subject of flue-curing Virginian tobacco, any one of those formulas or rules will give a beginner a general idea of how a kiln is controlled during the curing process, but it is advisable for those who are going to produce this tobacco for the first time, to have the advice and assistance of a practical curer for at least the first season.

Norfolk Co., Ont. STEPHEN McKENNA

Live Stock News From Britain.

At the London Dairy Show, which attracted 9,827 entries of all kinds, stock and produce mainly, the Friesian breed of cattle won the championship cups for milk and butter. The 50-guinea cup for cow gaining the highest number of points in the milking trials was W. & R. Wallace's Inwood Maggie Rose, aged nine, which averaged 7½ gallons of milk for two days. Her morning's milk weighed 41 lbs. 2 ounces, and had a 3.75 butter-fat percentage, and her evening's milk scaled 34 lbs. 1 ounce with a fat percentage of 4.97. A Friesian was reserve for this championship title, and the breed won other honors. In the inspection classes the Milking Shorthorns made a brave away but they are getting too sizey and are putting on "constitution" at the cost of their milk volume. In dairy Shorthorns first prizes were won by Lord Wimborne's Red Rose; Captain Fitzherbert Wright's Grendon Rose; and J. Chiver's Fawnley Olive. The Cid blood and the Noble strains were to the fore among Jerseys. In Red Polls the Sudbourne blood is very predominant.

Some 45 French-bred Percherons were sold in Sussex the other day for 13,245 guineas. Top price was 720 guineas paid by Miss Harrison (Stafford) for the grey four-year-old mare, Quoline, a prize winner in the Perche district. Other prices were 600, 560 and 400 guineas. This year, 842 Shorthorns have been sold under the hammer in Scotland for £279 73s. 19d., or an average of £332 4s. 7d. each—some money! ALBION.

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Tobacco Production in Norfolk County.

THE FARMER'S ADVOCATE:
 cured tobacco has been produced for the first time in this season, samples compared with the best grown in Leamington South, districts in Essex. The production of this type in Canada has been exclusively in the Virginia leaf. Norfolk County is far and texture to the own in those districts this quality of this type upon the soil conditions. available land suitable for of first-class Virginia in up for its production. The supply of this type atly below the demand, d be good prospects for Norfolk County. s in Norfolk County are oduction of this type of ose districts where the or its production, there is mber for fuel and building aral gas is also available. usands of acres of land production of Virginia -class quality. Most of which produces but an f rye, would produce if l, at present prices, a crop acco averaging \$500 per

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RAISE the standard of living in the home and the standard of the nation rises with it.

Canada was one of the first countries to respond to the now world-wide movement to beautify the home. And there are no people in the world who are in a better position to afford and to appreciate the best and truest things in life than we in Canada.

Furnishings Mould Character

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Beautify the home with furniture that is designed on truly artistic lines. Make the home a place of cheerfulness, refinement and restfulness. Make it breathe warmth and heartiness. Make it truly hospitable, solidly comfortable—a home that inspires interest in all that is good and worth while in life—and it will mould character and develop true pride in family and in race.

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As a suggestion, study our sketch of a “Queen Anne” bedroom. It shows the beautiful and refined effect obtained by the selection of an artistic suite of bedroom furniture.

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A Finer and Greater Nation

Every advance in refinement and culture, every improvement in the home surroundings, every influence that raises the ideals of home-life, makes the nation that much finer and stronger.

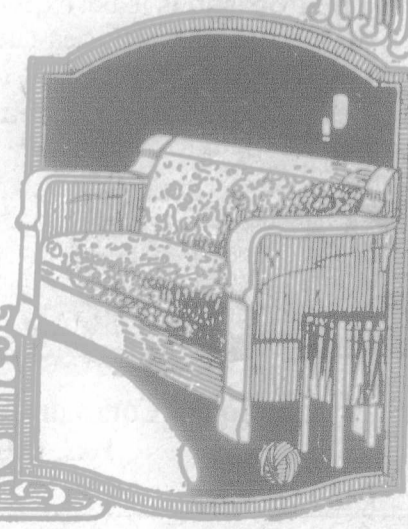
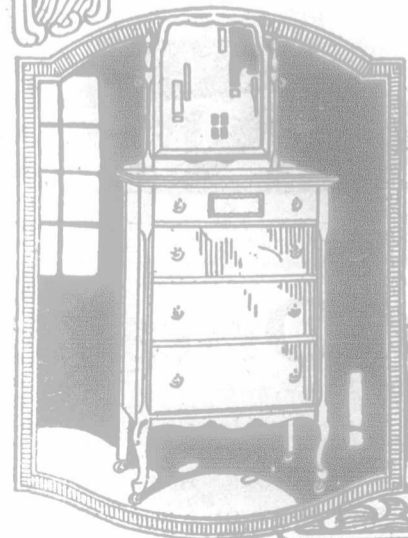
We are living in progressive, prosperous times in a country with a glorious future, therefore, Canadians have every incentive and can well afford to beautify their homes with new and better furniture.

This announcement is inserted by

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NOTE—The Home Furnishings Bureau does not sell furniture or goods of any kind. Its object is to promote a greater interest in the furnishing of Canadian homes. Your local dealer will be pleased to give you any information you desire about suitable furniture for your home.

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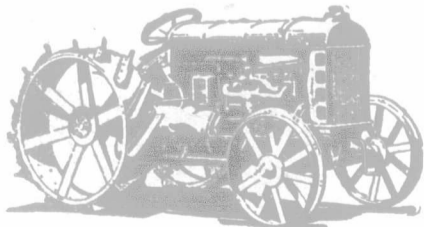
THE Fordson proves its superior efficiency by the results of convincing tests.

At the Hamilton Tractor show, the Fordson won first, second and third in one contest and first and second in the other against a field of fourteen competitors.

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The Fordson is least expensive in both first and up-keep costs. It does the most efficient work for whatever purpose it is used.

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Ford Motor Company of Canada, Limited
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LANDS once traversed by trails of buffalo, trapper and coureur-de-bois in days when "The Company of Adventurers" carried commerce across the great plains, are fast yielding to the plow. The last vestiges of a great Western Empire, offered to agriculture by the HUDSON'S BAY COMPANY, are yielding rich returns to 20th Century Canadian farmers.

We have several thousand parcels remaining that comprise from 160 to 640 acres each, distributed over the great southern portion of Manitoba, Saskatchewan and Alberta; \$10 to \$25 an acre; seven years to pay.

Prosperity and independence await you on one of these farms. Do not wait until the best are gone.

You may own a farm adjacent to H.B.C. land; if so, write for our prices.

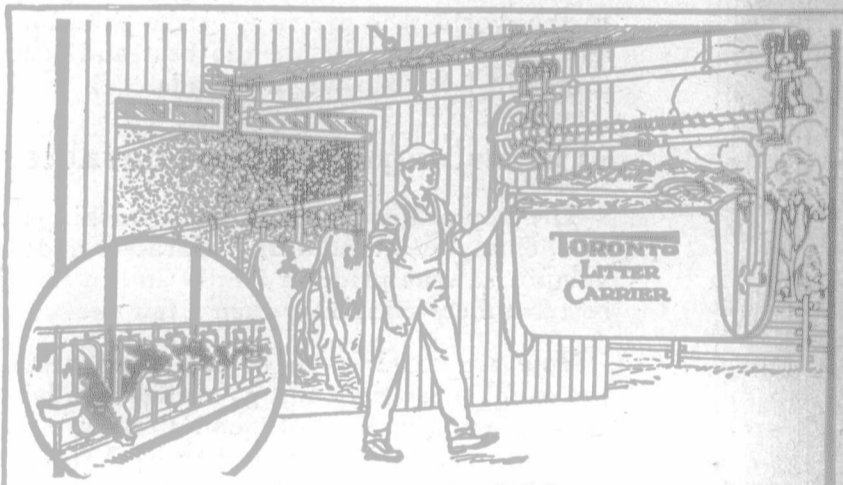
For FREE booklet, "Opportunities in Canada's Success Belt," and Map of Lands, write:

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All Toronto Stable Equipment is designed to save work and make cattle bigger profit producers. You'll find with this equipment that stable chores become easy. Time is saved. Cattle are contented.

A wide knowledge of proper stable equipment can be gained from a study of our big stable equipment book. This will be sent free if you ask for it. Write now.

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The Farmer's Advocate and Home Magazine

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1866

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LV.

LONDON, ONTARIO, NOVEMBER 18, 1920.

1466

EDITORIAL.

Keep your eye on East Elgin!

Build constantly for to-morrow, and the present will always be brighter.

Co-operation is not only the hope of agriculture today, but of Democracy also.

Spare the hay but sweeten up the other roughage with plenty of roots or silage.

Keep the coulter sharp and the mouldboard shining; there is yet much plowing to be done.

Your breeding herd or flock five or ten years from now will be patterned after the sire you are using to-day.

This season has sufficed to bear out the contention of fruit men that it is not always the largest crop that returns the greatest profit.

Pullets that were hatched early enough to have started laying now, require good feed, exercise, fresh water and comfortable quarters if they are to return a good profit this winter.

Recent developments in the sugar business would lead one to think that 25 cents per pound, not yet forgotten, was hardly a fair deal. A true history of the war period might reveal circumstances that were anything but sweet.

One of the arguments in favor of eliminating f. o. b. selling of live stock is the fact that when sold through the stock yards cars are not loaded so heavily and, therefore, the animals reach the market in better condition for sale.

The fruit growers of the Niagara District have it in their power to prevent a recurrence of the regrettable condition that prevailed this season, and the problems will have to be solved by them. Help will gladly be given from the outside, but the problem is one which must be solved from within.

East Elgin is this week the stamping ground of foremost politicians in Canada. This small, though prosperous constituency, is coveted by all parties, and is being visited by premiers, would-be premiers and aspiring politicians. It is too bad that the fall work is not more advanced so that farmers in the riding could take the time to enjoy the contest even more.

At the end of last week, in Western Ontario, there were some farms with hardly a furrow plowed. In hundreds of cases only a day or even a half a day had been put in at fall plowing. This may seem peculiar, following such an open fall as we have had. However, conditions have been extraordinary. In some communities the land was too dry to work properly, but in the majority of cases where fall plowing is behind, an exceptional crop of corn and a heavier job at threshing have retarded the fall work. Silo filling has been a bigger task by twenty-five or fifty per cent. this year, and those who usually have a day's threshing are finding that it takes them a day and a half to do the job. On farms where one-half day has been sufficient to do the threshing in the past, a day is often required this year. Further north in the Province fall plowing is more advanced, but farmers in the south look for two more weeks of open weather than is enjoyed in more northerly sections. An extra effort should now be made to turn over all the land intended for spring grain. The corn land, of course, can wait.

Niagara District Fruit Problems.

The committee of fruitmen who have been asked by the Ontario Department of Agriculture to sift out the troubles of the Niagara District growers and present them in proper shape for analysis, have no light task confronting them. In fact, the Department is wise on this occasion in not being too ready with a remedy for the condition in which the growers of the District find their branch of the industry. In all probability officials of the Department can still recall past occasions when a stabilization of fruit growing in the Niagara District was a matter that was given their most serious consideration and when their efforts to bring about a happier condition were almost repulsed by the very people who stood most to gain therefrom. Under ordinary conditions the apparent disinterestedness of the average grower in a real consideration of the question of organization is one of the most singular anomalies in modern Canadian agriculture. From the nature of the fruit industry, especially as it is conducted in the Garden of Canada, one would naturally expect a much more rapid solution of common problems here than under any other set of conditions which agriculturists, as a body, face to-day. Fruit growing, and especially tender fruit growing, is more speculative than almost any branch of farming. The question of efficient and prompt distribution is a matter of more vital concern to the tender fruit grower than to any other type of farmer; and the additional fact that land values are appreciably higher in fruit areas, while labor must be expended more freely for the production of a quality product, make it all the more surprising that growers have not already sought, found and applied a remedy for the conditions regarding which they frequently have cause to complain.

There is not much doubt that the problems of the tender fruit and small fruit grower, aside from those relating to production, can be largely solved, or at least made possible of solution, through organization. These problems largely hinge about questions such as transportation, distribution, packages, increased consumption, etc., and it is these very problems that offer organization its most effective field for work. None of these matters, moreover, are direct responsibilities chargeable to the Provincial Government, so that permanent relief, in so far as it can be brought about must come from common action on the part of growers themselves. The Provincial Government is wisely doing all that should be expected of it when it takes the initiative and facilitates a thorough summing up of the condition of the industry, while at the same time offering the services of the Department of Agriculture in assisting to bring about any protective organization which the growers may feel necessary to the welfare of the fruit industry.

The matter is thus left to the growers themselves, or a carefully selected committee of them, who will meet on the twenty-fourth of this month and, it is to be hoped, be the means of improving the situation. A district organization of some sort that will effectively harmonize the various sections of the Niagara fruit belt under capable management and which will provide a check upon the present faulty distribution is much needed. The Co-operation and Markets Branch of the Ontario Department of Agriculture has long been willing to further such a step in every possible way as has been the Fruit Branch; and the former did, about three years ago, attempt to bring the matter to a head, but there were so many divergent views held by growers at that time that it seemed impossible to harmonize them all. Some of the fruit buyers, too, are opposed to any further development of co-operative marketing, but there is no reason why organization should be further delayed on this account. What is needed is an organization covering the district from Hamilton to Niagara-on-the-Lake, but whether this is secured by a system of federated locals or by one large co-operative concern, can only be decided after much

discussion by those who must support it. There is too great a tendency to believe the district divided into sections which cannot co-operate. They can co-operate if they want to, and their problems will never be solved unless they do. The combined strength of all sections of the tender and small fruit area is needed before situations such as faced the growers this year can be eliminated.

We trust that the committee of growers who have been requested by the Department to survey the situation will be fully seized of the responsibility resting upon them. In such a case we believe the natural result of their deliberations will be a strong, concerted effort toward the organization that has been so badly needed for many years.

Labor More Plentiful.

There is a growing tendency on the part of industries to lay off men, and from one end of Canada to the other there is a notable difference in the labor situation. It is expected that after the great wheat crop of the West is harvested and threshed, still more men will float back into urban centres and still further change the situation. Industries laying off men require the same amount or even more production from those retained, and in the majority of cases they are getting it. Any serious disturbance in the labor market at this season of the year would not be the best thing for the country as a whole. Laborers in the towns and cities must have employment, and they must be getting their pay envelope at the end of the week or they will not be in a position to buy products of the farm and factory. However, more efficiency on their part and a desire to hold their positions and give satisfaction will be a boon to the whole country. One of the leading banks in Canada has the following to say: "The labor situation throughout the Dominion appears, for the most part, to be very much improved. Reports show that labor is more efficient, and that the men are more anxious to hold their positions than they have been any time since the Armistice."

The action of the labor unions during the past few years is likely to reflect unfavorably on the men themselves. The unions have arbitrarily stipulated the amount of work a man was allowed to do in a given time and, in the majority of cases, the amount was so small that it has been impossible to get reasonable production. Employers are taking the matter into their own hands, more and more, and when production is increased with fewer hands, as it will be, the whole situation will change. It is just possible that another season will find more men willing to accept employment on the farm and, furthermore, willing to do an honest day's work for an honest day's pay.

New Faces in the School-Room.

A deplorable feature of our rural schools is the number of changes made each year in the teaching staff. In one inspectorate in Western Ontario fifty-two per cent. of the teachers changed between this and the last school year, and W. M. Morris, Secretary of the Trustees' Association for the Province of Ontario, vouches for the truth of the statement that a little girl who just passed the entrance this season had thirteen teachers in seven years.

Good work positively cannot be done in the rural schools of this country so long as teachers are flitting about from one section to the other, or flitting into the teaching profession and immediately out again. Trustees and parents in rural sections are not without responsibility in regard to this very matter, but ultimately the Department of Education will have to devise ways and means of making the teaching profession one that will attract and hold its members. Good work cannot be done until the teachers become acquainted with the districts where they are located and with the pupils entrusted to their care.

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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Give a Half Day for Better Roads.

Country roads at this time of year require considerable fixing up. The ditches should be opened and the sods, weeds, and all obstructions should be thrown out. A furrow helps the water to get away. The culverts, too, are frequently clogged with dirt, brush and other particles that have washed down and lodged. It is water that disintegrates the road-bed and destroys its surface. All water should be allowed the opportunity of getting away to the creeks and rivers. The split-log drag, or the scraper, should be used frequently in order to keep the road well rounded up. A flat road-bed will hold the water and soon become a mire bog. A little extra time spent in filling up the holes, cleaning the ditches, rounding up the road-bed and getting rid of the water will make a decent highway out of a veritable mud road.

Nature's Diary.

BY A. BROOKER KLUGH, M. A.

THE SPREAD OF RATS IN CANADA.

Recent reports from the West show that the Gray Rat, or Norway Rat, as it is also called has now appeared in Western Manitoba and Saskatchewan, and threatens to become a serious pest in the Prairie Provinces, where it is said to have been previously unknown. The presence of these destructive rodents, with their prodigious capacity for multiplication, constitutes a great menace to these grain-growing regions.

The Gray Rat, which originally came from Asia, is reported to have reached western Europe in 1730 and supplanted the smaller Black Rat, which had come from Asia to Europe centuries before. The Gray Rat was introduced into America in 1775, and as in Europe it drove out the older Black Rat.

This species has for a great many years been recognized as a very destructive pest and of recent years has been shown to be a decided menace to health in its role of disease-carrier. It was estimated by Dr. Lantz, of the United States Department of Agriculture, some years ago that rats and mice destroy material to the value of \$200,000,000 annually in the United States, and since the price of commodities has doubled since this estimate was made it is probably that rats alone are now responsible for damage to this amount yearly. The annual upkeep of a rat has been placed at \$1 in France, and at \$1.80 in England, and the yearly damage by rats in England has been placed at \$75,000,000. During the outbreak of Bubonic Plague in India, Cape Colony and Australia in the latter part of the nineteenth century it was ascertained that this disease was communicated

by the bites of the fleas which were carried by rats, and since that time it has been shown that they can carry the germs of other diseases and thus infect food and drinking water.

The rat, as is only too well known, flourishes about the habitations of man, where it is provided with shelter and food, and is protected from its natural enemies. It has been estimated that there are 255,000,000 rats in the rural districts of the United States and 540,000,000 in the cities and towns. There are no reliable estimates for the number of rats in Canada, but reckoning on the same basis as in the United States our rat population is probably about 80,000,000.

The methods of rat extermination which have been tried are legion, but the main bar to success in this direction is the marvellous fecundity of this species. The Gray Rat breeds from six to ten times per year and produces an average of ten young per litter. Thus if a pair of rats and their progeny should breed continuously for three years their descendants would number 20,155,392 at the end of that time. Such an increase is, of course, theoretical, since it assumes that all the progeny live and come to maturity, but it shows the potentiality for a plague of this species which exists.

The most effective method of preventing damage by rats is undoubtedly the construction of rat-proof houses, barns and outbuildings. The use of concrete for floors and walls, if the walls are put down deeply, and if all drains and water-pipes are in concrete, will usually keep them out. Ventilators and other openings should be covered with heavy wire netting.

The next most effective means of control is by the use of poisons. Some poisons, such as strychnine, are objectionable because the kill so rapidly that the animals die in their holes about the buildings, and their decaying bodies produce a noxious odour, while phosphorus, which is frequently used, is dangerous to property because it may ignite and cause a fire. The best poison to use is barium carbonate, which is also known as barytes. This is a mineral poison without taste or smell and in small quantities is harmless to larger animals. Its action is slow and the rats usually leave a building to seek water and their bodies do not decay on the premises. It should be made into a dough, using one-eighth barium carbonate and seven-eighths oatmeal, and dropped into the rat-runs.

A new method of dealing with rats which has, in so far as it has been tested out, given remarkably successful results, is known as the Rodier method, because it was first used by William Rodier of Melbourne, Australia in eliminating rabbits. By this method the rats are caught alive, the females killed and the males released. In the ordinary methods of trapping and poisoning, more males than females are caught, because of the greater boldness of the former sex, and the rats become polygamous, thus resulting in no great reduction in the rate of multiplication. By killing the females only the ratio of the sexes is gradually changed and the greater number of males which have to be fed creates a food-scarcity for the species, which falls more heavily on the producing females. The Rodier method is slower and more difficult than other means of control, but it is contended that it is really the most efficacious, and unlike other methods it need not be used continuously, but allow for periods of neglect. Rodier cleared 64,000 acres of rabbit-infested land in Australia in twenty years by this method, after all other means had failed and the little which has been done with this method on rats seems to promise a similar degree of success.

Real Back-to-the-Land Movement.

BY ALLAN MCDIARMID.

There are two things that the majority of people have given up all hope of seeing these days. One is the Millenium, when the devil is to be chained up for a thousand years or so, and the other is the "Back to the Land" movement.

This exodus of humanity from the cities and towns to the country just can't get started, apparently. It's all the other way the thing has been going, especially in the past few years. One of the old proverb-makers said, many years ago, that "a man who wishes to live alone must be either a beast or a god," and as the common run of men are neither the one or the other it follows that there is a tendency among the inhabitants of the world to herd together, as do the cattle in the fields. We see the result of this instinct, or whatever it is, in the cities, towns and villages that we find on every part of the earth's surface, where man can live at all.

This tendency serves a good purpose until it has been carried too far. Cities are necessary to the growth of the world; it's there that most of our inventions are developed, our financial and business systems worked out and the government of the country perfected. It's what might be called the "nerve-centre" of the whole body.

But a nerve-centre can't exist of itself. It must have something to support it and from which to draw strength. It must have body and backbone behind it; and the rural districts of the world are, to the cities, this body and backbone from which they draw their life.

Admitting this, as almost everyone will, it isn't much wonder that people who are giving the subject any thought are getting afraid of what the consequences may be if farmers continue to forsake the land the way they are doing, either selling out to an inferior class or abandoning their farms altogether. If the time ever comes when the city is unable to draw recruits from the country progress is going to come to a sudden stop,

unless the cities develop some new means of support from within themselves. In the past they've always been importers of their mental and physical means of existence. City schools and back-yard gardens both seem to be in the one class when it comes to supplying the demand. The first is short on quality, the second on quantity. One thing we can say for mankind in general and that is, that when conditions show the need for improvement, there is always somebody on hand who is willing to understand the task. It's the case even with this "town and country" problem of ours, if all we hear of what they are doing in a little corner of California is true. "Back to the Land" has got out of the political war-cry class and is now an expression that stands for the genuine article.

Some time ago the California Legislature passed a Land Settlement act with the idea of "improving the general economic and social conditions of agricultural settlers within the State". Under this act a Land Settlement Board was created to which the State loaned money at 4 per cent. interest. This money was to be used for the purpose of organizing and placing on the land, a group of men who were unable to buy farms for themselves for the simple reason that they couldn't get the terms that made it possible. The Settlement Board bought the land and, for each settlement, they provided a Superintendent who was a practical man and knew how to give advice and help to whoever in his community was in need of it. It was a planned organization from the start.

For the first settlement sixty-three hundred acres of land was bought and divided into farms of from nine to three hundred acres, and which varied in value from forty-eight to three hundred and twenty-five dollars per acre. Irrigation ditches were put through and every thing done which the settler could not do for himself. And there was no trouble in getting the farmers; more wanted land than could be supplied. Those likely to succeed were given the preference and the land sold to them on terms that were considered fair by all concerned. To each man the Board loaned money for the improvement and equipment of his farm, but on condition that he also invest from fifteen to twenty-five hundred dollars of his own money in the enterprise—sort of a "guarantee of good faith" deposit. It made the community of settlers a responsible one.

A man called the "Farmstead Engineer" was appointed to help the owners plan their houses and outbuildings and give them ideas in the dividing of their farms into fields and such other things as the rotation of crops and so on. What is called a Community Centre has been provided, as well as a social hall; also churches and schools, as a matter of course. Such things as tennis-courts, swimming-pools, buildings for stock-shows and the other present-day necessities of the farm are all there. Even a veterinary surgeon is employed to look after the health of the animals in each settlement.

The farm-labor problem wasn't over looked either. Allotments of one or two acres of land were made and small but comfortable houses built on them, to be sold to any men willing to work for the farmowners. Twenty-six of these houses and garden-lots were provided and all of them were quickly taken; as many more could have been sold. These farm-laborer's homes have been one of the most successful ventures in connection with the whole enterprise. The improved outlook and feeling of equality that it has given to the hired man and his family is likely to work for the benefit of all concerned.

The spirit of co-operation is very strong in these community settlements, as might be expected. Everyone feels it in the air and even an outsider will notice something in the life of the place that is different from anything he comes in contact with elsewhere. They have a Stock Breeders' Association whose aim is for highest quality and condition of all live-stock in the district. They have a Marketing Association that anyone wants to can take advantage of. There is a cold storage plant which serves hundreds of customers. It is worked on the principle of a safety-deposit vault and each shareholder is provided with a key to a certain department, which he can use for the storage of his butter, meat or whatever perishable stuff he may have on hand.

Finally the scheme has been a complete success. All those who have bought land have met their payments promptly, and what more could be said.

The above description sounds rather more like a pleasant dream or the prediction of an optimist, than a plain statement of facts and figures; but it's no dream. The community we have described goes by the name of Durham and is located in Butte County, California. So, if there are any who still doubt that the "back-to-the-landers" can ever do anything towards putting the city man on the farm, and making him "stay put," they know where to go to find facts. The prospect of seeing a contented farmer ought to make the trip worth while.

Some farmers are inclined to adopt the sitting-down attitude when they meet with reverses in marketing, particularly when the situation is uncertain, or made obscure by the activities of highly-organized purchasers or marketing agencies. No one can criticize farmers if they do take life a little easier, but one can never get around obstacles by sitting down. It is the spirit of the thing to which the greatest objection can be taken. Reverses should only serve to awaken the spirit of combat, and lead to more effective co-operation among producers. Organization will carry producers over any obstacle, be it ever so high.

THE HORSE.

Plenty of axle-grease, judiciously applied, lessens the amount of oats required.

Unless there is work to be done on the road, work horses are better now with their shoes off.

A whip is a very handy thing when driving oxen, but the whip is not needed so much to drive horses as some people appear to think it is.

Horses mind the cold more at this season of the year than in the dead of winter. When the team is standing between jobs it is well to blanket them.

When the fall work is done in the fields it is a good plan to still keep a team fit and in condition. There is usually sufficient work to keep one team employed.

When the horses come into the stable with their legs wet and muddy, rub them dry with a wisp of straw or rags. As a general thing it is not a good plan to wash horses' legs. It involves more time and labor to wipe them dry and clean, but it pays in the long run.

It will do the foal no great harm if it is obliged to "rough it" a little. Nature provides the horse with a coat of hair sufficient to withstand the weather and plenty of outdoor exercise, even in winter, develops good bone and muscle. Give plenty of good, wholesome feed and provide dry accommodation in a box or shelter.

Considering current prices paid for hay it will be wise to switch the horses not employed at hard work on to a ration of good straw and roots with a little grain and perhaps one feed of hay per day. Horses can be maintained, under winter condition, in fair fit on such a ration. One very satisfactory way is to cut the straw and dampen it slightly, then mix with it a judicious quantity of roots and some chop or whole grain. This can be fed at the morning and evening meal and the hay given at noon.

Wounds and Their Results—VII.

RESULTS OF WOUNDS—TETANUS.

Few wounds, except very slight ones, result in a perfect cure, there being, in most cases, more or less of a scar or parts permanently void of hair. Such conditions are blemishes, but do not interfere with the animal's usefulness, nor are they liable to do so later on, hence do not constitute unsoundness. Some wounds cause death from loss of blood, others from exhaustion, or acute disease of vital organs that may have been wounded or vitally affected by nervous sympathy, but we wish now to discuss diseases that are liable to occur during the healing process.

Tetanus, commonly called lock-jaw, is not infrequently met with as a result of wounds accidentally inflicted, or those necessarily made during operations. The disease may follow a very trivial injury, as a saddle or harness gill, cracked heels, or, in fact, any injury that causes a raw surface, but is more liable to follow punctured wounds, and frequently occurs as a result of a punctured foot. The operations which are most liable to be followed by tetanus are docking, castration, operations for rupture, the insertion of suture, and it has been known to follow the application of a blister.

The disease is due to a germ which gains access to the circulation through raw surfaces caused by injuries or operations, or may be introduced directly by an object that inflicts a punctured wound. The disease may be described as a powerful and painful spasm of some of the voluntary muscles, which is long continued and uncontrollable. The spasm of the muscles is that of a rigid contraction, the intensity, varying in degree, but of constant and non-intermitting character. The disease is technically known by different names, according to the group or groups of muscles principally involved, but the term tetanus is used to denote the disease generally. When the muscles of mastication are principally involved, causing a locking of the jaws, it is known as lock-jaw.

Symptoms.—The symptoms appear in a variable period after an injury or operation, but usually in eight or ten days. A general stiffness and rigidity of the animal is noted; he moves with difficulty, the nose is protruded and the tail usually elevated; the eye has a wild, excited, nervous expression; he will usually champ his jaws, and sometimes grind his teeth, and there is often a flow of saliva from the mouth. Respirations become accelerated and the nostrils dilated; the eyes are drawn within their sockets, which causes the accessory eye-lid, that is lodged in the inner angle or corner of the orbit, to be pushed out more or less over the eye.

If the patient be suddenly disturbed, as by a slap on the neck or head, he becomes greatly excited, the accessory eye-lid shoots out suddenly over the eye, the nose becomes more protruded; the tail suddenly elevated, and the superficial muscles, especially those principally involved, becomes very hard and tense. If forced to move he does so very stiffly and will probably fall. These intense symptoms quickly disappear, but he is in a very nervous state, and a little noise or other disturbance, will cause a recurrence.

At first the pulse is little altered, but in the course of two or three days it usually becomes hard and frequent. The progress of the disease is usually slow, and the patient will sometimes continue to work for a few days after the first symptoms are noticeable, but the symptoms gradually, sometimes very quickly, become more marked, and when the spasms become

general the position of the body will be regulated by the action of the most powerful muscles chiefly involved. The jaws usually become more or less firmly set, in some cases it being impossible to separate the incisor teeth sufficiently to allow the introduction between them of a fifty cent piece; in other cases more or less motion of the jaws remains. The limbs are extended and difficult to move. The action of the bowels is checked, indicating that the involuntary muscles are involved, and urination is difficult. Although the spasm is continuous, its intensity varies. Excitement, noise, meddlesome attendance, strong light, etc., cause temporary paroxysms of great severity. In a modified light, when the patient is kept quiet, the spasms usually diminish in intensity. In severe cases the symptoms continue to increase until the animal can no longer retain the standing position, he falls, and is usually unable to rise, struggles violently and apparently suffers intensely until death ends the scene.

Treatment.—Preventive treatment is usually more successful than curative. The germ that causes disease is found in the ground or on floors, etc., hence a wound that comes directly in contact with these when the animal is either standing or lying, is much more liable to be followed by the disease than others. The hypodermic-injection of a small dose of a serum known as anti-tetanic-serum is supposed to render the animal immune, and in the experience of most veterinarians who are in the habit of observing this precaution, has been successful, hence when an animal has received a wound that is very liable to become exposed to the infection, it is good practice to inject.



A Team of Percheron Geldings Seen at the Western Fair.

Curative treatment is often ineffective. If the jaws become firmly locked in the early stages, there is little hope of recovery, but if even a slight motion remains, sufficient to enable the patient to eat a little and take fluids, recovery may result. The hypodermic injections of large doses anti-tetanic serum, is considered the most successful treatment. This should be administered only by a veterinarian. It is very expensive, and not successful in many cases, hence the owner, in some cases, does not care to risk the expense. As it is a disease of the nervous system, the patient should be kept as quiet as possible in a cool, dimly-lighted apartment removed from all noise and excitement, and where other animals are not kept. If unable to stand, he should be placed in slings. If possible a purgative should be given by the mouth, but when this cannot be done the bowels should be acted upon by the hypodermic injection of 1 to 1½ grains of aconite or eserine. The hypodermic injection twice daily of about ½ to 1 dram (30 to 60 drops) of carbolic acid in an equal quantity of glycerine has given good results in many cases. If he can either eat or drink, it is well to mix with damp food or water about 20 drops of Scheel's strength of prussic acid three times daily, but attempts to drench him should not be made, as the excitement caused defeats all benefits that may be derived from medicines and good care. When recovery is about to take place the symptoms gradually disappear, the jaws become relaxed and extreme nervousness decreases. When a case is about to prove fatal, the symptoms increase in severity despite treatment and care. It should be remembered that in the treatment for tetanus, quietness is probably of more value than medicinal treatment, hence none but the



[A Junior Farmer at the International Plowing Match Whose Trappy Team Branded Him as a Good Horseman.

attendant should come near the patient, unless a veterinarian is attending the case.

WHIP.

Cost of Horse Keep Computed.

Opinions vary considerably regarding the cost of horse keep on the average farm. Some horsemen are inclined to put the cost of maintaining a horse too low, while others set a figure that is entirely too high. At present this is an important matter, and, as maintenance costs decrease, full credit should be given to the horse. As a guide as to how one can go about computing the cost of horse keep in an approximate manner, we are reproducing the findings of the Farm Management Bureau of the University of Illinois. The Secretary of the Horse Association of America discusses the results of the investigations as follows.

"In the exact cost accounting studies carried out by the Bureau of Farm Management of the University of Illinois, covering a period of five years, work horses required annually but 25.3 bushels of corn, 37.8 bushels of oats, 1.7 tons hay and 170 days access to pasture, at 1.96 acres of pasture per horse. This is an allowance of 2,626.4 pounds of grain, 3,400 pounds of hay and 1.96 acres of pasture per year for each working horse. The horses observed were working regularly on Illinois farms under usual farm conditions.

"With these figures as a guide, it is not difficult to compute the cost per horse per year. Manure produced by horses and colts is valuable to the farmer and offsets feeding costs at present grain prices to the extent of approximately \$39 per year for a drafter, and \$30 per year for a draft colt. This is placing its worth at \$3 per ton. At present, figuring corn at 90 cents, oats at 60 cents, hay at \$25 per ton and \$15 per acre for pasture rent, the total board bill for a working horse comes to \$117.35 per year. The farmer subtracts from this the value of fertilizer contributed \$39.00, leaving but \$78.35 expense for a year's feeding.

"These exact figures explode the high cost of feeding theory. The recent drop in hay and grain prices is also an economy argument for city users of draft and wagon horses. Nor has it disturbed the balance between cost of production and income on farms where horses and mules are used, for with the decline of feeding stuffs the cost of maintaining farm power likewise drops."

LIVE STOCK.

At a recent Hereford sale in England 71 whitefaces sold for a total of 25,100 guineas.

Can you say that your herd or flock has a clean bill of health. Every precaution should be taken to maintain the health of the stock.

With turnips and mangels yielding upwards of 1,000 bushels per acre, there will be a large quantity of right good succulent feed for all classes of stock on many farms.

It is reported that at a recent U. S. Government auction of wool in Boston the highest price realized for any greasy lots was 17½ cents, while scoured wool sold at 15½ to 22 cents.

The Canadian Co-operative Wool Growers' Ltd., have sold 2,300,000 pounds of the five million handled by the organization this year. The Canadian trade has taken over half the amount sold.

It is continually being demonstrated that a breeder stands to lose when he consigns a plain, poorly-fitted animal to a sale. At London last week breeders were forced to take less than beef prices on such stuff, besides having to pay the expense of shipping and selling. Those in need of herd sires are beginning to look for bulls with breeding, type, individuality and character.

When changing from pasture to stable feeding, there is always more or less danger of some of the stock going off their feed owing to deranged digestive system as a result of the difference in feed. It is advisable to have a supply of salts on hand as they are frequently needed, and a dose administered in time may save complications developing.

Good Bulls and Good Care.

THE care and treatment that the young bulls will receive between now and next spring will very largely determine whether or not they will sell at money-making prices when offered by auction at the bull sales, or by private treaty on the owner's farm. Thousands of dollars are lost every year to those who raise and sell pure-bred bulls, simply because the animals are not led into the sale-ring in saleable condition. While fit and finish should not be the only factors that determine an animal's value, from the purchaser's point of view, they are very often the deciding factors between profit and loss. Those who have attended bull sales, and who have had something to do with feeding and fitting bulls for these sales, know that apart from the individual merit of the animals, the thing that draws bids is the condition that they are in, and the treatment that they received before being led into the ring. Such being the case, it should be every breeder's aim to spare neither time nor patience in this matter of preparation.

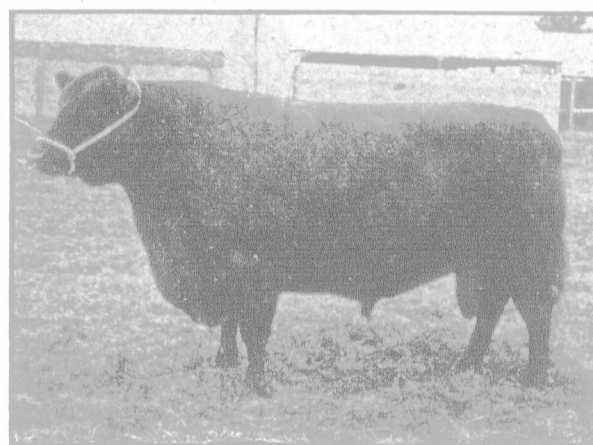
STABLING AND FEEDING.

By this time all bulls that are of suitable age to be fitted for sale in the spring should be under preparation, and on their winter feed. The matter of stabling is important in this connection. Where box stalls are available, two young bulls will do well together. Providing they have been raised together, there is no tendency to fight, and they soon settle down to business. The great advantage in a box stall is the ease with which they can be kept clean. The stall may be cleaned out and well bedded every other day or so, and there is no chance for manure to collect on their hips. The ban of stall-tying is the condition that the animals get into when they have to lie in the one spot continually, because, no matter how well bedded and how regularly they may be cleaned, the manure is sure to gather on belly, flanks and hips. Keeping them clean means eternally washing and grooming, and by the time they are ready for sale, these parts are bare of hair, and they cannot present a respectable appearance. The box-stall bull has a chance for maximum development, and if the stall is cool he grows a coat of hair that can be dressed to advantage when he is to be shown for sale. Where two bulls are fed together, however, it is not so easy to control the feeding and cater to their individual capacities; in this regard the man who is feeding bulls that are tied with either chains or stanchions has the advantage. When the bulls are tied it is wise to start them out on short stalls, and as they grow additional length can be added by slipping in short platforms behind the regular stall, if the floor is made of plan ks. With a concrete floor, of course, the length cannot be increased. The short stall lessens the chance of the bulls getting their rear parts in such bad condition.

In discussing the matter of feeding this class of stock, one cannot do better than answer a question asked by a beginner a few weeks ago. He said: "I recently purchased a well-bred bull calf, and would be grateful if you would tell me the most suitable feeds with proportions and times of feeding, to produce the greatest possible development." The six or eight-month-old bull that has just been brought in from the pasture with his dam, has been on a special pasture and getting extra feed through the fall months, must be started off gradually on a winter ration. The question of a nurse cow comes up, and a man must decide for himself whether or not his calf is worth giving a special cow. If he is of show calibre, and looks as though he would develop into a winner, there is no doubt about the advisability of switching him on to a nurse cow for the winter, because there is no cheaper feed for a good calf, and it will give him a bloom that is difficult to get in any other way. The milk-fed calf makes greater gains, has a better touch to his flesh and a better roll to his hide, than the bull on dry feed. However, we will leave the question of a nurse cow alone, because the

majority of small breeders are not going to resort to this method of finishing their bulls. The average calf can be carried along and brought out in good condition by weaning at nine or ten months of age, and finishing on the grains and roughages grown on the average farm. The thing that is required is a variety of choice roughages, and a combination of grain feeds, or concentrates, that will provide for growth and still put on flesh. A grain mixture should comprise at least oats, barley, oil meal and bran. Timothy alsike and clover, together with some silage and a few roots if available, will give a fair variety of roughage.

The proportions in which these grains should be mixed will depend, of course, on the age of the bull, but a satisfactory mixture for a bull close to a year old would be: Oats, 5 parts; barley, 3 parts, and oil meal, 1 part; or, oats, 4 parts; barley, 3 parts, oil meal, 1 part, and bran, 1 part. Start the grain feeding gradually; the secret of a successful start on a winter's feeding is starting off on a small, simple grain ration, gradually increasing as the feeding ability of the bull becomes known. The feed for the first while should be simple; the oil meal may be added gradually, as there are some bulls that "will not stand for" oil meal in their feed. Start



A Well-kept Aberdeen-Angus Bull.

off with a handful or two, and gradually work up until on towards spring the yearling bull is getting several pounds if he is taking it properly. At this age they should be getting a liberal amount of roughage per day, but, of course, this will have to be gauged entirely by the capacity of the calf. The calf with the strong constitution will prove the better feeder, and it will be for the attendant to decide as to the amount of the various feeds that shall be allowed. One cannot prescribe actual amounts of grain for any class of live stock. The attendant must gauge the quantity by the behavior of the individual animal, and if the stockman will not do this he can never expect to fit a champion or lead out a sale-ring topper.

If the hay is coarse, it had better be cut up, as there will not only be less waste, but it will be more palatable. To encourage them to eat heartily, it would be wise to try mixing some of the grains with the cut feeds and sprinkling the whole with molasses. The molasses makes an excellent appetizer, and also aids in the fattening process. On towards spring it would be wise to add more bran and increase on the barley, substituting boiled barley for the raw grain in the night feed. This will tend to improve the finish and handling quantities.

Success in feeding this class of stock depends on feeding a variety of feeds, and often, at regular feeding hours, and catering to their individual needs. As soon as a bull shows signs of leaving any of his grain, cut down on his

allowance for a time; clean out any left-over grain that may be in the manger. Never feed so that there is grain lying in the manger or feed box from one meal to another. Mix a little salt thoroughly with each feed. A young bull that feeds well should make good gains, probably averaging 2½ pounds per day.

WATER IMPORTANT.

Water, and plenty of it, is essential in successful fitting. Water before them at all times is the ideal thing, but on the majority of farms this is not practicable. They should have water at least twice a day during the winter months, and this with the chill off it. There are some that will not drink twice a day, but majority will take a good drink in the morning and a lesser one in the afternoon. Where several young bulls are playing in the yard together when out for water, there is a tendency for them to put off drinking until they are to be put in again, and unless they are driven to the tank and given time to drink, they are apt to go without. Where they are being fitted singly or in pairs in box stalls, it will not be necessary to let them out in the yard a great deal for exercise, and if the weather is bad the watering may be done in the stalls. No matter what system is followed, it should be carried out regularly throughout the winter months; if they are to be watered at nine o'clock in the morning and four o'clock in the afternoon, that is the time that it should be done every day. Pails or buckets that are used for watering should be used for that job alone, and not for feeding the pigs in between times, as is often the case. A bull cannot be expected to drink from a sour, ill-smelling pail.

WASHING AND GROOMING.

Occasionally throughout the feeding period the bull should be washed; this operation not only rids the skin of dandruff and irritating material, and tends to promote a good growth of hair, but with creolin, or a quantity of a good sheep-dip added to the water, it keeps them free from lice. A bright sunny day is best for this operation, but many breeders wash their bulls without regard for the weather, claiming that it does not hurt them to shiver, and that they will soon dry if blanketed. Speaking of lice, there seems to be some that are very difficult to kill by washing; they're like the cat with nine lives, particularly the blue lice that are often found in the wrinkles along the neck and shoulder vein and between the thighs or on the twist. These fellows will survive a good deal of washing, but can be "knocked out" with a good, strong insect powder; not prepared lice killer, but plain yellow insect powder that is strong enough to kill house flies. Plenty of brush and cury-comb, and frequent dustings with insect powder, rubbed well in, will keep the skin in good condition and free from lice if the weather or conditions do not permit of washing the animals. This point of keeping the bulls rid of lice is one that is important. A lousy bull, like anything else that's lousy, cannot thrive, and will in time start scratching the hair off in patches.

HALTER BREAKING.

Some time during the winter the question of halter-breaking is going to come up. The earlier it is done the better. The tendency is to put it off until spring and the approach of selling time. The proper time for halter-breaking is when they are calves, and when they are being taken to and from their mothers. These youngsters are easily trained at that stage, and it is easier on both the bull and the man on the end of the rope when it is done at that time. If it has been left until he is ten or eleven months old, only one thing remains, and that is a good, substantial rope halter and some form of force on the end of it. Of course, different methods must be used with different bulls, but there are few that cannot be broken in an hour's time by two men on the end of a rope. Start with a strong halter, properly fitted and with the upper part



Rosebud Sultan.

First Senior Yearling Shorthorn bull at the C.N.E., 1920. Exhibited by J. E. Flavell, Oakville.



Real Ace.

First Senior Yearling Hereford bull at the C.N.E., 1920. Exhibited by W. Readhead, Milton.

behind the ears rather than between the horns and the ears. Have it fitted so that the nose part comes midway between the eyes and the muzzle. After a few good, steady pulls, most bulls will make a forward jump, and the worst of the operation is over. With a steady pull on the rope the jumps become more frequent, and soon the animal walks up—halter-broken. There is no "royal road" to this halter-breaking business once they get past the calf stage; the thing to do is to start them when they are young if it is at all possible. At least one out of every lot of ten or a dozen yearling bulls is going to prove a "bad case." When human strength fails to make them lead a team of horses on the front gear of the wagon usually proves effective. With these, often times a rope around the neck works better than the halter, the latter tending to pinch under the tongue and cause sulking. A spring ring slipped into the nose and pulled gently when the strain comes on the rope or halter, works in some cases.

RINGING THE BULL.

Ring the bulls is a job that many dread, and one that in many cases is put off too long. Where bulls are sold through an Association sale, it is usually demanded that they be ringed. Various devices are in use for the punching of the holes in the nose; some use a fork prong, others a tong-like device which grips the nose, and through the holes of which is thrust a hot iron, which punches the hole. Another instrument on the market works tong-wise and punches a half circular hole in the cartilage of the nose. The draw-back with these devices is the fact that the hole that is punched closes up as soon as the instrument is withdrawn, and there is difficulty in getting the ring through, even though they are supposed to be self-piercing. A well-sharpened trocar is a satisfactory instrument to use, and with it a dozen bulls can be ringed in an hour's time. With it the hole is punched, and the cannula, or tube part, is left in the nose, and the trocar proper is withdrawn. One end of the ring is then inserted in the tube, which is gradually worked out, drawing the ring through with it. The ring is then closed, the screw is put in and the job is complete. A word or two about the preparation for the operation. The ring will need some treatment. It should be opened up, and with a small file the slot should be cleaned out and the sharp end rubbed over, so that it will close with very little pressure. When closed the joints should be smoothed off, as they are usually very rough, and if left in the nose in that state, are apt to cause an irritation. The screw should be mounted on the end of a small silver cut to fit in the slot; this will make it convenient for screwing in the ring, and there will be less likelihood of it being lost than when it is grasped between the fingers. A small awl should be convenient for tightening the screw, as the keys usually provided are too easily bent to be of much use. The trocar should be sharp, and should be rubbed with oil or vaseline before putting through the nose. With the equipment all ready, the halter is put on, and the bull's head tied firmly, and at a height that will stretch the neck and not allow him to jump forward. The operation is best done over the side of a stall, the operator on one side and the bull on the other. The nose is grasped between the thumb and second finger of the left hand, and the trocar is thrust through with the right. Ringing should be done when they are eleven months old, but in the case of bulls on nurse cows, that do not show signs of becoming bad tempered, the operation may be postponed, as it interferes with the sucking. Once the ringing has been done the bull should be taught to lead by the ring. Snap a lead rope into the ring every time he is led out, and gradually work some of the pull on this rope. Many bulls grow up without having the ring handled to any extent, and they never lead well in that way. Many will fight the ring for a time, and difficulty will be experienced in getting the rope snapped on, but once they find that they are not going to be hurt, they allow the ring to be handled without any trouble.

CARE OF THE FEET.

On toward spring the feet of the young bull will need some attention; the older bulls will have to have theirs trimmed often, particularly those that are stall tied, where the amount of exercise is very limited. As a rule, the front feet make a better job of caring for themselves than the hind ones, so we will confine ourselves to a discussion of the latter. The hind feet grow long on the toes, and the underside of the foot fills in with a soft growth of hoof of a cheesy consistency. This has the effect of throwing the bull back on his heels; it spoils the set of the hind legs and interferes with his action. Nothing gives a poorer impression than a bull led out for inspection, or into a sale ring, walking on his heels, and with his toes sticking up like runners on a sleigh. To straighten up the legs and give him a chance to show himself off properly, the toes must be shortened, and the bottoms of the feet shaved off. With a quiet bull it is sometimes possible to keep the feet in good shape by trimming occasionally with a pair of hoof pincers while he is lying down. As a general rule other methods must be adopted. The most satisfactory and simple method for the man who is not justified in building special stocks for this purpose is to use the pole method, where the leg is raised over a smooth pole. This method works well with any size of a bull from 800 to 2,400 pounds. The horse stable is a convenient place to do this. Lead the animal into a single stall which, with a mature bull, will allow little room for swinging sideways, and tie the head fairly high. Have a smooth pole, about six inches in diameter and about seven feet long, handy, as well as a couple of chains, or a chain and a rope, for tying up the pole. Fasten one of the chains or the rope around the stall post on the right of the bull, forming a loop, the bottom of which should hang down to about the level of

his flank. Around the post on the left is hung the other chain. The pole is put through the loop on the right; if the bull is standing back, the pole may be shoved through between his legs and the other end grabbed and lifted up just high enough so that he cannot get his leg over it. The pole is held up on the left by bringing the chain around it and slipping on the grab hook at what appears to be the proper height. With a full-grown bull one man will be required to slip the pole through on the right and two to raise it on the left and hold it up until fastened with the chain. The leg is up now and the foot is held up in such a position that it can be pared with safety, and without any chance of injuring the animal, even though he may struggle considerably on the start. Care should be taken to have the pole perfectly smooth, so there may be no chance of chafing the inside of the leg. The tools required are a good sharp pair of hoof pincers, a sharp farrier's knife and a rasp. The toes should be clipped off first, and then the bottoms sheared off to bring the sole down to its natural level. There is a danger of cutting down too deep on the sole and drawing blood; it is time to stop when a pinkish tinge begins to appear on the sole. The rasp may be used for the final levelling



A Quartette of Shropshires.
Shown at London by Geo. D. Betzner, Copetown, Ont.

off, and then the chain unfastened and the pole let down. A few minutes for rest should be given the leg before the other one is raised. The trimming of the feet may be done quickly and easily, and, if common sense is used, without injury to the bull.

This care and treatment takes one up to the time when sales are being held and when special preparation is necessary, but the special fitting for the sale-ring will be made the subject for another article.

Ninety-Eight Shorthorns Change Hands at London Sale.

The twelfth semi-annual sale of the Western Ontario Consignment Sale Company was held at the Fair Grounds, London, on Tuesday, November 9. Although the skies were lowering in the morning, the sun shone brightly towards noon, and again the Company was favored with a fine afternoon for the sale. A large crowd was present, but there were not as many enthusiastic bidders as on some former occasions. One hundred and three head were consigned and, on the whole, they were superior to what has been offered in the past. While there were a number of bulls and a few heifers that should never have been accepted in the sale, there were not as many as were brought into the ring in some previous sales. This Consignment Sale Company has built up a reputation for square dealing, and both spring and fall are besieged with entries for the sale. This fall they sold 98 head, with 66 females averaging \$313.33, and 32 males averaging \$201.06. If the Company had accepted around sixty entries, showing the best individuality and breeding, they would have had a good afternoon's sale and the average would have been much higher. One hundred head is too many for an auctioneer to sell in a short November afternoon, when his bidders are not educated to bid in anything over five or ten-dollar bids. The majority of the animals started at altogether too low a figure, and it takes time when five-dollar bids are made. It would be a better plan when there are so many cattle to be disposed of to hold a two-days' sale and have a get-together meeting of the breeders and consignors on the evening of the first day. This fall there seems to be a slight tendency towards depression in prices of cattle, especially of the plain-bred ones, and this reacts somewhat on those carrying fashionable pedigrees. However, when a Claret, Wimple, Roan Lady, Lavender, Lovely, etc., were brought into the ring bidding was brisk and the prices received were fairly remunerative, although nothing like what animals of similar breeding

and character have been selling for in the London sale during the past two years. It may be that the present is a very good time for a man to start in good cattle. Well-bred live stock will always command a good price. The consignment sales are a medium for the exchange of stock, but it has been demonstrated again and again that these sales are no place for the disposition of plain-pedigreed, poor-quality animals. The highest-priced animal of the sale was of the Lovely family, consigned by Percy DeKay, and went to the \$630 bid of Foster Bros., Wallenstein. She is a beautiful white two-year-old, with a calf at foot. She is a thick, deep, straight-lined individual, showing marked breed character. Zoe of Spring Grove, consigned by H. C. Robson, brought \$625, going to the bid of J. Redmond, Kerwood. This year-old heifer is of the Clipper family and carries much of the same blood as Millhills Comet. Diamond 22nd, consigned by Wm. Waldie, is under a year old, and was first in a large class of junior heifers. She is a particularly sweet thing, and was purchased by J. Moore, of Kirkton, for \$620. Practically all the stuff in the sale was under two years of age. Pioneer (imp.), a three-year-old Broadhooks bull, and second in a class of seventeen, was the highest-priced bull at the sale, going for \$575 to head the herd of Charles Hackney, at Science Hill. This bull was consigned by H. C. Robson, and considering the breeding, quality and character, the price should have been over \$2,000, compared with what bulls in Great Britain and the United States are selling at. The four top bulls in the pedigree were bred by William Duthie.

At the show held previous to selling the animals, classes are provided for bulls, cows, senior and junior heifers. This gives purchasers an opportunity to make comparisons and also creates a good deal of interest.

In a class of seventeen bulls, Elmdale Commander, consigned by R. & S. Nicholson, was first. The champion female was Lady Wimple, a senior heifer consigned by R. S. Robson & Son. The following are the awards in the different classes:

Bulls: 1, R. & S. Nicholson, on Elmdale Commander; 2, H. C. Robson, on Pioneer (imp.); 3, E. Brien & Sons, on Seafoam Pride; 4, H. M. Lee, on Port Light; 5, W. Waldie, on Marquis; 6, Joe White, on Beaufort Hero. Cows: 1, J. A. Watt, on Rosy Tulip; 2, E. Brien & Sons, on Spotless 2nd; 3, Geo. Amos & Sons, on Missie May 2nd; 4, R. & S. Nicholson, on Avenir 20th; 5, R. S. Robson & Son, on Doris Buckingham; 6, W. Waldie, on Lady Maid. Senior heifers: 1, R. S. Robson & Son, on Lady Wimple; 2, E. B. Gosnell, on Rosette 11th; 3, G. A. Attridge, on Oakland's Emmeline; 4, F. McDonald & Son, on Craiglea Buckingham; 5, Percy DeKay, on Lovely Robe 2nd; 6, H. C. Robson, on Zoe of Spring Grove. Junior heifers: 1 and 2, W. Waldie, on Diamond 22nd, and Claret 29th; 3, R. & S. Nicholson, on Lovely Maid 2nd; 4, F. B. Gosnell, on Rosebud Lady; 5 and 6, R. S. Robson & Son, on Cleopatra 9th, and Mina Lass.

The sale was managed by G. A. Attridge, of Muirkirk. Captain Robson was in the box, with McCoig, Laidlaw and Johnston assisting in the ring. The following is a list of the animals selling for \$200 and over:

FEMALES.

Claret, Carr Bros., Michigan.....	\$585
Diamond 22nd, J. Moore, Kirkton.....	620
Lovely of Craiglea 13th, G. J. Kaiser, Lambeth.....	200
Lady Maid, B. G. Burt, Bjenheim.....	255
Missie May 2nd, D. Wright, Ariss.....	360
Pleasant Valley Mysie, T. & J. Poland, Tupperville.....	505
Red Beauty 2nd, F. Malloy, Thedford.....	200
Fairy Rose, T. & J. Poland.....	420
Gay Lady, W. W. Knapp, Michigan.....	285
Roan Lily, W. Gibb, Embro.....	225
Lovely 14th, J. B. Snyder, Elmira.....	265
Lovely Robe 2nd, A. G. Farrow, Oakville.....	530
Lovely 4th, Foster Bros., Walkenstein.....	630
Mildred 19th, J. B. Snyder.....	245
Ruth Buckingham, E. Robson, Denfield.....	200
Strawberry Blossom 3rd, J. H. Knapp, Muirkirk.....	325
Spring Valley Missie 7th, Robt. McKinley, Bjenheim.....	200
Zoe of Spring Grove, J. Redmond, Kerwood.....	625
Nonpareil Dewdrop, J. K. Campbell & Son, Palmerston.....	300
Lady Wimple, W. A. Dryden, Brooklin.....	440
Mina Lass, Robt. McKinley.....	230
Doris Buckingham, F. Gosnell, Highgate.....	425



The Senior Heifer Class at the London Shorthorn Show and Sale.

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or feed box from one meal to
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Illustrated by W. Readhead, Milton.

Cleopatra 9th, W. Gibb.....	325
Rosetta 11th, W. H. Crowther, Fonthill.....	500
Rosebud Lady, Kerr Bros., Henfryn.....	330
Oakland's Emmeline, E. Robson.....	450
Glen Crescent Crimson Flower 9th, R. Mitchell, Ilderton.....	305
Miss Ramsden 12th, W. H. Cowan, Drumbo.....	295
Oakland's Strathallan, E. Gardner, Rodney.....	205
Lavender Gem 2nd, D. Wright.....	490
Ruberta, Jas. Hand.....	210
Matchless of Cedardale 3rd, H. Thompson, St. Mary's.....	355
Rosy Tulip, D. Wright.....	500
Red Flora, D. Wright.....	400
Easter Corsican, W. C. Brien, Thorndale.....	250
Clementina Rose, J. Moore, Kirkton.....	330
Missie's Royal, H. A. Dorrance, Orangeville.....	210
Vanity, Kerr Bros.....	200
Graceful Ella, E. Robson.....	285
Craiglea Buckingham, Palmer Bros., Michigan.....	300
Mina Princess, R. & S. Nicholson, Parkhill.....	200
Bethelnie Vine 2nd, F. W. Scott, Highgate.....	490
Sea Lady, Kerr Bros.....	560
Bluebell Lassie, E. Poole, Lambeth.....	230
Duchess of Gloster May, G. J. Beattie, Oakville.....	300
Butterfly Queen 4th, J. M. Langstaff, Tupperville.....	315
Hedgyn Missie, M. Patterson, Strathroy.....	310
Lovely Maid 2nd, W. R. Elliott & Son, Guelph.....	420
Averne 20th, A. Barrett, Parkhill.....	560
Vese Yviola, S. Morley, Ailsa Craig.....	220
Sittyton Lovelace 2nd, Jas. Norris & Son, Mitchell.....	350
Spotless 2nd, F. Poole.....	260
Corelli Beauty, J. Miller Jr., Ashburn.....	210
Duchess Victoria 5th, E. Robson.....	250
Duchess Victoria 6th, A. Thornton & Sons, Thamesford.....	260

MALES.

Dauntless, H. A. Dorrance.....	200
Rosewood Champion, J. G. McKay, Embro.....	290
Sittyton Orange, H. Rawson, Tilbury.....	235
Pioneer (imp.), Chas. Hackney, Science Hill.....	575
Oakland's Villager, D. Gardiner, Rodney.....	360
Royal Marquis, A. D. McLean, Parkhill.....	260
Missie's Royal, H. A. Dorrance.....	210
Statesman Junior, J. Norris & Son, Chatsworth.....	300
Browndale Pilot, J. L. Devereaux, Ridgetown.....	355
Newton Loyalist 2nd, G. H. Parkhearst, Michigan.....	200
Seaford Pride, D. T. Graham, Parkhill.....	285
Bapton King, J. G. Thompson, Mildmay.....	245
Elmdale Commander, W. Kaiser, Michigan.....	500
Mt. Pleasant Hero, H. A. Dorrance.....	275

Hooper Herefords Sold by Auction.

It was bargain day at J. Hooper & Sons' farm, near St. Marys, on November 10, when their exceptionally choice herd of White Faces went under the hammer at an average of \$269.50. Messrs. Hooper have in recent years exhibited at London, Toronto and Guelph, with phenomenal success, which is ample evidence of the high-class quality of the individuals in the herd. It is doubtful if a stronger line-up of young stuff ever came from a small herd than was seen at Toronto a year ago, shown by Messrs. Hooper. The eight individuals were the progeny of Victor Fairfax, and, when one considers that practically every one of the 1919 crop of calves was a show individual, one can realize what an asset this sire has been in the herd. While only beginners in the show-ring, Messrs. Hooper brought their stuff out in the pink of condition and captured the coveted ribbons from some of the older breeders. There was a fairly good attendance at the sale, but quite a few of the show animals went at a figure greatly below their value. Several of the purchasers were beginners in Herefords, and they certainly secured excellent foundation stuff. The herd sire, Victor Fairfax, only brought \$300, going to the bid of B. Hicks, Centralia. Beauty Fairfax, a year-old heifer, topped the sale at \$525. This is a show individual and Mr. Ross, the purchaser, has a heifer that he need not be ashamed to bring into any show-ring. Minnie Fairfax, also of show calibre, being first-prize yearling at Toronto and London this year, was bought by C. O'Neil, at \$510. The following is a list of the animals sold, together with the names and addresses of the purchasers:

Belle 6th, B. Wilson, St. Marys.....	\$120
May Refiner, A. F. O'Neil & Son, Denfield.....	235
Maude Refiner, A. F. O'Neil & Son.....	255
Belle Britisher 2nd, Herb. Wallace, Granton.....	150
Belle 3rd, A. L. Currah, Bright.....	420
Mary Refiner, W. Skinner, Centralia.....	190
Lily Fairfax, W. L. McDonald, Strathroy.....	165
Delilah 10th, A. L. Currah.....	120
Miss Brae 24th, Wm. Ross, St. Marys.....	340
Daisy Fairfax, Clarence O'Neil, Denfield.....	210
Miss Brae 26th, Byron Hicks, Centralia.....	180
Beauty Fairfax, Wm. Ross.....	525
Minnie Fairfax, C. O'Neil.....	510
Lady Fairfax, Morden Bros., Ridgetown.....	200
Jessie 45th, J. S. Dunbar, Ariss.....	320
Flossie Fairfax, Wm. Rodd, St. Marys.....	250
Rose, Wm. Ross.....	425
Kattie, A. L. Currah.....	425
Frebis, Morden Bros.....	210
Victor Fairfax, Byron Hicks.....	300
Andy Fairfax, Henry Houck, Embro.....	235
Admiral Fairfax, Albert Stevers, Parkhill.....	145

Elgin Breeders' Shorthorn Sale.

The Elgin County Shorthorn Breeders' Association held their fifth annual show, and sale, in St. Thomas, on Wednesday, November 10, when 67 head of Shorthorns changed hands for a total of \$13,675. The breeders consigned considerably better quality stuff than they have in the past, but the purchasers did not seem to appreciate pedigree and quality in the way that they did a year ago. There were a lot of choice herd sires and females that went away below their value, and, again, there were a few that should never have been brought to the sale. In time, breeders will learn that a consignment sale is no place to unload undesirable stock. On the whole, the entries were well brought out, showing evidence of having considerable time spent on them in fitting for the sale. The highest price was paid for Augusta Princess, an Augusta-bred heifer, consigned by J. D. Ferguson & Sons. Bidding was brisk, but towards the last it narrowed down to Geo. Spackman, of St. Thomas, and Carr Bros., Michigan. The former outbid his competitor. This is a particularly breedy, white calf and is of show calibre. The champion female of the show, Tidy's Beauty 2nd, consigned by W. H. Ford & Sons, was a sweet, roan heifer, scarcely a year, old, and went to the bid of Carr Bros., for \$470. W. W. Scott & Sons had a light roan, six-year-old cow with calf at foot that went for \$440. From the same herd came Lancaster Gem, sired by Gainford Eclipse. This seventeen-months-old heifer was second highest in the sale, going to George Spackman. The highest priced bull was consigned by W. A. Galbraith. He is of the Lustre family and sired by Proud Champion, an Augustabred bull. D. H. McCallum, Iona Station, paid \$310 for him.

Previous to the sale the animals were judged by George E. Day. There was a good line-up of both males and females. The first prize for bulls under one year was won by W. F. Ford & Sons, on Royal Master. W. G. Sanders & Sons were second with Hero's Last. D. McPherson was third with Stamford Beauty. In yearling bulls, W. A. Galbraith had the first prize in Royal Lustre, which was also the highest priced bull at the sale. M. W. Meek had the second prize in Silver Knight. The third prize went to Thomas Breen, on Diamond Boy. W. H. Ford & Sons had the champion female in Tidy's Beauty 2nd. J. McLean & Son were second with Lady Ramsden 13th; D. McPhedran was third with Stamford Beauty.

A banquet was tendered the consignors and purchasers by R. D. Ferguson and W. A. Galbraith, the consignors of the highest-priced male and female of the sale. Over fifty were present and enjoyed a social evening. George E. Day, Secretary of the Shorthorn Association, gave an instructive address in which he emphasized the importance of paying attention to breeding good stock and the feeding of the same. Instances were cited where grade females, bred to an outstanding sire, produced calves which developed into market-toppers. The value of the sire was emphasized, and breeders were cautioned against using a sire of poorer quality than the females in the herd. Captain Robson also emphasized the importance of securing the best sire available, pointing out that the quickest way to herd improvement is through the sire.

The sale was managed by W. A. Galbraith, with Captain T. E. Robson in the box, and Locke & McLachlin in the ring. Following is a list of the animals selling for \$100 and over, together with the names and addresses of the purchasers:

MALES.

Red Lady Jr., J. H. Sneyry & Son, Croton.....	\$425
Augusta Princess, Geo. Spackman, St. Thomas.....	610
Golden Patricia, A. G. Farrow, Oakville.....	200
Walnut Seaweed 2nd, Carr Bros., Michigan.....	410
Lady Ramsden 19th, J. D. Galbraith, Iona Station.....	180
Lady Ramsden 13th, W. H. Ford & Sons, Dutton.....	215
Ramsden Pearl 3rd, Palmer Bros., Michigan.....	175
Mysie Girl 3rd, J. H. Sneyry & Son.....	100
Red Mysie 2nd, C. B. Shore, Glanworth.....	170
Sea Lass, L. Kendle, Iona.....	440
Red Lady 2nd, A. McFarlane, Dutton.....	250
Tidy's Beauty 2nd, Carr Bros.....	470
Strathallan D. R. Turner, Highgate.....	155
Lady Adelaide, Geo. Spackman.....	350
Matilda A., C. H. Shore.....	100
Cloris Secret, Mr. McKinley, Ridgetown.....	195
Corelli Beauty, W. Miller, Shedden.....	130
Lady Lustre, J. M. Langstaff, Tupperville.....	430
Miss Strathallan, W. A. Galbraith, Iona.....	140
Lancaster Gem, Geo. Spackman.....	535
Buchan Rosedale, D. McCallum, Iona Station.....	130
Strathallan, Rosedale, Carr Bros.....	140
Claret Caprice, J. D. Galbraith.....	200
Comedy, C. B. Shore.....	165
Golden Beauty, Carr Bros.....	150
Juniata, W. Burgess, St. Thomas.....	135
Glenhome Daisy, B. D. Burke, Blenheim.....	280
May Mariner 2nd, B. Carmichael, Ilderton.....	135
Barbara, H. Smith, St. Thomas.....	240
Lilly Mariner, W. Burgess.....	160
Stamford Beauty, W. H. Ford & Sons.....	270
Glenhome Pride, N. Campbell, Shedden.....	200
Red Princess, B. D. Burke.....	130
Wallflower 2nd, Carr Bros.....	145
Welcome H., Carr Bros.....	100
Thamesview Gem, A. Watson, Wallacetown.....	105
Joan Lovely, J. G. Chapham, St. Thomas.....	100
Princess Emeline, J. H. Myers, Alvinston.....	105
Northern Belle 3rd, Geo. Spackman.....	200
August Topsy, W. B. Stirling, Blenheim.....	185
Ruby 20th, J. A. Campbell, Iona.....	100
Ramsden Lady 4th, J. H. Sneyry & Son.....	275

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Miss Ramsden Valley, L. McIntyre, Dutton.....	150
Evening Star, W. W. Scott & Son, Highgate.....	350
Spring Valley Eliza 3rd, W. H. Ford & Sons.....	350
Fancy Maid 2nd, Geo. Spackman.....	120
Lady Ramsden 10th, W. McTaggart, Appin.....	265

MALES.

Royal Lustre, D. H. McCallum.....	310
Proud Rufus, Palmer Bros.....	150
Silver Knight, E. Jones, Pt. Stanley.....	260
Royal Bruce, Palmer Bros.....	200
Red Hero, J. H. Myers.....	185
Roan Leader, Palmer Bros.....	210
Walnut Matchless, Palmer Bros.....	250
Rosedale Chief, Palmer Bros.....	125
Brigadier, D. Ferguson, St. Thomas.....	125
Hero's Last, D. Buchanan, Thamesville.....	210
Royal Master, T. L. Pardo, Blenheim.....	145
Artisan, P. J. Cameron, Dutton.....	155
Diamond Boy, J. Clark, Iona.....	230

First Annual Peel County Judging Contest.

As a result of the first annual county live stock judging contest held in Brampton, Peel County, on Friday, November 5, two junior farmers from Peel will go to the International Live Stock Exposition, Chicago, with all expenses paid, while a third contestant will attend a two-weeks' short course at the O. A. C., Guelph, this winter, under similar conditions. Similar county competitions in live stock judging between members of the Junior Farmers' Improvement Associations are being held in other counties including Wentworth, Halton, Brant, Waterloo and Durham. As a result of these contests and the liberal prizes that have been awarded to those winning highest honors, there will be about 17 successful contestants who have won a trip to the great annual live stock show at Chicago this fall. Of these, six will be from Oxford County, three from Wellington, two each from Waterloo, Wentworth and Peel, and one from Brant. Of the six boys who will go from Oxford County, one will have his expenses paid by Armour's Bureau of Research and Economics, which has offered two trips to the International Live Stock Exposition for the best two junior live stock judges in Ontario. These two go to representatives of the Carleton and Oxford County teams which competed for the Provincial championship last winter. Three more Oxford County boys are going to Chicago as the result of their success in training teams of public school boys for the rural school fairs of Oxford County. Of these three, the expenses of two will be paid by the Harris Abattoir Company, while another will go at the expense of the Merchant's Bank. A fifth Oxford boy crowded the fourth very closely in training boys for the school fair judging competitions, and his expenses will be paid by the school section. The sixth boy will pay his own expenses. These seventeen young farmers will go to Chicago in charge of a Representative of the Ontario Department of Agriculture, who will see that they are shown everything possible at Chicago, and who will organize the trip so that the most can be got out of it. It is very difficult indeed to say what the influence of these seventeen young men will be upon the agriculture of their respective localities. Their proficiency must be ascribed in a large measure to the training they have secured in the various live stock judging competitions that have been held during the past ten years, and they represent not the total results of these competitions, but merely the high-water mark, so to speak.

The Peel County competition was an all-day affair, in which each of the twenty-nine contestants was required to judge a class of mature Scotch Shorthorn cows, a class of feeding beef heifers, a class of mature Holstein cows, two-year-old Jersey heifers, and classes of Cotswold ewe lambs, Shropshire shearing ewes, Oxford shearing ewes, mature heavy draft Clydesdales, general-purpose horses, and a class of bacon hogs, or ten classes in all. Each contestant was given twenty minutes to judge each class, and to write his reasons for placing the animals a certain way, on a card provided for the purpose. After three or four classes had been judged, all of the contestants were taken before the judge of each class, and one by one were required to give their reasons orally—and without reference to any notebook—for the placings which they had made in each case. The written reasons were used only to break a tie.

There was some very keen competition throughout the whole day. As soon as the earliest scores were tabulated it was seen that a certain few of the contestants would stand well up. We also considered the event to be interesting because included among the aspirants for honors was at least one junior farmer who was the first of the rural school fair boys to come along and enter the junior farmers' class. We were informed that this particular young farmer did not do as well as usual on this occasion, but he nevertheless was winner of good standing in most of the classes. Below is a list of the awards in beef cattle, dairy cattle, sheep, swine, and horses. The total possible score for the day was 1,000, 200 being the possible score for beef cattle, dairy cattle and horses, with 300 for sheep and 100 for swine. Fifty points out of each 100 were given for correct placings, and the other 50 points for oral reasons. Incorrect placings were scored according to the seriousness of the mistake which had been made. The judges were: horses, Professor Toole, O. A. C., and C. F. Bailey, Toronto; sheep, R. W. Wade and L. E. O'Neil, Toronto; swine, G. E. Day, Guelph; beef cattle, Professor Toole

temperature of about 70 degrees sufficient alcohol will have formed in about a month.

CHANGING THE "HARD CIDER" INTO VINEGAR.
When fermentation has ceased and no more gas bubbles are evident the second stage of the process should be brought about, the changing of the alcohol into acetic acid or the acid of vinegar. This is done by adding "mother of vinegar" to the barrel. This contains the bacteria that cause the formation of acetic acid from alcohol. Pure "mother" is the clear, thin, glistening membrane that forms on the surface of good vinegar. If pure "mother" cannot be obtained then from two to four quarts of pure cider vinegar of good quality may be added to the barrel. This will contain enough "mother" for the purpose.

The forming of the acetic acid also requires a temperature of about 70 degrees. If this temperature is supplied good vinegar is obtained in about two months. Without these conditions the process may take as long as two or three years.

CARE OF THE VINEGAR.

When a vinegar of suitable strength has formed (5 per cent. acetic acid) the barrel should be bunged tightly and put in a cool cellar to stop the action of the bacteria or the vinegar will start to deteriorate in a short time if left exposed to the atmosphere.

It is best to "rack" or siphon off the clear vinegar and store it in a clean, freshly scalded barrel kept tightly closed, or else in stone jugs or other containers tightly corked. These should be kept in a cool place.

If these methods are followed no difficulty should be experienced in obtaining vinegar of good quality in a reasonably short time.

Farming at Weldwood.

As the season is now practically ended we thought perhaps readers of "The Farmer's Advocate" would be interested in learning about the operations on Weldwood Farm during the past year. One aim in operating this farm is to provide an opportunity for the editors to keep in close touch with practical agriculture and we furthermore hope through the breeding of cattle and swine to do our part in the development and improvement of the live stock industry.

Weldwood is an ordinary farm, run on as practical a basis as possible under the present labor difficulties, and it is paying its way. Crops peculiarly adapted to the vicinity are grown, and pedigreed cattle and hogs are kept to consume the feed produced. Some readers of these columns are under the impression that Weldwood is a model farm, with everything in order, but when they drive on to the place they are disillusioned as loose boards can be found lying around the buildings, an odd implement or two may be standing beside the barn during the summer, and Canada thistle, rag weed and even a little bind weed may be seen in some of the fields. On walking back through the lane, one may, perhaps, see a wrench, hammer or plow share which has been left beside a fence post, and possibly a gate or two will be off their hinges. On looking through the stable a few cobwebs will be seen in the corners, there may be a few broken window panes, and some of the windows would be the better of being washed, just as on any ordinary farm. The superintendent of the farm, who, by the way, is responsible for a portion of the reading matter in the paper, does what he can to keep the work in shape with the labor available. Anyone who has had anything to do with hired help during the past two or three years knows how difficult it is to get help, to keep it, and to get the work done in anything like a satisfactory manner.

Readers of "The Farmer's Advocate" at the time the farm was purchased will recollect that it was fenceless, drainless, and practically destitute of buildings. Added to this, it was very weedy. The original 112 acres later had 25 acres added to it, and a fairly complete system of drainage was put in at no light expense. Wire fencing was erected and an effort made to not only clean the soil but to increase the fertility. To a great extent this has been accomplished, and each year the yield shows an increase. Three years ago another 25 acres was purchased about half a mile from the original farm, and it is being brought under cultivation. This year we have had the use of a field adjoining this for pasture, which brings the area of the farm to over 200 acres, with about 160 acres which can be brought under the plow. A considerable acreage is devoted to wheat, not so much for its cash value but for the fact that we usually get a good catch of clover and a great bulk of straw. This year we had 24 acres in wheat, on the land which was recently purchased and which was pretty well run out. It had been in grass for a number of years. A year ago half of it was summer-fallowed and the other half in oats. About 300 pounds of basic slag to the acre was sown with the wheat, and the results of this were quite marked, as strips were left without the slag in several parts of the field. This year the crop yielded 28 bushels of good, plump grain to the acre, and we have an excellent catch of sweet clover on part of it and red clover on the remainder. This fall we put in 15 acres of wheat on sweet-clover sod. The field was pastured up to the first of August and then plowed and put in good tilth for seeding. We seeded late in order to escape the Hessian fly and the wheat was slow in coming up but, the weather being favorable later on, the wheat has a nice top at the present. On five acres of this field, barnyard manure, at the rate of twelve loads to the acre, was cultivated in, and on another five acres special wheat fertilizer was sown at the rate of 400 pounds to the acre. About two and a half acres were sown with basic slag, but, owing to the drill breaking, the other two and a half acres are without fertilizer of any kind. However, we purpose top-

dress this as soon as it freezes up. At present one can readily see where no fertilizer was applied.

Oats are usually sown on the previous year's corn ground, and on a field of sod. This year the wire worm considerably thinned out one field, but owing to the season being favorable there was a heavy crop of straw and the 38 acres of oats averaged 60 bushels to the acre. O. A. C. 72's have been grown for the last two years. As a rule, practically all the spring crop is seeded and the catch is good this fall. There is one 12-acre field which was broken out of sod that is not seeded, as we wish to put it in corn next year.

The corn crop was an exceptionally good one. On 15 acres enough corn was grown to fill a 14 by 40-foot silo and a 10½ by 38-foot silo. There were then two acres and a half of corn left on the field, which was later sold to a neighbor. There is a 6-acre field of corn still in stook, part of which will be husked and then the stalks ensiled. The large field was planted to Leaming and Bailey varieties at the rate of 28 lbs. of seed per acre in drills. The field was plowed this spring and put in as good a tilth as possible. Corn was planted the last of May, and we only found time to give it four cultivations during the summer. No commercial fertilizer was used, but the field was given a liberal dressing of manure during the winter. The corn was practically matured at the time of ensiling.

An effort was made a few years ago to grow alfalfa but with only partial success; consequently, the main hay crop is a mixture of clover and timothy. Last spring, however, alfalfa was mixed with the red clover in an effort to improve the quality of the hay. The 1920 hay crop was not as good as that of the previous two years. However, it went about two tons to the acre. One field was almost clear timothy, as it was the second cutting. This had been top-dressed the previous fall and the results were quite evident in the crop produced. From our experience a profitable place to dispose of the farmyard manure is on the meadows. Sweet clover has been grown with success, especially as a pasture crop and a soil renovator. The crop has on two occasions been saved for hay, and, while it made coarse feed the stock seemed to eat it quite readily. Our chief difficulty was that after cutting for hay the plants died off and we had no after-pasture. This was, no doubt, due to cutting too closely. No crop has been grown on the place that will carry the same number of cattle up till the first of August, and keep them in as good condition, as will sweet clover, and the soil is left in excellent condition for the succeeding crop. Twenty acres were seeded last spring; part with the white-blossom and part with albotrea.

From four to five acres of roots have been grown for several years in the young orchard. This year both mangels and turnips yielded fairly well, and cropping the orchard in this way does not seem to have in any way injured the trees. We always like to have the roots for feeding the hogs and cattle during the winter.

The six acres of young orchard, which was planted out the year after the farm was purchased, is coming along very well. A few of the temporary trees have died and have been replaced with cherries, plums or pears. Only one or two of the permanent trees have died. Last year there was a nice crop of Duchess, and a few apples of other varieties. This year there has been a splendid crop of Duchess, Wealthy, Tolman Sweet, Wagener, and McIntosh Red, with a few Russets, Ontario and Spys. The cherry and plum trees have borne heavily the last two years. Some of the other smaller fruits were set out to supply the table. A vegetable garden is grown each year, with as great a range of variety as possible. The main potato crop has never been particularly good, as the farm is not adapted to the growing of potatoes. Only sufficient potatoes are grown to supply the farm house.

When the place was first purchased, grade stock was kept, and it is only within the last three years that the last grade has been disposed of. A herd of some sixty head of dual-purpose Shorthorns is now maintained on the place, and from five to six Yorkshire sows are kept. The farm produces sufficient roughage, such as straw, hay, silage and roots, to carry this stock, but a small amount of concentrates are purchased to help balance the ration and carry the herd through. Last spring there were 15 tons of hay on hand after the stock went on grass, and about 15 feet of silage left in one silo for summer feeding. While an effort is made to secure creditable milk records, and to produce breedy, nice-quality stock, exceptionally high records are not sought after, as it is realized that to increase the milk flow beyond a certain point tends to make the animal's form less of a beef type. Last year the herd averaged around 7,500 pounds of milk. This is separated, the cream sold, and the calves, after they are three or four weeks old, are raised on skim-milk and grain. In the last twelve months we have raised twenty-one calves. Each year an effort is made to improve the herd by culling, and retaining the best young stock.

The labor situation has proven a handicap, and many things which we would like to have done have been left undone. While help could have been secured in the city at an outrageous price, the farm manager preferred to run the farm under ordinary farm conditions, and what could not be done with the regular help and an occasional day-man was left undone, to the detriment of the appearance of the place. Production rather than beautification was the aim. However, as time permits, an effort will be put forth to make the surroundings even more homelike and attractive. This past summer a neat story and a half frame house was built for a married man, with the hope that this would help solve the labor problem. Two men have been kept the year around, with an occasional day-man during the rush season. The herd has grown to such a size that one

man's time is pretty much taken up in the stable, and at certain seasons the other man can scarcely handle the outside work.

Weldwood Farm has not the same chance as the farm where the owner is working on it constantly with the men every day. Our experience has been that it is difficult to get men who will take an interest in the work and endeavor to do it as if it were their own. Consequently, time is not always utilized to the best advantage, nor implements and machinery looked after as they should be. However, the crops produced during the past three years have been bumper ones, and we hope to gradually further increase the yields. The live stock is thrifty and there has been very little sickness or mortality among either the cattle or hogs. We would like to have things a little more tidy around the buildings, but we are not ashamed of the place, of the crops produced, or the stock kept on the farm.

THE DAIRY.

Notes From the National Dairy Show.

One of the most interesting features of the National Dairy Show was the vast amount of dairy information made available from the various State College and Department of Agriculture exhibits. We made notes of some of the points that were brought out and the following miscellaneous jottings should be interesting and instructive to all dairymen.

Information was collected and presented with reference to the per capita consumption of dairy products. The probability is that the figures in all cases are not absolutely reliable, and in any case they are not entirely comparable for different countries owing to the fact that the figures are not for the same year in each case. Moreover, the figures regarding butter undoubtedly refer to the per capita consumption of creamery butter, which, in the case of Canada, at least, was only about 60 per cent., of the total butter consumption.

PER CAPITA CONSUMPTION OF BUTTER.

Australia, 25.6 lbs. (1913); New Zealand, 21.7 lbs. (1914); Denmark, 19 lbs. (1914); United States, 17.5 lbs. (1909); United Kingdom, 17 lbs. (1914); Netherlands, 16.8 lbs. (1917); Sweden, 16.5 lbs. (1917); Canada, 16.3 lbs. (1911); Norway, 14 lbs. (1906); Switzerland, 12.1 lbs. (1914); Italy, 2.5 lbs. (1913); Argentine, 1.7 lbs. (1913).

PER CAPITA CONSUMPTION OF CHEESE.

Switzerland, 26.4 lbs. (1914); Netherland, 13.2 lbs. (1912); Denmark, 12.2 lbs. (1914); United Kingdom, 11.2 lbs. (1905); France, 8.1 lbs.; Norway, 7.1 lbs. (1910); Australia, 4.8 lbs. (1913); Italy, 4.8 lbs. (1913); United States, 3.8 lbs. (1909); New Zealand, 3 lbs. (1911); Canada, 3 lbs. (1914); Argentine, 2.9 lbs. (1913).

PER CAPITA CONSUMPTION OF WHOLE MILK.

Sweden, 69.7 gallons, (1914); Denmark, 68.5 gallons, (1914); Switzerland, 67.4 gallons, (1914); Germany, 61 gallons, (1913); Belgium, 44 gallons, (1895); United States, 42.4 gallons, (1917); Netherlands, 39.5 gallons, (1902); Canada, 26 gallons, (1916); Hungary, 24.2 gallons, (1914); United Kingdom, 22.2 gallons, (1914); Italy, 4.2 gallons, (1915); Hawaii, 1 gallon, (1918).

DAILY CONSUMPTION OF DAIRY PRODUCTS IN THE U. S.
Cheese, .17 or 1/6 ounce; milk powder, .02, or 1/80 ounce; whole milk, 1 pound, or 1 pint; ice cream, .75, or ¾ pounds; condensed milk, .45 or ½ ounce; butter, .62 or ⅝ ounce.

Samples of Danish, Dutch, Argentine, and Canadian butter were on exhibit with their respective analyses, which were as follows:

	Argentine %	Canadian %	Holland %	Denmark %
Butter-fat.....	83.27	81.04	85.35	83.08
Water.....	14.10	15.20	13.06	14.25
Salt.....	2.02	2.69	.56	1.52
Casein.....	.57	1.03	.73	1.09
Ash.....	.04	.04	.36	.06

The point was emphasized with regard to the economy of the dairy cow that "For each 100 pounds of digestible organic matter consumed the cow gives back 18 pounds of digestible food solids."

The ravages of disease in live stock were indicated by a statement from the Bureau of Animal Industry, of the U. S. Department of Agriculture, which said: "The records of the meat inspection division of the Bureau of Animal Industry, for the fiscal year 1919, indicate that of all establishments under federal supervision there were condemned as unfit for food, 37,600 head of cattle and 65,838 hogs. This is equivalent to 2,000 carloads of cattle and 1,000 carloads of hogs. This represents a waste of approximately 30,000 carloads of feed that went into these animals."

Statistics compiled from the records of 437 Vermont cows were given to show the amount of milk needed to pay the various items in the cost of producing milk, and the amount of milk remaining after the expenses were paid.

For 180 cows producing less than 5,000 lbs. of milk,

king on the stable, and can scarcely handle the same chance as the experience has been that it will take an interest in the as if it were their own. ways utilized to the best and machinery looked after the crops produced during bumper ones, and we ease the yields. The live been very little sickness cattle or hogs. We would more tidy around the build- of the place, of the crops the farm.

DAIRY.

National Dairy

g features of the National out of dairy information rious State College and xhibits. We made notes rought out and the follow- ld be interesting and in-

ed and presented with umption of dairy products. rures in all cases are not case they are not entirely ntries owing to the fact e same year in each case. ing butter undoubtedly otion of creamery butter, at least, was only about er consumption.

PRODUCTION OF BUTTER.

New Zealand, 21.7 lbs. (1914); United States, 17.5 lbs. (1914); Nether- 16.5 lbs. (1917); Canada, lbs. (1906); Switzerland, lbs. (1913); Argentine,

PRODUCTION OF CHEESE.

(1914); Netherland, 13.2 (1914); United Kingdom, lbs.; Norway, 7.1 lbs.; Italy, 4.8 lbs. (1913); New Zealand, 3 lbs. Argentine, 2.9 lbs. (1913).

PRODUCTION OF WHOLE MILK.

Denmark, 68.5 gallons, (1914); Germany, 61 gallons, (1895); United etherlands, 39.5 gallons, (1916); Hungary, 24.2 m, 22.2 gallons, (1914); ai, 1 gallon, (1918).

PRODUCTS IN THE U. S. lk powder, .02, or 1/80 r 1 pint; ice cream, .75, .45 or 1/2 ounce; butter,

Argentine, and Canadian heir respective analyses,

Canadian %	Holland %	Denmark %
04	85.35	83.08
20	13.06	14.25
69	.56	1.52
03	.73	1.09
04	.36	.06

th regard to the economy 100 pounds of digestible w gives back 18 pounds

ve stock were indicated au of Animal Industry, griculture, which said: on division of the Bureau cal year 1919, indicate er federal supervision or food, 37,600 head of is equivalent to 2,000 arloads of hogs. This ately 30,000 carloads mals.

records of 437 Vermont out of milk needed to ost of producing milk, after the expenses were than 5,000 lbs. of milk,

it required 570 lbs. of milk to pay the overhead expenses; labor required the proceeds from the sale of 806 lbs. of milk; and feed, including concentrates, silage, dry roughage and pasture required, the money from 1,810 lbs. of milk, leaving an amount equal to 960 lbs. of milk to yield a salary for the manager and a profit.

In the case of 257 cows producing more than 6,000 lbs. of milk, 962 lbs. were required for overhead; 806 lbs. for labor; 2,302 lbs. for feed; while there were 3,074 lbs. left for the manager's salary and a profit. Thus the illustration given shows that where the average production of a group of cows was raised from 4,146 lbs. per year to 7,144 lbs., the amount of milk that actually goes to the owner for profit and managing ability is raised from 960 lbs. to 3,074 lbs., notwithstanding the fact that it cost 500 lbs. more of milk to pay for the feed eaten by the higher producing cows, and 400 lbs. more of milk to pay for increased overhead.

Figures which had been collected from cow-testing associations in the United States were given to show the increased income over the cost of feed which resulted from increasing the production of both butter-fat and milk. These figures are as follows:

Average butter-fat production lbs.	Average income over feed cost	Average milk production lbs.	Average income over feed cost
100	\$ 9.00	1,500	\$ 2.00
150	25.00	3,000	24.20
200	39.50	4,500	50.00
250	54.00	6,000	77.00
300	70.00	7,500	95.00
350	84.50	9,000	117.00
400	98.00	10,500	136.00
450	115.00	12,000	153.00
500	126.00	13,500	185.00
550	136.00	16,500	209.00
600	157.00		

These results are from ten cow-testing association years, including 2,337 individuals yearly records of cows of all breeds and all ages.

The season of freshening as influencing production is shown by the average production of 11,130 yearly cow-testing records.

	Lbs. Butter-fat	Lbs. Milk
Spring.....	236	5,775
Summer.....	234	5,863
Autumn.....	267	6,591
Winter.....	254	6,338

Figures were also given from 100 cow-testing associations involved in the yearly records of 16,457 cows to show the relation between butter-fat production and the feed cost per pound butter-fat; and the relation between butter-fat production and the returns from one dollar spent for feed.

No. of Cows	Feed Cost per lbs. Butter-fat		Returns from \$1 spent for feed
	lbs.	cents	
41	50	63	.60
562	100	35	1.20
2,124	150	25	1.65
3,984	200	22	1.90
4,361	250	20	2.10
3,056	300	18	2.30
1,465	350	16	2.45
575	400	15	2.63
185	450	14 1/2	2.73
70	500	13	2.82
26	550	14	2.65
8	600	15 1/2	2.72
2	650	13 1/2	—
1	700	14	—

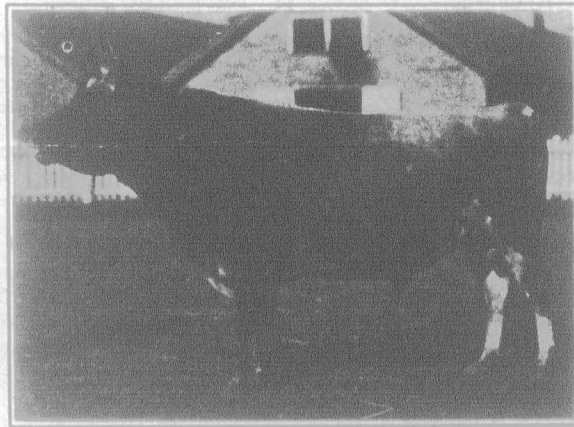
It was shown by the Ohio State University that the average family consumed 68 1/4 gallons of milk annually. At 15 cents per quart, this milk is worth \$40.95. It was also asserted that the average good cow would produce this amount of milk in 39 days, during which time she will require feed and labor in the following amounts: Hay, 190 lbs.; silage, 685 lbs.; oats, 50 lbs.; corn, 50 lbs.; oil meal, 48 lbs.; bran, 50 lbs.; Salt, 3 lbs.; stover, 106 lbs.; labor, 18 1/2 hours. The point in connection with this exhibit was to show to the consumer all the various feeds and items in the cost of production and distribution which must be paid for out of that \$40.95 mentioned above, before the producer or the distributor could get any profit.

The size of the average farm in the United States is 139 acres, and there are four dairy cows for each farm of this size.

There are 348,157 pure-bred Holsteins in the United States, of which 83,546 are owned in the State of New York.

The influence of a good dairy sire was shown by the Dairy Husbandry Division at the University of Illinois,

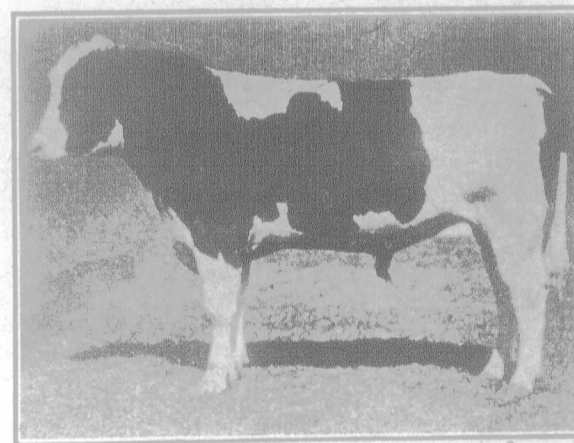
which presented the Milk and butter-fat records of five cows and their daughters sired by a good bull. In the case of No. 1, with a milk production of 9,283 lbs. and 290 lbs. of fat, the daughter gave 18,361 lbs. milk and 575 lbs. of fat. No. 2, with a milk production of 14,064 lbs., and 456 lbs. of fat, had a daughter whose milk record was 19,102 lbs. of milk and 659 lbs. of fat. No. 3's production of 9,526 lbs. of milk and 290 lbs. of fat was increased in her daughter to 13,043 lbs. milk and 468 lbs. of fat. The fourth illustration was quite similar, the production of 9,585 lbs. of milk having been increased to 14,901 lbs., while the fat production of 329 lbs. was increased in the daughter to 503 lbs. In the fifth instance the dam produced 10,105 lbs. of milk and 303 lbs. of fat, while the daughter made a record of 13,686 lbs. of milk and 443 lbs. of fat.



Brampton Radiator.
First aged Jersey bull and senior champion male at Toronto for B. H. Bull & Son, Brampton.

The Feeding of Silage.

The fact that the silo has become such an important factor on the modern dairy farm makes it advisable for the feeder to understand something of the process by which the feeding value of corn can be preserved for considerable length of time in the form of silage. About sixty-four per cent. of the total nutriment in the corn plant is contained in the corn and cob, while the remaining thirty-six per cent. is to be found in the stalks and leaves, and the fact that the silo has been the means of preserving this thirty-six per cent. of the nutriment of the corn plant in a succulent and palatable condition is something which has been of immeasurable advantage to the dairy industry. There is no cheaper form of storing dairy feeds than as silage and, as has been said, the silo at once becomes both the poor man's necessity and the rich man's luxury. It used to be



Count Rauwerd Rattler.
First two-year-old Holstein bull at Ottawa for the Kemptville Agricultural School, Kemptville, Ont.

thought that the feeding of silage was the means of producing tainted milk, and certain milk companies at one time refused to receive milk from silage-fed cows. Nowadays, however, with the modern-built silo and a general understanding of the better methods of preserving silage, it is known that there are no injurious effects upon the milk arising out of the feeding of silage. Poorly-preserved silage will, however, give rise to bad-flavored milk.

One of the things which is necessary for the proper preservation of silage is a smooth, air-tight wall. In the earlier days when silos were first built the walls were often very crude and by no means air-tight. The result was that much of the silage was lost. The necessity for an air-tight condition for silage arises from the fact that before it becomes fully made and in the stable to be preserved for any length of time, the green corn must ferment, and this fermentation is only brought about under the proper condition when the silage is well tramped and in an air-tight structure. This fermentation is caused by enzymes, which are contained in the plant cells, and also by bacteria and yeasts which are carried into the silo on the green corn. Corn carries a considerable amount of sugar, which during the process of fermentation is broken down into various acids, chief among which are lactic acid, which causes the souring of milk, and acetic acid, which is the acid in vinegar. When these changes take place in the sugar of corn, oxygen is taken up from the air and carbon dioxide is given off. When the sugar has been used up in the

corn, fermentation practically ceases, because other carbohydrates than sugar are attacked only to a small extent.

We find here, therefore, the principal reason why leguminous crops such as clover, do not make first-class silage unless combined with some other crop. This is due to the fact that clovers have a much lower sugar content than other crops, such as green rye, wheat, corn or sorghum. When ensiled with corn, cow peas, soy beans, pea vine, and other crops, make silage of good quality and rich in protein. As the corn plant matures it contains less sugar, for which reason silage from mature corn is less acid than from green corn, owing to the fact that there is less sugar with which to carry on the processes of fermentation. The silage-making process ceases after a few days, and from then on to appreciable changes will take place so long as the air is excluded. In addition to the conversion of sugar in acid, some of the protein is broken down into simpler compounds. But there changes are not injurious, for the reason that they are more or less similar to the changes in foods brought about by the process of digestion. Thus the silo has been described as a "quick process" vinegar factory, and in a bulletin of the Storrs, Connecticut, Experiment Station, silage fermentation is simply discussed as follows:

"A silo is a type of 'quick process' vinegar factory. In the cutting of silage every piece is covered with a film of sweet juice. This film of juice affords an ideal medium for the growth of sugar fermenting yeasts and bacteria, which begin to grow as soon as the silage enters the silo. The work of the bacteria in changing the sugar to acids and of the yeasts in changing the sugar to alcohol is performed for a time, till the lactic acid bacteria cease to work and the yeasts complete the fermentation of the remaining sugar. The alcohol produced is immediately acted on by acetic bacteria and changed to acetic acid. The great pressure that the bottom layers must undergo of sixty to a hundred tons, squeezes out, providing the corn is immature, considerable corn juice which, in a leaky silo, runs out and is entirely lost. The first ten feet of the bottom of the silo is practically in a water-logged condition. Each piece is buried in corn juice. The direct change of sugar to acid is brought about by lactic acid bacteria, which are abundantly present on farm teams, men handling the corn, and in the yards and stable dust. Some varieties of bacteria are likely indigenous on the corn plant. The corn juice is very sweet to the taste and is composed of such sugars as are readily fermentable by lactic acid bacteria. The yeasts grow till a certain amount of acid is produced or the sugar is used up, at which point they cease to produce any more alcohol.

"In the silo we find sweet juices fermentable by bacteria and yeasts, with or without the presence of air. The same kind of fermentation but less in amount seems to develop at the bottom where the juice and silage pieces are firmly packed under great pressure as develops near the top where there is a larger amount of air and smaller amount of moisture. At the surface and to a depth of one to three feet, depending on the density, there is a destructive fermentation, which is of an alkaline character.

"The acidity of silage is the most important factor connected with the fermentation. It is the acid which preserves the silage and prevents destructive fermentation which would change it to humus. The acidity combined with the lack of air contact are the two elements of preservation. If acid destroying organisms are kept from silage it will keep indefinitely. It is less important to know how this acid is produced than to know how to control the conditions which favor its production. But the study of acid production leads to the proper control of its production.

"The per cent. of acid in silage is never much less than one per cent., and not much over two per cent. The average would be nearly one and one-half per cent. This means that in one hundred tons of silage three thousand pounds of mixed acids are present. If these acids could be separated from the silage they would be worth \$1,700.00 more than the silage at the average market price.

"The amount of acid consumed by the cow is quite startling. Suppose a cow is fed forty pounds of silage in a day. In this silage there is about ten ounces of pure acid which would be equivalent to the cow's drinking seven quarts of vinegar a day. The equivalent for a man would be three pints of vinegar a day. These amounts of vinegar would certainly be damaging in either case. But since the acetic acid is much less in amount than the more favorable lactic acid its presence does not seem to be harmful. The lactic acid is very beneficial as an appetizer and as a tonic to digestion. It also inhibits the growth of undesirable bacteria in the alimentary canal, alleged to prevent in man that serious disorder auto-intoxication, which is the forerunner of a whole train of ailments attacking the animal organism, such as colds, headache, rheumatism, gout and so forth."

On account of these changes which are taking place in silage, the process of preservation may be likened to a ripening, somewhat similar to the ripening of cheese, whereby the fibres of the corn plant are softened and made more digestible, while new flavors have been added at the same time that palatability and succulence have been maintained. Succulence in the ration of the dairy cow is a matter of the greatest importance. The aim of winter feeding is to provide a duplicate of summer pasture conditions as cheaply as possible. Nothing is so palatable and so satisfactory to the system of the dairy cow as abundant pasture, because it provides a well-balanced ration in abundance, combined with palatability and succulence. Low-grade roughages

such as timothy hay, straw and corn stover can be used in limited amounts, but they lack both the palatability and the succulent condition of the silage, for which reasons they are inefficient for milk production if used alone. An average daily allowance of silage for a 1,000-lb. cow is about 30 lbs., and Henry gives it as a common rule to feed 3 lbs. of silage and one pound of dry roughage per 100 lbs. live weight. Thus, a cow weighing 1,000 lbs. should receive approximately 30 lbs. of silage and 10 lbs. of good red clover, or alfalfa hay. Silage is more economical than corn stover, not because it is more digestible but largely because it is eaten with little or no waste, while a good part of the corn stover remains uneaten. Another reason for the great economy of feeding silage is due to the fact that it is more profitable and will be consumed in larger quantities, so that there will be available for milk production a larger residue of nutrients after the maintenance requirements of the cow's body have been met. It has been shown by experiments at the Utah Experiment Station that when sufficient protein is provided from other sources, 100 lbs. of alfalfa hay can be replaced by a little more than 300 lbs. of corn silage. At Maine and Vermont Experiment Stations, also, it has been shown that from 280 to 350 lbs. of corn silage are equal to somewhat more than 100 lbs. of mixed hay.

In the feeding of silage only enough should be fed so that the cows will get all they will eat up clean in a reasonable time, and it is advisable to take care that the air of the stable is kept sweet and clean. Poor silage is not a good feed for any kind of live stock, any more than poor hay or poor grain. The fact that dairy cows are outstandingly valuable as economic users of roughages is one of the principal reasons why silage is an economical dairy feed.

National Milk Producers' Federation.

The National Milk Producers' Federation of the United States is a federation of milk producers' organizations with headquarters at Washington. During the week of the National Dairy Show, in Chicago, early in October, a general meeting was held at which the following resolutions of general interest were passed:

CREDITS AND PRICES OF FARM PRODUCTS.

"Resolved that we voice the conviction the farmers of America, in fighting for the clear right to market their products co-operatively, are not seeking to obstruct the operation of the law of supply and demand, but rather to prevent such obstruction by others; and we protest against such curtailments or deflation of credits as will necessitate the immediate sale of unduly large quantities of farm products at prices which will return to the producers thereof not only less than their expense in producing such products but also less than such products are actually worth when seasonably sold in the markets of the world.

PROCESSING AND MARKETING OF MILK.

"Whereas, many of the large milk condensing and manufacturing companies have on remarkably short notice refused to buy milk, thus depriving many farmers of their accustomed market and in many localities of any market, and

"Whereas, such action by manufacturing companies if not a concerted one is of surprising uniformity, their apparent purpose being to stop the production of condensed milk until their hoarded supply can be disposed of at prices far higher than justified by the present prices of raw milk and sugar, thus at one blow forcing dairy farmers out of business and compelling consumers to pay an unduly high price for condensed milk.

"Therefore be it resolved,

"(1) That such arbitrary acts on the part of the manufacturing companies but further illustrates

the danger incurred by dairy farmers in permitting middlemen to control the agencies and facilities for processing and marketing milk, and

"(2) That we urge each member organization to carefully consider the advisability of farmers exercising the right to process and market their own products."

REPRESENTATION IN WASHINGTON.

"Resolved that this Federation authorize and recommend to the officers thereof to provide and maintain such representation at Washington as in their judgment is adequate to safeguard and promote in national legislation the interests this organization is established to foster."

What Cow Testing Does.

Cow-testing work in the Dominion is slowly progressing, and with each increase in popularity comes further knowledge of the value of testing and weighing the milk from individuals of the dairy herd. The Dairy Branch of the Dominion Department of Agriculture is authority for the statement that there were 2,838 cows, in 263 herds, recorded for the month of August from the Province of Ontario. Big differences in the average monthly production of cows in one section are shown as compared with cows in another part of the Province. With reference to this, A. H. White, who is in charge of this work for the Dairy and Cold Storage Branch, Ottawa, gives the following illustration.

"For example, there were 129 cows in 14 herds in one of the best dairying districts of Ontario which averaged 663 lbs. milk and 23.65 lbs. fat. In another section, 168 cows in 17 herds averaged 557 lbs. milk, and 20.27 lbs. fat, a difference for the month of 106 lbs. milk and 3.32 lbs. fat, per cow. At \$2.45 per 100 lbs. milk, this means that each of the owners of the 17 herds with the lower production would have had more than \$25 additional revenue, had their cows averaged as much as the better herds. This is worth considering, is it not?"

"But there is a reason for this difference in production. In the better herds, milk records have been kept for years and the herds have been graded up to a higher standard, while this is the first year milk records have been kept in the 17 poorer herds. It pays to know your cows."

Evolution of the Creamery Butter Trade.

One of the most interesting bits of dairy history in Canada is the history of the growth and progress of the creamery butter industry. Progress has been most rapid and marked in the Prairie Provinces, and, in some respects, it must be confessed that Western Canada is in advance of Eastern Canada in this matter. For this reason it is interesting to note the manner in which the creamery-butter trade has evolved in any one of the Prairie Provinces, and the following paragraphs which we have received from the Manitoba Department of Agriculture, under the caption "The Evolution of the Creamery Butter Trade," should be interesting to every creameryman and cream producer.

Many changes which are gradually evolved are not noticed by the general public. A good illustration of this truth is presented by the creamery-butter trade of Western Canada.

As late as 1914, Manitoba was a large importer of creamery butter, the Province's imports of creamery butter for the year named being 20 carloads. In 1912 it had been as high as 55 carloads imported. Then in 1915 the Province began to export butter, and the amount sent out increased rapidly from year to year. Last year Manitoba exported 153 carloads.

This change of position from the importing to the

exporting column has been a large factor in gradually altering some very fundamental things in connection with butter manufacture, and the truth is that, without the public taste detecting it in any decided way, the Manitoba factories have changed the nature of their output almost completely during the past few years.

A few years ago our creamery butter was much nearer in character to dairy butter than it is now. Then a great deal of quite sour cream was gathered and churned, the idea being held by many patrons of the factories that more butter could be made from 100 pounds of cream if it was quite sour than if it was comparatively sweet. The cream was churned without pasteurization, and the butter was liberally salted. This gave a high-flavored butter—a butter with decided flavor in its unsalted state, and then with the particular tang which the salt itself contributed. Such butter pleased a good many palates, and it is still the kind of butter being made in almost every factory in the United States, because it requires no great skill or care to make, and because it will keep long enough to be satisfactory for a quick, local, "from hand to mouth" trade.

But when the Western Canadian provinces went into the export trade in a fairly large way they found that this class of butter would not do, and so the Dairy Branches of the Provincial Departments of Agriculture for Manitoba, Saskatchewan and Alberta, working more or less in concert, began a strong campaign to change a number of the butter-making practices. They found, by experimentation, that the most satisfactory butter for the long cold storage, that is essential in the export trade was a milder, cleaner-flavored butter, made from cream that is practically sweet, and which is pasteurized before churning and salted only very mildly. Contrary to the prevailing opinion, it has been found that salt has been over-rated as a butter preservative; that in many cases it was hiding the change in flavor which marked the change in condition of the butter, rather than actually preserving the butter from change. And so, after years of campaigning, practically all the creameries of Western Canada—certainly all the leading creameries—are now making an almost sweet cream, pasteurized, lightly salted butter; and this butter can be put into storage and taken out again twelve months afterward very little changed—an ideal export butter.

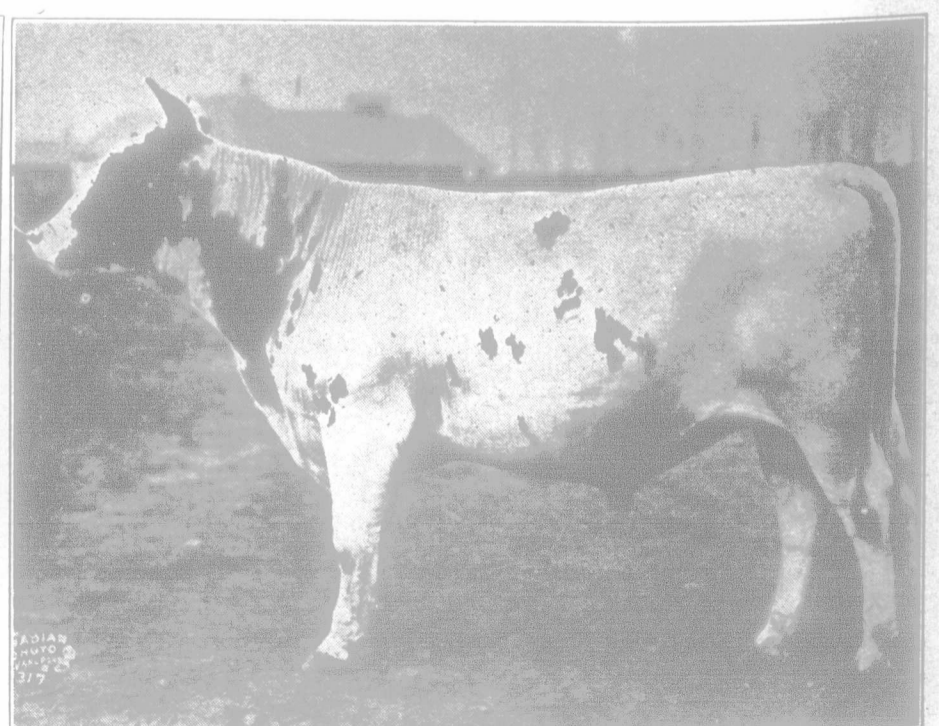
While it is easy enough to tell of this change, it has needed very strenuous work to bring it about. It was realized, for instance, that in order to get from farmers the kind of cream needed, it was necessary to grade the cream, and offer a better price for the choice product. Quality of cream had been preached for years, but no difference in price was paid, and so the preaching was largely ineffective. It was a long, hard job to put cream grading with a graduated scale of prices on a satisfactory footing; and even yet this work is not quite complete.

Then grading of butter by departmental graders was inaugurated, and certificates issued, so that an exporter or other buyer could purchase a car "unsight and unseen" and know just what he was getting. This was another big work to bring to perfection, because in the first place the value of the grading depended not only upon what the butter was like when it was graded, but also upon what it would be like six months hence. In other words, the butter must have keeping quality as well as present-day quality. It was thus necessary to know if the cream had been pasteurized before churning. This demanded the establishing of a laboratory in connection with the Department of Agriculture wherein the Storch Test could be used. By this test the heat to which the cream has been subjected can be detected. In connection with this laboratory and the grading work, other matters, such as the amount of salt used by different makers, can be closely observed, and uniformly secured. It is to be remembered that in all this work, there had also to be the closest kind of



Lessnesock Searchlight.

First prize two-year-old Ayrshire bull at the National Dairy Show, Chicago, for Alta Crest Farms, Spencer, Mass.



U. B. C. Prince.

Grand champion Ayrshire bull at Vancouver in 1919, and grand champion in 1920 for the University of British Columbia, Vancouver.

large factor in gradually changing things in connection with the truth is that, without in any decided way, the nature of their past few years. Creamery butter was much better than it is now. Then cream was gathered and by many patrons of the milk made from 100 white sour than if it was cream was churned without was liberally salted, butter—a butter with de- late, and then with the itself contributed. Such alates, and it is still the almost every factory in quires no great skill or will keep long enough to, "from hand to mouth"

Canadian provinces went y large way they found not do, and so the Dairy departments of Agriculture and Alberta, working a strong campaign to butter-making practices. on, that the most satis- storage, that is essential, cleaner-flavored butter, ically sweet, and which and salted only very ling opinion, it has been- rated as a butter pre- was hiding the change nge in condition of the preserving the butter years of campaigning, of Western Canada— eries—are now making eurized, lightly salted t into storage and taken rd very little changed—

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Vancouver in 1919, and Vancouver.

inter-provincial "team play," so that grades of one province did not swear at those of another province.

Perhaps no better public evidence of the wonderful amount of uniformity secured is to be had than is offered by our public exhibitions of butter. Such progress has been made that now the judging of butter at the largest fairs is a matter of the very finest niceties. So uniform have been the lots of butter from the best creameries this year that the average person, with shut eyes, might taste a score of samples without being able to tell any two apart. This is shown by the judges' scores, which are often only perhaps one-tenth of a point apart, with dozens of samples within two or three points of the top score.

This is the kind of butter needed for a satisfactory export trade; and now that the world markets are gradually going to revert to normal conditions, this is the kind of butter that will help to enable Canada to hold a place in competition with the great dairy countries of the other continents.

Criticism Too Severe?

A letter has been received at this office from S. B. Trainer, General Manager of the Canadian Milk Products Ltd., Toronto, complaining of unfair criticism of his company by "The Farmer's Advocate." Mr. Trainer's letter follows, in part:

"Much has been made of the unfortunate effect brought about with the producers by discontinuing manufacturing milk powder and handling the farmers' milk on a butter-fat basis.

"During the ten days from September 20th to September 30th, when we took all milk offered to us as usual, we were able to pay the farmers on an average of \$2.18 per 100 pounds of milk. Having now completed the month of October and having our figures together, we are able to announce that at our Western Ontario plants the farmers are to be paid 66.87 cents per pound of butter-fat for all of the fat in all of the milk that was delivered to us during the month of October.

"This high price that the farmers are to receive on the 15th of November for their October milk is due to the fact that we have an unusually good sweet cream market and have, therefore, been able to give our patrons the benefit of this market as compared with the ordinary butter market or market through the ordinary creamery. For instance, at Brownsville where our milk tested 3.67 per cent. for the month, we will pay the patrons on the average of \$2.45 per 100 pounds of that milk. At Belmont, where the milk tested a little lower, the farmers will realize on the average \$2.37 per 100 pounds of that milk.

"In addition to this, the patrons have taken all of the skim-milk home and have apparently found a ready use for it. This skim-milk has been found of such value that its value is claimed to be anywhere from 35 to 75 cents per 100 pounds as feed. Adding, therefore, an average value for skim-milk of 55 cents per 100 pounds to the yield from fat of \$2.45, our patrons at Brownsville, on the average, would get a return of about \$3.00 per 100 pounds of milk. Where the skim-milk is not of such value, the return would be less. It will be seen, therefore, that the patrons of this company for their October milk will get more value from their milk than they brought to us on the average than they got during the early part of September when we were not operating on a butter-fat basis.

"We feel that the returns that we are, therefore, distributing among our patrons for October milk are exceptionally favorable to the producers, and we are certainly not to be criticized for the way in which we have looked after the producers' interests at a time when we were most unfortunately prevented from turning the skim-milk into skim-milk powder. We think any statements that have been made reflecting upon our action can now be forgotten."

We wish Mr. Trainer and all others to understand definitely that the more his company is in a position to return to the patrons each month the better we will be satisfied, because high prices for milk are inevitably a boost for the dairy industry. Furthermore, we want to congratulate the C. M. P. on the fact that it has such an unusually good sweet cream market. This is a good thing for both company and patrons. A price of 66.87 cents for butter-fat seems remarkably good, comparatively speaking, but when Mr. Trainer states with regard to the skim-milk that the patrons have taken all of it home "and have apparently found a ready use for it," he is most optimistic. Some few have undoubtedly been able to do so, and may be fortunate enough to secure the return of \$3.00 per 100 lbs. of which Mr. Trainer speaks. Many more will receive \$2.75 per 100 lbs. and less, while those whose milk does not average 3.67 per cent. of fat will receive proportionately less still. The point which Mr. Trainer does not appear to place sufficient emphasis on is the fact that while on a basis of its comparative feeding value when fed in the proper proportion to hogs, along with grain, skim-milk was worth 73 cents per 100 lbs. last winter, it is worth only 50 cents now, and there are very few of his patrons who can get even this value from it—many of them not half this much. There is, however, no doubt of the excellent butter-fat price announced, and we congratulate both company and patrons on having gotten at least so far out of a nasty situation.

We are, however, not unmindful of the fact that Mr. Trainer in his letter has not answered any of our criticisms. These were not based on any opinion that the company had not the right to close down if it wanted to. The whole matter hinges about the suddenness of this action, following three or four years of very rapid expansion and the most flowery predictions for the future. Changes of heart so very sudden as this are

unusual enough to justify the most severe criticism, and we believe our criticisms just. We would not be so unfair as to refuse the company credit for philanthropic motives, if we thought such credit was deserved. We believe it was not deserved and that it was to the company's immediate interest to continue to operate its plants on a butter-fat basis for the following reasons: 1, The loss occasioned by overhead expenses on idle plants would be eliminated; 2, The organization of the company, including expert workmen and an organized sales force, could be held together; 3, The unusually good sweet-cream market could be retained; and 4, The patrons would be held pending a resumption of powder manufacture.

Now is the most opportune time that milk producers have had for years to perfect and complete a type of producers' organization that will be truly protective, and which will enable the producer to save large sums of money through more efficient marketing of his products.

POULTRY.

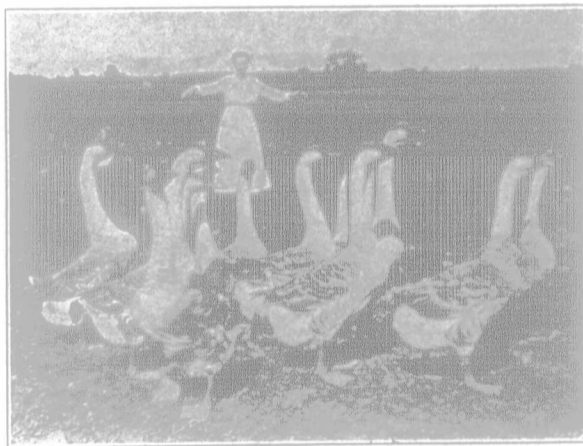
Chloride of Lime for Rats.

EDITOR "THE FARMER'S ADVOCATE":

I have just read with pleasure Allan McDiarmid's article "The Rat Problem," and can endorse his opinions of them from sad experience, especially from the poultry-raising standpoint. I wish to pass on a method of extermination that is claimed to have rid one city of their presence during a most virulent typhoid fever epidemic. The agent of destruction was chloride of lime, which was freely distributed in cellars and around buildings. The theory is that the rats in their peregrinations got their feet in contact with the pasty or sticky substance, formed by the chloride of lime plus the moisture, and in the effort to lick it off their sore feet they got a dose they didn't bargain for.

A dozen eggs will buy enough chloride of lime to carpet a good many rat runs and is well worth trying. If the ferret is as fond of chicken as the weasel or ermine, it might not be much safer than its relatives.

Thunder Bay, Ont. MRS. J. M. MUNRO.



Upholding the Dignity of the Farmyard.

Another Nova Scotia Egg Laying Contest.

Just recently we announced the results of the First Nova Scotia Egg Laying Contest. The results of the first week of the second year of this contest have now come to hand showing a total of 95 eggs from about half of the 30 pens entered. The greatest number of eggs during this week was laid by a pen of White Wyandottes that laid 16 eggs weighing 26 7/9 ounces, but the heaviest eggs were laid by a pen of R. I. Reds that laid 11 eggs weighing 25 7/9 ounces. Speaking of this contest J. P. Landry of the Nova Scotia Agricultural College says:

"The birds entered in this contest are much larger and better developed than were those of last year's lot. The contestants without exception have shown much better judgment in the selection of the type of pullet likely to make a strong producer. The advanced development of the pullets in second pens gave the contest attendants some concern as the change from their home pens to new pens would likely bring on a moult. Fortunately indications show that this has not occurred and is not likely to occur in most of the advanced pens.

"This contest has
8 pens of White Wyandottes.
7 pens of Barred Plymouth Rocks.
6 pens of Rhode Island Reds.
2 pens of S. C. White Leghorns.
1 pen of S. C. Brown Leghorns.
1 pen of Buff Wyandottes.
1 pen of Rhode Island Whites.
1 pen of Light Brahams.
1 pen of Anconas.
1 pen of White Plymouth Rocks.
1 pen of R. C. White Leghorns.

The variety of entries and various localities from which they have come indicates the general conditions of the poultry industry in the Province of Nova Scotia.

If some of the many breeds were dropped it would be little loss but no one wishes to condemn the favorites of the other fellow." J. P. L.

HORTICULTURE.

Ontario Horticultural Exhibition Now Over.

The twelfth annual Ontario Horticultural Exhibition has come and gone without having created a great deal of stir. This is an event which before the war was particularly popular with the fruit growers of Ontario; and it had grown to considerable proportions when the necessity for devoting all efforts to the winning of the war affected the Ontario Horticultural Exhibition as it did all other things pertaining to horticulture. Last year was the first exhibition held since the beginning of the war, and a creditable, though by no means the best exhibition ever held was conducted in the Transportation building on the Canadian National Exhibition Grounds, Toronto. When the plans for the new Royal Canadian Winter Fair were first proposed, it was planned to provide sufficient space to house the Ontario Horticultural Exhibition also and make the Royal Show an all-round horticultural rally. Consequently, the Horticultural Exhibition Association counted on the new show beginning its history this year, and made no special plans for the usual separate exhibition. Later on, however, it so happened that the Royal Show could not open in 1920, so that the directors were faced with the question as to whether to hold a small show this year, or hold no show and wait until 1921 when the Royal Show is expected to open. The latter course they did not feel justified in pursuing, and it was decided to go ahead with a show of moderate proportions that would keep the horticultural sections of Ontario agriculture before the public.

Housing space for an exhibition of this kind is also difficult to arrange. The Ontario Horticultural Exhibition has been held in many different parts of the City of Toronto. Last year it was held in the Transportation building on the Exhibition Grounds, but the cold weather was a factor that almost precluded the possibility of using these buildings again this year. People simply would not attend any event where they must stand around indoors and have it uncomfortably cold. It was impossible to heat the building sufficiently with stoves and the result was that the show last year was not satisfactory in many respects. This year it was not thought necessary to make plans for a very large show, while the matter of housing was again a difficult one, and the most suitable place available was the Oddfellows' Temple, on College Street, where the basement and first floor were secured for the three days of November 10, 11 and 12.

THE FLORAL DISPLAY.

Here was gathered together in a comparatively small space a very excellent showing of fruit, vegetables and flowers. The latter, of course, were very attractive, and with the co-operation of the Gardeners' & Florists' Association, and the Toronto Retail Florists' Club, very fine displays indeed were offered for the admiration and education of exhibition visitors. The extensive floral establishments of firms like the Dale Estate, at Brampton, and wealthy individuals such as Sir John Eaton and Sir H. M. Pellatt, Toronto, were the source of many impressive floral groups and exquisite specimens of various pot plants. This season of the year is a particularly fortunate choice from the standpoint of the florists, because there is available the great variety and charming colors of the chrysanthemums for decorative and display purposes.

Those who like flowers, and even those who feel that they can grow flowers successfully, must often be amazed at the wonderful size and perfection which some of these "mums" carry that are exhibited at the Ontario Horticultural Exhibition. Individual mums eight, nine and ten inches in diameter are to be seen in various colors, while the range of varieties varies from these of monstrous size to the small yellow kinds that stand out with such good effect in masses or floral collections. Roses of velvet texture and delicate colors, as well as the bolder and more gaudy carnations, were also in evidence, to say nothing of the many types of decorative plants not prized so highly on account of their beautiful flowers as because of the beauty of their foliage.

In the classes for floral exhibits, the Dale Estate won practically all first prizes for cut blooms of chrysanthemums as well as for other cut flowers including roses and carnations. The special prize of ten dollars, donated by the Toronto Horticultural Society, for the best single bloom grown in Toronto was won by Sir Henry Pellatt, while the latter also won first prize for the best specimen of chrysanthemum, any variety or size of pot. Included with this prize was the Challenge Cup, this Cup to be challenged and won twice, not necessarily in succession. The same exhibitor also secured the first prize of fifty dollars, as well as the Cup, for the best group of chrysanthemums and foliage plants arranged for effect, while Sir John Eaton was deemed to have the best display of orchids arranged for effect, and won a silver cup together with a fifty-dollar prize. The best group of single and pompom chrysanthemums arranged for effect was shown by R. S. McLaughlin, Oshawa.

FRUIT EXHIBIT.

The fruit exhibit was decidedly better in quality than last year, although all exhibits of apples greater than lots of ten boxes had been stricken out of the prize list. The amount of space available for housing the

exhibit was too limited to allow of the large inter-county competitions which in other years had been so much a feature of the Ontario Horticultural Exhibition. Nevertheless, the quality of the fruit itself, including not only the individual specimens and the single plates, but the collections of plates and the box apples was very excellent indeed, and in the case of some varieties the competition was very keen. The number of exhibitors was not large; in fact, there were only sixteen exhibitors of fruit, all told, but the show of fruit was quite large enough to occupy its full share of the building and to offer to any visitors, especially those who lived in the City, a correct and instructive idea of the quality of fruit which it is possible to grow in the Province of Ontario. Unfortunately, however, the crowds were not at all large, and it does seem impossible to interest a great number of people in a horticultural exhibition of this kind. Those who do go must undoubtedly feel it worth their while to know what can be done in the way of fruit growing in the Province of Ontario, and to see the masses of exquisite bloom in the floral display.

Probably the heaviest winner of first prizes was H. C. Breckon, Bronte, who had the best specimen of Northern Spy apple; the best commercial package of wrapped apples, any variety (75 per cent. to be given for package, grading and packing and 25 per cent. for variety and quality of fruit); also best cone of Baldwins and Greenings; best ten plates of Greening, Hubbardston, King, and Stark; best plate of Baldwin, Cayuga, Greening, King, Ribston and Golden Russet; best ten boxes of King; and best single box of Golden Russet ready for shipment. Seventeen first prizes went to W. L. Hamilton, Collingwood, who secured first prizes for best single specimens of Fameuse, Greening and McIntosh; best ten plates of Baldwin and Ribston; Sweepstakes box of any variety of apples on exhibit in any section; best ten boxes of Northern Spy; best five boxes of McIntosh; best single box of Baldwin, Cranberry, Greening, King, McIntosh, Ribston, Spy, Wagener, and Wealthy. The best plate of five Gravensteins went to J. E. Hambly, Cedar Springs. The best ten plates of Fameuse were shown by E. Howell, St. George, as well as the best single plate of Fameuse and Spitzenburg, the best five boxes of Fameuse, and the best single box of Fameuse and Tolman. E. F. Neff, Simcoe, won first prize for the best plate of Wealthys. J. B. Guthrey, Dixie, had the best cone of Fameuse, King and McIntosh; the best ten plates of Wolf River, McIntosh and Ben Davis; also the best single plate of Blenheim, Alexander, and McIntosh. F. Laughton, Clarkson, had the best single specimen of Baldwin, the best ten plates of Spy, the best single plate of Spy, (both cooking and dessert). C. Teskey, Wellington, had the best single specimen of King. Other exhibitors were: J. C. Gilbertson, Simcoe; H. W. Neff, Simcoe; J. D. McDonald, Cornwall; C. W. Beaven, Prescott; Geo. Howell, St. George; J. F. Elliott, Oxford Centre; W. Walters, Collingwood; and H. P. Henderson, Paris.

DECIDED IMPROVEMENT IN VEGETABLES.

There never was a stronger, better and more uniform vegetable exhibit at any exhibition we have seen during the past few years than the vegetable exhibit at the Ontario Horticultural Exhibition last week. Competition was very strong in many of the classes, and it was impossible not to be impressed with the splendid showing made. All told, there were only eleven exhibitors. Probably the heaviest prize winners were Brown Bros., Humber Bay, who won first on Detroit Red beet, Danish Ballhead cabbage, Snowball cauliflower, Winter celery, collection of four varieties of celery, green-seeded citron, Grand Rapids lettuce, Prizetaker onions, rope of red onions, rope of white onions, rope of yellow onions, rope mixed colors, forcing radish, salsify, and collection of onions, four varieties. George Aymer, Humber Bay, won first on white artichokes, flat cabbage, Yellow Globe onions, and horse radish. F. F. Reeves & Son, Humber Bay, won first on Paris Golden celery, Red Globe onions, White Globe onions, rope of Prizetaker onions, Hubbard, warted, green squash and best collection of at least twenty distinct varieties of vegetables, quality and arrangement to count. C. Plunkett, Weston, won first on White Pickler onions, winter radish, Irish Cobbler potatoes, Green Mountain potatoes, Rural New Yorker potatoes, Swede turnips (table), and collection of potatoes (three varieties). Robert Plunkett & Son, Weston, won first on Early Ohio potatoes. J. B. Guthrey, Dixie, won first on pointed cabbage, Chantenay carrots, parsnips, and Boston marrow squash. James Dandridge won first on red cabbage, Savoy drumhead cabbage, Savoy Green Globe cabbage, Hubbard, warted, yellow squash, collection of squash, and vegetable marrow (bush.). T. K. Aymer, Humber Bay, won first on Erfurt cauliflower, red-seeded citron, field pumpkins, pie pumpkins, parsley, vegetable marrow (English), and collection of cauliflower, two varieties. Chris. Vann, Oshawa, won first on one dozen leeks. Other exhibitors were T. W. Bamford, Belleville, and W. R. Trott, London.

Nova Scotia Crop Notes.

EDITOR "THE FARMER'S ADVOCATE":

Well, the crop of 1920 has been harvested, the weather man having supplied his very best brand during the harvest months of September and October. Hardly an hour was lost from rainy weather, and Jack Frost, the chap who produces those stiff, cold fingers so common at this season of the year, was conspicuous by his entire absence. "I never saw such a fine fall," says our oldest citizen. The story goes that an old lady expressed satisfaction when rain fell at night and on Sundays, "as it gave the hired men a rest." The

autumn of this year has certainly been devoid of rest, judged by that old lady's standard, while at this date, November 4, one can find potatoes lying around the fields where they were produced untouched by frost. Last season is known by its record freezes; this by its unusually warm weather both by day and night.

The apple crop, as predicted in an earlier article, was much larger than the most optimistic estimates. The quality is generally good, but the warm weather up to the present has rather impaired the keeping qualities of this most important fruit. The major portion of the apple output, not controlled by co-operative companies, has been acquired by speculators who began buying last May at two dollars per barrel, tree run, the purchaser supplying the package, and from then till early in the autumn the purchasing process proceeded steadily, the price gradually increasing till \$3.50 to \$4 per barrel, tree run, was paid for some orchards, the grower furnishing the package.

Owing to conditions in Great Britain, nearly all apples exported have gone overseas, where exceptionally good prices were received for a few shipments, but later "the bottom fell out of the market" and prices recently realized have been ruinous to the shipper, whether speculator or grower. But at the present date it is advised that prices are up again.

The potato crop has generally turned out a good deal better than the average, but in some localities very serious losses are reported from rot, while other districts, quite near report a good crop all sound. The price, Ah! there's the rub. There simply is not any such a thing as price. A few lots are being handled—a very few. Two years ago the railway strike in Cuba played havoc with our potato market; this fall financial conditions on the same Island are keeping some thinking as to where the finances are coming from to meet that fertilizer account due pretty soon. Possibly the feelings of the chap who paid \$70 per acre for fertilizer, \$3 per bushel for seed potatoes (planting 12 bushels on that acre), \$4 per day for hired help, and from 75 cents to \$1 per barrel for his barrels, can be better imagined than described when, on taking a load to the warehouse of the speculator, he gets this thrown at him: "Oh, we don't want 'em, but as you have them here leave them." And to the query regarding price he gets: "We think we can pay \$3 when we get a chance to ship them. Till then they can remain here at your risk." Some lots have been bought for \$2.75, and at this price where is the profit with barrels costing \$1 each.

Turnips have not done as well as usual, the dry weather having affected this crop. Oats have not yielded up to expectations, the quality of the grain not appearing to be as good as last year.

The wet weather during early August gave "dyke feed" a good start, and cattle have been housed from the dykes in exceptionally good condition. Possibly the good weather had something to do with this.

Speaking about "dry" reminds me that October saw this country vote "no booze," on the 25th ultimo. It is to be hoped that no booze means just what it says. Kings Co., N. S.

C. PERRY FOOTE.

FARM BULLETIN.

Act Quickly.

The subscription price of the Farmer's Advocate and Home Magazine has been \$1.50 per annum for the past seventeen years. After January 1st, 1921, the price will be \$2.00 for one year, or \$3.00 for two years, paid in advance; \$2.50 per year when not paid in advance. The subscription price of all papers has been advanced either during the war period or since. We find it is absolutely necessary for us to advance the subscription price for single-year subscriptions, but for two or more years we still give the paper at the old rate of \$1.50 per year. The cost of white paper has almost doubled, as well as all other expenses in connection with the publishing business.

Take advantage of the above SPECIAL OFFER for two years, and send us \$3.00 without delay.

A Hint to Our Advertisers.

Owing to the danger of advertisements having to be crowded out of our 1920 Christmas Number for lack of space (notwithstanding its size of 100 or more pages) we urge all those who have not yet sent in their reservations for extra space to do so at once and get all necessary matter in our hands without delay.

Why do School Books Change so Frequently?

EDITOR "THE FARMER'S ADVOCATE":

As the farmers of the Province now have a majority in the Provincial Legislature, I take this as a means of dealing with the subject named above, so that it may reach their ears.

Why is it that both public and high school books are changed so frequently? As I am a student in one of the Ontario high schools I wish to express my thoughts along this line. In a few clear words, it is my opinion

that these books need not be changed every few years, which is the present case. Take for an example the Ontario High School Geometry which was changed this year. If any person examines this geometry with the former one a powerful magnifying glass would be needed to find much difference between the two; yet the principals of the schools make it compulsory for every pupil who wishes to take this subject to secure the new book. The expense caused by this is enormous; but that is not the only reason why I am complaining about the changing of these books. The schools have now been opened for over three months and we find the greatest difficulty in procuring the new book. When one goes into the bookstore and asks for the new book, the dealer replies that he has had the book ordered for some time but finds out they are not published. Is this the fault of the publishers?

A pupil who is looking forward to an examination within six or seven months' time becomes discouraged in his work, and it causes much confusion and worry. I should like to hear from others on this subject. Northumberland Co. "NORTHERN LIGHTS."

Waterloo County Judging Competition.

A successful Junior Farmer's Live Stock Competition covering the County of Waterloo was held on the farm of Titus Shantz, Kitchener, on Thursday, November 11, under the management of J. S. Knapp, Agricultural Representative. The event was larger than had been expected, and sixty-one junior farmers took part in the judging. There were ten classes of live stock judged, two of beef cattle, two of dairy cattle, two of sheep, two of swine, and two of horses. All were good classes, and the judging started at ten o'clock in the morning and continued until about seven o'clock in the evening. The contestants were all required to write reasons for every class of stock, and to give oral reasons on five classes, one of each of the five kinds of live stock. Supper was taken together in Kitchener at the "Idle Hour Team Room," after which the judges gave their placings and reasons on the different classes of live stock. In addition to this there were a few speeches from some of the boys.

The slogan of the event was "Every junior farmer in Waterloo County taking part," and the event was open to all members or associate-members of a junior farmers' association, under thirty years of age. Each competitor was charged an entry fee of fifty cents, twenty minutes was allowed for judging each class of stock, and no competitor was eligible for more than two prizes. The usual score of fifty per cent. for reasons and fifty per cent. for placings was followed. The cash prizes were six in number for each of the different kinds of live stock, the first prize being five dollars and the sixth prize, one dollar and a half. The Waterloo County Board of Agriculture donated a silver cup for the Junior Farmers' Association having the five men making the highest total score, and a medal for each man on the team. Another special prize of considerable value was two free trips to Chicago, given by the Harris Abattoir Company for the first and second man in all classes.

The cup donated by the Waterloo County Board of Agriculture was won by the Kitchener Junior Farmers' Association. The five men on this team and their scores are as follows: Fred Snyder, Waterloo, 798; L. Shantz, Kitchener, 778; E. Hunsberger, Waterloo, 758; O. Weber, Waterloo, 702; H. Brubacker, Waterloo, 678; total team score, 3,714. The two men successful in winning a free trip to Chicago were Harvey S. Hallman, Ayr, 817 points, and Fred M. Synder, Waterloo, 798 points out of a possible score of 1,000 points. In the various individual prizes in the different kinds of live stock, where the possible score for each two classes was 200 points, the winners are as follows, with their score:

SHEEP: 1, A. Bond, Ayr, (177); 2, R. Kercher, Kitchener, (175); 3, C. D. Miller, Elmira, (170); 4, F. McPhail, Galt, (168); 5, O. Lerch, Preston, (166); 6, E. Wettlaufer, New Hamburg, (165); 6, D. McDonald, New Dundee, (165).

DAIRY CATTLE: 1, Harvey S. Hallman, Ayr, (181); 2, Leonard Burton, Preston, (141); 3, E. Hunsberger, Waterloo, (140); 4, L. Shantz, Kitchener, (136); 5, L. Turnbull, Galt, (132); 6, H. Brubacker, Waterloo, (131); 6, H. Grimm, Preston, (131).

SWINE: 1, F. McPhail (180); 2, F. Snyder, Waterloo, (172); 3, D. Lerch, Preston, (168); 4, L. Shantz, (165); 5, Wm. J. McReur, Ayr, (164); 6, L. Burton, Preston, (162).

HORSES: 1, Harvey S. Hallman, (190); 2, George Stockton, Paris, (188); 3, Wm. J. McReur, (187); 4, M. Weicher, New Hamburg (185); 5, B. Muma, Ayr, (180); 6, C. Lerch, Elmira, (178).

BEEF CATTLE: 1, Dan Lerch, (186); 2, Oscar Lerch, (185); 3, Fred Snyder, Waterloo, (179); 4, Roy Stoltz, Ayr, (177); 5, A. Bond, (176); 6, L. Weber, Waterloo, (174).

Toronto, Montreal, Buffalo, and Other Leading Markets.

Comment on week ending November 11.
Quotations on last Monday's markets.

Receipts and Market Tops.

Dominion Department of Agriculture, Live
Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Receipts		Top Price Good Steers		Receipts		Top Price Good Calves		Receipts		Top Price Good Calves	
	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending
	Nov. 11	1919	Nov. 4	Nov. 11	1919	Nov. 4	Nov. 11	1919	Nov. 4	Nov. 11	1919	Nov. 4
Toronto (U. S. Y.)	7,953	9,618	6,327	\$11.50	\$12.55	\$12.00	854	788	584	\$18.50	\$18.00	\$18.50
Montreal (Pt. St. Chas.)	1,693	4,167	925	10.00	11.00	10.00	822	870	456	15.00	16.00	16.00
Montreal (East End)	2,043	4,415	1,820	10.00	11.00	10.00	708	1,322	388	15.00	16.00	16.00
Winnipeg	21,121	15,723	20,099	10.00	12.15	10.00	2,611	1,519	1,465	8.00	9.25	8.00
Calgary	3,005	5,533	3,844	8.00	10.25	8.00	385	658	365	8.00	8.00	8.50
Edmonton	2,114	4,248	2,471	8.00	10.50	8.00	186	714	347	8.00	7.00	8.00

	HOGS						SHEEP					
	Receipts		Top Price Selects		Receipts		Top Price Good Lambs		Receipts		Top Price Good Lambs	
	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending	Week Ending
	Nov. 11	1919	Nov. 4	Nov. 11	1919	Nov. 4	Nov. 11	1919	Nov. 4	Nov. 11	1919	Nov. 4
Toronto (U. S. Y.)	7,299	8,647	7,046	\$17.50	\$17.75	\$18.25	12,085	14,936	11,308	\$12.50	\$14.00	\$14.25
Montreal (Pt. St. Chas.)	1,464	2,210	1,849	17.25	17.00	18.00	4,455	4,700	3,951	13.25	14.00	13.00
Montreal (East End)	2,074	1,402	1,307	17.25	17.00	18.00	3,385	3,815	2,478	13.25	14.00	13.00
Winnipeg	2,230	3,002	2,892	16.50	15.50	17.00	3,087	2,926	6,506	9.50	13.00	9.00
Calgary	403	492	224	18.25	15.75	19.25	2,584	934	2,532	10.50	11.25	11.00
Edmonton	247	278	229	16.25	15.75	17.75	233	210	602	9.75	11.25	9.50

Market Comments.

Toronto (Union Stock Yards).

The heaviest receipts of the year were unloaded at the Yards during the week. Cattle were in excess of 11,000, hogs totalled 8,907 and sheep 12,070. In addition there were 2,758 calves, 421 hogs and 72 sheep on through billing. On Monday, about five thousand cattle sales were made in which the better grades were weighed up at steady prices, and the common stuff at a reduction of 50 cents per hundred. The market remained at the new level during the remainder of the week. Good heavy steers sold from \$12 to \$12.50, medium from \$10 to \$11, and common from \$9 to \$10. Handy-weight butchers sold from \$10 to \$11.50 if of good grading and from \$8 to \$9.50 if common. Light weights of steers changed hands from \$5 to \$7. Cows of good grading moved generally from \$8 to \$9, and fair kinds from \$7 to \$8; these prices are from 50 cents to \$1 below the prevailing range during the previous week. Canners were liquidated at \$3.50 and cutters from \$4 to \$4.50; choice bulls sold from \$8 to \$9, and common from \$5 to \$6. During the week, there were many farmers on the yards in search of choice feeding steers, but the supply of this quality was limited, and the purchasers had to fill their requirements with fair quality stock. It is expected that the stocker and feeder business will show considerable activity during the next two or three weeks. Choice feeding steers weighing from eight hundred pounds up sold at steady prices, sales being made from \$9 to \$11 per hundred. Light weight feeders of good quality moved from \$8 to \$9, and the common from \$6 to \$7. Milkers and springers of good grading were in demand at steady prices, but the common kinds were off from \$15 to \$20 per head. There was a light run of calves on a stronger market. Choice veal was in good demand at prices from \$17 to \$18.50, good veal from \$17 to \$17.50, medium from \$14 to \$16, and common and grass calves from \$6.50 to \$10.

Sheep and lambs sold at steady prices on a level with the previous week's close. Although the market was considered slightly weaker on Monday and Tuesday, there was a noticeably strong feeling on Wednesday and Thursday. Choice lambs sold mostly from \$12 to \$12.50, choice yearlings from \$9.50 to \$10, light handy-weight sheep from \$7 to \$8, and heavy sheep and bucks from \$6 to \$7.

There was an average run of hogs on the market at the opening on Monday; selects sold early in the week at \$17.25, fed and watered, and at the close of the week from \$16.25 to \$16.75. The market is in an unsteady condition, and no heavy increase in the runs is anticipated.

The total receipts from January 1 to November 4, inclusive, were: 247,545 cattle, 70,991 calves, 255,884 hogs and 196,259 sheep; compared with 303,598 cattle, 59,899 calves, 326,849 hogs, and 217,605 sheep, received during the corresponding period of 1919.

Montreal.
During the same weekly period of 1919, receipts of cattle amounted to 8,500 head, as compared with less than half that amount during the past week. This

CLASSIFICATION	No.	TORONTO			MONTREAL			
		Avg. Price	Price Range	Top Price	Avg. Price	Price Range	Top Price	
STEERS								
heavy finished	99							
STEERS								
good	426	\$10.50	\$10.00-\$11.00	\$11.00	23	\$ 9.25	\$ 9.00-\$10.00	\$10.00
1,000-1,200 common	13	8.25	7.75- 8.75	9.00	249	7.75	6.00- 8.50	9.00
STEERS								
good	1,154	10.00	9.00- 11.00	11.00	41	9.25	9.00	10.00
700-1,000 common	670	7.00	6.00- 8.00	8.00	56	7.50	7.00- 8.50	8.50
HEIFERS								
good	551	10.00	9.00- 11.00	11.00	253	6.00	5.75- 6.50	6.50
fair	395	8.50	7.00- 9.00	9.00	72	7.75	7.50- 8.00	8.50
common	292	6.50	6.00- 7.00	7.00	316	6.00	5.50- 7.00	7.00
COWS								
good	177	8.00	7.00- 9.00	9.00				
common	595	6.00	5.90- 6.50	7.00				
BULLS								
good	79	8.50	8.00- 9.00	9.00				
common	252	6.00	5.50- 6.50	7.50	323	4.50	4.50	5.25
CANNERS & CUTTERS	1,187	4.75	4.00- 5.50	5.50	337	3.50	3.00- 4.00	4.50
OXEN					2			
CALVES								
veal	854	17.75	17.00- 18.50	18.50	176	13.50	12.00- 14.00	15.00
grass					646	6.00	6.00	6.50
STOCKERS								
good	1,193	8.50	8.00- 9.00	9.75				
450-800 fair	728	7.75	7.50- 8.00	8.00				
FEEDERS								
good	141	9.83	9.00- 11.00	11.00				
800-1,100 fair								
HOGS								
(fed and watered)								
selects	7,106	16.94	16.25- 17.50	17.50	1,249	17.10	17.00- 17.25	17.25
heavies	3			16.50	1			
lights	21	14.50	14.25- 15.50	15.50	164			
sows	168	13.13	12.25- 14.50	14.50	49	14.10	14.00- 14.25	14.25
stags	1				1			
LAMBS								
good	9,436	11.84	11.50- 12.50	12.50	2,871	13.00	13.00	13.25
common	536	9.00	8.00- 10.00	10.00	1,128	11.50	10.00- 12.00	12.00
SHEEP								
yearlings	166	8.50	8.00- 9.00	9.50	229	6.50	6.50	7.00
light	1,466	6.00	5.50- 6.50	6.50	217	5.25	4.50- 6.00	6.00
common	481	4.00	3.00- 5.00	5.00				

condition would indicate that the present year's marketings of cattle at Montreal during the fall months will be much lighter than during the fall of 1919. On the other hand, it may be possible that the fall run may be later than usual in reaching their full volume, and therefore heavier receipts may be expected in the near future. There were no really good cattle on sale during the week. A few steers of fairly good grading sold at \$10 per hundred, the pick of the medium stuff, from \$8.50 to \$9, and thin young steers of inferior breeding as low as \$5.50. Most of the common butcher stock, including only fair cows, common heifers and common steers, were weighed up at \$7 and under. Canners sold at \$3 and bologna bulls mostly at \$4.50. Grass calves sold 50 cents higher, five loads of grass calves were shipped to United States points during the week.

Lambs were weighed up on Monday morning at prices around \$13. During the day, however, the market weakened at \$12.50, and by the close of the week good sorts of lambs were quoted as low as \$12. The sheep, which were not very closely graded, sold mostly from \$6 to \$6.50 for the best lots.

Hogs sold on Monday at \$17, although packer buyers were endeavoring to buy at \$16.50, and the market appeared

weak. On Tuesday, however, there was a distinct change of tone and on a firmer market sales of selected lots were made up to \$17.25. The general price at the close was \$17 for selects, and \$13 for sows.

The receipts for the week amounted to 3,763 cattle, 1,530 calves, 7,840 sheep and 3,538 hogs.

PT. ST. CHARLES.—The total receipts from January 1 to November 4, inclusive, were: 36,588 cattle, 62,401 calves, 64,567 hogs and 92,123 sheep; compared with 50,565 cattle, 67,612 calves, 73,092 hogs and 89,391 sheep, received during the corresponding period of 1919.

EAST END.—The total receipts from January 1 to November 4, inclusive were 41,311 cattle, 52,903 calves, 54,564 hogs and 59,432 sheep, compared with 55,433 cattle, 52,340 calves, 52,836 hogs and 63,593 sheep, received during the corresponding period of 1919.

Wool Market Report.
There is nothing of note to report in regard to wool movements. The market remains dull, and very little trading is being done except in the lower grade wools; these are only being purchased in small lots to meet immediate requirements of manufacturers. Dealers report a very poor season in amounts handled to date, with cancellations of orders a common occurrence. United States re-

ports indicate that mills are still reducing their running time because of the very limited demand for goods. New York and Boston papers are speculating as to what effect the critical situation of the Australian banking system will have on the prices of wools from that country and, consequently, on prices elsewhere. Canadian mills have sufficient orders to keep them busy as yet, but some report that their orders will only keep them going until about the end of the year. Quotations on raw wools are unchanged.

Chicago.
Cattle.—Compared with a week ago, best corn-fed steers around steady; others mostly 15c. to 50c. lower; week top, \$17.50; bulk native, \$10 to \$14; bulk Westerns, \$8.25 to \$10.50; butcher cattle, unevenly 25c. to 75c. lower; canners and cutters, steady to 25c. lower; light and handy weight veal calves, strong to 25c. higher; heavy shipping calves, \$1 lower; feeders, steady to 25c. lower.

Hogs.—Top, \$13.05; pigs, about steady, bulk of desirable 100 to 130-pound pigs, \$12.50 to \$12.75.

Sheep.—Compared with week ago, fat lambs closed 15c. to 25c. higher; yearlings steady; sheep, 75c. to \$1 lower; feeder sheep and lambs, steady.

Toronto Produce.

Breadstuffs.

Manitoba Wheat.—No. 1 northern, \$2.00½; No. 2 northern, \$1.99½; No. 3 northern, \$1.96½; No. 4 wheat, \$1.89½.

Manitoba Oats.—No. 2 C. W., 64½¢; No. 3 C. W., 58½¢; extra No. 1 feed, 57½¢; No. 1 feed, 55½¢; No. 2 feed, 52½¢.

Manitoba Barley.—No. 3 C. W., \$1.07; No. 4 C. W., \$1.02; rejected, 82½¢; feed, 82½¢.

All above in store, Fort William Ontario Wheat.—F. o. b. shipping points, according to freight; No. 2 winter, \$1.95 to \$2; No. 2 spring, \$1.90 to \$1.95.

American Corn.—Prompt shipment, No. 2 yellow, track Toronto, \$1.19.

Ontario Oats.—No. 3 white, 60c. to 62c., according to freights outside.

Barley.—Malting, \$1.05 to \$1.10, according to freights outside.

Ontario Flour.—Winter, in jute bags, prompt shipment. Straight run bulk, seaboard, \$8.75.

Buckwheat.—No. 2, \$1.10 to \$1.15.

Manitoba Flour.—Track, Toronto, cash prices: First patents, \$12.90; second patents, \$12.40; first clears, \$11.80; according to freights outside. Market nominal.

Peas.—No. 2 outside, \$2.10 to \$2.15.

Rye.—No. 2, nominal; No. 3, \$1.60 to \$1.65.

Millfeed.—Car lots, delivered, Toronto freights, bags included: Bran, per ton, \$38 to \$40; shorts, per ton, \$42 to \$45; white middlings, \$55; feed flour, \$2.75.

Hides and Wool.

Country Hides, delivered Toronto.—Beef hides, flat cured, 8c.; green hides, 7c.; deacon or bob calf, 25c. to 50c.; horse hides, country take-off, \$3 to \$4; No. 1 sheep skins, \$1 to \$1.50; shearing and spring lamb, 25c. to 50c.; horse hair, farmers' stock, 36c. to 38c.

City Hides.—City butcher hides, green, flats, 8c.; calf skins, green flats, 10c.; veal kip, 8c.; horse hides, city take-off, \$4 to \$5.

Tallow.—City rendered, solids in barrels 8c. to 9c.; country solids in barrels, No. 1, 7c. to 8c.; Cakes No. 1, 11c. to 12c.

Wool.—Unwashed, coarse, 15c.; medium 20c.; fine, 25c.

Poultry.

There was a large demand for good poultry, and the demand exceeded the supply. Prices were firm on all kinds, and some lots showed an advance. Best call was for crate-fed chickens, large hens and ducks. There was not much call for turkeys or geese. Live weight prices were: Crate-fed chickens, 23c. to 25c.; chickens, good farm stock, 20c. to 22c.; old hens over 6 lbs., 27c., over 5 lbs., 25c.; hens, 4 to 5 lbs., 22c.; old roosters, over 5 lbs., 17c., under 5 lbs., 14c.; choice ducks, over 5 lbs., 27c., under 5, 25c. Dressed poultry—Crate-fed chickens, 32c. to 35c.; good farm stock, 28c. to 30c.; old hens, over 6 lbs., 30c., over 5, 28c., under 5, 24c.; roosters, 18c. to 20c.; choice ducks over 5 lbs., 32c. to 35c.; ducks under 5 lbs., 28c. to 30c.

Farm Produce.

Butter.—Some merchants reported an improved local demand for butter, but most dealers thought trade barely steady at prices one-half to one cent per lb. lower than a week previous. There was no demand for export. Choice creamery pound prints sold at 56c. to 59c.; medium creamery at 54c. to 57c., and best dairy at 49c. to 50c.

Eggs.—Trade was firm at unchanged quotations; new-laid selling at 80c. to 85c.; selects in cartons at 75c.; selects, ex-cartons, at 68c. to 69c., and No. 1's at 62c. to 64c. per dozen.

Cheese was a slow, weak trade at unchanged quotations; new, large selling at 29c. to 29½¢; twins at 29½¢ to 30c., and old large at 33c. to 34c.

Honey.—Choice comb at \$7.50 to \$8 per case of 15 combs, bulk 5's, 28c. to 29c.; 10's, 27c. to 28c.; 60's, 26c. to 27c.

Fruits and Wholesale Vegetables.

Most kinds of fruits and vegetables were quotable at a steady trade, but potatoes were the exception. Receipts were light and trade firm at much higher price levels, some dealers getting \$2.75 per bag, but the bulk sold at \$2.25 to \$2.50 per bag.

Apples were in better demand, but there was no change in prices.

Carrots, beets, onions and parsnips were a slow, draggy trade at prices that showed but little change.

Apples.—20c. to 30c. per 6 quart, 30c.

to 60c. per 11-quart basket, \$1 to \$2 per bushel, \$3 to \$6 per bbl.

B. C. apples, \$4 per box.

Bananas.—12c. per lb.

Crab Apples.—50c. to 60c. per 11-quart basket.

Cranberries.—\$13.50 to \$14 per bbl.

Grapes.—Blue, 40c. to 50c. per 6-quart, 75c. to \$1 per 11-quart basket. Green, 45c. to 60c. per 6-quart, and \$1 to \$1.25 per 11-quart basket.

Lemons.—Messina, \$5 to \$5.50; California's, \$7 per case.

Oranges.—Valencias, \$9.50 to \$10.50 per case.

Pears.—25c. to 50c. per 6-quart and 50c. to 75c. per 11-quart basket.

Potatoes.—Hot-house, 15c. to 20c. per lb.

Beets.—\$1 per bag.

Cabbage.—40c. to 75c. per doz., \$1 per bbl.

Carrots.—75c. per bag.

Cauliflower.—50c. to \$2.50 per doz.

Celery.—50c. to \$1 per doz.

Lettuce.—Leaf, 30c. to 35c. per doz.; Canadian head 75c. to \$1.50 per doz.

Onions.—\$1.50 to \$1.75 per 100-lb. sack; pickling yellow, 50c. per 11-quart; white, \$1 to \$1.50 per 11-quart basket.

Peppers.—Green, hot, 50c. to 60c. per 11-quart; sweet, 75c. to \$1 per 11-quart; red sweet, 75c. to \$1 per 11-quart; red hot, 65c. to 75c. per 11-quart basket.

Potatoes.—\$2.25 to \$2.75, bulk at \$2.50 per bag.

Spinach.—\$2 to \$2.25 per bbl.

Sweet Potatoes.—\$2.50 per hamper.

Squash.—75c. to \$1.50 per doz.

Pumpkins.—75c. to \$1.50 per doz.

Turnips.—60c. to 75c. per bag.

Hay and Straw—Farmers' Market.

New hay, No. 1, per ton, \$37 to \$39; mixed, \$30 to \$32; straw, rye, per ton, \$25 to \$28; straw, loose, per ton, \$13 to \$14; straw, oat, bundled, \$18 to \$20.

Clover Seed.

Dealers quote clover seed at country points as follows—Alsike, No. 1 fancy, \$14.50 to \$15.50; No. 1, bush., \$13.50 to \$14.50; No. 2, bush., \$12.50 to \$13.50; No. 3, bush., \$11.50 to \$12.50; rejected, \$9 to \$11.50.

Monday's Live Stock Market.

Toronto, November 15. Cattle.—Receipts, 6,465. With an average run, trade opened very draggy. There were heavy receipts from the West, with 1,000 cattle billed through. The market looked good for choice quality, although very few of this class were offered. Common to medium grades were steady to weak, with canners a quarter lower. The inquiry for stockers and feeders was light but will probably improve later. Quotations: Butcher steers, choice, \$11 to \$12; good, \$10 to \$11; medium, \$7.50 to \$11; common, \$6 to \$6.75. Butcher heifers, choice, \$10 to \$11.50; medium, \$7 to \$10; common, \$5.75 to \$6.75. Butcher cows, choice, \$8 to \$9; medium, \$6 to \$8; canners and cutters, \$3 to \$5. Butcher bulls, good, \$8 to \$9; common, \$4.25 to \$6. Feeding steers, good, \$10 to \$11; fair, \$9 to \$9.50. Stockers, good, \$8.50 to \$9.50; fair, \$6.25 to \$8.

Calves.—Receipts, 234. Receipts of calves were light. All grades were steady, tops selling at \$18.50. Quotations: Choice, \$16.50 to \$18.50; medium, \$13 to \$16; common, \$6 to \$11. Milch cows, choice, \$100 to \$160. Springers, choice, \$125 to \$165.

Sheep.—Receipts, 4,542. Lambs were stronger by a half a dollar than last week's close. A choice lot of 1,000 lambs sold for \$13.25.

Hogs.—Receipts, 1,542. Hog prices were unchanged from last week's close of \$16.25 to \$16.50, for fed and watered selects. The prospects are lower. Quotations, fed-and-watered basis: Selects, \$16.25 to \$16.50; lights, \$14.25 to \$14.50; heavies, \$15.25 to \$15.50; sows, \$12.25 to \$13.50.

Montreal, November 13. Cattle.—Receipts, 3,674. The market opened draggy. Local butchers bought light and medium cattle at prices ranging from \$6.50 to \$9. When this demand was supplied the market became stagnant, and before long cattle were standing without offers. Canners were \$3; bulls steady with last week's quotations.

Quotations: Butchers' steers, medium, \$8 to \$8.75; common, \$5.50 to \$7.50. Butchers' heifers, medium, \$7 to \$8.50; common, \$4.50 to \$7. Butcher cows, medium, \$4.50 to \$7. Canners, \$3; cutters, \$3.50 to \$4. Bologna bulls, \$4.25 to \$5.50.

Calves.—Receipts, 1,451. Grass calves were in good demand at \$6.50, with some sales up to \$6.60 and \$6.75, there were very few real calves of a quality offered. Quotations: Good veal, \$13 to \$15; grass, \$5.50 to \$7.

Sheep.—Receipts, 5,987. A very few selected lambs reached a top of \$13; some good lots were sold for \$12.75. A weaker feeling developed upon advices from other markets, and \$12.50 became the most common price. Quotations: Ewes, \$4 to \$6.50; lambs, good, \$12.50 to \$12.75; common, \$8 to \$11.50.

Hogs.—Receipts, 2,682. Packers opened the market with offers of \$15.50 for selects off cars. Sales were made to local butchers at \$16.00 to \$16.50, and as there were few hogs offered the price remained at \$16 to \$16.50.

Buffalo, Nov. 15 Cattle.—Receipts, 4,500. Butchers were a quarter to a half lower, with shipping steers a dollar lower. Top steers, \$12.50.

Hogs.—Receipts, 17,600. Hogs generally sold at \$13.50.

Sheep.—Receipts, 12,000. Top lambs, \$13.50; Canadians, \$11 to \$12; ewes, \$6.50 to \$7.

Calves.—Receipts, 2,400. Tops, \$18.50.

Buffalo.

Cattle.—Cattle prices got a good, hard jolt last week, the worst price reduction witnessed in many a week on the local yards. Conditions were the same at all American marketing points. One reason given was that the packers and smaller killers are scared—scared at the industrial situation, the demand for lower prices and the fact that workmen are piling up in large numbers out of a job. The situation didn't put a very good taste in the mouths of killers at any rate. This coupled with too many cattle, a badly jagged beef trade, on the catch-as-you-catch can order, established very much of a buyer's market, resulting in prices on shipping cattle being pounded all the way from a big dollar to a dollar and a half under a week ago, with the general run of butchering stuff selling fully seventy-five cents to a dollar under the previous week at the week's close. At no time of the year was the demand for shipping cattle as bad—and that's not a very good omen. On butchering stuff a lot of decent kinds of butchering heifers landed from \$7 to \$8, and in the handy steer line very few sold above \$10 to \$11. Canners and cutters showed about a quarter decline, bulls mostly a quarter and on milk cows and springers it was a fall \$5 to \$10 decline. Receipts included a liberal number of Canadians, there being fully one-half from the Dominion. Best steers were out of Canada, ranging from \$13.50 to \$13.75, but were the best here for many months past. Quotations: Steers—Canadians—Best, \$12 to \$13.75; fair to good, \$11 to \$11.50; common and plain, \$9.50 to \$10. Butchering Steers—Yearlings, good to prime, \$14 to \$15; choice heavy, \$11.50 to \$12; best handy, \$11 to \$11.50; fair to good, \$10.50 to \$10.75; light and common, \$8.50 to \$9.50. Cows and Heifers.—Heavy heifers, \$10 to \$10.50; best butchering heifers, \$9.50 to \$10; good butcher heifers, \$8.50 to \$9; light common, \$5.50 to \$6; very fancy fat cows, \$8.50 to \$9; best heavy fat cows, \$7.50 to \$8; medium to good, \$6.50 to \$7; cutters, \$4 to \$5; canners good, \$3 to \$3.25. Stockers and Feeders.—Best feeders, \$8 to \$8.50; common to fair, \$7.25 to \$7.75, best stockers, \$7.25 to \$7.50; fair to good, \$6.75 to \$7; common, \$5.50 to \$6. Bulls.—Best heavy, \$8.50 to \$8.75; good butchering, \$8 to \$8.50; sausage, \$5.50 to \$6.50; light bulls, \$5 to \$5.50. Hogs.—There was a strong hog demand all week; not enough hogs on some days to enable all buyers to meet their needs. Prices all round showed substantial takeoffs. Monday it was a \$15.25 market, at Buffalo, Tuesday, mostly \$14.75 for good hogs, yorkers and lights and pigs up to \$15.10 to \$15.25, Wednesday, a \$14.65 to \$14.75 price, Thursday, a \$14 to \$14.15 trade, few yorkers up to a quarter, while yesterday and to-day it was generally a \$13.50 price.

Sheep and Lambs.—Buffalo had a good, all round sheep and lamb trade last week, with good runs and yet no more than was needed. In fact, outlet was such that more could have been placed to good advantage. For the closing day of the week fourteen hundred were offered, mostly lambs, but including a load of

yearlings and wethers mixed and smaller bunches of sheep. Lambs were generally cleaned up early in the morning, it being practically a \$13.75 market for top sorted lambs. A fair to good kind were quoted from \$12 to \$13, with culls from \$8 to \$11.25. Yearlings were given a quotation of \$7 to \$10, wethers from \$7.50 to \$8 generally, mixed sheep \$6.50 to \$7, ewes \$6.50 to \$7.25, mixed lots from \$6.50 to \$7.50, culls running from \$2 to \$4.50. A load of yearlings and wethers about half and half, of the very desirable kind, were being held at \$11.50, but had not been placed. Week's receipts totaled 26,984. Top Canadians for the week reached \$11.50 to \$12.50.

Calves.—Calf market was mostly a \$19 top the past week, some few extra choice selling up to \$20. Top Canadians sold around top native prices, and quite a few Canadians were offered. Receipts for the week totaled 4,299 head.

Montreal.

Horses.—No change is reported in the market for horses. Heavy draft horses, weighing from 1,500 to 1,700 lbs. were quoted at \$225 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$250 each; light horses, \$175 to \$225 each; culls, \$50 to \$75, and fine saddle and carriage animals, \$250 to \$300 each.

Dressed Hogs.—There is a good demand for small lots of dressed hogs and prices were steady with fresh-killed, abattoir-dressed stock quoted at 25½ to 26c. per lb. and country dressed at 24c. per lb.

Potatoes.—The market for potatoes was firm under a good demand. Quebec stock was quoted at \$1.75 per bag of 90 lbs., ex-track and Green Mountains at \$1.70. In a wholesale jobbing way Quebec stock sold at \$2 to \$2.25 per bag of 80 lbs., ex-store.

Poultry.—Supplies of dressed poultry are small and with a fair demand prices held firm. Turkeys were quoted at 55c. per lb.; milk-fed chickens at 40 to 42c.; fowl, 32c.; roosters, 28c., and ducks, 36c. to 37c. Maple Products.—Prices of maple products are steady with syrup quoted at \$1.90 to \$2 per gallon in wood and \$2.10 to \$2.20 per tin of one gallon. Maple sugar was 26c. to 28c. per lb., according to quality. No. 1 white clover comb honey was 25c. per section; No. 2 grade 23c., and buckwheat honey 18c.

Eggs.—There is a scarcity of strictly new-laid eggs on the market, and as the demand continued good, prices are firm. Supplies of other grades are ample to meet requirements. Quotations: Special grades, 75c. to 77c. per dozen; extras, 67c. to 68c.; firsts, 58c. to 59c., and seconds 50c. to 51c.

Butter.—Local buyers of butter appear to be well supplied and no great volume of business is passing. Prices, however, were unchanged at 55c. per lb. for finest creamery in solid packages and 56c. in one-pound blocks.

Cheese.—The renewed weakness in foreign exchange has had an adverse effect on the export business for cheese. Very little business has been done, and as a consequence the demand for supplies on spot is slow.

Grain.—Trade in oats is quiet and prices steady. Car lots of No. 2 Canadian Western were quoted at 86c.; No. 3 Canadian Western at 80c.; No. 1 feed at 77c., and No. 2 feed at 74c. per bushel. Ontario No. 3 white oats were quoted at 77c. per bushel, ex-track.

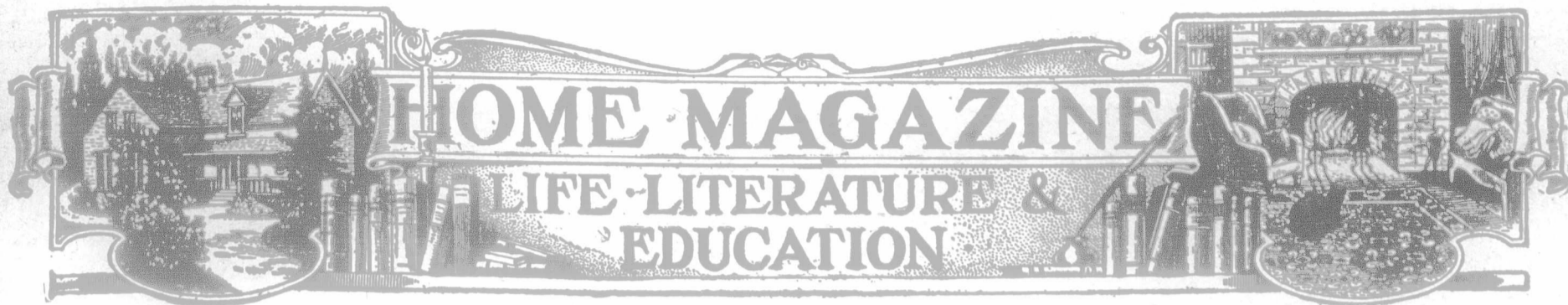
The feature of the market is the increased demand for American corn and sales of a number of car lots have been made for nearby and future shipment from Chicago.

A good demand is reported for Canadian Western barley, and as offerings are light buyers are finding it difficult to meet their requirements.

Millfeed.—Business in millfeed is good and the undertone of the market firm. Manitoba bran was quoted at \$40.25 and shorts at \$45.25 per ton, including bags, ex-track, less 25c. per ton for spot cash. Prue barley meal was selling at \$58 to \$60; dairy feed at \$50, and mixed mouille at \$45 per ton, including bags, delivered to the trade.

Baled Hay.—No. 2 timothy hay was quoted at \$30; No. 3 at \$28, and lower grades at \$24 to \$26 per ton, ex-track.

Hides and Skins.—The market for hides and skins continued unchanged with steer and cow hides quoted at 10c. per lb.; bull hides, 7c.; calf skins, 14c., and kips, 10c. per lb.; lamb skins were 50c. each, and horsehides \$2.50 to \$3 each.



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Now.
Weather sort o' gloomy,
Raining all the while,
Man, if you've got courage,
Now's the time to smile.

Saving Fuel and Keeping Out the Cold.

EVERYBODY wants to save fuel in winter. If one is buying fuel, coal and wood are both high; if one has wood to sell, then one wants to spare as much as possible for that purpose.

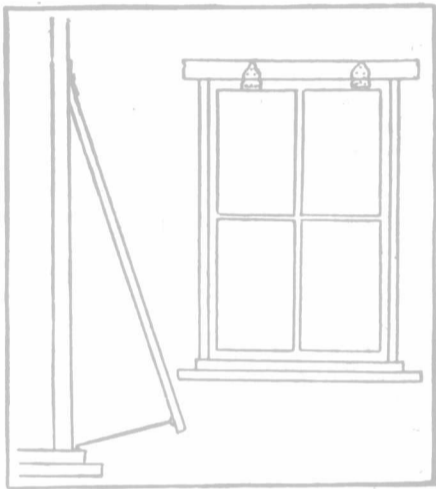
At the same time, everybody wants to be warm and comfortable. It is impossible to be happy and optimistic, or even to do one's work well when chilly; one feels much more like sitting by the kitchen stove, feet on the oven fender, and leaving the work for a later hour. When there are little children in the house, there is an additional reason why it should be cozy right down to the floor. A poor little tot of two or three is likely to take things for granted, and suffer silently because it does not know enough to complain that it is cold;—the result, colds and snuffles which might never have been contracted had the child not been chilled running about on a cold floor. Always heat rises, and so the coldest layer of air is down where the little child is.

Now "two birds may be killed with one stone" in this matter,—the fuel considerably saved, and the house kept comparatively warm, by taking certain precautions.

The first of these is, look to the windows; there are two things that may be done with them. (1) You can put on zinc weather-stripping, which can now be bought all ready for putting on the inside of the sash. When it is in place the sash fits snugly so that no wind can get in, and, moreover, the window may be raised or lowered at will. The weather-strip is, then, a very good invention. (2) You can put storm-windows on. In by-gone years the storm-window was fastened in tight, and three little holes (covered by a slide in cold weather) were placed in the bottom of the sash for ventilation. These were not very satisfactory; the three little holes were not enough to sweeten the air of a room by changing it quickly, and anyhow they were usually covered with snow. So inventive brains got to work, as they usually do when need of improvement is seen, and the modern method of fastening storm-windows was devised. A very easy matter it proved, too. You simply fasten the storm-window, by hinges, at the top, and fix an iron rod that hooks on staples on the lower sash (see accompanying cut). When you want to change the air in the room all you have to do is to swing the window open from the bottom and fasten it so, leaving the inside window open.

But, in a drafty house, all the wind does not come in around the sashes. You should examine all around the frames, besides, and it is just possible that you may find quite a current of cold air blowing through there. A very simple way to stop this is to make a paste, as follows, and stuff the cracks. Tear some old newspaper to bits and boil to a pulp in a very little water, adding some glue. If you haven't any glue boil the paper in some flour paste and add some powdered alum. When soft rub to a putty-like consistency and stuff into the cracks with an old knife or screw-driver. The "putty" will dry hard. If the cracks are very wide, cover when dry with building-paper to keep the "putty" from working out. The same method should be followed along drafty baseboards, or anywhere else that cold gains ingress; we do not want ventilation from such sources. An open fire (may be a stove) in a room, by the

way, is one of the very best ventilators. If a regular ventilating system has not been installed, and there is no open fire in a room, the air can be kept moving by opening a crack at the bottom of a window and leaving a crack open at the top of it or of another window. The idea, you see, is to keep the air moving, so that odors will be expelled and heavy, damp air not permitted to accumulate about the mouths of the breathers. A good way of dispelling the disagreeable odors that always accumulate in a room or house if it is not frequently "aired" is to throw the outside doors and windows open for a short time ever morning, and again about noon, to get rid of the cooking odors of dinner, etc.



Proper Method of Hinging Storm Windows.
It swings out at the bottom.

Doors may be protected by storm-doors, storm-vestibules, or by enclosing the porch or part of the verandah with glass. For either the vestibule or glassed-in porch, the sashes should be made of solid wood at the top and fitted with windows. They should be about 6 feet long by 3 feet wide, to be easily handled, and should be of good workmanship, as they will last as long as the house. They should be made to slide easily into grooves at the top and bottom, so they can be put in place without trouble about the first of November and removed when the weather becomes warm in spring. A good idea, if the porch or verandah is glassed in, is to have the winter sections the same size as the screens for summer; it is common now to have an entire porch or verandah screened in with wire netting in summer, so that the family can sit out on June evenings without being pestered with mosquitoes. If the porch or verandah is not enclosed in winter, a small vestibule at the door will be found a great comfort; it not only keeps the howling winds of winter out, but it affords a place for stamping off the snow, thus keeping the hall or room inside the door much cleaner. If possible the vestibule or porch should open, in winter, on the south or east side, or away from the prevailing winds, whatever the side they come from.

It is advisable, always, to have small panes in all of the removable sections, so that if a pane should be broken by accident the cost of replacing it will not be so great.

It pays to have a house securely protected against the cold. If this is done it can be kept warm with much less fuel than would be required otherwise. It should not be forgotten, moreover, that a certain amount of moisture in rooms helps to keep them more comfortable during cold weather. Water in the water-pan of the furnace helps in this way, but usually is not sufficient, therefore it is a good plan to keep a vessel of water on the registers or radiators. Since tin pans are rather unsightly, small jardinières may be used for this purpose.

New Work for Public Health.

BY H. W. HILL, M. D., D. P. H.

WESTERN University, growing and flourishing like a green bay tree in London, Canada, has established a Public Health Nurses' Course as one of its several professional courses connected with the medical sciences. For many years the Western University Medical Faculty has been turning out physicians from its Medical School in London. For many years Victoria Hospital and St. Joseph's Hospital, London, have been turning out bedside nurses. Now Western University is taking those bedside nurses after graduation and giving them an additional course in Public Health, thus fitting them for the great new field in which there is such a demand that all the universities together, in Canada and the U. S., have not begun to fill it.

Why has this demand thus suddenly arisen? The Great War brought home to every one the facts of neglected defect, disability and diseases so widespread amongst our people that the most conservative figures show 60% of our young manhood physically unfit for the front-line trenches; and half of these unfit for any kind of military service.

But not the war alone did it. The examinations made for war purposes applied only to young adults. Medical school inspection was the great enlightener of the parent concerning the physical conditions of the children of the race; they run, medical school inspection showed, 75 to 90% defective! Now, what is to be done? The mothers and fathers of the race demand that this situation shall not continue. Clubs, associations, societies, churches, of every kind and description, farmers, trades and labor, universities, public schools, preachers—everyone is demanding relief, seeking a way out. The answer up-to-date is the public health nurse—not a bedside nurse to tend the sick, greatly as they too are needed, but a specially-trained nurse to supervise the health of those who are well—or well enough not to be actually in bed!

The public health nurse proper then is the advice guard of the health army—of the coming developments, professional and official as well as public and unofficial, which the demand for service against defect, disability, disease and death has called forth.

Some of the larger cities have had such nurses for some years—engaged in medical school inspection, in tuberculosis work, in child welfare, prenatal, industrial and other phases. The great point of the present development is the demand for public health nurses from the rural districts and from the small communities, which are often too small to have even one nurse exclusively for their own public health needs.

Western University, modelling its course for public health nurses on the lines worked out by predecessors in the field but modifying the course, too, to meet the defects found by experience in these older courses, supplies now to graduate nurses' eight months solid of instruction by university professors and specialists; and practical field work, occupying nearly one-half the total time and covering every phase of the public health nurses' work, from social service to the handling of epidemics.

An eight months' university course means about 30 weeks, five days a week, six hours a day of real hard work—and the nurse who finishes successfully well deserves the certificate the university gives on the completion of the examinations in the spring.

The field studies are divided so that each nurse first observes and then serves for a short time in prenatal, maternity, infant welfare, child welfare, medical school inspection, tuberculosis, venereal

and contagious hospital work, industrial work, home visiting and nursing, etc. In all these subjects there are lectures as well as field work.

But she has lectures, demonstrations and practice in nutrition, bio-chemistry, physics, climatology, epidemiology, personal hygiene, vital statistics, public health administration and kindred subjects bearing on her work. On graduation from this course she may specialize as a school nurse, a tuberculosis nurse, a child welfare nurse, etc., but more than likely she will be called on for all these services by turns, more particularly if she goes into the rural districts.

Western University has double the number of candidates that Ann Arbor University has. But Western University cannot begin to meet the demands with its present class of eight. London itself is short-handed for public health nurses, although nine are already working in the city. The population of the fourteen counties of South Western Ontario is about 800,000 or 13 times the size of London. If one public health nurse to every 5,000 of the population were secured (and this is about the right figure, as found in other places) then nearly 160 public health nurses will be needed very soon, for this district alone.

The Women's Institutes have done much for mankind; but they can do much more. It is not sufficient to hire a nurse—even a fully trained public health nurse—and set her to work alone. In every county we need a County Public Health Association, one of whose activities it will be to study the nurse's difficulties and to help her, support her, "rally round"—and even in many instances pay her, if the county council does not. The next course will open in October, 1921.

Your Health.

BY "MEDICUS."

Delayed Dentition.

"INEXPERIENCED," Wentworth Co., Ont. "I have found your hints to help constipation a great benefit to my eleven-months-old boy (especially the brown bread). I have been weaning him gradually so that he takes whole milk now. I have been adding a little oatmeal gruel in the morning and bread and milk at other feedings.

1. Is the oatmeal advisable every day?
2. Is the yolk of egg needed for the iron which it contains, along with the milk?
3. If so, how often should I give him eggs?

Any suggestions as to diet for a year-old boy would be very acceptable. He is just getting teeth."

Ans.—1. At eleven months it is not necessary to add oatmeal gruel to the milk. It will do no harm, and perhaps makes the milk a little more easily digested. I hope you pasteurize or boil the milk.

2. Yolk of egg contains a fairly high percentage of fat, and on that account is rather hard to digest. The vegetables, cereals (wheat, oats, etc.) and meat, are the chief sources of iron in the diet. For that reason, strained vegetable soup is being given the babies (even breast fed) from the sixth month on. Spinach (to be had in the grocery store) is especially rich in iron, and that is very much used at present. Your baby should have had some teeth before eleven months. Has he been getting "raw" foods, a raw potato to chew at, orange juice, tomato juice? I would also suggest that you give him a teaspoonful of pure cod-liver oil night and morning. His diet should be quite liberal, a little bit of everything within reason. You study your child and find out the things he likes, and see to it that he is allowed to refuse every day some of the things he is fond of (i. e., let him eat until he has

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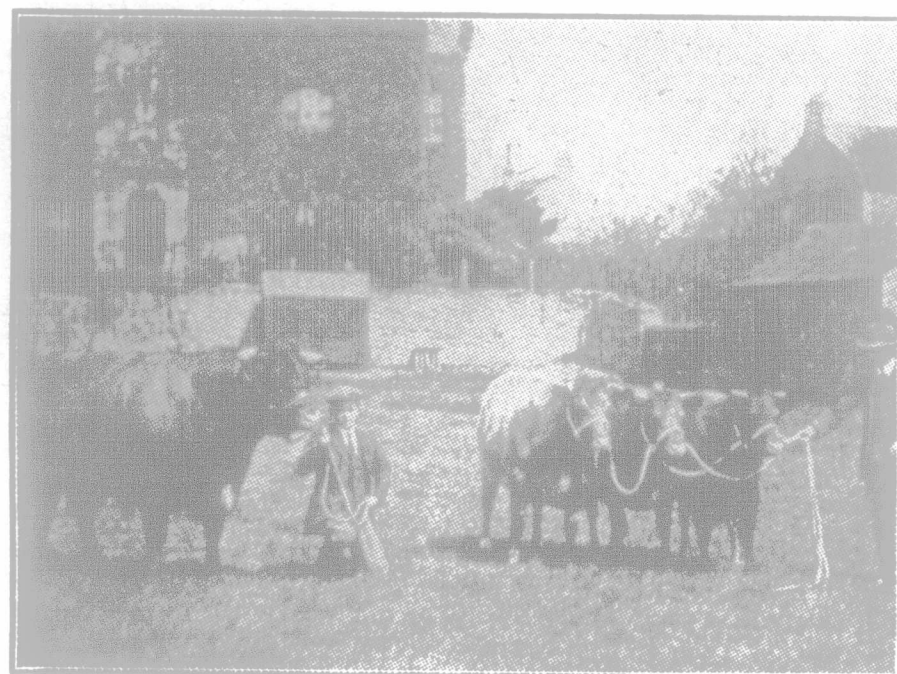
Five Imported Bulls

Twelve Canadian-bred Females

Five Canadian-bred Bulls

An offering personally selected by the sellers from many of Britain's most noted breeding establishments, and bringing forward many prominent show heifers, including the premier show group at this season's Royal Agricultural Show. Every good Canadian breeder will appreciate these cattle. Selling at the

Canadian National Exhibition Grounds, Toronto, Ontario, Friday, December 3rd, 1920



"RULER"

The noted herd sire at Gainford Hall, and three of his get, which won the "get of sire" group at the Royal Agricultural Show this year. All three heifers are in this sale.

ATTRACTIONS:

Gainford Marigold 4th, one of the three daughters of Ruler, shown above, and selling with an October heifer calf at foot which is sired by Collynie Mandarin, a first-prize winner at the "Royal."

Snowdrift 2nd, undoubtedly one of the greatest cows ever imported—a Miss Ramsden and dam of one of the good bulls in the sale. She is due again in March to Lothian Brigadier.

Inverness Princess Augusta, with a real Augusta pedigree and a real heifer. Due before sale to Newton Grand Duke.

Heather, a roan 20 months' heifer, by Baron's Pride that fills the score-card in every particular. A winner at Belfast in July, and bred in August to a son of the \$10,000 Edgocote Hero.

Bonnie Belle, a real attractive Cruickshank Julia heifer, by Spicy Beau, with a roan heifer calf at foot and re-bred to Rachan Matador.

Golden Bud, a red Brawith Bud cow direct from the Cruickshank family, and mother of one of the good bulls listed. Due again in April.

Lady Lancaster 5th, one of the outstanding breeding cows of the importation, low and thick. Due in January to a full brother of the great Argentine bull D. S. O. Congallon Rosemary, a 23-months' Shepherd Rosemary heifer, attractive from every angle, and one of the real features of the year-old heifers.

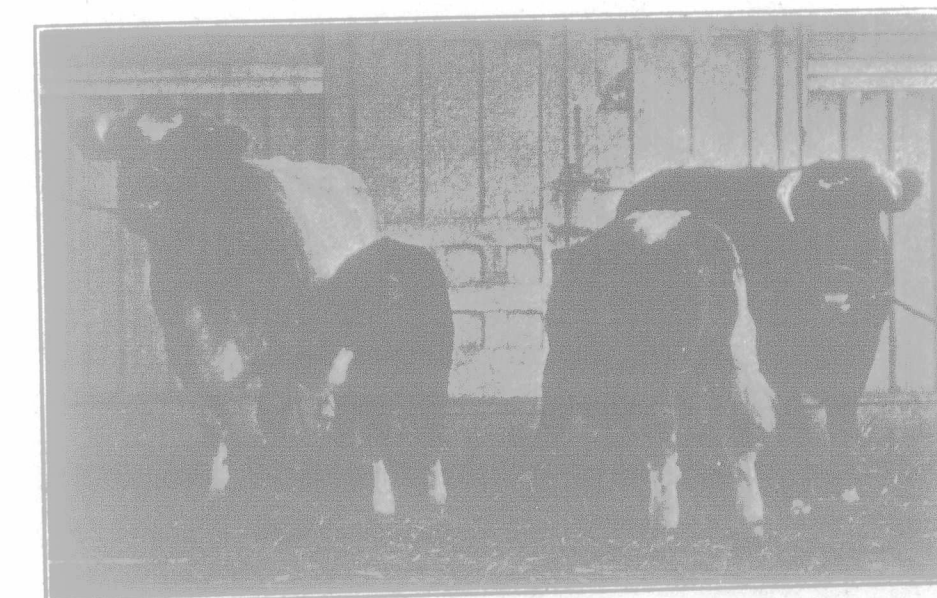
As Regards the Importation

When Messrs. Marshall, Russell & Watt decided to make an importation of Scotch Shorthorns, they intended to add to and strengthen their existing herds, and the cattle were selected with painstaking care with that end in view. Two months were spent by them in Great Britain attending the Edinburgh, Royal, Highland and other shows and inspecting the great breeding establishments to which the Shorthorn owes its pre-eminent position of to-day. Practically every herd of note in Britain was visited, and the statement may be made here without fear of contradiction that these breeders chose only the best from the real tops and brought these tops to Canada, almost regardless of price. It was, however, not until the destruction by fire in October of Mr. Russell's main barn and the season's crops that the decision was made to offer the importation at auction. With the exception of a few Canadian-bred lots the three breeders have an equitable interest in the offering, and from the quality of the cattle they are presenting it is certain that no importers who have brought Shorthorns to this country in the past are more deserving of the appreciation and support of their fellow breeders. The individuality in every instance is good, and anyone who has studied the pedigrees will be impressed with their worth and value in the production of the best—and these two combinations should furnish a fair idea of their value to the herds of the Dominion or to whatever country into which they go. Many of the cows are not only selling with calves at foot but are again well forward in service to some one of Britain's best herd sires which increases their worth as breeding cattle three fold. As mentioned elsewhere on this page many of the animals offered have been prominent winners at the Old Country Shows, including the Highland, the Royal and Edinburgh, and the pedigrees these animals are carrying are also choice. It is certain that their progeny should the first season come close to paying the first cost. As regards the bulls, there are more than several that show promise of exceptional merit; among which are individual calves that if sold in Britain separate from their dams when of breeding age would probably bring an equal number in pounds sterling as they will fetch in dollars on this side of the water. They are every bit as valuable however, and with the female entries make up one of the best balanced offerings of well-bred cattle ever sold in Canada. A few females are featured individually on this page, but in no respect are they superior to dozens of others in the offering, and all should receive your closest attention as listed in the catalogue and when you see the cattle on sale day.

The usual sale conditions and guarantees will apply. The cattle all have Dominion certificates as having passed the federal tuberculin test, and purchasers may be assured of fair treatment from these breeders in every way. If you are interested in good Shorthorns, you should attend this great noteworthy event.

The Canadian-Bred Cattle

The Canadian-bred lots that have found their way into this offering will not detract from the imported cattle. They will be presented in splendid condition, and in every instance they possess individual merit of high order. Of the seventeen Canadian-bred lots selling, five are bulls, and among them are several that show extraordinary promise. Three of these are got by Mr. Russell's own herd sire Lavender Light; another is by Craven Knight, and the fifth is a half brother to Matchless Dale, the sensational calf which won second at the International last year. Among the home-bred females is a red, year-old Rosebud show heifer; Victoria 75th, a handsome granddaughter of imported Victoria 71st; two nice attractive roan Roan Lady heifers; Celia 24th, a grand breeding granddaughter of Celia 10th (imp.), and also her daughter Celia Marchioness, the 4th prize senior calf in a strong class at Toronto this year. These are cattle that will do good in the herds into which they go.



Two of the good breeding cows, only a week out of quarantine. Note the growthy calves. These cows are well along in calf again to British service.

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J. A. WATT

had enough). His body needs the inorganic salts, vitamins, etc.; especially for the growth of bone, teeth, etc.

Graves Disease; Tuberculosis.

“WEEKLY Learner”.—Since my operation for appendicitis, I seem to be bothered with my throat, some days you would think it was going to close up; gets very dry. At times I spit up phlegm; when I sing I seem to get out of breath.

1. Is this from the ether?
2. I gargle my throat with peroxide. Is that right?

Ans.—1. Ether is in no way responsible for the condition of your throat.

2. Peroxide is not very efficient as a gargle. Its action is largely mechanical, because the oxygen gas liberated may dislodge plugs of mucus. One of the best gargles I can suggest is plain everyday salt, one teaspoonful to a pint of warm water. Some add 1/2 teaspoonful of baking soda. This will dissolve mucus, is not irritating, and will soothe any inflamed surface.

It would be advisable in your case to ask your family doctor to examine you carefully, to make sure that you are not suffering from a mild form of Graves' Disease—a form of enlargement of the thyroid gland (thick neck). This presses on the windpipe and causes shortness of breath. The very fact that you are raising some phlegm makes one think of the possibility of tuberculosis of the lungs. A careful examination should be made to decide if either of these conditions are causing your symptoms.

The First School of Its Kind in Canada.

It was a Women's Institute School, but the story of it is well worth reading by those who belong to any women's organization, for the ideas found good in one are likely to be of use in all. It was held at London, Ont., on the last day of the W. I. Convention, Oct. 24-26. The "teacher" was Mrs. Alfred Watt, M. B. E., who carried on the original schools in England during the war; the "pupils" were the delegates to the convention.

As an introduction Mrs. Watt traced briefly the history of the Women's Institute movement, which has now spread to all the provinces and many countries—a mighty movement that began, every Institute worker knows, in our own Province of Ontario, at a meeting of a few women in a home at Stony

Creek over 25 years ago. Ontario now has 1,000 Institutes and 39,000 members.

Passing to British Columbia—her own Province—Mrs. Watt traced the Institute from its organization by Laura Rose Stephen in 1908 to its adoption by the State in 1911, when an Advisory Board of four women was appointed in connection with the Department of Agriculture with an executive officer, Mrs. Watt, herself, within the Department. . . . In 1911 the movement started in New Brunswick and Quebec; in 1912 in Alberta; in 1913 in Nova Scotia, Manitoba and Saskatchewan.

In 1911 the famous Cornell Study Courses for farm women were begun in New York State, and in the same year, in Ireland, the Society of "United Irish Farm Women" was formed, modelled on the Women's Institute of Ontario. They have, however, diverged very much, the work there now being chiefly co-operative work with the creameries and dairies. But they have accomplished another end: they have kept Protestant and Catholic women together; Sir Horace Plunkett told Mrs. Watt that wherever they are established a better feeling exists.

By 1912 there were a number of Institutes in the United States, some of which were not known under the name of "Women's Institute." They also, however, copied much from the W. I. organization. In that country the Government has assisted liberally by an appropriation of \$1,000,000. . . . In England, the W. I. literature on Home Economics has been extensively used. They, in turn, have specialized very much on farm literature and have shown us the way.

Belgium also has its Women's Institutes. Early in the war a Belgian came to Canada to study with Mr. Putnam, and returned to organize Institutes, which have made an extraordinary development, the most outstanding difference being that the women in general have no part at all. They come to be taught agriculture and household science, and merely sit and listen. The teaching is done by experts, and the demonstrations are exceptionally good. At first it was a puzzle to Mrs. Watt that there should be an expert in every neighborhood ready to do this work, but, searching for the reason, she found a full explanation: Every normal school has a good course in Domestic Science and Agriculture; every teacher has to take it. Always, in Belgium, the Institute meetings are held on Sunday. So intensive is the agriculture there that no other time is available. The organization in Belgium is perfect, the co-operation between the Government, the church and the women works like a machine, but the women as yet take no part.

In France there is no regular Women's Institute; there is merely a section for women in the Department of Agriculture. When Institutes are established, they will probably be like those of Belgium.

. . . . In Poland the movement has taken a very interesting development called "The Society of Women Land-Holders." Outside of the qualification of holding land their aims and objects are very much like ours. . . . Italy's famous International Institute of Agriculture has also a women's department. The women there, however, have chiefly concentrated on industries. . . . Germany before the war had an East Prussian organization, rather an industrial development, aiming at something similar to our Institutes but with the Prussian touch, regarding the women chiefly as an economic factor with attention devoted most of all to such subjects as bee-keeping, vegetable growing, poultry-raising, etc.

In England the Institutes were organized in 1915, and are still spreading. Organization began in Scotland in 1917, when the Scottish Board of Agriculture asked for a speaker, and Mrs. Watt, who was there establishing the movement in England, was asked to go in response. She founded the first Women's Institute there, and two general organizers followed, One in the Highlands, the other in the Lowlands. Later the work was extended by Miss Guest and Mrs. McIvor. Lastly, in Finland was formed "The Martha Society," more like our own W. I. than any other organization.

Mrs. Watt recommended all to study the movement from the many sources available, (Among these are the Ontario W. I. Reports, the Cornell Reading Courses, Mrs. Watt's book, Reports of the Irish Co-operative Societies), and Mr. Putnam, when asked to tell something of the development in Western Canada, gave a short account of the meeting at Lethbridge in 1912, when a number of representatives from the Western Provinces and the United States met in connection with the Dry Farming Congress. At that Congress Institute work was discussed, and it was emphasized that the Institutes should work in conjunction with the State, keeping out all subjects of a controversial nature that would tend to divide the people. A committee was formed of which Mrs. Watt was secretary and Mr. Putnam chairman. That was the beginning of the Federation of Women's Institutes for the Dominion, but soon afterwards the war came, and federation was delayed until the last year of the conflict.

Mrs. Watt remarked that a federation of the Institutes in Canada and England is a probability, while many are looking

forward to an international federation taking in all the countries of the world in which Women's Institutes have footing.

Starting an Institute or a Year.

UNQUESTIONABLY the first step, said Mrs. Watt, is to make a survey of the field, considering all the possibilities—who can be relied upon to help, etc. A sort of "Doomsday" book was kept in England, and everything was written down. In making this survey what other organizations are doing must be considered, as it is important to work in harmoniously with them. Another item to keep in mind is the local needs; it would be folly to get up community work that no one needs. Sometimes we forget the work at our own doors; there may be a dirty spot or a crying lack in our community that we fail to pay attention to because we have got used to it. . . . Then certain national demands may be made upon us doing the year; by watching the papers we can have some idea of the trend of events, and can allow for that. . . . allowance must also be made for national holidays, so that meetings shall not fall upon them.

Another thing in making out the program is to provide for continuity of the educational work. We should guard against repetitions — Institute members have got past the age when they need to have things hammered into their brains—but we should watch to have subjects followed up, working from the known to the unknown, from the narrow to the broader.

Mrs. Watt now asked for questions and comments, which were readily forthcoming from her "school". Briefly the ideas gained from this discussion were: That in the survey for the year stock should be taken of any outstanding local men—doctors, lawyers, professors, etc.—who might be expected to give assistance. . . . That a 3-months entire rest from Institute activities during the summer is not advisable, but that a practical rest might be obtained by getting visitors, students home from holidays, etc., to give talks (say at an Institute picnic). Another idea was to visit back and forth with other Institutes.

Aims and Objects.

THE aims and objects of the W. I., how to get them worked on to the programs, was the next subject brought up.

These, said Mrs. Watt, are pretty much the same the world over:—To get better homes, better farms, better communities, better teaching of agriculture, to stimulate home industries and co-operation, and develop community centres.

A great many people do not know the aims and objects of the W. I. They are embodied in the constitution and everybody should know them. The fact that some Institutes have become mere money-making organizations shows our aims are not understood. They are really educational and our first duty to build up our own Institutes: The Institute does not exist to supply other organizations with funds. That was all right during the War, but now let other organizations "run their own show." We are nation-builders, it is true, but it is fundamental that each Institute have its own club-rooms, a good library, a good society, and funds to go on with the work. Some of us have been forgetting that we are women banded together to be good women and build up good communities.

In the discussion as to how to get our aims and objects on the programs, Mrs. Watt said that in England they are printed on the backs of the programs, and Mr. Putnam added that at the Ottawa Convention a good suggestion had been made, viz. to present the aims and objects at the April meeting, then ask that suggestions be thought out and presented by a committee at the next meeting, and subsequently printed for the following year. . . . Another suggestion was that it is excellent to have something in the papers occasionally to let people know exactly what the Institute stands for.

The discussion was concluded by Mrs. Watt, who said that if each branch educated its own community (and so gradually the nation) the aims and objects would eventually be understood. In formulating them agriculture must not be forgotten. In England a gardener came to every Institute to give instruction. Have the men tell about farm science and educate the boys and girls to see that



The "School." First of Its Kind in Canada.

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Institute or a Year.

UNABLY the first step, Mrs. Watt, is to make a field, considering all who can be relied upon. A sort of "Doomsday" in England, and every-thing down. In making that other organizations be considered, as it is work in harmoniously with them to keep in mind is it would be folly to do any work that no one else has forgotten the work; there may be a dirty lack in our community pay attention to because it is. Then certain things may be made upon a year; by watching the have some idea of the and can allow for that. Also be made for national meetings shall not fail

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agriculture is a beautiful thing. We never can cultivate the work too much. A useful idea might be to have clippings from agricultural papers on the Bulletin-board.

How to Get Attractive Meetings.

EVERYBODY seemed to be ready with suggestions for this. Some of them were: To have officers just two years (some said "Keep the same Secretary"); to keep the past Presidents as directors; a question drawer with several selected to answer; current events; make everyone work; get everyone on her feet during the meeting; get the girls in to furnish music; have community singing, etc.

Mrs. Watt remarked that when someone has done something well—drawing, millinery, etc., it should be shown at the meetings in a corner kept for that purpose. Appreciation should always be shown to the speakers; in Belgium it is customary to present them with flowers before they leave.

In reply to a question from Mrs. Watt, as to how "the place we meet in" affects meetings, several said they had found house to house meetings the most successful, in the country in summer and in the village in winter. Others had found a regular meeting place more satisfactory. One spoke of rooms with a piano and library, used "between times" as a rest-room. In reply to a question from Mr. Putnam as to whether school-houses were being utilized as meeting places, Mrs. Todd, Orillia, said that one school-house was so used in her locality. Mr. Putnam suggested that the Institutes might co-operate with the Councils to erect community halls which could be used. A booklet has been prepared on the subject, and can be got on application to the Department of Agriculture. You have to submit your plans to the Department, and for any hall costing up to \$3,000, one-fourth of the amount will be refunded by the Government.

Drama.

THIS subject also brought many ladies to their feet. In Lucknow a play had been written and put on. In Rodney two plays had been put on and were the best attended of anything the Institute had tried. Coldstream had been ambitious enough to get up among others, "Peg o' My Heart;" the young people had gone to surrounding villages, and a wonderful spirit had been created. Ailsa Craig followed this same plan, giving their plays like the "Ben Greet" players, anywhere, in school-houses and barns. During the war the money was left for war work, \$2,000 in all being made in this way.

Mrs. Watt suggested that Institutes contemplating drama write to the "National Federation of Women's Institutes, Idlesleigh Gardens, London, Eng.," enclosing 5 cents, for a list of plays and songs.

Games suggested by "pupils" of the "school," were: charades, promenades, spelling matches, etc. A young girl volunteered the information that excellent games can be got in the Canadian Girls-in-Training Handbook.

Papers, Debates, Discussions.

"A PAPER every meeting," on every subject under the sun—practical, literary, educational, and "nearly political"—seemed to be the rule. The subject in one Institute, was always announced in the local paper before the meeting.

Several delegates reported debates; two subjects given were, "Resolved that women should be in politics," and "Resolved that the mental capacity of women is greater than that of men." It was generally agreed that discussion is very valuable. Everybody should take part, as if the members don't express themselves in the meetings they will outside of them.

How to Get a Higher Standard.

A GOOD rule, said Mrs. Watt, is to be kind with amateurs, and to insist on professional speakers maintaining a high standard. This can be done by impressing upon the speakers, as Mrs. Todd said, the fact that the women they are to address are thinking, intelligent women. This will prevent speakers from wasting their own time and that of the Institute on trifles and silly little jokes, as some do.

"What I Should Like on an Institute Program."

THIS question, thrown out by the "teacher," brought forth a number of ideas, all the way from "a demonstration on home millinery," to "improvement cemeteries" and "how to conduct a county fair." The idea was to show that this should all be planned at the beginning of the year's work.

At the evening session Mrs. Watt, continuing the above subject, told something about the programs in England. There demonstrations have an important part; she had seen demonstrations on rabbit-skin curing, glove-making, tinkering, etc. Also cultural subjects have a prominent place. One Institute had taken up "a famous artist and his work," and another had a lecture on "music," with selections on the piano to illustrate. In England all the work is done by the Executive Committee; the only general business meeting is the annual meeting. This plan Mrs. Watt liked, because it develops trust and co-operation.

Duties of Officers.

THE President: Mrs. Watt impressed upon the "school" the fact that, in a general way, the duties of the President should be very light. The best President is the one who gets everybody working. She, however, must assume the responsibility for whatever transpires, although not for the actual work. She presides at meetings, and is, by virtue of her office, a member of all committees. At the beginning of the year the committees should know exactly what their work is, then they should be left to do it; some Presidents make the mistake of trying to do everything themselves. The President, as a matter of fact, hasn't any powers at all, although she has great influence. She should have great vision, should see possibilities, and should carry them by suggestion. The best President is tactful, pleasant, sympathetic, sides with no one. She should know how to conduct a meeting and the general points of procedure. Someone has described her as a person looking down a long vista; she can accomplish just as far as she sees.—So, the necessity of vision.

As presiding officer she often has a lot of social work to do. Often she has to give the welcome that will make a speaker speak well. Mr. Putnam added that when "things hang fire," as they do at times, she may have to express her views and practically dominate the meeting if anything is to be done, but this must be done tactfully.

Summed up, the President's duties are: to conduct meetings, to keep the society together and everyone working, to express the will of the people. It is a fatal mistake for the President and Secretary to do all the work.

The opinion of both "school" and "teacher" was that it is a great mistake, also, for the same President to stay in office year after year.

THE Secretary.—She may retain the position year after year; in fact, this is desirable. Her duties are heavy, attending to all the correspondence, but she should never answer letters without consulting the President or Executive. She should try, when writing the minutes, to express what transpires as clearly and as briefly as possible. It is not necessary to take down what everybody says. The same Secretary may act for all the committees, or each committee may have one of its own. Mrs. Watt was of the opinion that every Secretary who has much work to do should be paid; others thought recognition in other ways—say a present—better. The Secretary may also act as Treasurer, or there may be a separate Treasurer.

Executive and Directors.

(Duties outlined by Mr. Putnam.) IN the branch organization there may be; President, 3 Vice-Presidents, Secretary, Treasurer, and from 2 to 5 additional Directors. The Executive is composed of the President, 2 Vice-Presidents and Secretary, and its duties are to carry out decisions decided upon by the whole Institute or the Board.

Board of Directors.—This Board is provided to make sure of any ground that is to be covered. It may be given power to prepare programs, or to get up a Demonstration Course and go on with it

without referring to the whole body. If uncertain, it should consult the whole meeting. The Executive gets directors from the Board, and the Board carries out the wishes of the whole Institute. Special committees are usually named at the whole meeting, or the Board of Directors may name them. It is not necessary to refer certain routines to the whole meeting.

In reply to a question as to whether delegates should be appointed by the Executive, Mr. Putnam said that was a matter for the whole meeting to decide. The Directors should be chosen to represent different sections of the community. In this way every part is represented and served. In any Institute, Mr. Putnam said, there should be at least 3 Directors and an additional one for each 20 members over 25.

Duties of Committees.—Members of Committees should be "good mixers." They are expected (1) To carry out any work entrusted to them. (2) To take a lead in competitions, etc. (3) To maintain the aims and ideals of the Institute. (4) To see to the mental and physical comfort of each member, not neglecting the shy members. (5) To be a safeguard against impracticable things by thoroughly considering them and making recommendations.

In the discussion the question came up as to where correspondence should first be read, and it was decided that much time would be saved by its being gone over by the Executive and presented in the fewest possible words to the meeting. It might be placed on the Notice Board. Mrs. Watt emphasized that the Executive can be trusted with correspondence. "When we elect members of Parliament we will get more idea of corporate loyalty. The thing to do is to have loyalty, co-operation and decent business methods,—and get rid of gossip; it's sickening."

Election.

(Outlined by Mrs. Watt.) Election should be by ballot. Allow every member to nominate, and send the nominations to the Committee or whoever is appointed, a month before elections. Ballot papers are then prepared with every name sent in, and the election is held at the Annual Meeting. This is the most democratic way.

At the Annual Meeting appoint scrutineers, and place one outside the polling booth, one inside. The voter goes into the booth, marks her ballot, folds the paper and puts it in the ballot box. Afterwards the scrutineers read the results, put the names on the board, and destroy the ballots. The parliamentary way of voting is to place an X opposite the name.

At this point, owing to the lateness of the hour, the school came to a close, with the assurance that before long a number of Institute Schools will be conducted throughout the Province.

We almost forgot the "joke on Mr. Putnam" promised last week.

When we reached the Board of Commerce room, where the last session of the school was held, we found the delegates laughing over the extreme appropriateness of the room. Upon the wall was a placard, which had hung there for many moons, telling the things *not* to do if one wanted a live association. The last warning was: "Don't bother about getting new members. 'Let George do it.'" Institute members will recognize the coincidence.

The Children's Poem.

The Little Girl and the Pussy-cat.
Said a little girl to a pussy-cat:
"It's jolly to make you play!
How soft you purr when I stroke your fur,
And your claws are all tucked away!
I love you ever so much for that,"
Said a little girl to a pussy-cat.

"But, oh, there's a terrible thing I've heard.
That brings great sorrow to me;
You killed a poor little baby bird
That lives in our apple-tree.
You can't be dear to me after that,"
Said a little girl to a pussy-cat.

"O little maid," said the pussy-cat,
"You are gentle and kind, they say,
To bird and beast, but didn't you feast
On chicken for lunch to-day?
And aren't there feathers upon your hat,
O little maid?" said the pussy-cat.

"Oh, I'll be I, and you'll be you,
As long as the world shall be.
If you'll be as good as you can for you,
I'll try to be good for me.
So let's be friends, and agree to that,
O little maid!" said the pussy-cat.
—BURGES JOHNSON, in *Advance*.

Current Events

Kapuskasing is to be known as Spruce Falls, and under Government encouragement is to be transformed into a model town.

The Coroner's Jury exonerated Rev. J. O. L. Spracklin for the killing of Beverly Trumble at the Chappell House, Sandwich, which the Special License Inspector was attempting to enter in the course of his duty.

Capt. Johnson flew from Camp Borden to Ottawa, via Deseronto, last week, making the distance 240 miles, in 2 1/4 hours.

The Cork hunger strikers have begun to take nourishment, under the direction of the prison doctors.

On Armistice Day the greatest drama of democracy ever seen in the British Isles was enacted in London, when the body of an Unknown British Soldier was brought, with stately ceremony to its resting place among Britain's Great in Westminster Abbey. Admirals and Generals were the pallbearers, and the King himself chief mourner, Generals stood at salute as the flag-covered coffin, upon which rested the old "tin hat" of the unknown lad beneath, passed. In the graphic words of Sir Philip Gibbs: "Sometimes, perhaps, he had saluted them as they rode past. Now they stood in Whitehall to salute him." Upon the same day a similar scene was enacted in Paris, where the body of an unknown *poilu* was buried beneath the Arc de Triomphe.

The Bolsheviks have seriously worsted Gen. Wrangel's troops in the Crimea.

Italy and Jugo-Slavia signed peace, on Nov. 12th, at Rapallo.

German University men and members of the Reichstag have drawn up a reply accepting the appeal for re-establishment of the "friendly intercourse" which existed before the War, which the professors and doctors of Oxford University recently addressed to the professors of arts and sciences and members of the Universities in Germany and Austria.

The Windrow

Recent statistics state that up to July 31st, 1920, almost 19,000 returned soldiers have been settled on the land in Canada, and have been granted loans amounting in all to about \$75,000,000, of which \$58,000,000 has been disbursed. It is estimated that 2,000,000 acres of free Dominion land have been disposed of to the soldiers under the settlement scheme. Already 163 returned men have repaid their entire loan out of the proceeds of their first year's crop.

The lighthouses now being built send their beams straight up in a revolving or concentrated shaft of light that can be seen 100 miles by air or sea. The one erected at Hounslow Aerodrome, Eng., has a beam of 70,000 candle power.

Some of Edison's inventions, which helped the Allies in the War, are enumerated by a contributor to *Engineering and Contracting*: A device for detecting submarines by sound from a moving vessel; one for turning a ship quickly at right angles; collision mats for minimizing loss from torpedo attack; methods of camouflaging vessels; obstruction of torpedoes with nets; underwater search-light; oleum cloud-shells; water-penetrating projectiles; production of nitrogen gas from the air; locating hidden guns by "sound ranging"; method of preserving submarine guns from rust;—these are only a few of the inventions perfected by the invention "wizard" and the staff who carried out and advised him in the great work.

The Fashions.

How to Order Patterns.

Order, by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, The Farmer's Advocate and Home Magazine, London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

POSITIVELY NO PATTERNS WILL BE SUPPLIED EXCEPT THOSE ILLUSTRATED.

When ordering, please use this form:—
Send the following pattern to:

Name.....
 Post Office.....
 County.....
 Province.....
 Number of Pattern.....
 Age (child or misses' pattern).....
 Measurement—Waist..... Bust.....
 Date of issue in which pattern appeared.....

Make Toys for Christmas.

2967. A Set of Toy Animals.
 Cut in 1 size. The Cow requires $\frac{1}{2}$ yard of 27-inch material and the horse, $\frac{1}{8}$ yard of 36-inch material. Price 15 cents.

3061. Doll's Set.
 Cut in 5 Sizes for Dolls: 16, 18, 20, 22

and 24 inches in height. Size 18 will require $\frac{1}{8}$ yard of 36-inch material for the dress, $\frac{1}{8}$ yard of 40-inch material for the cape, and $\frac{1}{2}$ yard of 20-inch material for the bonnet. Price, 15 cents.

2970. A Set of Pleasing Toys for the Nursery.

Cut in 1 size. Either style requires $\frac{3}{4}$ yard of 27-inch material. Price, 15 cents.

2275.—A New Dress and Hat for Miss Dolly.

Cut in 6 sizes: For dolls 16, 18, 20, 22, 24 and 26 inches in length. Size 24 will require $1\frac{1}{2}$ yard of 27-inch material for the dress, and $\frac{1}{8}$ yard for the hat. Price 15 cents.

2937. Set of Toys.
 Cut in one size. It will require $\frac{1}{2}$ yard of 24-inch material for either toy. Price, 15 cents.

2273.—A Dainty Set for Dolly.
 The pattern included all styles illustrated, is cut in 6 sizes for dolls: 16, 18, 20, 22, 24 and 26 inches in length. The dress requires $1\frac{1}{4}$ yard of 27-inch material, the petticoat $\frac{1}{2}$ yard, and the combination $\frac{3}{8}$ yard for an 18-inch doll. Price, 15 cents.

2300.—An Attractive Set of Toy Animals.

The patterns are cut in one size only. It will require $\frac{1}{2}$ yard of flannel for the sheep, $\frac{3}{4}$ yard for the dog, and $\frac{3}{8}$ yard for the pig. Price, 15 cents.

1902.—Doll's Long Clothes Set.
 Cut in 3 sizes for dolls: 16, 18 and 20 inches in length. It will require $2\frac{1}{2}$ yards of 27-inch material for the dress. $1\frac{1}{2}$ yard of 24-inch material for the wrapper

and $2\frac{1}{8}$ yards of 24-inch material for the coat, for an 18-inch doll. Price, 15c.

3424.—Ladies' Dress.

Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A medium size will require $5\frac{1}{2}$ yards of 44-inch material. The width of the skirt at lower edge is about $1\frac{1}{2}$ yard. Price, 15 cents.

3432.—Girl's Dress.

Cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size will require $3\frac{1}{2}$ yards of 36-inch material. Price, 15 cents.

2991.—Ladies' House Dress.

Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires $5\frac{3}{4}$ yards of 36-inch material. Width at lower edge, is about $2\frac{1}{4}$ yards. Price, 15 cents.

3428.—Girl's Dress.

Cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year-size will require $2\frac{1}{8}$ yards of 27-inch material. Price, 15 cents.

3175-3417.—A Smart Costume.

Waist 3175 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 3417 cut in 7 sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. To make the entire gown of one material will require $8\frac{1}{2}$ yards of 27-inch material. The width of the skirt at the lower edge is $1\frac{1}{2}$ yard. TWO separate patterns 15 cents FOR EACH pattern.

3410.—Juniors Dress.

Cut in 3 sizes: 12, 14 and 16 years. A 14-year size will require 4 yards of 44-inch material. Price, 15 cents.

3414.—A Simple Apron.

Cut in 4 sizes: Small, medium, large and extra large. A medium, size will require $3\frac{1}{2}$ yards of 36-inch material. Price, 15 cents.

3001. Child's Coat and Cap.

Cut in 4 sizes: 2, 3, 4 and 5 years. size 2 requires $1\frac{1}{2}$ yards of 54-inch material for the coat, and $\frac{1}{2}$ yard of 32-inch material for the cap, with $\frac{1}{8}$ yard of lining. Price, 15 cents

3405.—A Stylish Gown.

Cut in 7 sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size will require $5\frac{1}{2}$ yards of 36-inch material. The width of the skirt at lower edge with plaits extended is about 2 yards. Price 15 cents.

3409.—Girl's Dress.

Cut in 4 sizes: 8, 10, 12, and 14 years. A 10-year size will require $4\frac{1}{4}$ yards of 36-inch material. Price, 15 cents.

3426.—Work or Morning Dress.

Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require $5\frac{3}{4}$ yards of 36-inch material. The width of the skirt at the foot is about $1\frac{1}{4}$ yard. Price, 15 cents.

3075.—Child's Dress.

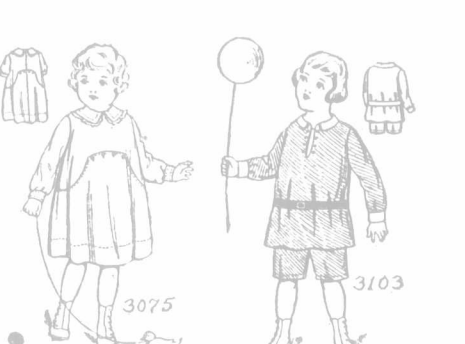
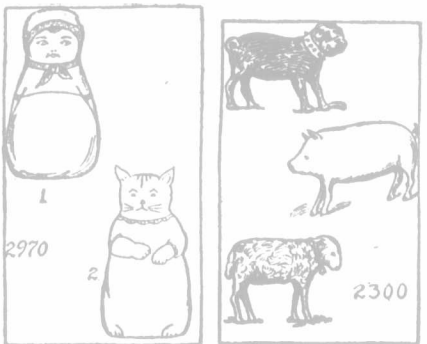
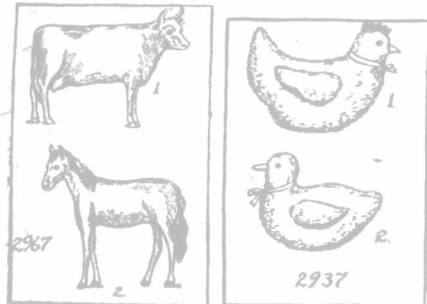
Cut in 5 sizes: 1, 2, 3, 4 and 5 years. Size 4 requires $2\frac{3}{8}$ yards of 36-inch material. Price, 15 cents.

3425-3419.—A Pleasing Costume.

Waist 3425 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3419 cut in 7 sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. The width of the skirt at lower edge is $1\frac{1}{4}$ yard. To make this costume for a medium size will require $5\frac{3}{4}$ yards of 40-inch material. TWO separate patterns 15 cents FOR EACH pattern.

3431.—Girl's Dress.

* Cut in 4 sizes: 8, 10 12 and 14 years. A 10-year size will require $4\frac{3}{4}$ yards of 27-inch material. Price, 15 cents.



FOUNDED 1866

Coat and Cap.
 sizes: 2, 3, 4 and 5 years.
 1 1/2 yards of 36-inch
 coat, and 1/2 yard of
 for the cap, with 1/4
 Price, 15 cents
 34, 36, 38, 40, 42, 44,
 bust measure. A 38-inch
 5 1/2 yards of 36-inch
 width of the skirt at
 plaits extended is about
 5 cents.
 Dress.
 8, 10, 12, and 14 years.
 will require 4 1/4 yards of
 Price, 15 cents.
 Morning Dress.
 34, 36, 38, 40, 42, 44
 bust measure. A 38-inch
 5 1/2 yards of 36-inch
 width of the skirt at the
 1/2 yard. Price, 15 cents.
 Dress.
 1, 2, 3, 4 and 5 years.
 2 3/4 yards of 36-inch
 15 cents.
 Pleasing Costume.
 in 7 sizes: 34, 36, 38,
 40, 42, 44 inches bust measure.
 in 7 sizes: 24, 26, 28, 30,
 32 inches waist measure. The
 skirt at lower edge is 1 1/4
 yards. This costume for a
 girl requires 5 1/2 yards of
 material. TWO separate patterns
 FOR EACH pattern.
 Dress.
 8, 10, 12 and 14 years.
 will require 4 1/4 yards of
 Price, 15 cents.

3406. Ladies' Night Dress.
 Cut in 4 sizes: Small, 32-34; medium,
 36-38; large, 40-42; and extra large 44-46
 inches bust measure. A medium size
 will require 3 1/2 yards of 36-inch material.
 Price, 15 cents.
 3103.—Boy's Suit.
 Cut in 4 sizes: 2, 3, 4 and 5 years.
 size 4 will require 2 1/2 yards of 40-inch
 material. Price, 15 cents.
 3411. Girl's Coat.
 Cut in 5 sizes: 6, 8, 10, 12 and 14
 years. A 10-year size will require 3 1/2
 yards of 44-inch material. Price, 15
 cents.
 3421-3415.—Costume for Home or
 Business.
 Waist 3421 cut in 7 sizes: 34, 36, 38,
 40, 42, 44 and 46 inches bust measure.
 A 38-inch size will require 3 yards of
 36-inch material. Skirt 3415 cut in
 7 sizes: 24, 26, 28, 30, 32, 34 and 36 inches
 waist measure. A 26-inch size will
 require 4 yards of 27-inch material. The
 width at the lower edge with plaits
 extended is about 2 yards. TWO
 separate patterns, 15 cents FOR EACH
 pattern.
 3416.—Child's Romper.
 Cut in 4 sizes: 1, 2, 3 and 4 years.
 A 2-year size will require 3 yards of 36-
 inch material. Price 15 cents.
 3161.—A Handy Apron.
 Cut in 4 sizes: Small, 32-34; medium,
 36-38; large, 40-42; and extra large,
 44-46 inches bust measure. For a medium
 size 4 1/4 yard of 36-inch material will be
 required. Price 15 cents.
 2988. Girl's Dress.
 Cut in 4 sizes: 8, 10, 12 and 14 years.
 Size 10 will require 3 1/4 yards of 44-inch
 material. Price, 15 cents.
 3423. Misses Dress.
 Cut in 3 sizes: 16, 18 and 20 years.
 A 16-year size will require 4 1/2 yards of
 36-inch material. The width of the
 skirt at the lower edge is about 2 yards
 with plaits extended. Price, 15 cents.
 3433. Girl's Dress.
 Cut in 5 sizes: 2, 4, 6, 8 and 10 years.
 A 6-year size will require 3 1/2 yards of 36-
 inch material. Price, 15 cents.
 3408. Ladies' House Dress.
 Cut in 7 sizes: 34, 36, 38, 40, 42, 44
 and 46 inches bust measure. A 38-inch
 size requires 6 1/2 yards of 36-inch material.
 The width of the skirt at lower edge is
 about 2 yards. Price, 15 cents.



Hope's Quiet Hour.

Art Thou He?

Art Thou He that should come, or do we look for another?—S. Matt. 11:3.
 "What think ye of Christ, friend? when all's done and said, Like you this Christianity or not?"

You own your instincts! Why, what else do I, Who want, am made for, and must have a God Ere I can be aught, do aught!—no mere name Want, but the true thing with what proves its truth, To wit, a relation from that thing to me, Touching from head to foot—which touch I feel, And with it take the rest, this life of ours!

BROWNING.

St. John the Baptist had lived for years a life of freedom in the wilderness. Then he came forth with his ringing message, calling on all men to repent and believe. Fresh from communion with God, his eyes were clear, and he proclaimed with unhesitating confidence that his Kinsman was the Lamb of God, the Sacrifice for the sin of the world.—S. John 1:29.

With wonderful courage the Baptist dared to tell Herod that he was living a life of open sin; and the natural consequence followed,—he was chained in a loathsome dungeon. The man, who had been clear-sighted when he breathed the free air and slept under the open sky, felt depressed and discouraged in the stifling atmosphere of the prison. But he still believed in the absolute truthfulness of JESUS. If He declared Himself to be the Messiah, then all doubts would be scattered. I know that some people—eager to glorify the Baptist—think that the question of our text was intended to convince St. John's disciples

only. But there is not a hint of this in the story. The imprisoned prophet sent two of his disciples to ask of Jesus: "Art Thou He that should come, or do we look for another?" The answer was indirect, but it was sent straight to their master. They were commissioned to tell him what they had seen and heard: "The blind receive their sight, and the lame walk, the lepers are cleansed, and the deaf hear, the dead are raised up and the poor have the gospel preached to them. And blessed is he, whosoever shall not be offended in Me."

This has often been called the "utilitarian age." Unless a thing is of some practical use the world pushes it aside, and will not stop to consider it. But the answer of Christ to the earnest question of a troubled soul is as convincing to-day as it was nineteen hundred years ago.

"What think ye of Christ, friend? when all's done and said, Like you this Christianity or not?"

Has it helped to uplift the ideals of the human race? Is it able to bring purity and healing to souls sunk in shame and degradation? If men really accept Christ as their Master, obeying His teaching and trying to be like Him in thought, word and deed, will they be better or worse.

I don't see how there can be any doubt about the answer to that question, if it is answered honestly. Some will say: "Oh, Christians are hypocrites. They profess to be unworldly, but they are just as selfish as other people." But isn't that really saying: "They are only pretending to follow Christ; they are not really living the Christian life?" It is an admission that if they really tried to be like Christ they would be better than they are now.

Of course sham Christianity will not uplift anybody,—but what about the real thing? If you honestly set out to obey the teaching and copy the Life of Jesus Christ, will He lead you toward impurity, selfishness, dishonesty and crime? Is He the most perfect Teacher and Example the world has ever known; or can you mention anyone who has inspired more people to be kind, honest and pure? It would take me a long time to go over my accounts, and tell you exactly how much money has been put into my hands by our readers to pass on to the sick and needy; but very few weeks go by without some kindly gifts, sent in the Name and for the sake of Him Who has won the love of millions of hearts.

During the last week I have received two donations of two dollars each (from Miss C. W., Bewdley, Ont. and M. L., Drayton, Ont.). One who signs himself "miserable sinner," Brampton, Ont., sent a dollar.

If the desire to be like Christ makes people more kind, it must be a good thing to be really like Him. A medicine is known by its results, and no other medicine but Christianity has shown marvellous power to heal sick souls.

There is on my desk to-day a book called: "The Dry Dock of a Thousand Wrecks." It gives the reader a glimpse of the wonderful work of restoration accomplished by the "Water St. Mission" during the last forty years. The searchlight is thrown on a man of good family, who had been dragged into the depths of shame and misery by the drink habit. For more than seven years he had wandered aimlessly about the slums of New York, "half-clothed, half-fed, entirely liquor-soaked." His own testimony is: "When I hobbled into the Mission, I felt and looked like an old man of eighty. To-day, I feel like a young man of thirty. The crowning joy of my life is my daily communion with Jesus Christ my Lord."

The Master's words have been fulfilled in him, as in so many other lives, and he is blessed. He lives a happy life, respected by all who know him, and only visits his old filthy haunts to try and draw other miserable outcasts away from shame and darkness into joy and light.

Some drunkards have been helped to their feet over and over again; for the rule of the Water Street Mission is, "Never give a man up!" When men fancy they can "keep straight" in their own strength, they usually are beaten again by their old enemy; but, when they really accept Christ as their Master, He proves His power and willingness to transform and heal their forlorn and hopeless lives. One of such backsliders, who had been helped out of the ditch many times, at last made the great surrender. He had been down in the depths for

years, yet now has a good business, many friends, and "a bright, joyous consciousness of the indwelling presence of Christ."

One man, who had been chained by the demon Drink for more than forty years, at last turned in despair to the One Saviour Who could free him. All alone in a city park, he flung up his arms and said "Jesus Christ, I can't pray—I don't know how. But if you will give me power to cut this cursed drink out of my life, I'll serve you faithfully the rest of my days."

The hand he had clasped in despair was strong, and his new Master soon restored his health, gave him life and hope and happiness, and—best of all—gave him the privilege of helping others who were "down and out."

That is one of the most wonderful parts of the story of that famous Mission in New York. Those who have been helped out of shame and misery are eagerly reaching out friendly hands to others who are sinking in the mire. They are, as they say, "getting out to help the other fellow." Won by the Friend of publicans and sinners, they also become friends of sinners. Instead of dragging men and women down, they are trying their hardest to help them up. They are inspired by their Living Friend. Can any other friend work such miracles?

When troubled souls, ask the question of our text. "Art Thou He that should come, or do we look for another?" the Master points to a great multitude of happy, healthy souls, and lets each questioner read the answer to his own doubting question. Blind souls have learned to see and crippled lives have been straightened, leprous sores of uncleanness have been cleansed and deaf ears now hear the Voice of God, those who had been dead in open and shameless sin have been raised up to new life, the poor not only listen to the good news of God's love but go out to proclaim it, and the faithful servants of Jesus Christ, have found the secret of blessedness. Their misery has changed into wonderful joy.

Christ can point out such miracles wherever lives are honestly surrendered to Him. What think ye of this Master? Can you find one more worthy of your love and service? If He is not your chosen Master, have you found one surpassing Him in beauty of character and in power to uplift? If He is your Master and Lord, are you trying to win others to His service?

"Ye servants of God,
 Your Master proclaim,
 His wonderful Name:
 And publish abroad
 The Name all-victorious
 Of JESUS extol;
 His kingdom is glorious,
 And rules over all.
 DORA FARNCOMB.

The Ingle Nook

Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in a stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.

Cheese-Making at Home.

For Mrs. P. C., Essex Co., Ont.
 The following directions are abridged from Mrs. Laura Rose Stephen's book, "Farm Dairying":—Heat the milk to 86 by setting it on the stove and stirring. The milk should be sweet and pure. If the cheese is to be colored use a small teaspoonful of cheese color to 100 lbs. (10 gals.) of the milk; add the color to a pint of the milk, then stir in with the rest. A large new tin tub, or any clean vessel which will not injure the milk will do as a cheese vat.

For every 25 lbs. milk use 1 teaspoonful of rennet. Try to get the rennet at a cheese factory; rennet tablets such as druggists sell are sometimes not satisfactory. Dilute the rennet in a pint of cold water and pour it into the milk, stirring from 2 to 3 minutes. Take off the stove. Cover the vat to keep the milk warm.

Try the milk occasionally to see when it has sufficiently coagulated, by inserting the forefinger into the curd and with the thumb making a dent in the curd

just at the base of the finger, then raise the forefinger carefully. If the curd breaks clean it is ready to cut. The time from adding the rennet to cutting is usually about 20 minutes.

If you have not a curd knife, use a long-bladed carving knife. Cut the curd lengthwise into strips one-third of an inch wide, then crosswise the same, then horizontally as well as you can; begin stirring gently and continue the cutting till the curd is of uniform size. While the stirring is going on heat may be slowly applied by setting the vat in a vessel of warm water, or a clean can filled with hot water may be put into the vat. After the whey has separated pretty well from the curd, a pailful may be dipped out and heated to 130 or 140, then returned to the vat, then more whey dipped out and heated, and so on until the curd is heated to 98. Do not heat too quickly; half an hour should be taken. After it is brought to 98 it is not necessary to stir continuously, but it must be frequently stirred to prevent matting and the temperature must be maintained. It is well to keep the vat covered as much as possible.

In about 3 1/4 or 3 1/2 hours after adding the rennet to the milk, the curd is usually ready to dip. When ready the curd should be rather firm, with a shiny appearance, and falling apart when pressed in the hand. Dip the curd and whey into a colander and put the curd in a large cheesecloth on a level butter-worker or some sort of wooden rack in a large tin. The curd should be well stirred for 10 or 15 minutes to allow the whey to escape. It is then salted at the rate of 1 ounce to every 25 lbs. of milk. Stir the curd well and let stand 10 or 15 minutes.

A cheese hoop of wood or heavy tin is now necessary with a circle or follower of wood, fitting well on the top. A bandager of ordinary tin should fit closely inside the hoop and 4 inches higher. Cut a piece of cheesecloth the length of the bandager and the width around it, sew up, run a thread around one end and slip on the outside of the bandager.

Place the hoop on a board in a tin pan; put a square of cotton wet in hot water on top of the hoop then place on the prepared bandager and shove it to the bottom. Put in the salted curd; press down well with the hand. Pull up the bandager and the cheese will be inside the cheesecloth in the hoop. Lay a square of wet cotton on top, and put on the follower.

Pressing comes next. An old-fashioned fulcrum and lever press is good. It may be constructed thus: Get a strong board 8 or 10 ft. long. Place it under a ledge, put the cheese on the floor or on a bench near the ledge, and put a small block or board on the centre of the cheese for the board to rest on. Place a heavy weight (about 50 lbs.) on the end of the board. It is well not to put all the weight on at once, but to increase it gradually.

Next morning take the cheese out of the hoop, dampen it with hot water on the outside, pull the cheesecloth up and trim it so it will extend half an inch over the ends. Cut a circle of stiffened cheesecloth the size of the top, place carefully on the cheese, cover with a square of wet cotton, place the hoop on top, and force the cheese into it.

Finish off the other end in the same way, and put again to press until next day. Then take from the hoop and place in a cool cellar on a clean board, turning it upside down every day for a month, and after that occasionally. Do not worry if it moulds; the mould can be washed off before the cheese is cut. At the end of 2 months the cheese should be ready for eating, but is better if kept 5 or 6 months.

Late Fall Cookery.

Pumpkin Timbales.—Take 1 cup stewed pumpkin, 2 eggs, salt and pepper, a slight grating of nutmeg. See that the pumpkin is very thoroughly drained and beaten or mashed perfectly smooth. It is best to pass it through a coarse sieve or strainer. Add to it the yolks of the eggs and seasonings. Beat the whites of eggs and when quite stiff, fold these in at the last moment. Have ready small well greased timbale moulds or custard cups. Fill them two-thirds full of the mixture and bake in a moderate oven about 20 minutes, being careful to stand the cups in a pan of hot water in the oven so that the timbales may

cook evenly. Turn out and serve either plain or with a creamy sauce.

Of course, stewed pumpkin may be served as a vegetable in the same manner as stewed squash; that is, well seasoned with salt and pepper and with a generous portion of butter added at the last moment.

Little Pumpkin Pies.—Cut a pared pumpkin in inch-cubes, and steam until done; let dry over a hot fire in a colander, then press through a sieve or ricer. To a cup and a half of sifted pumpkin, add half a cup of sugar, two table-spoonsfuls of molasses, two eggs, beaten without separating the whites and yolks (one egg and one-third a cup of cracker crumbs may be used), one table-spoonful of ginger, half a teaspoonful of salt, two table-spoonfuls of melted butter and one cup of rich milk, and turn into small tins lined with pastry. Bake about twenty-five minutes. Serve, turned from the tins, reheated a little and decorated with whipped cream. Sweeten the cream slightly and flavor with a few drops of almond or vanilla extract.

Cauliflower and Cheese.—Mix cold cauliflower with rich cream, or rather a thick white sauce if you can't spare the cream; add salt and pepper to taste;

pack into a dish, cover thickly with grated cheese, and bake.

French Onion Soup.—The best way to make this is: Peel a large onion and mince it with a sharp knife. Put in saucepan a generous table-spoonful of butter. When this is melted, put in the onion and stir over a hot fire until browned. Do not allow the onion to burn or scorch. As soon as a delicate shade of brown is reached, pour into the saucepan one and one-half pints of water, at a hard boil, and season to taste with salt and pepper. Bring to a boil and take from the fire. Put in each soup-plate a handful of fried bread-dice or of croutons, pour in the soup, and put a little grated cheese on the surface.

Red Cabbage.—Wash a large head, quarter, shred fine, wash again, and drain. Put a lump of dripping in a deep skillet, test with shredded onion; when the onion browns put in the cabbage, stir well, add boiling water to cover, and cook an hour. Then add three large apples, sliced thin, and a small pinch of salt; let boil ten minutes, then stir in a level table-spoonful of flour wet smooth in three spoonfuls of vinegar. Boil up, and serve hot. A variant, much approved in some kitchens, is to slice sweet potatoes instead of apples. Finish the same.

"suppose we do; I aren't above giving a lift to a chap as can use 'is fists,—not even if 'e is a vagrant, and a uncommon dusty one at that;—so, if you're in the same mind about it, up you get,—but no more furrin curses, mind!" With which admonition, the Waggoner nodded, grinned, and climbed back to his seat, while Bellew swung himself up into the hay once more.

"Friend," said he, as the wagon creaked upon its way, "Do you smoke?"

"Ah!" nodded the Waggoner.

"Then here are three cigars which you didn't manage to smash just now."

"Cigars! why it ain't often as I gets so far as a cigar, unless it be Squire, or Passon,—cigars, eh!" Saying which, the Waggoner turned and accepted the cigars which he proceeded to stow away in the cavernous interior of his wide-eaved hat, handling them with elaborate care, rather as if they were explosives of a highly dangerous kind.

Meanwhile, George Bellew, American Citizen, and millionaire, lay upon the broad of his back, staring up at the cloudless blue above, and despite heart break, and a certain Haunting Shadow, felt singularly content, which feeling he was at some pains with himself to account for.

"It's the exercise," said he, speaking his thought aloud, as he stretched luxuriously upon his soft, and fragrant couch, "after all, there is nothing like a little exercise."

"That's what they all say!" nodded the Waggoner. "But I notice as them as says it, ain't over fond o' doing of it,—they mostly prefers to lie on their backs, an' talk about it,—like yourself."

"Hum!" said Bellew, "ha! 'Some are born to exercise, some achieve exercise, and some, like myself, have exercise thrust upon them.' But, anyway, it is a very excellent thing,—more especially if one is affected with a—er—broken heart."

"A w'ot?" enquired the Waggoner.

"Blighted affections, then," sighed Bellew, settling himself more comfortably in the hay.

"You aren't 'nting at—love, are ye?" enquired the Waggoner cocking a somewhat sheepish eye at him.

"I was, but, just at present," and here Bellew lowered his voice, "it is a—er—rather painful subject with me,—let us, therefore, talk of something else."

"You don't mean to say as your 'eart's broke, do ye?" enquired the Waggoner in a tone of such vast surprise and disbelief, that Bellew turned, and propped himself on an indignant elbow.

"And why the deuce not?" he retorted, "my heart is no more impervious than anyone else's,—confound it!"

"But," said the Waggoner, "you ain't got the look of a 'eart-broke cove, no more than Squire Cassilis,—which the same I heard telling Miss Anthea as 'is 'eart were broke, no later than yesterday, at two o'clock in the artemoon, as ever was."

"Anthea!" repeated Bellew, blinking drowsily up at the sky again, "that is a very quaint name, and very pretty."

"Pretty,—ah,—an' so's Miss Anthea!—as a pict'er."

"Oh, really?" yawned Bellew.

"Ah!" nodded the Waggoner, "there ain't a man, in or out o' the parish, from Squire down, as don't think the very same."

But here, the Waggoner's voice tailed off into a meaningless drone that became merged with the creaking of the wheels, the plodding hoof-strokes of the horses, and Bellew fell asleep.

He was awakened by feeling himself shaken lustily, and, sitting up, saw that they had come to where a narrow lane branched off from the high road, and wound away between great trees.

"Yon's your way," nodded the Waggoner, pointing along the high road, "Dapplemere village lies over yonder, 'bout a mile."

"Thank you very much," said Bellew, "but I don't want the village."

"No?" enquired the Waggoner, scratching his head.

"Certainly not," answered Bellew.

"Then—what do ye want?"

"Oh well, I'll just go on lying here, and see what turns up,—so drive on, like the good fellow you are."

"Can't be done!" said the Waggoner.

"Why not?"

"Why, since you ax me—because I don't have to drive no farther. There be the farm-house,—over the up-land yonder, you can't see it because o' the trees, but there it be."

So, Bellew sighed resignedly, and, perforce, climbed down into the road.

"What do I owe you?" he enquired.

"Owe me?" said the Waggoner, staring.

"For the ride, and the—er—very necessary exercise you afforded me."

"Lord!" cried the Waggoner with a sudden, great laugh, "you don't owe me nothin' for that,—not nohow,—I owe you one for a knocking of me into that ditch, back yonder, though, to be sure, I did give ye one or two good 'uns, didn't I?"

"You certainly did!" answered Bellew smiling, and he held out his hand.

"Hey!—what be this?" cried the Waggoner, staring down at the bright five-shilling piece in his palm.

"Well, I rather think it's five shillings," said Bellew. "It's big enough, heaven knows. English money is all O. K., I suppose, but it's confoundedly confusing, and rather heavy to drag around if you happen to have enough of it—"

"Ah!" nodded the Waggoner, "but then nobody never has enough of it,—leastways, I never knowed nobody as had. Good-bye, sir! and thankee, and—good luck!" saying which, the Waggoner chirruped to his horses, slipped the coin into his pocket, nodded, and the wagon creaked and rumbled up the lane.

Bellew strolled along the road, breathing an air fragrant with honey-suckle from the hedges, and full of the song of birds; pausing, now and then, to listen to the blythe carol of a sky-lark, or the rich, sweet notes of a black-bird, and feeling that it was indeed, good to be alive; so that, what with all this,—the springy turf beneath his feet, and the blue expanse over-head, he began to whistle for very joy of it, until, remembering th Haunting Shadow of the Might Have Been, he checked himself, and sighed instead. Presently, turning from the road, he climbed a stile, and followed a narrow path that led away across the meadows, and, as he went, there met him a gentle wind laden with the sweet, warm scent of ripening hops, and fruit.

On he went, and on,—heedless of his direction until the sun grew low, and he grew hungry; wherefore, looking about, he presently espied a nook sheltered from the sun's level rays by a steep bank where flowers bloomed, and ferns grew. Here he sat down, unslinging his knapsack, and here it was, also, that he first encountered Small Porges.

CHAPTER IV.
HOW SMALL PORGES IN LOOKING FOR A FORTUNE FOR ANOTHER, FOUND AN UNCLE FOR HIMSELF INSTEAD.

THE meeting of George Bellew and Small Porges, (as he afterward came to be called), was sudden, precipitate, and wholly unexpected; and it befell on this wise:

Bellew had opened his knap-sack, had fished thence cheese, clasp-knife, and a crusty loaf of bread, and, having exerted himself so far, had fallen a thinking or a dreaming, in his characteristic attitude, i. e.:—on the flat of his back, when he was aware of a crash in the hedge above, and then, of something that hurtled past him, all arms and legs, that rolled over two or three times, and eventually brought up in a sitting posture; and lifting a lazy head, Bellew observed that it was a boy. He was a very diminutive boy with a round head covered with coppery curls, a boy who stared at Bellew out of a pair of very round, blue eyes, while he tenderly cherished a knee, and an elbow. He had been on the brink of tears for a moment, but meeting Bellew's quizzical gaze, he manfully repressed the weakness, and, lifting the small, and somewhat weather-beaten cap that found a precarious perch at the back of his curly head, he gravely wished Bellew

"Good afternoon!"

"Well met, my Lord Chesterfield!" nodded Bellew, returning the salute, "are you hurt?"

"Just a bit—on the elbow; but my name's George."

"Why—so is mine!" said Bellew.

"Though they call me 'George-Porgy'."

"Of course they do," nodded Bellew, "they used to call me the same, once upon a time,—"

George Porgy, pudding and pie
Kissed the girls, and made them cry,

though I never did anything of the kind,—one doesn't do that sort of thing when one is young,—and wise, that comes later, and brings its own care, and—er—heart-

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BY JEFFERY FARNOL.

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CHAPTER III.

WHICH CONCERNS ITSELF WITH A HAY-CART, AND A BELLIGERENT WAGGONER.

IT was upon a certain August morning that George Bellew shook the dust of London from his feet, and leaving Chance, or Destiny to direct him, followed a hap-hazard course, careless alike of how, or when, or where; sighing as often, and as heavily as he considered his heart-broken condition required,—yet heeding, for all that, the glory of the sun, and the stir and bustle of the streets about him.

Thus it was that, being careless of his ultimate destination, Fortune condescended to take him under her wing, (if she has one), and guided his steps across the river, into the lovely land of Kent,—that county of gentle hills, and broad, pleasant valleys, of winding streams and shady woods, of rich meadows and smiling pastures, of grassy lanes and fragrant hedge-rows—that most delightful land which has been called, and very rightly, "The Garden of England."

It was thus, as has been said, upon a fair August morning, that Bellew set out on what he termed "a walking tour." The reservation is necessary because Bellew's idea of a walking-tour is original, and quaint. He began very well, for Bellew,—in the morning he walked very nearly five miles, and, in the afternoon, before he was discovered, he accomplished ten more on a hay-cart that happened to be going in his direction.

He had swung himself up among the hay unobserved by the somnolent driver, and had ridden thus an hour or more in that delicious state between waking, and sleeping, ere the waggoner discovered him, whereupon ensued the following colloquy:

The Waggoner. (Indignantly) Halloa there! what might you be a doing of in my hay?

Bellew. (Drowsily) Enjoying myself immensely.

The Waggoner. (Growling) Well, you get out o' that, and sharp about it.

Bellew. (Yawning) Not on your life! No sir,—not for Cadwallader and all his goats!"

The Waggoner. You jest get down out o' my hay,—now come!

Bellew. (Sleepily) Enough, good fellow—go to!—they voice offends mine ear!

The Waggoner. (Threateningly) Ear be frowed! If ye don't get down out o' my hay,—I'll come an' throw ye out.

Bellew. (Drowsily) 'Twould be an act of wanton aggression that likes me not.

The Waggoner. (Dubiously) Where be ye going?

Bellew. Wherever you like to take me;

"Thy way shall be my way, and—er—thy people—(Yawn) So drive on, my rustic Jehu, and Heaven's blessings prosper thee!"

Saying which, Bellew closed his eyes again, sighed plaintively, and once more composed himself to slumber.

But to drive on, the Waggoner, very evidently, had no mind; instead, flinging the reins upon the backs of his horses, he climbed down from his seat, and spitting on his hands, clenched them into fists and shook them up at the yawning Bellew, one after the other.

"It be enough," said he, "to raise the 'Old Adam' inside o' me to 'ave a trumper o' the roads a-snoring in my hay,—but I ain't a-going to be called names, into the bargain. 'Rusty'—I may be, but I reckon I'm good enough for the likes o' you,—so come on down!" and the Waggoner shook his fists again.

He was a very square man, was this Waggoner, square of head, square of jaw, and square of body, with twinkling blue eyes, and a pleasant, good-natured face; but, just now, the eyes gleamed, and the face was set grimly, and, altogether, he looked a very ugly opponent.

Therefore, Bellew sighed again, stretched himself, and, very reluctantly, climbed down out of the hay. No sooner was he fairly in the road, that the Waggoner went for him with a rush, and whirl of knotted fists. It was very dusty in that particular spot so that it presently rose in a cloud, in the midst of which, the battle raged, fast and furious.

And, in a while, the Waggoner, rising out of the ditch, grinned to see Bellew wiping blood from his face.

"You be no—fool!" panted the Waggoner, mopping his face with the end of his neckerchief. "Leastways,—not wi' your fists."

"Why, you are pretty good yourself, if it comes to that," returned Bellew, mopping in his turn. Thus they stood a while stanching their wounds, and gazing upon each other with a mutual, and growing respect.

"Well?" enquired Bellew, when he had recovered his breath somewhat, "shall we begin again, or do you think we have had enough? To be sure, I begin to feel much better for your efforts, you see, exercise is what I most need, just now, on account of the—er—Haunting Spectre of the Might Have Been,—to offset its effect, you know; but it is uncomfortably warm work here, in the sun, isn't it?"

"Ah!" nodded the Waggoner, "it be."

"Then suppose we—er—continue our journey?" said Bellew with his dreamy gaze upon the tempting load of sweet-smelling hay.

"Ah!" nodded the Waggoner again, beginning to roll down his sleeves,

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break." Here Bellew sighed, and hacked a piece from the loaf with the clasp-knife. "Are you hungry, Georgy Porgy?" he enquired, glancing up at the boy who had risen, and was removing some of the soil and dust from his small person with his cap.

"Yes I am."

"Then here is bread, and cheese, and bottled stout,—so fall to, good comrade."

"Thank you, but, I've got a piece of bread an' jam in my bundle,—"

"Bundle?"

I dropped it as I came through the hedge, I'll get it," and as he spoke, he turned, and, climbing up the bank, presently came back with a very small bundle that dangled from the end of a very long stick, and seating himself beside Bellew, he proceeded to open it. There, sure enough, was the bread and jam in question seemingly a little the worse for wear and tear, for Bellew observed various articles adhering to it, amongst other things, a battered penknife, and a top. These, however, were readily removed, and Georgy Porgy fell to with excellent appetite.

"And pray," enquired Bellew, after they had munched silently together, some while, "pray where might you be going?"

"I don't know yet," answered Georgy Porgy with a shake of his curls.

"Good again!" exclaimed Bellew, "neither do I."

"Though I've been thinking of Africa," continued his diminutive companion, turning the remains of the bread and jam over and over thoughtfully.

"Africa!" repeated Bellew, staring.

"That's quite a goodish step from here."

"Yes," sighed Georgy Porgy, "but, you see, there's gold there, oh, lots of it! they dig it out of the ground with shovels, you know. Old Adam told me all 'bout it; an' it's gold I'm looking for, you see, I'm trying to find a fortune."

"I—er—beg your pardon—?" said Bellew.

"Money, you know," explained Georgy Porgy with a patient sigh, "pounds, an' shillings, an' bank-notes—in a sack if I can get them."

"And what does such a very small Georgy Porgy want so much money for?"

"Well, it's for my Auntie, you know, so she won't have to sell her house, an' go away from Dapplemere. She was telling me, last night, when I was in bed,—she always comes to tuck me up, you know, an' she told me she was 'fraid we'd have to sell Dapplemere an' go to live somewhere else. So I asked why, an' she said 'cause she hadn't any money an' 'Oh Georgy!' she said, 'Oh Georgy, if we could only find enough to pay off the—'"

"Mortgage?" suggested Bellew, at a venture.

"Yes,—that's it, but how did you know?"

"Never mind how, go on with your tale, Georgy Porgy."

"If—we could only find enough money, or somebody would leave us a fortune," she said,—an' she was crying too, 'cause I felt a tear fall on me, you know. So this morning I got up, awful' early, an' made myself a bundle on a stick,—like Dick Whittington had when he left home, an' I started off to find a fortune."

"I see," nodded Bellew.

"But I haven't found anything—yet," said Georgy Porgy, with a long sigh, "I s'pose money takes a lot of looking for, doesn't it?"

"Sometimes," Bellew answered. "And do you live alone with your Auntie then, Georgy Porgy?"

"Yes,—most boys live with their mothers, but that's where I'm different, I don't need one 'cause I've got my Auntie Anthea."

"Anthea!" repeated Bellew, thoughtfully. Hereupon they fell silent, Bellew watching the smoke curl up from his pipe into the warm, still air, and Georgy Porgy watching him with very thoughtful eyes, and a somewhat troubled brow, as if turning over some weighty matter in his mind; at last, he spoke:

"Please," said he, with a sudden diffidence, "where so you live?"

"Live," repeated Bellew, smiling, "under my hat,—here, there, and everywhere, which means—nowhere in particular."

But I—I mean—where is your home?"

"My home," said Bellew, exhaling a great cloud of smoke, "my home lies beyond the 'bounding billow'."

"That sounds an awful' long way off."

"It is an awful' long way off."

"An' where do you sleep while—while you're here?"

"Anywhere they'll let me. To-night I shall sleep at some inn, I suppose, if I can find one, if not,—under a hedge, or hay-rick."

"Oh!—haven't you got any home of your own, then,—here?"

"No."

"And—you're not going home just yet,—I mean across the 'bounding billow'?"

"Not yet."

"Then—please—" the small boy's voice was suddenly tremulous and eager, and he laid a little, grimy hand upon Bellew's sleeve, "please—if it isn't too much trouble—would you mind coming with me—to help me to find the fortune?—you see, you are so very big, an'—Oh!—will you please?"

George Bellew sat up suddenly, and smiled; Bellew's smile was, at all times, wonderfully pleasant to see, at least, the boy thought so.

"Georgy Porgy," said he, "you can just bet your small life, I will,—and there's my hand on it, old chap." Bellew's lips were solemn now, but all the best of his smile seemed, somehow, to have got into his gray eyes. So the big hand clasped the small one, and as they looked at each other, there sprang up a certain understanding that was to be an enduring bond between them.

"I think," said Bellew, as he lay, and puffed at his pipe again, "I think I'll call you Porges, it's shorter, easier, and I think, altogether apt; I'll be Big Porges, and you shall be Small Porges,—what do you say?"

"Yes, it's lots better than Georgy Porgy," nodded the boy. And so Small Porges he became, thenceforth. "But," said he, after a thoughtful pause, "I think, if you don't mind, I'd rather call you—Uncle Porges. You see, Dick Bennet—the blacksmith's boy, has three uncles an' I've only got a single aunt,—so if you don't mind—"

"Uncle Porges it shall be, now and forever, Amen!" murmured Bellew.

"An' when d'you s'pose we'd better start?" enquired Small Porges, beginning to re-tie his bundle.

"Start where, nephew?"

"To find the fortune."

"Hum!" said Bellew.

"If we could manage to find some,—even if it was only a very little, it would cheer her up so."

"To be sure it would," said Bellew, and, sitting up, he pitched loaf, cheese, and clasp-knife back into the knap-sack, fastened it, slung it upon his shoulders, and rising, took up his stick.

"Come on, my Porges," said he, "and, whatever you do—keep your 'weather eye' on your uncle."

"Where do you s'pose we'd better look first?" enquired Small Porges, eagerly.

"Why, first, I think we'd better find your Auntie Anthea."

"But,—"

"But me no buts, my Porges," smiled Bellew, laying his hand upon his new-found nephew's shoulder, "but me no no buts, boy, and, as I said before,—just keep your eye on your uncle."

To be continued.

The Future is Safe.

A school superintendent, on one of his visits, was complaining to a teacher that children of the present day are so stupid it is almost useless to attempt to teach them anything.

Said he: "I'll show you what I mean. Johnny, give me a number."

Johnny: "Fifty-eight."

The superintendent wrote eighty-five on the board.

Silence—no comment from anyone.

"You see," he remarked to the teacher, "they don't observe. Let's try another."

Superintendent: "James, you give a number."

Johnny: "Fifty-seven."

The superintendent wrote seventy-five. Same result as before, and he remarked to the school teacher: "It is deplorable, such a lack of perception, dense stupidity. It is disheartening."

Spying red-headed, freckled-faced fidgety little Tim O'Brien, he said: "My boy, you give a number."

Tim: "Theventy-theven; thee if you can turn that around."—*The Furrow.*

Fine Feathers MAKE Fine Birds

That is, to all outward appearances. However, the unusually well-seasoned wood, the superior sound-board, the finest actions and the high quality of every article used in the manufacture of Sherlock-Manning Pianos assures you of their superiority.

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BOURBON RED TURKEYS, AFRICAN geese, Muscovy, Runner, and wild ducks, barred Rock, R. I. Red cocke.els. Mrs. John Annesser, Tilbury, Ont.

MY BARRED ROCK WON THE CANADIAN Laying Contest, Ottawa, laying 272 eggs. Cockerels and hens for sale. F. Coldham, Box 12, Kingston, Ont.

NEIL'S SAUBLE STRAIN OF MAMMOTH Bronze Turkeys—Young toms and hens for sale of the strain that has won more prizes at Guelph in the last four years for Bronze Turkeys than all other exhibitors. I can furnish pairs or trios not akin. Prices reasonable. Geo. Neil, Tara, Ont.

PURE-BRED SINGLE-COMB RHODE Island Red cockerels, imported heavy-laying strain; \$3.00 each, two for \$5.50, three \$8.00. Dr. Hendry, Delhi, Ont.

S.-C. BLACK MINORCAS OF SIZE AND quality; cockerels for sale, prices right. Clifford Woolcott, Bright, Ont.

Superior Barred Plymouth Rock Cockerels For Sale—From 12 best bred-to-lay families in both countries.

Pen No. 1.—Park's Supreme Ringlets, imp., laying record 313 eggs in 1 year.

Pen No. 2.—Thompson's Imperial Ringlets, imp., record 312.

Pen No. 3.—Holderman's Aristocrats, imp., record 311.

Pen No. 4.—Riley's Delights, imp., record 309.

Pen No. 5.—Taylor's Regals, imp., record 308.

Pen No. 6.—Bryant's Standard, imp., record 307.

Pen No. 7.—O. A. C., Guelph, record 310.

Pen No. 8.—Guild's, record 283.

Pen No. 9.—Coldham's Canadian Ringlets, record 260.

Pen No. 10.—Clark's, record 258.

Pen No. 11.—Donaghy's, record 256.

Pen No. 12.—Jameson's, record 255 eggs.

Price—First 6 pens \$9.00 each; remaining 6 pens \$5.00 each.

It is a many times proven fact that the cockerel transmits the laying qualities to his pullets which he receives from his dam.

A. H. CROZIER, Box 16, Meadowvale, Ont

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS—Five cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 75 cents.

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ADA—The rich prairies of Alberta, Saskatchewan and Manitoba are especially suited for mixed farming. Land that will produce big crops of grain and fodder, and well adapted for dairying or live-stock raising, can still be had at prices averaging about \$18.00 per acre, with twenty years to pay if you wish. Only 10 per cent. down. No further payment on the principal until the end of the fourth year; then sixteen payments. Interest 6 per cent. Write for illustrated booklet to D. A. La Due Norwood, C. P. R. Land Agent, Windsor Station, Montreal, Quebec.

FARM FOR SALE 155 ACRES IN DERE-

HAM Twp. well adapted for dairy or mixed farming; new all-steel tank barn, comfortable frame house; 1 1/4 miles from village. Apply Box 442, Ingersoll, Ont.

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TILE Eastern Townships; one-third heavily timbered; 3 miles from Lennoxville. Good buildings, and in a high state of cultivation. Price \$21,000. Apply to F. M. Passow, Rustis, P. O.

WANT TO HEAR FROM PARTY HAVING

farm for sale. Give particulars and lowest price. John J. Black, Advocate, St. Chippewa Falls, Wisconsin.

WANTED A SINGLE MAN TO ASSIST

herdsman with Shorthorn cattle and help with farm work. Good wages to competent man. W. P. Frazier, Bridge Farm, Meadowvale, Ont.

WANTED TO HEAR FROM OWNER OF

farm for sale. Mrs. W. Booth, Hipark, Des Moines, Iowa.

Logs Wanted

Hard and Soft Maple, Rock and Soft Elm, Basswood, Ash, Hickory and Walnut.

BRADLEY CO. :: Hamilton, Ont.

Cheese Markets.

At the regular meeting of the Picton Cheese Board, on Saturday, November 13, 618 boxes of colored cheese sold at 22 1/15c., while at Belleville, on the same day, 379 colored and 80 white sold at 22 1/8c. At Cornwall, 955 boxes of colored cheese sold at 22 1/4c., while 50 boxes of white boarded remained unsold. On the New York market whole-milk flats, held, average run, sold for 24c. to 25c.; current make, average run, 22 1/2c. to 23 1/2c.; whole-milk twins, held, average run, 24c. to 25c.

Sale Dates Claimed.

Nov. 18, 1920.—Jas. H. Morrison, Walton, Ont.—Shorthorns.

Nov. 24.—Ira Nicholas, Burgessville, Ont.—Jerseys.

Nov. 30, 1920.—Wentworth Holstein Breeders, Dundas, Ont.

Nov. 30, 1920.—Ula Flanders, Mohawk, Ont.—Shorthorns.

Dec. 3, 1920.—Marshall-Russell & Watt, Exhibition Grounds, Toronto, Ont.—Shorthorns.

Dec. 3, 1920.—Frank Brown, R. R. 2, Dundas, Ont.—Shorthorns.

Dec. 11, 1920.—Moote-Shaver Combination Holstein Sale, Canboro, Ont.

Dec. 15.—Oxford Holstein Breeders' Club, Woodstock, Ont.—Holsteins.

Dec. 16.—Perth District Holstein Breeders, Stratford, Ont.

Dec. 16.—Brant District Holstein Breeders, Brantford, Ont.

Jan. 26-27, 1921.—Peninsular Live Stock Breeders' Association, Chatham, Ont.—Shorthorns, Aberdeen-Angus, etc.

Feb. 2, 1920.—Dryden-Miller Sale, Toronto, Ont.—Shorthorns.

Feb. 3, 1920.—Robt. Miller, Toronto, Ont.—Shorthorns.

Questions and Answers.

Miscellaneous.

Sweet Viburnum.

To what kind of tree does the enclosed branch belong? M. F.

Ans.—This branchlet is off a sweet viburnum, *Viburnum lentago*, called in some localities "nannyberry" from the appearance of the ripe fruit. In Ontario it usually grows as a tall, rather straggling shrub, but it sometimes attains, or may be trained to grow, to a small tree. The wood under the sap-wood is dull orange and quite hard. J. D.

Crippled Pigs.

What is the cause and cure for crippled pigs? W. D.

Ans.—Crippling very often results from the pigs sleeping on a damp floor, heavy feeding and lack of exercise. If the pigs are on cement it might be advisable to put in a wooden platform for them to sleep on. The pigs should be forced to take plenty of exercise. We have found that we have the best success when we can arrange for the young pigs to run out in the yard from the time they are a week old until nearly ready for finishing. It is surprising how far they will wander from the building, and unless one has tight fences the pigs are apt to get into mischief. However, rooting in the fresh soil seems to be the life of them. In cold weather they confine their efforts to rooting in the barnyard. Once they become crippled it is rather difficult to put them in a thrifty condition unless they are outdoors. They should be fed on laxative feed, and as medicinal treatment purge each with one to two ounces of Epsom salts and follow up for a few days with 5 grains of salicylic acid three times daily.

160 Acres, \$8,800, with 7 Horses, 27 Cattle and

10 shoats, 2 mowing machines, 4 plows, cultivator, harrow, grain drill, fanning mill, wagon, blacksmith equipment, some household furniture; immediate possession; in one of best grain-growing sections Ontario, near big city; 140 acres gently rolling loam fields, immense crops, wheat, oats, clover, silage; spring-watered pasture, wood, timber, good apple orchard, roomy house, magnificent view; 90-ft. barn, various outbuildings; owner left alone, closing out, includes everything at \$8,800; part cash, balance easy terms. Details this and other farms Ontario, Nova Scotia, Alberta and 33 States, page 93 Strout's Big New Illustrated Catalogue Farm Bargains. Copy free. Write for free copy.

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Anticipates its exquisite flavour.

Send us a postal for a free sample. Please state the price you now pay and whether Black, Green or Mixed Address Salada, Toronto.

B713

SOLD THE FARM

Auction Sale of Farm Stock

and implements, at the village of Mt. Pleasant, Mohawk, Ont., on

Tuesday, November 30th

including my entire flock of Registered Southdown Sheep, consisting of mature ewes, 3 shear ewes, shearing ewes, ewe lambs, also rams.

ULA. FLANDERS

::

MOHAWK, ONT.

A Good Herd of Scotch and Scotch-topped

Shorthorns

AT DISPERSION SALE

Friday, December 3rd, 1920

DUNDAS, ONTARIO

Sale at farm, four miles northwest Dundas Station, Main Line G.T.R. Commences 2 o'clock.

This herd consists of 12 cows, 1 herd sire, King Rosewood (Imp.) = 107295 =; 17 head young stock sired by the imported sire, King Rosewood; 3 cows will have calves at foot at time of sale sired by above sire.

Horses and farm implements will be sold same day. Lunch at noon.

Trains will be met at Dundas by writing or telephoning.

FRANK BROWN

R.R. No. 2

Dundas, Ont.

Phone 625, R. 6

The Mouse Deer.

You know what a mouse is, and you know what a deer is, but did you ever hear of a mouse deer? The June Every-land tells all about him—a little animal exactly like a deer in shape and just the size of a jack-rabbit. According to Mr. J. R. Denyes, he has all the brains of the jungle in his head. The people in the faraway East Indies look up to his wisdom and tell stories of his cunning, as we do about the fox.

A preacher conducting a revival meeting announced that he would speak the next night on "Liars," and he requested his hearers to read in advance the 17th chapter of St. Mark.

The next evening, before opening, he asked all who had read the chapter to hold up their hands. A score or more hands were raised.

"Well, you're the perons I want to talk to," he said. "There isn't any 17th chapter of St. Mark."—Lincoln (Neb.) Journal.

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Canadian Grey Wolf

Natural Grey Canadian Wolf Scarf, measuring about 30 ins. in length and about 10 ins. wide. Lined with a shirred crepe-de-chene, crepe frill around edge and streamers. Trimmed with natural head, tail and paws. M367. Scarf delivered to you \$24.25 Muff to match, in ball shape, velvet lined, crepe cuffs, trimmed with head and tail, complete with wrist cord and ring. M368. Muff delivered to you \$24.25 The above scarf or muff will be sent promptly on receipt of money.

Send to-day for your

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1921

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Gossip.

A. A. Colwill, a breeder of Clydesdales, Shorthorns and Tamworths, writes: "I have a choice lot of young Tamworths of both sexes, from six weeks to five months old; also a pair of choice sows carrying their second litters. The young bulls I am offering are good ones. They are sired by Primrose Duke, and are out of splendid dual-purpose cows. Prices are moderate."

A. J. Hickman & Co., English exporters of pedigree stock, writes as follows regarding trade in registered cattle:

"Trade with us has been very good this year, although it has been very bad with you, through the foot and mouth disease restrictions. We have had plenty of promising enquiries and some orders which unfortunately have not been able to lead to business. However, we think it is now time that your horse breeders started to replenish their stocks again, and that trade will not be affected by disease regulations. To other parts of the world we have sent a lot of stock this year. In bulls alone we have shipped over 150, and last week we sent 7 very choice Hereford bulls and 10 yearling heifers of a total value of \$55,000.00 to a buyer in Uruguay. Our Mr. Hickman was fortunate enough to buy a very high-class Aberdeen-Angus bull a few weeks back. It is probably the best in England, and is by the same sire as Mendozze, the female champion at the Royal and the Highland Shows. This is not a cheap bull, but if any of your readers are prepared to pay a good price to procure one of the best, here is their opportunity."

Maple Shade Shorthorns.

Will A. Dryden, of Brooklin, writes as follows regarding his present offering of Shorthorns: "For a time after our Shorthorn sale, on July 21, last, the enquiry for cattle was not so keen, because I expect most breeders thought that we would be about sold out of Shorthorns, but so long as my post office remains Brooklin I expect to be interested in the best breed of cattle for the every-day farmer. I have a number of young bulls here that are now offered for sale, and amongst them are some as good as I ever bred or imported, and I would like to get in touch with prospective buyers of bulls, no matter whether they are to be used on the best pure-bred herds or upon grade females for the production of the best class of feeding cattle. I trust that there will not be one of your readers who needs a bull hesitate to write to me for prices, for I will surprise him how cheap they are. A number of these are imported bulls, have been running out all summer with their dams, and some of them are thin. There will be chances for purchasers to buy these bulls and grow them out into animals which will make a profit, in some cases, many times the original cost of the bull. I have bulls for the farmer as low as \$250.00, and all they will have to do is to take care of them and use them and they will begin to see results at once. Just let me state that I hope to find buyers for these bulls within two months and, therefore, the movement may be rapid, so drop a line at once and if I am at home you will get a prompt reply. All the Shropshire sheep which I advertised have been sold with the exception of a few ram lambs and a few ewe lambs. These are amongst the best of the year's crop, and will be glad to hear from any one interested."

Questions and Answers. Miscellaneous.

Ginseng.

Where can I get a book on growing ginseng? J. B. C. Ans.—This book can be secured through this office at \$1.25.

Covering Strawberries.

Is it safe to cover strawberries with buckwheat straw? J. H.

Ans.—A light coating of buckwheat straw might not hurt, but there is a tendency for it to lie so close to the ground that it smothers the plants. We would prefer using oat or wheat straw, or even straw horse manure.

Yesterday He Was At Work--

Last night he was on the operating table; today he is passing through the "valley of the shadow".

Most serious illnesses—appendicitis, typhoid, pneumonia—are sudden.

But why go on?

Would you suffer mental as well as physical anguish if tonight you had to face the surgeon's knife?

Would there be back in your mind the drumming thought that if you failed to "come through" your wife and family would be on the verge of want?

Think it over. Then—if you feel your family is not adequately protected—if you have not made ample provision for your own old age—ask us to send you our booklet "The Creation of an Estate".

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26 WENTWORTH 26 HEAD HOLSTEINS HEAD

To be sold at the Melbourne Hotel Stables, DUNDAS, ONTARIO, on

Tuesday, November 30th, 1920

At 1 p.m. sharp

The offering consists of a number of Record of Merit cows, with daughters and granddaughters got by better than 33-lb. bulls, a number of granddaughters of Lulu Keyes, three heifers got by a 25,000-lb. bull, a 1917 two-year-old champion over all breeds at the Winter Fair Dairy test at Guelph. A choice selection of 4 bulls, two fit for service, one having the dam and sire's two nearest dams averaging 31.34 lbs. butter in 7 days.

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Saves mending, saves money and keeps the boy tidy, comfortable and happy at work or play, in all kinds of weather. Every real boy wants a "Bob Long."

All styles and sizes for the lad and his dad.

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**Wear Bob Long Union-Made
Overalls and Shirts**

BOB LONG says:

"My Overalls and Shirts are the best made, because they are roomy and comfortable. I designed them with the idea that you might want to stretch your arms and legs occasionally."

Our Scottish Letter.

October is well advanced, yet so far the end of harvest is not in sight. Seldom has a more wearisome harvest been experienced. There have been seasons in which grain was more extensively wasted, but not often has there been a season in which it was so difficult to make headway. Even at this late date (23rd October) there are considerable stretches of grain area to cut. This does not apply to what are called "late" districts. But in parts of the country in which harvest generally is over by the end of September, the appearance of uncut corn shows how "taiglesome," as an old farmer put it, the weather conditions have been. Potato lifting is now quite general. There is a minimum of disease and the crop is likely to prove remunerative to the growers, and highly beneficial to the country at large. We are at the moment in the throes of a great economic conflict. The miners have "downed tools" and the railwaymen threaten to follow suit. The motive cannot possibly be the demand for more pay. The means are strangely disproportionate to the end, should the whole aim be to obtain an advance of two shillings per day for every adult miner. The industrial trade of the country is threatened with paralysis, and men are being discharged from employment every day. Some of the spokesmen of the miners frankly avow that their end is political and not economic. The Government is firm, while maintaining an open mind to every possible suggestion of compromise. Give the country, they say, a guarantee of output, and the country will at once guarantee an increase in wages that will more than meet the strike demand. A man is well paid who is sure of an enhanced wage when he produces the goods. No man is wrong when payment by results is made the basis of his contract.

The strike experiences of the past few years are not likely to have furthered the cause of nationalization. It is not good when the rulers of a country become embroiled in industrial strife. Such embroilment would be a normal condition under nationalization of industries. Whether mining would ever have been allowed to become a matter of private ownership had political freedom existed when mining began may safely be doubted. But it is not easy in an ancient civilization to impose conditions on industry which would have been natural in its incipient stages, but which are now inconsistent with the whole scheme of society. Socialists recognize this and are not slow to indicate that their goal, therefore, is the overturning of the existing social fabric. The times are certainly ominous.

Meantime the general agricultural situation is one of prosperity. There has been an enormous shrinkage in the area under wheat in England. This shrinkage is but of 386,000 acres, and this means a great decrease in the supply of home-produced wheat. The chief causes for this sudden slump—in the high attainments of 1916, 1917 and 1918 are labor anxieties.

1000 Eggs In Every Hen

If You Keep Chickens, Cut This Out—Four to Seven Eggs a Week per Hen Through Cold Winter Season. With Eggs at Dollar a Dozen, Means \$5.00 Profit per Hen in Next Six Months. Amazing Poultry Secrets Revealed By
AMERICA'S FOREMOST POULTRY EXPERT

This is an offer no reader of this paper who keeps chickens can afford to ignore. We will tell you why.

Henry Trafford, Famous Poultry Expert and Breeder, for nearly eighteen years Editor of "Poultry Success," has developed a new and remarkable system of rearing, breeding and feeding chickens for heavy egg production that seems certain to revolutionize the poultry industry and give five eggs or more for every egg produced today. This plan or system is explained in Mr. Trafford's "1,000 Egg Hen," a free copy of which will be sent to any person who keeps six hens or more.

Poultry keepers, following Mr. Trafford's directions, learn how to start young pullets laying early; make old hens moult quickly and resume heavy laying during entire winter season. Most any hen will lay in spring when eggs are cheap. Mr. Trafford tells how hens lay four to seven eggs a week during coldest winter days when eggs sell at a dollar a dozen or more. His system shows how any breeder, with ordinary care, may get 1,000 eggs or more from nearly every hen in five years' time at a net profit of \$25.00.

There is big money to be made with chickens this winter by the man or woman who gets the eggs. The time to get the hens ready for heavy winter laying is now. Mr. Trafford's "1,000 Egg Hen" system tells how, and arrangements have been made whereby any reader of this paper may receive one copy absolutely free by using the Coupon below. Send no money, but cut out the Coupon and mail it with your name and address to Henry Trafford, 328P Tyne Bldg., Binghamton, N. Y., and the story of the 1,000 Egg Hen will be sent you by return mail.—Advt.

London Farmer's Advocate Date 11, 18

FREE COUPON

This Coupon entitles holder, provided he keeps six hens or more to one free copy of Mr. Trafford's "1,000 Egg Hen." Write name and address plainly and enclose in envelope with this coupon. Address Henry Trafford, 328P Tyne Bldg., Binghamton, N. Y.

FARMERS' BUSINESS

For the past 54 years, this Bank has given particular attention to the business of Farmers.

We have helped many over the rough places, and have aided many more to the highest plane of success.

We are prepared to extend you every aid within legitimate banking practice.

Come in at any time and talk over your affairs with us. You are always welcome.

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Head Office: Montreal OF CANADA Established 1864.

With its 149 branches in Ontario, 47 branches in Quebec, 1 branch in New Brunswick, 3 branches in Nova Scotia, 44 branches in Manitoba, 44 branches in Saskatchewan, 87 branches in Alberta and 11 branches in British Columbia, serves rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

Write to The Farmer's Advocate and Home Magazine for Instructions on how to make money by securing NEW SUBSCRIPTIONS.

When the Eight-Hours Bill was before Parliament last year it was again and again argued hands off agriculture. It was pointed out that agriculture was a seasonal employment; that it was impossible to fix hard and fast rules as to hours of labor in it; that over-time payments and idle time during a wet harvest would lead to farmers adopting the simplest remedy. That they evidently have done. They have gone back as rapidly as possible to grass farming. This is an unfortunate step, but economically the farmer has no option. He cannot crop as successfully as he can raise stock, and at the present time stock are very remunerative. There is small hope of rural regeneration with increasing areas of grass land. As one said twenty years ago, a shepherd and his dog are poor substitutes for several plowmen and their pairs of horses, with their consequent—an army of field workers and land cleaners. It is equally so with dairy farming. The problem of an adequate labor supply is rapidly driving men out of the business of milk production. At best it is a business which entails constant, unremitting personal attention. The decreasing supply of home-grown wheat and "sweet" milk is a menace to the health and well-being of the rising generation.

October is the month for cheese shows. All the principal pre-war events have been resumed. Castle Douglas, Kintyre, London, and Kilmarnock have witnessed stirring events. At London, Mr. Cropp, of Knockdon, Ayrshire, won first and champion honors. At Kilmarnock the championship went to Thomas Logan, Low Milton, one of the most successful breeders of Ayrshire cattle. Quite a number of the highest-priced bulls in recent years have been bred by Mr. Logan, who belongs to a talented family.

SCOTLAND YET.

Tobacco Stripping and Packing.

All reports concerning the tobacco crop of Ontario this year confirm that there is a large overproduction of white Burley, part of which may remain on the farmers hands for a long while.

With regard to the part that may be bought by the home manufacturers and delivered at the ordinary date this winter little anxiety need be felt as to its safe keeping. Most of the buyers have redrying plants through which the leaf is processed, before being baled, to just the right degree of moisture to keep for quite a long time. But it will be necessary to pack in as dry a condition as possible all tobacco that will not find a ready sale this winter.

There is a large proportion of late crops and fat stems should be carefully watched, for, as a rule, it is there that trouble begins. Even the web of the leaf will have to be just pliable, and special attention should be paid to the tips which as a rule keep the moisture longer and sometimes start to mould in the center of the bales.

With tobacco taken down from the sheds in good stripping condition, that is to say when the curing is complete, there is only a comparatively small proportion of fat stems found once in a while and it is an easy matter to dry them up by spreading the leaves in thin layers on the floor of a dry and reasonably warm room, or on tables.

According to the part that should be dried the leaves should be laid in two rows overlapping, the tips inside if it is the fat stems that must be dried up, or tips outside if it is the tips that are too wet. The central part can be kept from drying too fast by being protected from rapid evaporation with a sheet of paper or a cloth.

This method, of course, will not replace the redrier, but we think it could be recommended rather than leaving the unsold part of the crop hanging in the barns exposed to weather changes which may result in the long run in moulds or other damage.

On the other hand very likely the buyers will take advantage of a large crop this year to insist again on the grading of the tobacco into three grades, tops, middle and bottoms. This would also be a good practice to be followed by the grower obliged to hold his crop, as it may facilitate later on the sale of the latter—F. Charlan, Chief of the Tobacco Division.

Hours Bill was before year it was again and and off agriculture. It that agriculture was a ment; that it was im- and fist rules as to it; that over-time pay- during a wet harvest farmers adopting the That they evidently y have gone back as to grass farming. This step, but economically no option. He cannot y as he can raise stock, at time stock are very here is small hope of with increasing areas one said twenty years and his dog are poor eral plowmen and their ch their consequent—an kers and land cleaners. th dairy farming. The equate labor supply is n out of the business of At best it is a business stant, unremitting per- The decreasing supply heat and "sweet" milk e health and well-being ation. month for cheese shows. re-war events have been le Douglas, Kintyre, arnock have witnessed At London, Mr. Crop, rshire, won first and At Kilmarnock the nt to Thomas Logan, of the most successful shire cattle. Quite a ighest-priced bulls in e been bred by Mr. s to a talented family. SCOTLAND YET.

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The Outlook for Dairying.

The following is a liberal extract from an address delivered on Oct. 12, by Milo D. Campbell, President of the National Milk Producers' Federation at the annual meeting of delegates from member associations held in Chicago. Mr. Campbell is a national figure in the United States and speaks with authority of agricultural conditions, especially as regards dairying.

A bird's-eye view of the business we represent, presents five millions of farmers with 23,000,000 of cows, furnishing one-fifth of the food of the nation. These cows supply 90,000,000 pounds of milk each year. 44% is used as fresh milk, 36% for butter, 4 1/2% for cheese, 5% for condensed milk, 4% for ice cream and the balance is absorbed for hogs, calves and waste.

We find ourselves upon the afterside of a great war that gave us many experiences and taught us many lessons. The Government has told us that from a recent survey, it finds that 25% of the farmers wives are working in the fields in addition to house work; that 36% of farm women are helping to milk cows; that 96% of them do their own washing and sewing and that the average farm woman arises at five o'clock in the morning and works 11.3 hours per day through the year and 13.1 hours per day during the summer months. The Census recently taken has shown the migration from farm to city, and the marvellous change that has taken place in urban and rural populations. The last three years has witnessed a decadence in agriculture never before experienced in this country. There are no new farm houses, no freshly painted farm buildings, and but little new fencing or other farm improvements.

Farm help is almost unknown. The orchards and vineyards are loaded with fruit that ought to net the farmer a fine reward; but with no help to gather it, no facilities for transportation and no market that offers a profit above expense. The wheat and other grain harvest is over, with abundant crops that promised rich returns to the farmer compared with average years, but he now finds wheat down more than fifty cents per bushel, and other grains correspondingly, although the world outside is short; England upon bread rations and other nations atavring.

I am speaking somewhat generally of conditions, because the dairy business is so intimately related to other farming, that it cannot be separated from it. Nine-tenths of all the milk produced in this country is upon farms where mixed farming is done. The average bushel of wheat raised in this country, just harvested, has cost not less than \$2.50 in the bin. The farmer is to-day asked to sell it for \$2 and less, donating his labor. He is also told that he should sell early and avoid a lower price. He is not told of the shortage of wheat in other countries, of the scarcity in Italy, France and England of the lessened surplus of the wheat exporting countries and of the certain demand that there will be for breadstuffs before the next harvest. Nor is he reminded of the discrimination he suffered during the war when he was compelled to sell his wheat for \$2.26, that would have brought him \$5 per bushel, according to Mr. Hoover's statement. He is not told of the discrimination against his wheat of last year through Government embargoes, applying to the farmers only, and by which he lost \$350,000,000 on the wheat market alone.

The oppression and discrimination in the Dairy Industry finds the milk producer more helpless. Milk is highly perishable and must be quickly used or manufactured, nor can the manufactured product be long stored without loss. The law of supply and demand, is like the law of gravitation, it is always working, though at times obstructed in its operation, as it is to-day. The farmer is not unwilling to be governed by this law. Condensed milk in its various forms has mostly created one of the chief markets for the farmers surplus milk. Within the last four years it has grown from less than two billion pounds of whole milk to more than four billion pounds. Just at this time, the condensers and big dealers report themselves overstocked with condensed products, some of it manufactured with high priced sugar.

A glance at market quotations covering the last six months, shows, that not-

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32x3 1/2	9.00	2.85	34x4	11.40	2.95	36x4 1/2	13.10	3.40	38x5	15.50	4.25
34x4	10.50	2.75	36x4 1/2	12.00	3.05	38x4 1/2	13.40	3.50	40x5	16.00	4.60
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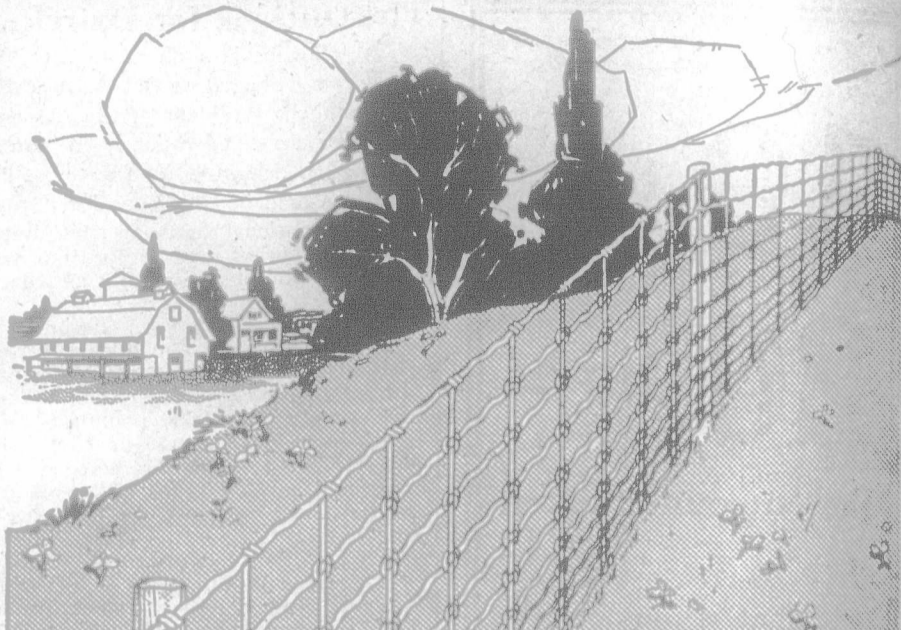
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withstanding the surplus the condensers have on hand, the price they make to the public does not comport with the price they pay for the farmer's milk. Seemingly, with perfect understanding among themselves, they hunt out the same old goat that has always borne the food losses, and announce that for the month of October the farmer must accept from fifty cents to a dollar per hundred less for milk than he received in September. These condensers are usually the only market for this milk, while there is less butter in the country than there was a month or a year ago, while there is no oversupply of cheese, while the country and the world needs every pound of milk, both whole and manufactured, that the cows of this country can produce, the milk producing farmers of this country, who are the slaves of these over-lords are compelled to submit, or pour their milk on the ground. No longer does any sane man call the milk producer a profiteer. No one claims that he can produce milk at the price he is offered, but because he has no other outlet, no ready market, he can reach no voice in price-fixing, he is compelled to submit. Like other buffers, the milk producer is held fast and takes the shock.

The average milk producer cannot change from selling whole milk to a condenser, to a creamery over night. There may be no creamery near, no wagon gathering cream passing his door, he has no hogs or calves to consume his skim-milk, no separator and equipment for the butter making branch of his business, and like reasons prevent a change to cheesemaking. It would seem that after the hundreds of investigations that have been made by Federal and state authorities, by colleges of agriculture, covering thousands of farms and tens of thousands of cows, that it would be unnecessary to discuss the cost of producing milk. Formulas have differed slightly, methods of feeding are not alike, but when the final results have been reached they have not differed in any material degree. Right now, for the month of October, calling grain \$55 top hay \$20, silage, \$7, roughage, \$7, and labor 40c. per hour, it costs the farmer without a penny of profit \$3.26 for every hundred pounds of milk produced. This estimate from experiments unquestioned is based upon cows averaging more than 6,000 pounds of milk per cow annually, a production at least 2,000 pounds above the average in the United States. Milk at this season should be advancing in price, and at the prices above quoted for feed and labor should be at least \$3.65 per hundred for the next six months. This would but cover the cost of production to the dairyman who has cows of highest average, nor would this allow him a penny of profit.

It was asked, with unquestioned sincerity by Herbert Hoover, at a meeting with him at the Food Administration Building in Washington if the farmer cannot produce milk at the price at which he sells, why does he continue in the business? This question carries with it the only argument of the buyer and consumer. But the answer is simple to the man who knows what it means to be controlled by circumstances. The dairy farmer is the average farmer and not forehanded. His farm is planned for dairying. His buildings are arranged and equipped for that purpose. His fields have been planned and planted for his herd. His silos may be filled or in waiting. His cows have been selected or raised with care. They are furnishing milk that cannot be stopped and turned on with changing prices. It is perishable and cannot be stored to wait a better market. His cows are eating and need care. He cannot quit without a sacrifice unknown to other business, and one that means practical bankruptcy.

We are mentioning some of these underlying conditions because they differentiate our business from other lines of industry. During the war, we have vainly tried to place our cause before the consuming public. We have invited the investigation of the Government, we have been through the fires of litigation, subjected to the torture of political demagogues and yellow journalism, called by all the names known to dishonor and shame, and all because it has seemed popular with a class of consumers who did not and could not know actual conditions. We do not recall another industry that is to-day inviting an investigation into the cost of production. Our imports of foodstuffs exceeded our



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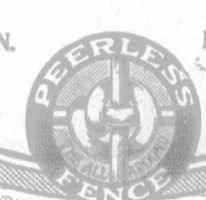
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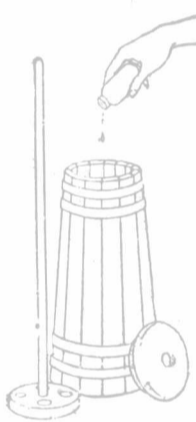
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exports. The reports shows that the great surplus food exporting nation of the past, has reached a time when it must buy more foodstuffs than it can sell, when its exports of foodstuffs, with bountiful crops, has dropped off more than \$500,000,000 in a single year. These conditions ought to arouse the civic consciousness of the nation to dangers akin to war. Out here at the food show we find an exhibit of butter from Denmark that ought to be a red flag to every milk producer in the country. The American cow demands American rights. She objects to a protective tariff of thirty per cent. upon automobiles for the manufacturer, and a tariff of 2 1/2 cents a pound on butter, about five per cent., for the farmer. It is such discrimination as this that has driven the country boy to the city, leaving but forty millions of people out on the farms, and that has filled the cities and villages with sixty-five millions. The cry of "Pre-War Conditions" is just as impossible of fulfillment as it would be to go back to conditions prior to the Civil War. The auto manufacturer, who could accumulate millions as easily as the farmer could save dollars, may well return to pre-war profits; but the milk producer, who barely lived and then at the cost of long hours and of donated work by wife and kids, cannot and will not return to pre-war prices for milk.

But the farmer asks, "what can we do?" "Have we a remedy that we can apply?" Yes, there is a remedy, but it is expensive to the farmer and would be destructive to the health and welfare of the nation. It would be the sale and disposal of all cows, but enough to supply the needs of the farmer and his family, a remedy that would mean decadence-approximating death to the nation. That would be the policy that is being pursued by the condensers, and by every losing industry except the farmer. "Dieticians" and scientists tell us that there should be 43,000,000 cows in the country instead of 23,000,000 to supply our own people with the milk they should consume; but when through the manipulation of capital, the milk producers are compelled to produce this milk at less than cost, suggestion of quitting for a few years is economically a very important one.

In ninety-five herds out of every hundred there are so-called boarders, cows that do not produce enough milk to pay their keep. There is, no doubt, but that all such cows should be sent to the yards at once. If this were done, it would reduce the cow population of the country at once by one-third. Of course, it would lessen the quantity of milk greatly, but for the balance of the milk the farmer would receive as much money as he does now for the larger amount. This is proven by every crop the farmer raises and sells unobstructed under the universal law of supply and demand.

Within the last few years farmers have made wonderful strides along co-operative lines. If to-day one-half or two-thirds of the manufactories of butter, cheese and condensed milk were in the hands of co-operative milk producers, the industry could be saved and consumers better served. There must be no lessening of effort along the line of organization, for without it, agriculture is doomed to the feudalism and serfdom of the middle ages. The Farm Bureau, could not engage in more beneficial services than the organization of co-operative condenseries, creameries and other milk products concerns in territory not already served by co-operative factories. The farmer is fast learning that a hundred or five hundred dollars invested in a co-operative enterprise that affords him a sure market and all the profit that belongs to him, is the best investment he can make. We must not sleep, until the laws of the nation and of the state are so amended that farmers may dispose of their own products collectively. Both of the great political parties have endorsed the same in their platforms, but our enemies of co-operation are wary and elusive and jokers are handy in the killing of good laws. The conditions I have referred to above, emphasize the necessity of a tariff upon butter and other milk and farm products, sufficient to protect them from the competition of the cheap labor, of Europe and of other food producing countries.

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other breeds. Write for particulars.

E. McEWEN, R. R. 4, London, Ont.

have so attracted our boys from the farm,
with its long days and meagre pay, that
the country side is becoming a lonely
place. It is yet an ideal spot for the
artist with his palette and brush or for
the contented soul that sings:

"Let me live in my house by the side of the
road" * * * and be a friend to man."

When our forefathers declared their
independence, they first recited the wrongs
they had suffered, saying, "A decent
respect to the opinions of mankind re-
quires that they should declare the cause,"
etc. This we have done. Our independ-
ence and our existence now depend upon
more heroic action.

Great Hereford Sale in England.

A fine sale of Hereford cattle took
place at Bean House Farm, Cradley,
Herefordshire, on Tuesday, October 26,
when Messrs. Edwards, Russell and
Baldwin, instructed by the executors,
sold the entire famous herd of the late
T. R. Thompson, of Erw'r Delyn, Pen-
arth. Numbering 71 head, (including
eleven of C. English's, of Bishops Frome,
Herefordshire), they realized a total of
25,100 gns.

Included in the sale were two great
bulls, Resolute, a grand animal, first
and champion at Darlington Royal Show,
which was purchased by Owen Williams,
Cowbridge, Glamorgan, for 5,500 gns.,
and Twyford Hampton, a two-year-old,
for which 200 gns. was paid by E. Rich-
ards, Hampton. A record price for a
bull calf was realized when Major David
Davies, M. P., Newtown, Montgomery-
shire, gave 2,300 gns. for Resolute 2nd,
a son of the 5,500 guineas bull, while the
cow, Beauty the 5th, and dam of this
famous calf, became the property of
Chas. E. Blackstead, the Priory, Clifford
Hay, for 660 gns. Another beautiful
cow, Beauty the 10th, was sold to Owen
Williams for 1,350 gns. and her bull calf,
Resource, went to Senior Arocena, of
Monte Video, for 750 gns. Owen
Williams was also the purchaser of the
cow Beauty the 11th for 1,050 gns.,
her bull calf, Resolution, going to Lord
Lisburne for 370 gns.

Major David Davies also bought the
cow Merlin the 9th for 350 gns. and her
heifer calf, Martha, for 200 gns. likewise
the cows, Agate for 290 gns., Exquisite
for 320 gns., and Shapely for 250 gns.
C. E. Blackstead was also a buyer of the
two-year-old heifer, Frolic, for 760 gns.
Capt. Butcher, Elderfield, gave 470 gns.
for the cow Lisette, while her heifer calf
Dorothea was knocked down to T. R.
Thompson, son of the late owner of the
herd, for 560 gns., Young Thompson
brought several other head, including the
cows Trilby for 340 gns., Lady Geraldine
for 425 gns., Beauty the 8th for 500 gns.,
and Beryl for 280 gns. The 25 cows in
calf to Resolute averaged £436 each,
and 20 calves by Resolute averaged
£345 3s. Six cows in calf to Twyford
Hampton averaged £215 apiece. Other
big sales are to follow. ALBION.

Preserving Fence Posts.

Charring fence post butts has been
so commonly practiced for so long a
time that most people accept without
question the idea that charring preserves
fence posts. Now the Forest Products
Laboratory in Madison, Wisconsin, comes
forward with the statement based upon
experiments, it is presumed, that char-
ring is of little or no value in protecting
the butts of fence posts and telephone
poles from decay.

It is true that charcoal is no fit food for
decay fungi, but the checks through the
charred wood provide for easy access to the
spores of decay and destruction process as
easily as in any untreated wood.

Only recently the laboratory exploded
the old theory that well seasoned railroad
ties resisted decay longer than green ties,
since the soil moisture very soon entered
the seasoned tie and provided the neces-
sary moisture for decay fungi. The
same would hold true with fence posts.

"It appears that poisoning the wood
in the butts of posts or poles is the only
feasible way to preserve them," according
to W. J. Morrill, of the Agricultural
College at Fort Collins. "Zinc chloride,
sodium fluoride and coal-tar creosote are
the most suitable. While the first two are
cheaper the creosote is the most
effective."

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Why feed loafers? The high-priced feed you give
them should produce eggs. Mix Pratt's Poultry Regu-
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golden winter eggs. Costs nothing, for the hens pay
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Gives you more eggs—or your money back.

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and often.

Made in our own Factory in Toronto.
Expert Advice Free. We help solve your poultry
problems. Write. Ask for FREE Booklet—
worth dollars to you.

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Ad. No. 6.

Scotch—Scotch-Topped Shorthorn Females

Sire in service—Sittytan Sultan Dale 108651—466391.
Got by Avondale and dam by the great White Hall Sultan.

I have at present a number of bred heifers and also a very limited number of young
bulls which I am pricing easy, quality considered. Some of the heifers are
Scotch-topped, while the others are of straight Scotch breeding. Write
me also for breeding cows. I have 15 now with calves at foot.

A. J. HOWDEN, (Myrtle, C.P.R.—G.T.R.; Oshawa, C.N.R.) COLUMBUS, ONT.

Fairview Pure Scotch Shorthorns—Our herd is headed by "Royalist" who sired the
of Scotch-bred heifers and young cows we have ever had on the farm. Call and let us show you our
breeding herd of cows, headed by Marquis Supreme, that great son of Gainford Marquis (imp.).
JNO. WATT & SON, Elora, Ontario.

Irvinedale Scotch Shorthorn Heifers—For the present we are all sold out of bulls of service-
able age, but we have the largest and strongest offering
of Scotch-bred heifers and young cows we have ever had on the farm. Call and let us show you our
breeding herd of cows, headed by Marquis Supreme, that great son of Gainford Marquis (imp.).
JNO. WATT & SON, Elora, Ontario.

Plaster Hill Herd Shorthorns DANADAS OLDEST DUAL-PURPOSE HERD
ESTABLISHED 1859

Herd sires: Green Leaf Record 96115. Sire and dam imported of best English breeding. Commodore
130056, bred by late S. A. Moore. His two nearest dams average 12,112 lbs. Seven young bulls
from R.O.P. cows. Tubercular free herd. **ROSS MARTINDALE, R. R. 3, Caledonia, Ont.**

Pleasant Valley Farms SCOTCH SHORTHORNS OF MERIT
Herd headed by Imp. Newton Grand Champion
and New Year's Gift—two of the greatest bulls of
the breed. Our females comprise the best families obtainable. Young bulls of herd heading type.
Also farmers bulls and females bred to above herd sires. Inspection invited.
GEO. AMOS & SONS, Moffat, Ont.

Welland River Shorthorn Offering—We have at present only two young bulls in the stable,
but would price within the next few weeks a half-dozen or
more young cows or heifers bred to our present herd sire, Sunnyside Model. This is a Cruickshank
Lovely-bred son of Right Sort (imp.). The families are Kilbuck Beauty, Missies, Rosemary,
Seaweed, Rosebud, Ballenchin Daisy, etc. Fifty head to select from
Farm one mile from Welland. **W. H. CROWTHER, Fonthill, Ont.**

Willow Bank Stock Farm—Established 1855—Shorthorn Cattle and
Leicester Sheep. Bulls in service: Browndale
80112, by Avondale, and Browndale Banner,
unior Champion at Toronto, 1919. A special good lot of young bulls and females to offer. Write
or information, or come and see.
JAMES DOUGLAS, Caledonia, Ont.

Shorthorn Bulls and Females—Herd headed by Ruby Marquis, a son of
the great Gainford Marquis (imp.). Our
calves now coming are all by this sire. We are also offering a few females in calf to him. Get our
prices before buying elsewhere.
PRITCHARD BROS., R.R. No. 1, Elora, Ont.

Cedar Dale Scotch Shorthorns—Pleasing Cattle and Pleasing Pedigrees—Senior Sire, Excel-
sior, by Gainford Marquis (imp.). Junior Sire, Matchless Duke,
by Gainford Matchless, the \$12,000 son of Gainford Marquis (imp.). I have a number of choice bred
heifers, and must sell a few to make room. Also have a couple of Scotch-bred bulls. Prices right
at all times. **FRED J. CURRY, Markdale, Ont.**

Spring Valley Shorthorns—Herd headed by Sea Gem's Pride 96365. We
have a number of good bulls for sale, including
the Champion Ivanhoe 122760, and his full
brother also, an extra well-bred Rosewood, and others. Write for particulars.
Telephone and Telegraph by Ayr. **KYLE BROS., Drumbo, Ont.**

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Lays Eggs 800

hem all lay. and you give... utry Regu-... ore of the... hens pay

ator

dition; organs.

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Prattis

Females 66391. Sultan.

ited number of young... of the heifers are... reeding. Write... lves at foot.

COLUMBUS, ONT. "Royalist" who sired the Dryden-Miller Feb. sale females are all Scotch and casters, Miss Ramdens, ering females and a few... Myrtle, Ont.

ld out of bulls of service-est and strongest offering... and let us show you our... ford Marquis (Imp.).... ON, Elora, Ontario.

DUAL-PURPOSE HERD IED 1859... sh breeding. Commodore... 2 lbs. Seven young bulls... R. 3, Caledonia, Ont.

ORNS OF MERIT... ewton Grand Champion... wo of the greatest bulls... ll of herd heading type... NS, Moffat, Ont.

young bulls in the stable... ew weeks a half-dosen or... t. This is a Cruickshank... ty, Missies, Rosemarys... ER, Fonthill, Ont.

-Shorthorn Cattle and... ll in service; Browndale... and Browndale Bamer... females to offer. Write... LAS, Caledonia, Ont.

y Ruby Marquis, a son of... d Marquis (Imp.). Our... s in calf to him. Get our... . No. 1, Elora, Ont.

egrees-Senior Sire, Excel-... or Sire, Matchless Duke... a number of choice bred... red bulls. Prices right... Y, Markdale, Ont.

Gem's Pride 96365. We... ll for sale, including... e 122760, and his full... s. DS., Drumbo, Ont.

Works as Hard as a Horse



"A good dairy cow in full flow of milk is expending as much energy as a horse at hard labor, and this without cessation for many months."

The above quotation is taken from the book "Feeds and Feeding," by W. A. Hendry, D.Sc., D.Agr., which is used as a text book in the Agricultural Colleges.

When a horse works hard he requires more concentrates and less roughage. This is also true of a cow. More than that, the concentrates should be chopped, ground or crushed

to make the feed easy of mastication and digestion, so as not to overtax her digestive organs.

Monarch Dairy Feed is a well-balanced, concentrated, completely mixed and prepared feed that is palatable and easily digested. It is a feed that gives energy and stamina to the cow and is so highly digestible that, after the bodily needs of the cow are provided for, there is a large percentage remaining to turn into milk.

Monarch Dairy Feed is rich in Proteins, analysing 20% Protein and 4% Fat.

Order a ton of this energy feed from your dealer.

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SIZES to suit your openings. Fitted with glass. Safe delivery guaranteed. Write for Price List (E). Cut down fuel bills. Insure winter comfort. The HALLIDAY COMPANY, Limited HAMILTON FACTORY DISTRIBUTORS CANADA

Ayrshire R. O. P. for October.

During the period from October 5 to November 1 there were 21 Ayrshire cows and heifers qualified in the Canadian Record of Performance, 6 in the mature class, 3 four-year-olds, 2 three-year-olds, and 10 two-year-olds. The leader in the mature class was Margery 8th of Ottawa, by Monarch of Tanglewyld, owned by the Central Experimental Farm, Ottawa. Her record was 10,420 lbs. of milk and 401 lbs. of fat in 283 days. During November, 1919, she made 1,654 lbs. milk and 62.85 lbs. fat. A close second in milk production was Springhill Prairie Flower, with 10,411 lbs. milk. This cow leads in butter-fat production with 436 lbs. of fat produced in 365 days, and is owned by Shuttleworth Bros., Ypsilanti, Michigan. Next comes Blossom of Craggan, owned by Rev. E. Walker, Rollo Bay, P. E. I., with a record of 10,094 lbs. milk and 437 lbs. fat in 365 days. This cow leads the class in production of fat. In 309 days, Blossom of Maple Hill, owned by Geo. Pearson & Sons, Waterdown, Ont., made 9,947 lbs. milk and 379 lbs. of fat, while Jewel of Fairfield, owned by Channon Bros., Cloverdale, B. C., has a record of 8,713 lbs. milk and 363 lbs. fat in 297 days. The four-year-old class is led by Spot of Sunny Hill, with a record of 9,400 lbs. milk and 408 lbs. fat in 365 days, for Henry M. Henderson, Huntingdon, Que., W. R. Younker, Charlottetown, P. E. I., owns Pollyana that gave 8,651 lbs. milk and 367 lbs. fat. Both three-year-olds made creditable records. Grand View Viola 2nd, by Lessnessock, Comet, owned by Channon Bros., made 9,159 lbs. milk and 365 lbs. fat in 345 days, while Allencroft Minnie, by Finlayston San Toy, owned by Sir H. Montague Allen, gave 7,281 lbs. milk and 301 lbs. fat in 335 days. The two-year-old class leads in butter-fat production with Grand View Ruby 2nd., by Royal Salute of Tanglewyld, also owned by Channon Bros., leading the class with 10,314 lbs. milk and 517 lbs. fat in 342 days. Her average test was 5.01 per cent., and her best month was May, 1920, when she gave 1,247 lbs. milk and 62.39 lbs. fat. Pansy of Craiglea, owned by H. C. Hammill, Markham, Ont., gave 9,083 lbs. milk and 386 lbs. fat in 265 days, while Allencroft Laura, also owned by Sir H. Montague Allen, gave 8,419 lbs. milk and 366 lbs. fat. Myrtle of Springbank, owned by A. S. Turner & Son, Ryckman's Corners, Ont., made a record of 8,209 lbs. milk and 368 lbs. fat in 338 days while Allencroft Nan made 7,677 lbs. milk and 337 lbs. fat in 348 days.

ABORTION IN CATTLE

CAN BE TREATED SUCCESSFULLY AND YOUR COWS MADE PROMPT. REGULAR BREEDERS BY STERILOID TREATMENT: If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to treat Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully. GUARANTEE: We will refund money in every case when STERILOID FAILS to make good. PRICE, \$1.00 plus 4c tax. Mailed Postpaid, in plain wrapper. MARTIN REMEDY COMPANY, Dept. F, 398-408 Columbus Ave., New York City. Reference-Colonial Bank.

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25 Bulls-6 to 18 months of age. Half imported Shorthorns The price won't stop you write W. A. DRYDEN, BROOKLIN - ONTARIO

ENGLISH DUAL-PURPOSE Shorthorns

We offer a grand choice of young bulls and bull calves from imported dams and sire, bred on the English system for milk and beef. They will add value to any herd. The dual characteristics have been impressed by scientific treatment for continuous years. Prices moderate. Always on hand, sows and boars of the most satisfactory breed of pigs, English Large Blacks. F. W. COCKSHUTT Lynnore Steek Farm, Brantford, Ont.

Mount Victoria Farms

T. B. MACAULAY, Esq., Owner Hudson Heights, Que. Dual-Purpose Shorthorns, High-Stepping Shetlands, Yorkshire Swine, Shropshire Sheep, R. I. Reds, Single and Rose Combs. Address all correspondence to J. E. CHANDLER, Hudson Heights, Quebec

MARDELLA DUAL-PURPOSE SHORTHORNS

Eight choice young bulls, 30 females, cows and heifers. All of good size, type and breeding. Herd headed by The Duke; dam gave 13,599 lbs. milk, 474 lbs. butterfat. He is one of the greatest living combinations of beef, milk and Shorthorn character. All priced to sell. Write, call or phone. Thomas Graham, Port Perry, R.R. 3, Ontario

Shorthorns

Present offering: Six young bulls, Reds and Browns; also a number of females. They have size, quality and breeding from good milking dams. Prices moderate. Satisfaction guaranteed. CHAS. GRAHAM, Port Perry, Ontario

The Salem Herd of Scotch Shorthorns

HERD HEADED BY GAINFORD MARQUIS, CANADA'S PREMIER SIRE. Write us about the get of Gainford Marquis. They have won more at Toronto and other large exhibitions than those of any other sire. We still have a few sons to offer, as well as females bred to Canada's greatest sire. J. A. WATT Elora, Ontario

Glenburn Farms Shorthorns

Over fifty head of Imported Scotch bred and Canadian bred Shorthorns. Herd headed by Rex Augustus-128232-. Breeding cows, heifers and young bulls for sale. One fine Canadian bred 14-months-old bull, Sittyton Chief -138011- Dam, Emeline -83239- Sire, Sittyton Sultan Dale -108651-. Prices reasonable. GLENBURN FARMS 45 minutes from Toronto by rail or motor. H. H. POWERS, Manager UNIONVILLE, ONT. Col. F. H. DEACON, Proprietor

SCOTCH SHORTHORNS

My herd is stronger than ever, and I have cows with calves at foot, heifer in calf, younger heifers, young bulls fit for service soon, for sale in any number at reasonable prices. Augusta Sultan -88092- is one of the greatest living sires, at head of herd. Write me, and, if possible, come and see me, it is worth while. Post Office, Telephone, Telegraph and Station is Stouffville, Ont. I pay the freight. ROBERT MILLER STOUFFVILLE, ONTARIO

Imported and Canadian-bred Scotch Shorthorns

We now have a number of eight and ten months old calves from imported cows, several of which are imported-in-dam. Write us also for bred heifers. We have a choice lot bred to one or the other of our three imported herd sires. Prices right and inspection invited. J. A. & H. M. PETTIT (Burlington Station) FREEMAN, ONT.

Reyburn Milking Shorthorns

Herd headed by Victor 8rd, Imp., Grand Champion at Erie Show and Congress. Herd average over 9,500 lbs. milk per cow. Choice cows, heifers and herd-heading sires for sale. R. R. WHEATON THORNDALE, ONTARIO Long-distance 'phone and telegraph.

Dual-Purpose Shorthorns

Bulls from 3 to 7 months old for sale, also several cows. Inspection of herd solicited. WELDWOOD FARM, Farmer's Advocate LONDON, ONTARIO

MILKING SHORTHORNS

Young stock for sale, from Record of Performance cows, by imported sires. G. L. SMITH, Credit Grange Farm MEADOWVALE, ONTARIO

Shorthorns

For Sale-One three-year-old herd sire imp. in dam; one good yearling bull, imp. in dam, his breeding and individuality is extra; one yearling bull, imp. sire and dam; two choice red 10-months bull calves. Also offer for sale number of good dual-purpose cows, 2-year-olds and heifer calves, and one yearling bull from extra milking dams. R. M. MITCHELL, R.R. 1, Freeman, Ont.

He-You women have no right to the ballot for the simple reason that in case of war you would not be able to fight. She-Then why do you allow a man who is crippled to vote? He-Why-er-say, if it isn't just like a woman to ask some such foolish question as that.-Boston "Transcript."

Sugar Beet Growers Ask for Raise.

The Executive of the Ontario Sugar Beet Growers' Association met the officials of the Dominion Sugar Company on October 21st, at Chatham to discuss the prices for beets for the 1921 crop. The growers are asking for those delivering beets at the factory \$10 per ton for 12 per cent. beets, and a raise of sixty cents per ton for each per cent. beets test over 12 per cent. For those selling on a flat basis, \$10 per ton minimum when sugar is selling at \$8 per cwt. with a raise of \$1.50 per ton for each One-Dollar sugar rises above \$8 per cwt.

This does not necessarily mean that growers will receive no more for their beets next year than they received this year. It all depends on the average selling price of sugar for the months of September, October, November and December on which the basis of computation is fixed.

Considering the price of land, the increased cost of producing beets and the risk involved, the growers feel that they require a guarantee of at least \$10 per ton before they can engage in the production of sugar beets.

It may be of interest to the public to know that five sugar companies in the United States, the Utah-Idaho, Sugar Company, the People's Sugar Co., the Amalgamated Sugar Company, the Layton Sugar Company and the West Cache Sugar Company have agreed to pay a minimum price of \$12 per ton for the 1920 crop with a raise of one dollar per ton for every dollar sugar sells over \$11 per cwt. during the months of October, November, December and January. The Ontario sugar beet growers are receiving nine dollars per ton for their beets this year with a raise of one dollar per ton according to how sugar sells above eight dollars per cwt. during the months of October, November, December and January.

Gossip.

Guelph Winter Fair.

The dates for the 1920 Ontario Provincial Winter Fair are Dec. 3-9.

The classification and prizes for horses have not been changed to any extent from last year. The Clydesdale classes have an additional attraction in the form of two gold medals from the Clydesdale Horse Society of Great Britain.

The Beef Cattle Department presents the same classification as last year, strengthened by prizes offered for groups of 3 and 5 steers of handy marketable weights. In response to the wishes of a large number of exhibitors in this department the management have decided to have all animals owned by one exhibitor stabled together where practicable.

The dairy department promises to be of more interest than ever. Arrangements have been made for the thorough disinfecting of the buildings previous to the fair dates.

Questions and Answers.

Miscellaneous.

Physiological Disease of Apples.

What is the matter with the enclosed apple? They are all like that and appear to be taking a dry rot, starting from the inside. The tree is young, healthy-looking, and is well pruned, with nice, smooth bark. It is growing in rich soil which is kept cultivated. The only thing I see out of the usual is that the tree is perhaps too growthy. The apples are very large and there are plenty of them, but they are all like this one. What is the cause, and if I can do anything to remedy this condition or assist fruit production I would be glad if you would let me know through your valuable paper.

J. McF.

Ans.—Unfortunately, the exact cause for the condition of the apple sent us is not known. Scientists say that apples affected in this manner are suffering from some physiological condition and usually let it go at that. The disease is sometimes called "Fruit Pit Disease" and is due apparently to some deficiency in the soil or soil conditions. We could not answer the question in an entirely satisfactory manner without thoroughly studying the conditions under which the tree is growing.

IT PAYS BIG



THOUSANDS of successful hog raisers have proven by actual experience that SCHUMACHER FEED is an economical growing and developing feed for hogs—a feed that promotes rapid growth and develops the much desired big, stretchy framed type on which the feeder can put on more pounds of pork economically.

SCHUMACHER FEED being composed of specially selected by-products of Wheat, Oats, Barley and Corn, together with Linseed meal (the whole being finely ground and scientifically blended) meets the requirements of growing hogs so well that it has taken its place as the leading growing, developing hog feed.

SCHUMACHER Feeding Plan

The SCHUMACHER Feeding Plan is helping thousands of farmers and hog raisers solve their feeding problem. As soon as your hogs are old enough to wean begin feeding them SCHUMACHER FEED either in self-feeders or in the slop. When hogs are on pasture, SCHUMACHER FEED is the only other feed necessary. They will develop big, strong, healthy frames and later on, by adding tankage to your self-feeder

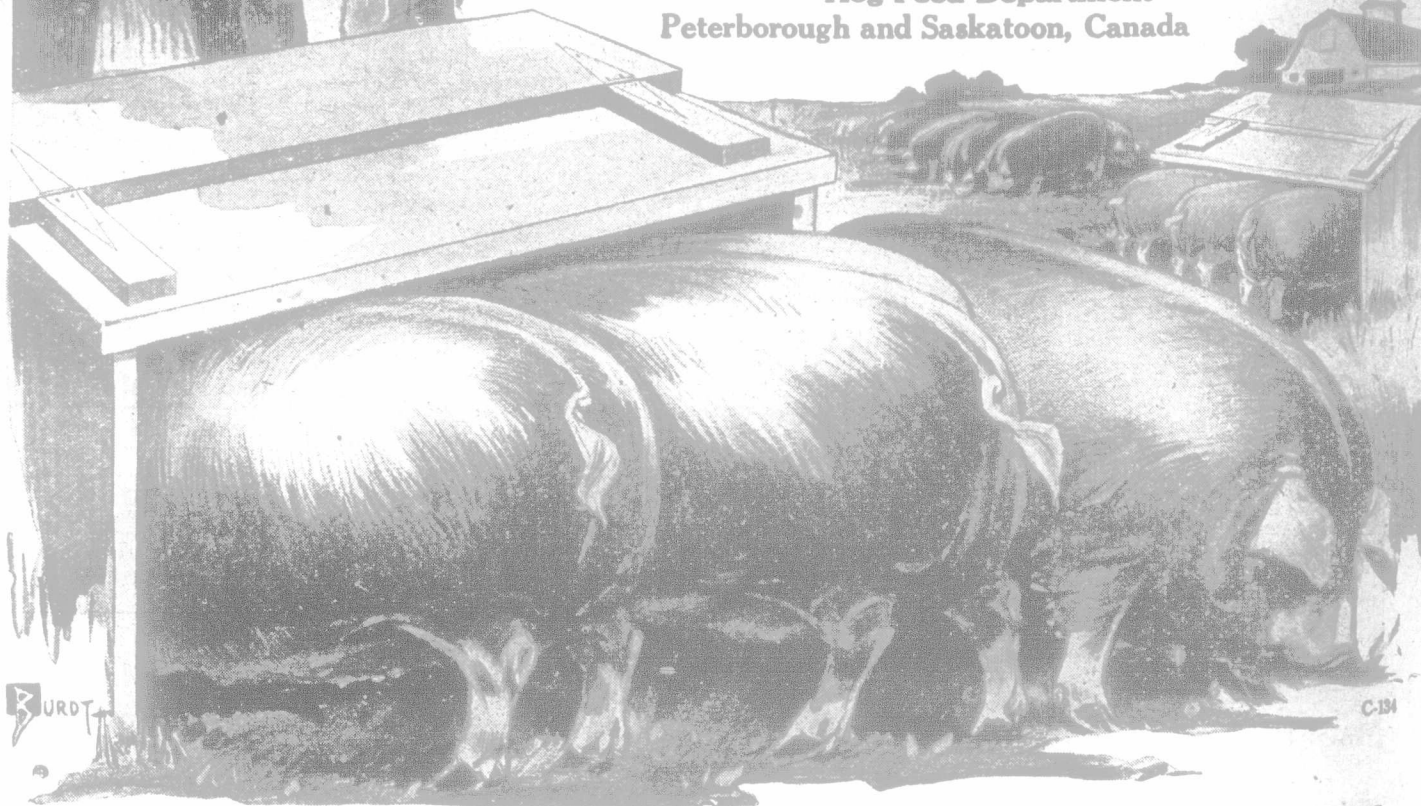
compartment, they will put on fat at a most rapid rate.

If you prefer the slopping method, make a thick slop of SCHUMACHER and give to your hogs regularly from weaning time to market time.

Either plan will prove exceedingly profitable and prove to your satisfaction that there is big profit in raising hogs today with the aid of SCHUMACHER FEED. Ask your dealer for SCHUMACHER—if he can't supply you, write us.

The Quaker Oats Company

Hog Feed Department
Peterborough and Saskatoon, Canada



Fairholm Scotch Shorthorns

Our herd is headed by a three-year-old son of the great "Avondale." We are offering his sons, and also have one son of Gainford Marquis (imp.), one son of Edgecot Broadhooks (imp.), and one by Secret Light. These calves are all ready for service and are show individuals. Can also spare a few bred heifers of Scotch breeding.

Visitors welcome at all times.

PERCY DeKAY (Elmira, C.P.R. and G.T.R.) Elmira, Ont.
St. Jacob's, G.T.R.

SPRUCE GLEN SHORTHORNS

Seven choice well bred, thick, deep, mellow, young bulls, from 14 to 22 months; also heifers in calf to Nonpareil Ramsden = 101081 =, a show bull, and a good one.

JAMES McPHERSON & SONS

DUNDALK, ONTARIO

Morrison Shorthorns and Tamworths—FOR SALE—Seven dandy bulls from 10 to 13 months old, of Scotch breeding, and choice females of the deep-milking strain. Also choice Tamworths of both sexes from prizewinning and champion stock.

CHARLES CURRIE, Morrison, Ont.

Pear Lawn Farm

Offers Three Beautiful Black Percherons For Sale. One Stallion rising three, inspected and enrolled in Form 1; one Stallion rising two years; one Imp. mare rising three, a winner of six first prizes; one Hackney rising two years. These are A1 show horses. A choice lot of Shorthorn heifers in calf and calves at foot.

HERBERT J. MILLER, Peterboro' Co., Keene P.O.

Scotch Shorthorns

The most fashionable families only

Herd Bulls—Escana Right For'ard (Right Sort—Favorite Missie).

Browdale Banner—Grand Champion, Canadian National Exhibition, Toronto, 1920.

Families—Nonpareil, Lancaster, Brawith Bud Jilt, Kinellar Rosebud.

Four Young Bulls for Sale—all winners, Toronto, 1920, at reasonable prices.

W. P. FRASER, Meadowvale, Ont.

Wrestling Book FREE
Be an expert wrestler. Learn at home by mail. Wonderful lessons prepared by world's champion Farmer Burns and Frank Gotch. Free book tells you how. Secret holds, blocks and holds revealed. Don't delay. Be a strong, healthy, winning man with ease. Write for free book. State your name and address. Write to: Wrestling Book, Farmer Burns, 298 Range Bldg., Omaha, Neb.

Manor Farm Holsteins

A Producing Herd Where Quality Excels

I have at present just the bull calf you need for your next herd sire. Visit Manor Farm yourself and select him from the choice lot of youngsters now in the pens—all are sired by our great son of Lulu Keyes, King Korndyke Sadie Keyes. The records of the dams of these calves would like to show you run from 20-lb. two-year-olds to almost 35 lbs. for matured cows—quality and production considered, they are priced exceptionally low.

GORDON S. GOODERHAM, Manor Farm, Clarkson, Ontario

RAYMONDALE FARMS

Our Junior Herd Sire, King Korndyke Raymondale
"One of the best bred bulls of the great Holstein breed."

His sire, Avon Pontiac Echo, is one of the most noted sons of the world's greatest cows, May Echo Sylvia; while his dam, Korndyke Queen De Kol 6th, is three times a 30-lb. cow, and twice a 35-lb. cow—her best 7-day record being 37.26 lbs. of butter and 781 lbs. of milk. She has 3,101 lbs. of milk and 150.9 lbs. of butter in 30 days, and 10,125 lbs. of milk in 100 days. The dam and sire's dam of this junior sire average 896.5 lbs. of milk and 39.14 lbs. of butter in 7 days; 3,682.55 lbs. of milk, 160.35 lbs. of butter in 30 days, and 137.30 lbs. of milk for one day. He is a splendid individual, and is proving himself a great sire.

Let us send you particulars regarding the few bull calves we have by this young sire. All are from good record dams in our own herd.

RAYMONDALE FARMS
Vandreuil, Que.

D. RAYMOND, Owner
Queen's Hotel, Montreal

Hospital for the Insane, Hamilton, Ont.

HOLSTEIN BULLS ONLY FOR SALE

Senior sire is from one of the best sons of King Segis Alcartra Spofford. Junior is grandson of the noted May Echo Sylvia, by Champion Echo Sylvia Pontiac.

Write to the Superintendent for prices, etc.

Silver Stream Holstein Herd Sires

WE BREED FOR YEARLY PRODUCTION

We have at present several choice young bulls, nearly all of which are sired by our own herd sire, King Lyons Colantha, whose six nearest dams average 30.10 lbs. of butter for 7 days. These youngsters are all from good yearly record dams and great individuals—probably as strong a lot as we have ever bred. Come and see; us also for females.

JACOB MOGK & SON

TAVISTOCK, ONTARIO

Hamilton House Holstein Sires

Our young bulls of serviceable age have all been sold, but we have a number of the best young calves we have ever bred. All are from dams with good combination records for both milk and butter. Several are up to 700 lbs. of milk and 31 lbs. of butter for 7 days. If you are interested in a good calf, write or see them now—they can be purchased at considerably less than we will be pricing them next winter.

D. B. TRACY

All Railways
Bell Phone

COBourg, ONT.

TRAPPING

Skunk and Coon Trapping

BY ROBT. G. HODGSON.

The skunk is a very common animal to all rural communities and usually one much despised. Scarce, indeed, is the farm that has not its share of skunk dens.

This animal, by reason of the unpleasant odor ejected by it, is gone after by only a few, and this indeed is probably a good thing for their hides are yearly growing so valuable that those trappers who do trap them find it a very lucrative business.

In reality the skunk is not a bad animal to handle, bad from the standpoint of its odor I mean, for if they are handled in the regular way, a person can take them in large numbers and yet never give evidence of it by reason of any odors clinging to his person. The scent glands which are located near the root of the tail, and operated by the tail, should never be injured, and if care is used there is no necessity of their being so in skinning. Be careful to skin around them and you will experience no difficulty in this way. Again, when the animal is lifted off the ground it is powerless to throw this odor and the trapper can profit by this seeming act of Providence, by having each trap chain fastened to a pole, say ten or twelve feet in length. When an animal is caught pick up this long pole, pull up the trap stake, if you use one in addition to the pole, and then holding it in the air kill it by hitting a severe tap on the nose with a club. In case the trapper is alone he cannot hold it off the ground and kill it too, but he can lay it over some object so it will be held up from the ground and go in and kill it.

Should the trapper be so unfortunate as to get a dose of this high-smelling liquid, it can be removed from the clothing by washing in gasoline and hanging out on a line in the open air for the scent to evaporate with the gas. Gasoline can also be used for the hands and face or body, but carbolic or tar soap is quite as good and not so dangerous. When

Willowbank Holsteins

Nearly fifty head to choose from, only one animal on the farm over four years of age, and all except two have been born at Willowbank. Better come down to Fenwick Sta., where we will meet you. Have some highly-bred bulls ready for service.
Bell Phone. Fenwick Sta.

C. V. ROBBINS, Wellandport, Ont.

"Premier Holstein Bulls Ready for Service"—I have several young bulls from dams with 7-day records up to 32.66 lbs. of butter, 755.9 lbs. milk, with 110 lbs. milk in one day—over 3,000 lbs. in 30 days. All are sired by present herd sire, which is a brother to May Echo Sylvia. Step lively if you want these calves.

H. H. BAILEY, Oak Park Farm, PARIS, ONT.

HOLSTEIN BULLS FROM 30-lb. DAMS

If you want 30-lb. bulls—good individuals—and priced right—you should see my present offering. I also have lower priced bulls, and am offering females bred to Ormsby Jane Buzke. Correspondence solicited.

R. M. HOLTBY, Manchester G.T.R., Myrtle C.P.R., PORT PERRY ONT.

Holstein Herd Sire, \$150—Pontiac Hermes Cornucopia, a choice, well-grown youngster just ready for heavy service—good individual and guaranteed right. Sire, Gipsy Pontiac Cornucopia, a 30-lb. son of May Sylvia Pontiac Cornucopia. Dam, a 21-lb. 3-year-old daughter of King Segis Pontiac Duplicate. We are also listing five younger calves, all sired by Gipsy Pontiac Cornucopia.

JOS. PEEL, Elmsdale Farm, Port Perry, Ont.

Quality HALEY & LEE, Springford, Ont. Production

HOLSTEINS—If in need of a better herd sire, speak early for a son of one of our great show cows and by our 35-lb. bull, a son of Susie Abbecker Colantha, with world's record for 5 month's milk and butter. Our cows were foremost in winnings at Toronto and London.

Summer Hill Holstein Females—We are at present crowded for room, and are pricing twenty-five head of one and two-year-old heifers of our own breeding at prices which any good breeder should be pleased to pay for this sort of quality. See these if you appreciate the best. We have one young bull left—a show calf.

D. C. FLATT & SON, R.R. No. 2, Hamilton, Ont.

Evergreen Farm Quality Holsteins—Our aim since we began breeding Holsteins has been to develop a producing herd of "Quality" cattle. Records of the show-ring and those for official production show that no herd of the breed has been more successful. If you require type, backed by production, we would very much appreciate your inquiry.

A. E. HULET, Norwich, Ontario

HOLSTEIN HEIFERS

bred to a 29.12 lb. son of Avondale Pontiac Echo. These heifers are all well grown, and got by good sires. Their dams also, in most cases, own official records and, as I need the room we feel that there is no stronger lot in Ontario. Quality and breeding considered, they are priced exceptionally low. See these if you appreciate the best.

JOHN W. MOOTE

CANBORO, ONTARIO

Do You Need a Holstein Bull?—I now have in my stables three young bulls which are ready for service, and all are choice individuals. Their dams hold good 7-day records, and their sire is a son of Victoria Burke (31.30 lbs.) and Ormsby Jane King. This being a son of Ormsby Jane Segis Aaggie, 46.33 lbs. The breeding is the best, and as I need the room some one else is going to own them soon. Write quick.

GEORGE SMITH (Myrtle Station, C.P.R. and G.T.R.) PORT PERRY, ONT.

For Sale—Hill-Crest Rafterd Vale, 4 years old, our herd sire whose 26,000 lbs. of milk and 1,050 lbs. of butter in one year. Am keeping all his heifers in the herd. Also young bulls sired by him. Will sell one or two cows.

W. FRED FALLIS, R. R. 3, Millbrook, Ont.

24,687 lbs. Milk—Butter 1,016 lbs.

Record of sire's dam. Write for extended pedigree and particulars of 1920 Holstein Bulls from him and R. O. P. cows.

HONEY & SONS - Dartford, Ontario

40 HIGH-CLASS HOLSTEINS

IN UNRESERVED

Breeders' Sale

A Real Choice Offering of Well-bred, Untested Holstein Females. Selling at FAIRVIEW FARM, near

Dunnville, Ont., Saturday, Dec. 11th, 1920

We are cataloguing for this sale forty of the very best females we have, and in three or four instances only are there cows above five years of age. At least twelve will be fresh or near freshening by sale date; others are bred to freshen in early spring, and the remaining numbers are made up of unbred youngsters. Five of these are daughters of the great young herd sire, Elmcrest Pontiac Sylvius, who is owned jointly by Mr. Shaver and Mr. Moote.

Elmcrest Pontiac Sylvius, the sire of these heifers, is got by

NOTE.—The cattle will be sold subject to the tuberculin test if purchaser so desires. Those attending the sale are also assured that the sale will be over in plenty of time to allow every one to catch the evening train at Dunnville, where it is possible to make close connections for almost any point in Western Ontario, and arrive there that evening.

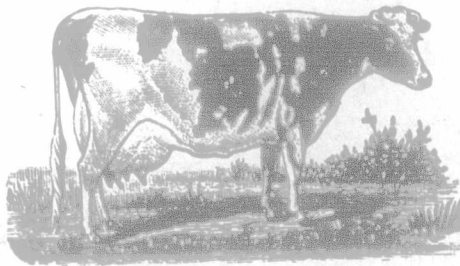
All requests for catalogues should be addressed to

JOHN. W. MOOTE, Canboro, Ont.

All trains met at Dunnville on morning of sale.

Owners, JNO. W. MOOTE, M. B. SHAVER

Auctioneers, MOORE, MONTAGUE. Sales Manager, C. T. HOUCK



Avondale Pontiac Echo, one of May Echo Sylvia's most noted sons, while on his dam's side he is a son of the great old 29-lb. cow, Maud Snowball. The daughters of this bull will speak for themselves on sale day, and there will be in the neighborhood of twenty females selling that are bred to him, which means that practically every female that is bred is carrying a calf which will be sired by a 29-lb. grandson of May Echo Sylvia. There are also 14 daughters of King Johanna Netherland and 4 daughters of Orvilla Helbon Prince listed.

using gasoline to wash the clothes in be very careful of it and if possible do not wash in the house, at least not near a fire.

Skunk are characterized by their black body and white stripes. They vary in color from an almost pure black to an almost white, the grades being: Black, short stripe, narrow and long stripe. The less white on the pelt the more valuable they are. Some are under the impression that the white fur, when made into garments is simply dyed black, and for this reason they are unable to see why there should be so much difference in the price of a black and that of an almost white. The truth of the matter is that the white fur in a skunk pelt is much coarser in texture than the black and for this reason the white must be completely cut out preparatory to making into fur garments.

The fur of the skunk is one of the staples of the fur industry, although, as a rule, the people of other countries seem to appreciate its warmth and rich black beauty.

Skunk are most active during the fall in preparing for winter, and during the spring, by reason of this being their running season. During the cold months, when the fur is naturally most valuable, it being at its best at this season, they are denuded up and come out only on mild nights, such as we often get during January thaws.

While they feed on a wide range of food, those in the natural bait line most attractive to them are muskrat flesh, poultry or rotten eggs.

Skunk are not cunning nor difficult to trap, but they often give the novice much difficulty in holding them in the traps once they are taken, by reason of pulling out or amputating their imprisoned feet. For this reason the No. 1 Giant, 91½ Newhouse, Victor, or Jump, as these traps reduce to a minimum, any possibility of escape in the manner stated.

The method used most extensively is the den set. This is about the surest set there is, and it certainly is the easiest to make. Their dens are usually found on sandy hillsides, among rock or fence rails, under stumps, barns and old stacks, and quite often in the woods, especially in small, fairly open thickets.

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will prove exceedingly profit- ove to your satisfaction that profit in raising hogs today l of SCHUMACHER FEED ealer for SCHUMACHER— supply you, write us.

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ashionable families only scana Right For'ard (Right rt—Favorite Missie). Grand Champion, Canadian ion, Toronto, 1920. arell, Lancaster, Brawith Bud inellar Rosebud. Bulls for Sale—all Toronto, 1920, at onable prices. R, Meadowvale, Ont.

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rt wrestler. Learn at home by mail. Lessons prepared by world's champion and Frank Gotch. Free book. Secret holds, blocks and holds. Don't delay. Be strong, healthy, handsome. Write for free book. State your name. 208 Range Bldg., Omaha, Neb.

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The following booklets tell how to prevent disease among livestock and poultry and give directions for using

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PARASITICIDE AND DISINFECTANT

which is specially adapted for use on all

Livestock and Poultry

BOOKLETS

No. 151—FARM SANITATION. Describes and tells how to prevent diseases common to livestock.

No. 157—DOG BOOKLET. Tells how to rid the dog of fleas and to help prevent disease.

No. 160—HOG BOOKLET. Covers the common hog diseases.

No. 185—HOG WALLOWS. Gives complete directions for the construction of a concrete hog wallow.

No. 163—POULTRY. How to get rid of lice and mites, also to prevent disease.

Kreso Dip No. 1 is sold in original packages at all drug stores.

ANIMAL INDUSTRY DEPARTMENT OF
PARKE, DAVIS & CO.
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Polled Hereford Sale
Tuesday, Nov. 30th, 1 p.m. For catalog write B. O. Gammon, 324 Valley National Bank Bldg., Des Moines, Iowa

Polled Shorthorn Sale
Thursday, Dec. 2nd, 10 a.m. For catalog write J. H. Martz, Greenville, Ohio.


Hereford Sale
Friday, Dec. 3rd, 1 p.m. For particulars write R. J. Kinzer, 1009 Baltimore Ave., Kansas City.

A Season of Instruction in the Art of Breeding and Feeding Live Stock Economically.

The International Grain and Hay Show for Chicago Board of Trade Premiums.

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CATTLE



Sheep and horse owners all need our FREE BOOKLET. It gives valuable pointers on De-horning, Castrating, Horn Training, Animal Diseases and Vaccines, Breeding Tables, etc., also a complete list of Stockmen's supplies.

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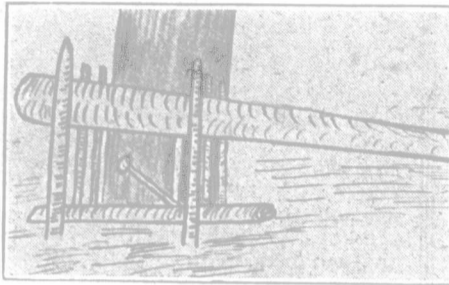
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Exporters of all Breeds
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Slightly in from the entrance to the den make an excavation the exact size and shape of your trap. Line the bottom of the excavation with dry grass or leaves to prevent its freezing down later on in the season. Put a piece of batting under the pan and set it in the place you have ready, covering first with leaves, etc., and then with sand or dirt. Now stake your trap chain as far out as it will reach, for if the animal is allowed chain enough to get down the hole and out of sight you are going to have some time getting him out. In case the hole is large and there is a chance of the animal entering or coming out without being caught, place a rock or a stick on each side of the trap to more surely guide the animal in. Throw a piece of bait back in the hole, and in case another skunk or a mink or weasel should be passing it will be sure to enter, enticed by the odor of the bait.



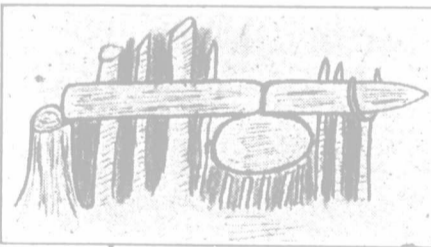
A Canadian Dead Fall.
Referred to in previous issue.

The Coon.—The raccoon, commonly called coon, while no relation to the skunk, is considered under this heading simply as a matter of convenience.

The fur of the coon is in great demand, and doubtless always will be for it is very popular, and is used for men's coats to the near exclusion of all other furs of this price and grade. The fur is the most durable and warmest of any of the standard American furs.

They are closely related to the bear family and, like them, have a great fondness for honey; this being a lure often used to advantage, as I shall presently describe. They are also fond of fish, corn, frogs and many small insects. The corn, fish and frogs being used as bait for the traps in taking them.

Coons are not so hard to take as the mink, but are considerably harder to take than skunk. They den up during the winter, where they lie in a dormant state until spring. The den is usually a hollow tree or log in the woods.



A Snare Set.

Traps used in taking them are: No. 1 Giant, No. 91½ Victor, Newhouse or Jump, or No. 3 Tree trap. This latter trap is especially designed for coon and is used by fastening to a tree and baiting it. This trap has the advantage that it kills the animal instantly, and also that it can be set well up on tree trunks where snow does not bother it.

During the fall months coons will make nightly visits to near-by corn fields, and here they will devour and destroy to their heart's content. For this reason most farmers find it to their advantage to get them if it is at all possible. As they make their home in a near-by woods or swamp, you can expect them to enter the field from this direction, and by looking for paths under the fence or hairs on the bottom rail or wire where they have crawled under, rubbing their back in passing, you can locate their trail and set a trap by making an excavation in much the same manner I have described for skunk, you are pretty sure of catching them.

They have a large bump of curiosity, and can be attracted by any bright, shining object. Special fish or other imitation objects made of tin can be secured, or you can fasten a small mirror or a piece of tin-foil to the pan of your trap. Now go along the stream where

Childrens' Savings Accounts

We suggest you start your children on the road to Thrift by opening Savings Accounts for them, and then encouraging them to increase their balances. A small sum will open the account, and by the time a boy or girl is of age there will be a substantial amount for a start in life. Few things give a young man or woman more assurance than the knowledge that there is always a nest egg in the Bank to fall back on.

The Manager of any Bank of Toronto Branch will gladly take the few minutes necessary for the pleasant duty of opening Savings Accounts for your children.



Thos. F. How
General Manager

THE BANK OF TORONTO

47

PICKERING FARMS - WHITBY, ONTARIO World Famous Jersey Cattle

For the last quarter of a century the cream of the Island of Jersey has been finding its way to our stables. We are making it possible for the smaller breeders to obtain young bulls but a generation away from Meadowgrass 2nd—one of the greatest cows that ever lived and the most outstanding cow ever exhibited in Canada. These bulls are being sold at a price that represents but slightly more than the actual cost of raising them.

THINK WHAT THIS MEANS TO YOU, MR. BREEDER!!

You can always obtain, too, a few heifers of any age to go with one of our bulls. Write to the farms for a circular on our great sire—RALEIGH MEADOWGRASS.

R. J. FLEMING, 92 King Street, East, TORONTO

Prospect Farm Jerseys—Herd sire, Torono of Prospect Farm 12094, whose sire Lous Torono 106614, dam and both grandams, have an average R.O.M. record of 14,261 lbs. milk and 966 lbs. butter, 85 per cent. fat. Lous Torono is a grandson of Hood Farm Pogis 9th, 55532, and Hood Farm Torono 60326, both Gold Medal bulls. Torono of Prospect Farm, dam Keetsa 333656, has a 2-year record of 10,627 lbs. milk, 617 lbs., 85 per cent. butter, and on retest has milked 60 lbs. milk a day. She is a daughter of Hood Farm Torono 99265, whose first 17 daughters, as 2-year-olds, averaged 8,746 lbs. milk and 600.01 lbs. butter, 85 per cent. fat. We have for sale young bulls sired by Torono of Prospect Farm and from R.O.P. cows, also choice young bulls sired by Brampton Bright Togo 5760, and cows and heifers bred to Torono of Prospect Farm, due to calve Sept. and Oct. Pure-breds and high-grades. The high-grades will make choice family cows.
R. & A. H. BAIRD, R. R. 1, New Hamburg, Ont.

BRAMPTON JERSEYS

THE LARGEST JERSEY HERD IN THE BRITISH EMPIRE

At Toronto Exhibition, 1919, we won twenty-five of twenty-seven first prizes. We now have for sale first-prize young bulls from R. O. P. dams, as well as females of all ages.

B. H. BULL & SONS :: Brampton, Ontario

All Bulls of Serviceable Age Sold

A few young bulls sired by Financial Raleigh King, son of the \$6,000.00 Financial Beauty King, for sale, R.O.P. dams.

JAS. BAGG & SONS (Woodbridge, C.P.R.; Concord, G.T.R.) **EDGELEY, ONTARIO**

The Woodview Farm Jerseys—CANADA'S MOST BEAUTIFUL JERSEY HERD
Herd headed by Imported Champion Rower, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

DON HERD OF PRODUCING JERSEYS

We have three young bulls of serviceable age—good individuals and priced right. Could also spare a few choice bred heifers. Visitors welcome.

D. DUNCAN & SON, TODMORDEN, ONT.

Ayrshires—Yorkshires—If you want a few large and well-developed Ayrshire to have you call and see our present offering. Heifers good enough to win in the show ring, we would like show bull. Write us also for Yorkshire litters.

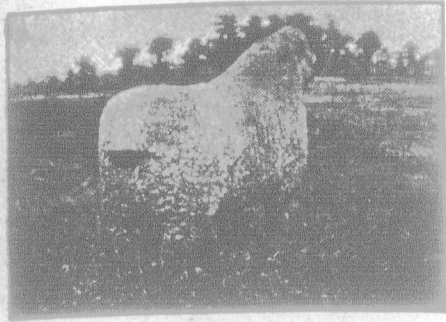
JAS. B. ROSS, Streetsville C.P.R., Stop 38, Guelph Radial, Meadowvale, Ont.

Inglewood Farm R.O.P. Ayrshires—This herd has passed the first test for accreditation of 16,038 lbs. milk. Her first daughter was a cup-winner, and her first granddaughter has a record of 2-yr.-old record of over 10,000 lbs. We cordially invite you to see these females. Present offering: Bull calves only.

WILSON McPHERSON & SONS, St. Anns, Ont.

Glenhurst Ayrshires—Headed by Mansfield Maines Sir Douglas Hague, No. 16163 Imp.—have been noted for their depth and size, good teats and smoothness of conformation. If you are looking for a combination of size, type and production—plus high butter-fat—write me or visit the farm. Males and females of all ages for sale.
James Benning, Summertown Sta., G.T.R. **Williamstown, C.P.R.** Bell Telephone 78-3 Central

SUMMER HILL OXFORDS
They Hold an Unbeaten Record for America



We are now offering a number of ram and ewe lambs sired by Lord Milton at very reasonable prices, quality considered. This ram went to the Western Stock Ranches, Ltd., at \$500 immediately after the Chicago show. We also have shearing ewes and rams as well as a few two-shear rams. Can supply ram and ewes not related. We guarantee satisfaction. Follow our exhibit at the shows and get our prices.

Peter Arkell & Sons, Teeswater, Ont.
H. C. Arkell W. J. Arkell F. S. Arkell

Shropshire and Cotswold Rams

Your choice of 50 large, well-wooled ram lambs for \$30. Recorded in your name and express paid to your station. Also a few good yearling and two-shear rams at a low price.

JOHN MILLER, Claremont, Ont.

Blairgowrie Shropshires and Cotswolds

I have at present a real choice lot of ram and ewe lambs, as well as a few shearing ewes and ewes of both breeds. Will price these sheep reasonable, and guarantee the best of both breeds.

JOHN MILLER, JR., Ashburn, Ontario

High-class Oxfords for Sale

Including shearing ewes, rams and ram lambs. Sired by "Heythrop 42" (Imp.), an extra choice ram imported by the McKerrow Farms, Wis. These sheep are the low-down, blocky kind, and have ideal skins, fleeces, color and covering. Write for prices and descriptions.

W. T. TILT, R.R. No. 6, Brampton, Ontario

Oxford Rams

We offer choice ram lambs, shearing ewes; also ewes any age. All bred on the farm.

John M. Ross, Embro, Ont.

FOR SALE

A number of first-class two-year-old Oxford Down Shearlings and Some Splendid Ram Lambs

All from the best of imported stock. Apply ROBERT J. FLEMING
92 King St. East Toronto, Ontario

Kent or Romney Marsh Sheep

The hardiest and best grazing mutton and wool sheep of Great Britain. Successfully acclimated wherever they are required. Descriptive pamphlet, list of breeders and all information from

W. A. Ball, 12 Hanover Square, London, W. 1

Shropshires and Shorthorns

Choice ram and ewe lambs, sired by Imp. Berry ram. Also five Shorthorn bulls, and few females for sale. Grant Christie, Manchester, Ont.

Cotswolds

Special offering: Ram lambs and ewes, all ages. Write: R. HONEY & SONS - Dartford, Ontario

you know coon travel, and in shallow but fairly fast-moving water, set your trap. On the far side of trap stick a stick in the mud, the end projecting from the water being liberally dosed with scent or, if you have none, some honey. The coon is attracted to the spot by the scent and the bright-colored metal, which by reason of the fast-moving water appears to be alive, at once arouses the animal's curiosity, and putting his foot out to get it is caught.

Always look along streams where you know coon are in the vicinity, for hollow logs, and if you find tracks or other indications that they are using logs set and carefully cover a trap at each end of the log. If you find them passing close by, but not entering a hollow log, set a trap at each end and place some scented bait inside to attract them.

Take a fish or several of them in shallow water and set several traps around them. Coon are very fond of fish and are sure to investigate this set.

It is best not to stake coon traps solid; use rather a drag, preferably a stone, to the trap.

Questions and Answers.

Veterinary.

String Halt.

We have a horse that we think has string in his hind leg. What is the cause and cure? L. M.

Ans.—String halt is purely, a nervous disease, a form of chorea, no medical treatment is effective, an operation by a veterinarian, which consists in removing most of a ligament in the region of the hock is effective in relieving the symptoms in a reasonable percentage of cases. V.

Unthrifty Cow.

Jersey cow eats and milks well, but is very thin. She has a nasty cough and her bowels are loose all the time, and she seems to feel the cold easy. Since this cold spell she seems to be worse.

Is her milk fit for use? J. E.

The symptoms indicate tubercular disease of both the respiratory and digestive organs for which nothing can be done. The only reasonable definite means of diagnosis is the tuberculin test by a veterinarian. It is probable that her bowels can be regulated by feeding on good hay, chopped oats and bran (no roots or green stuff), and adding to her drinking water 1/2 of its bulk of lime eater, but if she is tubercular the improvement will not last unless treatment is continued. As the cough has become chronic it is not probable that treatment would be effective even though it be not due to tubercular trouble.

2. If she is tubercular neither the milk nor flesh will be fit for consumption. It will be wise to have her tested with tuberculin. V.

Miscellaneous.

Wild Buckwheat.

What is the name of the enclosed weed seed. It was plowed up and didn't appear to have any stalks. The seed was lying in a bunch under the earth. State if this is an injurious weed or not. T. E. C.

Ans.—The seeds submitted to this office were from a plant known as wild buckwheat. This is not a desirable weed to have on the place, but it is not as injurious as many, and is not so difficult to eradicate.

Tractor for Small Farm.

Which is the best tractor for a farmer working 125 acre? I have a six-roll corn shredder. Would a Fordson run this? Would an International 8-16 run it? How do they compare for fuel and cylinder oil? Y. F.

Ans.—We would consider one of the smaller makes of tractors to be preferable for a small farm, and from what we have seen the different makes of smaller tractors have sufficient power at the belt for doing the ordinary work about a farm. We do not know what power the corn shredder would require. As to fuel and cylinder oil, it depends a good deal on the man running the machine and on the kind of work which is being done. Some operators run the machine much more economically than others.

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Choice Oxfords and Shorthorns

We offer choice, big ram lambs of show quality and ideal covering; also ewes any age. Write for prices before buying. Herd sire, Master Marquis - 123826, full brother to grand champion female at Toronto. Bulls and cows for sale.

GEO. D. FLETCHER Erin, R.R. No. 1 L.-D. phone. Erin C.P.R.

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I have a choice lot of yearling and two-shear ewes in both breeds; also some good ram lambs that have been winning at the fairs. Prices reasonable.

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Boars ready for service and best pigs, rich in the blood of Lord Premier's Successor 161500, Grand Champion, 1914, Champion sire of 1915, 1916, 1917. His descendants have won Grand Champion honors at the largest and strongest shows of 1919. The Champion Berkshire barrows of 1918 International were double grandsons of Lord Premier's Successor. We have shipped many Berkshires to Canada with satisfaction to customers. Prices on request. HOOD FARM, INC., Lowell, Mass.

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JOHN G. ANNESSER, Tilbury, Ontario

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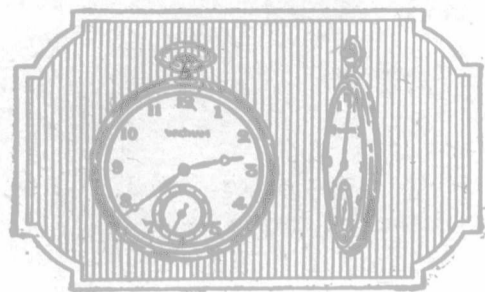
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Some Things Worth Knowing About Apples.

The guide to teachers, issued by the Ontario Department of Education, mentions fruit judging and packing fruit in boxes and barrels as a November topic, and it seems opportune in this connection to mention a few things that may be learned about the apple.

It is well, first of all, to be able to identify varieties, or to name apples as they are found; but names after all do not mean very much. Men and women, boys and girls, all have names, but these names are used only to distinguish one from another. It is the kind of a boy or the kind of a girl, and what he or she is capable of doing that really matters. So it is with apples. Varieties are given certain names so when they go on the market consumers will know whether they are purchasing a cooking apple or a dessert apple, a fall apple or a winter apple, a sweet apple or a sour apple. All this suggests that when a study of varieties is being made, and judging is being done, that we go a little further and study groups of varieties, determine on the time of year when they are in season, and for what use they are best adapted. A knowledge of names only is of little value; it is the quality, character, season, and use to which they can be put which determines their respective values as a food commodity.

We would suggest that a study of apples take the following form. First, learn the different varieties and become acquainted with the characteristics peculiar to the different kinds. After being able to name them, then divide them into groups, such as summer, fall and winter. In the first group would come Astrachan, Yellow Transparent, and Harvest apples, as well as many others. In the fall group would come such as Wealthy, Alexander, Gravenstein. Then there is the winter group which might be divided into early and late winter, according to the season in which the varieties are at their prime.

Another classification which means much to the trade is that which separates cooking apples, such as Baldwins, Greenings, Starks, from those which are termed dessert apples, and usually eaten out of hand. In this latter category would come Spy, McIntosh Red, Snow, etc. This is a very important division of varieties, for dessert apples usually command a very much higher price on the market than do cooking apples. There is an economic feature, or, more properly speaking, a marketing feature, in connection with this. A grower would not, as a rule, bother packing cooking apples in boxes, because the trade does not care for them that way on account of the extra expense involved. It is dessert apples, like Snows or McIntosh Reds, which are wrapped in paper and put up in fancy boxes.

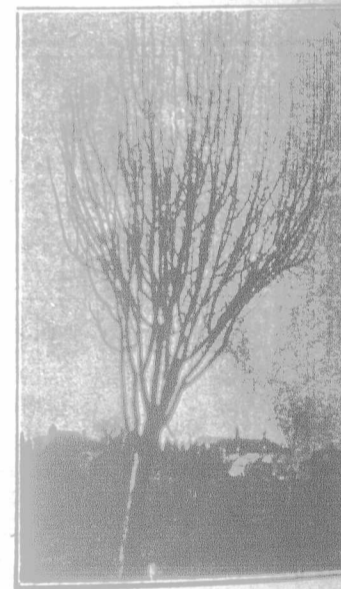
Coming back again to the matter of seasons, one should consider the ability of certain varieties to stand shipment. Duchess, Astrachan and Yellow Transparent are not often shipped very long distances, for the reason that they are not suited for the ordeal, neither are they worth enough money to make it practicable. The Duchess is, however, sometimes shipped from Ontario districts as far as Winnipeg. Fall varieties (occasionally) and winter varieties are shipped to Europe, chiefly Great Britain. This is an important point in the study of apples, for marketing or distribution governs to a large extent the nature of the whole fruit-growing industry.

Questions put to the pupils will elicit replies that convey considerable information. It will probably be said by some pupil that King trees do not bear very heavily, and the same is true about Russets, where the trees are not well fed and taken care of. Ben Davis, Baldwins, and others usually yield heavily every other year, when given half a chance. This, too, is important and has a direct bearing on the varieties that are usually planted.

One can go still deeper into this study of apples or varieties and analyze the conditions under which the tree is planted to give best results. Some varieties, such as the Spy, are said to be self-sterile, that is, the pollen which they produce will not properly fertilize their own flowers, although it is quite potent on the blossoms of other varieties. One can quite appreciate what would happen if a block of Spys were set with no other varieties in the immediate neighborhood. There would be little or no fruit; in fact, there are instances on record where Spy orchards have been non-productive until other varieties were grafted into some of the trees. This question of fertility or sterility in the bloom has not been thoroughly studied, but experiments go to show that the following varieties are more or less self-sterile: King, Northern Spy, Gravenstein, Yellow Bellflower, Spitzenburg and Tolman Sweet. When orchards are being planted this matter should be taken into consideration, and an effort made to not have entire blocks of one variety.

Another point that is worth consideration is the age of a tree before it comes into bearing. Spy trees do not bear, as a general thing, until they are twelve or fifteen years old. Other varieties, such as the Wagener, will sometimes bear the second year after they are planted. Experts are working on this question and endeavoring to recommend certain treatments that will bring young trees into bearing as early as possible, but we need not go into that question here.

We have treated this whole matter in a very brief and sketchy manner. All we wished to do was to point out a few of the interesting features regarding varieties that should be made the topic for discussion in lessons on the apple.



A Young Spy Tree.

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BY HENRY G. BELL, B. S. A.

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