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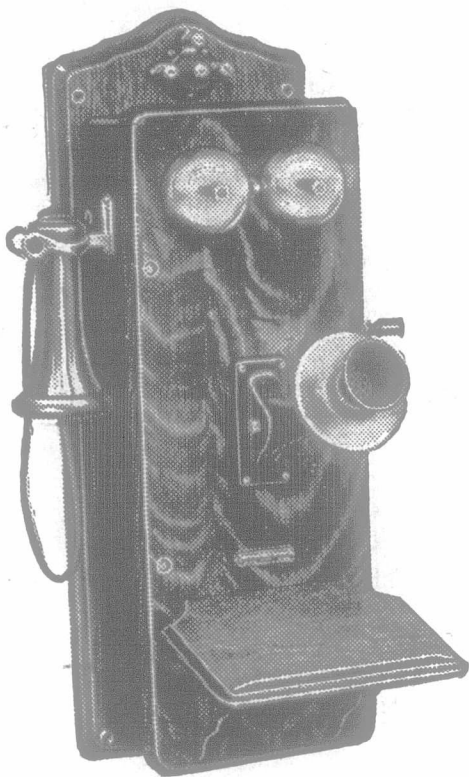
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Chief Office, Dept. of Agr.
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Vol. XLVIII.

LONDON, ONTARIO, DECEMBER 18, 1913.

No. 1081



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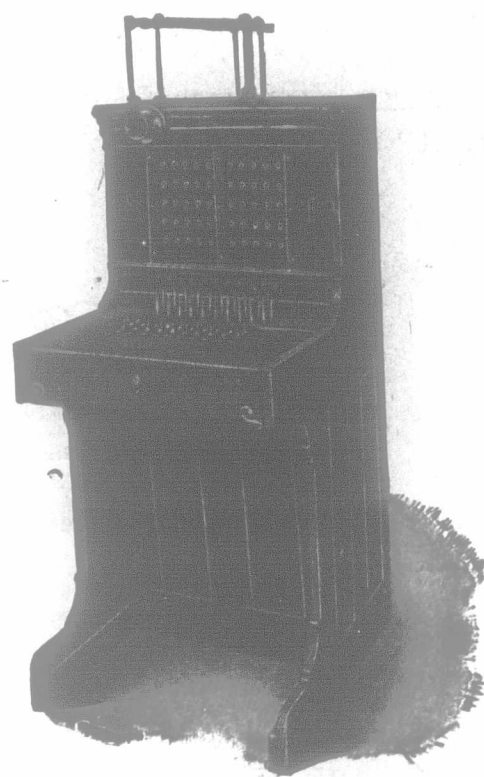
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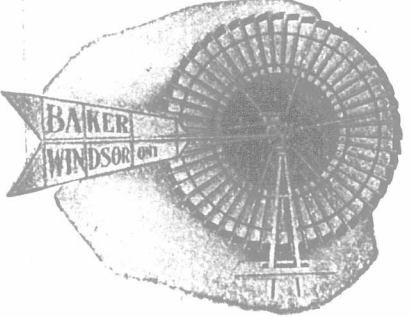
This story could be told by many Canadian farmers who have used a high-grade POTASH fertilizer. One farmer in Cape Breton, N.S., doubled his crop of potatoes, in fact has just harvested a yield of 735 bushels to the acre. If he can get such a yield, why can't you? You surely ought to have plenty of barnyard manure to use. If so, use it in quantities in connection with 400 lbs. Basic Slag and 160 lbs. Sulfate of Potash to the acre; cultivate well and you can get a yield similar to his. That is what he did. Another farmer in Cowansville, Que., obtained a yield of 1,666 bushels of mangels to the acre by using 150 lbs. Nitrate of Soda, 400 lbs. Acid Phosphate and 150 lbs. Muriate of POTASH, increasing his yield 826 bushels over the plot fertilized with only Acid Phosphate and Nitrate of Soda. **IT COST THIS FARMER JUST \$3.45 TO GET 826 BUSHELS MORE OF MANGELS.** If you want to do likewise on your farm, write us and we will tell you how

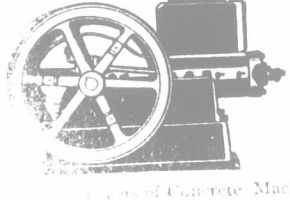
POTASH PAYS

Every crop removes from the soil so much Nitrogen, Phosphoric Acid and POTASH. This is the food the plant consumes. If you wish to raise bigger crops, you must put back into the soil the plant food that the plant takes up in its natural growth. You probably understand this, and very likely you use some sort of fertilizer, but if you are NOT using a fertilizer containing 6% to 10% POTASH, you cannot get bigger yields of better quality. This is because a plant removes from the soil more POTASH than Phosphoric Acid. Ordinarily, low-grade fertilizers contain from 6% to 8% Phosphoric Acid and approximately 2% of POTASH. Certainly this is not more POTASH than Phosphoric Acid. You must increase this percentage to 6% to 10% POTASH. If you want to raise a bumper crop next year do this. Insist that your dealer provide you with a 6% to 10% POTASH fertilizer. If he cannot do this, and you have to buy a low-grade fertilizer, for every ton of low-grade fertilizer you buy, add 200 to 300 lbs. of Muriate or Sulfate of POTASH, and this will bring it up to a high-grade fertilizer. You can mix your own fertilizer at home if you want to. Our Agricultural Experts will tell you free how to do this. Get in touch with your fertilizer dealer now, so that he will be sure to have POTASH on hand for you when you need it. Send us your dealer's name and we will send you FREE booklets on how to increase your yield. These booklets we know are instructive and are the best on the subject, being written by Experts. Write us, telling the kind of crops you raise, giving us the name of your dealer, and we will see that you get a fertilizer high in POTASH. You will have plenty of time this winter to study this all-important question, and how to proceed another year to get bigger yields of better quality from your farm. *Write us To-day.*

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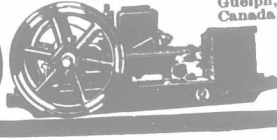
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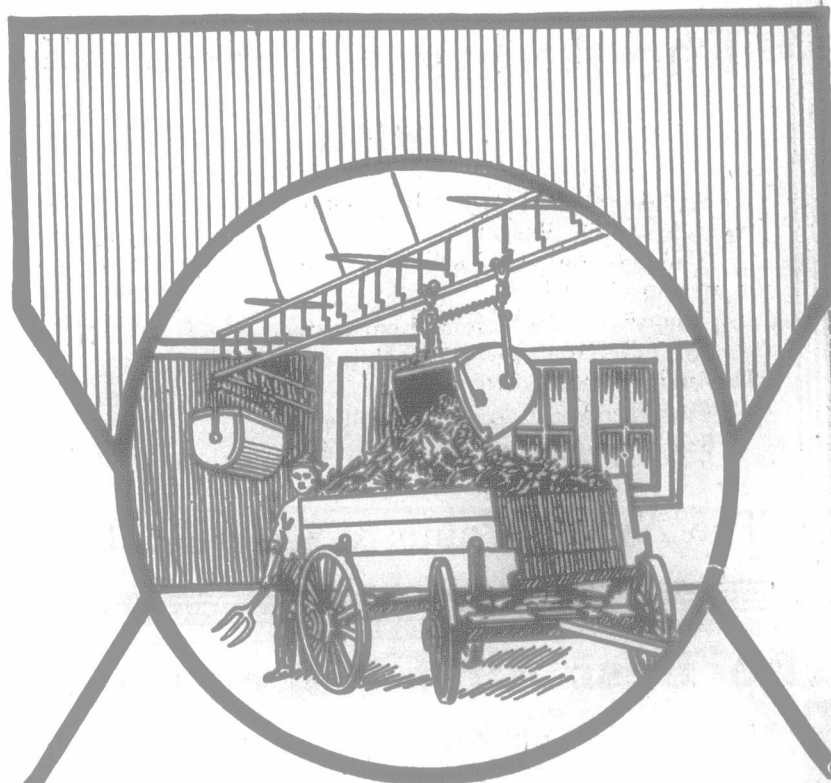
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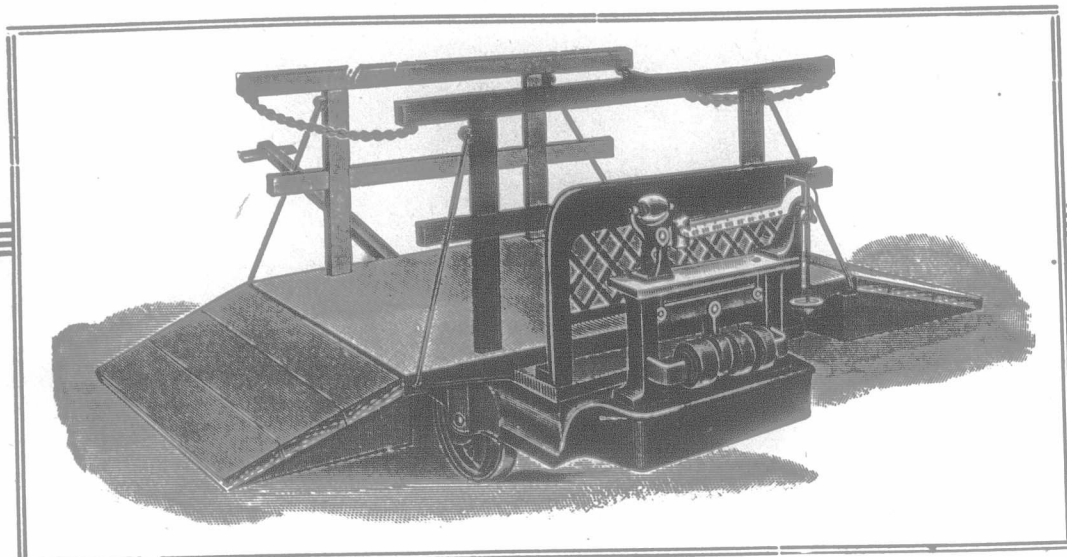
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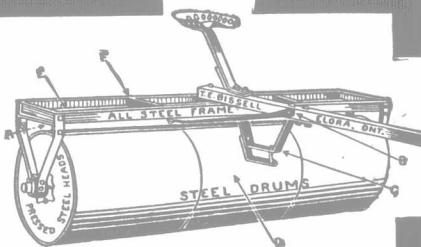
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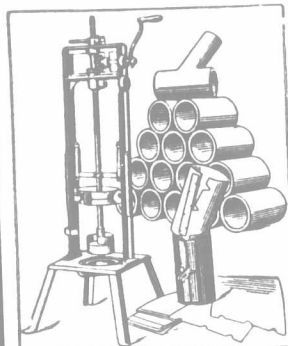
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Mail Service Branch, } Superintendent
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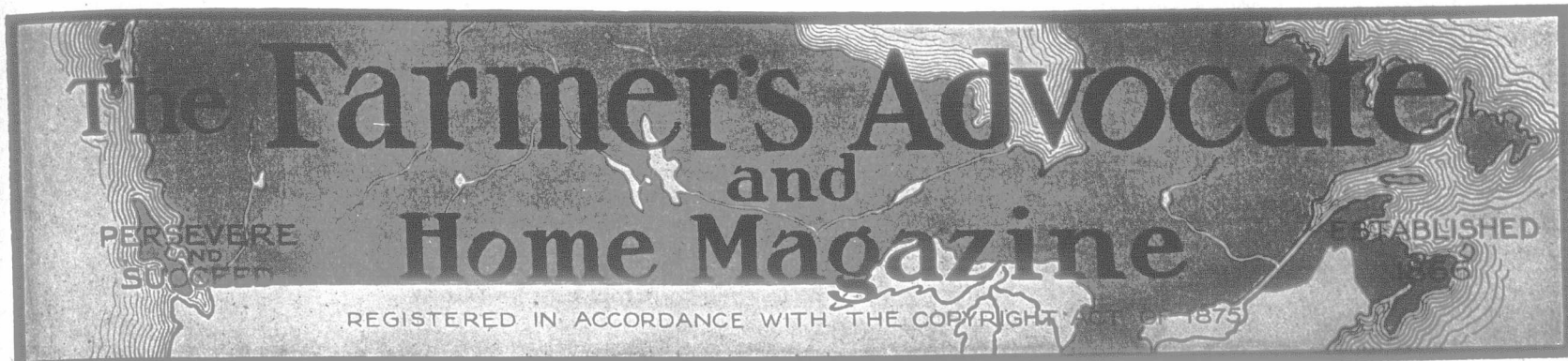
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VOL. XLVIII.

LONDON ONTARIO, DECEMBER 18, 1913.

No. 1081

EDITORIAL

Train up a calf in the way he should go, and when two years old he may become an International champion.

A United States Congressman has made the discovery that cold storage covers a multitude of the cost of living sins.

The pork packer, now having three strings to his bow, should be in a position to make it worth our while to raise bacon hogs.

Unless in some very exceptional cases, the plowman may now stand aside and observe Farmer John Frost perform his wonderful winter tillage operations.

Among the publication announcements elsewhere in this issue, is a remarkably favorable encyclopaedia proposition that a great many readers will be glad to embrace.

Many long centuries ago a successful Roman farmer was prosecuted before "The Forum" for sorcery because he grew more abundant crops than his neighbors, but his defence was "better cultivation."

"Our folks all shouted with glee," writes an old and appreciative reader, "when the rural mail man left us the big Christmas 'Farmer's Advocate' last week. It was a little late in coming, but all the more welcome when it arrived."

The refreshingly candid way in which newspapers of both sides of politics and the more avowedly detached exponents of public opinion, have called in question the clamor of the railways for extra compensation, because of the incoming parcel's post system, may result in their premature demands putting a check upon themselves.

Some of the modern achievements on which we plume ourselves are not so absolutely new in conception after all. A good many readers of our Christmas Number were somewhat surprised to learn that the great American editor, Horace Greeley, over forty years ago, had sufficient insight into the future to foreshadow the use on the farm and otherwise at long distances of electric power developed at Niagara River.

The men and women of other trades and professions find a good paper devoted to their interests an indispensable aid. And this is more true of farming, because of its many-sidedness and because farmers are more isolated. Having enjoyed the benefits of "The Farmer's Advocate and Home Magazine," you can render no better service at this season than by extending its advantages to others.

It is reported that nearly a dozen Bills are pending in the United States Congress on the cost of living. If some of the authors were to take off their dress suits and put on farm overalls it might be as effective as their legislative cure-alls.

Federal Aid and Provincial Action.

Economic conditions, as far as they pertain to agriculture, have, during the past few years, been a matter of deep concern in this country as well as in other countries. Orators have orated upon and writers have raked the far corners of their thought reflectors to find some further advice upon the all important subject of helping the farmer produce more abundantly, that they (the exhorters) might live more cheaply. Our agriculture has its needs—its weak places which require bracing up, and hindrances to be removed, but, as the present Dominion Minister of Agriculture has many times pointed out in his addresses, it needs no "pap feeding." It is entitled to a fair field. Most of the quack doctors who have found a cure-all for the ills of our basic industry have diagnosed these wrongly, usually from the statement of the case by others who have ventured long-distance advice. The Hon. Martin Burrell, realizing that there was a growing need of a Dominion-wide agricultural policy set to work to inaugurate a campaign to help where help was needed, and where the people receiving it were endeavoring to help themselves. To Dr. C. C. James, formerly a moving spirit in Ontario agriculture, he entrusted the work of finding out what the country most needed, and laying plans to meet these needs. From an already wide knowledge of Canada's agricultural conditions and from a year's further specific study of them, Dr. James, than whom no better man could have been chosen, conceived the idea of working out the Federal aid to the provinces for the advancement of education, interpreting the term, "education" in the widest possible sense as it applies to agriculture. The beginning seems to have been made in the right place, and much credit is due the man who so admirably handled such a big question in so short a space of time. In another column details are given of the plan as worked out.

The beginning has been made; the Federal grants have been apportioned. Ten million dollars in all goes from the Dominion Treasury to the various provinces during the next ten years as an aid to better agriculture. A decade leaves plenty of time to work out many of the details of the expenditure as the yearly grants increase, and it is up to the provinces to see that their methods of spending the money improve as time goes on. This money is not all to be spent in a year, so no great difficulty in finding a place for it has been thrust upon the provinces, and they have been given time to develop the "education" in agriculture.

While "education" in the broad sense is not education as it is generally understood, the plan takes in the latter, including public schools. As far as school systems are concerned, however, the British North America Act gives the control to our provincial authorities, so, within existing limitations, the Federal Government, through the Minister of Agriculture and Dr. James, have done their share competently and thoroughly.

"The Farmer's Advocate" has long held that there is room for improvement in our public school system. Agricultural needs are not taken very seriously into consideration by the educational authorities and our text books while they contain a great deal of matter of decided merit from a literary viewpoint, tend, with other developments, to promote the military spirit rather than a knowledge of and respect for agriculture.

Part of the new Federal grant was this year used in this Province to pay the salaries and ex-

penses of six field agents of agricultural education—young men, students from the Ontario Agricultural College, who spent the summer months visiting schools, giving short talks of an explanatory nature, embracing instructions in play, addresses to trustees and inspection of Children's Progress Club work. One of these men organized a corn contest and one a Township Teachers' Association, while others carried on township education surveys. The grants are also used to meet expenses of inspectors at short courses, public and high school teachers' travelling expenses to the summer school at Guelph, exhibits at fairs, special publications, etc. All this may and no doubt does help some, but one hour spent in talking to a teacher or a class or a school-room of pupils cannot do any great amount of lasting good. The best-informed and clear-thinking teacher in the world could not hope in so short a time to accomplish very much. The crux of the matter is in the regular teacher training. Ontario has her summer school for teachers at the agricultural college, and her nature study courses for normal trained teachers,—where a little is learned and a good time enjoyed, and from which a few go away enthusiastic over the possibilities of training the young mind to appreciate nature and things agricultural—but lacks effective teacher training in the real ground work. Educationists have recognized the need of this training, but trying to accomplish it as the teacher labors in the public school cannot bring desired results. If there is such a need, and there is, why not use some of the grant to work out a thoroughly reliable system of teacher training in agriculture? Perhaps fewer bulletins and a little more actual instruction in the Normal Schools would help. A good deal depends upon the attitude of the educational "powers that be." One thing is sure, that the public is about surfeited with bulletins and superficial agricultural work in connection with rural schools. One of the really good things for the youth has been the school fair work carried on by the District Representatives of the Ontario Department of Agriculture where the plots are grown at home and planned, planted, cared for and harvested by the pupils. Overlapping of Departmental work has already been complained of. There is no use of the Educational Department attempting something that the Agricultural Department has accomplished, but they would be in their own field if they planned a re-adjustment of curricula and inserted little more pertaining to agriculture in the text books, and in their regular teacher-training courses.

The Good Farmer Succeeds.

Director J. H. Grisdale, of the Dominion Experimental Farm, in his comprehensive review of the farmer's year in Canada in the Christmas Farmer's Advocate and Home Magazine, made the suggestive comment regarding one of the provinces that the good farmer has had a good year. There is food for thought in Mr. Grisdale's observation. Why should he not have a good year? As a matter of equity or fairness, the good farmer may reasonably look for good returns from his season's operations. We expect that he will, and we are seldom disappointed. A combination of sound theory and practice usually works out that way. It does so in other pursuits, and it would be an extraordinary upsetting of nature's procedure if in farming things all

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED WEEKLY BY
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Agents for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers of any publication in Canada.
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went awry. And even if by reason of what are called mishaps to the farmer or the family or from the visitations of drought, wet or storm he suffers reverses, these are usually less severe in final result than in case of the shiftless, ill-informed man, and in nine cases out of ten the good farmer bears his losses with greater composure and fortitude. He is also more likely to recover quickly from a setback. His resources of will and spirit are greater for he is able to rest upon the bed-rock assurance that time is on his side, and that the forces for weal are greater than the forces for ill. As in righteousness, so in farming he that endures will be saved.

Why Fewer Pigs are Produced.

There are many reasons advanced for the decrease in numbers of hogs being raised and marketed in many of the pork-producing sections of Canada. Ontario has been the leading province so far as the bacon trade is concerned, and Ontario has showed the greatest falling off in the industry. True, many of the young men have left the farms for city employment, and, true, thousands of the younger men and older ones, too, have sold their farms or left the old homestead in the East for wider fields in the West. And besides there has been of late a growing dislike for certain kinds of labor on the farm, among them being pig feeding and cleaning out hog pens. There should be nothing particularly distasteful or unduly laborious about pig feeding. Pigs are one of the most profitable classes of live stock on the farm. There is, however, another very potent factor in the decrease in pork production. We refer to the changed conditions of Canadian dairying. A few years ago the bulk of the milk was made into cheese and butter, leaving an abundance of skim milk or whey on the farm, both profitable by-products when utilized in making bacon. There has been a great change. Particularly has this been the case with cheese-making, which has fallen off rapidly, the milk going elsewhere. The output of butter is increasing, but not so rapidly as it might were it not for the fact that augmented city populations

have increased the demand for whole milk enormously. Milk condenseries, powder factories and other plants have been insvalled, all of which take the whole milk. The prices for this latter product have gone higher, in consequence of the increased demand, than it was possible to obtain from selling the milk to the cheese or butter factories. Perhaps if the value of all the by-products left on the farm, when cheese and butter are sold, were reckoned, this practice would balance up with the apparently higher returns from selling whole milk. However, the difference in price between that obtained for whole milk for city trade and for the same product to the cheese and butter factory has been sufficient to change the methods of dairying followed on many farms, and where the change has been made it has not been found so profitable to raise pigs in large numbers. There is nothing quite so suitable for young pigs as skim milk, and without it greater skill in feeding is required to make newly-weaned pigs grow rapidly. Perhaps this change has been, more than any other one condition, responsible for the falling off in bacon production. Pigs and milk go well together, and the feeder accustomed to having plenty of milk for his pigs cannot satisfy himself to feed them without it, and there is no question but that he cannot make his operation in the pig business quite so successful without skim milk or whey. If the cities and powder plants continue to get the whole milk we need not look for a very rapid increase of bacon hog rearing.

Good Roads and Good Citizenship.

"Getting the people closer together by enabling them to get in touch with one another, whether on foot or by wagon or by automobile or other means, through satisfactory and well-maintained highways will be a great step toward insuring better citizenship by the betterment of educational, social and economic advantages."

This is the epitome which David F. Houston, Secretary of Agriculture in the United States, applies to the relationship between good roads and good citizenship. Better facilities for education, greater ease of social intercourse, and a saving of thousands in the marketing of crops, all of which good-road systems accomplish must make for a better citizenship. Good roads are a mark of the progress of civilization. The simplifying and perfecting of the various modern means of communication and transportation have advanced very rapidly, but as Secretary Houston points out good roads, perhaps the most important and most beneficial of all, have failed entirely to keep pace with these advancements. The road question is the one transportation question which demands the attention of all the people. It is like the business of the smallest municipality, and even the most indirectly interested individual in that municipality, and the most powerful legislators in the Federal Government.

The question is, which is the best plan, to inaugurate a system of good roads feeding local markets with ample provision made for maintenance or a transcontinental highway or highways touching large cities and towns. "The Farmer's

mediate neighborhood—with a single stretch of roadway running for about four thousand miles without regard to subsidiary highways. This latter sort of road is, I presume, the one generally considered in touring circles, where pleasure more than usefulness, and picturesqueness rather than economic value, seem the first requirements. * * * * * The suggestion of interstate and transcontinental roads connecting capitals and cities of commercial importance appeals to me, but the essential thing to be done is to provide such good roads as will enable us to get products from the community farms to the nearest railroad stations and make rural life more profitable, comfortable and pleasurable. Such roads are equally essential to the establishment and operation of adequate elementary and secondary schools for the benefit of the country boys and girls."

How true! a system of good roads in every county leading to the local market centers and railway stations is the foremost consideration. Once these are accomplished there need be no worry about a national system. It will be already a reality. Let the municipalities get busy with the aid of the Provincial and Federal Governments, and lay their plans to cover maintenance as well as construction. There is absolutely no use of spending good money in building roads without ample provision for maintenance. The road question is a very live one in this country just now. In Ontario a commission is busy gathering data concerning the roads in different counties. Thinking men may well apply their powers to road matters. It is a national question as well as a question for each individual.

Federal Aid to Agriculture by Provinces.

In the session of 1911-12 the Honorable Mr. Burrell, Minister of Agriculture, brought down appropriations aggregating \$500,000 to assist the provinces in their agricultural work. This sum was divided according to population, and the grants varied from \$6,530 for Prince Edward Island to \$175,733 for Ontario. The two main conditions laid down were that the provinces were to spend these sums on approved agricultural work, and were to use them to supplement their regular appropriations. No special restrictions were laid down as to the lines of expenditure. It was expressly stated by the Minister that these grants were merely preliminary to a more careful consideration of the situation. After a year's enquiry and consultation it was determined that much valuable and permanent benefit would result if assistance were given along the line of education, interpreting that word along its broadest lines. The bill introduced defines it as "Education, instruction and demonstration." Evidently it was thought that the agricultural industry could be materially helped if instruction along many lines could be provided for or conveyed to the farmer and his family. Schemes or plans of instruction carried out by the provinces should have the element of permanency, therefore, the Minister made provision for grants covering a period of ten years. The grants for 1913-14 total \$700,000 or \$200,000 more than for the previous year. This extra amount is divided as follows: \$20,000 to be divided among the Veterinary Colleges, of which there are now two in Canada, and \$20,000 to each of the nine provinces. Thus, this year each province receives \$20,000 more than it did last year. There is an annual increase of one hundred thousand dollars in the total. The yearly grants work out, therefore, as follows, according to the table in Hon. Mr. Burrell's address:

	1913	Yearly increase.	1917-23
Prince Edward Island	\$ 26,529.85	\$ 1,306	\$ 31,753.73
New Brunswick	44,509.93	4,902	64,117.87
Alberta	46,094.95	5,219	66,970.91
British Columbia	47,334.76	5,467	69,202.57
Manitoba	51,730.05	6,346	77,114.09
Nova Scotia	54,288.45	6,858	81,719.21
Saskatchewan	54,296.29	6,859	81,733.32
Quebec	159,482.40	27,896	271,068.32
Ontario	195,733.32	35,147	336,319.98

Advocate" has always held that this latter form of good road would be an automobile tourists' pleasure path, and not the most necessary and most valuable means of improving the condition of the rural population educationally, socially or economically. Speaking of a transcontinental road Mr. Houston said:

"The value of such a road, of course, cannot be doubted, but we must not confuse a national highway—made up of localized roads which touch at many points throughout the country each a unit of immense economic value to its im-

It may be of interest to our readers to know what the various provincial departments are doing with these grants, and, therefore, we have compiled the following notes, showing how, through the Federal grants to the Provinces, the latter have been enabled to enlarge their operations and undertake new work.

Prince Edward Island.—First of all the Department purchased a hall and fitted it up for the holding of courses in livestock judging, pure seed fairs, and horticultural work. Instead of sending farmers to Nova Scotia, short courses are now provided on the Island, and the atten-

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dance has been away beyond all expectation. Demonstration work is being carried on throughout the province in sheep and poultry husbandry and in horticulture. Courses in agriculture have been established at Prince of Wales College. Women's Institutes have been inaugurated, and provision made for introducing nature study in the public schools.

Nova Scotia.—During the past two years much needed additions have been made to the buildings and equipment of the Maritime Agricultural College, at Truro, and additional instructors have been appointed on the staff. The College has also undertaken a considerable amount of extension work, thereby serving many parts of the province and enlarging the influence of the College. Women's Institutes have been assisted, and summer courses in agriculture for teachers have been conducted. A large amount of demonstration work is being carried on.

New Brunswick.—Two agricultural schools are being established, one at Woodstock and one at Sussex. Special travelling instructors have been appointed. Demonstration trains have been run. A Director of Agricultural instruction for public schools has been appointed, courses for teachers established and school gardens encouraged. Women's Institutes are being organized and courses given in domestic science. Demonstration work, also, is being undertaken along several lines—poultry, beekeeping, dairying and horticulture.

Quebec.—First of all \$20,000 each has been handed over to the three teaching institutions, Macdonald College, Oka, and Ste Anne De La Pocatiere for equipment, additional instructors and extension work. Some assistance is being given to normal schools, for teachers and to domestic science schools. The rest of the grant is being used for demonstration work in poultry, bacon production, fruit growing, apiculture, maple sugar making, crop production, clover and underdrainage. Demonstration trains are provided for. It is also proposed to locate some county or district representatives.

Ontario.—During the past two years the Federal grants have made possible several important additions to the buildings at the Agricultural College at Guelph—field husbandry building, \$50,000; poultry building, \$30,000; apiary building, \$6,000, and some other additions, \$5,500. No less a sum than \$80,000 has been added this year to the regular provincial appropriations of \$83,000 for district representative work. Nearly every line of instruction and demonstration work carried on by the Department has been assisted—underdrainage, short courses, fruit growing, vegetable growing, beekeeping and soil cultivation. Domestic science courses also have been materially assisted. Public school instruction in agriculture is being developed. Fall fairs for rural public schools is a most promising line of work that is being assisted.

Manitoba.—The most elaborate work undertaken here is in connection with demonstration farm work, a very thorough system having been inaugurated to demonstrate the best methods of crop rotation and to encourage the growing of alfalfa—the whole scheme being planned to encourage mixed farming. Travelling instructors are employed, and a special feature is the giving of instruction to the foreign settlers in various districts. Demonstration trains and short courses also are provided for, with the publication of a special series of popular farm bulletins. Farm clubs for boys and girls are assisted.

Saskatchewan.—This Province carries on through its Agricultural College a lot of work that in other provinces is done by the immediate staff of the department. The grant, therefore, is divided, one-half going to the college at Saskatoon, which has added a number of instructors whose work is mainly that of extension or taking instruction to farmers. The departmental officers are using their half of the grant in demonstration work and in giving instruction in dairying, live stock, and weed destruction.

Alberta.—About \$40,000 of the total grant is being used in the maintenance of the three agricultural schools recently opened at Claresholm, Olds and Vermilion. The buildings for these schools were erected at a cost of \$30,000 each. The equipment added \$80,000. Each school is erected at a demonstration farm. The Provincial Department will add equipment and buildings as required, and the Federal grant will be used for maintenance. These schools will be used as centres for extension work. Field husbandry, animal husbandry, farm mechanics and household science are the subjects provided for. The permanent staff is assisted from time to time by provincial officers of the department.

British Columbia.—Instructors in agriculture and short courses are provided for. Women's Institutes are assisted through the organization of courses of instruction. Fruit packing and stock judging competitions are held. Demonstration work is carried on in crop production, dairying and horticulture. School gardens are assisted.

From the foregoing statement it will be seen that the various Provincial Departments are heartily co-operating with Hon. Mr. Burrell in

working out the scheme which he provided for in his bill of last session, and which became operative on the first of April, 1913. It might be mentioned here that the Lever Bill of somewhat similar nature was introduced into the House of Representatives of the United States on April 4th, 1912, was passed on August 23rd, 1912, but has not yet received the assent of the Senate.

Nature's Diary.

By A. B. Klugh, M.A.

In our last article we dealt with the way in which plants secure their raw materials and manufacture them into starch. Starch is a compound which is insoluble in water and consequently has to be changed to some soluble substance in order to be transported to the different parts of the plant. This substance is sugar, which is formed from the starch by the action of chemical agents known as ferments. Part of the sugar may be used in building up the cells of the plant, part of it may act as a "fuel" to be burnt (oxidized) to supply energy, while the rest is carried to the stem or root to be stored, after being reconverted into starch, for future use. We know well enough that we can get sugar from the sap of the sugar maple during the growing season, but where is the sugar during the winter? If we make a chemical test on a twig of sugar maple in spring or summer we can detect sugar, but in the fall and winter we find starch. This formation of sugar from starch is spoken of as digestion.

The work which is done by the plant in building up its tissues is called assimilation. This process goes on in all the living parts of the plant. In assimilation the sugar or starch (both of which substances are termed carbohydrates from the fact that they are composed of carbon and the elements of water) is united with the nitrogen, sulphur and phosphorus to form proteids. The three last named elements are taken in by the roots from solutions of ni-

the appearance of a "wilted" plant, and we know that it may be rendered rigid again by supplying it with plenty of water. Hence one function of water is the maintenance of rigidity or turgidity, as it is termed in plant physiology. To see how water acts in maintaining turgidity we have only to take a rubber tube, which, when empty, is quite "flabby," tie one end, attach it to the tap and turn on the water. The tube will then be comparatively firm and rigid.

Plants in taking up salts from the soil absorb more than they need for the manufacture of proteids, and also take up some salts which are of no service to them. When the water, in which these salts have been carried up to the leaves, is given off through the stomata the salts are left behind. This is why a bonfire of leaves makes such a surprisingly large heap of ashes. An abundant constituent of burnt leaves in silica, a substance chemically the same as sand. This the plant is forced to absorb along with the potash, compounds of phosphorus, and other useful substances found in the soil water, but since silica is of hardly any value to most plants, it is accumulated in the leaf as so much refuse. Lime is much more useful to the plant than silica, but a far larger quantity of it is absorbed than is needed, hence it, too, accumulates in the leaf. We see then that when a dead leaf falls to the ground it carries with it the waste material of the tree, and the leaves thus play a part, in quite a different way, it is true, but the same part nevertheless as the kidneys of animals.

THE HORSE.

Evolving the Exmoor Pony.

Editor "The Farmer's Advocate":

Exmoor once possessed what was, for quite a long time, thought to be a spectral horse. This was none other than Katerfelto, an animal of some fourteen hands, which roamed the moors,

and no one knew from whence he came. He was seen, as were the Doones in Ridd's day, but could never be caught. Many an expedition to seize him failed, until one real organized effort was made, about a hundred years ago, to secure him. Ere he yielded up his freedom, Katerfelto made a leap, called extraordinary in those days, and still spoken of as "Katerfelto's leap." He was captured, after this last mighty effort to retain freedom, by an ancestor of the Froude family at East Anstey.

He was a dun with a black "bit" down his back, and he presented all the appearances of a blood-like stallion, being, to present-day ways of thinking, extremely like the small Thoroughbred to the Polo-bred stallion. Some would call him a Galloway—meaning, of course, the racing pony called by that name to-day.

The story which has gone down to history regarding him was that he belonged to a political offender, or an outlaw, who rode him from up the country to Porlock, and escaped by sea to foreign parts. But one thing is certain—for well nigh three years Katerfelto was running free and wild with the ponies of Exmoor, and his influence upon the mares must have been a considerable one. Much of the present-day blood can be traced to him.

There have been many tales told of this once spectral steeple-chaser, and "The Druid" believed that Katerfelto's dam, stolen by some gipsies, proved in foal to an Arab stallion; but the version recorded herein was given by the late Froude Bellew to the late George S. Lowe, who made such a special study of horse and pony lore.

The evolution of the Exmoor pony also reads like a romance. Sir Thomas Ackland and John Knight were the actual pioneer breeders of the type upon a large scale. The 12-hands pony came from their mares as regularly as clockwork. They fell chiefly as buff-bays or browns, and many of them had mealy mouths, but there were a few chestnuts and greys. The fame of the pony spread far, and once all London was talking of these Exmoors.



A Drafter and His Load.

One of the six-horse team of drafters belonging to the Union Stock-yards Co., Chicago, Ill.

trates, sulphates and phosphates in the soil. The proteids are most highly complex substances, and protoplasm, the living matter itself of both plants and animals is a proteid.

A plant in taking in water with the dissolved salts in it takes in a good deal more than is needed for the manufacture of carbohydrates. This excess is given off through the stomata, and the process is termed transpiration. The function of the guard-cells of the stomata is to regulate transpiration. When the plant has an excess of water the guard-cells stand wide apart at their centers, thus allowing the water to pass off in the form of water-vapor. When there is no excess of water the guard-cells are closed. The amount of water transpired by the plants is large. During 173 days of growth a corn plant has been found to give off nearly 31 pounds of water. In 140 days a sunflower plant gave off 145 pounds. A grass-plant gives off its own weight of water every twenty-four hours in hot summer weather. This would mean that about six and a half tons of water would be given off from an acre of meadow in twenty-four hours. A birch tree, standing in open ground, was found to transpire from seven to nine hundred pounds in a hot day.

We have referred to the use of water in the formation of carbohydrates and as a solvent for salts, but it has another very important function in the plant. We are all familiar with

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At a cost of £1,000 some Dongola stallions—an Arab standing close on sixteen hands—were imported and there was one good hunter, at least out of an Exmoor pony mare by one of these desert-born stallions, but it cannot be said that the Dongola venture was a great success.

The pack-horse was also crossed on the Exmoor, but in the end the Knight family became convinced that there was nothing like the Thoroughbred for a strengthening or renovating cross upon the pony stock, and the better the racing blood the more gratifying were the results. Such great racing stallions as Pandarus by Whalebone, Quicksilver by Velocipede, and Old Port by Sir Hercules were used in the middle of the "thirties." Thirty years later a son of The Baron—to wit, Don Jon—was used upon the Knight ponies, and he got from a local mare a stallion, John Trot, which became famous far and wide, and was a great favorite of Sir Frederick Knight.

The late G. S. Lowe stood convinced that the Knight ponies did a lot of good to the general breeding stock of North Devon horses. The half or quarter-bred ponies produced the very best of hunters when mated back to the Thoroughbred again.

By 1890 Sir Frederick Knight had got his ponies to a level standard of 13 hands one inch, and to-day Polo pony breeders have a source in the Exmoor breed from which an almost unlimited number of mares can be obtained to raise playing ponies from, either with the aid of the Polo-bred stallion or the small Thoroughbred.

Those who care to investigate the history of the pony must be struck with the wonderful part which that type of little horse has played in the production of ideal mounts, be they for the hunting field, for Hyde Park, or for army purposes. The Thoroughbred horse owes much to our many breeds of ponies, and, in turn, these latter must pay just as much tribute to the Thoroughbred for its manifold renovations or infusions of blood. Time and again did West Country pony-raisers go to the English Thoroughbred when they required added size and substance. The resulting offspring, mated to a Thoroughbred once more, invariably produced the type of horse which we now thoroughly believe will be the future war horse of Great Britain.

London, Eng.

G. T. BURROWS.

LIVE STOCK.

Some Startling Figures on Live Stock Exportation.

The removal of the tariff on live stock going into the United States from Canada has been the subject of much discussion recently. Even before the new tariff laws took effect on October 4th thousands of head of Canadian cattle journeyed to United States market centers. While more cattle than other classes of stock went across the line, the official figures show also an increase in the exports of sheep and horses. We obtained from the Customs Department at Ottawa the figures for August, September, October and November, 1912, and for the same months this season. During these four months in 1912, 753 horses, valued at \$219,427, went from Canada to the United States, and during the same months this year, 1,270 horses, valued at \$346,450, or 517 head of an increase, valued at \$127,023, were exported from Canada to that country.

In sheep, the figures also show an increase in export for 1913. For the four months in 1912, 10,279 sheep, valued at \$55,526, crossed the border; while for the same period in 1913, 14,179 sheep, valued at \$78,001, were exported to the United States, showing an increase of 3,900 head and an increase in value of \$22,475.

As would be expected, cattle show by far the greatest increase. In 1912, from August 1st to November 30th, 12,950 cattle, valued at \$655,999, went from here to the American markets, while in the same months this year 167,225 head, valued at \$5,402,713, was the number exported by Canada to our cousins to the south, being an increase for four months alone, and during only two of which the new tariff was operating, of 154,275 animals and a difference in value of \$4,736,714. In October, 1912, the value of cattle exported to the United States was \$269,682, while for the same month, 1913, the value was \$1,877,242. The trade is increasing, for in November, 1913, \$2,929,157 worth of cattle went south, as against \$316,473 for the same month last year. The big increases are all during the two months since the new tariff came into effect. These figures are, to say the least, startling. An idea of the effect the new tariff is exerting on the supplies of live stock in this country is vividly depicted. What of the future? There is not enough stock in Canada to maintain this very long and supply our own markets. During last November \$3,077,521 worth of horses, cattle and sheep left Canada for United States markets, and nearly \$3,000,000 of this money was paid for cattle. This has meant a

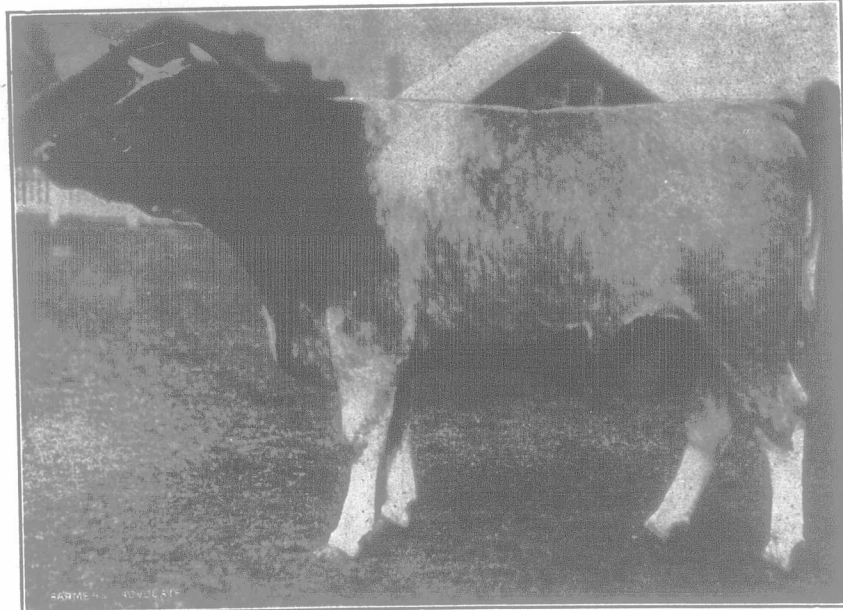
great deal to the stock feeders of this country, but a note of caution is sounded in these figures. The man who sells off too much stock will not be prepared to reap the rich rewards next year and during following years. Study the figures in the following table:

EXPORTS TO UNITED STATES.

	1912.		1913.	
	No.	Value.	No.	Value.
August	214	\$ 59,660	233	\$ 73,275
September ..	240	70,343	340	91,862
October	165	57,852	295	79,742
November ...	134	31,572	402	101,571
Total	758	\$219,427	1,270	\$ 346,450
	Sheep.			
August	417	\$ 7,353	356	\$ 4,587
September ..	1,023	7,237	747	8,311
October	2,973	13,756	4,650	24,310
November ...	5,866	27,180	8,426	40,793
Total	10,279	\$ 55,526	14,179	\$ 78,001
	Cattle.			
August	653	\$ 28,750	7,807	\$ 157,619
September ..	533	31,094	24,725	438,695
October	5,142	269,682	58,650	1,877,242
November ...	6,622	316,473	76,043	2,929,157
Total	12,950	\$655,999	167,225	\$5,402,713

Toronto Junction Fat Stock Show.

From a moderate beginning in December, 1910, the Toronto Fat Stock Show, held at the Union Stock Yards, West Toronto, has in the short space of four years developed into a large and exclusive stock show, and in number of en-



The Grand Champion.

This steer, owned by Jas. Leask & Sons, Greenbank, Ont., was grand champion at the recent Toronto Junction Fat-stock Show, and sold for 30c. per lb.

tries and quality of stock shown it compares favorably with any other show of the kind held in the Dominion. At the late show, held on December 6th and 8th, there was a total entry of 944 cattle, 1,561 sheep and 627 swine, many of them representing a finished product of a quality fit to compete in any showing in the world. In fact, Mr. Ferguson, of the Swift Co., who had just returned from the International at Chicago, said the majority of the individual classes, showed a decidedly better balance and more uniformity than the same classes at Chicago, and of the sheep exhibit, H. S. Arkell, Assistant Live Stock Commissioner, Ottawa, who had also just returned from Chicago, said they were fully equal in fitting and quality to the Chicago entries, and it was expressed to the writer by the Stock Yards management that, in their opinion, the day had come when in the best interests of the live-stock breeders of the country, instead of the several fat stock shows as held at present, the launching of one monster national show would eclipse anything of the kind held in the world and would demonstrate to the world the superiority of Canada as a live-stock breeding ground of a perfection not reached in any other country.

Of the individual cattle classes, there was a total entry of 234, fifty-two of which were pure-breds. The judges in these classes were Charles McCurdy, Toronto; W. R. Elliott, Guelph, and J. M. McCallum, Shakespeare. The championship in the pure-bred classes was won by the entry of A. Barber, of Guelph, and in the grade classes by Roan Champion, last fall's champion at the Canadian National. Here he was declared

the winner over John Lowe's Black Monarch, which, at the late National Show at Toronto, was given the championship honors, a complete reversal of judgment, and opinions were divided as to which judgment was right. Roan Champion was bred and fitted by James Leask & Son, of Greenbank, and at this show in the final grand champion over all was given the decision over Barber's pure-bred, and netted his owners the neat little sum of \$120.00 in cash and a \$25.00 gold medal.

In the carload lots, the awards were made by B. Slattery, Ottawa; G. H. Walker and Alex. Levack, Toronto. For carload of 15 steers 1,200 pounds and over there was an entry of twenty; for carload of 15 steers under 1,200 pounds there were eight entries; for carload of 15 heifers fourteen entries. The Harris Abattoir special of \$500.00 for carload of 15 steers under 1,300 pounds, without horns, was won by J. D. Larkin, of Queenston, on an entry of Aberdeen-Angus, and the same lot won the \$150.00 offered for best carload of 15 steers under 1,200 pounds. The \$150.00 offered for carload of 15 steers 1,200 pounds and over was taken by J. Brown & Sons, Galt, and the \$100.00 offered by Gunns Limited for carload of 15 butcher heifers 1,100 pounds and under was won by A. White, Guelph. The Swift Canadian Company special of \$100.00 for 20 breeders' steers or heifers under 1,150 pounds, without horns, was won by J. Brown, Galt. The Matthew-Laing special of \$50.00 for 10 steers without horns, under 1,300 pounds, was won by A. A. Armstrong, Fergus, and a special of \$100.00 for 15 heifers, average weight, was won by M. Thompson, Chesley.

In the sheep sections, the judges were Fred. Arkell, A. S. Chapelle and Josh. Ingham. For a carload of 50 fat sheep, the \$40.00 offered went to John Houston, Chatham, and second money of \$20.00 to John Black, Fergus. Carload of 50 lambs, wethers or ewes, the Swift Canadian special of \$75.00 went to A. White, Guelph. In the short-wool classes, the carload of 50 fat sheep went to John Houston, Chatham, and the carload of 50 lambs, wethers or ewes, went to D. Hanley, Cainsville—the prizes same as above.

The judges in the swine division were C. G. Vanstone, R. Carter and W. J. Johnstone. Gunns Limited special of \$100.00 for carload of 50 bacon hogs, 180 to 220 pounds, went to Merrick & Graham, Sunderland. The Swift Canadian special of \$75.00 for carload of 50 bacon hogs, 200 to 240 pounds, went to James Main, Hagersville. Carload of 50 bacon hogs, 180 to 225 pounds, first prize of \$50.00 went to Merrick & Graham, Sunderland, second of \$30.00 to S. & J. Hisey, Creemore, and third of \$20.00 to John Black, Fergus.

Among other winners in the cattle classes were W. O. Coon, Penville; Jas. Stone, Saintfield; David Smith, Carlisle; R. F. Duncan, Ancaster; Alex. Young, Glanford, and Kyle Bros., Drumbo.

Pigs that Paid.

Editor "The Farmer's Advocate":

I herewith send you a statement of profits from a bunch of pigs I fed the past summer. I had 15 pigs at first, but two died when weighing about 100 lbs. each. I fed cooked beans and oat and barley chop as well as shorts. The pigs ran outside most of the time until near the end of the feeding period. The beans were only poor quality, not having kept well. However, here is a statement of expenses:

2,900 lbs. shorts at \$23 per ton	\$21.80
70 bushels of oats at 35c. per bushel	24.50
26 bushels barley at 50c. per bushel	13.00
46 bushels of beans at 50c. per bushel ...	23.00
Total	\$82.30

The twelve pigs weighed 2,590 lbs. and at \$8.35 brought \$216.25. One pig was butchered valued at \$18, making a total of \$234.25, leaving a profit of \$151.95, or \$11.68 per head.

Elgin Co., Ont.

ROBT. CAMPBELL.

Editor "The

The pair treated here & Sons, M grand bull herd. Who weighed at speaks well steers were Christmas some three were fed p pion steer the start were fed w clean. A molasses with all t a short t ten quart increased These cal time they pulped t covered u Middle

Artific

By B. I. "The and, by it with central f hangs un sails th between for him into his The thus ref average the ear layer, the far- vided th the val needs of able sul phosph of to-d ductivit ing dem

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What Feed Care will do.

Editor "The Farmer's Advocate":

The pair of pure-bred Shorthorn calves illustrated herewith were bred and fed by R. H. Scott & Sons, Middlesex Co., Ont., and sired by the grand bull Roan Baron now in use in the herd. When sold they were under a year old and weighed about one thousand pounds each, which speaks well for the breeding and feeding. The steers were sold to a London butcher for the Christmas market at \$80.00 each; the price of some three-year-olds. This pair of baby beefers were fed principally the same feed as the champion steer at the Chicago Fat Stock Show. At the start they were nursed by their dams, and were fed what ground up oats they would eat up clean. At three months old they were fed molasses meal in addition to the ground oats, with all the alfalfa hay they would eat. After a short time barley and oats were fed, one of barley to three of oats and at the rate of about ten quarts each per day, and the molasses meal increased to about three pounds each per day. These calves never refused their feed once all the time they were feeding. They also got a few pulped turnips and clover hay, as the alfalfa is covered up at present.

R. H. SCOTT.

THE FARM.

Artificial Fertilizers Their Nature and Use III.

By B. Leslie Emslie C. D. A., P. A. S. I., F. C. S.

"The simple husbandman can till his field and, by knowledge he has gained of its soil, sow it with the fit grain, though the deep rocks and central fires are unknown to him—his little crop hangs under and over the firmament of stars, and sails through whole untracked celestial spaces, between Aries and Libra; nevertheless it ripens for him in due season, and he gathers it safe into his barn."

The "simple husbandman," to whom Carlyle thus refers, hardly finds a counterpart in the average farmer of to-day, whose knowledge of the earth's crust extends beyond the superficial layer, which his plow upturns. He knows that the far-seeing Providence, whose solicitude provided the increasing population of the earth with the valuable coal measures, also anticipated the needs of agriculture in storing up those remarkable subterranean deposits of nitrate of soda, phosphate rock and potash salts, the discovery of which, in due season, has furnished the farmer of to-day with the means of increasing the productivity of his soil, to meet the world's growing demand for food.

NITROGEN.

The atmosphere contains about 78 per cent. of nitrogen, 21 per cent. of oxygen, one-third of one per cent. of carbon dioxide and traces of other gases. The fact that plants derive their supply of carbon from the carbon dioxide of the air, has already been noted, but the power of assimilating the valuable nitrogen, existing there in such abundant volume, seems to be confined to one special order of plants (leguminosae), known as legumes, embracing clovers, alfalfa, peas, beans, etc. Since nitrogen is the most expensive element in a fertilizer, the fact that legumes can avail themselves of the atmospheric nitrogen is of paramount importance to the farmer. Its importance prohibits here the discussion, which it merits, so we shall deal with it later.

FERTILIZERS EMPLOYED AS A SOURCE OF NITROGEN.

Nitrate of soda (15 to 16 per cent. nitrogen)—Nitrate of soda, which has its origin in the rainless districts on the western coast of South America, is still the most popular source of nitrogen. The crude material, known as "caliche," occurs in close proximity to the surface and, as no shaft-sinking is necessary, mining operations present few difficulties, the salt-bed being simply loosened by charges of dynamite, inserted in the vertical bore-holes.

We are not particularly concerned with the manner in which these deposits have been formed, but the most acceptable theory seems to be that the nitrate beds were laid down by the oxidised drainage from decaying seaweed. The proportion of nitrate in the caliche varies from 30 to 50 per cent. and by processes of concentration and recrystallization the commercial product of about 95 per cent. purity is obtained.

Since all nitrogenous compounds must first be converted into nitrates, before being assimilated by plants, nitrate of soda contains its nitrogen in a very available form and is, therefore, rapid in action. Owing to this fact, care must be taken in its application so as to avoid loss by leaching, especially in moist climates and on the lighter class of soils. In general it ought not to be applied before seeding time, and, under certain conditions, it is advisable to apply it in two or more applications at intervals of from two to three weeks.

Some authorities claim that the continued use of nitrate of soda on heavy clay soils destroys their texture and makes them sticky, while others hold that, on the contrary, such soils are rendered more friable thereby. The writer is of the opinion that with the moderate applications of nitrate of soda, used in general farm practice, no such effects, either beneficial or detrimental, are noticeable.

On account of the very quick and noticeable results, which follow the application of nitrate of soda to a growing crop, some are tempted to use large amounts of nitrate and to neglect the supply of the other ingredients, which are essential to the proper development of the plant.

SULPHATE OF AMMONIA. (19 to 21 per cent. Nitrogen).—The origin or source of this material

compounds by means of electrical energy. Their efforts have already been rewarded with a large measure of success for not only has the feasibility of the process been demonstrated, but several nitrogenous fertilizers, thus produced, have, during recent years, been offered on the market, the price per pound of nitrogen in the same being similar to that in nitrate of soda.

The subject of artificial fixation of nitrogen is of more than ordinary interest to us in Canada, possessing as we do such vast resources of water power, available for conversion into electricity. Gibbon, the historian, said that "the servitude of rivers is one of the most important victories that man has gained over the licentiousness of nature," and in the light of our present knowledge, how much more complete the conquest appears.

LIME NITROGEN

OR CYANAMID (20 to 22 per cent. Nitrogen).

—This material, also known in Germany as kalk-stickstoff, is a cyanamid of lime, i.e., a compound of lime, carbon and nitrogen, and presents the first economically successful attempt to combine the atmospheric nitrogen for fertilizer purposes. The process, which was devised by Prof. Frank, of Berlin, may be briefly stated as follows: Air is conducted over heated copper filings; the copper forms a compound with the oxygen of the air, and the nitrogen passes

into an electric furnace containing lime and carbon compounds. At a temperature of nearly one thousand degrees centigrade the nitrogen is induced to combine with the lime and carbon to form cyanamid of lime. Plants for the manufacture of this material are in operation in Germany, Italy, France, Norway and Switzerland, besides one at Niagara Falls, which produces the same substance under the trade name of "cyanamid." It has been claimed that the cyanamid produced here has more of a crystalline structure and does not possess some of the objectionable features, associated with the original lime nitrogen. Some years ago, then in Germany, the writer conducted experiments with the then new lime nitrogen to test its efficacy in comparison with nitrate of soda and sulphate of ammonia. The results obtained indicated

that under suitable conditions lime nitrogen would prove a profitable nitrogen fertilizer, although not quite equal to the others used in the test. Lime nitrogen is an exceedingly fine black powder, even finer than basic slag, which it somewhat resembles; this characteristic renders it difficult of application. If mixed in large quantities with other fertilizers, such as acid phosphate, the mixture rapidly generates a great heat and gases are given off, some nitrogen being lost as ammonia and oxides of nitrogen. In storing, it must be very carefully protected from moisture for this reason. Being at first rather poisonous to plants lime nitrogen is totally unsuited to a growing crop, and should always be applied to the land at least two weeks before seeding; and at once cultivated in.

Fertilizer manufacturers find it impracticable to use more than 80 to 100 pounds of nitrogen or cyanamid per ton to complete fertilizer mixture, and have to employ some other source of nitrogen to supply the required balance.

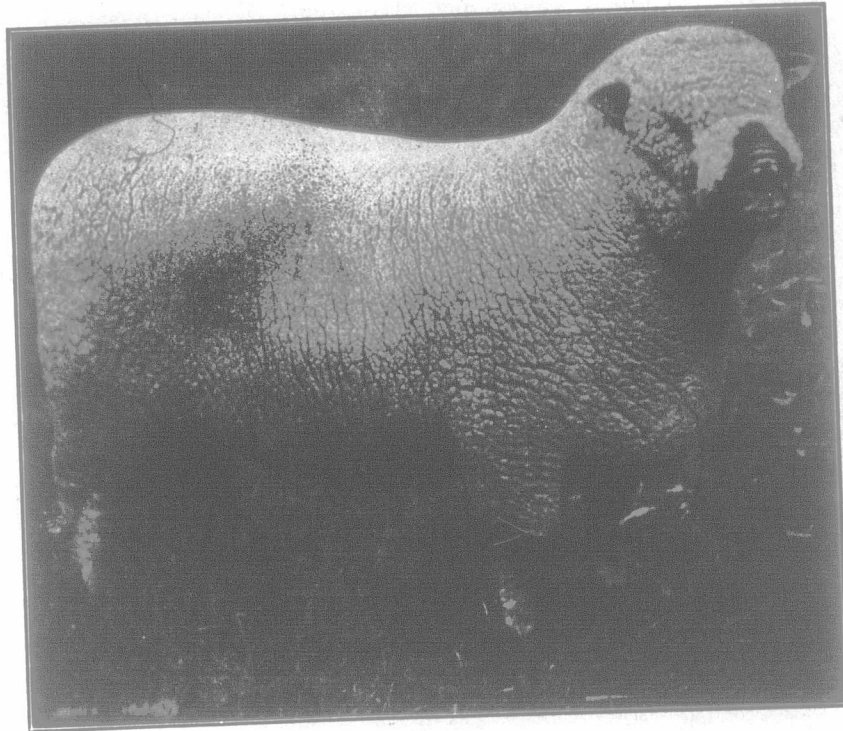
NITRATE OF LIME. (13 per cent. nitrate).—This material is also the product of the fixation of atmospheric nitrogen, but the process is different to that employed in the manufacture of lime nitrogen. One operation consists in passing a current of air through iron tubes containing enormous electric arcs, furnishing a temperature of about 3,000 degrees C., which brings about a union of the nitrogen and oxygen of the



Two Baby Beeves.

Fed by R. H. Scott & Sons, Middlesex Co., Ont., and sold at eleven months of age for more money than many three-year-olds bring.

is coal, which contains one and one-half to two per cent. of nitrogen. It is chiefly a by-product of gas works and is produced to a large extent in Europe, where it ranks next in importance to nitrate of soda as a nitrogenous fertilizer. Although less rapid in action than the latter, sulphate of ammonia is by no means slow-acting. Before becoming available to plants, the ammonia is first of all converted into a nitrate, chiefly nitrate of lime, by soil bacteria. In well-aerated, warm soils where nitrification is rapid, sulphate of ammonia may be said to be almost immediately available. The nitric acid which is formed from the ammonia in the process of conversion requires lime to form the nitrate. The sulphate or sulphuric acid part of the sulphate of ammonia also combines with lime and, in the form of sulphate of lime, passes off in the drain-



Shropshire Shearling Ram.

First in his class at the Royal, 1918.

age from the top soil. It follows, therefore, that sulphate of ammonia ought only to be supplied to soils known to contain a sufficient supply of lime. This being provided, sulphate of ammonia may be preferred to nitrate of soda on soils of loose texture, particularly in moist climates or wet seasons.

ARTIFICIAL FIXATION OF ATMOSPHERIC NITROGEN.—Owing to the increasing demand for nitrogenous fertilizers, such as nitrate of soda and sulphate of ammonia, and in view of their rather limited supply, scientists have for years been devoting their attention to the fascinating problem of capturing the free nitrogen of the atmosphere and combining it in stable chemical

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CAMPBELL.

air. The mixture of gases is quickly cooled to avoid decomposition and then passed into an oxidising chamber, the dioxide being then converted into the tetroxide of nitrogen. As an absorbent slaked lime is used, resulting in the formation of nitrate of lime. The first attempt to apply this method on a large scale was made by Bradley and Lovejoy at Niagara. By using soda as a base, nitrate of soda was formed, but owing to difficulties in the operation of the plant the enterprise was not financially successful. The first mentioned process, which was based on that employed by Bradley and Lovejoy, is known as the Berkeland and Eyde process, and is in operation at Notodden and Telemarken in Norway. At Telemarken it is estimated that 220,000 horsepower will be available for the generation of electric energy. As in the case of lime nitrogen or cyanamid, nitrate of lime must be protected from wet, but the latter material is also hydroscopic in character, i. e., it draws moisture from the surrounding atmosphere. To offset this tendency quick lime is sometimes added to the material to keep it in a dry condition, and probably satisfactory means will yet be discovered to remove many of the detrimental features, which these new nitrogenous fertilizers possess. (To be continued.)

HORTICULTURE.

Fruit Growing Possibilities in the North.

Editor "The Farmer's Advocate":

The planting out of 75 acres of apple trees on St. Joseph's Island, near the Soo, has considerably widened the fruit belt of Ontario. The northern limit of commercial-apple growing has been set as the territory around the southern shore of Georgian Bay or possibly a little further north. But extending the area for the successful growing of fruit to the district around the Soo has not been undertaken without careful consideration of the results of experimental planting, which has been carried on by some able and enthusiastic men of that vicinity. In following up the experimental work, I was employed by the experimental board to make what observations I could as to the possibility for fruit growing in Northern Ontario. These observations resulted in the following conclusions: Winter injury is responsible for the majority of the unsuccessful plantings and is of no consequence on trees of the hardier varieties which had not previously been injured. Making use of the methods of prevention for the various forms of winter injury has been followed by excellent results. Borers and mice have been quite effective in their efforts to keep the fruit belt within its previously mentioned limits and it seems there is yet to be discovered some satisfactory means for their control. Recently a nursery has been started on the Island and this should prove of great value in increasing the longevity and hardiness of the trees. The trees do not grow to the size of those in Southern Ontario. For this reason, as well as for the added protection, closer planting can be followed.

St. Joseph's and Manitoulin Islands stand apart from the other sections in the variety of fruits that can be successfully grown. They not only thrive under domestic conditions in which the trees are carefully coddled, but also when given the more general care of the commercial orchard. The 75 acres previously mentioned were planted last spring to McIntosh, Duchess, Dudley, Wealthy and crabapple. Several acres were interplanted with gooseberries and currants. This comparatively large planting has been undertaken by two companies operating from the Soo. It was carried out only after careful investigation of the orchards in bearing which were proving the adaptability of several varieties to the Island conditions. In the selection of of the lighter soils, killing back was found to be very much lessened. The sandy soils dry out more quickly than the clay and check a late, sappy growth. Protection is the word to be given the greatest consideration in prevention of winter injury in its many forms. As a protection against sunscald, the northerly slope increases in virtue as one goes north. The much commented on windbreak has certainly proved a valuable weapon in the fight against winter injury and has established itself as a necessary feature of the orchard. The cold, dry wind of the north is the most serious agent in the evaporation of moisture from the trunk and branches. The variety question is the solution to many of the winter injury problems and much credit is due Chas. Young, of Richard's Landing, for the work he has undertaken in the testing of varieties. Those of special merit are McIntosh, Duchess, Hibernial, Dudley, and Martha, Whitney and Hyslop crabapples.

In each of the five northern districts there were generally one or two men who were successfully growing the small fruits. The prices received for fresh fruits in the North is a surprise

to those accustomed to Southern prices. When one considers the demand and high prices for these it is remarkable how few there are who have barely enough to supply themselves much less the local trade. Any of the commercial varieties of gooseberries and currants will succeed admirably in Northern Ontario. Strawberries, while being more widely planted, often rewarded the grower with a poor crop. Usually this was brought about by neglect in the selection of varieties and again by lack of protection during the winter. This again illustrates how few people give consideration to a change of conditions and the means at their hands to remedy the situation. A late strawberry, as a rule, can be depended upon as hardy, for it is in the freezing of the blossom that the fruit suffers most from frost. Beder Wood, Parsons and Haverland varieties were found satisfactory in a variety of conditions. Protection may be had by the use of straw manure in the locations where the snow does not lie in winter. Some very interesting developments in the use of sunbreaks were noticed in connection with the red raspberries. It is doubtful if this fruit can be grown commercially north of St. Joseph's Island as it was only seen to produce fruit in well-protected and closed-in gardens. In the open it would invariably freeze back to the ground except in very favorable seasons. In several cases, when the patch was situated on the north of shelter, whether on the fringe of bush or buildings, the plants close to protection showed least signs of injury, while those further out evidenced very clearly the ill effects of the strong spring sun.

A man might be easily duped into believing that raspberries could be grown without protection because of the variance of the seasons, as some are much more favorable than others. Concerning varieties of raspberries, it would be impossible from information gathered this past season to form any accurate opinion. The observations were so contradictory. The Columbian raspberry, a variety stated by Mr. Macoun, of the Central Experimental Farm, to be subject to winter killing, was the only raspberry which I found to be uniformly hardy over the entire territory. People would say that they had tried other varieties time and again without success. Of course, the killing of the other varieties may have been accidental, thus making the statement of little value. At least, whatever variety is preferred, the protection derived from a sunbreak will be largely influential in determining a successive crop of fruit.

It was my privilege while travelling through this country to observe some of the worst cases of winter injury and it would have been impossible not to have formed some impressions as to causes and prevention. Besides, what I have said as to the influence of sunbreaks, windbreaks, soils, aspect and elevation in minimizing the extent of winter injury, the fact that apples are being produced in Manitoulin proves to us that much of the injury found in lower Ontario might be largely overcome by observing a little care in a few of the above points. Trees are producing

fruit in Manitoulin without a trunk and with very little pruning other than that will make a more compact form. The rows are interplanted with deciduous and evergreen trees, showing that considerable advantage is derived from shading and checking of evaporation. Thus, while a few years ago people did not consider that fruit could be grown in the north, it is now being demonstrated that it is not the extreme cold that hinders production of fruit as much as inattention to the means at hand for combating the many forms of winter injury. G. J. CULHAM, Lambton Co., Ont.

THE APIARY.

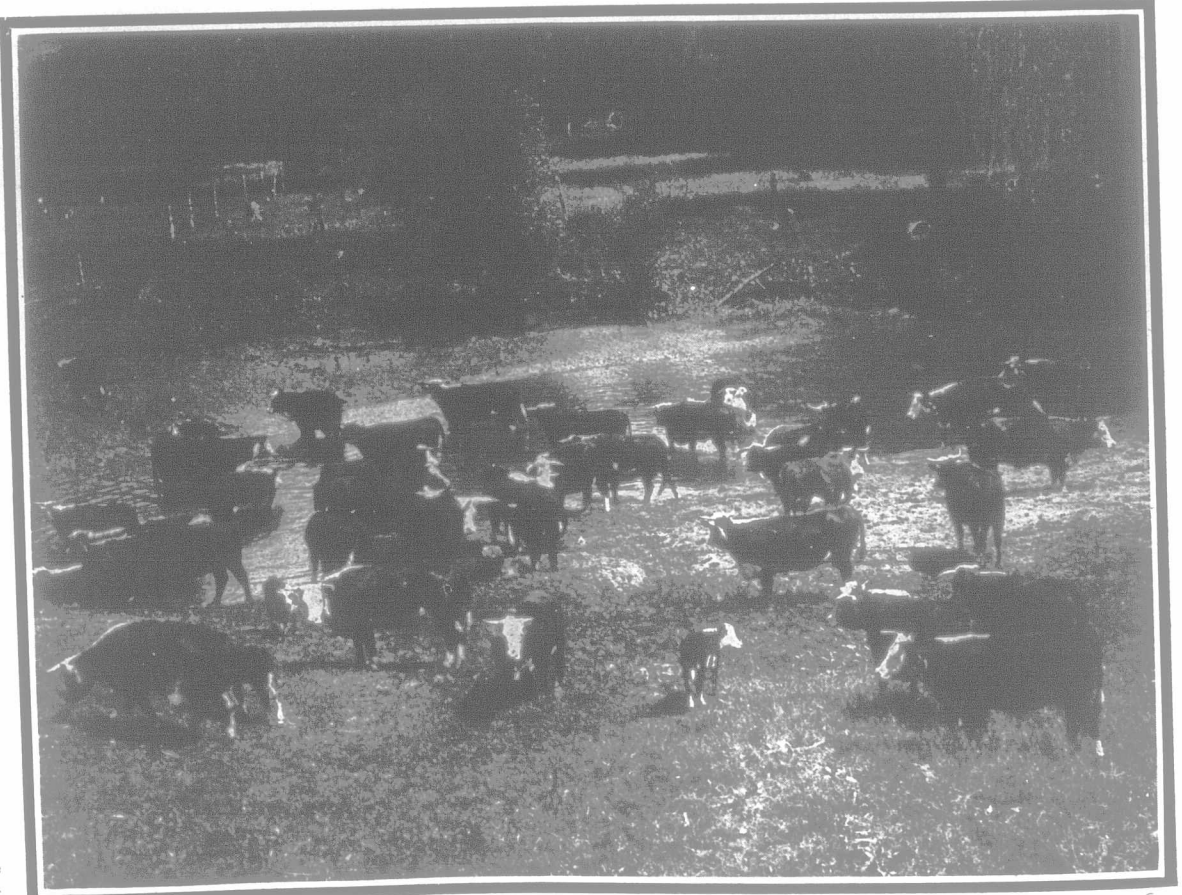
Bee-keeping, Intensive Agriculture

When it comes right down to real intensive agriculture beekeeping wins in a walk. The profits from an acre or two of land, often poor land at that, are frequently enormous, it requiring four figures to express them. The beekeeper may get a stinger or two thrust through his epidermis, but the man who understands the business thoroughly, embarks upon it on a small scale at first, learns it and grows up with it, seldom is "stung" as applied to the financial end of the business. A commencement may be made on a very small capital—a few colonies costing only a trifling sum. The outlay for land is small, and no costly stables are required, most beekeepers, with a little extra precaution, wintering their bees outside. It costs little to operate the apiary, no extra labor being needed most of the year. The bees feed over wide areas and the raw material is thus the cheapest on earth, and to the man who enjoys leisure beekeeping offers great opportunities, for only during four or five months of the year is it necessary to work hard; however during the summer season in large apiaries everyone must be up and doing. There will be swarms galore unless swarming is controlled by giving the bees plenty of room in the spring to raise brood and putting supers on early and also queen cells should be cut out. It is absolutely necessary that the beekeeper knows the condition of every colony just as well as the stockman knows the condition of each individual animal in his stalls. Bees soon get to know the person who cares for them and rarely is it that a judicious apiarist gets into an argument with his insect moneymakers, the best and steadiest workers in the world. They may have "hot feet" but they turn in the "cold cash." There is a growing market for honey, one of the wholesomest products of the farm. Keep bees.

Clean, Wholesome, Effective.

Enclosed please find order for my renewal to "The Farmer's Advocate and Home Magazine" and a new subscription with compliments of the season and best wishes for success of the paper. Your clean, wholesome and effective advocacy of all questions of interest to farmers is of great value.

Jacques Cartier Co., Quebec. J. NEWTON.



Herefords, the Great White-faced Grazers.

THE DAIRY.

The Great Dairy Test at Guelph.

The dairy branch of the Guelph Fair attracts many visitors, and none are disappointed after a close inspection of the wonder-

ful producers on exhibition. The exhibitors of dairy cattle have long complained of the lack of accommodation and suitable quarters for their animals, but other departments are likewise congested and will likewise tend to impress upon the authorities and any institution from whence help might be forthcoming the absolute necessity of a scheme for expansion.

Notwithstanding conditions the dairy entries showed an increase this year, and although individual tests have been higher, in rare instances in the past, the general average this year is higher than has ever been known at the Winter Fair.

The crusade in favor of the milking Short-horns has brought that type of animal to the front, and their performance this year was creditable indeed. In most years cow after cow would not qualify for any prize as a producer of milk and butter-fat, but in only one case, this year, did they fail to come up to the requirements of the milk-test standard.

Jerseys also came forward in greater numbers and increased their records to a marked degree, while Ayrshires still maintained their standing as a productive breed. In all there were ten more entries than in the previous year.

Other breeds gave way this year to Calamity Posch Wayne 3rd, a Holstein, as the name indicates, as champion producer of the entire exhibit. Her score of points was 288.10, showing an increase of 35.61 points over last year's champion "Cherry", a grade cow. In 1911 the record was 272.78, and in the year previous 291.42. The test is completed in three days, and the scale of points adhered to when making the awards is 25 points for each pound of butter-fat, three points for each pound of solids not fat (S. N. F.), and one point for each ten days in milk after the first thirty, with a limit of ten points.

RESUME OF THE DAIRY TEST.

	Lbs. milk	Lbs. fat	Lbs. s.n.f.	Days	Total points
SHORTHORNS.					
Aged cow-1, Bessie of Lowbanks, F. Martindale & Son, York...	153.6	5.37	14.4	35	178.10
Aged cow-2, Gipsy Lady 2nd, Estate of A. W. Smith, Maple Lodge.....	122.2	5.01	11.79	63	163.93
Three-year-old cow-1, Kentucky Rose 40th, James Brown, Norval.....	113.8	5.00	11.35	47	160.93
Under-three-years, cow-1, Lady Braemar, James Brown, Norval.....	83.2	3.36	8.01	53	110.59
AYRSHIRES.					
Aged cow-1, White Floss, A. S. Turner & Sons, Ryckman's Corners.....	168.2	7.23	15.43	32	227.30
Aged cow-2, Annie Hume, H. C. Hamill, Box Grove.....	154.7	6.80	14.77	15	214.49
Aged cow-3, Briery 2nd of Springbank, A. S. Turner & Sons.....	178.4	6.33	16.43	90	213.60
Aged cow-4, Lena of Fairfield, Reginald J. A. Smith, Hatchley Station.....	151.3	6.12	14.77	24	197.50
Aged cow-5, Jessie, A. S. Turner & Sons.....	140.3	5.05	12.80	42	165.87
Three-year-old cow-1, White Lass, J. L. Stansell, Straffordville.....	154.2	6.39	14.39	45	204.67
Three-year-old cow-2, Craigielea, H. C. Hamill.....	146.5	6.44	14.05	17	203.31
Three-year-old cow-3, Pansy of Springbank, A. S. Turner & Sons.....	151.7	6.21	14.71	20	199.63
Three-year-old cow-4, Starlight of Fairfield, Reg. J. A. Smith.....	144.9	5.86	14.14	18	189.14
Three-year-old cow-5, Betsy Brown, A. S. Turner & Sons.....	135.8	5.6	13.02	108	187.75
Three-year-old cow-6, Dairy Maid of Hickory Hill, N. Dymont, Dundas.....	121.6	5.10	11.36	232	171.79
Three-year-old cow-7, Duchess of Hickory Hill, N. Dymont.....	123.4	5.45	10.99	24	169.27
Heifer, under three years-1, Craigielea Peach, H. C. Hamill.....	143.9	5.89	13.70	23	188.60
Heifer, under three years-2, Whitehill White Rose 3rd, A. S. Turner & Sons.....	91.0	3.54	8.62	107	122.28
Heifer, under three years-3, Jean Armour of Fairfield, Reginald A. J. Smith.....	92.3	3.60	8.99	23	119.29
Heifer, under three years-4, Fairy of Hickory Hill, N. Dymont.....	103.9	3.42	9.55	31	116.49
HOLSTEINS.					
Aged cow-1, Calamity Posch Wayne 3rd, Tig Wood, Mitchell.....	255.9	9.14	19.79	12	288.10
Aged cow-2, Snowflake, H. F. Patterson, Paris.....	229.4	8.02	21.27	27	264.5
Aged cow-3, Ladoga Idaline Verman, A. E. Hulet, Norwich.....	208.7	8.03	19.33	37	259.56
Aged cow-4, Netherland Beauty Posch, W. H. Cherry, Garnet.....	224.8	7.64	20.51	17	252.62
Aged cow-5, Calamity Houwtje, Martin McDougall, Woodstock.....	211.8	7.30	19.08	33	240.24
Aged cow-6, Breta, H. F. Patterson, Paris.....	249.7	6.86	22.00	12	237.66
Aged cow-7, Lady Calanthus De Kol, Martin McDougall.....	200.3	6.71	18.75	13	224.00
Aged cow-8, Candlemas Queen, Martin McDougall.....	184.5	6.82	17.43	17	222.96
Aged cow-9, May Schuiling Pietertje, Clarence C. Kettle, Wilsonville.....	191.8	6.52	17.54	12	215.68
Aged cow-10, Netherland Aggie Belle, Wilbert C. Prouse, Tillsonburg.....	203.2	5.99	17.24	41	202.69
Aged cow-11, Aaltje Canary Posch, L. H. Lipsit, Staffordville.....	180.0	6.03	15.90	52	200.67
Aged cow-12, Pietertje Hengerveld Belle, L. H. Lipsit.....	168.1	5.04	14.16	20	168.55
Three-year-old cow-1, Pontiac Jessie, Martin McDougall.....	185.7	7.05	17.13	26	227.80
Three-year-old cow-2, Elmdale Maid, W. Lemon, Lynden.....	184.7	6.74	16.69	26	218.01
Three-year-old cow-3, Queen Segis, Ormsby, A. C. Hallman, Breslau.....	188.1	6.30	17.54	13	210.18
Three-year-old cow-4, Pontiac Atlas Pauline, Martin McDougall.....	181.3	6.16	17.22	15	205.77
Three-year-old cow-5, Della Schuiling De Kol, T. H. Dent, Woodstock.....	166.2	6.31	15.29	17	203.76
Three-year-old cow-6, Countess Maud Posch, Clarence C. Kettle, Wilsonville.....	177.2	5.38	16.45	14	183.90
Three-year-old cow-7, Inez Rosie Verman De Kol, L. H. Lipsit.....	163.8	5.33	14.06	52	177.48
Three-year-old cow-8, Maple Grove Sadie Vale, W. O. Palmer, St. Sebastian, Quebec.....	141.1	4.79	12.66	7	158.62
Heifer, under three years-1, Netherland Beauty Posch's Fafont, W. H. Cherry.....	181.4	7.16	17.66	13	232.12
Heifer, under three years-2, Madam Pauline Canary, A. E. Hulet.....	164.5	6.64	15.29	18	214.50
Heifer, under three years-3, Schuiling Maid Girl, Tig Wood.....	184.6	6.36	17.74	11	212.45
Heifer, under three years-4, Bessie Spink Mercena, T. W. McQueen, Tillsonburg.....	144.3	5.91	13.74	16	189.14
Heifer, under three years-5, Countess Mercena Wayne, T. W. McQueen, Tillsonburg.....	160.8	5.62	14.62	30	184.56
Heifer, under three years-6, Inka Mercedes, O. & W. O. Palmer, St. Sebastian, Quebec.....	142.0	4.75	12.57	61	159.14
JERSEYS.					
Aged cow-1, Maid of Dentonia, D. A. Boyle, Woodstock, Ont.....	116.9	5.26	11.55	85	171.63
Three-year-old cow-1, Brampton Wonder Beauty, B. H. Bull & Son, Brampton, Ont.....	109.3	4.44	10.31	138	151.96
Three-year-old cow-2, Brampton Czarina, B. H. Bull & Son.....	96.8	4.77	9.42	40	149.06
Three-year-old cow-3, Rena's Cobalt, Wm. James Beatty, Guelph, Ont.....	84.1	4.45	8.36	141	146.53
Under-three-years, cow-1, Springbank Buttergirl, T. H. Dent.....	125.9	5.35	12.35	32	171.02
Under-three-years, cow-2, Brampton You'll Do Queen, B. H. Bull & Son.....	107.2	5.52	10.51	21	169.57
Under-three-years, cow-3, Beauty Maid, D. A. Boyle, Woodstock.....	97.5	4.97	10.01	41	155.46
Under-three-years, cow-4, Brampton Bright Lass, B. H. Bull & Son.....	88.4	5.03	8.55	55	154.12
Under-three-years, cow-5, Brampton Bright Betty, B. H. Bull & Son.....	80.6	4.55	7.78	99	144.11
Under-three-years, cow-6, Brampton Bright Kathleen, B. H. Bull & Son.....	104.6	4.39	9.98	63	143.09
Under-three-years, cow-7, Mokena's Best, Wm. James Beatty.....	78.2	4.06	8.05	130	135.82
GRADES.					
Aged cow-1, Pine Grove Bell, Willis Bros., Pine Grove.....	247.2	6.55	21.26	51	229.66
Aged cow-2, Sadie, Geo. B. Ryan, Courtland.....	201.5	6.85	18.38	40	227.43
Three-year-old cow-1, Beauty, Geo. B. Ryan.....	216.9	7.80	19.9	41	256.01
Under-three-years, cow-1, Daisy, Geo. B. Ryan.....	170.9	6.75	15.18	36	214.92
Under-three-years, cow-2, Madge, Wm. James Beatty.....	86.4	3.75	8.49	146	129.46

Butter and Cheese Makers Have a Lively Meeting.

The annual meeting of the Butter and Cheese Makers of Western Ontario, held at the Dairy Building of the O. A. College, on December 10th, during Winter Fair week, was one of the largest, liveliest, most enthusiastic meetings which has been held for some time by the men who preside over the manufacture of butter and cheese in the western part of the Province. There was also a sprinkling of men from eastern Ontario.

S. E. Facey, President of the Western Dairy-men's Association presided with good grace and good sense, qualities not always found in a chairman. Frank Hems, Sec'y. W. D. A., had prepared a list of interesting topics to be discussed, with "live wire" men to lead in each case. There was scarcely a dull moment during the whole afternoon, and the discussion from "the floor of the house" showed that the men who wield the ladle in the creamery and the bandager in the creamery know how to express themselves at a public meeting if given a chance to do so.

The discussions of greatest interest centered around the creamery, the cheesemen being not so well represented as the buttermen. As a number of makers have orders for saltless butter, the question has arisen, should a creameryman receive more money for such butter as compared with salt butter, and if so, how much more in order to come out even?

Experiments made at the O. A. C. showed an increase of about four per cent in the "overrun", making salt butter as compared with saltless. The practical men said they figured that the price should be from one and one-half to two cents extra for saltless butter, owing to the fact that closer inspection of butter for moisture content will be the rule in future, owing to the appointment of J. F. Singleton, as chief inspector, it was agreed that buttermakers should provide a moisture test and use it, in order to avoid prosecutions. G. H. Barr, Chief of the Dairy Division, Ottawa, said he did not wish to have the painful duty of prosecuting any Western Ontario makers.

The storing of ice, cream grading, and testing of cream were fully discussed. The chief conclusions reached were:

1. Each and every patron of a creamery ought to provide not less than one ton (two or three tons better) of ice, per cow, for the coming season. Some creamerymen are assisting patrons to get a supply of ice. On many farms a pond can be made at small cost to provide all the ice needed for several farms. This should be operated on the co-operative plan, and thus ice can be got at small cost.

2. Mr. Barr said the Province of Ontario is behind the Western Provinces in the matter of cream and butter quality, and gave figures showing how the quality of butter had improved very much in Alberta creameries after adopting the grading system, and paying from two to four cents a pound fat more for first-grade cream. A prominent buyer present said that he was unable to understand what became of some of the butter made in Western Ontario creameries. "We would not touch it with a ten-foot pole," was his expression in reference to this butter. All the evidence points very strongly to the fact that something must be done in order to improve the quality of butter in some creameries. Lack of cooling cream on the farm, and delivery of cream but once or twice a week, were blamed as the chief cause of poor butter.

3. That a standard cream test bottle, and standard methods of making cream tests, together with penalties for over-reading or under-

Culture

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reading of tests, are needed in order to increase the confidence of patrons in testing, was the view expressed by some of those taking in the discussion with reference to the testing of cream. Some favored testing each delivery, while others thought composite sampling all right. The danger of daily testing, is that of doing the work so hurriedly that inaccurate tests are made, while composite sampling tends to cause dissatisfaction among patrons, who wish to know how their cream tests and if anything is wrong, that it may be remedied before going too far. Daily testing appears to be growing in popularity.

Messrs McFeeters, Scott, Singleton, Newman, and Instructors Robertson, MacMillan and Smith, took a leading part in the testing question, which appeared to be a live topic, probably due in some degree at least, to recent articles in "The Farmer's Advocate" on this question. Some rather strange experiences were related, all of which goes to show that we have not by any means got to the bottom of testing problems. Mr. Brown, O. A. C., gave results with a new preservative for composite samples, creosote, which seems promising.

Mr. McKay gave the results of tests at the O. A. C. concerning over-ripe milk, showing a loss of cheese and poorer quality of cheese by the delivery of milk and making same into cheese with too much acid. The remedy is, cooling of the milk during hot weather. He also advised salting of curds at the rate of not over two to two and one-half pounds salt per one hundred pounds curd.

G. A. Putnam, Superintendent of dairy instruction, closed the meeting with a few words of advice to the makers present. H. H. D.

POULTRY.

Canada's Greatest Poultry Show.

During the past decade the poultry exhibit in connection with the Ontario Provincial Winter Fair has been recognized as the greatest show of the feathered tribe each season. It is no new thing in a report of this department of the Exhibition to read that it was the greatest so far held, but this latter statement applies more strongly than ever before to the exhibit made at Guelph last week. Over 5,200 entries were in the coops, and President William McNeil, than whom there is no better judge of poultry in America, expressed his opinion that this was without a doubt the show of the highest quality birds ever brought out. At many former shows White Leghorns and Barred Rocks were the outstanding features numerically, but at this year's exhibition White Wyandottes came to the fore and easily led in numbers. The outstanding feature of the entire poultry department was the marked increase all around in the utility classes as compared with the fancy breeds. It seems that the agitation in favor of the hen that lays and the one which is capable of producing good table fowl is having some effect. Most people do not keep poultry to look at. It might be interesting to our readers to know just how many birds were out in some of the classes. In White Wyandottes there were 46 cocks, 62 hens, 76 cockerels; in Barred Rocks, there were 34 cocks, 32 hens, 59 cockerels, and 39 pullets; White Rocks were much the same, with 27 cocks, 32 hens, 34 cockerels, and 39 pullets; single comb Rhode Island Reds were numerous and of high quality, there being 24 cocks, 29 hens, 57 cockerels, and 56 pullets; the rose comb variety has 20 cocks, 24 hens, 33 cockerels, and 47 pullets. Of Buff Orpingtons there were 15 cocks, 16 hens, 15 cockerels, and 15 pullets. The other varieties of Orpingtons ran along about the same as the Buffs, with the Blacks the smallest class. Single Comb White Leghorns were not as numerous as they sometimes are, but there were 25 cocks, 32 hens, 27 cockerels, and 25 pullets; while the rose comb variety had 10 cocks, 13 hens, 15 cockerels, and 17 pullets. The brown variety were much stronger than the single comb, showing 19 cocks, 23 hens, 14 cockerels, and 17 pullets. This gives some idea of the strength of the more common utility breeds. Of turkeys and water fowl it may be said that never before in the history of an exhibition in Canada has the public been privileged to look over so many high-quality birds, numbering in all upwards of 500, of which it was said that about 300 were geese. In fact the show from one end to the other was quality par excellence.

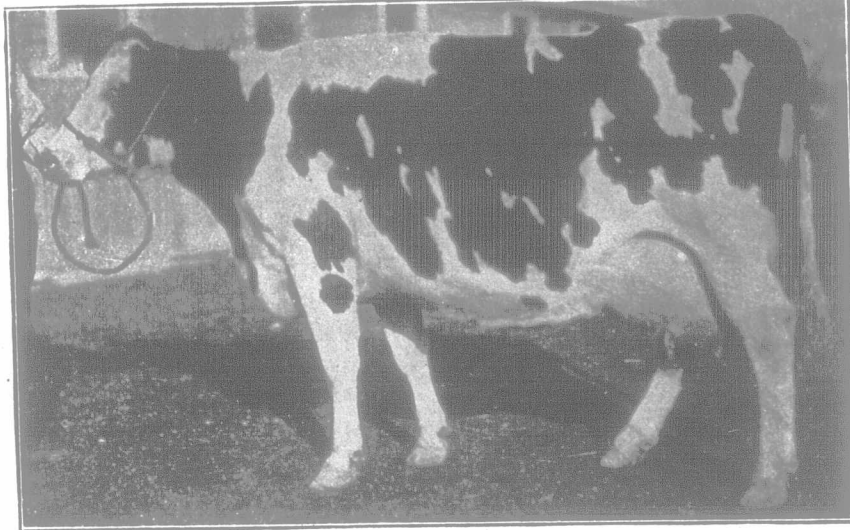
Dressed poultry, in keeping with the increase in the live birds, showed quite a marked improvement. There were more entries and better-finished birds were on exhibition. The Poultry Department of the Ontario Agricultural College had three demonstration boxes of twelve birds, each showing just how poultry should be packed for market. Two boxes were what they called the squat pack, one having the birds packed breasts up and the other having them packed down, while the third was a side pack.

The Dominion Poultry Department continued its educational work at this show, bringing their candling demonstration exhibit and several other

interesting features, among which was a statement of the estimated losses due to careless handling of eggs in the Dominion. It will surprise you to read that they estimate losses from held eggs at \$1,250,000; from heated eggs, \$1,000,000; from rotten eggs, \$750,000; from broken eggs, \$500,000; from dirty eggs, \$350,000, and from musty eggs, \$235,000 annually. Directly under the cases depicting in coin these amounts, we read the easiest and most effective manner of covering these, in order they are: ship more frequently, gather more regularly, remove the male birds, pack carefully, keep nest clean, and pack in dry, clean fillers.

The Egg Circle idea was again brought before the people in the form of a circle of brown eggs set in a background of white eggs, and the advantages of the egg circle were explained to inquirers as being better price, more frequent marketing, the elimination of unnecessary middlemen and delighted customers.

The Ontario Agricultural College educational exhibit took the form of a plucking demonstration held each day, and which drew large crowds. They also had on exhibition models of the various improved types of houses, feed troughs, watering troughs, etc. Many people took great interest in the piles of grain, etc., showing the exact amount of feed which the average well-fed hen consumes annually. We give them here: wheat, 24 lbs.; corn, 24 lbs.; rolled oats, 24 lbs.; buttermilk, 90 lbs.; green food, 36 lbs.; grit, 1.75 lbs., and oyster shell, 2.5 lbs. Also many people stopped to look over the hen which, at the College, has laid as many as 282 eggs in one year. She stood in her coop side by side with two other hens, one of which represented the average hen of Ontario which produces only 100 eggs, and the other an average hen from the bred-to-lay pen at Guelph, in which 150 eggs were laid by each individual. Instructively, and from the viewpoint of the poultry fancier and visitor alike, this was the greatest show of them all.



Cora Countess Echo.

Senior and grand champion Holstein cow at the New National Winter Show in Toronto. Owned by Hiram Dymont, Dundas, Ont.

FARM BULLETIN.

Why Seven?

By Peter McArthur.

To-day I am flying signals of distress. I am in trouble. The editor forwarded a letter of advice and criticism meant for me, and it contains a mystery that is too deep for my comprehension. I wonder if any of the readers of "The Farmer's Advocate" can interpret. Here is the passage that has obfuscated me:

"First in regard to the mice eating his trees. I think I can give him a good method to exterminate those pests. If he will keep seven cats (as we do) and feed them well, the mice will soon vanish."

That sounds all right. Competent cats are wonderfully effective in dealing with mice, but why should I have seven? Is there some occult significance in the number seven? Wouldn't eight cats be even better? As a matter of pure reason I should say that eight would be better, but I cannot help wondering whether some mystical meaning attaches to the number seven. Besides its importance in sacred symbolism it played a leading part in the Pythagorean system of philosophy and occurs frequently in astrology and folk-lore. Seven is a number with a history and a veiled import and I cannot help wondering whether we could discover something that would be of importance to scientific methods of farming if we got to the bottom of sevenness of things. It does not do to be supercilious about anything that may lead to the discovery of new truth or

the re-discovery of old. But to return to the mystery of the seven cats. As I grapple with it I begin to recall rhymes dealing with the number seven and even with cats:

"As I was going to St. Ives
I met a man with seven wives.
Each wife had a sack,
Each sack had a cat,
Each cat had a kit,
Kits, cats, sacks and wives,
How many were going to St. Ives?"

You can see that seven cats had some significance away back in the dim days of Mother Goose. As I meditate on this a stanza from Alice in Wonderland presents itself for parody:

"If seven cats with seven kits
Caught mice for half a year
Do you suppose," the Farmer said,
"The place would then be clear?"
"I doubt it," said the Farmer's Wife,
And shed a bitter tear.

We have three cats and they are doing wonders. Almost every time I see them they are watching for a mouse or growling over one they have caught. I wonder if I should get four more. But I guess I needn't bother. Someone will be sure to come along before the winter is over and drop a bagful of superfluous cats in the neighborhood. It is a little way that some people have when they find that they have too many cats.

Speaking of the mice, I find that they are getting thinned out. The cats and the dog are at them all the time and some hawks are constantly hovering about the fields. At night we hear both screech and hooting owls that are probably mousing about the place, and when we were hauling in the cornstalks we killed a hundred or more. We also killed over thirty rats, so we are hopeful that in time we shall overcome these pests. And before I forget it, let me record the fact that mice have sprung a new trick on men. One day when crossing through the young orchard I found a little tree that had toppled over. On examining it, I discovered that it had been completely gnawed off below the surface of the ground. A few days later I found a mouse-hole a foot or so from a tree and followed it up. I found that although the tree looked all right above the ground the mice had tunneled among the roots and had girdled every one of them for several inches. What are we going to do about that? No system of protection that I have heard of will help in such a case as that. But stay. I must not jump at conclusions. Perhaps it is to meet such subtlety on the part of the mice that I should have the mystical number of seven cats. I wonder if that is the answer.

In another part of her letter of comment my correspondent writes—referring to some paragraphs on the November storm:

"I am also very much surprised that Peter McArthur, who has been giving instruction to so many readers, would be so far behind the times as to have his Leghorns roosting in the trees. (Draw your cap well down over your face, Peter, for I know you are blushing). I am a lover of the Leghorn and keep one hundred of them, but I must say if you lived in a God fearing community as I do you would have them all properly housed and the door padlocked."

I have just taken a peep in the looking glass and fail to find a trace of a blush. And as for the cap:

"His bonnet sits fu' fair on his brow,
His auld ane as guid as mony ane's new," etc.

Also I wish to call my correspondent's attention to the fact that I spoke of only one Leghorn being found in a snowdrift. And instead of being ashamed, I point with pride to the fact that there was one Leghorn roosting in a tree. It is the best possible evidence that I am becoming a real farmer. Scientific farmers or amateur farmers may have everything in such excellent

order that no hen ever roosts in a tree, but who ever heard of a real farmer whose hens were not given to such tricks? No picture of a real farm is complete without a few hens roosting in the trees. Perhaps you remember the story about the artist who painted a picture of a litter of little pigs eating out of a trough. It was very much admired by the critics and city people in general, but one day a real farmer came along and drawled: "Wal, that's the fust time I ever seed nine little pigs eatin' without one of them having his foot in the trough." The artist at once changed his picture, for he understood the great artistic truth that a true work of art must have some imperfection in it or it is beyond human sympathy. I stand up for that storm-beaten hen on artistic grounds. But there is one

point raised by my correspondent that I wish to correct. She says that I have been giving instruction in these letters. If I did, at least as far as practical farming is concerned, it was without knowing it. Any farmer who tries to get practical instructions from my contributions does it at his proper peril. He should look for that sort of thing in the editorials and the articles by specialists in farming. All I undertake to do is to talk things over with other weak, erring human beings like myself, and to have an occasional laugh with them over the troubles we meet with in our everyday lives.

* * * *

At the present writing we are having perfect winter weather, clear, frosty and exhilarating. In

its way winter is just as enjoyable as summer. It is changing from one to the other that bothers us. When winter is approaching we stand and shiver like a boy about to take his first swim in the spring, but after the plunge has been taken everything is glorious. The crisp snow under foot and the bracing air act like a tonic and life in the clean, white fields is as enjoyable as when the flowers are in bloom. Besides, it is in the winter that we have Christmas, our best holiday, and most of us have the time to enjoy it properly. At this season our spirits are effervescent and we are in the mood to talk nonsense, write nonsense, and even to be patient with the nonsense of other people. I hope you will take that as a sufficient justification for all the nonsense I have written to-day.

Some Instructive Lectures at Guelph.

Each year the management of the Provincial Winter Fair secures a number of prominent agriculturists, specialists in their particular lines, to address the large numbers who avail themselves of this opportunity to enhance their knowledge of the business in which they are engaged. It has been difficult to get people to attend lectures while judging was in progress in the ring and the management have endeavored, as far as possible, to arrange the program so that there would be as little conflict as possible between these two important departments at the great show. To some extent they have succeeded, but sometimes the judging gets behind time and then the lectures are held back and a few people get tired of waiting. However, great interest was taken this year in most of the lectures, stallion enrolment, the dairy Shorthorn, seed lectures, lightning rods, and dairy and swine lectures being drawing cards, which brought out much valuable discussion.

THE DAIRY SHORTHORN.

In introducing the subject of dairy Shorthorns, Prof. G. E. Day, of the O. A. C., pointed out that he had no intention of belittling the importance of other breeds, which are doing excellent work. The question has been asked very frequently, "Is there such a thing as a dairy Shorthorn?" Some have claimed that there is not, others admit that there is such a thing, but that it is of relatively small importance.

Any person who has visited England and who has studied at first hand the live stock and the methods of farming in that country will very readily admit that there is such a thing as a dairy Shorthorn, because in England we find more Shorthorns than anything in the dairy herds of that country. The largest dairy herd which Prof. Day visited in England belongs to J. & H. Robinson, in Sussex. These people have a contract to supply the city of Brighton with five hundred gallons of milk per day, and they have nothing but Shorthorn cattle in their herd. Of course they are not all pedigreed cattle, but they are essentially Shorthorns. In fact, it is rather an exception to see anything but Shorthorn cattle on English dairy farms. Such being the case, there is no room to doubt that there is such a thing as a dairy Shorthorn.

It is rather interesting to study the origin of the dairy Shorthorn. Many of them are what we call "short pedigreed" cattle, that is to say, the first recorded cow has been admitted to registration since Volume 40 of Coate's Herd Book was published. Many of the largest producers belong to this class, and, of course, according to the rules of the Dominion Shorthorn Herd Book, they are not eligible for registration in our Herd Book. A purchaser of dairy Shorthorns, therefore, must be on his guard and will find that he must leave behind many excellent cows if he wishes to record his cattle in the Canadian or American Shorthorn Herd Books. Many dairy Shorthorns, however, and many excellent producers have as long pedigrees as any Shorthorn cattle in existence, and it is very interesting to note that the most popular Shorthorn cattle among English breeders of dairy Shorthorns almost invariably trace to the herd of Thomas Bates. It is a remarkable fact that the milking qualities so highly prized by Thomas Bates and scoffed at by many of his rivals should, after all these years, come once more to the front and make Bates cattle the most popular cattle in England to-day. In many of the dairy families we find cows to-day of practically straight Bates breeding, and it seems somewhat strange to see wealthy men again spending money lavishly to secure representatives of some of these old, old tribes, such as the Barringtons, Cambridge Rose, Darlington, Duchess, Furbelow, Foggathorpe, Oxford, Waterloo, Wild Eyes and many others whose fame for years was apparently obscured, but which has once more come to the front.

In appearance the dairy Shorthorn is likely to disappoint those who are familiar only with the beef type. People are apt to forget that a

deep-milking cow will usually become thin before the end of her milking period and they expect a heavy milker to look like a cow that does not give enough milk to properly nourish her calf. All cattle which are very thin look very much alike so far as conformation is concerned. You may take one of the fattest and smoothest cattle in the show and allow it to become very thin, and you will be surprised how angular it will become; how the broad back becomes narrow and sharp, and the wide shoulder top contracts to less than half of its present width; how the full neck vein will shrink and disappear and thus add to the length of the neck, and how the animal will approach in general angularity of appearance to the conformation of the dairy cow. The casual observer, therefore, is liable to jump to the conclusion that the dairy Shorthorn is an undesirable type of Shorthorn, simply because he sees her shorn largely of the fat which covers up and smooths over the angularities of her beef sister. If we were to take one of these same angular and thin cows, allow her to go dry and feed her liberally, we would be surprised to see how closely, after all, she would eventually approach the beef type. Generally speaking, however, there is a difference between the general type of the dairy Shorthorn and that of the approved beef type in Shorthorn cattle. The dairy Shorthorn is usually a little longer in the face, a little longer in the neck, slightly longer in the leg, and more angular in her general conformation than the approved beef standard would permit. In other words, she is a little more nearly like the old-fashioned Bates cattle than the present Scotch type. While this is true, no person can deny that the old-fashioned Bates cow was an extremely useful animal for beef purposes, in spite of the fact that she did not quite conform to the ideal beef form as we regard it to-day.

While having no records of them, Prof. Day saw in England quite a number of steers which the producer of feeders in this country would be delighted to secure, although they might not make show animals. As to milk production, it is easier to obtain milk records, though even this side of the question has been more or less neglected in some herds. Being what we call a "dual purpose" breed, we would not expect to find any world's records in this breed, but we would naturally expect to find such records as would justify the breed to be classed as a profitable dairy breed. Of individual cow records one of the best, if not the best, is that of the cow known as Darlington Cranford 5th. Her highest yearly record was 12,567 lbs., a record which has been beaten by a number of other cows for the best one year's production, but this remarkable cow produced over 100,000 pounds of milk in ten consecutive years, a record which places her among the really high-class dairy cows. The Tring Park herd of Shorthorns, owned by Lord Rothschild, is one of the prominent herds in England to-day, and in this herd very careful records are kept of each one's production. The latest yearly record for this herd which he has been able to secure is that for the year 1911. In that year 74 Shorthorn cows were in the herd during the whole year, and their records and averages are given apart from those who were in the herd for only a portion of the year. The highest record was made by a cow called Dorothy, which produced 12,851 pounds of milk, and the average yearly record of the seventy-four cows was 6,058 pounds per cow. When we consider the number of cows included in this test, we must admit that it is a fairly good showing, even from a dairy standpoint. The cow Dorothy previously mentioned has an average yearly production of 9,722 pounds of milk for eight years. Another cow has an average record for seven years of 8,675 pounds per year, and still another cow has an average record for eleven years of 7,124 pounds of milk per annum. In the herd of the late George Taylor there were 32 cows which averaged over 10,000 pounds of milk each per annum, a record of which any dairy breed might be

proud, but perhaps enough has been said to give an idea of the possibilities of the Shorthorn as a dairy cow, and the persistence with which the tenant farmers in England appear to cling to this breed is pretty exclusive evidence of its utility.

We have discussed the dairy Shorthorn from various points of view, but there is still one other point to be considered and that is this: "Is there a place in Canadian agriculture for a cow of this kind?" It seems to me that she probably does not come directly into competition for public favor with the recognized dairy breeds for the reason that the dairy Shorthorn is not regarded as a special dairy breed and consequently cannot be reasonably expected to give us a maximum production of milk or butter. While this is true, there are many farmers in this Province who do not wish, or who do not find it practicable to make a specialty of dairying and it is to this class of farmers that the dairy Shorthorn will especially appeal, for the reason that she will pay her way in milk and produce a calf which it is profitable to raise for beef purposes. The greatest difficulty in the way of the spread of dairy Shorthorns is their comparative scarcity. It is true that they exist in rather large numbers in England, but the demand from other countries, as well as the demand at home, far exceeds the supply, and the result is that these cattle cannot be bought in England to-day for what they are worth. Such being the case, a person will naturally ask: "How then is the dairy Shorthorn to find a place in Canada if it cannot be bought for what it is worth?" It seems to me that in the meantime at least there is only one thing to do, and that is to make the best of what we have. There are many excellent milking Shorthorns in this country already if they could only be sifted out and have their merit recognized. The fact that Bates blood is very popular among breeders of dairy Shorthorns in England, but deep-milking qualities are not confined to cattle of this breeding by any means, and it is possible to find cows of straight Scotch breeding which would make profitable dairy cows if the owner saw fit to develop them along that line. A few years ago the College owned an imported Scotch-bred cow belonging to the Roan Lady family. This cow nursed her first two calves, which every person will admit was very bad training for a heifer in the way of developing her milking qualities. With her third calf she was milked and a record kept of her production. In the year she produced over 6,000 pounds of milk and there is little doubt if this cow had been milked from the start she would have made a really profitable dairy cow. This is only one case, but cows of this kind are numerous throughout this Province if we would only take the trouble to find them out. The present move of the Dominion Shorthorn Breeders' Association in establishing a record of merit for milk production should bring, in the course of time, a lot of good cows to the front, and as time goes on it will be possible, for those who are interested in dairy Shorthorns, to make selection of sires from large-producing dams and in this way increase the milking qualities of their herd. It will no doubt take years to bring the dairy Shorthorn into prominence in this country, especially as it is difficult to make importations at a reasonable cost, but the persistent use of sires from deep-milking dams and the careful selection of breeding stock will work wonders in the development of dairy qualities in the Shorthorn cattle in this country. What will be the ultimate position taken by the dairy Shorthorn in this country remains to be seen, but the breeders of Shorthorn cattle have it in their power to develop a dual-purpose breed of great possibilities, provided they see fit to do so. The whole matter now rests in the hands of the Shorthorn breeders.

THE OBJECT OF DRAFT-HORSE BREEDING.

Prof. G. E. Day, at the lecture to the horse breeders, by a series of slides reproduced from

photographs of some of the leading sires of the heavy-draft breeds, particularly Clydesdales, showed the development in type from the days of Prince of Wales 673, and Darnley 222, in Clydesdales, up to the present. As horse after horse was thrown on the screen down to the present-day champions—Baron o' Buchlyvie, Baron's Pride, Dunure Footprint, etc.—it was clearly seen that quality had made steady advancement. The same was true of the other breeds shown. Prof. Day made it plain that we are not breeding horses for the pleasure of doing it, but that the main object in draft-horse breeding is to improve the type of horses which must put their shoulders to the collars and do the work required of them. Utility is the main consideration and utility means the improvement of the work horses.

STALLION ENROLMENT NOT UNIVERSALLY APPROVED.

One of the most interesting meetings and, incidentally, one of those drawing the largest crowd, was that at which stallion enrolment was the topic for discussion. Since the Ontario Government saw fit to pass an Act compelling stallion owners to enroll their horses there has been much discussion through the press and in meetings as to the advisability and practicability of the measure. Dr. F. C. Grenside, one of the Ontario Stallion Enrolment Board, discussed briefly the Act. One of the main arguments he brought forth to show that there must be something good in stallion enrolment was that some form of enrolment was compulsory in every Province in Canada with the exception of Quebec, and in about two dozen of the States in the American Union. Much has been learned from the system in which enrolment has been carried on. It has been thought advisable this year to hold only one inspection and that to come some time in the winter and in place of holding the inspections at certain village centres the Board plan to send the inspectors right to the farm homes of the stallion owners. The weak place in the Act Dr. Grenside pointed out to be that inspection had not been compulsory. It is proposed to ask the Parliament at the coming session to amend the Act to make inspection compulsory. Again, in the Act as it now stands, there is nothing to provide for its enforcement. Another amendment is proposed—that an inspector in each county be appointed to see that the Act is enforced. Without some measure of this kind the Act would soon become a dead letter.

A lively discussion followed Dr. Grenside's address. R. S. McVitty, of Muncey Institute, followed up remarks which he made at a like meeting at this show last year. He said that the Act as it now stands puts the scrub horse on the same level as the good horse and that all horses should be graded according to breeding, soundness and conformation. He went so far as to move a resolution, which was passed, asking that the Parliament of Ontario be asked to amend the Act to make inspection compulsory and that horses be graded according to their breeding, soundness and conformation, and that if the Government wishes to continue to inspect these horses they should pay the bill. From the discussions we gathered that the Enrolment Act is not well understood. A horse pure-bred and sound and inspected gets a certificate on what they call Form 1, a pure-bred horse which may have some little defect and is inspected gets a Form 2 certificate, a pure-bred enrolled and not inspected gets a Form 3 certificate, and a grade horse gets a Form 4. The casual observer, looking at one of these certificates, or a statement of one of them on a horseman's advertising, would not understand what Form 1, Form 2 or Form 3 meant. John Bright, Dominion Live Stock Commissioner, said that the word "form" had been used in place of "grade" to avoid confusing grade in this sense with that of a grade stallion. However, it was clearly seen from the discussion that few people believed these certificates to be of very much use. A man could have a horse, and a good horse, enrolled, and would get a Form 3 certificate, while another man might have a much poorer horse and could get a Form 1 certificate, because the horse had been inspected and passed by the inspectors.

The opinion of the meeting seemed to be in favor of stallion inspection thoroughly carried on. One speaker brought out the fact that he did not think that it was necessary for him to have his horses enrolled every season when he still had them in his possession. Others agreed that the Government should certainly foot the bill if they forced this thing upon the horsemen. Seeing that the meeting passed the resolution in favor of compulsory inspection and grading, and that the Government should pay the bills, it would seem that at least a part of the horsemen are in favor of this being put through. However, we noticed that a very small proportion of those present voted, and it does seem from discussions which came up at the meeting and from the opinions of individual horsemen that there will be some trouble in enforcing such a law if it is passed. We need something to

eliminate the scrub horse, that is true, and "The Farmer's Advocate" has supported stallion enrolment, believing that the Government would go farther and when conditions warrant bring about some measure which would aid in the matter. There are those, however, who think it impossible to legislate good horses into the country, and there is strong ground for some of their arguments. There is no doubt but that the best methods would be for the breeders themselves to eliminate the scrub, but if they will not do this, it sometimes is necessary to legislate a little along this line. If the horses are inspected and graded 1, 2, 3, and this is done by competent men, it should have some effect. But if the Act becomes overburdened with machinery, and too many men are connected with its operation, there is grave danger that everything will not run smoothly in connection with the working out of the plans. Some good horsemen are in favor of the Act and some are against it, all realizing that as far as it has gone it has not accomplished what it set out to do, but a beginning was necessary somewhere and it is more than likely that it was better to start in a moderate way than to force a strong measure on the people first. Our columns are open for a discussion of this matter and we hope that in the end the very best possible Act for the horsemen themselves and for the whole country will be evolved.

HOW TO MAKE MONEY WITH HOGS.

The Feeding and Management of Swine is not a new subject for J. H. Grisdale, Director of the Dominion Experimental Farms, but he handled it in a somewhat different manner than upon former occasions and just now, when hogs are so high in price, his address was indeed timely. The high markets of the world show good prospects for the pig feeder and breeder and to show that there is money in pigs Mr. Grisdale cited a case where a feeder had a bunch of pigs from January last until sold this summer and the total cost of feed and labor, including that of the sow, was \$266.30 and the returns from the pigs were \$800. A paying business. Another man bought a sow for \$7.50 (a poor individual). She farrowed in February and these pigs were fed off, realizing \$85. Her second litter was sold for \$42.50 and the sow sold for \$20, the total dealing from the one sow in the year netting, after payment for feed, \$114.60. Invariably, said Mr. Grisdale, pigs pay, and he based his remarks upon his experiences at the Ottawa Experimental Farm over the past 15 years. He urged farmers to do a little more buying and selling, to increase the raw material grown and fed on their farms, and to, if possible, always have skim milk, clover or roots to feed for roughage. Business acumen, a knowledge of pigs and pig breeding and generosity, he considered three requisites to success. Pig-pens should be roomy, light, well-ventilated and clean. Heat in the pen, without light and proper air circulation, and especially in an ill-kept pen, is worse than cold. Do not forget to give the pigs plenty of water, and above all things do not confine the pigs to grain alone. In winter, feed clover, roots, clover hay, fine-grass hay, alfalfa, straw or chaff. Get roughage into the ration.

At Ottawa the fattening pigs are closed in their pens after they reach 50 to 60 pounds in weight. Previous to this time they have free run for exercise. Breeding sows are kept outside and housed in small, cheaply-constructed pens until about ten days before they are due to farrow, when they are placed in the warm pens. These sows while outside get second-cutting clover hay, fine-grass hay or alfalfa hay, raw mangels or cooked turnips, and at the start one to one and one-half pounds of grain daily, the latter being increased to from three to five pounds daily just before they are closed in to farrow, at which time they are fed a laxative ration of shorts, bran, oil-cake meal and crushed oats, the latter being the best grain feed for a breeding sow. A few roots and a little skim milk are also given.

An interesting point was brought out by the speaker when he cited an experiment carried on at Ottawa where seven sows were bred when gaining in flesh and seven others were bred when in failing flesh, the former farrowing and raising 77 pigs and the latter farrowing 35 and losing a large proportion of them. From this it would seem advisable to breed sows always when they were gaining in flesh.

TO PRODUCE GOOD WOOL.

T. Reg. Arkell, of the Dominion Live Stock Department, used sample fleeces to bring before the sheepmen the proper methods of preparing wool for market. Sheepmen should put forth every possible endeavor to keep the wool clean while it is on the backs of the sheep. Many fleeces of defective wool were shown and the reasons why they were defective explained. For instance, chaff and straw in the neck of the fleece. Such fleeces require skirting. To get rid of the dirt they are carbonized in a solution of sulphuric acid. Fleeces which carry tags, paint,

dung-locks, burrs, etc., require similar treatment, all of which means extra expense, which in the end comes out of the producer.

To make better sales, Mr. Arkell urged that communities should go in together (community breeding) and produce a uniform wool, or where various classes of wool were produced, the growers should at least market it together and see that it was properly graded before being offered and not have long wool, short wool and dirty, hard fleeces all in the same bundles. This would mean in the end co-operative marketing, which would bring the wool grower far larger returns by grading properly and selling in larger quantities.

ESSENTIALS IN CORN PRODUCTION.

One of the best addresses of the entire programme that was given by Prof. L. S. Klinck, of Macdonald College, on growing corn for ensilage purposes. He was undoubtedly right when he said that an undue amount of emphasis had, in the past, been placed upon small grains in proportion to the need for them on the average farm in this country. This being true, he urged a greater acreage of the more heavy-producing crops like corn, clover, alfalfa, etc. The corn belt is being gradually shoved northward, and conditions are changing almost yearly. What we require for the northern and eastern portions of Ontario and for Quebec is a hardy corn. The large horse-tooth kernel, so often found in the bags at the seed store, is very little good for growing in those sections. It is necessary that the corn grower knows corn when he sees it, else he is quite likely to get poor seed. From a series of slides prepared from photographs of good and poor ears Prof. Klinck illustrated his address very well. The three essentials to success, he considered strong, vital seed of a suitable variety, second a suitable rotation of crops, and third, good cultivation. When going to a seedsmen to purchase seed he always asks three questions: First, the name of the variety; second, will it grow, and third, is there evidence of good breeding. The rougher Dent corns are almost always late in maturing, consequently, for northern or eastern localities the cob showing the very rough kernel surfaces should be avoided. The good corn on the cob is always toward the center. The butts of the ears mature later, and the tips earlier than this corn in the center. Another thing very well illustrated was that the rough-kernelled corn is nearly always a deep kernel. In selecting corn on the cob, always avoid the large cob of the saw-log type. Early Leaming he considered one of the best varieties for northern and eastern Ontario and for Quebec. The fault he had to find with whitecap was that there had been no standardization of the strain, or, in other words, the growers were developing too many strains of this variety. Wisconsin No 7 he considered one of the best of our ensilage corns, naming Early Leaming, Early Whitecap, and Wisconsin as three of the leading varieties. The average buyer of seed corn feels safer in buying Flints and Dents as far as maturity goes, but as Mr. Klinck pointed out, very often the Flint corn is not very well matured when cut, and sometimes the water gets in under the husks and freezes injuring the seed, so that one cannot be too careful in selecting his corn, which, if possible, should be bought on the cob, for very often cobs may be found which are soft and corn upon such does not germinate well. In other cases in shelling the corn considerable may be found where the germs adhere to the cob, and consequently this corn does not show a high percentage of germination.

Corn does best in a warm soil, preferably after a clover sod, and they found at Macdonald College that rows 42 inches apart and the stalks one foot apart in the rows gave the best balanced ensilage. They sometimes get larger yields from other distances of planting, but not so well-balanced a product. The cultivation he approved was deep at first and gradually getting shallower as the corn grew, but he pointed out that too many cease cultivation too early in the season, and urged more of the growers to use the single-horse cultivator if it was impossible to work the two-horse implement. This he deemed very important, as just at this stage of the corn's growth very often an exceedingly dry spell sets in, and unless something of this kind is resorted to the corn crop is very much shortened.

ROOTS AND THEIR FEEDING VALUE.

P. A. Boving, formerly of Sweden, but now on the staff of Macdonald College, Que., took up the subject of root growing and feeding value of the different kind of roots. He based his comparisons and feeding value upon the following statement: Ten pounds of mangels, Swedes or carrots, and 12.5 pounds of turnips have the same feeding value as one pound of corn. Introductory to his address he mentioned that in his opinion in some sections where corn did not do exceptionally well, corn growing was being overdone, and the grower might well consider the production of more roots. For instance, roots do better than corn at Macdonald College, which is situated in a very favorable position as far as Quebec agriculture is concerned. An acre of

mangels, he pointed out, would produce over 6,000 feed units, or three times as much as are contained in two and one-half tons of good hay. Labor is the only limiting feature in root growing. While it is expensive to grow small or ordinary crops, it is not expensive to grow the big crop. Mr. Boving preferred that ground should be ploughed once and if possible twice in the fall, the manure being ploughed down at the second ploughing. Some of those present did not agree with this. He also believed that in many cases fertilizers could be used to advantage. An unfertilized plot at Macdonald College had yielded 17.5 tons per acre, while the fertilized plot had yielded 26.46 tons per acre. The fertilizer he recommended to be used was 50 pounds of sodium nitrate, 50 pounds of Ammonia sulphate, 250 pounds of acid phosphate, and 75 pounds of muriate of potash. From experience at Macdonald College the speaker said that he preferred, in all cases, to grow his own seed. Twenty to twenty-five roots will give seed enough to plant one acre, and, from experiments conducted at Macdonald College last year, increases, where home-grown seed were used, ran from one to three and one-half tons per acre as compared

with crops from the best imported seed. He did not think it paid anyone to grow the long varieties of mangels, preferring the intermediate. Swedes do best on a heavy soil, mangels on a rich, loamy soil, soft turnips on a poor soil, and on a very sandy soil he preferred sowing carrots. He also urged early seeding, and, from an experiment, he showed that early seeding brings highest results. We do not think, however, that it is always wise to sow as early as he recommended, viz., May 8th. A much better quality of turnip often grows when the seed is sown, say the 10th or 15th of June, than when it is put in early in May. Mangels, however, should be got in early. Mr. Boving held that all land should be cleaned before the roots are sown. Much interest was taken in Mr. Boving's methods of sowing and cultivating roots. He always sows on the flat, rolling the land down over the rows and using a light harrow or weeder several times crosswise of the rows to keep down weeds. This he claims lessens the cost of labor very appreciably. It pays also, as shown from an experiment which he quoted, to single roots as soon as it can possibly be done. From an experiment which was carried on it was found that singling

as soon as the first two adventitious leaves appeared gave the best results, and that thinning at intervals of a week for the following three weeks showed a gradual falling off in yield. Mangels are put in rows thirty inches apart, and thinned to eight inches apart in the row. Other roots are left proportionately thick. Great exception was taken to the amounts of seed advised by the speaker. Very few of our growers in this country would think of sowing four or five pounds of Swede turnips to the acre, much less fifteen to sixteen pounds of mangels. We have seen as good a stand as a person would want, in fact the mangels came up too thick from a seeding of four to five pounds per acre. We think that it is more a matter of germination power of the seed than it is of the large amount per acre. Where seed had been carefully tested and tested over 90% say, there would be little need of putting on \$8.00 worth of it to the acre, and few farmers in this country are likely to take up with such an idea. His address was listened to with great interest, however, and many points were carried away by the root growers in attendance to put in practice on their own farms during the coming year.

An Expansion Year for the Guelph Winter Fair

A sentiment pervades a great part of the country that Guelph is the most suitable and only place for the stockmen's final roundup, and when the crops are harvested, the plowing done and all the fields asleep beneath nature's cloak the rural folk feel free to meet once more at that old-established rendezvous, the Ontario Provincial Winter Fair. For years, the farmers of Wellington County and contiguous districts have met with their grains, poultry and finished bullocks and made their old stand the modern Olympics, not of strength and speed, but a contest of the husbandman's skill and the feeder's art, and now that stockmen from one end of Ontario to the other, gather together with the choicest stuff, the Ontario Provincial is indeed the "Smithfield of Canada."

Readers will remember that complaints were made last year through the farm press about the lack of accommodation, both for stock and visitors. There has not been much improvement in this regard, but the congestion of the stables and crowding amongst the spectators will in the end demonstrate the inefficiency of the present buildings to much longer domicile the Guelph Winter Fair.

It is a growing institution and attendance and entries increase each year. The entries in the horse department were, this year, greater by 102 than at last year's big show. Beef cattle were twenty-six head stronger than in 1912, dairy cattle ten head, and swine increased by 130 individuals. This condition was very exacting on the limited space, but that was not all; on Wednesday, December 10, the constant clicking of the busy turnstiles admitted over 15,000 people.

The Winter Fair must be born again and in a larger sphere with more room for expansion. A large judging arena is a prime requisite, with more room in all departments. There is a bright streak of hope, however, on the horizon, for the Dominion Government has pledged itself to financially assist the Board and this should act as a strong suggestion to the Provincial Government and local philanthropists.

Horses are trumps at the Winter Fair, and many indeed were the flashy, big stallions and drafty mares that pranced up and down the arena. Light-horse breeds made an elegant showing, from the small foals and fillies that do not yet understand the trainers' "whoop" up to the old and ring-wise sires.

The beef-cattle classes were also exceedingly good, but here could be found at the lower end of the line animals which were a little wanting, either in conformation or excellence of finish. The winners were not susceptible of appreciable criticism, but some of the losers would well have stood a little more feeding and final finish.

Never before has such an aggregation of pigs been seen at the fair, and the sheep were well up to their usual high standard. This year a pen of Southdowns, from the McEwen flock, carried off the much-coveted Drummond cup.

Up in the poultry department all was excitement. A poultry fancier is an enthusiast and his charges also generally make plenty of noise. Over 5,200 entries made the best quality show ever seen in this country.

A little extension was made this year, and the City Hall, instead of covering the city fathers, was for one week the stopping place of the fathers of our pure-seed industry. Other things were to be found here also, of which educational exhibits from the O. A. C. were prominent.

It was indeed the greatest show of its kind, and an atmosphere of progress and keen competition permeated the whole fair, and all was done that could be done to mingle the spectacular with the real and useful, so that every moment was interesting to the visitor. The Board are to be congratulated on the fair of 1913, and much credit is due to the energetic secretary, R. W. Wade, who was untiring in his efforts to make everything run smoothly for exhibitors and visitors at this, the first of these fairs under his management. It does seem that the more shows we have the better, and it was the general opinion that, in place of injuring the Guelph show, the new show at Toronto had strengthened it.



R. W. Wade.
Chief of the Live-stock Branch for Ontario, who has conducted the most successful Provincial Winter Fair.

Horses.

The horse exhibit at the Winter Fair is worth going many miles to see. This statement is substantiated by the immense audience that year by year fills up all the available space in the arena, during judging hours, while some cling to window ledges, uprights or any projection within the reach of agile youth. Horses are the main feature of the show, and year by year the entries grow with more than gratifying rapidity. The entry books for 1913 show an increase of 102 over those of 1912, and with the increase in numbers the quality does not decrease. During the recent fair some record classes came out, and one class in particular, John Bright, Dominion Live Stock Commissioner, declared to be the best class of Clydesdale mares ever seen in Canada. Percherons, Shires and all the light breeds were well represented and made the show spectacular, as well as interesting and instructive.

CLYDESDALES.

The "Bonnie Clyde" almost equalled in numbers the entire exhibit of all other breeds and many a good horse was there that has crossed the ocean or been bred on Canadian soil. The stallions were a strong lot of noble horses and the mares large, drafty and clean limbed. It was not always, however, that the largest horse won, for the judges, R. S. Starr, Port Williams, N.S.; Wm. McKirdy, Napinka, Man., and Geo. Gormley, of Unionville, were determined that no defects, especially in quality and limbs, should escape their notice. Sometimes substance was sacrificed for quality and action, and rightly so, for they are the cardinal points that make the Clyde so popular in Canada to-day. It is the heavy horse, though, that demands the price, and if Clydesdale breeders could add a little to the substance and maintain the quality it would enhance the value of the breed. The show-ring is the place to set the standard, and sometimes judges might strain a point to encourage weight, but it can be said of the Provincial Winter Fair that the right horse won under the present general conception of Clydesdale type.

Some good and familiar horses came forward in the aged-stallion class, but it was decreed that some animals unknown in Canadian show-rings should win. Roag & Son's Baron Ian, having twice won championships at Aberdeen and honors at Glasgow, has crossed the water to compete in Canadian show-rings. This horse is a standard in action, limbs and quality, and carries a nice body, well coupled. Seldom does a horse possess feet and pasterns equal to those of Baron Ian, nor such a body and muscling. Not only did he win his class, but he was grand champion Clydesdale stallion, and later proclaimed the best horse at the fair, winning the special silver cup. Horsemen agreed that Baron Ian was the best horse ever shown at the Ontario Provincial Winter Fair. Second stood the Great Eastern, and he certainly has the weight with the quality, tipping the scales at one ton and forty pounds. He has a powerful body, well coupled, with lots of quality for his size, and large, well-turned feet to stand upon. His action could hardly be faulted, although he did not move as straight as Baron Ian. Another candidate for second place was found in Anchor's Pride, a big, solid, stylish horse, and a good mover. Taking quality, action and substance together, the Great Eastern won; Anchor's Pride went down to third place, and Macaroon came up to fourth. It was a surprise to see this horse go so far down after winning first last year and having a championship record in Scotland. Few horses possess better shaped feet or nicer limbs and pasterns than Macaroon, but he is just a shade off bloom for show-ring requirements, and undoubtedly will give a better account of himself in the future, for he is able to do it when in condition. The big, massive Marathon came in for fifth place. He could not move quite as straight as Macaroon and was fleshy to a fault, but he is an exceptionally well-built horse, with a closely-coupled body, low set and possessed of quality in no mean degree. Knight of Barglass was sixth, and Everest Again seventh.

Like the previous class, seven came out in the three-year-olds. Prince of Aden finally strode to top place, with Corinthian standing next. The former horse's quality would not allow him to take any lower place, and he is a good mover besides. Heavier horses were there, but they could not show the action and quality of the Prince of Aden. Corinthian is a large horse, well sprung in the rib, has a strong loin and moves right. Neither he nor Clarion, who went third, have as

good quality of bone behind as the winner, but Clarion holds his hocks in position when he moves and is a showy horse. The fourth-prize horse, Baron's Hope, moves off with much precision, and he has a strong loin and body, which is set off by good fitting. Dunwin David took the fifth ribbon, not because he is a poor individual, but because the others were exceptionally good. Perhaps he does not move quite as true as the best of his class, but he has good quality and shows good style.

It was in the two-year-olds that nine came out, and five of which put up some of the strongest arguments of the whole show. Craigie Sam and Laird O'Ken fought it out for first place. The first horse won, but by a very close margin, for Laird O'Ken has exceptionally good quality, is a good mover and a little deeper ribbed than Craigie Sam. Quality and a trifle on action finally put the Hassard horse up, but only after much consideration. Full of Baron of Buchclyvie blood through his maternal ancestry, quality is written all over him, and Baron Ian had to show his best in order to win from him the championship. Garty Ideal, the third in line, could travel a little closer at the hocks, but he is closely coupled, has quality in abundance, and is a good mover. Royal Trustee, with his strong hock and good limbs, was not out of place standing next, and Gloucester, Craigie Sam's stable mate, made the line look good on both ends.

Coming Star was the winner of the foals, with Thorndale second. Both gave promise of good action, but the first had a little more quality. Village Swain, a growthy, good-limbed youngster was third, and Keir Democrat 2nd was fourth, with the fifth place left for Prince of Wright.

Ten aged mares responded to the call and made up the best class of mares ever shown in Canada. The best action and quality were found in Lily of Muriton and she went to the top, while Royalette, a larger mare with a little less quality, but a right goer, went second. Carrie Heir, possessing the same qualities as the ones above her only in a slightly less degree, took third, and a big, strong, dark-colored mare, Brampton Lady Peggy, was next in line, with Fanny Clarke fifth.

Three-year-old mares came out strong in numbers, with Princess Patricia in the van. She could move a trifle straighter in front, but her quality of bone, her good feet and pasterns and muscular body mark her at once for first place. Nellie of Pendreigh, the second animal, also has abundance of clean, flinty bone and is nicely topped. This mare won her class last year, but she was forced down, still keeping Ella Fleming, Dora Duff and Lady Sangster below her in third, fourth and fifth places. The white-ribbon winner has rather a plain head, but from the ground up she is quality and muscle.

Nell of Aikton won the class for two-year-olds and later the championship of the filly classes. Up and down she has the conformation and quality that wins and the right kind of action. Snowdrop was a little more compact, but not enough to make her movement heavy, for she had the right action, both at a walk and trot. Lily of Rattrra did not stand on quite as good feet as the first and second winners, but she is a trappy mover and quite worthy of a good place. Coburty Queen, a strong-built mare, and Pride of Auchencleith, a trappy goer, were fourth and fifth.

Exhibitors: T. D. Elliott, Bolton, Ont.; H. Robinson, Erindale, Ont.; T. H. Hassard, Markham, Ont.; George B. Armstrong, Teeswater, Ont.; John A. Boag & Son, Queensville, Ont.; Joseph Telfer, Milton, Ont.; W. H. Mansell, Fletcher, Ont.; G. W. Saunders, Jerseyville, Ont.; Smith & Richardson, Columbus, Ont.; Hugh & Malcolm McLean, Wyoming, Ont.; W. W. Hogg, Thamesford, Ont.; James Paton, Proton Station, Ont.; I. E. Haug, Chesley, Ont.; A. W. Watson & Sons, St. Thomas, Ont.; Goodfellow Bros., Bolton, Ont.; George Millar, Blackheath, Ont.; R. B. Pinkerton, Essex, Ont.; W. A. Jones, Caledonia, Ont.; Neil Swinton, Southampton, Ont.; Alex. McCraig, Jr., Rockwood; Fuller Bros., Norval, Ont.; Fred. J. Wilson, Riverbank, Ont.; L. J. C. Bull, Brampton, Ont.; Wm. Jacob, Mitchell; J. A. Attridge, Murkirk, Ont.; Joseph Fewster; Thos. Bird, Norval Station, Ont.; Norman Dryden, Galt, Ont.; H. A. Mason, Scarboro, Ont.

Awards: Aged stallion: 1, A. Boag & Son, on Baron Ian, by Baron's Pride; 2, Smith & Richardson, on Great Eastern, by Dunure Frieman; 3, Elliott, on Anchor's Pride, by Baron Ruby; 4, Hassard, on Macaroon, by Baron of Burgie; 5, Telfer, on Marathon, by Marcellus. Clydesdale stallion foaled in 1910: 1, Hassard, on Prince of Aden, by Sam Black; 2, Smith & Richardson, on Corinthian, by Memento; 3, Boag & Son, on Clarion, by Royal Abundance; 4, Goodfellow Bros., on Baron's Hope, by Baron's Pride; 5, Hogg, on Dunwin David, by Baron of Buchclyvie. Stallion foaled in 1911: 1, Has-

sard, on Craigie Sam, by Sam Black; 2, Boag & Son, on Laird O'Ken, by Cawdor Laird; 3, Smith & Richardson, on Garty Ideal, by Baron Ideal; 4, Boag & Son, on Royal Trustee, by Dalabaddy; 5, Hassard, on Gloucester, by Rycroft. Stallion foaled in 1912: 1, Boag & Son, on Coming Star, by Mendel; 2 and 3, Smith & Richardson, on Thorndale, by High Honor, and Village Swain, by Kinlieth; 4, Pinkerton, on Keir Democrat 2nd, by Keir Democrat; 5, Jones, on Prince Wright, by General Miller. Aged mares: 1, Hassard, on Lily of Muriton, by Everlasting; 2, Hogg, on Royalette, by Royal Edward; 3, Jacob, on Carrie Heir, by Hillhead Chief; 4, Bull, on Brampton Lady Peggy, by Royal Addie; 5, Wilson, on Fanny Clark, by Baron Maceachran. Mare foaled in 1910: 1, Smith & Richardson, on Princess Patricia, by Everlasting; 2, Boag & Son, on Nellie Pendreigh, by Baron Mitchell; 3, Watson & Sons, on Ella Fleming, by Sam Black; 4, Dryden, on Dora Duff, by Ransom; 5, Smith & Richardson, on Lady Sangster, by Baron Rothschild. Mare foaled in 1911: 1, Hassard, on Nell of Aikton, by Baron Buchclyvie; 2, Mason, on Snowdrop, by King Tom; 3, Smith & Richardson, on Lily of Rattrra, by Kinlieth; 4, Boag & Son, on Coburty Queen, by Crossrig; 5, Elliott, on Pride of Auchencleith, by Picador. Mare foaled in 1912: 1 and 4, Boag & Son, on Pride of the Craig, by Mendel, and Bessie Morton, by Fyvie Baron; 2 and 3, Smith & Richardson, on Black Jewell, by Bydand, and Black Maid, by Fyvie Baron; 5, Pinkerton, on Queen of Keirs, by Keir Democrat. Champion Stallion: Boag & Son, on Baron Ian, by Baron's Pride. Champion mare: Hassard, on Nell of Aikton.

CANADIAN-BRED CLYDESDALES

A pleasing feature of the Clydesdale contest was the numerical superiority of the Canadian-bred over the open classes, fifty-two more horses claiming Canada as their birth place. The quality and type throughout were creditable and compared very favorably with imported blood.

Day Dream led off for first in the aged stallions, with eight following. He is a young horse and very fine. This gives him the appearance of being a little up-standing and lacking substance, but with age he will thicken out into a choice individual. Last year he won his class as a two-year-old, and he is keeping up his record. Baron Elator, a solid, nicely-turned horse, was second and would have made a good first, but in such a case Day Dream would have been obliged to go down to fourth or fifth place, which his quality would not permit. King of Fountain Park, a winner at Ottawa, came third. If he had a little heavier middle he would be an outstanding horse, for he has good quality and ability to move straight. Lord Ronald won his class last year, but he could not measure up to his competitors, and remained fourth from the top. Then came Romeo's Pride, who carries his hocks a little wide, but has all the properties of a first-class horse.

Fifteen came out in the two-year class, and a good one it was. Royal Netherlea best represented the modern type of Clydesdale with plenty of substance and bone of the right sort. Then came Donald Glamis, a big, smooth horse, straight and strong in his limbs, a right mover, and possessed of good conformation. Guinea Gold was third, with pasterns that might well be a trifle longer, but he is well muscled and moves off in a fearless manner. Pride of Glamis and Glen Orchy were selected for fourth and fifth places on account of the former's quality of bone and general appearance, and the latter's fineness and superior underpinning.

Sixteen individuals made a strong class of yearlings, and with the qualifications they possessed made it hard for Glen Ivory to win the red. However, the judges were pleased with his action, abundance of flinty bone and general type, and put him first and later made him Canadian-bred champion stallion. Rick Hill Baron, a tall, dark horse with white spots, struggled into second place over Morning King. Fourth came Prince Tannerlane, and fifth Lothian Treasure.

Prince Carruchan 2nd did not find it extremely difficult to win honors in the class for foals. He is a promising young stallion, with a deep rib and plenty of the best bone, and standing on good feet and pasterns. Ronald, the next best, is a promising mover, and the third, Abercorn Duke, is yet a little out of proportion, but will develop into a strong-bodied horse with pleasing action. Oakland's Chief was fourth, and Pride of Hillside, an exceeding free-going colt, was fifth.

The number of aged mares doubled that of the open Clydesdale class and presented some good individuals. Charming Jean won premier place on her nicely-turned croup and strong body. She could have a little more slope of pastern, yet her quality of bone is commendable and her action easy and strong. May Morn, who occupied second place, did not carry the same strength of back and loin, but her quality of underpinning was well up to the mark as was that of Queen Maud, the white-ribbon winner.

Princess Clendrie, a compact mare, went fourth, while Derwent Queen, a winner in the closed class at Toronto, went fifth.

Eight came out in the three-year-old class and all gave way to Queen of Tuan, a sturdy mare of the right kind. Hillside Bessie won the two-year class on substance and quality combined. She is good from the ground up, and moves straight and easy. Hillside Beauty was the best yearling, with Patricia of Connaught a close second. Both fillies were strong-loined mares and both moved in a pleasing manner, but the former has an exceeding good set of limbs, and rightly won the premier place.

The young fillies were a promising lot, and contained the Canadian-bred champion mare in Princess Carruchan 2nd. This young filly is compact and deep-ribbed, and has quality in every bone.

Exhibitors: Edward Hoy, Orchard; J. A. Attridge, Muirkirk; Mair Bros., Aurora; Thomas McMichael & Son, Seaforth; Wm. Elliott, Galt; R. C. Rogerson, Fergus; W. H. Mancell, Fletcher; J. F. Staples & Son, Ida; Smith & Richardson, Columbus; Jas. A. Myles & Co.; George Gropp, Milverton; Wm. Wilson, Atwood; John McClure & Sons, Brantford; R. B. Pinkerton, Essex; Walter Rae, St. Pauls; W. G. Ormiston, Enfield; A. G. Darrock, Cotswold; Hastings Bros., Crosshill; Joseph Telfer, Milton; James Carlin, Seaforth; Wm. Woodley & Sons, Dundas; George D. Fletcher, Erin; W. J. Taylor, Grand Valley; W. J. Monkman & Son, Rockwood; James A. Harris, Royal Oak; Brown & Carefoot, Clarksburg; George Miller, Blackheath; David Cording, Lisgar; John Johnson, Woodbridge; Ira Baker, Cainsville; John Arbogast, Stratford; Wm. Jacob, Mitchell; Charles Groat, Ottawa; Alex. McCraig, Jr., Rockwood; John Black, Belwood; C. M. Blyth, Guelph; James Given, Georgetown; W. F. Batty, Brooklin; Fierheller Bros., Mt. Elgin; R. Tuck & Son, Eden Mills; Wm. Gilliard, Forest; J. E. Haug, Chesley; J. W. Innis, Woodstock; Harvey Hastings, Tuan; John D. Campbell; Harriston; W. S. Airth, North Bruce; Thomas Bird, Norval Station; Wm. Richmond, Washington; S. J. Prouse, Ingersoll; H. I. Barnhardt, Oro Station; Armstrong & Son, Rockwood; Fred. J. Wilson, Riverbank; G. R. McMichael, Seaforth; Robert Duff & Son, Myrtle; Jas. Bowes, Toronto; A. Jamieson, Streetsville; E. B. Barnhardt, Orangeville; Robert C. Given, Glen Williams; Peter Christie, Manchester; Thomas Laughlin, Paris; Wm. Rinn, Constance; W. S. Steadman, Petrolia.

Awards.—Aged stallion: 1, Elliott, on Day Dream, by Baron Acme; 2, Staples & Son, on Baron Elator, by Elator; 3, Smith & Richardson, on King of Fountain Park, by King Thomas; 4, McMichael & Son, on Lord Ronald, by Baron's Luck; 5, Hay, on Romeo's Pride, by Prince Romeo. Stallion, two years old: 1, Wm. Wilson, on Royal of Netherlea, by Netherlea; 2 and 4, Gropp, on Donald Glamis, and Pride of Glamis, by Knight of Glamis; 3, Wm. Elliott, on Guinea Gold, by Baron Acme; 5, Rae, on Glen Orchy, by Baron's Luck. Stallion, one-year-old: 1, Smith & Richardson, on Glen Ivory, by Black Ivory; 2, E. B. Barnhardt, on Rick Hill Baron, by Baron Columbus; 3, Gropp, on Morning King, by Knight Glamis; 4, Buttress & Carefoot, on Prince Tannerlane, by Buttress; 5, Cordingly, on Lothian Treasure, by Craignair. Stallion, foaled in 1913: 1, Batty, on Prince Carruchan 2nd, by Gallant Carruchan; 1, Fred. Wilson, on Gay Ronald, by Montrave Ronald; 3, Given, on Abercorn Duke, by Mathantha; 4, Attridge, on Oakland's Chief, by Duke of Oxford; 5, Black, on Pride of Hillside, by Montrave Magnus. Mare, foaled previous to Jan. 1st, 1910: 1, Haug, on Charming Jean, by Charmer of Conniston; 2, Black, on May Morn 2nd, by County Gentleman; 3, Tuck & Son, on Queen Maud, by King's Seal; 4, McMichael & Son, on Princess Clendrie, by Clendrie Prince; 5, Staples & Son, on Derwent Queen, by Derwent Crooke. Mare, foaled in 1910: 1, Hastings, on Queen of Tuan, by Baron Elect; 2, Campbell, on Lady Favorite, by General Favorite; 3 and 4, Watson & Son, on Trim of Oro, and Belle of Argyle, both by Baron Garty; 5, Prouse, on Oxford Maid, by Scotland's Pride. Mare, foaled in 1911: 1, H. J. Barnhardt, on Hillside Bessie, by McKinley 2nd; 2, Bowes, on Princess MacQueen, by Prince of Park; 3, Smith & Richardson, on Lady Shapely, by Dundee Shapely; 4, Duff & Son, on Princess of Atha, by Bay Ronald; 5, G. R. McMichael, on Spring Beauty, by Glen Rae. Mare, foaled in 1912: 1, H. I. Barnhardt, on Hillside Beauty, by Ardnahoe; 2, Christie, on Patricia of Connaught, by Acme; 3, Arbogast, on Bonnie MacGregor, by Edward MacGregor; 4, Batty, on Maple Avenue Bell, by Golden Favorite; 5, Given, on Charming Girl, by Royal Cook. Mare, foaled in 1913: 1, Batty, on Princess Carruchan 2nd, by Gallant Carruchan; 2, Miller, on Scotland's Charm, by Kinburnie; 3, Fred. Wilson, on Ruby Lane, by Montrave Ronald; 4, McMichael & Son, on Queen Margaret, by Glen Rae; 5, Gropp, on Queen of Fairview, by Highland Blend. Champion Canadian-bred stallion, Smith & Richardson, on Glen Ivory. Champion mare, W. F. Batty, on Princess Carruchan 2nd.

abundance of quality and good limbs, while Royal Melrose will show a little more substance. Nancy McKay, in the aged-mare class, was a winner, and later champion mare as was Antevola Rysdyk champion stallion.

Exhibitors: Ira A. Mabee, Aylmer; S. A. Devitt, Burkson; T. H. Hassard, Markham; Ira Baker, Cainsville; W. H. Mancell, Fletcher; W. A. Attridge, Duart; J. M. Gardhouse, Weston; Wm. Sager, Troy.

Awards.—Stallion, foaled previous to Jan 1st, 1911: 1, Devitt, on Antevola Rysdyk, by Royal Rysdyk; 2, Mabee, on General Worth, by Gambetta Wilkes; 3, Hassard, on Royal Hergie, by Royal Rysdyk; 4, Baker, on Metallas King, by Metallas. Stallion, foaled on or after Jan. 1st, 1911: 1, Attridge, on Chief Brino, by Wild Brino; 2, Gardhouse, on Royal Melrose, by General Melrose. Mare, foaled previous to Jan. 1st, 1911: 1, Mabee, on Nancy McKay, by Gambetta Wilkes; 2, Sager, on Ideal, by Beau Ideal. Mare, foaled on or after Jan. 1st, 1911: 1, Gardhouse, on Queen Melrose, by King Melrose.

THOROUGHBREDS.

This breed made a strong showing in the stallion classes, but the entire number of individuals was not large. Nasbaden again won his class, as he has previously done, but it was a strong fight. Selwick, the second horse, has substance as well as quality and good conformation. Charlie Gilbert, the horse with the white ribbon, had no superior in the ring for quality, but the two uppermost horses possessed a little more substance. Glimmer was fourth and Buccleuch fifth. Seven horses in this class made a strong aggregation of quality, nerve stamina and enduring quality. Sam T. won from three other young stallions, and Lady Rosebery Coventry from two other young mares. Both were full of quality and had substance combined.

Exhibitors: A. E. Currie, Ospringe; James Bovaird, Brampton; John Coventry, Woodstock; Will Lowes, Drayton; F. D. Parsons, Guelph; Roland Thayer, Aylmer; J. A. Myles & Co., Heathcote; D. McCrae, Guelph.

Awards: Aged stallion: 1, Thayer, on Nasbaden, by Masturtium; 2, Bovaird, on Selwick, by Knight of the Thistle; 3, Currie, on Charlie Gilbert, by Masetto; 4, Lowes, on Glimmer, by Martinas; 5, Myles & Co., on Buccleuch, by Balsamo. Two-year-old stallion: 1, Sam T., by Earl G.; 2, Coventry, on Hermit Coventry, by Martinas; 3, McCrae, on Percy, by Per-Se. Mare foaled on and after Jan. 1st, 1911, age considered: 1 and 2, Coventry, on Lady Rosebery Coventry, by Crichlade, and Red Mart, by Martinas; 3, Thayer, on Aylmer, by Nasbaden. Champion stallion: Nasbaden.

PONIES.

The struggle in these classes was between Royal Review and Talke Fire Alarm, in the Hackney pony class. The latter horse was champion and grand champion at the Canadian National and later at the National Live Stock Show in Toronto. He also has a winning record in the Old Country, but went down at this time to Royal Review, a horse with a little more substance and a par on action. In the Hackney mares, Lady Horace, with the best all round action, won from Fairview Golden Pippin and Green Brae Fairy.

Exhibitors: T. H. Hassard; J. M. Gardhouse; E. B. Clancy, Guelph; Joseph Russell, Toronto; Ralph Ballagh & Son, Guelph; A. Barber, Guelph; T. S. Russel, Downsview; Mrs. W. Hunter & Son, Orangeville; Lloyd-Jones, Burford.

Awards: Hackney stallion: 1, Hassard, on Royal Review, by Fire Boy; 2, Gardhouse, on Talke Fire Alarm, by Talke Wildfire. Hackney mare, any age: 1, Gardhouse, on Lady Horace, by Plymouth Horace; 2, Joseph Russell, on Green Brae Fairy, by Plymouth Horace; 3, Fairview Golden Pippin, by Fairview Golden King. Shetland stallion, any age: 1, Ballagh & Son, on Shadeland Royal, by Shadeland Navaro; 2, Barber, on Lefty Jack. Shetland mare, any age: 1, T. S. Russel, on Daisy, by Prince of the House of David. Pony stallion, any other breed: 1, Mrs. Hunter & Son, on Electricity; 2, Ballagh & Son, on King Domino; 3, Lloyd-Jones, on Daylight. Pony mare, any other breed: Clancy, on Fairy Queen. Champion pony stallion: Royal Review. Champion pony mare: Lady Horace.

Cattle.

BEEF CATTLE.

Although the prize-winners in these classes were examples of well-finished cattle of the right type, yet there were occasionally some which showed neither type nor finish. The mission of the Winter Fair will not be accomplished until every man from the east to the west of Ontario knows by sight and touch the properties of a good, stall-fed brute. One thing is gratifying, however, and that is the numerical superiority of the yearlings over older classes. By actual test and records the winner of the carload lot of beef cattle at the International Live-Stock Show, in

Chicago, proved conclusively that yearlings made more economical gains than older cattle. The record and statement are not susceptible of criticism and establish the query, why feed older cattle?

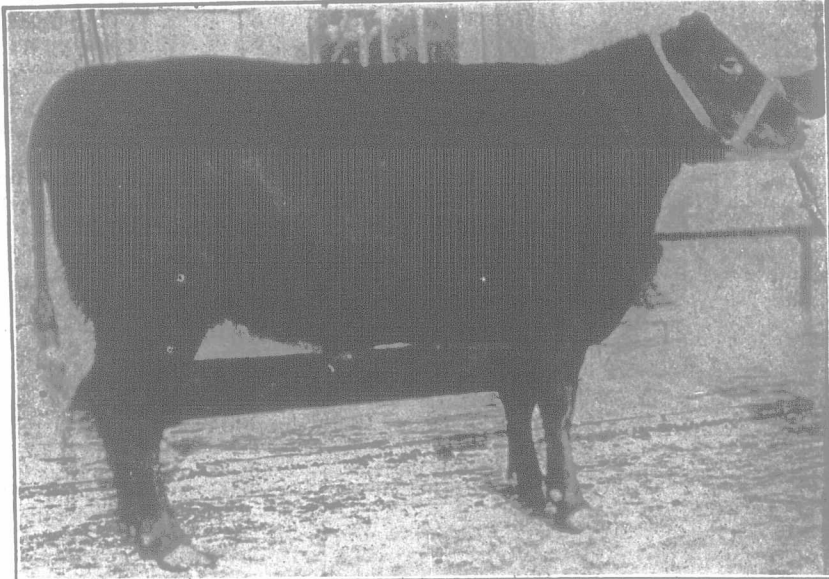
SHORTHORNS.

In the pure-bred classes the Shorthorns were dominant far outnumbering any of the other breeds, and the yearling classes were stronger in numbers and showed better type and quality than the older animals. Lavender, Barber's Shorthorn, two-year-old, was first in his class at the Winter Fair as well as at the Stock-yard Show, in Toronto. He was an evenly-fleshed steer and well finished. A steer, Archer, was second, but his flesh was not as firm as was that of the winning steer. Barber was again first in the yearling class, with Louise Lad, a large, red steer which has finished off with only a few indications of unevenness, but he is deeply covered and easily won his class.

The first really good class was the seven yearling heifers, of which Miss Quality was first, and Missy Mildred second. The winner was an elegant handler and evenly, though not deeply, fleshed. Yet a stronger class was found in the heifer calves, where a uniform lot of eleven appeared. Mable Mysie won not on size, but on fineness and quality. The second heifer was larger but of good type, yet without the depth of flesh and firmness of number one.

Exhibitors: Adam Armstrong, Fergus; D. A. Graham, Wyoming; Albert Barber, Guelph; John Brown & Sons, Galt; Charlie Barr, Blyth; John Barr, Blyth; Daniel Wright, Ariss; T. A. Russell, Downsview; Wm. Murdock, Palmerston; David Smith, Carluke; George Ferguson, Salem; John Currie, Rockwood; Alex. Young, Glanford; Pritchard Bros., Fergus; Norman Brown, Norval; Kyle Bros., Drumbo; George B. Armstrong, Teeswater; Peter Stewart, Everton; J. A. Watt, Elora; A. F. & G. Auld, Eden Mills; E. Brien & Son, Ridgetown; Peter W. Glennie, Fernbank; N. McKersie & Son, Rockwood; H. E. Alton Jr., Everton.

Awards.—Steer, two years and under three: 1, Barber; 2, Brown & Sons; 3, Charlie Barr; 4,



Grand Champion.

Red Paul, a two-year-old heifer, champion at the Winter Fair, reared by Adam Armstrong, Fergus, Ont.

Armstrong. Steer, one year and under two: 1, Barber; 2, Brown & Sons; 3, Wright; 4, Russell. Steer, under one year: 1, Ferguson; 2, Pritchard Bros.; 3, Smith; 4, Currie; 5, Barr. Heifer, two years and under three: 1, Kyle Bros., 2, Charlie Barr; 3, Norman Brown; 4, Armstrong. Heifer, one year and under two: 1, Armstrong; 2, Stewart; 3, Auld; 4, Kyle Bros.; 5, Alton. Heifer, under one year: 1, 2 and 4, Auld; 3, Kyle Bros.; 5, Armstrong.

HEREFORDS.

Some very good individuals came out in these classes, but the breed is capable of producing a better average than was seen at the fair. The winners always had a considerable depth of fleshing, but some showed a slight unevenness and occasionally one would show a lack of finish. Mrs. Hunter & Son, of Orangeville, had the only steer or heifer, two years and under three. In the yearlings, L. O. Clifford, of Oshawa, was first and second. Both were well fleshed, and the first particularly was a good handler and firm. Walter Readhead, of Lowville, was third and fourth.

Only three came out in the steer class, under one year. Clifford took first; Henry Reed, of Mimosa took second, and Mrs. Hunter & Son third. Heifers, under one year, were a better class, and Mrs. Hunter & Son won first and fourth, while second and third ribbons went to Clifford.

ABERDEEN-ANGUS.

Adam Armstrong, Fergus; Jas. Bowman, Guelph, and John Lowe, Elora, were the only exhibitors in this breed. In the two-year-old class, Bowman was first and second and Armstrong third and fourth. In the yearling class, Armstrong took first, third and fourth, with Bowman second. Under one year, Lowe was first and Bowman second and third.

GRADES AND CROSSES.

These classes brought out some superior animals and made a very commendable showing. In the class of two-year-olds, Leask's Roan Champion appeared again. During the past season he has had a career full of successes and adversity. He was champion steer at the Canadian National, but went down to defeat before Lowe's Black Monarch, at the National Live Stock Show in November. Yet he reversed the decision at the Stock Yards Show and again went down to defeat at the Winter Fair before a two-year-old heifer shown by Adam Armstrong. In the yearling steers, Lowe was first on Midnight 2nd, a well-fleshed steer, but not the equal of his aforetime stall mate, Black Monarch, that won at the National Live Stock Show. Russell was second with a large roan, good on the loin, but not as good on the back or rib as Midnight 2nd. Seven steers, under one year of age, came forward, and Kyle Bros. were first on a deeply-fleshed steer, and Lowe was second on Hector, the champion butcher calf at Toronto in November. The champion of the beef cattle came out in the two-year-old heifer class. Adam Armstrong's Red Paul, a small but deeply-fleshed heifer, won her class and later the championship over all breeds or crosses. Capt. Robson, of London, who judged all the beef cattle, proclaimed her fitted with the best quality and depth of natural fleshing that he had seen in many a day. Some fairly good heifers, one year in age, came before the judge, and the red ribbon went to Peter Stewart, on Beauty, a good, blocky roan, well fleshed and firm. Barber was second and had a rather up-standing animal, but fairly deep in flesh, while Henderson was third on a deeply-fleshed but uneven heifer.

Exhibitors: Adam Armstrong; Leask & Son Greenbank; Benjamin Tolton, Eramosa; Pritchard Bros., Fergus; John Brown & Sons, Galt; Joseph Abel, Wanstead; D. A. Graham, Wyoming; John Lowe, Elora; Robt. Smith, Watford; Albert Barber, Guelph; T. A. Russell, Downsview; E. T. Howse, Ariss; A. R. Wood, Fergus; John Barr, Blyth; Geo. Ferguson, Salem; Thos. Forest, Guelph; Alex. Young, Glanford; Kyle Bros., John Lowe; Mrs. W. H. Hunter & Son; James McKinnon; Hillsburg; Wm. Murdock, Palmerston; J. C. Henderson, Guelph; Peter Stewart, Everton; Jas. Barbour, Fordyce; John Currie, Rockwood; Matthew Wilson, Elora; John S. Cowan, Atwood.

ATWOOD.

Awards: Steer, two years and under three: 1, Leask; 2, Tolton; 3, Brown; 4, Armstrong. Yearling steer: 1, Lowe; 2, Russell; 3, Brown; 4, Howse; 5, Armstrong. Steer, under one year: 1, Kyle Bros.; 2, Lowe; 3, Barr; 4, Ferguson; 5, Forest. Heifer, two years and under three: 1, Armstrong; 2, Brown; 3, Lowe. Yearling heifer: 1, Stewart; 2, Barber; 3, Henderson; 4, Kyle Bros.; 5, Wright. Heifer, under one year: 1, Barbour; 2, Currie; 3, Lowe; 4, Barr; 5, Abel.

BEEF GRADES AND CROSSES.

(Open Only to Amateurs.)

Exhibitors: Benjamin Tolton; Charles Barr; E. T. Howse; A. R. Wood, Fergus; N. McKersie & Sons, Rockwood; David Smith, Carluke; Jas. McKinnon, Hillsburg; Wm. Murdock, Palmerston; Norman Brown, Norval; Walter Readhead, Lowville; Jas. Barbour, Fordyce; John S. Cowan, Atwood.

Awards: Steer, two years and under three: 1, Tolton; 2, Barr. Yearling steer: 1, Howse; 2, Barr. Steer, under one year: 1, Smith; 2, McKersie; 3, Barr; 4, McKinnon; 5, Murdock. Heifer, two years and under three: 1, Brown; 2, Barr. Yearling heifer: 1 and 2, Readhead; 3, Barbour. Heifer, under one year: 1, Barbour; 2 and 3, McKersie; 4, Cowan.

TAMWORTHS.

As usual, the competition in Tamworths was altogether too limited to create any interest. Besides a large entry by D. Douglas & Sons, Mitchell, A. G. Hallman, Breslau, had two entries in the class for barrow, six months and under nine, on which he won second and third, and one entry in class for sow, six months and under nine, in which he won third, Douglas getting all the other awards.

CHESTER-WHITES.

Again, in this breed, there were only two ex-2, Hastings; 3 and 4, Campbell. Wright & Son, Glanworth. Judged by John Platt, Millgrove, as follows: Barrow, six months and under nine: 1, DeCoursey; 2 and 3, Wright. Barrow, under six months: 1, DeCoursey; 2 and 3, Wright. Sow, nine months and under fifteen: 1 and 2, DeCoursey; 3, Wright. Sow, under nine months: 1 and 2, Wright; 3 and 4, DeCoursey. Sow, under six months: 1 and 3, DeCoursey; 2, Wright. Litter of three: 1, Wright; 2, DeCoursey. Champion barrow: DeCoursey. Champion sow: Wright.

ANY OTHER BREED.

In this class, Hampshires were shown by Hastings Bros., Crosshill, and Duroc-Jerseys by Mac Campbell & Sons, of Northwood. They were judged by S. Dolson and resulted: Barrow, six months and under nine: 1 and 3, Hastings; 2 and 4, Campbell. Barrow, under six months: 1 and 2, Hastings; 3 and 4, Campbell. Sow, six months and under nine: 1 and 2, Campbell; 3 and 4, Hastings. Sow, under six months: 1 and 2, Hastings; 3 and 4, Campbell.

GRADES AND-CROSSES.

The exhibitors in breed classes showed in this class with the addition of Henry Wilson, Georgetown, and were judged by Prof. G. E. Day. Barrow, six months and under nine: 1, Brethour; 2, Featherston; 3, DeCoursey; 4, Douglas. Barrow, under six months: 1, Dolson; 2, Douglas; 3, DeCoursey; 4, Brethour. Sow, six months and under nine: 1, Brethour; 2, Cowan; 3, Wilson; 4, Murdock. Sow under six months: 1, Murdock; 2, Dolson; 3, Cowan; 4, Douglas. Best barrow exhibited by an amateur: 1, J. E. Ezard; 2, A. Stephenson. Best sow exhibited by an amateur: 1 and 2, Ezard.

The Maritime Winter Fair.

The thirteenth annual Maritime Winter Fair was held in Amherst, N. S., on Dec. 8 to 11, 1913, and was a decided success.

The exhibit of beef cattle was not up to previous years in numbers, and there were very few heavy cattle, the bulk of the show being made up of yearlings and two-year-olds. The quality, however, was even superior to that shown last year; most of the cattle were brought out in good show condition, and also showed good breeding, and are the right stamp of beef cattle. We missed the old herd of Herefords which had for so many years been shown by W. W. Black, of Amherst, his herd having been sold out about a year ago. A. Bradshaw, of Amherst, showed eleven Herefords and nine grades, most of which were good individuals and brought out in fairly good show condition.

In the class for Herefords and Aberdeen-Angus, Mr. Bradshaw won the lion's share of the prizes, his chief competitor being Horace Gill, of Little York, P. E. I., who showed three Aberdeen-Angus heifers, and won first on two-year-old heifer, first on yearling heifer, and fourth on heifer calf; also sweepstakes for the best animal in the class with his two-year-old heifer. Mr. Bradshaw also won first and second in the block test, thus demonstrating the superiority of the quality of Hereford beef.

The Shorthorn classes were fairly well filled, and most of them were brought out in good condition. The principal exhibitors of Shorthorns were: Harold Etter and Hazen Etter, of Westmorland Pt., N. B.; Chas. W. Forrest and Edwin Forrest, of Amherst Point; C. H. Angus, Carlington, N. S.; Geo. M. Holmes, Amherst; H. P. Lawrence, Nappan; R. A. Snowball, Chatham, N. B., and Senator N. Curry, Tignish, N. S.

The keenest contests were in the junior yearlings, where H. Etter won first, R. A. Snowball second, C. W. Forrest third, and Snowball fourth, and in the aged-cow class, where H. Etter again won first, Senator Curry second, Snowball third and fourth.

The cup for best Shorthorn, any age, which has always been one of the most coveted trophies of the fair, was won by Harold Etter, of Westmorland Point, N. B.

In the grade classes the competition was often keen, and most of the cattle were brought out in good condition. The principal exhibitors were: Harold and Hazen Etter, Charles and Edwin Forrest, A. Bradshaw, C. W. Pugsley, River Herbert, and E. P. Anderson, Sackville.

The cup donated by Hon. Wm. Pugsley for best grade animal, any age, was won by E. P. Anderson, Sackville, N. B., on a high-grade Shorthorn heifer.

The most prominent feature of the show was the dairy test, the stables being filled with 87 cows of all the dairy breeds. The herd of S. Dickey & Sons, Lower Onslow, N. S., showed a splendid row of Holsteins of excellent quality and won a big share of the prizes. The grand championship for best cow, any breed, went to one of Dickey's Holsteins with the phenomenal score of 259 points, making 78 lbs. of milk in one day and testing as high as 3.8 per cent. fat. This is the highest score ever made at a Maritime Winter Fair and is, we believe, the highest score made anywhere in Canada this year. Mr. Dickey also won first in the grade class with a Holstein grade, which made a score of 243 points.

Logan Bros., of Amherst Point, showed nine Holsteins, all good workers, and won a good share of the prizes.

Fowler Bros., Amherst Pt., showed one two-year-old Holstein and five grades and won first on three-year-old grade, first on two-year-old grade, first and second on yearling grade, third on aged cow and fifth on two-year-old Holstein.

T. W. Keilor, Amherst Point, showed three grades and one Holstein and won a prize on every animal.

Shorthorns were shown by H. P. Lawrence, Nappan, and Geo. M. Holmes, Amherst.

Jerseys were shown by J. E. Baker & Sons, Barronsfield, N. S.; Wm. E. Harding, of Amherst Point, and H. S. Pipes & Son, of Amherst. W. E. Harding won first in the aged-cow class, making a score of 201 points. H. S. Pipes & Son showed eleven high-class Jerseys, most of which were shown at the fall shows and several have been in milk since Sept. 1. The Messrs. Pipes won first on yearling; first, second and fifth on three-year-old; third, fifth and sixth on two-year-old, and fourth and fifth on aged cow, showing that a Jersey that is a prize winner in the show-ring can also win in a dairy test.

Guernseys were shown by D. G. McKay & Son, Scotsburn, N. S., and F. H. Roper, of Charlottetown, P. E. I. On aged cow, Roper won first, fourth and sixth; McKay second, third and fifth. In three-year-olds, McKay first, Roper second. Two-year-olds, McKay first, Roper second.

Ayrshires put up the strongest class in the show, and were shown by Fred. S. Black, Amherst; C. P. Blanchard, Truro; McIntyre Bros., Sussex; Geo. Retson, Brookside, N. S.; John Retson, Truro, and A. McRae & Sons, Charlottetown, P. E. I. C. P. Blanchard won first on aged cow, McRae second, John Retson third. In three-year-olds, Fred. S. Black was first and grand champion for highest scoring Ayrshire, Geo. Retson second, McRae third, McIntyre fourth. In the two-year-old class, Fred. S. Black was again first, with McRae second, and McIntyre third. McRae's two-year-old, "Fairview Queen," is a daughter of "Milkmaid 7th," which won the grand championship last year and has just finished a twelve-month record, making a Canadian record, giving 16,676 lbs. milk and about 750 lbs. fat in 12 months. Milkmaid 7th did not freshen in time for the show this year.

J. R. Semple, of Brule, N. S., showed three Jerseys and three grades.

The people of the Maritime Provinces are certainly alive to their possibilities as a dairy country, and buyers were on hand for anything

good that was being offered. Several good cows changed hands, the highest price paid being \$135 for a Holstein grade.

Sheep were a larger and better show than ever before. Albert and George Boswell, of Prince Edward Island, showed Leicesters, Lincolns and Cotswolds; John Retson, Truro, Leicesters; Geo. Retson, Leicesters; Samuel Lane, Leicesters. Shropshires were shown by Geo. Boswell; Logan Bros.; James T. Stewart, Amherst Pt.; Ciphus Nunn. Oxfords by J. E. Baker & Sons, Barronsfield, and Burder Goodwin, Baie Verte. Hampshires by Ciphus Nunn and Geo. Boswell. Suffolks by Albert Boswell. Lincolns by C. W. Pugsley, Barronsfield, and A. Boswell. Most of the sections were well filled and the sheep in good show condition. There would appear to be good opportunities for more breeders of really good stock to supply the demand for breeding stock which is now imported from other Provinces. It would appear to us that some of the more active breeds of sheep would make profitable use of the hillside pastures in the Maritime Provinces.

Hogs made a larger and perhaps better show than ever. At least there were fewer coarse hogs, but it may be that some of the best of former years would have won over all this year.

Yorkshires were shown by W. H. Pope Cook, Little York, P. E. I.; J. W. Callbeck, Summerside, P. E. I.; C. W. Forrest, Amherst Point; A. A. McBeath, Marshfield, P. E. I.; Stewart Bros., Alliston; Geo. Boswell; A. Gill, Little York. Tamworths made a particularly strong show, the principal exhibitors being Fowler Bros., Amherst Point; A. McTae & Sons, Charlottetown, and W. J. Gibson, Marshfield, P. E. I. Berkshires were shown by Peter Brodie, Little York; Fowler Bros. and Stewart Bros., J. T. Stewart, Amherst Pt., and J. R. Semple, Brule.

The show of sheep and swine from Prince Edward Island shows that the Islanders have not all gone over to raising black foxes, although there is said to be more capital invested in foxes than in cattle on the Island.

A Last Minute Christmas Gift.

Christmas giving should not be carried to the extreme of burdening the donors. Most of the gift purchasing will have been done by this date, but a concluding suggestion may yet be helpful. An excellent way to remember some friend, relative or acquaintance directly or indirectly interested in agriculture and home life, would be to send them "The Farmer's Advocate and Home Magazine" for a year, which will carry with it a copy of the Christmas Number of last week (which, by the way, seems to be exciting warmer commendation than any previous holiday issue,) which is saying a great deal. One advantage of such a present is that it continues its pleasure and satisfaction weekly all the year through. Kindly advise us that the subscription is intended as a Christmas gift.

Death of Alex McNeill.

Alexander McNeill, Chief of the Fruit Division in the Dominion Department of Agriculture, died at his home in Ottawa on Monday morning last. Mr. McNeill, who had previously rendered valuable public service in the position of chief fruit inspector, was appointed head of the Fruit Division Service in 1904 upon the retirement of W. A. McKinnon to assume the position of Commercial Agent for the Canadian Government at Bristol, England. Coupled with an extensive practical knowledge of fruit growing, and particularly in apple culture, Mr. McNeill was able to apply a wide fund of general information bearing upon the industry, which has been most helpful to the country in its development.

Please renew your subscription promptly. See our premium list, and send us one or more new subscribers. Examine the date on your address label to see if it is promptly changed, if not, advise us at once.

Markets.

Toronto.

Receipts at Union Stock-yards, West Toronto, on Monday, Dec. 15, were 208 cars, comprising 3,674 cattle, 1,992 hogs, 2,356 sheep and lambs, and 139 calves. It was one of the best markets of the season. Choice butchers' steers sold at \$8.50 to \$8.90; good, \$8 to \$8.50; medium, \$7.50 to \$8; choice heifers, \$8 to \$8.25; common heifers, \$6.75 to \$7.25; cows, \$4.50 to \$7.25; bulls, \$4.50 to \$7.50; milkers, \$60 to \$120; calves, \$5 to \$11.50. Sheep, ewes, \$5 to \$6.

lambs, \$8.75 to \$9. Hogs, \$8.50, fed and watered.

REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards for the past week were:

	City.	Union.	Total.
Cars	25	508	533
Cattle	436	7,989	8,425
Hogs	73	7,957	8,030
Sheep	522	4,874	5,396
Calves	24	555	579
Horses	59	11	70

The total receipts of live stock at the two markets for the corresponding week of 1912 were:

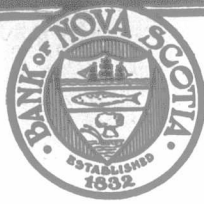
	City.	Union.	Total.
Cars	54	452	506
Cattle	1,011	6,508	7,519
Hogs	194	7,820	8,014
Sheep	596	6,055	6,651
Calves	74	399	473
Horses	—	16	16

The combined receipts of live stock at the two yards for the past week, show an increase of 27 cars, 906 cattle, 16 hogs, 106 calves, and 54 horses; but a decrease of 1,255 sheep and lambs, compared with the corresponding week of 1912.

Receipts of live stock were liberal owing to the Fat-stock Show being held

this week. Trade was active in all classes of live stock, and good prices were paid. The champion prizewinner sold at \$20 per cwt. The bulk of the prizewinning cattle sold at prices ranging from \$10 to \$12 per cwt. Choice lots of Christmas cattle sold at an average of \$10 to \$11.50 per cwt. Loads of good to choice butchers' cattle sold at \$8 to \$9, with few at the latter price. Stockers and feeders were in demand at firm prices. Feeders, 1,000 to 1,100 lbs., at \$6.40 to \$6.75; steers, 900 to 1,000 lbs., at \$6 to \$6.25; stockers, 500 to 800 lbs., at \$5 to \$6.

Milkers and Springers.—The demand was unlimited for milkers and springers this



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Many a man has lost the hard-earned savings of a life-time through bad investments. You should safeguard yours. Since 1832 we have been serving the public as a depository for their savings. Capital and Surplus \$17,000,000. Total resources over \$80,000,000. Our Annual Statements have been independently audited since 1906.

The Bank of Nova Scotia

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

week. Prices ranged from \$65 to \$130, the bulk selling at \$75 to \$95 each.

Veal Calves.—Receipts of veal calves were inadequate every day of the week, and prices were higher than ever. Choice veal calves sold from \$10 to \$11.50; good at \$9 to \$10; medium at \$7.50 to \$9, and common at \$6 to \$7.

Sheep and Lambs.—Prices were firm all week. Ewes sold at \$5.25 to \$6; culls and rams, \$3.50 to \$4.50; lambs, \$8 to \$9.

Hogs.—Prices ranged from \$8.25 to \$8.50, fed and watered.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, 83c. to 84c., outside; 87c., track, Toronto. Manitoba—Wheat, No. 1 northern, 93c. to 94c.; No. 2 northern, 91c. to 92c.

Oats.—No. 2 white, 33c. to 34c., outside; 35c. to 36c., track, Toronto. Manitoba oats, No. 2, 41c.; No. 3, 39c. lake ports.

Rye.—No. 2, 68c. to 69c. Peas.—No. 2, \$1 to \$1.05. Buckwheat.—No. 2, 70c., outside. Corn.—American, No. 2 yellow, 80c., Midland, and 85c., track, Toronto. Flour.—Ontario, 90-per-cent. patents, new, \$3.60 to \$3.70, bulk, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.50; second patents, \$5; in cotton, 10c. more; strong bakers', \$4.80 in jute.

COUNTRY PRODUCE.

Butter.—Prices firmer. Creamery rolls, 31c. to 33c.; creamery solids, 28c. to 30c.; separator dairy, 27c. to 28c.; store lots, 24c. to 25c.

Eggs.—New-laid, 50c. to 55c. per dozen. Cheese.—Old, large, 15c.; twins, 15c. Honey.—Extracted, 10c. to 11c.; combs, \$2.50 to \$3.

Beans.—Imported, hand-picked, \$2.35 per bushel; Canadians, \$2.35, and primes, \$2 per bushel.

Potatoes.—Ontario potatoes are worth from 80c. to 85c.; New Brunswick, 90c. to \$1.

Poultry.—Turkeys, dressed, 21c. to 22c.; geese, 12c.; ducks, 15c. to 17c.; chickens, 16c. to 17c.; hens, 12c.

HAY AND MILLFEED.

Hay.—Baled, car lots, No. 1, \$14 to \$14.50; No. 2, \$13 to \$13.50. Straw.—Baled, in car lots, \$8 to \$9 per ton.

Bran.—Manitoba bran, \$22 to \$23, in bags, track, Toronto, shorts, \$24 to \$25; Ontario bran, \$22 in bags; shorts, \$24; middlings, \$24.

TORONTO SEED MARKET.

Alsike, No. 1, per bushel, \$8.50 to \$9.25; alsike, No. 2, per bushel, \$7 to \$8; alsike, No. 3, per bushel, \$5 to \$5.50; timothy, No. 1 per bushel, \$2.75 to \$3.25; timothy, No. 2, per bushel, \$2 to \$2.50; red clover, per bushel, \$6.00 to \$7.00.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; city hides, 14c.; country hides, cured, 13c.; calf skins, per lb., 16c.; lamb skins and pelts, 60c. to 90c.; horse hair, 35c. to 38c.; horse hides, No. 1, \$3.50 to \$4; tallow, No. 1, per lb, 5c. to 7c.

FRUITS AND VEGETABLES.

Apples, No. 1 pies, \$4.50 to \$5; Greenings, \$3.50 to \$4; Baldwins, \$3.50 to \$4; Canadian onions, 75-lb. bags, \$2; cabbages, per case, \$1.25, and 65c. to 80c. per dozen; turnips, 40c. per bag; beets, 75c. per bag; carrots, 75c. per bag; parsnips, 80c. to 85c. per bag; Canadian celery, 45c. to 65c. per dozen.

Montreal.

Live Stock.—The cattle market was fairly steady, little or no choice stock arrived for the Christmas trade. The weather was favorable, being colder, and demand from butchers was fairly active. Considerable shipments still go on to the United States. Best steers brought 7c., but the bulk of the trade continued to be done at 6c. to 7c. per lb., including medium to good stock. Cows ranged from 4c. to 6c. per lb., and bulls at about 5c. to 6c. Canning stock sold as low as 3c. Sheep and lambs were not very plentiful, and as a consequence prices were quite firm. Demand was good, and sales of lambs were made at 8c. to 8c. per lb., while sheep were sold at 5c. to 5c. per lb. Selected hogs sold at 9c. to 9c. per lb., weighed off cars.

Horses.—Winter still holds off, and as a consequence trade in horses was light. Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350; light draft, 1,400 to 1,500 lbs., \$225 to \$300; broken-down, old animals, \$75 to \$125, and choicest saddle and carriage animals, \$350 to \$500 each.

Poultry.—The market for poultry was very firm indeed. Demand was active and offerings fairly large. Prices were unusually high. Dealers quoted turkeys at 20c. to 23c.; ducks, 17c. to 20c.; chickens, 15c. to 23c.; fowl and geese, 13c. to 15c. Live turkeys were quoted here at 19c. to 20c. per lb. Live chickens, 14c. to 16c.; live fowl, 11c. to 15c., and live geese, 14c. to 15c.

Dressed Hogs.—There was a fair demand for abattoir-dressed, fresh-killed hogs, at 13c. to 13c. per lb., while country-dressed were offering at 12c. to 13c. for choicest, and 12c. to 12c. for less desirable.

Potatoes.—The weather was more wintry, and as a consequence prices were firmer. Green Mountains were quoted at 85c. to 95c. per bag, ex track, in car lots, while Quebec varieties were about 75c. In a jobbing way, prices were 15c. to 20c. higher, ex store. Bags weigh 90 lbs.

Honey and Syrup.—White-clover comb was 15c. to 16c. per lb.; extracted, 10c. and to 11c.; dark comb, 13c. to 14c., and strained, 7c. to 8c. per lb. Tins of maple syrup sold at 9c. to 10c. per lb., while syrup in wood was 7c. to 8c., and maple sugar, 9c. to 10c. per lb.

Eggs.—Eggs were very scarce, and firm in price. Strictly fresh stock was 55c. to 60c. per dozen. Selected eggs sold at 37c. to 38c., while No. 1 candled were 33c. to 34c., and No. 2 candled sold at 26c. to 27c.

Butter.—The butter market was firmer than ever. Choice makes were 28c. to 29c. per lb., wholesale. Fine butter was 28c. to 28c., while second grades were 27c. to 27c. Dairy butter was firm, 27c. to 27c. per lb.

Grain.—There was little change in the price of oats. No. 2 Western Canada price of oats was quoted at 41c. to 42c. per bushel, ex store; No. 3, 40c. to 41c., while No. 3 yellow corn was 80c. per bushel, ex store, and No. 3 mixed was 78c., ex track. Ontario maiting barley was 65c. to 66c.

Flour.—Manitoba first patent flour was quoted at \$5.40 per barrel, in bags; second being \$4.90, and strong bakers' middlings, \$24.

\$4.70. Ontario winter-wheat flour was unchanged, at \$4.75 to \$5 for patents, and \$4.50 to \$4.60 per barrel, in wood, for straight rollers.

Millfeed.—Bran sold at \$21 per ton, and shorts at \$23, in bags, while middlings were \$26 including bags. Mouille was \$29 to \$31 per ton for pure, and \$27 to \$28 for mixed.

Hay.—Prices were unchanged. No. 1 pressed hay, car lots, Montreal, on track, was \$16 to \$17 per ton, while No. 2 extra was \$15 to \$15.50, and No. 2 \$14 to \$14.50 per ton, ex track.

Hides.—There was no change last week. Beef hides were 12c., 13c. and 14c. for Nos. 3, 2 and 1, respectively. Calf skins, \$1.10 each, with horse hides ranging from \$1.75 for No. 2, to \$2.50 each for No. 1. Tallow sold at 1c. to 3c. per lb. for rough, and 5c. to 6c. for rendered.

Buffalo.

Choice, handy cattle, were popular at all markets the past week. Trade has ruled weak on the heavier steers, but the handy ones have been in good, keen demand. At Buffalo, receipts for the week were 6,375, as against 6,000 for the previous week and 7,125 a year ago. Canadian supply was not large, there being not over fifty cars. Something like 92,500 Canadians have landed in Buffalo since the first of the year for sale. This does not include through cattle from the Dominion. Offerings have included practically all kinds, from the prime, weighty steer, to the canner. The past week, weighty Canadian steers sold up to \$8.75, best price paid, excepting for a car of very fancy Ohio steers, intended for Christmas trade, which brought \$9.15. Canadians from the feed lots are coming now, and show heavy corn feed, and are not discriminated against. These long-fed Canadians are killing out up to 57 to 58 per cent., which is a good, strong percentage. Some time back there were plenty of the heavier, "hippy" kinds of Canadian heifers, and killers complained that some of them were a little too heavy, and were badly hooked and bruised in shipment, and after the price was taken off of these, there was a let-up on them, and the past week there were not enough of these handy heifers to meet the demands. Anything handy, and with a wealth of fat, sells readily, and indications are that they will continue to be in good, strong demand right along. Even the East, that takes a lot of weighty steers, finds that the call is stronger for the handy cuts, rather than the big ones. Stockers and feeders are showing some weakness by reason of the lateness of the season, and were 10c. to 15c. lower, the West showing about the same decline. Heavy bulls were punished somewhat in prices, but handy, fat ones, held to a steady level, while the demand remains strong for best milkers and forward springers, medium and common ones ruling slow and weak. Prices: Best Canadian steers, 1,450 lbs., \$8.25 to \$8.75; best Canadian steers, 1,150 to 1,250 lbs., \$7.25 to \$7.75; Choice, handy steers, 1,000 to 1,100 lbs., \$8 to \$8.50; fair to good steers, 1,000 to 1,100 lbs., \$7.25 to \$7.75; best cows, \$6.50 to \$7; butcher cows, \$5.25 to \$5.75; trimmers, \$3.25 to \$3.75; best heifers, \$7.15 to \$7.60; medium butcher heifers, \$6.35 to \$6.85; common, light heifers, \$4 to \$4.25; best feeding steers, dehorned, \$7.25 to \$7.50; fancy stock steers, \$6.50; best stock steers, \$5.75 to \$6.25; common, light, stock steers, \$5.25 to \$5.50; best heavy bulls, \$6.75 to \$7.25; best butcher bulls, \$6.50 to \$7; bologna bulls, \$5.75 to \$6.25; stock bulls, common to good, \$5 to \$6.

Hogs.—Very uniform market all the week long. Four days out of the first five, bulk of hogs were on an \$8 basis, and at po time during the week did packers land any below \$7.90. Few scattering sales at \$8.05. Feature of market was on pigs, these grades for first half of week commanding top prices, ranging from \$8 to \$8.10. Pig market closed up weak for the week's close, selling from \$7.75 to \$8; roughs, \$7.25 to \$7.50; stags, \$6.50 to \$7. Receipts, 56,000; against 53,600 the previous week, and 47,200 for the same week last year.

Sheep and Lambs.—Generally an \$8.25 market for top lambs first half of the week, trade for closing days being a lit-

tle stronger, tops moving Friday from \$8.25 to \$8.35, with some reaching \$8.40. Heavy lambs continue slow, the hundred-pound kinds selling around cull prices, ranging from \$7.50 to \$8. Sheep were strong; top wethers, \$5.75; mixed sheep, \$5.25 to \$5.50; ewes, \$5 to \$5.25; cull sheep, \$4 down. Receipts for the week were 38,400; previous week, 36,400; year ago, 36,000.

Calves.—Range on top veals reached \$11.75 to \$12.50, it being a \$12.50 market for tops Friday. Culls generally \$10 down, some reaching \$10.50, and grassers \$5 to \$6. Load of Canadian calves on Friday, containing some heavy, fat calves, being little better than ones selling last week at \$6.25, and these were placed up around \$6.75. Runs for the week totalled 1,700; against 1,925 the previous week, and 1,300 a year ago.

Butter.—Creamery prints, 36c. to 37c.; creamery tub, 35c. to 36c.; dairy, fancy, 31c. to 32c.

Cheese.—17c. to 18c.

Eggs.—44c. to 45c.

Dressed Poultry.—Turkeys, 22c. to 25c.; fowls, 16c. to 17c.; chickens, 17c. to 18c.; ducks, 16c. to 20c.; geese, 20c. to 22c. Live poultry—Turkeys, 20c. to 22c.; ducks, 15c. to 17c.; geese, 14c. to 15c.

Chicago.

Cattle.—Beeves, \$6.60 to \$9.60; cows and heifers, \$3.40 to \$8.30; calves, \$7 to \$11.50.

Hogs.—Light, \$7.45 to \$7.80; mixed, \$7.55 to \$7.92; heavy, \$7.55 to \$7.92; rough, \$7.55 to \$7.65; pigs, \$6.25 to \$7.75.

Sheep and Lambs.—Sheep, native, \$4.40 to \$5.60; yearlings, \$5.50 to \$6.80; lambs, native, \$6.40 to \$8.

British Cattle Market.

Quotations were 13c. to 14c. per lb. for Irish steers and heifers.

Gossip.

BIRMINGHAM FAT-STOCK SHOW.

At the sixty-fifth annual fat-stock show at Birmingham, England, the first week in December, the grand champion beef animal was the Duke of Portland's pure-bred Aberdeen-Angus heifer, Beauty of Weibbeck, whose weight at two years and nine months was 15 cwt. 3 qrs. 13 lbs. She also took all of the three 100 guinea challenge cups, the reserve being C. F. Raphael's cross-bred black heifer, Ruth of Shenley, the Norwich champion, sired by a Shorthorn bull, and out of an Aberdeen-Angus cow. The heaviest beast in the show was a cross-bred blue-gray steer, a Shorthorn-Aberdeen-Angus, which weighed 21 cwt. 2 qrs. 16 lbs., when three years and seven months old.

The Cooper challenge cup for the best pen of sheep, went to W. M. Casalet's first-prize pen of Southdown fat wethers, not over twenty-three months old, the reserve being Donald Nicholl's first-prize pen of Hampshire fat wether lambs.

The pig championship went to a cross-bred pair, Middle White and Berkshire.

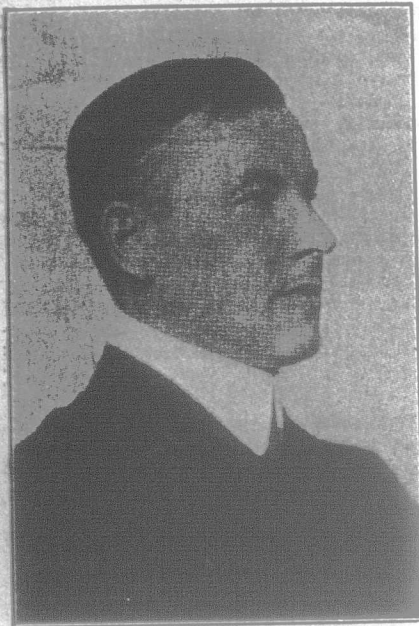
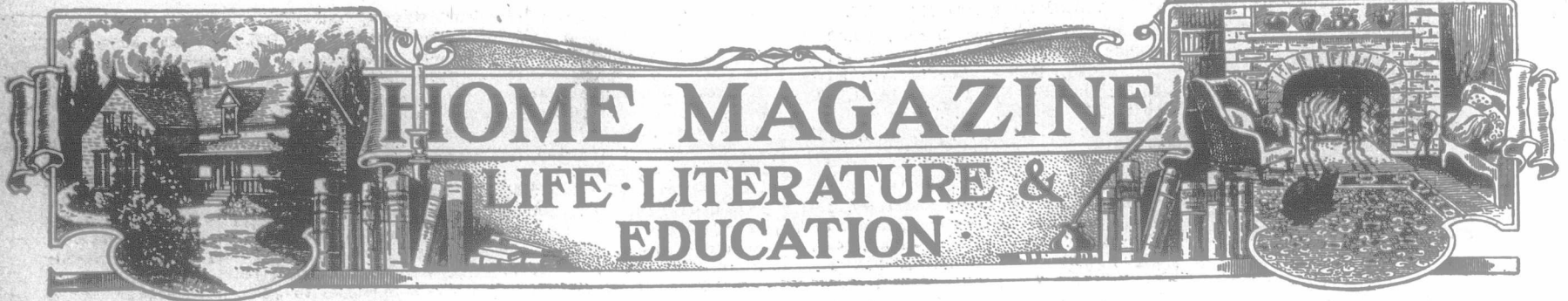
Questions and Answers.

Miscellaneous.

A Trespassing Bull.

A has a pasture adjoining B. In B's pasture he allowed a two-year-old bull to run on free range. The animal is an inferior one. He comes into A's pasture while a pure-bred cow was in heat. She bred to him, and 's in calf. A sent word by a neighbor for B to keep his animal at home. In a few weeks after he crosses the fence again, and another cow gets in calf. A has sent word to B to come and settle for damages—which he never paid any need to.

- 1. Can A collect damages?
2. What steps must he take to do so?
Ontario. R. L.
Ans.—1. It is probable that he can.
2. He should place the matter in the hands of a solicitor, with instructions to write B for payment of the damages—stating amount of same—and to follow the letter up, if necessary, by suit in the Division Court.



Robert W. Service.

My Madonna.

By Robert W. Service.

I hailed me a woman from the street,
Shameless, but, oh, so fair!
I bade her sit in the model's seat,
And I painted her sitting there.
I hid all trace of her heart unclean;
I painted a babe at her breast;
I painted her as she might have been
If the worst had been the best.
She laughed at my picture and went
away,
Then came with a knowing nod,
A connoisseur, and I heard him say:
"Tis Mary, the Mother of God."
So I painted a halo around her hair,
And I sold her and took my fee,
And she hangs in the Church of Saint
Hilaire,
Where you and all may see.

Little Trips Among the Eminent.

Canadian Poets.

By Clayton Duff.

THE SOURDOUGH AND THE HABITANT.

Ask a group of Canadians off-hand to name a Canadian poet, and nine out of ten would be likely to say, "Robert W. Service." If you asked for the name of a Canadian poem, the same proportion would probably answer, "The Cremation of Sam McGee." Robert W. Service writes poetry that sells like popular fiction, and it seems hardly necessary to recount that he was a young man from Glasgow, who came to Canada and worked in a bank, and, being stationed at White Horse, began putting down his impressions of "The Land God Forgot," in verse with a Kipling flavor for the entertainment of his friends. The ballads came to the attention of a Toronto publisher, and the result was one of the sensations of Canadian literature. "Songs of a Sourdough" has been followed by two similar volumes of verse, and a novel, "The Trail of Ninety-Eight," and Service has no time now to count other people's money. This last summer he spent in the Balkans gathering more grim impressions of life, and the newspapers tell us he is going to marry a Parisian lady, so we may expect his next volume to be either on love or war—probably both.

A good deal of controversy has been aroused by Service's poetry. It has been attacked both by the critics who resent

the slight upon the more delicate, spiritual and refined body of Canadian poetry that seems to be implied by the popular success of the Yukon poet; and by those readers to whom his profanity, sensationalism, and occasional vulgarity, are repellent. But the field Service opened up was a fresh one, and the bigness, grimness and crudeness of the life there seemed to find its natural expression in his style, where "the sin and the blaze," and the peace and the pain, and the glamor and despair, are laid on in "chunks." It is a land of extremes, and Service is a poet of extremes. Some of these rhymes are nothing but rag-time, and by the end of the book we have grown a little weary of vice below zero. But most of us find his directness and vigor stimulating. There is a contagious snap and swing to most of the poems, and one good reason for their popularity, I fancy, is the ease with which they can be read aloud. Talk as one will of Service's faults, few of us fail to respond to a piece of description like this from "The Spell of the Yukon":

"I've stood in some mighty-mouthed hollow,
That's plumb-full of hush to the brim;
I've watched the big, husky sun wallow
In crimson and gold and grow dim,
Till the moon set the pearly peaks gleaming,
And the stars tumbled out, neck and crop;
And I've thought that I surely was dreaming,
With the peace o' the world piled on top.

"The summer—no sweeter was ever;
The sunny woods all a-thrill;
The greyling a-leap in the river,
The bighorn asleep on the hill,
The strong life that never knows harness;
The wilds where the caribou call;
The freshness, the freedom, the farness—
O, God! how I'm stuck on it all.

"The winter! the brightness that blinds you,
The white land locked tight as a drum,
The cold fear that follows and finds you,
The silence that bludgeons you dumb,
The snows that are older than history,
The woods where the weird shadows slant;
The stillness, the moonlight, the mystery,
I've bade 'em good-bye—but I can't.

"There's gold, and its haunting and haunting;
It's luring me on as of old;
Yet it isn't the gold that I'm wanting,
So much as just finding the gold.
It's the great, big, broad land 'way up yonder,
It's the forests where silence has lease;
It's the beauty that thrills me with wonder,
It's the stillness that fills me with peace."

DR. DRUMMOND.

Rivalling Service in popularity, Dr. Drummond has a more assured place in the affections of his readers. He has been called "The pathfinder of a new land of song," and what he has done in making English-speaking Canadians familiar with the customs and characteristics of their French countrymen has been of national as well as literary importance. Racial and religious prejudices melt away as Dr. Drummond portrays the quaint, humorous, and lovable types of the "habitants," or rural dwellers of Quebec. Eminent statesmen have claimed the credit of establishing racial harmony in Canada, but Drummond should share in that distinction.

While not a Canadian by birth, having been born in County Leitrim, Ireland, in 1854, William Henry Drummond came to

this country in his boyhood, and was educated at the Montreal High School and Bishop's College, Lennoxville, Quebec. He practiced medicine in Montreal for many years, and his patients were benefited as much by his genial, wholesome personality, as by his prescriptions. An ardent sportsman and lover of outdoor life, it was while on a prospecting trip in New Ontario that he contracted the illness which resulted in his death—a loss to our literature that caused widespread regret, for his name was a household word in Canada.

During his lifetime, Drummond published several collections of poetry, "The Habitant," "The Voyageur," and "Johnny Corbeau," and since his death a complete edition of his poems in one volume has been issued by G. P. Putnam's Sons, New York. The character of the habitant, ingenuous, unworldly, full of unconscious humor, is portrayed in these poems with affectionate insight. His nature is childlike, even in its failings, which arouse amusement rather than indignation. Who could help growing more gay and mellow after reading such a poem as "The Habitant," with its quaint philosophy and its picture of rustic contentment? While his humorous poems are justly famous, the most perfect expression of the poet's art, it seems to me, occurs in some of his shorter lyrics, such as "Leetle Lac Grenier," "De Snowbird," "De Bell of St. Michel," which are marked by more earnestness and tenderness of feeling, more grace of form, than many of his longer poems. One of the most charming is "Little Bateese":

"You bad leetle boy, not moche you care,
How busy you're kipin' your poor gran-pere
Trying to stop you ev'ry day
Chasin' de hen aroun' de hay—
W'y don't you geev' dem a chance to lay?"

Leetle Bateese!
"Off on de fiel' you foller de plough,
Den w'en you're tired you scare de cow,
Sickkn' de dog till dey jomp de wall,
So de milk ain't good for not'in at all—
An' you're only five an' a half dis fall,

Leetle Bateese!
"Too sleepy for sayin' de pray-er to-night?
Never min', I s'pose it'll be all right
Say dem to-morrow—ah, dere he go!
Fas' asleep in a minute or so—
An' he'll stay lak dat till de rooster crow,

Leetle Bateese!
"Den wake us up right away toute suite
Lookin' for somet'ing more to eat,
Makin' me tink of dem long-leg crane,
Soon as dey swaller dey start again.
I wonder your stomach don't get no pain,

Leetle Bateese!
"But see heem now lyin' dere in bed,
Look at de arm onderneat' hees head;
If he grow lak dat till he's twenty year
I bet he'll be stronger dan Louis Cyr,
An' beat all de voyageurs leevin' here,

Leetle Bateese!
"Jus' feel de muscie along hees back,
Won't geev' heem moche bodder for carry pack
On de long portage, any size canoe,
Dere's not many ting dat boy won't do,
For he's got double joint on hees body, too,

Leetle Bateese!
"But Leetle Bateese! please don't forget
We rader your stay in de small boy yet,
So chaise de chicken an' mak' dem scare,
An' do w'at you lak wit' your ole gran-pere,
For w'en you're beeg feller he won't be dere—

Leetle Bateese!"

Travel Notes.

(From Helen's Diary.)

Munich, Oct. 31, 1913.

The Prince Regent of Bavaria, lifted his hat to me to-day, and smiled upon me graciously. I suppose he thought I was a loyal subject. It happened in this way: As I was passing the palace I noticed a couple of old, white-haired gentlemen, and an old lady, chatting together just inside the gate. One of the old gentlemen bowed to me. The old lady also bowed. Then I realized that it was the Prince Regent and his wife. I had seen him many times before, but always in grand military regalia, attended by much pomp and ceremony; but this particular time he was in plain civilian attire. I dawdled along the street to see what would happen, and in a few minutes the Prince Regent and his wife came out together, arm-in-arm, and strolled along looking just like an affectionate old German couple out for a morning walk. He was dressed in a plain black suit, and did not even wear gloves. He looked as if he might have been anybody's nice old grandfather. Never having seen royalty disporting itself in this democratic fashion before, I was seized with a sudden desire to follow them, for the same reason, I suppose, that a small boy trails after a circus procession. And it was quite as exciting. For an hour and a half I shadowed the royal couple—through the streets to the English Garden (the largest park in Munich), through the park and out into the street again, and back to the garden wall in the rear of the palace, where the Prince Regent pulled a key from his pocket and let himself in. While he was out walking, every person who recognized him, bowed respectfully, and with great formality. The men side-stepped, clicked their heels together, raised their hats with a great sweep of the arm, and stood uncovered till he passed; the women made elaborate court bows. Some of the poor old working women carrying big bundles, had a hard time of it bending their knees, but they did their best. In the English Garden, the Prince Regent turned off into a quiet path, where he had a chance to give his left arm a rest, for up to this time he had been bowing almost continuously. I wonder he has any back hair left, for during this walk he lifted his hat three hundred times. I counted. The bowing muscles of royalty must be abnormally developed, for they are exercised so much. On this sequestered path in the English Garden there wasn't a person in sight ahead, and I rather hesitated about following, but a man with a white dog, and a man with a green hat, were meandering along behind me, so I kept on. These two men seemed to be doing the same thing I was.

The day was lovely, and the park a dream of autumnal beauty. Nursemaids were out by dozens, and children were scampering all over the paths. (In Germany it is "verboten" to go on the grass.) The Prince Regent smiled and chatted with some of the children, and patted their curly pates in a nice old grandfatherly sort of way. A girl's school, one hundred strong, came along, marching two by two. As soon as they sighted the Prince Regent, they formed into a line along the side of the path and gave him a grand kowtow as he passed. On Nursemaid's Row the Prince Regent met an elderly gentleman with whom he shook hands and had a long conversation. They talked so long that I retired to a bench to rest, and the man with the white dog, and the man with the green hat disappeared. But I was determined to see royalty home, and tagged on after them out into the street, where they had to go out into the mid-

...le of the road to get past an immovable group of squabbling boys that blocked the path.

The man with the green hat had reappeared, and I began to think he was following for some special purpose. I wondered if he was an anarchist, or a lunatic, or any other kind of a freak. Up till this time he had been walking behind me, but I feigned an interest in a jewelry-store window until he got ahead, and then I watched him, too. It was quite exciting. He kept at a distance of half a block behind the Prince Regent, and his object seemed to be to see, but not to be seen. He tracked him to the garden gate and hid behind some shrubbery while the Prince Regent was letting himself in, and then he started off at a brisk pace in an opposite direction, and I, having a suspicion by this time that he was a palace official sent out to keep an eye on the royal pair during their unofficial stroll, trailed after him to verify my conviction. He went straight to the main entrance of the palace, and the sentries on guard gave him a military salute as he passed in.

I feel quite qualified now to take a position on the Pinkerton detective force. The Prince Regent is to be made King of Bavaria in a few days (from time of writing). The hereditary king has been insane for forty years, and as he is quite incurable, and is the last of his line, the Crown is to be transferred to the present Prince Regent, who will become Ludwig III. There will probably be a military display, although that is not a novelty in Munich. Soldiers are very much in evidence here. They seem to be always marching some place. Every day at noon there is a military band concert in the court of the City Hall, and four times a week at the same hour, a band plays in the Feldherren Halle (Hall of Generals), which is a copy of the famous Loggia dia Lanzi, in Florence. This is a very popular gathering-place, especially on Sunday mornings after church. It is very gay then. The officers are out in their most glittering uniforms, the University students are strutting around with their gaudy caps, and the women are befattered to the limit.

Das Tragen von Hutnadeln mit unverwahrten Spitzen ist

VERBOTEN

Die nichtbeachtung diesen Vorschriften hat den Ausschluss von der Fahrt zur Folge.

This sign is conspicuously placed in every street-car in Munich. It means that the wearing of unprotected hat-pins in street-cars is strictly forbidden by law, and that the conductor has the right to put any person off the car who refuses to comply with the regulations.

Ignorance of this rule sometimes leads to very embarrassing situations as I know by experience. I saw a lady the other day getting her first lesson in German hat-pin law. She was a pale-faced American, with huge diamond earrings and expensive, up-to-date clothes. Her fashionably small hat was skewered on with ridiculously long hat-pins, the point of each one projecting far enough to blind a person for life if one happened to run against them. The man sitting next her noticed them at once, and growled out something in German.

She took no notice of him. He growled again, louder, and more ferociously.

She moved away from him a couple of inches and gazed persistently in the opposite direction.

The man complained to the conductor, who hurried up the aisle, planted himself in front of the lady, and reeled off a yard or two of German, pointing frequently to her hat.

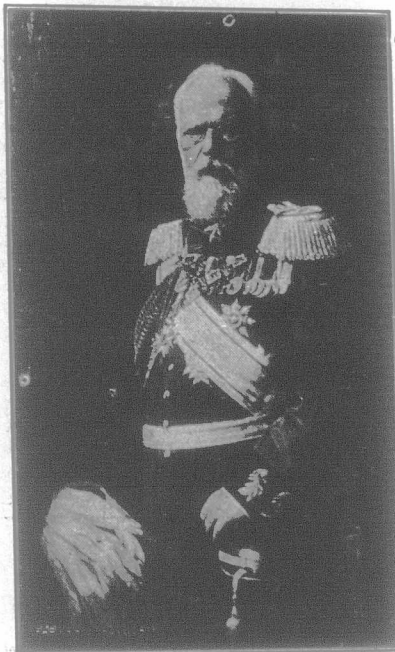
She flushed scarlet, and said, nervously, "I don't understand."

The passengers began to snicker. An Englishwoman sitting opposite, leaned over and said: "He says you must take out your hat-pins."

"Why?" asked the lady, looking very defiant.

"It's against the law to wear them in cars unless the points are covered."

"Oh!" gasped the lady, "and MUST I take them out?"



King Ludwig III, of Bavaria, Who was recently made king.

Just then the conductor pulled out a couple of shields from his pocket and clapped them on the hat-pin points.

"Gif's mir ven you out go," he said. The American lady looked puzzled.

"He says," said the Englishwoman, "to give them back to him when you leave the car, but you better give him ten pfennigs and keep them, for you will have the same experience in the next street-car you ride in."

The hat-pin rule is also enforced in the art galleries. The guard at the door casts a careful eye on your hat as you enter, and if there are any visible points, he gives you corks to stick on them. It does look very funny to see gorgeously-attired women sailing around the rooms with cork-trimmed hats, but it certainly saves the valuable art treasures from lots of scratches.

The Germans are a very practical people, and have a great many sensible laws that other countries might well copy. Their cities are the cleanest, most beautiful, and best governed in the world. The laws and regulations seemed to be treated with respect. I'm sure that if there was a law in America about keeping off the grass in the city parks, no one would ever dream of paying any attention to it. But in Germany it is different. I sometimes wonder what the Germans would do if it was "verboten" (forbidden) to get fat. Would there be a revolution, or would they calmly submit and become a nation of slabs instead of pillows? In the making of their laws, there is one thing they seem to

have forgotten, and that is a law against bad air. It seems strange that a nation that lives so much out of doors, can stand such vile air indoors.

A friend of ours placed her little daughter in a school in Munich. She slept in a room with seven other girls and a teacher, and they were not allowed to have the window open at night without special permission.

A German woman told me it was much more expensive to run a pension frequented by Americans, because they kept their windows open so much it cost more to keep the house warm.

Bismarck is quoted as saying that there was only one thing a German was afraid of, and that was a draft. Any person who has ever travelled in the cars with Germans will readily endorse that statement. And apropos of this there is a story told:

Two old ladies were in an omnibus in Paris. One old lady was English and the other German. They were squabbling about the window. One wanted it open; the other wanted it shut.

Said the Englishwoman—"If you shut the window I shall die from the heat."

Said the Germanwoman—"But if you open the window I shall catch a fearful cold, which will result in my death."

The conductor could do nothing to calm them.

At last a Frenchman called out to the embarrassed conductor:

"Open the window that the one may die; then shut it that the other may die, also; and then perhaps we will have some peace."

November 5th.

[The Prince Regent has been declared King Ludwig III of Bavaria, and the city is all a-flutter with blue-and-white flags, and streamers.]

Women's Public Work in Canada.

While the memory of the recent "Women's Parliament," as some have called the Convention of the Women's Institute is still fresh, may be an opportune time to present the following papers. The first, written by Miss Carling, daughter of the late Sir John Carling, of London, Ont., was read at the National Council's Annual Convention in Montreal this year. It will explain itself.

The second was sent us many months ago, by Miss Agnes Kingston, who has since gone to the Beyond, and is, we may believe, finding new work suited to her talents in that Land of great and happy adventure. Miss Kingston occasionally wrote for the Canadian press, and her paper given to-day is prefaced by a few lines written by a dear friend who knew all of her great worth.



Prince Luitpold, of Bavaria, The King's grandson.

Farming for Women in Canada. Madame President and Ladies of the Council:

Those of you who attended the meetings of the Council in Montreal last spring, probably heard the discussion on agriculture for women, conducted by Mrs. L. A. Hamilton, and a short paper on the subject, which I wrote at the instigation of Mrs. Boomer.

There have been many arguments for and against women taking up farming, but when we consider that half the population of our country is agricultural, and that there are 886 women to every 1,000 men, that the total value of farm products of all kinds consumed and exported brings a greater revenue than any of the other important natural resources, viz., fisheries, forests, and mines, it is surely time to wake up and think what farming in this country will mean in a few years, and what part our women will take in its advancement.

A committee was appointed by the Dominion Government a few years ago to inquire into the causes of the failures to make farming a success in a country where so much was in its favor. The report was, that it was not owing to climatic conditions or any other cause, but to the hap-hazard and faulty methods used. Since that time agricultural colleges and experimental farms have been established, and they have done much to educate and encourage the farmers to make farming a success. However, there is still much room for im-



The Feldherrenhalle, Munich. A military band plays here at noon four times a week.

provement, and especially among the women.

Our ambition is to educate all women to a certain extent in agriculture, and to establish small schools in every country to thoroughly train all women who are anxious to take up farming as a profession before they try it in a haphazard way and lose all their money and become discouraged, as well as discouraging others. We also aim to make it so attractive that more women will be induced to take it up.

One of the great drawbacks to success is that as the Canadian law stands today, no unmarried woman may receive a homestead grant from the Government, but any man who applies is provided with one hundred and sixty acres, with the privilege of obtaining more at a merely nominal price. In an effort to change this state of affairs, a monster petition of over 11,000 men voters in Manitoba was sent to the Minister of the Interior, but we are now told that this petition was received and filed. It is on this account that the tide of immigration of women is directed to Australia instead of Canada. We want women of education and some money to come to this country with a will to work.

Before closing, I must tell you what Mrs. Hamilton has been doing this summer—on their large farm, near Lorne Park, Toronto. Hitherto they, as well as others, have found it very difficult to obtain berry-pickers during the berry season. Mrs. Hamilton put her wits together to solve the question. She conceived the idea of making a comfortable woman's hostel out of one of their farm buildings and managing it herself. She then sent word to the large department stores and offices that any young women desiring a holiday and outing, and who were willing to pay \$3 a week for board, and pick berries, would be paid so much a quart for the picking. It worked like a charm, and Mrs. Hamilton not only had the satisfaction of having her berries picked, and of making her scheme pay, but gave a cheap and healthful holiday.

FARMING FOR WOMEN IN CANADA.

[Copy of Miss Carling's paper, read and heartily endorsed at the annual meeting of the National Council of Women, held in Montreal in 1918.]

The London Times and the New York Herald have lately been strongly advocating "Farming for Women in the Colonies," as a means of livelihood, and the time has come in Canada when the subject should receive more consideration than it has in former years. Thousands of women are coming into our country with some money to invest and the will to work, and if farming can be made to pay, especially small farming, which is so much healthier than factory life or office life, let us ask our Provincial Governments to help, and our societies to help to make this industry a success.

Without practical experience in the beginning, failures would probably be the result, and consequently discouragement to others who contemplated taking up the work. To obviate this, may I suggest:

1. That the Provincial Government should be asked to set aside a certain portion of the land of the Agricultural College grounds and build thereon a medium-sized farmhouse on each, planned as models, and used as schools of practical small farming for women. A competent teacher from one of the women's agricultural colleges in England could be chosen for a superintendent, and the number of pupils limited to half a dozen at a time, who in their turn, when they have graduated, could become superintendents of small farming schools throughout the Provinces. The object in having the farmhouses, instead of a college building, would be, to see how half a dozen women could really make a farm pay before encouraging others to take it up. The pupils would have the advantage of studying dairy work, the keeping of poultry, bees, etc., the study of market gardening, and floral culture, lectures in domestic science as applied to farm-life, practical lectures on the properties of food, and also hygiene lectures by trained nurses or competent teachers.

2. I should suggest that great care should be taken in the choice of superintendents, that they should not only be competent teachers, but gentlewomen by nature and breeding. Their influence would be great among their pupils, who

might in turn become teachers. The one idea should not only be to make small farming remunerative, but make the farmhouse and home as attractive, simple, and refined as possible, spotlessly clean, fresh, well aired, and bringing science to bear upon having the work well done without unnecessary labor. The good to the country would be incalculable.

3. Dairy farms managed by competent women for supplying milk for children and invalids should be remunerative. At the agricultural colleges there would be great opportunities for learning how to choose the best cattle, and the newest and most approved manner of managing a dairy.



The Late Miss Agnes Kingston, of Watford.

Whose paper, entitled "Home," appears in this issue.

[Miss Kingston will be long remembered for her often-quoted Canadian sentiment, which appeared in a magazine some years ago, and was re-published in the Year-book of the Women's Press Club of Canada.

"My love for Canada is bound up with my respect for the commandment, 'Honor thy father and thy mother.' My father and my mother hewed out a home for themselves in Canada; they are laid at rest here, and I pray that my days may be long in the land."]

Home.

[A paper written for the Women's Institute, by the late Miss Agnes Kingston.]

Let me first call to mind the Scripture, "Which of you, intending to build a tower, sitteth not down first and counteth the cost, whether he have sufficient to finish it; lest haply after he hath laid the foundation and is not able to finish it, all that behold begin to mock him, saying, This man began to build, and was not able to finish."

Building a home—How many failures are made in building too extensively. It often makes life a burden to all concerned in that home; because our neighbors may be well-to-do and can afford to have all the luxuries of life is no reason that one should so far forget and get one's self involved so that he may never retrieve himself.

Home is an institution of God Himself; it is His ideal of the life of humanity; upon it, as base and models he builds up nations. A home is not an isolated fragment of life, it is an integral part of society. Every home has its influence for good or evil upon humanity at large. Its sanctity, its honor, its importance, is the care of our Creator.

The foundation of a home, I think, is sound moral principle. Let me say I do not believe there are impregnable good principles that are not established on religion as a basis. The heart is so deceitful, and temptations are so strong, that unless the soul is braced with religious principle, it is not secure of withstanding the onset of the world, the flesh, and the devil. The true ideal of the home, then, is its inception in two who are Christians, and who have a

oneness of religious belief. True, there are happy homes where they hold different dogmas, but we are speaking of the best that can be brought together for the founding of a model home, and we say first a oneness of religious principle. Religious principle which takes the, "Thus saith the Lord," as an ultimatum, is a family anchorage not on shifting sands.

How important is every home! What a tremendous responsibility surrounds its founding. How needful to count the cost.

Let us see that we live within our income. We should be prepared, like the wise woman in Proverbs, to look well to the ways of our household. To look at them understandingly, one should know how everything should be done, even though we may not have to do it ourselves. If one relies on telling help to do work, and does not know how to do it one's self, it is likely to be poorly done. To be sure, there will be waste somewhere.

Streams do not rise higher than their source, and first-rate housekeeping is secured only where there is a first-rate housekeeper at the head of affairs, although she may not personally perform any of the labor. A true ability for housekeeping—a mastery knowledge of it—is one of the finest capitals a woman can bring into a marriage partnership. Some may sneer at housekeeping as being vulgar, common knowledge. Housekeeping is not vulgar; it is a fine art. It grasps with one hand beauty, with the other utility; it has its harmonies like music, and its order like the stars in their courses. I do not mean the good housekeeping which exhibits itself in occasional entertainments or a handsome parlor, but the good housekeeping which extends from attic to cellar, and through every hour in the year. Housekeeping embraces a very large part of our home duties, and we should all feel that nothing is too good and beautiful to be laid on the altar of home. It is not essential to be a learned scholar to be a good housekeeper, but wherever a woman is a sound scholar, she ought to be, therefore, the finer housekeeper. Reaching towards perfection in any one thing should lift us higher in all things. It should beget a habit of application and thoroughness. Some scoff at science in housekeeping, but let me tell you, scientific knowledge is required, and we often use science imitatively, not knowing that science is concerned. This reminds me of a story of Nora, an Irish girl. The mistress said, "Nora, your salad is not crisp; it seems wilted; did you have it in water?" "Faith, it was floatin' in the pan better nor half an hour, be that token some lies there yet," said Nora. The lady looked, and it was there, but in picking the leaves from the stem, she had laid them all face down. She then said, "Nora, you must cover the leaves with water, or put them bottom-side down." "And why will I do that?" said Nora. "Because they have no moutns on the upper surface to drink the water," she was told. "If you say so, I'll put them so," said Nora, "but it's not meself iver saw a mouth in a salad leaf, here nor ould Ireland, where everything is made right." So that we see that botanical knowledge does not come amiss in the kitchen. Cultivate intelligence in the home. Culture of beauty is of immense value in a home. The beauty may be extremely simple and inexpensive. A family who are housekeepers are an inexpensive family. Sons and daughters do not waste their money at home. They are tempted into rash outlays when in the company of strangers, hanging about public places, and striving to vie with those who have either no need of saving, or honest desire to do so. We hear so much complaint that farmers' sons and daughters do not want to stay at home. They "hate the farm." The girls would rather be dressmakers or store clerks than be at home helping their mothers making butter, bread, etc., and the sons want to try their fortunes in the city. The parents find themselves, when their children are old enough to be efficient help, left to hired help, who have little care to aid them in making and saving, who are no company indoors, and, meanwhile the parental heart is burdened with fears and anxieties for the absent ones, and possibly the parental purse is burdened with their business failures. We shall have constantly recurring "panics, and

crashes, and hard times," until people learn that the tilling of the soil is the true source of wealth; that golden corn above the ground is really of more value to the country than the gold in the earth. When, instead of our rural population crowding to the cities in a mad zeal for speculation and hasty fortunes, when every acre of land is made to produce to its fullest capacity, then we shall be a solidly wealthy people, then great financial convulsions and crises will be unknown. If the population which is now swarming in the cities and towns in poverty and idleness would pour out into the country, filling it so that land must be worked, then we would find a reign of plenty, and all our present beggars might be on horseback; at least while they were tilling their fields and driving their market-wagons. Instead of the rush to the country, the rush is away from it. It may be that one reason of that restless haste to leave the farm is owing to the neglect of making the farm and farm home attractive. What a stay to a child in all his life, the memory of a home beautiful, upright, and loving! And by beautiful, I do not mean the beauty which is created by money in velvet carpets, rosewood furniture, fine ornaments, and pictures. Those are all very well when they fall to our lot, but the beauty which I mean can be created anywhere, and out of almost anything, by simple, good taste. What an anchorage for good faith and virtue is the love of an honest, pure home.

The New Public Health.

"The Farmer's Advocate" Bureau of Public Health Information.

QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by the Institute of Public Health.—(The Public Health Faculty of Western University, London, Ontario.)

[Questions should be addressed: "New Public Health, care of 'The Farmer's Advocate,' London, Ont." Private questions, accompanied by a stamped, self-addressed envelope, will receive private answers. Medical treatment or diagnosis for individual cases cannot be prescribed.]

Living out of Doors and Sleeping out of Doors.

There is no doubt that the average physical development and enjoyment of physical life tends to be greater in the outdoor worker than in the indoor worker. He whose muscular development is good, who eats well and sleeps soundly, certainly gets more satisfaction from his body, is more efficient in his work, and lives longer and better, other things being equal, than the man with flabby muscles, poor appetite, and a short, light, restless sleep. True, the ideal body is that of which the owner is unconscious, the body that does what he wants without groaning or complaining like an ill-kept machine. Therefore, most people who have high physical development, who eat well and sleep well, who are, in brief, "unconscious of their bodies," do not appreciate their blessings at all on account of that very "unconsciousness." These are the bodily conditions of the outdoor man, but very often the outdoor man is dissatisfied with his work and wants to go indoors because he can make more money or see more people or dress more delicately, or in some way "enjoy life" from a physical standpoint more than he does in his outdoor work. The result is that he sacrifices the unrecognized physical advantages he has out of doors for the alleged physical advantages or enjoyments of the indoor life. One of the most striking examples of this on a large scale is the drift from the rural districts to the cities. True, the time was once when the mental life of the rural districts was almost blank, when the farmer, although of necessity a first-class animal physically as compared with the city man, yet had nothing to exercise or occupy his mind outside of his daily work as the city man had. Things have changed. The fierce com-

entitled, "Pop Corn for the Home." In it the usefulness of pop corn as a nutritious breakfast food is suggested, also its cultivation by the small farmer as a profitable marketable product. The popped corn, it is pointed out, may be served with cream and sugar, or the unpopped corn may be ground like coffee and eaten either raw with sugar and cream, or boiled with water like oatmeal.

The scholarship awards at Stanford University, Cal., administer a silent rebuke to American men students. Seven women students secured rank that admitted them to the Phi Beta Kappa Society, and only one man, a Japanese. "Fortunately," remarks the Independent, "the men still retain a safe superiority in football, and women should not be allowed to invade that field."

Maxim Gorky, the great Russian novelist, is expecting early death, says Literary Digest, and in his home on the Island of Capri is "feverishly working to finish his stint before the reaper takes him."

There are three clergymen in the United States, all Congregationalists, who have during the year held the position of Mayor of cities. They are W. J. Hindley, Mayor of Spokane, Wash.; Geo. R. Lunn, of Schenectady, N. Y., and Geo. A. Brock, of Lockport, N. Y.

Hens are able to make at least 23 different notes or cries, all of which convey distinct meanings, say Messrs Edward Carpenter and George Merrill, who have been investigating, in The Humanitarian. It is easy to see, now, how they can organize a general strike during December and January.

For some time pellagra, the deadly "hookworm" disease, has been believed to be started by a fungus on Indian corn. Recent research, however, has shown that it is transmitted from individual to individual by a fly, the "simulium." During the past few years pellagra has been gaining ground rapidly in the United States, some places in the south having to its credit more deaths than tuberculosis. Cases have been reported as far North as Illinois.

A movement meeting with general favor is under weigh in Great Britain with the object of creating a department of fine arts, with a Cabinet Minister at its head, in the Government. The object will be to guide, conserve and promote the artistic interests of the country.

A Christmas Present or New Year's Gift.

Boys and girls, here is a chance to get a Christmas box or New Year's gift for your mother—one that she will be delighted with. Send us the names of two new subscribers (at \$1.50 each for one year) and we will send you a pretty pink-flowered China tea-set, 21 pieces. This is a fine chance for you. See what you can do. When ordering be sure to give the name of the express office to which the set is to be sent.

Hope's Quiet Hour.

Provoke One Another.

Let us consider one another to provoke unto love and to good works.—Heb. x: 24.

I know the forwardness of your mind, for which I boast of you to them of Macedonia, that Achaia was ready a year ago; and your zeal hath provoked very many.—2 Cor. ix: 2.

Perhaps you thought the title of this sermonette very surprising; and yet I found it in the Bible, you see. Usually, when we speak of being provoked by anyone, we mean that our temper has lost its serenity. But you see it is possible to provoke others to love and good works. The zeal of the Christians in Corinth, and their readiness to send help to the poor in Jerusalem, provoked many others to follow their inspiring example.

In the R. V. the reading is more modern, declaring that emulation of their zeal had stirred very many of the Macedonian Christians.

In these days we hear a great deal about the infectious nature of evil. We are warned to avoid deadly germs of disease, and we are told of the widespread harm done by degrading pictures and literature; until it seems incredible that

personal experience. Not very long ago, "A Country Woman" sent a donation for some of my poor friends. Not knowing her name, I had to thank her through "The Farmer's Advocate," and her zeal has certainly provoked very many. Within the last week alone I received \$1.00 from a reader in Alberta; \$5.00 from one in Saskatchewan, and \$5.00 from one in Ontario—to provide Christ-

inspired by the beauty of unselfish faithfulness. He could not be false to his ideals—the ideals which he caught from other heroic lives. Simply, and as a matter of course, he wrote in his diary—a great legacy to the world—"I take this opportunity of saying that we have stuck to our companions to the last. In the case of Edgar Evans, when absolutely out of food and he lay insensible, the safety of the remainder seemed to demand his abandonment, but Providence mercifully removed him at this critical moment. He died a natural death, and we did not leave him till two hours after his death."

I say that good is more infectious than evil. Such a record must make millions of people try hard to be brave, patient, and faithful, in a time of severe testing, but if one of the party had proved himself a coward, his action would have injured few but himself—even if the world had ever heard of it, which is not likely. When someone committed suicide by jumping off a "skyscraper," some years ago, the example was followed by another miserable being or two; but it certainly did not "provoke very many."

We walk unharmed in the midst of millions of germs—though it is safer to live in pure air—and the crimes that are committed from time to time, in our midst, do not provoke many people to become criminals—though it is better for our souls' health to live in a respectable neighborhood. Of course, if we deliberately read poisonous literature, and choose degraded people for our boon companions, we must expect to become infected, and a menace to others. Disease of any kind is abnormal and unnatural, but even the healthiest people are not proof against infection—though I still believe that the soul, like the body, makes a strong fight for health, and that light is able to conquer darkness when the rival forces meet in battle.

A young man in college once "decorated" the walls of his room with pictures that were the reverse of elevating. His mother came to visit him, looked round the room, but made no comment on his poor taste in pictures. Instead, she remarked: "George, I see you are fond of pictures. If I send you one from home will you hang it up?"

He promised to do so, and in a few days Hoffman's head of the Boy Jesus arrived. It was hung up in almost the only vacant place, surrounded by trash. George looked at the pure face and could not endure the other pictures beside it, so they were all swept off the wall until the Boy-Christ hung alone. Then he bought a simple landscape and placed it on the opposite wall.

A few nights later, when some of his friends were in his study, one of them said, "Hello, George! Where are your pictures?"

He answered quietly, "I took them down. When I hung that picture it seemed as though the others didn't belong with it."

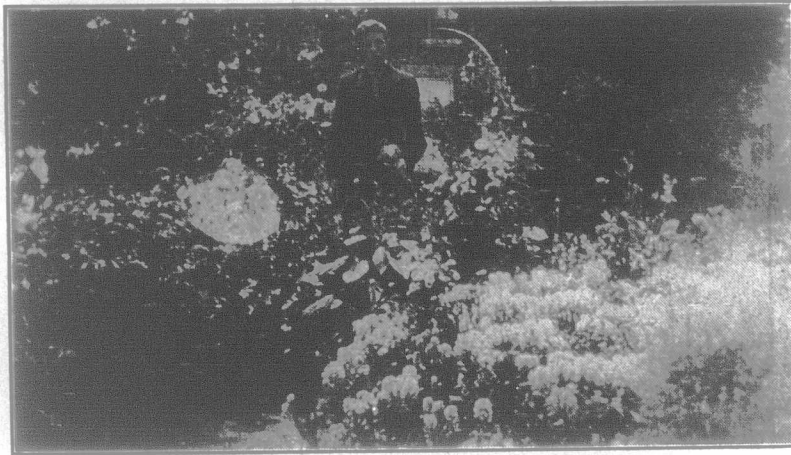
It is always so. When the vision of Christ is really seen in all the beauty of holiness, by any soul, evil desires and earthly ambitions slip away ashamed. The Great Example has provoked men and women to love and to good works ever since the first great Christmas Day, and the inspiration is more far-reaching every year.

About 35 years ago the "Christian Police Association,"—which has branches in Australia, India and Japan, as well as in this country,—was started in Old London. This is the romantic story of its beginning:

Miss Katharine Gurney was returning from church one Sunday morning, when the idea struck her that she was doing very little personally to advance Christianity—though she gave generously to various charities—and she determined that she would waste no further time, but would begin upon the first person she met.

This person was a policeman, and she nervously began to talk to the startled official. From this conversation grew an association which has done widespread good among policemen in England and elsewhere. Miss Gurney is still at its head, and her zeal has provoked many to help in the work.

Can you do anything to help those around you? A lad once had five little cakes of barley-bread, and thousands of people needed food. What were they among so many? In his hands they were as nothing; but he gave them to

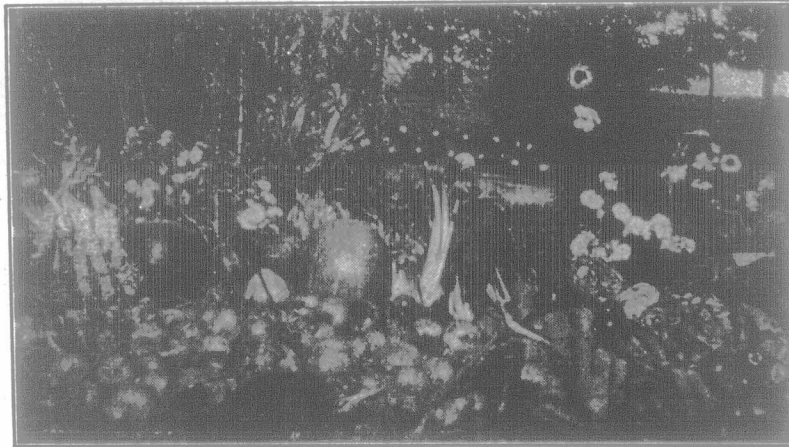


Flowers in Howard Jamieson's Prize Garden.

anyone can be reasonably healthy or moral. And yet—think of the people you know, wherever you are living. Don't you know a great many people who are enjoying pretty good health, and who are living honorable lives? How many in your neighborhood are hopeless invalids or moral lepers? Not a very large proportion, I expect.

mas cheer for some of Christ's brethren. It is a joy to me to pass on their gifts, and I am sure their zeal will provoke many of our readers to bring Christmas sunshine into darkened homes in their own neighborhood.

The Good Samaritan thought he was only helping one poor, wounded traveller, but he has helped millions. No one can



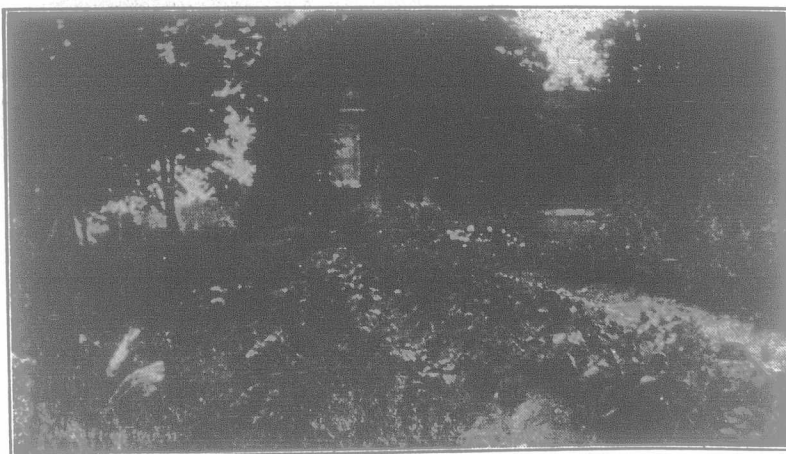
A Fine Lot of Vegetables from Howard Jamieson's Garden.

If evil is so infectious, how does this happen? Simply because good is far more infectious. The zeal in good works of one person provokes very many.

When our terrible lake disaster brought sorrow into hundreds of homes, it "provoked unto love and good works," people in thousands of homes in this country and in other countries. City, town, and vil-

lage caught fire when the relief fund was started, and rich and poor were eager to help. It is always the way. When people hear of trouble—and they hear very swiftly in these days of electricity—they sometimes listen helplessly at first. But let one person start to do something, and his zeal will provoke very many.

I have reason to know this from my



Howard Jamieson's Prize Garden Showing Arch.

neglected the sick!" Satan dared to hurl in the face of the Most High a great lie, when he said: "All that a man hath will he give for his life." But the lie might have been a truth if example were not so infectious. A man like Scott finds it absolutely impossible to desert his sick and dying comrades, because from early childhood he has been

inspired by the beauty of unselfish faithfulness. He could not be false to his ideals—the ideals which he caught from other heroic lives. Simply, and as a matter of course, he wrote in his diary—a great legacy to the world—"I take this opportunity of saying that we have stuck to our companions to the last. In the case of Edgar Evans, when absolutely out of food and he lay insensible, the safety of the remainder seemed to demand his abandonment, but Providence mercifully removed him at this critical moment. He died a natural death, and we did not leave him till two hours after his death."

Can you do anything to help those around you? A lad once had five little cakes of barley-bread, and thousands of people needed food. What were they among so many? In his hands they were as nothing; but he gave them to

Christ to use, then they were enough and to spare. Are you doing that with your time, money and talents? Start the New Year greatly.

"Ah, the past is dark behind us,
Strewn with wrecks and stained with blood;
But before us gleams the vision
Of the coming brotherhood.
See, the Christlike host advancing,
High and lowly, great and small,
Linked in bonds of common service,
For the common Lord of all."

DORA FARNCOMB.

BOOKS FOR CHRISTMAS.

By Dora Farncomb.
"The Vision of His Face," 50c., 75c., and \$1.
"Star-Led to the Heights," 25c. and 50c.
Just published: a new book, by Dora Farncomb:
"IN THE GARDEN WITH HIM."
Cloth, with gilt lettering, 75 cents; postage, 5 cents.
THE WM. WELD CO., London, Canada.

The Beaver Circle

[For all pupils from Senior Third to Continuation Classes, inclusive.]

Dear Beavers,—To-day we are pleased to give you a chance to read the two first-prize essays in the Beavers' Garden Competition. We are sure you will be delighted with Dorothy Newton's description of her garden. She used her eyes—just notice how close her observation of the bees in her garden was!—and she certainly knows how to write an interesting letter. Howard Jamieson came ahead somewhat on methods; his letter is a good, practical "boy's" letter. . . . So you will not wonder that it was decided to give a first prize, \$5.00, to each of these two very energetic Beavers.
Dorothy sent two photos, both beautifully clear; Howard sent four, not so good, but indicating fairly well the different parts of his garden.
Next time, some more of the garden letters will be published.

A First Prize Letter.

Dear Puck,—As soon as the sun's warm rays started to melt the snow, and the trees began to bud, I went in search of boxes to plant my seeds in. Most of the boxes I used were about four inches deep.

It was April 8th when I planted my first package of seeds. The ground was then frozen, and I was not able to get any earth outside, but papa had some earth in boxes in the cellar, so I took some of that. I tore open the package of zinnias, and found a lot of large, flat, brown seeds, somewhat resembling a Beggar's Bur Tick. They looked so dry and flat that it hardly seemed as if they could produce a plant. I sifted the earth to make sure there would be no lumps or sticks of any kind. It does not take long to sift it, and is more thorough than just breaking the lumps with the fingers.

I put the box under the stove where it would be warm and dark. The earth was kept quite moist, so it was only four days till the little plants came up, their two leaves joined together by the shell of the seed. When the shell burst, the two leaves spread apart, and two more leaves appeared.

I sowed larkspur last of all. It has a rather curious seed. They are black, and do not seem to have any uniform shape. Looking at them through a magnifying glass, I was surprised to see how pretty they were. They have a shiny surface covered with tiny ridges, a little bit like the veins of a maple leaf. Larkspur leaves resemble a carrot-top, and droop over the stem of the plant so prettily that they look almost as pretty before they bloom as after.

Last fall I picked quite a lot of pansy seed off my own plants. I kept the seeds all winter in a small glass bottle. Besides the pansy seed which I planted, I bought a package of French pansies. The seed of these was slightly larger

than the home-grown seed. When they came through the ground, I noticed that more plants grew from my own seed, though the French pansy plants were larger.

A week after I planted the zinnias (April 15th) I planted the stocks and phlox. The dwarf stocks had flat seeds, with a little edging of white around the outside. The Virginian stocks' seed were entirely different. They were reddish in color, narrow, and fairly small. Phlox Drummondii have grey seeds, which look as though they had been picked all over by a pin, for they have a very rough surface. Phlox and stocks are

table seeds in a hotbed, and he gave me the cabbage and tomato plants. Though I did not take care of the plants when they were small, I took complete care of them after they were transplanted into my garden.

I planted the beets, lettuce, sweet peas, poppies, mignonette and candytuft, in the garden, not in boxes. One day after all these seeds were up and growing well, I ran into my garden and I found most of my sweet peas cut off. I was very much surprised, and at once tried to find the enemy that was destroying my flowers. All I found was a cutworm, and a tent tree caterpillar. Probably it was

gathering pollen. The poppies have a great many stamens, and, of course, a large amount of pollen. I noticed that the bees had a cream-colored ball on each of their hind legs. I was puzzled at first when I saw these, for I couldn't remember seeing them before. Some of the balls were larger than others, and when a bee with no balls on its legs came flying into the garden, I was sure that they didn't naturally have them. Then I suddenly thought of a piece I had read a year ago, about how bees made bee-bread out of pollen, and carried the pollen on their hind legs. Were these balls of pollen? I watched them more closely to try and find out. I saw one bee catch on with its two front legs (a bee has six legs) to a poppy seed-case, and with its second pair brush itself carefully off. Each time it did this it would seemingly rub the pollen off its legs onto these balls. Before it brushed itself it had gone into the flowers and got covered with pollen. It is lovely to watch the busy insects! Their pleasant humming falls on our ears as one of those soothing sounds in Nature, like the splashing of a waterfall, the sigh of the wind among the trees, or the music of the

"Hidden brook
In the leafy month of June,
That to the sleeping woods all night,
Singeth a quiet tune."

I watered all the beds of flowers every night till they were quite large. It took a great deal of water to water everything, and as I had to carry it from a well, it used to take quite a while.

I found the garden hardest to weed early in spring. The weeds grew very fast, and my flowers were not large enough then to choke any of the weeds. I had a lot of purslane in the fall. Its yellow flowers and shiny leaves seemed to start growing everywhere. I also had some shepherd's purse and chickweed, but they were not very troublesome. One day when I was weeding my stocks something moved under my hand. I looked to see what it was, and found a fine, big toad sitting there. Generally after that I would find him sitting in the same bed in the shade. He stayed in my garden for a long time, and I was glad to have him to eat insects.

I had a few flowers that I did not give any attention to, and they grew only about half as large as those in the garden. Very few of them bloomed, and those that did bloom had tiny blossoms. That showed that we cannot have good flowers or vegetables without taking care of them.

"Where grows? Where grows it not? If vain our toll,
We ought to blame the culture, not the soil."

Well, Puck, I have written you a very long letter, but if you had been as interested in a garden as I was this summer, you would have had a lot to write about, too.

With best wishes to the Circle, your little gardener,

DOROTHY NEWTON.
(Age 12, Model III.)

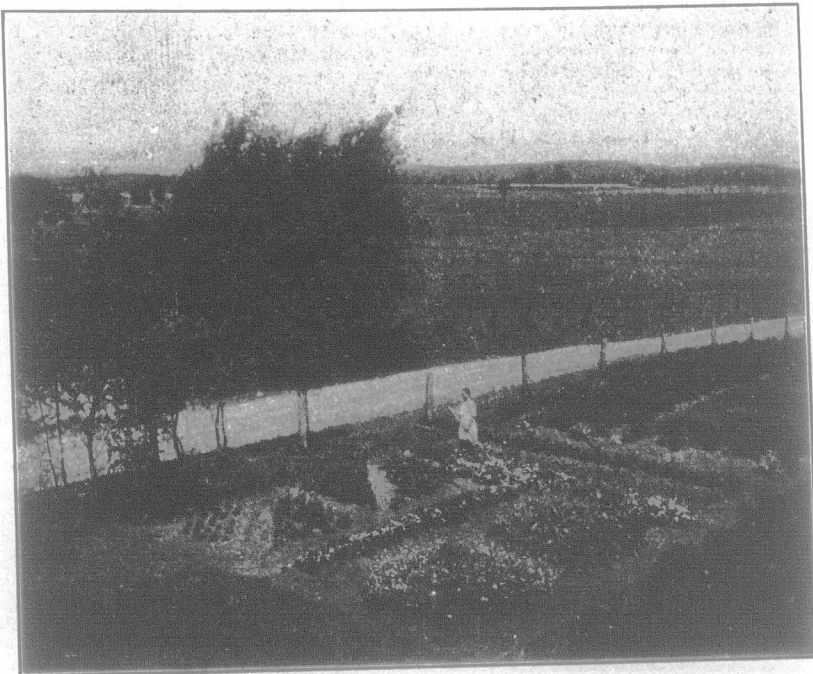
Cloverdale Farm, Plaisance, Que.

I had a garden once, Dorothy, so know just how interested you can become. Some day, read Charles Dudley Warner's "My Summer in a Garden." What he says about purslane or "pusley," will amuse you very much after your experience.

ANOTHER FIRST-PRIZE LETTER.

I had been planning during the winter how I would have my garden in the spring, so after writing down my plan and buying my seeds, the first thing I did was to make a hotbed. First I made a frame three feet by five feet; then I put in a foot of manure and covered that with five inches of the richest soil I could get. After leaving it a few days so the soil would get thoroughly warm, I sowed my seeds. In one half I sowed vegetable seeds, and in the other half I sowed flower seeds in shallow boxes; this made the plants easy to transplant.

The flowers I planted in the hotbed were pinks, stocks, petunias, phlox, salvia, and asters. For vegetables, I sowed lettuce, radishes, tomatoes, celery, and watermelons. Watermelon seeds are half an inch long, and black in color. I



Dorothy Newton's Prize Garden Early in Summer.

slower growers than zinnias, but they showed h/w quickly the spring weather grew warmer, by coming up in three days, where the zinnias had taken four. I put all the boxes in the windows, and each day watered them with great care. When they were left in the window for several days without turning the box, their stalks would always bend over towards the light.

Meanwhile the snow had all disappeared, and my last summer's pansies began to look green once more. As soon as the ground was ready, my brother plowed and harrowed it.

the cutworm. My sweet peas grew up the second time, from the same root, and did not seem to be any smaller than those that were not cut off.

This summer we were greatly troubled by cutworms and root-maggots. The cutworm is a gray grub, about an inch long. It does not seem to eat the cabbages or tomatoes, but just cuts them off above the surface of the earth. I put a circle of Paris green, mixed with bran and molasses, around the plant, that seemed to stop them. The root-maggots are small and whitish. We would notice the cabbage leaves droop-



Dorothy Newton's Prize Garden in Autumn.

I was favored with splendid weather for transplanting. It rained a great deal, so the ground was always damp, and I didn't have to pour water in the holes I made to set the plants in. You asked how deep we made the holes. I cannot answer that question very well. It all depends on the size of the plant. You simply make it deep enough so that the earth completely covers the root, and wide enough to prevent the rootlets being crushed together.

My father planted a great many vege-

ing, and when we pulled them up there would be large numbers of these maggots eating the roots.

All the poppies I had had red blossoms. When they were in bloom they were certainly very showy. One morning I went out to my garden, and I saw a great many bees around the poppies, and none around any of the other flowers, I thought it rather queer that the bees should gather honey from poppies any more than from the other flowers, and I soon found out that they were

planted them in egg-shells set in dirt; this made it so I could transplant them without disturbing the roots. Everything grew well, and it was very interesting to see the little green leaves growing under the glass when everything outside was still asleep.

My garden was seven yards by fifty yards, which was none too large for the quantity of seeds I planted. The ground had been plowed in the fall, and in the winter I fertilized it with well-rotted manure and ashes; this helped to loosen the clay loam of my garden. After this was harrowed in the spring, it was plowed into seven drills running lengthwise. After the drills were well raked and the dirt made fine, I staked off fifteen yards at one end for my flowers, then taking out my note-book I made the paths as I had planned.

First I put up two poles four feet apart, and had them joined at the top by a bent stick. I then planted morning-glories and wild cucumbers around the bottom, and in two drills running four feet apart away from the poles, and as they came up I had strings running to the poles from each plant. This made a fine gateway to my garden. The vines grew very fast, and had reached the top of the poles early in July. At each side of the gateway I planted dahlias. These grow from bulbs a little larger than hen eggs. I had four different colors, light red, dark red, pink, and yellow. They were classed among my constant bloomers. I planted a row of summer cypresses along the north side as a protection from the wind. I made six beds; one was round, two were square, and three were long. Two long beds were composed of asters and cockscombs; the other long bed had petunias, marigolds, everlasting, poppies, and phlox. In the round bed I planted zinnias, pinks and asters, with a border of sweet alyssum. Another bed had balsams and pinks, and was bordered with candytuft, and the other one had stocks bordered with candytuft. The stocks, alyssum, petunias, and candytuft, were in continual bloom from June until the frost. Great care had to be taken in planting small seeds, such as cockscomb, petunia, poppy, and alyssum, for fear of getting them too deep; larger seeds, such as balsam, marigold and zinnia, could be sowed a quarter of an inch in the soil. I sowed the path between the dahlias with clover; this I kept mowed all summer, and it made a very nice path. I planted a row of nasturtiums along each side of the path; the seeds are crinkly and round, and the leaves are nearly round. The vegetable seeds I sowed were parsnips, carrots, beets, cabbage, lettuce, radish, cucumbers, citron, pumpkin, squaw corn, gourds, Dutch set onions, seed onions, bunch onions, and beans. The largest seeds I planted half an inch in the soil, but the smaller ones I planted shallower. I transplanted my hotbed plants in June, just after a rain, so that the plants would get a good start before the hot sun came out. I had about sixty tomato plants, which I planted three feet apart. I planted the celery three inches apart in ditches. I planted my flowers which came from the hotbed in vacant places in the beds.

I left a small corner which I did not water or weed, and I am glad I did not leave my whole garden like it. The weeds seem to grow much faster than the flowers.

The weeds that bothered me most were foxtail and purslane; these I kept hoed all summer. I did most of my scuffling with the hoe, and what I could not hoe I weeded with my hand. I kept the soil loose, which helped to hold the moisture in dry weather. I watered the plants nearly every night in the dry weather. When you water them at night they keep wet until morning.

The flowers grew fine, and I had constant bloom all summer. I got a fine, large bouquet of everlasting. I kept my flowers picked so they would keep blooming.

We used my vegetables all summer, my lettuce and radishes being ready the first of May. I had many bushels of tomatoes on my vines. The cucumbers bore very abundantly. I planted a cabbage, beets, and a carrot, which I saved from last year. They were covered with seed. I saved seed from all my flowers and vegetables for next year. I had to plant my citrons and watermelons as far apart as possible, as the bees and wind carry the pollen from flower to flower,

thereby spoiling the fruit; this I learned from experience last year.

My garden was always one of interest to everybody who saw it. The bouquets I cut seemed to brighten all who saw them. Hummingbirds, butterflies, bees, and birds, seemed to be my most interested helpers by day, and the toads and moths by night. I often saw a sleepy toad in his cool retreat under a leaf. The cattle would longingly look at my fat cabbages, but were not allowed to come nearer than the meadow fence.

It was always a pleasure for me to be working in my garden. I think that nature can show more of her handiwork in the formation of a flower than anything I know of.

I'm sure that Puck is very kind in getting the Beavers interested in nature and gardening. Still wishing that the other Beavers were as interested as I was, I remain, yours truly,

HOWARD JAMIESON.

Camborne, Ont.

I am very glad you had such a successful garden, Howard, and I am very sure that all who saw it were very much interested. That patch which you did not cultivate showed you the use of constant tillage, did it not? Some day when you are a real farmer, if you should be one, you will remember that neglected spot, and cultivate your corn and roots all the better because of it. . . . The Beavers will remember that when setting the Garden Competition last spring, we asked that one little plot be neglected. We did this that the Beavers might notice the effects of lack of care, and we hope that the lesson has not been wasted.—P.

News of the Week

CANADIAN.

It is expected that Canada's new parcel-post service will begin in January.

A company has been formed to erect a large cotton mill in Welland.

Miss Frances Galbraith, of Toronto, has won two silver medals at the Royal Academy, London, Eng.

The Canada Cement Company's plant, recently completed in Montreal, is one of the largest individual mills in the world.

At a meeting of the thirteenth annual convention of the North American Fish and Game Protective Association in Ottawa, on December 9th, it was resolved to urge the Government to co-operate with Great Britain and the United States to secure better protection of the migratory birds, which are now threatened with extinction.

Plans for greatly extending the extent of country served by hydro-electric power, are being formed.

BRITISH AND FOREIGN.

The spirit of unrest in India is reported to be rapidly increasing.

Government ownership of telegraph and telephone lines throughout the United States is being considered by President Wilson.

Gaston Doumergue, the new Premier of France, last week appointed his cabinet.

The British oil-burning battle cruiser, "New Zealand," the gift of New Zealand to Great Britain, arrived in England on December 8th, after making a world's tour.

One hundred and sixty-five persons perished during the recent floods in Texas, 20,000 were left homeless, and property was damaged to the value of \$6,000,000.

The Nobel Peace prize for 1912, was conferred at Christiania, Norway, on December 10th, upon U. S. Senator Elihu Root, and that for 1913, upon Senator Henri La Fontaine, of Brussels, Belgium. Each prize totals \$40,000.

Miss Sylvia Pankhurst was arrested at Shoreditch, where she addressed a meeting on December 9th, for the purpose of organizing a local company of the "People's Army."

The port of Dublin, closed since the end of August, was re-opened on December 11th, when the dock-workers agreed to resume work. Eighty thousand people in Ireland were on the verge of starvation as a result of the strike.

United States, British and German warships are guarding the neutral zone of Mexico. A desperate battle that raged at Tampico during December 11 and 12, was stopped by U. S. Rear-Admiral Fletcher, who threatened to open fire on the combatants from his gunboat unless it ceased.

Leonardo da Vinci's famous portrait of Mona Lisa, stolen from The Louvre in August, 1911, and since searched for in vain in many countries, has been discovered in Florence by Prof. L. Credaro, Minister of Public Instruction and Fine Arts, and the man who had it in his possession, one Vincenzo Perugia, has been arrested. Perugia says he stole it out of spite to France, for whose galleries so many works of Italian art have been purchased. The "Mona Lisa" is regarded as priceless, France having refused \$5,000,000 for it, offered by the British Government. Da Vinci, the great master, painted it during 1500-1504.

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The People of the Whirlpool.

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Chapter IX.

A WAYSIDE COMEDY.

May 15th. Madame Etiquette has entered this peaceful village. Not, however, as the court lady of the old French regime, but travelling in the wake of the Whirlpoolers under dubious aliases, being sometimes called Good Form and at the other The Correct Thing. At present she is having a hand-to-hand encounter with New England Prejudice, a once stalwart old lady of firm will, but now considerably weakened by age and the incessant arguing of her great-grandchildren.

The result of the conflict is quite uncertain, for actually even the Sunday question hangs in the balance; while the spectacle is most amusing to the outsider and embarrassing to the referees.

Father, seeing through medical eyes, regards the matter merely in the light of a mild epidemic. Evan is rather sarcastic; he much preferred garden quiet and smoking his evening pipe to the tune of soothing conversation concerning the rural days' doings, to the reflex anxiety of settling social problems. In these, lo and behold, I find myself unwillingly involved, for one New England habit has not been abandoned—that of consulting the wife of minister and doctor, even if holes are afterward picked in the result, and in this case a daughter stands in the wife's place.

The beginning was two years back, when the Bluff colony began to be an object of speculation, followed in turn by censure, envy, and finally aspiration that has developed this spring into an outbreak of emulation.

Ever since I can remember, social life has moved along quite smoothly hereabout, the doings being regulated by the

age and purses of the participants. The householders who went to the city for a few winter months were a little more precise in their entertaining than the born and bred country folk. As they commonly dined at night, they asked people to dinner rather than supper, which is the country meal of state. But lawn parties, picnics, and clambakes at the shore were pretty much on the same scale, those who could afford it having music and employing a caterer, while those who could not made no secret of the cause, and felt neither jealous nor humiliated. A wagon load of neighborly young people might go on a day's excursion uncriticized, without thought of dragging a mother or aunt in their wake as chaperon. In fact, though no one is more particular than father in matters of real propriety, I cannot remember being formally chaperoned in my life or of suffering a shadow of annoyance for the lack.

Weddings were always home affairs among the strictly country folk, by common consent and custom, no matter to what denomination the people belonged. Those with contracted houses went quietly to parsonage or rectory with a few near friends; others were married at the bride's home, the ceremony followed by more or less merrymaking. A church wedding was regarded as so great a strain upon the families that the young people had no right to ask it, even if they so desired.

That has passed, at least for the time being, and all eyes are fixed upon the movements of the Bluff people, and many feet are stumbling along in their supposed footsteps. It would be really funny if it were not half pitiful. The dear folk are so terribly in earnest that they do not see that they are losing their own individuality and gaining nothing to replace it.

The Whirlpoolers, though only here for the between seasons, are constantly entertaining among themselves, and hardly a day passes but a coaching party drives up from town with week-end golfers for whom a dance is given, or stops en route to the Berkshires or some farther point. A few outsiders are sometimes asked to the more general of these festivities, friends of city friends who have places hereabout, the clergy and their wives, and, alas, the Doctor's daughter.

It is not harsh judgment in me, I feel sure, when I say that Evan would not be asked so often to the Bluffs to dinner if he were not a well-known landscape architect whose advice has a commercial value. They always manage to obtain enough of it in the guise of after-dinner conversation and the discussion of garden plans to make him more than earn his fare. For the Whirlpoolers are very thrifty, the richer the more so, especially those of Dutch trading blood, and they are not above stopping father on the road, engaging in easy converse, praising the boys, and then asking his opinion about a supposititious case, rather than send for him in the regular way and pay his modest fee.

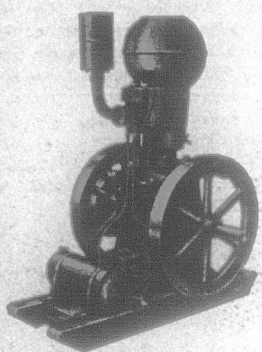
In fact, Mrs. Ponsonby asked me to a luncheon last autumn, and it quickly transpired afterward, that she had an open trap for sale suitable for one horse; she knew that Evan was looking for such a vehicle for me, and suggested that I might like this one.

A bulky and curious correspondence grew up around the transaction, and the letters are now lying in my desk marked "Mrs. Ponsonby, and the road cart." Finally I took the vehicle out on a trial trip. I noticed that it had a peculiar gait, and stopping at the blacksmith's, called him to examine the running gear. He gave one look and burst into a guffaw: "Land alive, Mrs. Evan, that's Missis Ponsonby's cart, that stood so long in the city stable, with the wheels on, that they're off the circle and no good. I told her she'd have to get new ones; but her coachman allowed she'd sell it to some Jay. You ain't bought it, hev yer?"

Good-natured Mrs. Jerk-Smith, the pioneer of the Bluffs, was the first one to throw open her grounds, when completed, for an afternoon and evening reception, with all the accompaniments of music, electric lit fountains, and unlimited refreshments. Everybody went, and satisfaction reigned for the time, but when another season it was found that she had no intention of returning calls, great disappointment was felt.

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lasted for a moment, for was not a travelling man, as the drummer is always called in country towns, a person of experience and knowledge of the world, as well as being not infrequently shrouded in mystery? As she pondered on the card, wondering if she dared put it in her pocket, he said in a matter-of-fact way, again extending the wallet: "Don't hesitate, take the deck, may come handy, father like to keep goods in stock some time. That's my regular; carry a side line too, perfumes and an A-1 hair restorer. Got all my samples at Oaklands depot. You mind stopping there on the way? Want to get fresh collar"

No, of course Fannie would not mind; this last request fixed her companion firmly in her esteem. Any other man of her acquaintance would have removed his collar and proceeded without one, never giving the matter a thought; in fact, she had been momentarily expecting that this would happen. Now she would have the bliss of taking him home in all the perfection of his toilet as she first beheld him.

From that moment she grew more conversational, and his utterance became less jerky, until, when they finally drove up back of the long red brick railway station at Oaklands, a little before noon, she had not only given him a synopsis of local history, but was, in her excitement, vainly trying to recollect what day of the week it was, so that she might judge of the dinner probabilities at home, also if it would be safe to ask him to stay. Fortunately remembering that she saw her father beheading chickens the night before, which guaranteed a substantial meal, she decided it was an absolute duty.

As L. Middleton emerged from the baggage-room in a fresh collar, even higher than the other, he threw an ornamental bottle of violet water into Fannie's lap to keep company with the horseshoe. Immediately Hope arose at the combination, and settled under the left folds of Fannie's pink shirt waist; for Middleton seems a distinguished name to one who has been called Penney for twenty-eight years, and romance had never died in the heart under the pink waist for the reason that it was only at this moment being born.

On arriving at home, Fate continued to prove kind. Mrs. Penney was inspired to ask the guest to "stop to dinner," without any hints or gesticulations being necessary, which might have marred the first impression. Not only did the chickens appear at the table, where no canned food was present, but there was a deep cherry pie as well, which was eaten with peculiar relish by the commercial traveller, accustomed to the awful fare of New England country hotels, where he was often obliged to use his own samples to fill gaps. He gazed about at the comfortable kitchen, and won Mamma Penney by praising the food. Father Penney took a hasty bite in the buttry, and soon disappeared to rescue his goods from the highway. He was always considered something of a drawback to the matrimonial prospects of his daughters: for, as his nose indicated, he had a firm, not to say combative, disposition, and frequently insisted upon having not only the last but the first word upon every subject, so that Fannie regarded his going in the light of a special providence.

After dinner the three other Penney sisters all tried their best to be agreeable, Marie donning a clinging blue gown and walking up and down the piazza watering plants at this unusual hour of the day for his particular benefit, a performance which caused L. Middleton to ask, "Say, did you ever do a vaudeville turn?" And Marie, not knowing whether to take the remark as a criticism or a compliment, preferred to take the latter view and answer in languid tones,—

"No, but I have acted, and I've been seriously advised to go on the stage."

In the middle of the afternoon, the load of groceries having arrived safely, Fannie's "hero" took his leave, Papa Penney driving him to the village inn, where he was to unpack his samples.

For a while L. Middleton was a standard topic of conversation among the girls. They wondered for what L. stood. Fannie guessed Louis, Marie spitefully suggested that it might be

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Lucifer, and that was why he didn't spell it out. Then, as he seemed about fading from the horizon, he reappeared suddenly one crisp October morning, just starting on his eastern fall route, he said, and invited Fannie to go to the Country Fair.

Again a period of silence followed. The sisters remarked that most travelling men were swindlers, etc., but Fannie persistently put violet water on the handkerchief that she tucked under her pillow every night, until, as winter set in, the supply failed.

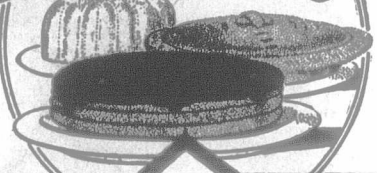
Then an idea came to her, she took the horseshoe from where it had been hanging over her door, covered its dinginess with two coats of gold paint, cut the legend, "Sweet Violets," together with the embossed flowers, from the label on the perfume bottle, and pasted them on the horseshoe, which she further ornamented with an enormous ribbon bow, and despatched it secretly to L. Middleton by express a few days before Christmas.

At New Year's a box arrived for Fannie. It contained a gold pin in the shape of a horseshoe, in addition to a large, heart-shaped candy box filled with such chocolates that each was as a foretaste of celestial bliss to Fannie, who now thought she might fairly assume airs of importance.

Half a dozen letters went rapidly back and forth, and then the proposal bounded along as unexpectedly as every other detail of the courtship. There was very little sentiment of expression about it, but he was in earnest and gave reference as to his respectability, etc., much as if he were applying for a business position, and ended by asking her at which end of his route she preferred to live, New York, or Portland, Maine, and if in New York, would she prefer Brooklyn or Harlem?

Fannie quickly decided upon Harlem, for, as Marie said, "There one only need give the street name and number, while very few people yet realize that Brooklyn really is in New York. This important matter settled, the

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Penney girls arose in their might upon the wings of ambition. There should be a church wedding.

Now the Penneys were, as all their forbears had been, Congregationalists; but that church had no middle aisle, besides, as there was no giving away the bride in the service, there was little chance for pomp and ceremony. It was discovered that the groom's parents had been Episcopalians, and though he was liberal to the degree of indifference upon such matters, it was decided that to have the wedding in St. Peter's would be a delicate compliment to him.

All the spring the village dressmaker has been at work upon the gowns of bride and of bridesmaids, of whom there are to be six, and now the cards are out and the groom's name also, the L at the last moment having been found to stand for Liberty. If they had consulted the groom, he would have decried all fuss, for Fannie's chief attraction was that he thought her an unspoiled country girl.

The hour was originally set for the morning, but as Fannie saw in her fashion paper that freckled people often developed a peculiarly charming complexion when seen by lamplight, the time was changed to eight at night, in spite of the complications it caused.

A week before the invitations were issued Fannie came to see me and after some preamble said: "Mrs. Evan, I want my wedding to be good form, and I'd like to do the swell thing all through. Now the Parlor Journal says that the front pews that are divided off by a white ribbon should be for the bride's folks on one side of the aisle and the groom's on the other. Mr. Middleton hasn't any people near by enough to come, so I thought I'd have the Bluff folks sit on that side."

"The Bluff people?" I queried, in amazement. "You surely aren't going to invite them? Do you know any of them?"

"Well, not intimately, but Mrs. Ponsby has been to the house for eggs, and Mrs. Latham's horse dropped a shoe last week and father set it, and the Vanderveer boy's pony ran away into our front yard the other day, so I don't feel as if they were strangers and to be left out. Oh, Mrs. Evan, if they'd only come and wear some of their fine clothes to light up the church, it would be in the papers, the Bee and the Week's News over town maybe, and give me such a start! For you know I'm to live in New York, and as I've never left home before, it would be so pleasant to know somebody there!"

I almost made up my mind to try to put things before her in their true light, and save her from disappointment, but then I realized that I was too near her own age. Ah, if Lavinia Dorman had only been here that day she could possibly have advised Fannie without giving offence.

May 16th. The wedding is over. Shall I ever forget it? The rain and cool weather of the past ten days kept back the apple blossoms, so that the supply for decorating the church was poor and the blossoms themselves only half open and water-soaked. Mrs. Jenks-Smith, who always hears everything, knowing of that dilemma, in the goodness of her heart sent some baskets of bothouse flowers, but the girls and I who were decorating did not know how to handle them effectively, for Fannie, still clinging to sentiment, had gilded nearly a barrel of old horseshoes, which were tied with white ribbon to every available place, being especially prominent on the doors of the reserved pews.

Late in the afternoon a fine mist set in with clouds of fog, which, if it got into the church, I knew would completely conceal the glimmer of the oil lamps. It seems that Papa Penney was not told until an hour before the ceremony that he was to walk up the aisle with the bride on his arm and give her away. This he flatly refused to do. He considered it enough affliction to have the wedding in church at all, and it was not until his wife had given her first exhibition of fainting, and Fannie cried her eyes red, that he apparently yielded.

We arrived at the church at about ten minutes to eight, father and Evan having been persuaded to come in recognition of good neighborhood feeling. The back part of the church was well filled, but the space above the ribbon was

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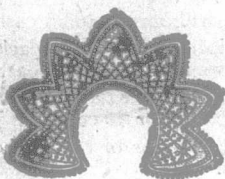
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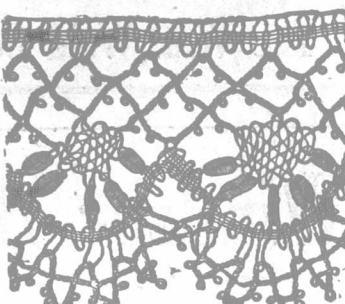
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painfully empty. The glimmering lamps did little more than reveal the gloom, and the horseshoes gave a strange racing-stable effect.

We tried to spread ourselves out as much as possible to fill up, and presently the Ponsonby girls entered with some friends, seemingly astonished at being seated within the barrier, for they had never seen their cards of invitation, and had come as a sort of lark to kill time on a wet evening.

The ushers wandered dismally up and down, stretching their hands nervously as if unused to gloves. Presently they fell back, and the organ, in the hands of an amateur performer and an inadequate blower, began to chirp and hoot merrily, by which we knew the bridal party was about to appear.

The ushers came first, divided, and disappeared successfully in the shadows, on either side of the chancel steps. A long wait and then Marie Penney followed, walking alone, as maid of honor; she had insisted upon having plenty of room, as she said so few people walked well that they spoiled her gait. Next came the six bridesmaids on a gallop, then Papa Penney and the bride. He walked along at a jog trot, and he looked furtively about as if for a loop-hole to escape. As for poor Mrs. Penney, instead of being seated in the front pew before the procession entered, she was entirely forgotten in the excitement, and stood trembling near the door, until some one drew her into a seat in neighborly sympathy.

The clergyman stood waiting, the bridesmaids grouped themselves behind papa, so that there was no retreat, but where was the groom and the best man? One, two, three minutes passed, but no sign. He had been directed to the vestry door as the bridal party drove up. Could he suddenly have changed his mind, and disappeared?

The silence was awful, the Ponsonby girls giggled aloud, and finally got into such gales of laughter that I was ashamed. The organ had dropped into the customary groaning undertone that is meant, I suppose, to give courage to the nervous and weak-voiced during the responses.

Outside the church, in the rear, two men in evening dress might have been seen blundering about in the dark, vainly trying to find an open door, for besides the door to the vestry there were three others close together, one opening into the little chantry, one the Sunday-school room, and one into the cellar. They battered and pulled and beat to no purpose, until a mighty pound forced one in, and the two men found themselves flying down a flight of steps, and landing in a heap of coal.

Dazed, and not a little bruised, the groom struck a match, and looked about; the best man had sprained his ankle, and said so in language unbecoming the location, but Liberty Middleton arose superior to the coal. Judging by the music that the ceremony had begun, he told his crippled friend to sit still until he came back for him, and, by lighting a series of wax matches, found his way back to the front door of the church, and strode up the aisle dishevelled, and with a smutty forehead, just as Pape Penney had succeeded in breaking through the bridesmaids, dragging Fannie with him. A sigh of relief arose, the couple stepped forward and the ceremony began. When, however, the giving away time came, it was found that Papa Penney had retreated to a pew, from which he could not be dislodged. Another hitch was only averted by the groom turning pleasantly toward his father-in-law, and saying, with a wave of his hand, "It's all right, don't trouble to move; you said 'I do,' I think; the Parson understands." The ceremony was ended without further complication. When Fannie walked out upon the arm of the self-possessed Liberty, I thought that the travelling man had the makings of a hero in him after all. It afterward transpired that the hapless best man, left in the coal cellar, and not missed until the party was halfway home, had only wrenched his ankle, and made his escape to the village tavern for consolation, proving that even commercial travellers may be upset by a fashionable wedding ceremony.

(To be continued.)

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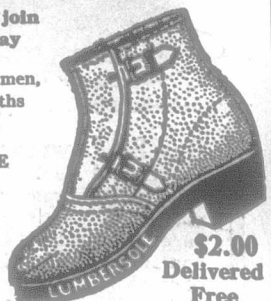
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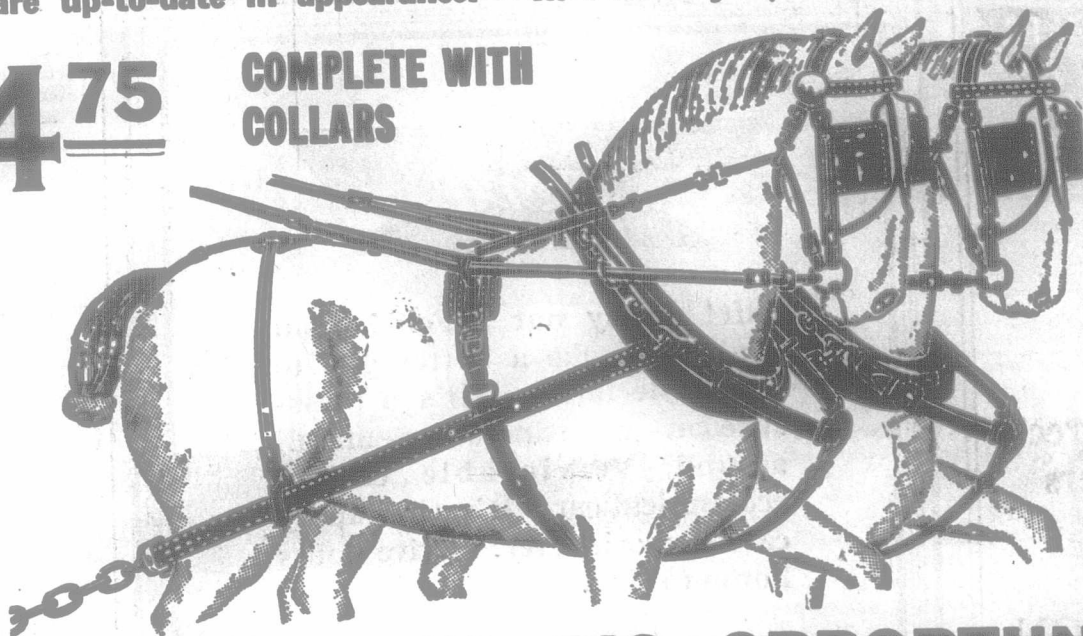
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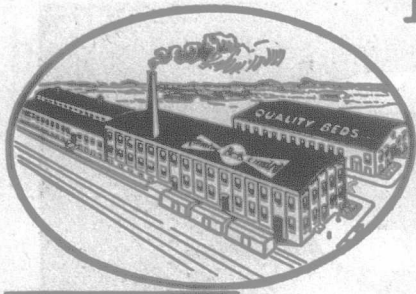
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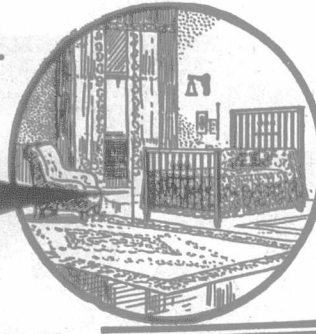
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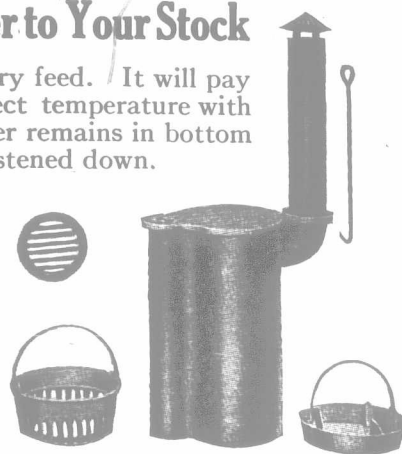
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When the West India delegation visited Ottawa to adjust preferential trade arrangements, one of the uppermost considerations was a better steamship service between the ports of Eastern Canada and the Islands. This is now to be realized by means of four splendid boats of the Royal Mail Packet Co., of London, Eng., said to be the largest steamship company in the world. They are especially fitted up for tropical traffic, supplied with ample cold-storage compartments for food, and capably officered. The boats are sailing from Halifax, N. S., and call at many leading points of interest in the West Indies. The round voyage occupies 39 days, and the transportation fares are reasonable. Readers should look up the regular announcement in another column.

Gossip.

BROCKVILLE DISTRICT AYRSHIRE CLUB.

An Ayrshire Breeders' Club, for Brockville, Ont., district, was formed at a recent meeting of leading breeders in Leeds County. The club starts with an enrolled membership of 21, and the prospects are that it will be a power for good in breeding choice Ayrshires. The chairman, W. H. MacNish, of Lyn, outlined the object of the gathering. W. F. Stephen, Secretary of the Canadian Ayrshire Breeders' Association, gave a valuable address on the Ayrshire cow, dwelling especially on the importance of Record-of-Performance work to bring out her best qualities. W. H. Smith, B.S.A., District Representative, emphasized the importance of keeping the herd bull as long as possible, there being a tendency to sell him to the butcher at three or four years of age, just the time when the breeder knew what the offsprings were to be like. If they were satisfactory, the animal should be retained or exchanged with some other breeder. Addresses followed by J. C. Stuart, Dalmeny; J. R. Dargavel, Elgin, and W. N. Bass, Newboro. The meeting then organized a club, to be called the Brockville District Ayrshire Breeders' Club; with the following officers: Hon. President, J. R. Dargavel, M.P.P., Elgin, President, W. H. MacNish, Lyn; Vice-President, W. M. Bass, Newboro; Secretary—Treasurer, A. J. Hudson, Lyn; Directors, H. E. Bowser, Delta; W. H. Bradley, Lansdowne; G. W. Percival, Glen Buell; B. N. Henderson, Morton; J. C. Stuart, Dalmeny; J. V. Lynett, Westport; and J. Hamblen, Athens.

A member of the House of Commons had been paying attention to a lady for a long time. On the last day of the session, as they came out, he bought her a bouquet of flowers, and said to her, "May I offer you my handful of flowers?" She replied promptly, "I move to amend by omitting all after the word 'hand.'" He blushing seconded the amendment."



"What's flour gluten, Bud?"
 "It's what makes your dough rise, Rose."
 "Yes"—she encouraged.
 Added Bud very sagely:
 "Makes it rise in the mixer and expand
 "in the oven. It's the elastic part of
 "flour—absorbs all the water and milk
 "—and things."
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 "FIVE ROSES," said Bud, "is exceedingly
 "rich in gluten. I s'pose because it's all
 "made from Manitoba wheat. Takes up a lot
 "more water—makes those fat loaves—lasts
 "longer, too."
 "Saves money, doesn't it?" asked Rose.
 Bud in a big voice:
 "The fat loaf makes the fat pocketbook."
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Miscellaneous.

Working Land for Oats-Silo.

1. Do you think fall plowing corn stubble would produce a better crop of oats than just disking it up in the spring, the field having one crop of clover the second crop of clover to blossom, and plowing it all down for the corn crop. Some people think that the manure and clover should be plowed up again for the oats.

2. How many acres of good Dent corn, planted in hills to be cultivated both ways, would it take to fill a silo 10 feet in diameter and 30 feet high?

W. E. C.

Ans.—1. It is not easy to answer this question. We are plowing all our corn ground at Weldwood this fall, but ours is a heavy soil, which requires as much frost action as possible. On a clean field, where no weeds have seeded, and where the land is loamy and friable, and if the clover has not been plowed down too deeply, we would not advise plowing. If the clover is down deep, and the soil is very heavy and of a stiff-clay nature, and also if any amount of weeds are present, it would likely be better to plow.

2. From four to five acres of a good crop should fill it.

Gossip.

D. C. Flatt & Son, breeders of Holstein cattle and Yorkshire hogs, write that they have an extra choice young bull to offer, fit for a heavy season's work. His dam, three months after calving, gave in one day 111 pounds of milk. She also has an official seven-day record of over 26 pounds of butter in seven days. The sire of this bull has 87 per cent. the same blood as Pontiac Korndyke. Anyone requiring a bull to head their herd should see this one.

Louis J. Horowitz, the sky-scraper builder, who in twenty years has risen from a position of \$3 a week to one of \$100,000 a year, was talking about success.

"I go to bed at 9 o'clock," he said, "and I get up at 5 o'clock. I play a little, but my play is exercise to keep me in good trim for my office. I play to work—as other men work to play."

Mr. Horowitz mused a moment; then in his terse, epigrammatic way, he said, shaking his head:
 "Success demands sacrifice! Two men set out to achieve fame. One succeeded. The other lived."

A salesman had taken a large order in for a consignment of hardware, and endeavored to press upon the canny Scottish manager who had given the order a box of Havana cigars.

"Naw," he replied. "Don't try to bribe a man. I couldn't tak' them—and I am a member of the kirk."
 "But will you accept them as a present?"

"I couldna," said the Scot.
 "Well, then," said the traveller, "suppose I sell you the cigars for a nominal sum—say sixpence?"

"Well, in that case," replied the Scot, "since you press me, and no' liking to refuse an offer weel meant, I think I'll tak' twa boxes."

The Call of the North

Do YOU know of the many advantages that New Ontario, with its millions of fertile acres, offers to the prospective settler? Do you know that these rich agricultural lands, obtainable free, and at a nominal cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead regulations, settlers' rates, etc., write to

H. A. MACDONELL
 Director of Colonization
 Parliament Bldg.
 TORONTO, ONTARIO

264 Page Book on Silos and Silage

1913 copyrighted edition now ready. Most complete work on this subject published. Used as text book by many Agricultural Colleges. Gives the facts about Modern Silage Methods—tells just what you want to know, 264 pages—indexed—over 45 illustrations, a vast amount of useful information boiled down for the practical farmer. Tells "How to Make Silage"—"How to Feed Silage"—"How to Build Silos"—"Silage System and Soil Fertility"—"Concrete or Cement Silos." All about "Summer Silos" and the Use of Silage in Beef Production. Ninth Edition now ready. Send for your copy at once. Enclose 10c in coin and mention this paper.

Silver Manufacturing Co., Salem, Ohio

VALUABLE PREMIUMS

These Premiums are Given Only to Our Present Subscribers for Sending in Bona-fide New Yearly Subscriptions Accompanied by \$1.50 Each.

Present Subscribers (if not already paid in advance) are expected to send their own renewal for 1914, at the same time as sending in new subscriptions. Below are described some of the premiums which we are offering for procuring new yearly subscriptions to "The Farmer's Advocate and Home Magazine"

TWENTY-ONE-PIECE AUSTRIAN CHINA TEA SETS BEAUTIFUL DELICATE PATTERN

These would retail at from \$3.50 to \$4.50 per set, depending on locality. FOR TWO NEW SUBSCRIBERS or \$3.00 CASH.

FARMER'S ADVOCATE KNIVES

Manufactured by Joseph Rogers, Sheffield, England. Jackknife and Penknife, both nickel-handled and having two blades. Manufactured specially for "The Farmer's Advocate," worth, retail, \$1.00 each. ONE NEW SUBSCRIBER FOR EACH KNIFE.

COMPLETE KITCHEN EQUIPMENT

A utensil for every purpose. All made of the highest grade of crucible steel. Rubberoid finished. hardwood handles, mounted with nickel-plated ferrules. All six articles for ONE NEW SUBSCRIBER or \$1.00 Cash.

SET SCISSORS

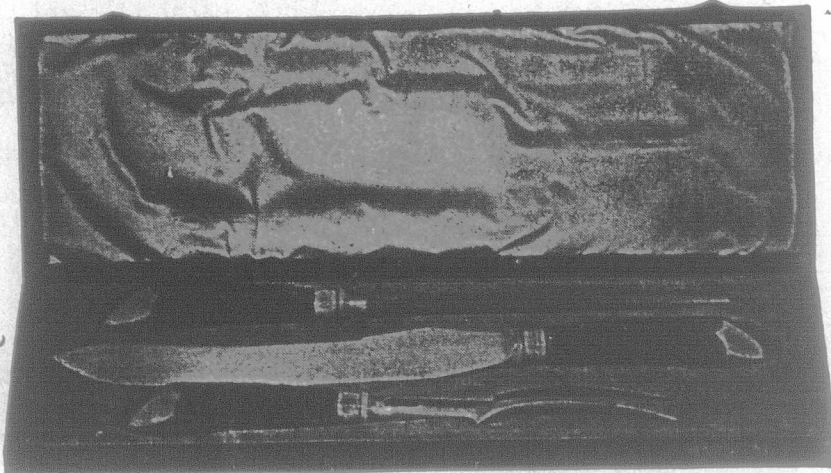
One self-sharpening scissors, one embroidery scissors, one buttonhole scissors. All good quality steel. ONE NEW SUBSCRIBER.

SET STAGHORN CARVERS

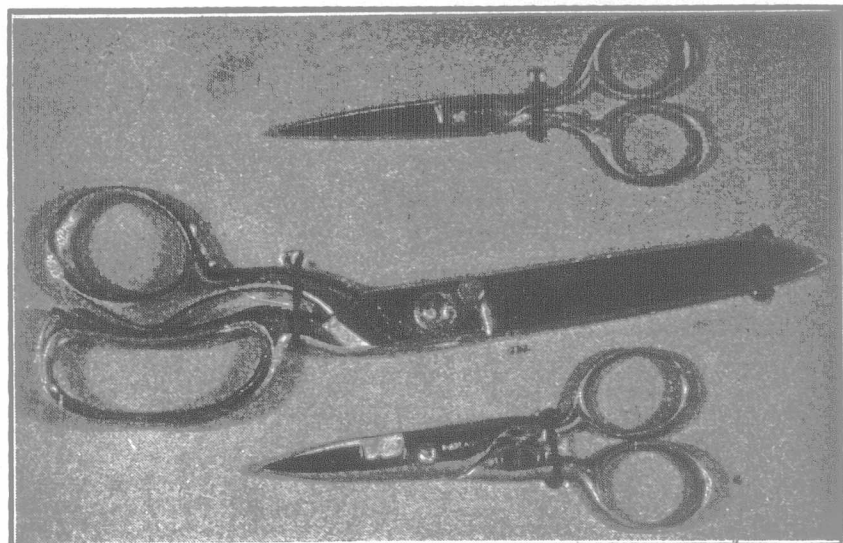
First quality steel, with staghorn handles and handsome nickel mounting. These carvers retail from \$3.50 to \$5.00 per set. TWO NEW SUBSCRIBERS or \$3 Cash.

SANITARY KITCHEN SET

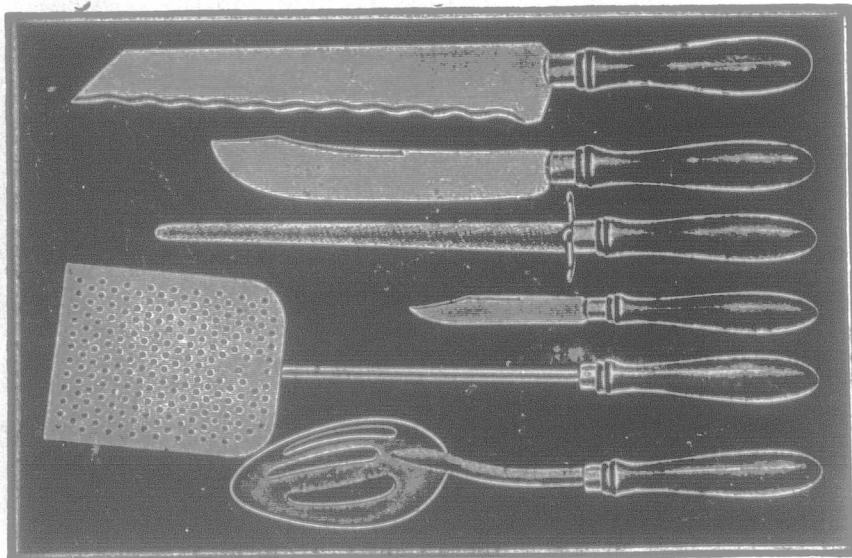
Best quality steel; five pieces and rack which can be hung on the wall. ONE NEW SUBSCRIBER.



SET STAGHORN CARVERS



SET SCISSORS



COMPLETE KITCHEN EQUIPMENT

BIBLE

Old and New Testaments in beautifully clear, legible type; references, concordance to both old and new Testaments. Index to names of persons, places and subjects occurring in the Scriptures. Twelve full-page maps; all excellent in type and outline. This book is of most convenient size, being 7 x 10 inches when open; weight, 23 ounces; and would sell at regular retail price from \$1.00 to \$1.50. ONE NEW SUBSCRIBER.

"THE VISION OF HIS FACE"

By Dora Farncomb, writer of Hope's Quiet Hour in "The Farmer's Advocate," contains 18 chapters 224 pages, in cloth with gilt lettering. 75c or ONE NEW SUBSCRIBER.

"CARMICHAEL"

By Anison North—A Canadian farm story, bound in cloth, illustrated. Buffalo Courier says: "It is far above the ordinary run of fiction." Toronto World says: "Should be in all the homes of the people." Cash, \$1.00 or ONE NEW SUBSCRIBER.

"IN THE GARDEN WITH HIM"

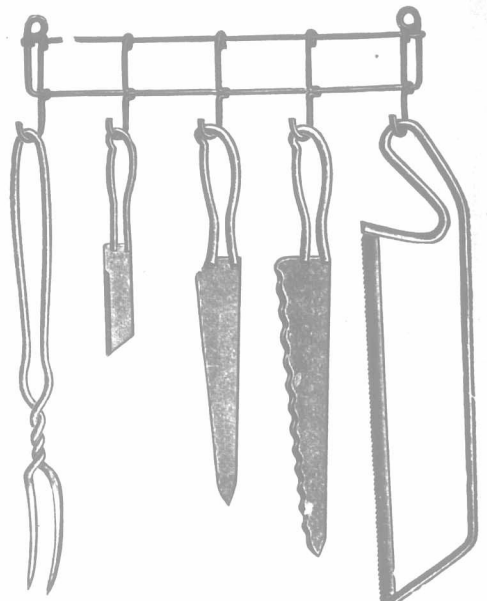
A new book by Dora Farncomb, marked by the same sweetness and spirituality that characterized "The Vision of His Face." Bound in cloth with gilt lettering. Cash, 75c or ONE NEW SUBSCRIBER.

SIX MONTHS' CREDIT

Any subscriber may have the date on his own label advanced 6 months for sending us the name of one new subscriber and \$1.50.

These premiums are all extra good value, and excellent remuneration for the short time necessary in securing the required number of new subscribers.

Send for sample copies and agent's outfit to-day.



SANITARY KITCHEN SET

The William Weld Co., Limited, London, Ontario

Flour trial is essential but— it is not your work!

Flour varies from time to time in baking quality. This is because wheat continually varies according to soil conditions, etc.

Therefore, if baking results are to be constantly high, baking tests are essential. It is unreasonable to expect you to make these tests at your expense.

PURITY

So from each shipment of wheat delivered at our mills we take a ten pound sample. This is ground into flour. Bread is baked from the flour. If this bread is high in quality and large in quantity, we use the shipment. Otherwise we sell it.

By simply asking for flour bearing this name you can always be sure of more bread and better bread.

“More Bread and Better Bread” and “Better Pastry Too” 523

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE
10 Days FREE—Send No Money



We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp.

BURNS 70 HOURS ON 1 GALLON OIL
 Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

\$1000.00 Reward
 will be given to the person who shows us an oil lamp equal to this Aladdin in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the Aladdin? We want one person in each locality for our 10 Day Absolutely Free Trial Proposition. Agents' Wholesale Prices, and learn how to get ONE FREE.

AGENTS WANTED
 to demonstrate in territory where oil lamps are in use. Experience unnecessary. Many agents average five sales a day and make \$300.00 per month. One farmer cleared over \$200.00 in 6 weeks. You can make money quickly and spare time. Write quick for territory and sample.

MANTLE LAMP CO., 744 Aladdin Bldg., Montreal & Winnipeg

MAKE MONEY SAWING LUMBER

There's thousands of feet of high priced lumber over there in the wood-lot, waiting for you to get an "American" Portable Saw Mill, belt it up to your farm engine, and get busy in a profitable lumbering business. There's an "American" of just the size you want—and it's so simple, durable and easy running that you can manage it yourself, turning out the best lumber at the lowest cost. No skill or experience is needed. We give you full instructions for making lumber which you can use yourself or sell in the local market. If you have no timber, there's lots around you. Lumber is high, and going higher. Trees bring the big-gest money when sawed into lumber. Begin now to harvest your wood lot. Write for our Farm Catalog and Booklet No. 32 on farm lumbering.

AMERICAN SAW MILL MACHINERY CO.
 118 Hope Street, Hackensack, N. J.
 1287 Terminal Building, New York
 Chicago Savannah New Orleans Seattle

Imported Percherons, Clydes and Shires

My 1913 importation from France and Scotland are now in my stables. If you want the best in Percherons, Clydesdales and Shire stallions and fillies, come and see my offering; 30 head to select from. Also Hackneys and French Coach stallions. I have all ages of best breeding and highest quality, and the prices are low.

J. E. ARNOLD, Grenville, Quebec

Clydesdales, Imported and Canadian-bred—With over 25 head to select from, I can supply, in either imported or Canadian-bred, brood mares, fillies, stallions and colts.

Let me know your wants. L.-D. Phone. R. B. PINKERTON, Essex, Ont.

Questions and Answers. Veterinary.

Fatality in Pigs.

Pigs four months old, fed on ground oats, barley and peas and pulped roots, were doing well until one day I fed them a handful of salt. The next day they became sick. They held their heads high and staggered. When they laid down they would pant. Two have died.

D. B.

Ans.—Some claim that when salt is fed to pigs the results are mostly always serious, but it is hard to see how or why such should be the case. At the same time it is unwise to mix salt with the food, and practically force its consumption, and we notice that when pigs have free access to salt, they consume very little of it. It is possible that the salt caused the trouble, but more probable it is due to too high feeding and want of exercise. Give each a purgative of about four ounces raw linseed oil, and feed on milk, shorts and pulped roots for a few days. V.

Miscellaneous.

Book on Sheep.

Could you tell me where I could get a book on "sheep," telling all about the different breeds. Also one of the same kind about "Pigeons."

W. H.

Ans.—Modern Sheep Breeds and Management, by Shepherd Boy, may be had through this office, at \$1.50, postpaid. There is a department in many poultry books on pigeons, and we have a book on "Squabs for Profit," which we could mail you at 60c., postpaid.

Pasturing and Feeding Queries.

Will you kindly let me have your opinion, through "The Farmer's Advocate," in reference to turning cattle into meadows in the fall to eat the "after grass"?

1. What effect will it have on next year's hay crop?
2. If the "after grass" is allowed to grow, and no cattle turned in on it, after it is frozen, is that portion of the grass that is frozen simply wasted, or does the goodness go back into the roots and stimulate next year's growth?
3. If cattle are allowed to graze in meadows in the fall and eat down the "after grass," does this leave the roots in any way unprotected, and render them more liable to be winter-killed?
4. Do you consider, by allowing cattle to feed on "after grass," the gain is sufficiently great to counter-balance the effect on next year's hay crop?
5. Also, what kind of fodder do you consider can be grown in the Province of Quebec to best advantage to feed to milch cows when the pastures begin to get short of feed after August? Millet, corn, or what other crop would you suggest that would grow in this Province? Is millet, fed green as outlined above, considered to be good for milk production?

E. G.

Ans.—1. Pastured off too closely it injures the meadows, they not being in as good condition to stand the winter. Besides, if land is soft, cattle or horses may punch it badly late in autumn.
 2. The grass frozen down acts as a protection to the roots, and goes back to the land to increase fertility.
 3. If pastures too closely; yes.
 4. Judiciously done, generally yes.
 5. Corn is a good crop where it can be successfully grown. Millet gives fair results, but possibly you could use a mixture of oats and peas to advantage, or a mixture of sugar cane, oats and clover.

The farmer had bought a pair of shoes in the city shop.

"Now, can't I sell you a pair of shoes trees?" suggested the clerk.

"Don't git fresh with me, sonny!" replied the farmer, bristling up. "I don't believe shoes kin be raised on trees any more'n I believe rubbers grow on rubber trees, or oysters on oyster plants, b'gosh!"

A TURNED CRANK.

Willie—"Paw, what is a genius?"
 Paw—"A genius is a successful crank, my son."

Don't BLAME your Horse



A horse cannot be expected to pull a load on icy roads or streets if his shoes are dull and smooth.

If you expect him to exert all his pulling power, he must have a foothold. Get

Red Tip Calks

today and save your horse from danger and yourself from delay and annoyance.

On and off in twenty minutes, RED TIP CALKS put you in the always ready class.

Compared to injuries sustained by your horse from falling, or possible fatal loss; not to mention damage to wagons and harness, RED TIP CALKS are CHEAP INSURANCE.

Send today for booklet K

THE NEVERSLIP MFG. CO.
 U. S. Factory: New Brunswick, N. J.
 Canadian Office and Factory: 559 Plus LX Ave, Montreal.

Why Pay More

\$18.90 direct from factory to you is all you need to pay \$20 for the famous New Butterfly Cream Separator.

and a half minute—material and workmanship guaranteed a lifetime. Why pay more? Also made in four larger sizes up to No. 5 J-I shown here. Makes a clear profit of \$15 more per year from each cow. Pays for itself in six months. Saves work, ends drudgery.

NEW BUTTERFLY
 Cream Separators run light and easy, have ball bearings bathed in oil. The one-piece aluminum skimming device cleans quickly without scrubbing. No discs to rust and get out of place. Only one part inside the bowl. We give 30 days' FREE trial on your farm and pay freight both ways if you are not pleased. Write for Catalog Folder and low factory-to-farm prices. ALABAMA SEVER CO., 2139 Marshall Bldg., CHICAGO

For a Better Orchard

You can secure the largest yield of No. 1 fruit by using Davies Special Fertilizers. Some orchard men apply part New and complete the application of the Fertilizer in the Spring. We will tell you how. Write for free booklet.

The **DAVIES** Company
 Wm. Davies Limited
 WEST TORONTO, ONT.
 We have an agent near you

Please mention "The Farmer's Advocate."

DANGEROUS

as well as painful

Backache Neuralgia
Lumbago Rheumatism
Stiff Joints Sprains

Gombault's Caustic Balsam

WILL RELIEVE YOU.

This penetrating, soothing and healing and for all
Sores or Wounds, Felons, Interiors Glanders, Burns,
Boils, Carbuncles and all Swellings where an outward
application is required CAUSTIC BALSAM HAS NO
EQUAL. Removes the soreness—strengthens the muscles.
Price \$1.50 per bottle. Sold by druggists or sent
by us express prepaid. Write for Booklet L.

The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

Aylmer Superior Level Force Pump.

For Hand and Windmill use. Has Six
Eight, and Ten-inch Stroke. Ad-
justable Base.

Fig. 38.



Fig. 38 represents our
Superior Level Pump, fitted
for hand and windmill
use. Made in 1 1/2 and
2-inch.

This style of lever and
fulcrum has several advan-
tages over the ordinary
style; having longer stroke
the power is greater, mak-
ing it work easier. The
handle being wood, they
are not so liable to break in
frosty weather.

The base is adjustable
admitting of top being raised
or lowered to any position
desired.

The handle is drilled for
three lengths of stroke. Six,
eight, and ten-inch stroke.

This is readily converted
into a Windmill Pump by
the addition of a flat bar,
which screws into the cross-
head on top.

Cylinders capped inside
require to be two inches
longer to obtain same
stroke.

This pump is adapted for
all depths of wells; furnished
with Iron, Brass Body or
Brass Lined Cylinder.
You'll never regret placing
one of these pumps on your
farm. Write us to-day for
prices and illustrated catalogue free.

Aylmer Pump & Scale Co.
Aylmer, Ontario

Live and Poultry Dressed WANTED

WE are now starting to pack
poultry for the WESTERN
CANADA CHRISTMAS
MARKETS. As soon as your
birds are ready we will buy them.
Feed is dear, and there will be
nothing gained by holding. Write
to-day for our Weekly Poultry
Letter if you live west of Toronto
and have poultry to sell.

We supply crates and guarantee
prices f.o.b. your nearest station.
We pay a special price for milk-
fed crate-fattened chickens.

"CANADA'S LEADING
POULTRY HOUSE"

Silverwoods Limited
LONDON, ONT.

Logs Wanted

Maple, Soft Elm, Rock Elm and Basswood
Inspection at point of shipment; terms cash.

THE BRADLEY COMPANY,
Hamilton, Ontario.

Notice to Importers

C. CHABOUDEZ & SON
205 rue La Fayette, PARIS, FRANCE.
If you want to buy Percheron Horses and
Mares, I will save you time and money and all
trouble with papers and shipment. Will meet
importers at any landing port. I am acquainted
with all breeders and farmers. 30 years experi-
ence. Best reference. Correspondence solicited.

DR. BELL'S Veterinary Medical Won-
der. 10,000 \$1.00 bottles
FREE to horsemen who will give The Wonder a
fair trial. Guaranteed to cure Inflammation, Colic,
Coughs, Colds, Distemper, Fevers, etc. Agents
wanted. DR. BELL, V. S., Kingston, Ont.

Questions and Answers.

Miscellaneous.

Maple Sugar Bulletin.

Let me know the cost of that book
you speak of on the maple-sugar in-
dustry. J. M.

Ans.—The publication is a bulletin on
the maple-sugar industry, issued by the
Dominion Department of Agriculture, and
may be had free on application to the
Hon. Martin Burrell, Minister of Agricul-
ture.

Kitten has Cough.

Kitten, five months old, vomited and
had short sick spell after eating fat of
healthy fowl. Since then she has
had a sort of cough, or sneeze, and
breathes heavily at times. Breathing
sounds like phlegm in nose or throat.

1. Has cough anything to do with the
sickness?

2. What treatment, if any, would be
likely to prove successful? D. F.

Ans.—Unless this cat is very valuable,
it would be advisable to destroy it.

Combined Well and Cistern.

Well close to end of barn does not
keep enough water for horses and cattle.
We turned eave pipes to catch water off
barn into the well, and then we pump
with windmill to tank in barn. The
roof is cedar shingles. Will the water
be all right for horses, if too much is
not kept in tank? P. M.

Ans.—This water should be all right.
It may be discolored a little if the
shingles are new, and may taste a little
of the cedar, but should do the stock no
harm, provided it is pure in other par-
ticulars.

Black Head.

Can you tell me what is the matter
with my turkeys? They appear to be
very healthy. They soon become stupid
and get pale in the head and die sud-
denly. We opened one and found it to
have a large liver and yellow spots go-
ing nearly through it. W. J. T.

Ans.—The symptoms clearly indicate
black head, an infectious disease common
among turkeys. It is often advisable to
get rid of the flock. Always isolate
affected birds. Place healthy birds in
new runs, or in buildings separated from
the diseased birds. A little muriatic
acid in drinking water has been advised
many times through these columns. Dis-
eased birds do not often recover.

Itchy Skin.

What will remove itch and dust from
cattle? Last spring my milk cows ap-
peared to be very itchy. There was no
lice on them, but the hair came off along
the back and neck. Would bathing with
some kind of disinfectant kill it? I am
feeding steers now, and have clipped off
the hair along their backs, and I brush
them, but still they are nearly mad with
itch. There must be something in the
skin. J. E. M.

Ans.—The trouble is probably due to
feeding, and impure blood. Wash thor-
oughly with a five-per-cent. solution of
Creolin or Zenoleum, and brush them
often. If this does not correct matters,
purge them with one pound of Epsom
salts and four tablespoonfuls of ginger,
in water, as a drench. Follow the physic
with a blood tonic. To prepare this,
for each animal mix 16 tablespoonfuls
each of nitrate of potassium and sul-
phate of iron. Give in doses of 1 1/2
tablespoonfuls daily in a bran mash until
all is used.

He was a chubby, brown-faced, bare-
legged little urchin, from whom, during
my vacation, I acquired the way to the
nearest golf course.

"Weel," said he, "ye'll gang straight
along here till ye come to the first on
yer right, an' ye'll see a minister—I mean
a sign-post," he corrected hastily, "and
ye'll get the road frae it."

Thanking him for his information, I
next enquired why he called the finger-
post a minister.

Shuffling his feet and gazing longingly
at the copper I held out to him, he
stammered out: "Folks ca' it a min-
ister 'cos it pints the right road, but
diana gang it itself," and he rushed off
to join his companions, while I retired
thinking deeply on the spread of disre-
spect to the cloth.

Caldwell's Molasses Meal

You can save money by using Molasses Meal because
it increases the value of other feed by 25% at least.
But—be sure it's Caldwell's: Because Caldwell's is the
only Molasses Meal that contains 84% of pure cane
molasses—the rest of it is an edible moss with amazing
therapeutic qualities. Caldwell's Molasses Meal is
the greatest concentrated feeding meal on the market.
Its systematic use is sound economy. Most dealers handle
it. You will oblige us by telling us if yours doesn't.

The Caldwell Feed Co. Limited, Dundas, Ont.

Molasses Meal, Dairy Meal, Cream Calf Meal, Poultry Meals
Substitute

Ship your LIVE STOCK to the old firm of
DUNNING & STEVENS, Inc.
Commission Merchants EAST BUFFALO, N. Y.
Room 1, Live Stock Exchange Building
Established 1876 Write for market paper
Paid-in Capital, \$100,000 or pass books

CLYDESDALES --- Stallions and Fillies

WE have again landed at our stables a large and choice collection of Clyde Stallions
and Fillies of strictly high-class show calibre. We never had a lot that measured up
to the standard of this lot, big, flashy quality; close, straight action and bred in the
purple. We can supply winners in any company. Write us.

SMITH & RICHARDSON - Columbus P. O.
Brooklyn, G.T.R.; Myrtle, C.P.R. Long Distance 'phone

Imp. CLYDESDALES, PERCHERONS, Imp.

I sold more horses last year than any other Canadian importer. Why? because I had
a bigger and better selection than any other man in the business and my prices and
terms are the best obtainable. This year I have 80 head to choose from and their
breeding, size, quality, character and action are at the top of all others, Clydesdales,
and Percherons, stallions and fillies.

T. H. HASSARD - Markham, G.T.R., Locust Hill, C.P.R.

STALLION & FILLIES CLYDESDALES PRIZE-WINNERS & CHAMPIONS
For this season's trade we have Clyde Stallions and Fillies that were up to champlon-
ship honors in Scotland, and the same honors in Canada. Breeding characters, quality
and action unsurpassed. Visit our barns if you want the best. HOWICK, QUE

TOPPERS IN CLYDESDALES AND PERCHERONS
I have just landed a big importation of Clydesdales and Percherons, if you want a
big ton stallion with the best of quality, come and see me, I can show you the best lot
of stallions you ever saw.
T. D. ELLIOTT, BOLTON, ONTARIO

Imp. CLYDESDALES & PERCHERONS, Imp.
Until my new importation arrives in December I can give better value in stallions
above breeds than any man in Canada. Ton Horses, with flashy quality, royally bred.
There are none better, come and see them. T. J. BERRY, Henshall, Ont.

Imp. Clydesdale Mares and Fillies

Seven 4-year-olds and two 3-year-olds with an average weight of 1750 lbs. all of them safe in foal,
well matched pairs, have been in Canada over a year and in fine condition. Chocely bred, a high-
class quality lot.
L. J. C. BULL, BRAMPTON, ONT.

Mount Victoria Clydes & Hackneys
When in want of a high-class
Clydesdale stallion or filly, or something that has won and can win again in Hackney stallions or fillies,
visit our barns at Hudson Heights, Que. T. B. MACAULAY, Proprietor
E. WATSON, Manager, Hudson Heights, Que.

BREEDING & CLYDESDALES—STALLIONS AND FILLIES
QUALITY
My fall importation of Clydesdale Stallions and Fillies are now in my stables; there never was a
better bred lot imported, and their standard of character and quality is the highest, and my price
the lowest. G. A. BRODIE, NEWMARKET, ONT. L.-D. Bell Phone.

Imp. Stallions CLYDESDALES Fillies Imp.
To the Clydesdale men of Canada we wish to say our 1913 importation is home, and we
have some of the best show material in this country. More size, more style; more
quality, more character and better breeding than ever before, in both stallions and fillies.
JOHN A. BOAG & SON, Queensville, Ont. Electric Cars every hour.

Ormsby Grange Stock Farm Ormstown, P. Que. Owing to
being overstocked I am desirous
of disposing of a number of imported fillies and stallions, Clydesdales and Shires at most
reasonable prices. They are all personally selected out of A. W. Montgomery's Clyde
studs and the Bramhope Shire stud. Send for catalogue. D. McEachran

Our impor- tation of Clydesdale Stallions
and comprise a lot, that, for
breeding, quality and size, are
difficult to excel.
BARBER BROS., - Gatineau Pt., near Ottawa, Que.

CLYDESDALES, IMPORTED STALLIONS AND FILLIES
In the modern Clydesdale there must be big size, draft character, quality at the
ground, and straight clean action. Come and see what I have with the above requi-
sites in both Stallions and Fillies, also one French Coach Stallion.
JAMES TORRANCE, MARKHAM, ONT., G.T.R.; LOCUST HILL, C.P.R.

Heaves CURED

—by removing the cause—and cured to stay cured—If 3 boxes of Fleming's Tonic Heave Remedy fail to effect a cure of any case—old or new—we will refund the full amount paid.

Per Box 1.00, 3 for 2.50 Mailed on Receipt of price

Scratches Disappeared
Gentlemen—I gave a course of your Tonic Powders, which has put a horse and his mate in fine shape, and a touch of scratches has quite disappeared.

Fuller information in FLEMING'S VEST POCKET VETERINARY ADVISER Write us for a Free copy

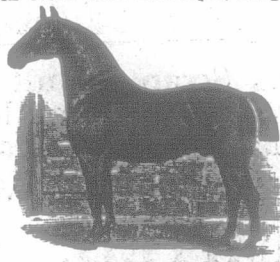
FLEMING BROS., Chemists
75 Church St., Toronto, Ont.

DR. PAGE'S ENGLISH SPAVIN CURE

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hocks, Strains or Bruises, Thick Neck from Distemper, Ringworm on cattle, and to remove all unnatural enlargements.

This preparation, unlike others, acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E.C. Mailed to any address upon receipt of price \$1.00.—Canadian agents:

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Any VETERINARY DRUGS

If you need any write at once, when we will quote very low and reasonable prices.

Consultation by letter FREE of charge, with our diplomed veterinary doctor. For any diseases, write and consult him now.

NATIONAL STOCK FOOD COMPANY
Ottawa, Ont.

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2K Free.

ABSORBINE, JR., the antiseptic liniment for mankind. Reduces Strained, Torn Ligaments, Enlarged Glands, Veins or Muscles, Heals Cuts, Sores, Ulcers, Allays pain. Price \$1.00 a bottle at dealers or delivered. Book "First Aid" free.

W.F. YOUNG, P.D.F., 258 Lyman Bldg., Montreal, Can.

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GERALD POWELL,
Commission Agent and Interpreter,
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Will meet importers at any port in France or Belgium and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking, and pedigrees. Many years' experience; best references; Correspondence solicited. P.S.—Nogent is in the heart of the Perche horse district.

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Against Death by Accident or Disease

Specialties of Stallions, In-foal Mares, Track Horses, Transits, etc. Liberal policy issued by a Company operating under Federal Insurance Department's supervision.

WRITE FOR FREE BOOKLET

The General Animals Insurance Co. of Canada
Head Office: 71a St. James Street, Montreal, Que.

Shires and Shorthorns

In Shire stallions and fillies, from the best studs in England, we are offering some rare animals at rare prices. Scotch Shorthorns of either sex or age, of highest breeding and quality. **John Gardhouse & Son, Highfield, Ont.** L.-D. Phone.

Questions and Answers. Miscellaneous.

Cotton Seed Meal.

In reading your valuable paper, I find that cotton-seed meal is highly recommended as a feed for milch cows. Would you kindly let me know where I could buy it, and what the price would be?

J. F.

Ans.—This feed may be purchased from firms advertising feeds in this paper. Look up these advertisements and write them for prices.

Immature Mortgage.

A bought a farm from B, subject to a mortgage, which is held by a loan company, the mortgage coming due only in small payments. A wants to pay it off before due.

1. Is there any way he can compel the loan company to take their money?
2. If so, how?

Ans.—1 and 2. The company cannot be compelled to accept payment of the mortgage money in advance, as desired by A.

A Cow Deal.

I bought some stock from a farmer when purchasing his farm last spring, among which were two cows, for which he charged me fifty dollars each, telling me the two cows were not great milkers, but there was quality in the milk. I also have to pay 6 per cent. annually on these two cows, also paying for stock at one hundred dollars per year. The one cow came in last spring, but the other failed to. The farmer asked me afterwards if the other cow had come in, and I told him she had not. Besides, for about four months they only gave about 14 quarts a day, on an average, during the summer. Now they only average about 6 quarts a day. I am speaking of the two cows giving these quantities of milk. Can I make the farmer take the said cows back, and take the one hundred dollars off the bill, and should there not be something allowed for not coming in last spring; that is the one cow?

Ans.—We do not see that you can get anything from the man who sold you the cows, seeing that he did not claim them to be heavy milkers, and as we judge from your description of the agreement, he did not guarantee them to be with calf. No doubt you would have got more milk had the other cow freshened. Unless there are some other details in the case which you have not stated, you would not likely be entitled to any reimbursement. If the cows are any good at all, they would be worth much more than \$50 each this fall.

Manuring for Corn.

I have four acres of clover sod that I wish to plow early in the spring and sow with Early Learning corn for fodder. Will it be proper to draw out manure from barnyard and spread with manure spreader as soon as it freezes up and through the winter at convenient times, as long as snow is not deep? This land is clay loam, and naturally well drained, but not excessive. Will the manure substance wash away with the spring thaws? Will it be a better plan to draw out the manure from barnyard through the winter and pile in a large pile in the field, and then take manure-spreader and draw over the field in the spring, after barley and oat seeding is finished?

J. H. W.

Ans.—Either of the two methods would likely prove entirely satisfactory. Many favor the direct application of the manure from the stables, and where there is little danger of spring washing this is good practice, especially if the land is rather on the heavy side. A little loss may occur in run-off, but under favorable conditions this is not usually serious. It is also a good plan to haul manure in a large pile, to be applied in the spring, but this necessitates much extra labor. If the manure contains weed seeds, the piling is the better method, as heating and rotting destroys these and saves trouble later on. It is largely a question of soil, lay of the land, and whether or not the manure contains noxious weed seeds. We are not sure just how rolling your land is. If it is just enough to carry away surface water readily, it would be all right to spread the manure as made. You will have to judge this for yourself.

OIL CAKE

Nothing better for milk cows. They give more milk and better milk when fed

Livingston Brand Oil Cake Meal

It is equally good for fattening steers and putting them in the market in prime condition.

Fine ground, or course ground for cattle. Pea size for sheep. We also sell Linseed Meal and Flax Seed.

If your dealer cannot supply you, write us.

The Dominion Linseed Oil Company Limited
BADEN, ONTARIO MONTREAL, QUEBEC

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ECONOMICALLY INCREASED BY BALANCING THE GRAIN RATIONS WITH

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LEARN TO FEED A BALANCED RATION

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Exclusive Canadian Agents. We can ship you any quantity, from 100 lbs. to a carload.

SHIP US YOUR CREAM

WE Supply cans and pay all express charges within a radius of 100 miles of Berlin. Send a statement of each shipment. Pay every two weeks.

WRITE FOR FULL PARTICULARS.

THE BERLIN CREAMERY COMPANY
BERLIN, CANADA

Canada's Champion Herefords When selecting a herd header or foundation stock come to the fountain herd; for years my herd have proven their title as the champion herd of Canada. I have always both sexes for sale

L. O. CLIFFORD, Oshawa, Ontario

Shorthorns —I have ten young Shorthorn bulls, some fit for service now. Part of them are bred, and made so that they are fit to head the best herds in any country. Some of them are of the thick, straight, good feeding kind, that will produce money-making cattle; some of them are bred from the best-milking Shorthorns, and the prices of all are moderate. I have Shropshire and Cotswold rams and ewes of all valuable ages. Write for what you want, I can suit you in quality and in price. Ask for Bull Catalogue.

ROBERT MILLER, STOUFFVILLE, ONTARIO

IRVINE SIDE SHORTHORNS

We are offering just now some very choice Scotch-bred heifers, high-class in type and quality, bred in the purple; also one right nice yearling roan bull.

L.-D. phone. **JOHN WATT & SON, Salem, Ont.**

SHORTHORN BULLS FOR SALE

8 head from 10 to 18 months, bred from cows which are from imported dams and sired by choicely bred bulls, prices are not high as I need the space for stabling cattle.

Shropshire and Cotswold ewes bred to imported rams.

BLAIRGOWRIE FARM JOHN MILLER, Jr., ASHBURN, ONT.

Springhurst Shorthorns Four of the first-prize Shorthorns at the late Guelph Show, including the champion and grand champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young herd headers of this champion-producing quality.

HARRY SMITH, HAY P. O. ONT. Exeter Station. Long-distance Telephone.

MEADOW LAWN SHORTHORNS OF RICHEST AND MOST FASHIONABLE SCOTCH BREEDING, and of high-class type and condition. I can supply young bulls and heifers—Clarets, Roan Ladys, Mildreds, Stamfords, etc. L.-D.-Phone


F. W. EWING, R. R. No. 1, ELORA, ONTARIO.

SHORTHORNS Our present offering consists of Nonpareil Lorp -87184 - Dam Imp. Dalmeny Nonpareil 6th. 7 young bulls from 6 to 12 months old. 15 cows and heifers of choicest quality and breeding.

A. J. HOWDEN & CO., COLUMBUS, ONTARIO
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Be Safe!

Don't take too many chances with spavin, splint, curb, ringbone, bony growths, swellings and of lameness. Use the old reliable remedy—



KENDALL'S Spavin Cure

It has been used by horsemen, veterinarians and farmers for 35 years—and it has proved its worth in hundreds of thousands of cases.

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H. NEIDORF.

\$1 a bottle—\$ for \$5, at druggists—or write for copy or our book "Treatise on the Horse" free.

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Enosburg Falls, Vermont, U.S.A. 79

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with

Fleming's Fistula and Poll Evil Cure

—even bad old cases that skilled doctors have abandoned. Easy and simple to use, just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within ten days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ont.

Aberdeen-Angus of Show Form and Quality. For this season my offering in young bulls and heifers, are toppers every one. Show-ring form and quality and bred from show-winners. **T. B. BROAD-FOOT, Fergus, Ont. G. T. R. and C. P. R.**

Shorthorns

Fourteen good young bulls, from 6 to 12 months old, and a number of females. Would appreciate your enquiry for same.

H. CARGILL & SON, Cargill, Ontario

OAKLAND 45 SHORTHORNS

25 breeding females of milking strain headed by Scotch Grey 72692, a first prize and sweepstake roan bull; and Red Baron 81845, a fine large dark red bull of excellent dairy strain. Both for sale. Also a pair of grand young bulls 10 and 14 months, of excellent milking strain, youngest if properly placed will head a herd.

JNO. ELDER & SONS, HENSALL, ONTARIO.

Spring Valley Shorthorns

A few of the best young bull prospects we ever had. They will please you. Will sell females too. Visit the herd; we think we can suit you. Particulars on application.

KYLE BROS., R. R. No. 1, Drumbo, Ont.

WOODHOLME SHORTHORNS

I have for sale a most attractive offering in young bulls and young females, pure Scotch, breeding unsurpassed, the low thick kind. Write me your wants. **G. M. FORSYTH**
North Claremont, Ont.

1854 MAPLE LODGE STOCK FARM 1913

Shorthorns and Leicesters

I have a most excellent lot of young rams for sale, mostly sired by imported Connaught Royal. Something very choice in young bulls. House one mile from Lucan Crossing G. T. R.

A. W. SMITH, MAPLE LODGE, ONTARIO

SHORTHORNS, COTSWOLDS, BERKSHIRES

In Shorthorns am offering cows and heifers and calves of either sex. In Cotswolds have ram and ewe lambs and breeding ewes for sale. In Berkshires have a nice lot ready to ship. **CHAS. E. BONNYCASTLE,**
P. O. and Station, Campbellford Ont.

Shorthorns for Sale

2 yearling bulls of the right kind, 2 high-class herd headers, 12 months, one from imp. cow 4 bull calves, also young cows and heifers, some good milking strains

Stewart M. Graham, Lindsay, Ont.

Spruce Lodge Shorthorns & Leicesters

Present offering: A number of good heifers and young cows, with calf at foot, from good milking families. A few ram lambs and a choice lot of shearing ewes, now bred to imp. ram.

W. A. Douglas, R. R. No. 2, Caledonia, Ont.

Questions and Answers. Miscellaneous.

Veterinary books

Will you please let me know the name of a good veterinary science book, and where I could get it?

A SUBSCRIBER.

Ans.—There are many, but The Farmer's Veterinarian is comprehensive and easily understood. It may be procured through this office, at \$1.50, postpaid.

Abortion in Cow.

I went to an auction sale a short while ago and bought several cows. They were guaranteed to be free from abortion and all right. In a few days one lost her calf, and she was supposed to freshen in April next. In a few days another one that was to freshen in February, lost her calf, and I hear some more of them will do the same. Can I make the seller allow for them? R. D.

Ans.—This is a case where it is scarcely likely that you could get anything from the seller. If, however, you can prove that the cows were affected with contagious abortion when he sold them to you, and he guaranteed them free from it, he would be liable. However, it would likely be very difficult to prove this. You might approach him about the trouble anyway, and explain the matter to him.

Miscellaneous.

1. How many turnips would it be advisable to feed cattle, with silage, for fattening?
2. What benefit would oil cake be to cattle?
3. Are raw potatoes good to kill worms in horses?
4. How much hardwood ashes would be safe in feeding horses to kill worms?
5. How long will sweet clover stay in the ground without re-seeding?
6. How much per bushel is the seed? Our seedsmen don't handle it. They call it a weed.
7. How many pounds per acre is sown?
8. Would it hurt it to pasture the young seeds?
9. How would a little buckwheat, mixed with oats and sown together, do?
10. What would be good to feed hens that have the white scours? What causes it?
11. Is the red mortar-color good to put in drinking water for the fowl to drink?
12. Does land require to be very rich in order to grow alfalfa?

A SUBSCRIBER.

Ans.—1. This depends wholly upon the size of the cattle, the amount of silage fed, and the amount of other feeds given. A 1,200-lb. steer getting a liberal ration of grain, hay and silage, does not absolutely require roots, although a variety increases palatability and digestibility. From 15 to 30 lbs. of roots daily would do no harm, and might improve the ration.

2. Oil cake is a highly nitrogenous concentrate, suitable in small quantities for putting finish on feeding cattle, sheep, or swine. Where a ration has too wide a nutritive ratio, that is percentages of protein to carbohydrates and fat, it is well to add a little oil-cake meal. It is a rich, strong feed, greatly relished by stock.

3. We do not think so.

4. Only a small handful in their oats, if fed at all. Some worm powders would be more effective.

5. Sweet clover is biennial, and must be re-seeded each year.

6. Enquire from some of the larger seedsmen whose advertisements run, in season, in this paper.

7. From 20 to 30.

8. Pasturing young seeds is seldom, if ever, advisable.

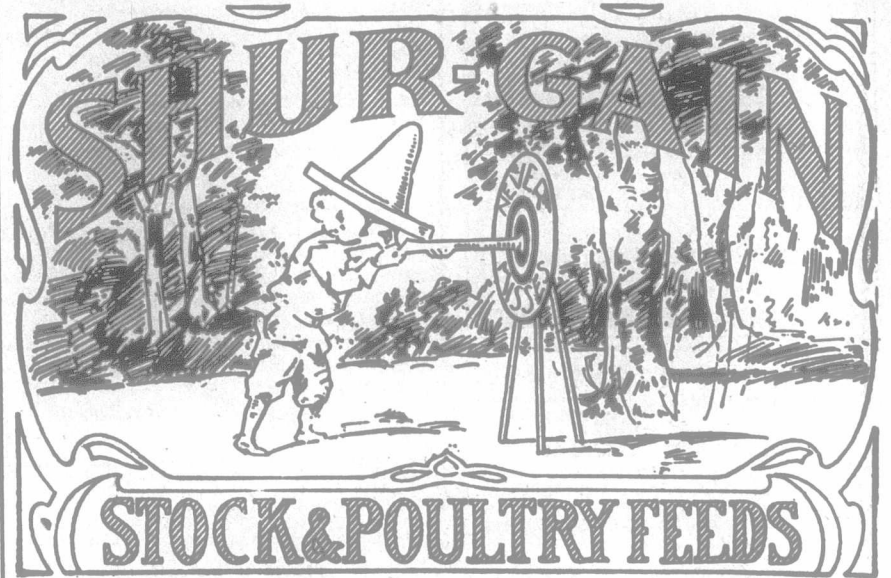
9. Buckwheat and oats would not be a profitable mixture.

10. Most probably this has been caused by injudicious feeding. Avoid green food, such as mangels, cabbages, etc., which has been frozen. Feed regularly. Do not give much green feed until scours cease. Give good, whole grain, and rolled oats, and give sour milk to drink. Give plenty of grit also.

11. What is it made of?

12. Not necessarily so. More depends upon the kind of soil and the nature of the land, whether or not it is level or rolling, and drainage. Of course, the soil must be in good tilth, clean, and well cultivated.

GUNNS



Beef Scrap Charcoal Chick Scrap Poultry Bone
Beef Meal Bone Meal Oyster-Shell Calf Meal
Crystal Grit Dairy Meal Hog Meal

Or any other line of stock and poultry food. Write:

GUNNS LIMITED,
West Toronto, Ontario

The Auld Herd and Pleasant Valley SHORTHORNS

We have females of all ages and of the best Scotch families for sale. Those interested should come and see us. Correspondence invited.

Bell 'phone. Guelph or Rockwood Stns. **A. F. & G. AULD, Eden Mills, Ont.**

Shorthorns & Clydesdales

We have seven yearling bulls and seven bull calves from 7 to 12 months. All reds and roans, and of choice breeding. We have some extra good imported mares for sale, also some foals. If interested write for catalogue of their breeding.

W. G. PETTIT & SONS, FREEMAN, ONTARIO
Burlington Junction, G. T. R. Bell 'Phone.

SHORTHORNS

—Records show that cattle bought from the Salem herd won numerous ribbons the past season; we have others. Several young bulls are priced reasonably.

ELORA G. T. R. and C. P. R. J. A. WATT, SALEM, ONT.

100 SHORTHORNS IN OUR HERD 100

For sale—Imported yearling show bull; 14 calves 8 to 14 months old; cows and heifers and show material all ages. Herd headed by 3 high-class imported bulls, all 3 were prizewinners at Toronto this year.

Farm ¼ mile from Burlington Junction. **MITCHELL BROS., Burlington, Ont.**

SHORTHORNS

of breeding, style and quality. If in want of an extra choice herd header, carrying the best blood of the breed, or a limited number of right nice yearling heifers, write us; we can supply show material of either bulls or females. **Geo. Gier & Son, Waldemar R. R. No. 1, Ont. L.-D. 'Phone.**

DAIRY-BRED SHORTHORNS

We have for sale, Scotch and English-bred Shorthorns. A few bulls of improved breeding on big milking lines; also others pure Scotch, and heifers of both breed lines.

L.-D. 'Phone G. E. MORDEN & SON, OAKVILLE, ONTARIO

Ayrshires & Yorkshires

—Bulls for service, of different ages; females all ages. Calves of both sexes. All bred for production and type. A few pigs of either sex ready to ship.

ALEX. HUME & COMPANY, Menie P. O., Ont.

City View Herd of Record of Performance Ayrshires

One two-year-old, one yearling, one calf, males only, for sale, from R. O. P. cows, and sired by bulls from R. O. P. dams.

JAMES BEGG & SON, R. R. No. 1, St. Thomas, Ont.

75 Hillcrest Ayrshires

Our Ayrshires are selected and bred for big production, and show-ring quality. Many of the heifers we are offering are grand-daughters of the two Ex-World's Champions, Jean Armour, Record, 20,174 lbs., and Primrose of Tanglewyld, Record 16,195 lbs.

F. H. HARRIS, Mount Elgin P. O. & Stn.

High-class Ayrshires

If you are wanting a richly bred young bull out of a 50-lbs-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.

D. A. MACFARLANE, Kelso, Que.

Dunganon Ayrshires

For high-class Ayrshires, write us or come and see them. We can sell matured cows, heifers, heifer calves, all bull calves are sold. Prices right.

W. H. FURBER, COBOURG, ONT.

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Hunters and Trappers

Save your fine Specimens! Every trophy you kill is worth money to you. You will be astonished at the prices you will get for your specimens. We can teach you, by mail in your own home, how to

Mount Birds and Animals also heads, fish, and the tan hides, make rugs, robes, etc.

Yes, you can learn easily—quickly—perfectly in your own home by mail. Success guaranteed. Fascinating work. We have 35,000 sportsmen students, and every one is an enthusiastic taxidermist. Big profits to all who know taxidermy. Write today.

Special for Canadian Students

For a short time we are making a special reduced price to Canadian students. Act promptly. Write today. We will send you, absolutely free and prepaid, our complete new book on taxidermy and the Taxidermy Map. Hundreds of letters from enthusiastic Canadian students ask for it. We want every Canadian student to have it. Write for it today. It is a pocket size book, but it is worth a fortune. It is a pocket size book, but it is worth a fortune. It is a pocket size book, but it is worth a fortune.

President

These famous Suspenders obtainable in a Tasteful Christmas Box make a servicable gift a man will prize.

Suspenders

RAW FURS

Our specialty is **CANADIAN RAW FURS**. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

HALLMAN FUR CO., Toronto
N. Hallman, Manager, 4 years with John Hallman; E. J. Hagen, Treasurer, 11 years with John Hallman; J. L. Jewell, Buyer, 5 years with John Hallman; G. Hagen, Sec'y., 7 years with John Hallman.

MOLASSES FEEDS

For Dairy Stock and Horses

Write for FREE samples to

CHISHOLM MILLING COMPANY TORONTO

HOLSTEINS FOR SALE

Ten females, all ages, one bull, 3 years old, owned by the David Rife Estate. The above stock have been placed in my hands for sale, and will be sold reasonable to anyone taking the lot. Will not be sold separate. For particulars apply to

WM. A. RIFE, Hespeler, Ont.
Nine miles south of Guelph.

Royalton Stock Farm Holsteins

Herd headed by Royalton Korndyke Major, (imp.) whose dam gave 111.1 lbs milk in one day, 3 months after freshening. We are offering a few young cows (2 years and up) bred to the above bull and due to freshen from now on. One young bull calf 5 months old from above bull. Also four young bulls fit for service, sired by Sir Abbeckerik Paul De Kol (my former herd bull) and from R. O. P Cows. **E. C. GILBERT**
R. R. No. 7, St. Thomas, Ontario

The Maples Holstein Herd

Headed by Prince Aaggie Mechthilde. Present offering: Bull calves and bulls fit for service, from Record of Merit dams, with records up to 20 lbs. butter in 7 days. Prices reasonable.

WALBURN RIVERS Ingersoll, Ont.
R.R. No. 5

Glenwood Stock Farm HOLSTEINS

2 yearling bulls for sale, out of big milking strains; at low figure for quick sale. **Thos. B. Carlaw & Son, Warkworth, Ont. Campbellford Station.** Applications for registry, transfer and membership as well as requests for blank forms and all information regarding the farmer's most profitable cow should be sent to the secretary of the Association. **W. A. CLEMONS, St. George, Ont.**

DON JERSEY HERD Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern. **D. DUNCAN, DON, ONTARIO**
Phone L.-D. Agincourt. Duncan Stn. C. N. R.

The Uses of Bats.

One of the most singular and groundless of prejudices entertained by Canadians, and I suppose other peoples, is a prejudice against bats. Twice have I had the chance of observing a city congregation when a bat was flying in the church during evening service; even the preacher, who ought to have known better, dodged when the bat swooped round near the pulpit. "I am dreadfully afraid it will get into my hair," says one; another says those dreadful bats will suck the baby's blood if they get the chance; and there is a pretty general prejudice that they bring vermin into the house. One dislikes their odor; another dislikes their shape, and a third can't sleep if there is a bat in the house. The truth is that no bat makes a nest for its young, nor does it need any lady's hair. No Canadian bat ever tasted a baby's blood. The peculiarity of the beautiful construction of its fur, makes it difficult for either insect invasion or attachment. It is true that they have an odor, and that their shape is eerie, but no nurse ever moved more noiselessly in a sleeping patient's bedroom.

What is to be said in their favor? In the first place, their food is almost exclusively insects, and of these, mosquitoes are their favorite. Dr. C. A. R. Campbell, of San Antonio, Texas, lives in a country where the bat is abundant, and he has expertly used his opportunity to study it. His careful and exhaustive examination of the droppings of bats, taken on a hunter's cabin, worked out a diet of about 500 mosquitoes for each bat per night.

The Doctor has made a practical application of his studies, and has built a bat-roost in a locality that had been very badly infested with the malaria-producing mosquito. The people in the locality report a very noticeable diminution of the mosquito plague since the establishment of the roost.

In addition to being a mosquito-destroyer, the bat, where congregated in large numbers, produces a high-grade guano. The report under notice gives the address of one collector who sells over 125 tons of bat-guano annually at \$30 a ton. Dr. Campbell advocates the construction of bat-roosts, which would afford the little animals protection from their natural enemies, and figures out that in favorable localities the revenue from the guano would return large profit on the cost of building and maintaining the roosts. **J. D.**

Gossip.

We have received recently from the Henley Publishing Company, of New York, a book by Victor W. Page, entitled, "The Modern Gas Tractor: Its Construction, Operation, Application and Repair." The secret of gas power is thoroughly explained, as well as many different makes of engines in this book. The illustrations systematically explain the contexts, and the book is printed on good paper and substantially bound. This book would be a valuable addition to any farm library or agricultural school, and may be procured through this office, at \$2, postpaid.

January is the fruit-growers' month in New York State, and Rochester is their Mecca. For fifty-nine years the Western New York Horticultural Society has held its meetings, and the fruit-growing industry owes very much to the splendid accomplishments of this organization, which is the oldest and largest of fruit-growers in the Empire State. The gathering of January 28th, 29th and 30th, will be a memorable one, the programme containing several attractive features. Among the out-of-State speakers will be the always-welcome Professor S. A. Beach, of the Iowa College of Agriculture; Dr. Lipman, Director, New Jersey Agriculture College Experiment Station; a Michigan peach-grower, etc. A large aggregation of spray rigs, etc., is already arranged for. Liberal prizes are offered in the competitive class for fruits, such as a solid silver cup, several large cash prizes for boxed fruits and collections, and the usual cash prizes for single plates. Those wishing further information regarding the fruit entries should at once communicate with John Hall, Secretary-Treasurer, 204 Granite Building, Rochester, N. Y., also for copies of programme when ready.

Lakeview Public Sale

AT
Bronte, Ontario, January 20th, 1914

Unreserved Auction Sale of Some 35 Head of
Purebred Holsteins

Daughters of **COUNT HENGERVELD FAYNE DE KOL**, and cows in calf to him; also daughters of, and cows in calf to **DUTCHLAND COLANTHA SIR MONA**. The herd is over large for the quarters we have, and this sale is being held to reduce its numbers. Most of the stock offered has been bred here, and all the females in milk are in the Record of Merit.

Colonel D. L. Perry is the Auctioneer.

Catalogues from:

E. F. OSLER :: :: BRONTE, ONT.

35 REGISTERED HIGH-CLASS 35 HOLSTEINS

descendants of such sires as **Johanna Rue 4th's Lad, Sir Johanna Mercedes, Count Echo De Kol, etc.**, being our entire herd, two Registered Clydesdale Stallions aged 3 and 5, and one mare to be sold by auction

TUESDAY, DECEMBER 30th

at **Mormond Hill Farm** two miles north of Hoards (Belleville-Peterboro branch G.T.R.). Farm is sold. Prospective purchasers will be met at station. If cold and stormy day sale will be held under cover. Write for catalogue to

J. A. STEWART, Sr. Menie, Ont.

SUMMER HILL HERD OF

HOLSTEIN CATTLE

Do you realize that you must have another serviceable bull soon? Better go down to Hamilton right away and see those well-bred fellows with high official backing, that you can buy well worth the money from

D. G. FLATT & SON, R.R. No. 2, HAMILTON, ONTARIO. 'Phone 2471

Riverside Holsteins

Herd head by King Johanna Pontiac Korndyke whose near dams and sisters, 12 in all, average 55.77 lbs. butter in 7 days. His sister, Pontiac Lady Korndyke, has a record of 38.02 lbs. butter in 7 days 156.92 lbs. in 30 days—world's records when made. We are offering several females bred to this bull also a few bull calves.

J. W. RICHARDSON, R. R. NO. 2, Caledonia, Ont.

FAIRVIEW FARMS HERD

Offers for sale: A son of Pontiac Korndyke, out of a cow with a record of over 31 pounds in 7 days. Calf is nearly ready for service. Have only a few sons of this great sire left, and, remember, these are the last. Look up the record of sons of Pontiac Korndyke, and see what they are producing.

E. H. DOLLAR HEUVELTON, NEW YORK

Evergreen Stock Farm High Class Registered Holsteins

Winners of 80% all first prize at the Canadian National Exhibition 1913. For Sale—a few choice females all ages and are booking orders for what bull calves will be dropped during December. I will also buy on commission anything in pure-bred or grade Holsteins, singly or car lots. **A. E. HULET, NORWICH, ONT. R.R. 2**
Bell 'phone

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When wanting some right nice Holsteins of any age, workers and bred from workers, also young bulls, write me. One four-year-old and one yearling. Percheron stallions for sale; also Buff Orpington cockerels and pullets. **A. MITTFELDELDT, Elcho P. O. Smithville Station.**

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HOLSTEINS—I can supply a limited number of high-producing and highly-bred bulls, bred on both sides from high official backing. Let me know your wants. **W. E. THOMPSON, R.R. No. 7, Woodstock, Ont. L.-D. 'Phone.**

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Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Boog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be misused. Easy to use, only a little required, and your money back if it ever fails.

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We are making a special offering for 30 days of 30 fine yearling Oxford Down ewes. Being now bred to our imported Royal winning ram. Also 20 first-class Oxford Down ram lambs.

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A few young puppies now for sale both from imported and home bred stock. Place your order early for a good young Angus bull this year if you wish to secure first choice.

ROBT. McEWEN, BYRON, ONT.
Near London

Oxford Downs choice ram and ewe lambs from prize-winning stock \$10, \$12 each, also yearling rams and ewes at close prices. Satisfaction guaranteed.
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Tower Farm Oxford Downs—We are offering a choice lot of ram and ewe lambs from our imported rams; also a few one and two-shear ewes bred to our imported Hobbs ram winner at the Royal Show. E. Barbour, Erin, Ont., P.O. and station. L.-D.-Phone

Oxford Down Sheep Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Bueno Vista Farm, Harriston, Ont.

HILTON STOCK FARM
We are sold out of Tamworths, also females in Holsteins, but still have some choice bulls for sale, from two to six months, officially backed and right good ones.
R. O. MORROW & SON, Hilton, Ontario
Brighton Sta. Phone.

Pine Grove Yorkshires
Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs akin, to offer at reasonable prices. Guaranteed satisfaction. Joseph Featherston & Son, Streetsville, Ont.

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Both sexes and all ages, from imported stock. Prices reasonable.
C. A. POWELL, ARVA, ONTARIO
Four miles north of London.

REGISTERED TAMWORTHS
For Sale, from 8 weeks to 7 months old, either sex; also a couple of Brood Sows, already bred and some Pure Bred Poultry.
POWELL BROS., Elizabethville, Ont.

Our English Correspondence.

The British Government is paying £47,000 a year in subsidies and registration fees to horse-owners, for its extra supplies of army horses, and it can call on 22,000 horses at 24 hours' notice.

At Horsham Fat-stock Show, where Sussex cattle do most congregate, the championship prize fell to John Augier's 84-months-old Sussex heifer.

Lord Tredegar, at Newport, in Monmouthshire, South Wales, yearly gives £500 for a winter show of horses and cattle. J. H. Maden's Shorthorn bull, Montrave Ethling, won in the aged class, and was reserve for the cattle championship, which fell to His Majesty's Hereford bull, Avondale. The champion female was Maden's Shorthorn cow, Holker Waterloo 7th.

Sir George Barham died in Sussex in November. He succeeded in bringing milk by rail to London in large supplies, from districts considered too far away, when in 1865 a cattle plague in the country threatened metropolitan supply.

C. Morgan-Richardson, a famous Welsh breeder of Shorthorn cattle, is dead. He bred such good bulls as Meteor, Moonstone, and Moonlight "Yet. The last named realized \$2,100, to Mr. Duthie.

John Graham, Carberry, Manitoba, has been buying Border Leicester sheep, and has got one fine ram, called Whittinghame Achilles. The shearing ewes are by the best of Lambden blood.

The Scottish Board of Agriculture has granted £585 for improvement in the breeding of sheep. About six hundred "superior" rams are to be distributed among the crofters.

Yorkshire, the biggest county in England, possesses 149,265 horses. There are, however, 540,145 head of cattle, and 1,762,696 head of sheep. There are only 179,528 hogs in the county.

The Cheshire County Council are spending £54,000 on 5,020 acres of land, which they mean to convert into small holdings at a rental of 48 shillings an acre.

English farmers are rising in their wrath against spraying of roads for automobile fends. Sir Alfred Tease says, cattle sheep and pedestrians are being driven off these roads to which they have an ancient and prescriptive right.

J. B. Joel, one of the South African diamond mining magnates, has won £25,420 in stake money on the English Turf this season. Desmond's stock won £30,555 in stakes, and R. Wootton, the Australia trainer, prepared 66 winners, who secured £27,989 in stakes for his stable's patrons.

Louis Winans won the last big race of the "flat" season in England, with Dalmatian, a six-year-old, good-looking American-bred son of Ethelbert and Ionics. In the United States, Dalmatian won seven races, worth £4,000, and for the Empire City course, galloped nine furlongs in 1 minute 51 seconds. This is better than our English figures, but the good old British atmosphere played it up on Dalmatian, albeit. He won at Manchester on a foggy day.

An Australian show jumper, Landlock, has cleared 7 feet 2 inches at Bendigo Show. He has been secured for England, and will very likely be seen at Olympia.

G. T. BURROWS.

Gossip.

SALE POSTPONED.

In last week's issue there appeared an announcement of a sale of Ayrshire cattle, the property of F. H. Harris, Mt. Elgin. Owing to an accident, the sale has had to be indefinitely postponed. Further announcement later.

We draw attention again to the big Holstein sale which J. A. Stewart, Sr., Menie, Ont., is holding at Mormond Hill Farm, December 30th. Thirty-five head of producers, descendants of the great Johanna Rue 4th's Lad, Sir Johanna Mercedes, and Count Echo De Kol, will be sold. Also two Clydesdale stallions. The farm is two miles north of Hoard's Station, on the Belleville-Peterboro branch of the G. T. R. Conveyances will meet trains day of sale. Write at once for catalogue.



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This fall I have the best lot of lambs I ever bred. I have plenty of show material, bred from the best stock procurable in England. Order early if you want the best. Ram lambs, shearlings and ewe lambs Yorkshires of all ages.

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Shropshires and Cotswolds In my 1913 importation of 60 head just arrived are show rams and ewes, field rams and ewes of both breeds. I also have 50 home-bred yearling rams and ewes, and a fine lot of ram and ewe lambs. Will be pleased to hear from you if interested in sheep, as "no business no harm" is my motto. JOHN MILLER, Brougham, Ont., Pickering Stn., G.T.R., 7 miles. Clarendon Stn., C.P.R., 3 miles.

Prize Chester White Swine-Winners High-class in type and quality, bred from winners and champions. Young stock both sexes, any age, reasonable prices.
W. E. Wright & Son, Glanworth P. O., Ont.

ELMHURST LARGE ENGLISH BERKSHIRES
From our recent importation of sows, together with the stock boar Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, Cainsville P. O. Langford Station on Brantford and Hamilton Radial

Hampshire Swine I have a choice lot of Hampshire belted hogs for sale. Will be pleased to hear from you, and give you description and prices.
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Large White Yorkshires Have a choice lot of sows in pig Boars ready for service and young pigs of both sexes supplied not akin at reasonable prices. All breeding stock imported, or from imported stock from the best British herds. Write or call H. J. DAVIS, Woodstock, Ont.
Long-distance 'phone. G. P. R. and G. T. R.

Morrison Shorthorns and Tamworths bred from the prize-winning herds of England. Have two choice young bulls for sale 10 months old, out of large deep-milking cows and also some choice cows. Tamworths both sexes. CHAS. CURRIE, Morrison, Ont.

WOODBURN BERKSHIRES
are founded on the famous old Sally tribe, noted for big size, length of body and strength of bone. We can supply pairs and trios not akin. Show stock a specialty. Also high-class Cotswolds, ram and ewe lambs, shearlings.
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Tamworths—Boars, \$15 to \$30. Sows bred for spring farrow, \$40 to \$50 each; registered. Write for particulars.
JOHN W. TODD, Corinth, Ont.

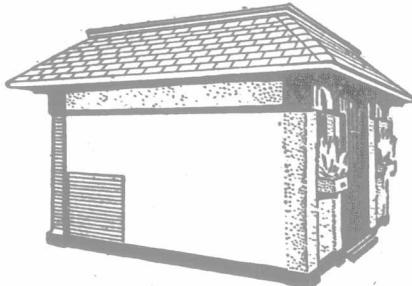
Poland-China Swine for sale from the champions of Canada; also a few good Chester Whites, and choice young Shortorns of either sex. Prices right.
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From the illustration below you can see exactly how Bishopric Stucco Board is made up. The bevelled lath are imbedded, under heavy pressure, in sheets of hot Asphalt-Mastic, faced with fibre-board.



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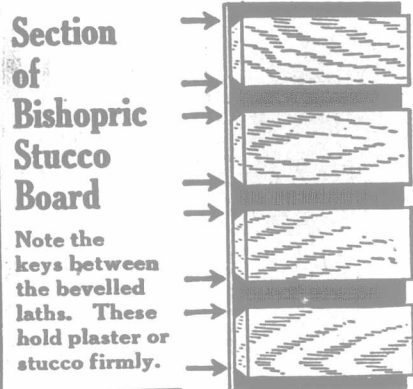
Bishopric Stucco Board is nailed to studding and ceiling joists, lath side out, then covered with a thin coat of plaster. For exterior work, Stucco replaces the plaster.

The spaces between the laths form such perfect keys that the plaster can never work loose or fall. As it does not push through, there is a great saving in the amount of plaster required. But even more important is the fact that the layer of Asphalt-Mastic makes the wall damp-proof, air-tight, much warmer than ordinary lath-and-plaster, and impervious to rats and mice.

BISHOPRIC WALL BOARD

applied lath side against the studding, forms a smooth, warm, dry wall without any plastering, thus saving time and expense.

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Section of Bishopric Stucco Board. Note the keys between the bevelled laths. These hold plaster or stucco firmly.

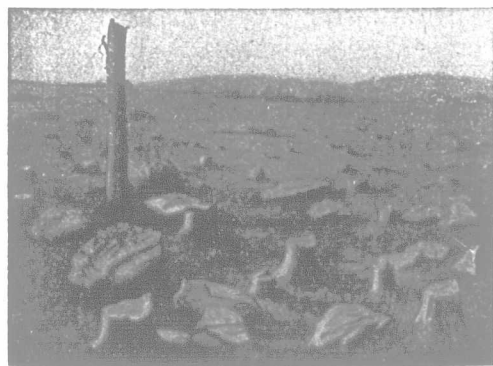
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I enclose 6c. in stamps to cover cost of mailing me Working Plan for Bishopric Model Home. 26

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PRATTS Poultry Regulator will keep your fowls in vigorous health. It is a perfect digestive tonic suited to the constitution of poultry. This great preparation is not a food, but a mild, natural regulator of the organs of digestion, preventing disease and ensuring fertility. "Your Money Back if it Fails." At your dealer's. 25-lb. pail, \$2.50; 100 lb. bag, \$9.00; also in packages at 25c., 50c. and \$1.00.



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Pratts Poultry Regulator, 25c. to \$9.00.
Pratts Baby Chick Food, 25c. to \$5.75.
Pratts Liquid Lice Killer, 35c. qt., \$1.00 gal.
Pratts Powdered Lice Killer, 25c-50c.
Pratts Roup Cure, 25c-50c.
Pratts White Diarrhoea Remedy, 25c-50c.
Pratts Poultry Disinfectant, \$1.50 gal.
Pratts Cholera Remedy, 25c-50c.
Pratts Condition Tablets, 25c-50c.
Pratts Sore Head Remedy, 25c-50c.
Pratts Scaly Leg Remedy, 25c-50c.



PRATTS Roup Cure

is a scientific compound in powder form. It is soluble, and when dissolved in water, not only prevents colds, croup, catarrh and diphtheria, but is a POSITIVE CURE for ROUP. It is quickly taken up by the blood, and cleanses the system, allaying the inflammation and reducing the fever. "Your Money Back if it Fails." At your dealer's, 25c. and 50c.



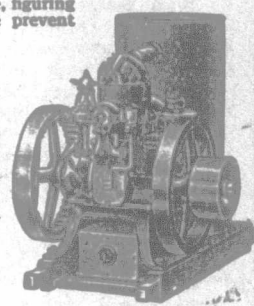
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Fill in and mail this coupon, with 10c. to cover postage, wrapping, etc., and we will mail you a copy of "The Poultryman's Handbook," 160 pages, profusely illustrated.
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This is the cost for Coal Oil per horse power to run this engine, figuring the price at 16c. a gallon. Don't let the high price of gasoline prevent you from having cheap, safe and dependable farm power.

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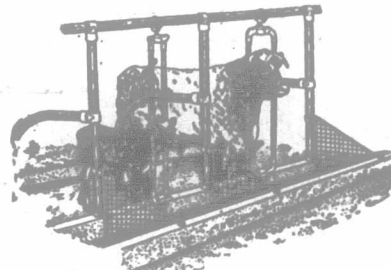


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				Old Ont. per rod	New Ont. and Que.	Maritime Prov.
No. 9 Page Wire Throughout in 20, 30 and 40 Rods, Freight Paid				Spacing of Horizontals in Inches		
4	30	22	10, 10, 10	\$0.16	\$0.18	\$0.19
5	37	22	8, 9, 10, 10	.18	.20	.21
6	40	22	6 1/2, 7, 8 1/2, 9, 9	.21	.23	.24
7	40	22	5, 5 1/2, 7, 7, 7 1/2, 8	.23	.25	.26
7	48	22	5, 6 1/2, 7 1/2, 9, 10, 10	.23	.25	.26
8	42	22	6, 6, 6, 6, 6, 6, 6	.26	.28	.29
8	42	16 1/2	6, 6, 6, 6, 6, 6, 6	.28	.30	.31
8	47	22	4, 5, 5 1/2, 7, 8 1/2, 9, 9	.26	.28	.29
8	47	16 1/2	4, 5, 5 1/2, 7, 8 1/2, 9, 9	.29
9	48	22	6, 6, 6, 6, 6, 6, 6	.29	.31	.32
9	48	16 1/2	6, 6, 6, 6, 6, 6, 6	.31	.33	...
9	51	22	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9	.29	.31	...
9	51	16 1/2	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9	.31
10	48	22	3, 3, 3, 4, 5 1/2, 7, 7, 7 1/2, 8	.31	.33	...
10	48	16 1/2	3, 3, 3, 4, 5 1/2, 7, 7, 7 1/2, 8	.33
10	51	16 1/2	3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	.33
10	51	22	3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	.31	.33	...
11	55	16 1/2	3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	.36
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No. 9 Top and Bottom, and No. 12 High Carbon Horizontals between; No. 12 Uprights; No. 11 Locks.						
5	36	16 1/2	8, 8, 10, 10	.18	.19	.22
6	36	16 1/2	6, 7, 7, 8, 8	.20	.21	.24
6	42	16 1/2	7, 7, 8, 10, 10	.20	.21	.24
7	42	16 1/2	6, 6, 7, 7, 8, 8	.22	.24	.27
7	26	8	3, 3, 4, 5, 5, 6	.23	.25	.28
8	48	16 1/2	4, 5, 6, 7, 8, 9, 9	.26	.28	.31
9	36	12	3, 3, 3, 4, 5, 6, 6, 6	.27	.29	.32
9	50	16 1/2	3, 4, 5, 6, 7, 8, 9, 9	.28	.30	.33
10	54	16 1/2	3, 3, 4, 5, 6, 7, 8, 9, 9	.30	.32	.35
SPECIAL POULTRY FENCING				No. 9 Top and Bottom, Intermediates, No. 13 Uprights 8 inches apart.		
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48	14-ft. opening			4.50	4.75	

HOW TO ORDER Above Cash Prices include freight to your railway station on lots of 20 rod rolls of fence or over or shipments of 200 lbs or over. All this fence is in 20 30 or 40 rod rolls except the two "poultry" fences, which are in 10 rod rolls. Make up your order, including fence, staples, brace wire and gates. If you wanted your fence painted white or green, we will be glad to do it for you at a cost of 2c. a rod. Send your order to the nearest Page warehouse. You get the fence at once at your railroad station. We allow your dealer 1c. a rod profit, if you prefer to order through him. Remit the money by express or postal order or personal check.

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