

FARMER'S ADVOCATE



AND HOME MAGAZINE.

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THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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The FARMER'S ADVOCATE is published on or about the first of each month. Is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

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Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

- 1.—No award will be made unless one essay at least comes up to the standard for publication.
- 2.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling.
- 3.—Should any of the other essays contain valuable matter, not fully covered by the one awarded the first prize, or should any present different views of the same topic, and we consider such views meritorious, we will publish such essays in full, or extracts from them as we may deem best, and allow the writer ten cents per inch (one dollar per column) printed matter for as much of such articles as we publish. By this rule each writer who sends us valuable matter will receive remuneration for his labor, whether he be the winner of the first prize or not.
- 4.—We invite farmers to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch (one dollar per column) printed matter. Criticisms of Articles, suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome.

We will give a prize of \$5 for the best essay which will name and describe the varieties of spring wheat, oats, barley and peas which have yielded best during the past season in the district in which the writer resides, and the mode of cultivation which has given the best results. Essay to be in this office not later than the 15th January, 1892.

We will give a prize of \$5 for the best essay which will name and describe the six most promising varieties of potatoes grown in the district in which the writer resides, and the mode of culture which has given the best results. Essay to be in this office not later than 15th Feb., 1892.

We will give a prize of \$5 for the best essay on corn and corn culture, the writer to name and describe the three most promising sorts grown in the district in which he resides, also the best and most economical mode of cultivation before and after planting. Essay to be in this office not later than 15th February, 1892.

In writing on any of the above subjects describe any new varieties; compare them with standard sorts.

Editorial.

Prospects for Better Times in Dairying.

LETTER FROM PROF. ROBERTSON, DAIRY COMMISSIONER.

To the Editor of the FARMER'S ADVOCATE.

Sir,—In response to your request that I should send you an article forecasting the probable work of the Dairy Commissioner for the next year, I submit the following brief outline:—

Beginning with the eastern provinces of the Dominion, I find that a wonderfully increased interest has been awakened among the farmers in our work in the province of

NOVA SCOTIA

during the current year. Some eleven new cheese factories were started. All the cheese factories in the province were visited by an expert whom I left in that province during the summer months. Already there is a noticeable improvement in the quality of the cheese from the influence of his summer's work. Besides visiting the cheese factories, he held meetings in a great many districts, where the farmers were seeking information on the best methods of establishing cheese factories and of opening up creameries. At one of the factories of Mr. L. C. Archibald, Antigonish, N. S., 100 cheese were made for export to Great Britain. This plan was taken to demonstrate to Nova Scotians that the cheese from their province would find a ready demand in the British markets at a price not far, if any, below the finest cheese from Ontario. In that province I took occasion under the authority granted to me by the Minister of Agriculture to distribute a large number of three pound sample bags of Indian corn among the farmers, in order to encourage them to test the value of that wonderfully productive forage plant in the feeding of their cows. So far I have had nothing but the most favorable reports from every man who grew a small plot of it. I expect that the acreage of fodder corn in Nova Scotia will be at least a thousand-fold larger in 1892 than it has been in any year previous. We intend to continue the work of itinerant instruction at the cheese factories, and also to establish an Experimental Dairy Station as soon as the conditions of the province are ready for it. Our object in this latter action will be to lead in the commencement and extension of winter dairying. Nova Scotia farmers ought to make large quantities of creamery butter during the winter. That practice would enable them to raise larger numbers of excellent stock and to fatten more and better swine. Then, the milk from the same cows could be diverted to cheese-making during the summer months.

In the province of

NEW BRUNSWICK

work has been done of a somewhat similar nature to that which was undertaken in Nova Scotia; and, of course, action in the future will likely be somewhat similar to that which has been outlined for its sister province. In

PRINCE EDWARD ISLAND

only one cheese factory has been in operation during the season. A number of meetings in different parts of the island have been held under my direction, and a large number of sample bags of Indian corn have been distributed among the farmers. From every recipient I hear nothing but words of satisfaction with the corn venture; and I am sure that next year the farmers of Prince Edward Island will provide abundance of this excellent crop, to enable them to feed their cattle economically during their rather long winters. We expect to have a dairy station in operation on the island for the manufacture of cheese during the summer, and for the manufacture of butter during the winter. I am informed that already 400 cows have been guaranteed in one locality. All that the farmers of that beautiful island province require to enable them to develop a very large and profitable dairy business, is confidence in their own resources, capabilities, and opportunities. The presence of an Experimental Dairy Station, which will be a centre of authoritative and reliable information, will supply the missing link and enable them to turn their natural advantages to the best account.

In the

PROVINCE OF QUEBEC

my assistant for the French-speaking sections, Mr. J. C. Chapais, St. Denis, P. Q., and a cheese-making expert, visited every county, and gave lessons to cheese-makers and butter-makers at central factories. The Babcock milk tester was also carried with them to illustrate its use and suitability for preventing fraud, and for establishing a sound basis for the payment of milk according to its quality. At one of the factories in Quebec some experiments in cheese-making were also conducted, to assist in determining the quantity and quality of cheese that may be obtained from milk containing different percentages of butter fat. About 250 boxes of other cheese were also made at one of the factories to be shipped to England for the purpose of illustrating to the dairymen in Quebec that cheese from their factories, when properly made, will fetch the very highest price obtainable in the British market for any imported cheese.

The holding of the Dominion Dairy Show at Sherbrooke, Que., also gave a very great impetus to the dairy trade of that province. That cheese

from the Eastern Townships, in open competition with cheese from the best factories in Ontario, should have carried off the sweepstakes was a surprise to the people of the province themselves. It is to me a most gratifying evidence of the progress they have made during recent years, and of the better things we may expect in agriculture during the years to come. A quantity of the cheese from the exhibition was afterwards sent to London, Kilmarnock and Manchester. Very favorable comments as to their quality and appearance have appeared in the English papers.

[TO BE CONTINUED.]

Our Clubbing Rates for 1892.

Having obtained very favorable clubbing terms with the publishers of the leading Canadian papers, we are in a position to supply our subscribers with one of the select papers below mentioned

We beg to inform our readers that the three Toronto daily papers have advanced their rates from \$5 to \$6 per annum, therefore, all subscriptions from first of January will be as follows:—

THE FARMER'S ADVOCATE AND

Winnipeg Weekly Tribune.....	\$1 75
Toronto Weekly Globe (16 pages).....	1 70
“ Daily “.....	6 00
“ Weekly Mail.....	1 75
“ Daily “.....	6 00
“ Weekly Empire.....	1 75
“ Daily “.....	6 00

A handsome premium album of scenes in the life of the late Sir John A. Macdonald given with the Weekly Empire.

London Weekly Free Press.....	\$1 60
“ Daily “.....	5 00
“ Weekly Advertiser (twice a week).....	1 75
“ Daily “.....	4 00
“ Wives and Daughters.....	1 50

Hamilton Weekly Spectator (including premium picture “Songs of Life”).....
 1 75 |

Hamilton Weekly Times.....
 1 70 |

Montreal Weekly Herald (14 pages).....
 1 75 |

“ “ Gazette.....
 1 50 |

“ Daily “.....
 5 50 |

“ “ Witness.....
 3 00 |

“ Weekly “.....
 1 60 |

We will supply the FARMER'S ADVOCATE and any two of the above weeklies for \$2.50 or the FARMER'S ADVOCATE and any three for \$3.25.

THE FARMER'S ADVOCATE AND

Toronto Week.....
 \$3 00 |

“ Grip.....
 2 50 |

“ Canadian Churchman.....
 1 75 |

The Cosmopolitan Magazine.....
 3 00 |

Cassell's Family Magazine.....
 2 00 |

The Quiver.....
 2 00 |

Scribner's Magazine.....
 3 50 |

Quarterly Register of Current History.....
 1 60 |

The Home Maker.....
 1 60 |

Table Talk.....
 1 75 |

The Century Magazine.....
 4 50 |

St. Nicholas Magazine.....
 3 50 |

Atlantic Monthly.....
 4 25 |

Andover Review.....
 4 25 |

Journal of American Folk Lore.....
 3 40 |

By subscribing through us for any of the papers we have mentioned we save you considerable trouble and expense. Remit by post-office order or registered letter; a P.-O. order is the cheapest and safest.

Our Live Stock Premiums.

As in previous years, we continue to give live stock as subscription prizes. All animals sent out by us are good individually, and possess good pedigrees. See our advertising columns for full particulars.

Dairying—Present and Future.

At this season of the year when friends and neighbors are exchanging friendly greetings with one another, we also send greetings to the farmers and dairymen of Canada. We wish you and your families every happiness. We only need to look around us to see how highly favored we have been. Other lands have had storms and floods; other lands have had famine and earthquakes and rebellions, but here in Canada we are in peace and comfort, with the fruits and produce of our country in abundance. The dairymen have had a very fine season for the production of milk, the markets have been good and prices fair, with a good finish up of the season, which would indicate a good demand with good prospects for the next season's produce. We are scarcely in a position to give a very decided opinion as to the quality of last season's make.

We heard some complaints during the summer months of cheese being off flavor, and of some fall cheese not being quite up to the mark in quality, style and finish. There was a want of neat, tidy workmanship, which ought not to have been, especially in the fall cheese.

A great deal has been done during the past year for our dairy industry, which our cheesemakers have not yet received the benefit of. The Dairy Commissioner had his men at experimental work in the different provinces during the season. These experiments were carried out under his instructions, somewhat as follows: Different quantities of rennet, different temperatures of setting, different stages of ripeness of curd when salted, different quantities of salt, and various other experiments as to the results of milk manufactured into cheese containing a greater or less percentage of butter fat. The results of all these experiments are expected to be made public at the dairymen's association meeting in January. We shall endeavor to give a very full report of these results for the benefit of all our readers, as many of them will not be at the association meetings.

The Western and Eastern Dairymen's Associations had a number of milk inspectors at work during the summer, but it seems, with all their efforts, there are parties who, through carelessness, or spite, or stubbornness, or a combination of these qualities, will not take the care of their milk which they ought to do, and, after all that has been done and said, some parties will adulterate their milk. Perhaps the last and best remedy for these parties would be to refuse to take their milk; but the day is dawning now when every patron of a cheese or butter factory will be paid according to the quality of his milk, and then every one will get his or her own, and no more. There was the Dairy School at Tavistock, under the direction of Mr. Adam Bell, one of our most experienced makers, where a large number of makers, especially in the early part of the season, attended for a few days. An outsider might well ask, What more can be done? Here is the Dominion Government, through the Dairy Commissioner, doing a grand work of investigation and experimental work on behalf of the dairy interests; the Provincial Government, with the Dairy School, vying with the Dominion Government for a share of the honor; and the dairy associations, with the inspectors to keep the patrons straight,—surely our Canadian cheese ought to be

improving and gaining favor with the merchants and the consumers, and it is to be hoped that next season there will not be such a wide difference between the price of Scotch and English cheese and Canadian as has been the past two seasons. Our fall make has had mostly been sold at about 10c., a few at 10½c. and 10¼c., which means about 52 to 53 shillings per 112 pounds at Liverpool, or one shilling more at London. The last reports of the Chester, England, cheese market, was 68 to 72 shillings per 120 pounds, which about equals 63 to 67 shillings per 112 pounds. Scotch Cheddars about the same for finest quality. This is a difference of 8 to 12 shillings per cwt. Surely this gives room for improvement in price, and only improvement in quality will bring the price. It is to be feared a good many of our makers are resting on their present reputation and attainments, forgetting that to stand still is to be left behind.

Besides this, our butter industry has not been forgotten. The Minister of Agriculture for the province had during a part of the season a Travelling Dairy School going from place to place under the superintendence of Prof. Dean of the Agricultural College, Guelph, who gave practical instruction, and taught the people at meetings called for the purpose how fine butter should be made and put up for market, at the same time giving instructions how best to separate the cream from the milk, and how best to prepare it for the churn, all of which will no doubt tend to improve the quality of farm and dairy butter; and last, but not least, the Dairy Commissioner had two factories fitted up about the beginning of December to make butter during the winter. The East Oxford factory, near Woodstock, has been fitted to make butter on the system of gathering the cream and leaving the skim-milk. The cream is gathered three times each week and ripened and churned at the factory. The make last month was about 600 pounds of butter per week, put up in tin-lined tubs to be shipped to the English market. The Mount Elgin factory is fitted up with a separator. The whole milk is brought to the factory and run through an Alexandra separator, the patrons getting the skim-milk home with them. They were receiving about 7,000 pounds of milk daily, which gave about 280 pounds of butter. So far as we can learn, the patrons of these institutions are pleased with the results, but we will know better when the returns are made. If the farmers can get 10c. per 100 pounds for the milk, and save all the skim-milk for the pigs, they will be satisfied. If this move proves to be a success, patrons will have to make arrangements to meet the requirements. First of all, patrons of these institutions must quit growing turnips to feed cows giving milk; instead, grow beets and carrots, and also corn, for silos will need to be provided for winter feed. Next, cows must be kept clean, and in well-ventilated stables. There's no use in trying to make fine butter from the milk of cows kept in a close, dirty, unventilated stable. Clean food, clean water, a clean bed, and plenty of pure air, are absolutely necessary for cows giving milk, to produce good results. We would say, keep your milk cows clean and comfortable, if you mean to succeed and prosper in dairy work.

Nearly half a million dollars was expended in new buildings in Brandon, Man., during 1891.

Articles Left Over.

Lack of space compelled us to "lay over" several articles which should have appeared in this issue. They will be published in February.

Seed Grain!

During the last six months we have been collecting much valuable information concerning seed grain, corn and vegetables, the pith of which will be published in our February and March numbers. New varieties will be compared with the older and standard sorts; the varieties giving the best results in the different sections will be named. We invite intelligent and progressive farmers everywhere to write us, giving all the information they can on these subjects. We can collect a great deal of practical information, yet our readers can greatly assist us. On the first page we offer a prize of \$5 for the best essay sent us on these subjects. We invite farmers to carefully read the rules governing these essays, especially No. 3.

Send Us Information.

Farmers everywhere are invited to write us on practical subjects pertaining to agriculture and live stock. To such as send us articles containing valuable matter we will pay at the rate of 10c. per inch, as explained in rule 3 governing the prize essays.

Criticisms of articles which have previously appeared, reports of experiments, particulars concerning new grains or vegetables, or new and useful farm implements, drawings of new devices, plans and descriptions of buildings, etc., etc.—all are welcome and will be duly paid for if valuable. The *ADVOCATE* is pre-eminently the farmers' paper. We are determined to make it the best and most useful agricultural journal published; we ask the farmers to assist us.

The Origin and Formation of Soil with Special Reference to Ontario.

BY J. HOYES PANTON, M. A., F. G. S.
(Continued from page 472.)

However, great changes were going on, and the surface of the province was considerably modified from the action of agents we shall now consider:

III. Disintegrating agents, i. e., agents breaking up rocks. These acted upon the solid floor of Ontario during vast periods of time.

1. Air, in the presence of moisture, has a great influence upon rocks, especially if iron is in them, and this is a common ingredient among the oldest rocks. You often notice by the wayside, boulders with rusty stains upon them. These result from the action of the air upon the iron in the stone. It will only be a matter of time before it is dissolved out and the stone crumbles to pieces. The element, oxygen, a constituent of air, has a great tendency to unite with other elements, and, hence, its destructive effects upon many rocks. Consequently, the simple action of the air in the long ages between the Devonian and Pleistocene periods

would no doubt do much to the breaking up of the rocks upon which it acted.

2. Water, especially in the form of rain beating upon the rocks during this long period would exert a wonderful influence upon the rock surface in two ways, viz., mechanical and chemical. The former needs no explanation for it is readily seen how rain would act, as we see it to-day by distributing the ground-up rock and wearing away by mechanical action the surface over which it flowed. But there is another way in which it can act very forcibly, especially when it contains carbonic acid which is present in the atmosphere. When this carbonic acid and rain water come in contact with rocks, especially such as contain lime, magnesia and iron, they form with them compounds soluble in water, and thus break up the rock in which they are found. This solvent action of water explains why it is always more or less charged with mineral substances, producing so-called hard water. Many caves, especially those found in limestone, have been formed by the solvent action of water, and the beautiful icicle-like structures in them have been deposited from water, drop by drop. The Mammoth Cave of Kentucky has 223 avenues representing 150 miles. The average height and width of these passages is 21 feet. The amount of limestone removed is said to be equivalent to 12,000,000 cubic yards. This to a great extent is the result of the solvent action of water. Rain charged with carbonic acid during long ages would certainly act so as to disintegrate the limestone floor of Ontario. See its effects upon the marble tombstones in a graveyard, and observe how it corrodes the limestones of the field so that we readily distinguish them by their *weathered* look.

3. Plants as soon as they appeared would exert an influence upon the surface. While living the tender roots penetrating the soil would feed upon the minute particles and dissolve those near them, and when they died channels would be left for rain to pass into the soil, and the decomposing plants supply carbonic acid which would aid in the work of disintegration.

4. Animals, especially such as burrowed, would open up the way for air and rain to reach below. Few animals are credited with more influence in the breaking up of soil than the common earthworm. From extensive experiments by Darwin it has been discovered that in some places worms add one-fifth of an inch of mould yearly to the soil, or at the rate of 16 tons to the acre derived from the deposits they leave upon the surface. Besides this their burrows form passages for air and rain to act upon the rock material exposed.

5. Frost while it existed would be a powerful agent. We see how it breaks down the rocky banks of rivers and sculptures the mountains. Much of the rock lying at the base of mountains, cliffs and steep banks is the result of frost.

Now the more we dwell upon these five agents, *air, rain, plants, animals* and *frost*, the more we will be convinced of their disintegrating effect, especially when we think of the vast period of time elapsing from the close of the geological records (Devonian No. 6) in Ontario, until they were reopened for deposits in the Pleistocene days (No. 15). This gap, as already noticed, embraced eight periods, each of which

may have been thousands of years in duration; yet in that time the rock surface was undergoing changes that must have prepared great deposits of finely divided rock. However, this soil would be largely localized, being much of the same nature as the rock below it; but when the Pleistocene period arrived, the Ice Age appeared, and was destined to mingle this pulverized rock in a most marvellous manner. In order to understand this more fully, let us examine some things going on now in countries where mountains are found with snow capped summits throughout the whole year, and from these phenomena form some conclusions regarding the state of affairs in Ontario during the Ice Age, claimed by some writers to have lasted 160,000 years.

IV. Ice Age, the period during which enormous quantities of rock material were ground up and mixed with soil formed previous to its appearance.

In countries where the mountains are high above the level of the sea, a line of perpetual snow is formed, and ice keeps accumulating throughout the whole year. In time the mass becomes so great that it can no longer remain upon the mountain top, but begins to descend. If the slope is steep, the descent is rapid, and the mass of ice is known as an *avalanche*, which moves with tremendous force into the valley below.

But if the descent is gradual, then the ice moves slowly towards the lower country, and forms an ice river (a *glacier*), sometimes miles long and hundreds of feet thick. It glides onward, sometimes at a slow rate—only a few inches each day—yet it moves, and what seems very remarkable, moves more rapidly in the centre than on the sides. This has been shown by putting stakes in the glacier and along the sides. In the course of time they assumed a V shape, indicating that those in the centre have made more progress than those at the side. In the course of its journey, fragments of rock are constantly falling upon the glacier. If cracks (*crevasses*) occur in the ice, which is quite a common thing, the rock drops into them and becomes imbedded in the ice. In cases where some reach the bottom one can readily understand what a grinding effect those imbedded rocks will have upon the rock below. Thus a glacier becomes a tremendous agent in grinding up rock. This river of ice will continue gliding on until it reaches a point at which the temperature is sufficient to melt it, and then it becomes the source of a river. If it is a very warm season, the glacier is not so long, and an opportunity is offered to see how things appear where the glacier was the season before. The solid rock is smoothed, polished and covered with markings running in the direction from which the glacier came, and the boulders lying about are rounded. Now if the glacier reaches the sea before it melts, a portion of it breaks off and moves away as an *iceberg*. This will carry away all the rock material in it, and all will be deposited where it finally melts. This is what occurs yearly along the coast of Labrador and Newfoundland, where so many bergs strand at certain seasons. Now, if an elevation of the sea bottom here took place, we would find it covered with great boulders, not the same as the rocks along the shore, but like those in Greenland, whence the icebergs came.

The Ontario Agricultural and Experimental Union.

The Ontario Agricultural and Experimental Union will hold its annual meeting at the Ontario Agricultural College, Guelph, January 28th and 29th inst. The experiments in agriculture, horticulture, and bee keeping, have been very successful. The annual meeting promises to be an unusually interesting one. Already the Hon. Jno. Dryden, Minister of Agriculture, Ontario; T. B. Terry, Hudson, Ohio; R. McKnight, Owen Sound; Mr. Gilbert, Dominion Experimental Farm, Ottawa, and many other prominent men are expected to be present. The farmers throughout the Province are earnestly requested to be present. Further particulars concerning reduced railway fare for those attending may be secured by addressing the secretary, R. F. Holtermann, Brantford, Ont.

Canadian Farmers and the British Market.

A very successful meeting of farmers was held at Dorchester Station on the evening of Wednesday, the 16th instant, under the auspices of the North Dorchester Agricultural Society. Mr. Richard Venning presided, and the Town Hall was filled in every part with representative farmers from the surrounding country. The deepest interest was manifested in the proceedings, and although the meeting lasted until 11 o'clock, unbroken attention was given to the addresses. By special invitation, given some time ago, Hon. John Carling, the Dominion Minister of Agriculture, and Professor William Saunders, Director of Experimental Farms, were present. Each gave addresses of great practical value.

HON. MR. CARLING

in his opening remarks referred to the good which might be expected to follow upon meetings of this character. It was by coming to fully understand matters relating to trade in farm products that they could best advance their interests in that respect. He then spoke at considerable length upon the importance of agriculture in this country, and as a means of quickening general interest in this great industry he urged the teaching of the elementary principles of agriculture in all our public schools. He hoped that a good use would be made of the text book recently issued by the Education Department of Ontario, and that one of the results would be to keep young men from forsaking the farm and flocking into the city. Coming then to the broad question of a market, the Minister of Agriculture pointed out the position in which Canada was now placed through the

TARIFF LEGISLATION

of our neighbors. It was quite evident that a number of articles making up a considerable part of our export trade in farm products would be practically shut out from the United States, and, if our farmers were to continue the growing of these articles for export, a new market would have to be found. Having in view all the circumstances, and having regard to experiments tried during the past season, the market in which our farmers might expect to meet with the best results was Great Britain. It was absolutely true that there were few things produced on Canadian farms for which a profitable market could not be found across the Atlantic. Mr. Carling then undertook an analysis of that market. Taking the articles one by one he dealt

with the conditions under which they were produced in Canada, and then gave the latest trade figures, for the purpose of showing the extent of the demand in Great Britain. Beginning with

HORSES,

he aptly remarked that it cost no more to raise a good animal than a poor one, and showed that for well-bred horses there was a good market both in Great Britain and in the United States. Poor horses, however, are cheaper across the line than in this country. With respect to cattle, it was not necessary that he should do more than point to the enormous trade which we had developed within twenty years, for his hearers to see in which direction they might look for profitable sales in the future. So far as

LAMBS

were concerned, now that they had been struck a fatal blow by the McKinley Bill, he was pleased to observe that a fine opening presented itself in Great Britain. He referred to the bulletin recently issued by the authorities of the Agricultural College at Guelph. There is room for a large and profitable trade in fat grade lambs between Canada and Britain, providing they are shipped early in the season. At some length the Hon. Minister dealt with the question of

HOG PRODUCTS.

He showed that of hams and bacon alone Great Britain had imported last year 560,001,102 pounds, of which the United States sent 515,344,044 pounds, and Canada but 7,470,087 pounds. We were not getting the share of that trade which our means for the production of superior bacon entitled us to. Canadian bacon and hams readily realized from one cent to one cent and a-half more per pound than the American article, and this increased price compensated for any difference that might exist in the cost of feed. In this connection there was the discouraging fact that we had for years been importing very largely from the United States. To improve this state of affairs the Government had imposed an increased duty on hog products two years ago, as a result of which there had been an important diminution of our imports from across the line. The figures were:

	1890	1891
Pork	17,445,728 lbs.	11,085,111
Bacon and hams	4,344,300 lbs.	2,564,044
Lard	4,882,851 lbs.	988,969
	26,672,757 lbs.	14,638,154

Here was a reduction in one year of 12,034,603 pounds, which was the measure by which the home market had really been enlarged. In this connection he also pointed to the fact that our imports of beef from the United States had declined from 6,443,315 pounds in 1890 to 2,698,305 pounds in 1891, or a total reduction in one year of 3,745,010 pounds. Mr. Marshall's name was mentioned in this relation as that of one of the hardest workers in parliament in respect of these meat duties. Mr. Carling said he would like to see every farmer impressed with the wisdom of giving more attention to hog raising as a means of increasing the annual profits from his skill and labor. No one could glance at the figures of British imports without seeing that a market existed for all the pork, bacon, hams and lard we could produce. He had been told quite recently by one of the largest pork packers in Canada that a sufficient number of live hogs could not be procured for his purpose. From this subject Mr. Carling passed on to a consideration of the question of

GROWING BARLEY.

He pointed to the almost prohibitory duties imposed by the Americans, and drew the conclusion that if our farmers wished to continue the growing of barley, they must grow that sort which was preferred by the British maltster, viz., the two-rowed variety. There was no longer any room to doubt the possibility of growing two-rowed barley in many parts of the Dominion at a greater profit than the six-rowed. It yielded more to the acre and weighed more to the bushel. The product of the past two years has been well received by the British maltster, who was willing to pay a high price for it. Mr. Carling explained that in October last he had sent eight sacks to the High Commissioner in London, with a view to having those samples submitted to leading experts and maltsters, so that they might say what price they fixed upon them. He read a number of cables, which clearly showed that a keen demand existed for the better samples, and the High Commissioner declared that certain buyers would take very large quantities if they were available. A cable dated 11th December intimated that barley up to the samples would realize from thirty-five to forty shillings, or as much as the very best on the market. These prices in Canada, it was explained, would be equal to ninety-one cents in one case and one dollar and four cents in the other per bushel of forty-eight pounds, from which should be deducted from twenty-five to twenty-seven cents for all the charges incidental to the transportation of the grain and the placing of it in the hands of the British maltsters. Although the amount of barley available for export during the past year had been relatively small, it was gratifying to know that 739,421 bushels had been shipped from Montreal during the season of navigation just closed. Of that amount nearly 300,000 bushels was made up of the two-rowed sort. Mr. Carling exhibited samples of the grain sent to the High Commissioner in October, and at some length explained the conditions under which two-rowed barley could be successfully grown for the British market. Quality was of the first importance. In the return which had been sent to him from Montreal there was included some gratifying figures with respect to eggs. Notwithstanding all that had been said about the killing of our

EXPORT TRADE IN EGGS

by the McKinley Bill, it turned out that during the past season 2,233,757 dozen had been shipped from that port to the British market. The United Kingdom annually imported 100,000,000 dozen eggs, and it might be said that there was a market there for all we could possibly produce. From this promising beginning he had no doubt that the trade would rapidly increase, until it passed the highest figures ever reached in our exports to the United States. Our facilities for reaching the foreign market were excellent, and would improve with the production. Touching incidentally upon the question of

UNRESTRICTED RECIPROCITY,

Mr. Carling declared that he saw the greatest possible danger to British connection in the proposition now before the country. He apprehended that there was no feeling in Canada in favor of annexation, and judging by the applause which followed this remark it could be safely assumed that there was none in that meeting, at least. In concluding, the Minister presented an inter-

esting array of important figures, for the purpose of showing the progress and prosperity of the country at large; and if our people stood shoulder to shoulder in all their efforts, he saw nothing to prevent Canada from becoming one of the most prosperous nations under the sun.

PROF. SAUNDERS

followed, and after explaining the Experimental Farm system, and dealing with some of the more important features of work undertaken, he entered into an elaborate explanation of the plan which had been adopted by the Department of Agriculture at Ottawa for the encouragement of winter dairying. He gave the details in connection with the Experimental Stations as established for Ontario at Mount Elgin and Woodstock respectively. A cheese factory had been rented at each of these places and furnished with the necessary machinery and appliances for making butter according to the most approved methods. The product from the two factories reached about six hundred pounds per day, and it had been arranged by the Dominion Dairy Commissioner to make shipments every two weeks to the British market. In making these shipments the butter would be placed in special packages, which would be marked with a brand that it was hoped would become a guarantee of quality in Great Britain. Thus far the entire experiment had been a happy success, and it was intended to very largely extend the system of turning cheese factories into winter dairies throughout the Dominion. It has been demonstrated that it would pay the farmer much better to have his milk sent to these creameries, than to make butter at home. It was all a matter of dollars and cents to the farmer, and Prof. Saunders remarked that this was a plan which gave every promise of putting many dollars into the pockets of our farmers. We should build up a trade in butter with Great Britain, based on the quality of our goods. The Director also explained that at these dairies the plan had been adopted of paying each farmer for his milk in proportion to the amount of butter fat it contained. Prof. Saunders's remarks were of an eminently practical character, and the attention that was given them showed how fully they were appreciated.

The Hackneys and Other Stock at Hillhurst.

Under date of Dec. 17, 1891, Mr. Jas. A. Cochrane, Compton, P. Q., writes as follows:—

"I am pleased to say the newly imported Hackneys are doing well and taking kindly to their new surroundings. In my opinion there is no class of horses more suitable for the farmers of the Dominion to handle, since they have proved their adaptability to our soil and climate, besides being a capital cross for our good roadster mares; for they are at once a general purpose sort, the mares being all the better for doing work on a farm, and nothing commands a better price at the present time than the very type which they represent. The Hackney has been bred as long as any other horse for a particular purpose, and is capable of stamping his produce with his own characteristics.

"The cattle at Hillhurst have gone into winter quarters in capital condition, and the young things look as promising as any of their prize-winning predecessors, which have followed up their victorious career in Canada by taking the highest honors during the past season at some of the leading fairs in the U. S., finishing up with the sweepstakes for beef herds at St. Louis. Having so abundant a supply of ensilage and swedes, we have put in 46 head of steers for feeding, in addition to 57 Aberdeen-Angus Polls, 22 Herefords, 24 Jerseys, 35 grades and crosses, and 206 sheep, of which 81 are registered Shropshires."

Provincial Fat Stock Show.

The eighth annual Ontario Provincial Fat Stock Show was held in Guelph on the 9th and 10th of December, under the management of the Agriculture and Arts Association of Ontario and the Guelph Fat Stock Club. There had not been the usual notice given to breeders and feeders this year that the show would be held, and up to a time, all too short for special preparation, it was an undecided question whether there would be any show this year. Special efforts were made by the Guelph Fat Stock Club, and by their active President, Mr. James Millar, and the show was secured, and proved a great success. Last year the contrary was the case. There were some good animals shown there, but the place where the show was held was unsuitable, and the expenditure overran the income, so that the directors had personally to put their hands in their pockets and pay up the difference, which they, not very cheerfully, but very manfully, did. This is in striking contrast to the directors of the Chicago Show of 1890, who, in similar circumstances, offered a compromise of so many cents on the dollar, and some of the exhibitors at Chicago a short time ago had not received their dividend of the prize money won. This year the show was held in the curling rink, centrally situated, well lighted, floored specially for the show, and with the ante-rooms for the officers, and the whole building very comfortable both for man and beast. It has been decided that the Provincial Show will be held annually in future, and while the place has not finally been decided upon, the majority, both of visitors and of exhibitors, was decidedly in favor of Guelph as the best location.

SHORTHORNS.

As was to be expected in the birth-place of Shorthorn breeding in Canada, the majority of animals exhibited were either pure bred Shorthorns or high grades, but, more than ever before, the other beef breeds were also represented.

HEREFORDS,

from this year's champion herd, were exhibited by F. A. Fleming, of Weston.

GALLOWAYS

shown by D. McCrae, of Guelph, fairly good quality, but not fed enough for fat stock winners.

DEVONS

from W. J. Rudd, Eden Mills, and a winner of a place at the fall shows. All these very much helped the character of the show, though only one of them got a place in the prize list. From the

ONTARIO EXPERIMENTAL FARM

there were a few steers shown, grades of the different breeds, and, by way of contrast, a specimen of the "scrub" steer, fed with the others, but with good care and good feeding he obstinately refuses to put the beef on the places where it should be. Altogether there were forty cattle, fifty-five sheep, eleven hogs, and tables covered with dressed poultry, very good and very neatly shown.

The judging was done on the evening of the first day of the show, and before beginning, the annual fat stock club dinner took place at the Western Hotel. Members, judges and exhibitors gathered in force, and the large dining-room was filled to overflowing.

C. M. SIMMONS,

Ivan, chairman of the joint committee of management, presided, and had on his right Hon.

Jno. Dryden, Minister of Agriculture, and on his left Mr. James Miller, president of the fat stock club. There were also present the members of the Agriculture and Arts Association of Ontario, the professors and officers of the Ontario Agricultural College, the sheriff of Wellington, the aldermen of the city, and many of the leading farmers and stock breeders of the district. On a centre-table, admired by all, was a very pretty

SILVER TEA SET,

the leading prize of the show, given by the FARMER'S ADVOCATE for the best steer of any age or breed. The service consisted of five pieces of very neat design, and suitably engraved.

At the close of the dinner the chairman with a few well chosen remarks introduced the

HON. JOHN DRYDEN,

who made a short speech thanking the Fat Stock Club for their hospitality and for the excellent animals they had got together in the show—a credit to the feeders of our country. Canadian cattle and sheep were now taking a good position in Britain, and in breeding stock some of the very best live stock in the United States were Canadian bred. The champion Shorthorn bull on the continent was bred and reared not far from Guelph, and he hoped that Ontario by the skill and enterprise of her live stock breeders would long keep up their well-won reputation for the best stock on the continent.

The company adjourned to the rink, and the judges began their work. Those on cattle were: Isaac Groff, Elmira; T. Allison, Galt, and W. Crealock, Toronto. The first class called was the

THOROUGHBRED STEERS.

Four animals entered the ring—all Shorthorns; three of them pure white, and the fourth a light roan. Mr. Walter West showed White Prince, eighteen months old, bred by R. & J. Hunter, Alma; weight, 1,225 pounds. He was purchased by Mr. West at the last Ontario College sale, and while he has done well since then, he had not the quality to put him before the others. Mr. Adam A. Armstrong showed the roan under thirteen months weighing 1,085 pounds, called Redmond, after his breeder Mr. Wm. Redmond, Millbrook, Ont. He is a nice pony steer of good quality, and got third ticket. Jas. Oke & Son, Alvinston, showed a three-year-old steer, White Prince, bred by themselves, and shown at Toronto this fall. He then weighed 1,775 and has since gained in weight. He is a large and well-developed animal, and was much admired, but had to take second place to the younger and fresher animal, White Duke, shown by Thomas Ballantyne & Son, Stratford, one year eleven months old, weighing 1,530 pounds; bred by Arthur Johnston, Greenwood, and bought by the present owners when three months old. He is very level and smooth, of very good quality, and a popular winner. The son of the first Commoner of Ontario has much credit for the way he brought out his animals. They showed careful attention and good feeding. The next class was for

THOROUGHBRED COWS OR HEIFERS

any age. Weir & Weir, of St. Marys, were first with Butterfly, a nice four-year-old, bred by Hugh Thompson, and weighing well up to a ton. John Currie, Everton-Erin, was second with a three-year-old, Snowball, bred by himself; and Peter Stewart, Eramosa, was third with a roan heifer three-year-old—Rose Baroness.

These both were non-breeders, as was also the Galloway Countess of Arran, shown by D. McCrae, Guelph, much smaller than the winners, and looking all the smaller because of shortness of leg, but a compact animal, and the firmest handler in the show, with a long black coat almost as rough as a buffalo. F. A. Fleming, Weston, showed Miss Brodie, a good specimen of the Herefords, and W. J. Rudd, Eden Mills, showed the Devon Esmeralda, five years old, bred at the Guelph Agricultural College, and carrying a deal of good meat. This exhibit was one of the best of the show, as the animals were typical specimens of the different breeds, and while some might have been better pleased to have had the honors divided, the class was a creditable one to all the exhibitors. In the class for

AGED STEERS

Weir & Weir were first and second, and Oke & Sons were third. The first prize animal was a very heavy, big steer, weighing about 2,200 pounds, and a good handler. His length of leg made him seem an immense size. The second prize was a red and white, hardly so big and not so smooth, but very fat. The third prize animal was a three-year-old roan, smooth, level and ripe, very good in front, but slacker behind. The next class,

STEERS TWO AND UNDER

three years old, brought out the champions of the show, and the winner of the FARMER'S ADVOCATE prize. This was the dark roan steer, 30 months old, and a very superior animal; well finished all through. He will be remembered by many of our readers as the winning steer at the fall shows of this year, and was sold at Ottawa show for nine cents per pound live weight, delivered after this show. Jas. Oke & Sons had in him a clear first, and an animal that would be hard to beat in any ring in the world. A level carcass, smooth and nice, with the beef well placed, carried him to the front when in competition with the winners in the other classes. Quality was preferred to quantity, and the judges looked to the market value of the meat more than to the size of the animal or the amount of fat carried. An excellent rule was laid down for the guidance of the judges, but the necessary facilities were not provided for weighing and measuring the animals on the ground, and thereby carrying out the rule with mathematical exactness. The rule reads: "The judges are instructed to award premiums to such animals as present the greatest weight in the smallest superficies, taking into consideration age, the quality of flesh and its distribution in the most valuable portions of the carcass. This rule to be applied to special prizes also, unless other conditions are given." In this class T. Ballantyne & Son were second, with a nice roan 26 months old, weighing 1,600 pounds. He sold for 6½c. live weight. In

YEARLINGS,

S. Lovee, Rockwood, was first, with a steer 22 months old, which was also sold for 6½c. Second place was taken by L. O. Barber, with a red steer 20 months old, and third place was awarded D. Robertson, Ospringe, for a red and white. This class was not equal in quality to the preceding one. In the class for

COWS OR HEIFERS, THREE YEARS AND OVER, first prize went to W. C. Short, Salem, for a very well-fed and well-fleshed roan cow, five

years old. Second went to Wm. Rae, Askeil, for a red and white, rather rougher about the hip bones, but a good animal. In

TWO-YEAR-OLDS,

James Oke & Sons had a nice red and white heifer, of their own breeding, weighing about 1,800 pounds; T. Ballantyne & Son had second place, with a light roan, 30 months old, 1,565 pounds — both very good animals; P. Stewart was third, with a red heifer smaller than the others.

YEARLINGS

were not so good a class. First went to D. Robertson, Ospringe, for a well-fatted but rather rough heifer, a Shorthorn grade, and second to the grass-fed Galloway grade heifer shown by D. McCrae, Guelph, of better quality, but lacking the feeding. There were a number of calves shown

UNDER A YEAR.

A. A. Armstrong was easily first and second, and W. Spencer, Guelph, was third. The first prize animal, 11 months old, and weighing 1,010 pounds, was an extra specimen of baby beef. In the

SWEEPSTAKE

prize for best female any age or breed, there was a gold medal given by Mr. John McAteer of the Western Hotel, Guelph. This was very keenly competed for, but the contest at last came to lie between the Shorthorn cow Butterfly, shown by Weir & Weir, and the two-year-old grade heifer, shown by Jas. Oke & Sons. The cow was much the larger animal, was fatter, with a grand, level back, and a wealth of well-placed fat. She looked short in the quarter and fell away at the twist; but when measured she was found extra long, and her breadth deceived the eye. The heifer was smaller and smoother, and the almost unanimous decision of the butchers was that she would make the most valuable carcass, and the gold medal went to her owners.

THE SHEEP

were an excellent lot, and the show was very much helped by the exhibit of breeding animals made by the Agricultural College. These were mostly Downs — Southdowns, Shropshires, Hampshires, and Oxford-downs, and Suffolks, a high standing, large sheep, with bare, very black faces, medium wool, fully equal to the Shrop, and well-formed bodies. They are new to this part of the country, and are said to be bred from an old Norfolk breed, crossed with the Southdown. They promise to be a valuable breed on heavy pastures. The only longwools in the lot were Leicesters. Altogether these sheep were of excellent quality, and very creditable to the Hon. the Minister of Agriculture, who personally made most of the selections. In the

FAT SHEEP

class the veteran exhibitor, John Rutherford, Roseville, had ten head on exhibition. Nine of these were winners at Chicago, and were the youngest and best of the lot. For two year-old wether he was first with a Cotswold and third with a Leicester, Robert Irving & Sons, Nassagaweya, being second with a Cotswold. In yearling wethers he was first with a Lincoln, Robert Irving & Sons second with a Cotswold, and J. Kelly, jr., third with a Leicester. In wether lambs John Kirby, Armstrong's Mills, was first with a Cotswold, and the same exhibitor had the honor of carrying off the grand sweepstakes prize for the best pen of lambs, any breed, ewes or wethers, — no small honor for the Cotswolds

and for Mr. Kirby among such strong competition. In the ewe classes J. Kelly, jr., of Shakespeare, came out very well. He showed nine sheep and got seven prizes, and all with Leicesters but one third prize for a Down grade wether. He got all the prizes in the ewe lamb class, and first in the aged ewe, and first in the yearling ewe classes. W. Oliver, Avonbank, got second and third in these latter classes. Other exhibitors were J. Pringle, Mosborough, who got third prize for wether lamb; Robert Douglass, Aberfoyle, who got first and second for cross-bred wether lambs — cross between an Oxford-down and Cotswold; and H. Wright, Guelph, who got the prizes for cross-bred ewe lambs.

The judges for sheep were J. Brown, Galt, Geo. Waller, Toronto, and W. Walker, Ilderton.

There were but few hogs, the honors for sows over one year being taken by J. & R. Miller, Guelph. For those under one year, Thomas Bolton, Mosborough, took two firsts; G. S. Armstrong, Speedside, two thirds; and D. Barborrie, Corwhin, and Geo. Fyfe, Gornock, got the seconds. The latter also got first for best pen of four fat hogs. The judges were James Main, Milton; Geo. Clayton, Morden; and J. McHardy, Guelph.

The exhibit of dressed poultry was large and good. Geo. Fyfe, Gornock, got first for best display, and J. Tomalin, Brampton, second. Robert Buchanan, Guelph, was also a large exhibitor, winning five prizes. James Anderson, Guelph, got two prizes, and A. Hales two firsts for ducks and drakes.

At the conclusion of the awards

MR. SIMMONS,

from a chair in the centre of the ring, made the presentation to Mr. James Oke, Alvinston, of the gold medal for best female, and the service of plate for the best steer, presented by the "FARMER'S ADVOCATE." He said it gave him great pleasure to present such a beautiful and costly prize; that the efforts of the late Mr. William Weld (for many years proprietor of the FARMER'S ADVOCATE) to encourage the best stock breeding, and the many valuable prizes he had given, both for beef and milk contests, had been productive of much good. The same work was being continued by his successors, and he hoped that these efforts would be appreciated by the farmers of Canada, who should show their appreciation of such liberality. He complimented Mr. Oke on his winning so valuable a prize. An adjournment was then made to the large hall of the Western Hotel. Mr. Simmons acted as chairman. The President of the Agriculture and Arts Association, R. Vance, of Ida, gave his annual address. Speeches were also made by Hon. John Dryden, N. Awrey, M. P. P., Major Goldie, J. C. Snell, Esq., of Brampton; President Mills, O. A. C.; Mr. John Hobson, Mosborough; Mr. Jas. Laidlaw, Guelph; Sheriff McKim and others. The meeting broke up at a late hour.

THE FAT STOCK FAIR

was held the following day. Prices were low, and 4½ cents per pound was common for good stuff. Most of the prize animals sold for 5 cents and over, 6 to 6½ cents being rare and only paid for a few animals. Altogether the prices were discouraging to feeders, except in the case of prize-winners, and some of the feeders longed for the long ago, when the rule was that the best animal at the Guelph show was sold for 12½ cents live weight.

Prominent Ontario Sheep Breeders.

Our plate pages in this number are of more than usual interest, presenting as they do photo-engravings of Ontario's best known and most popular sheep breeders. Many of our readers are familiar with some, if not all, of these gentlemen, and will appreciate our efforts to bring them more prominently before the public. Those of our readers who have not heretofore known all, may now become acquainted with each by means of the engravings and the short sketches we now present. If any of our readers desire to purchase pure-bred sheep of any breed, we can heartily recommend to such the breeders whose portraits appear on our pages.

COTSWOLDS.

MR. JOSEPH WARD
has been breeding Cotswold sheep for thirty-five years. In 1871 he had a large and good flock of Canadian bred sheep, but that year decided to add some imported animals to his flock. Accordingly, he bought two imported ewes from Mr. Arthur Johnston. The first year these ewes reared three ewe lambs and one ram. The next year they reared five lambs. In 1872 Mr. Ward purchased and used the Duke of Burford, then a lamb, imported by Mr. Johnston, bred by Mr. Jacobs, England. After using him one season Mr. Ward sold him to Mr. Wady, of Kentucky, for \$200. He previously paid \$160 for him. After showing him two seasons in Kentucky and adjoining states, Mr. Wady sold him to another Kentucky breeder for \$1,200. It is said \$1,500 was afterwards refused for him. This sheep possessed a fleece of wonderful length, fineness, evenness and beauty. He was long, large, showy and upstanding—just such a sheep as at that time caught the eye and fancy of the American buyers, but not thick and fleshy enough, nor possessing enough constitutional vigor to suit English or Canadian breeders of the present day. The next ram used by Mr. Ward was bred by Mr. Gillet, of England, and cost Mr. Ward \$150. About this time five ewes were bought from James Johnston, Cannington, the dams and sires of which were by Robert Jacobs, Gloucestershire, England. Next ram bred by Mr. Arthur Johnston, and out of a Jacobs ewe was used. The next ram used was bred by F. W. Hodson, sire his noted Gray Prince, winner of many first prizes at all the leading exhibitions in Canada and the U. S. A., including the Ontario Provincial, St. Louis Exposition, Indiana and Illinois State Fairs, besides all the leading exhibitions of Kentucky. At the American Centennial, held in 1876, he won the silver medal as best sheep in his class. That year and the next lambs got by Gray Prince won over 300 prizes at the various exhibitions in Canada and the United States. The dam of Mr. Ward's ram was bred by Jas. Walker, Gloucester, England, and was a very successful prize-winner both in England, Canada and the United States, finally winning the silver medal in her class at the centennial in 1876. The next sheep used was imported by James Main. Mr. Ward's flock now numbers 110, forty-three of which were imported by him last season, being selected in person from the flocks of the leading English breeders, and are an exceptionally good lot, both rams and ewes.

JAMES MAIN.

Importer and breeder of Cotswold sheep, is a native of Devonshire, England, who emigrated to Canada about forty years ago, and is now in his sixty second year, but being blessed with an unusually strong constitution is still in vigorous manhood. Coming to this country with very limited means, but with strong hands, a brave heart and the spirit of enterprise, he has been eminently successful as a breeder, importer and exhibitor of high class stock. His first ventures as an importer were in bringing out pigs and poultry, but in the last twenty years he has made large and costly consignments of sheep, mainly of Cotswold, which is his specialty, selected from the flocks of the leading breeders on the Cotswold Hills, including Messrs. Jacobs, Gillet, Swanwick, Baynall, Garne, Smith, Powell and others. Mr. Main has the reputation of being an excellent judge of all the leading classes of sheep and pigs and also of heavy draught horses. He will not handle inferior stock at any price. Believing that the best is none too good he will have only such as come fully up to the standard of first-class. He is regularly entrusted with orders by leading breeders of the different breeds of sheep to make selections and import for them, and has invariably given good satisfaction to those who have placed their orders with him. His honesty and integrity, as well as his love of British fair play, combined with good judgment, has made him a safe man to deal with, and he has probably brought out as many of the prize-winning animals at the Royal and other leading English shows for himself and for others as any other man in the business. His importation for 1891 included the first and second prize pens of ewes at the Royal Show, several of the best shearing rams that have been brought out in recent years, and a number of very grand ram lambs, among which was the extraordinary lamb which was allowed to be the best in England, which won first money at Detroit, Toronto and Montreal, and was sold to Mr. J. C. Snell, of Edmonton, for \$100. Mr. Main's success in winning

prizes at the great shows above named might fairly be called a clean sweep, though it was by no means a walk-over, the competition in Cotswolds being stronger than for many years previously. Mr. Main has some of his last importation still on hand, some of which he proposes to carry over for next year's fair to be supplemented by another importation next summer. He also has young rams and ewes for sale at fair prices.

MR. J. C. SNELL.

senior member of the well-known firm of John Snell's Sons, of Edmonton, Ontario, breeders of Cotswold sheep, has long held a prominent place amongst the advocates of this standard old breed. The Messrs. Snell may be fairly numbered with the pioneers in the introduction of Cotswolds into Canada, having secured a portion of the first importation of these sheep which ever reached the shores of this continent. This was in the year 1854, and built upon that foundation, strengthened at intervals by new importations from the leading flocks in Britain, the Willow Lodge flock has been steadily maintained to the present day without a break in a period of nearly forty years. The frequent importations which have been incorporated into the flock during these years have included a large number of the prize animals at the Royal and other leading shows in England, and it has always been the rule to maintain the use of first-class rams at the head of the flock. The records of the old Provincial Exhibition and of the late fair associations will show the high position this flock has held in the list of prizes won, and from the past few years selection from the Willow Lodge flock in the hands of customers of the Messrs. Snell have largely made up the list of winners at the great Western State fairs. Mr. Snell having through a long series of years in the show ring made himself a continental reputation as a breeder of high repute has ceased to show his stock at the fairs, but makes a point of preparing a good lot every year for his customers to show in their different provinces and states, and most of his sales are now made through orders, his patrons trusting his judgment and integrity to fill the bill for them, and so great has been the demand for Cotswolds during the past year that it has taxed the flock to its utmost to supply them; indeed several orders for ewes have been returned as they could not be spared without weakening the flock below the standard to which it is aimed to keep it. Mr. Snell's name and premises are familiar to stockmen throughout the country in connection with the leading exhibitors and breeders' association for Cotswolds, and he has frequently been called to distant parts of the country to act as single judge of cattle and sheep of which he is acknowledged on all hands to be a careful and safe judge. He is an active member and an ex-President of the Council of the Agriculture and Arts Association of Ontario, and a member of the World's Fair Committee charged with the interests of Ontario stockmen in that connection.

MR. JOHN PARK'S

flock of Cotswolds was established in 1870; since that date nothing but the choicest imported and registered rams have been used. These have been principally selected from the pens of Mr. J. C. Snell and Messrs. Laidlaw & Jackson. During the last five years Mr. Park has won upwards of 700 prizes with his sheep. His flock at present numbers 40 head.

WM. THOMPSON, ESQ.

Mount Pleasant flock of Cotswolds, the property of Mr. Wm. Thompson, Esq., was founded about twenty-five years ago, when he began sheep-raising with a few fairly good Cotswolds. He always kept in use rams bred by such breeders as Snell, of Edmonton, and Stone of Guelph. About seventeen years ago he bought a number of imported ewes and a ram, keeping only the best ewe lambs for breeding. Again in 1877, along with his brother, he imported several from such flocks as Jacob's, Tom's and Gillet's. Those first imported were from the Walker flock. Since then he has always used rams bred by Jacob's, Ecker and Gillet, until the present year, when he imported another bunch which came from the flocks of Bagnal, Hubert and Gillet's, several of these, and also these of the former importations, being winners of prizes at the Royal shows in England. The flock numbers now about sixty head, all of which are registered. Ever since beginning to raise sheep he has shown at local fairs, and always carried off a good share of the prizes. This year he showed at the Toronto Industrial in company with Mr. Ward, and at the Peterborough Central and Lindsay Central, winning at the latter two all the prizes, while at Toronto he won first on shearing ewes and third on ewe lambs, also second on shearing ram and third on ram lamb, also second on the pen. At the North Ontario county fair held in Uxbridge he took first on shearing ram, and first and second on ram lamb; also first on aged ram, first again on shearing ewes, second on ewe lambs. On a pen consisting of four ewes, two ewe lambs and a ram of any breed, he took first. Since beginning to breed sheep he has shipped them to all parts of Ontario, and to different parts of the U. S. A., even as far west as Oregon. Mount Pleasant Farm is situated about three miles north of Uxbridge, a thriving town through which passes the Midland Railroad.

LINCOLNS.

JOHN GEARY.

Blu Bro Farm, importer and breeder of Lincoln and Shropshire sheep, made his first importation of Lincoln sheep in 1879, followed in 1882 by a

large importation of Lincolns and Shropshires, and since then by smaller importations. Both the above breeds were for several years shown at the provincial fairs in Ontario by Mr. Geary with success, having carried off a great many prizes, medals and diplomas. Many breeders, both in Canada and the United States, have drawn largely from these flocks for their show sheep.

MESSRS. WM. WALKER & SON'S

flock of Lincolns was established in 1840. It now numbers 50 head of imported and Canadian bred sheep. The first direct importation from England was made in 1853, and comprised one ram and seven ewes. Since that date stock rams have been imported every two or three years. In 1887 two rams and four ewes were imported. In 1890 further additions were received from England. Ever since the foundation of the flock it has been very successful in the show ring. In 1891 representatives from this flock won a large share of the prizes offered to this class at the Toronto Industrial and Western Fair. At the latter they carried off the bronze medal for best flock of sheep any breed. On September 11th, 1891, the show flock was weighed. A yearling ram tipped the beam at 224 pounds, a ram lamb 168 pounds, a breeding ewe 223 pounds, a yearling ewe 273 pounds, and a ewe lamb 154 pounds.

MR. WM. OLIVER.

the well-known breeder and exhibitor of Lincoln sheep, resides on the farm taken up by his father nearly fifty years ago, who soon after commenced to breed improved sheep. About thirty years ago six Lincoln ewes and two rams were received from Mr. Thomas Wilkinson, of Dumfriesshire, Scotland. The progeny from this importation was bred to rams imported from the flock of John Bellirew, Lockerby, Scotland, up to the year 1881. Since that date the rams have been bought from Mr. John Geary, of London. Mr. Oliver writes that the demand for Lincolns is very good, frequently greater than he can supply.

MR. J. T. GIBSON

was born in England, emigrated to Canada in 1860, but returned again to England. He has had much experience both in Canada and the U. S. A. as a breeder of Lincoln sheep. He was manager of the New York Mills farms some years, and later for Colonel King, of Minnesota. At each place Lincolns were bred. He visited England in 1891. After inspecting the flocks of several of the Lincoln breeders, he selected a number of choice specimens from the flock of H. Dudding, which is said to be the largest and best in England. The ram selected was, Mr. Gibson thought, the best that could be bought, in fact he experienced considerable difficulty in persuading the owner to put a price on him. Mr. Gibson also choose what he thought were the best from among a flock of 700 breeding ewes. A number of the ewes selected were in lamb by a ram for which Mr. Dudding paid \$525, the highest price paid in 1890 for a Lincoln ram. The balance of the ewes bought were in lamb to a very large upstanding sheep, which has since won the first prize at the Royal Show of England. Mr. G. now has one ram and four ewe lambs got by this ram.

LEICESTERS.

MR. WM. WHITLAW.

one of the most highly respected Canadian breeders, came to Canada from Mertoun, the home of the celebrated Border Leicesters of Lord Polewarth. He was naturally partial to that breed of sheep, so in the year 1841 or 1842 he bought from the late George Millar, of Markham, a young Leicester ram to improve his then small flock of ewes, and some years afterwards bought another ram from the same gentleman; after that he bought from various breeders the best rams he could find until the year 1871, when, being in Scotland on a visit, he brought home with him to Canada 12 shearling ewes and 4 rams. Some two or three years afterwards he made another importation of rams, and has continued importing at intervals ever since. The last importation made, four years ago, was five shearling ewes from the flock of Lord Polewarth; also two shearling rams from two of the most noted breeders of Border Leicesters in Great Britain. His present flock consists of about 50 breeding ewes, besides a number of ewe lambs and ram lambs, which he intends to keep for shearlings. In a recent letter he says:—"I have always had a good demand for my sheep; greater at times than I could supply."

MR. JOHN KELLY, JR.

founded his now famous flock of Border Leicesters in 1872, when he purchased from his father six ewes seven ewe lambs and a stock ram. In each of the years, 1875 and 1878, he bought a stock ram from Mr. Wm. Whitlaw, Guelph. The second proved a great success. In 1881 Mr. Kelly went to Scotland and selected three yearling rams and five ewes from the flock of Alexander Melvin, Midlothian, and in 1882 he imported a ram from the flock of Samuel Jack, Scotland. In 1886 he again bought two rams from this flock and one ram and four ewes from the famous flock of Lord Polewarth, of Mertoun, Scotland. Again, in 1890, a ram and two ewes were imported from the last named flock, and in 1891 a ram. Mr. Kelly says he never used a sheep whose stock he considered so uniformly good as that by the one imported in 1890. In 1891 Mr. Kelly imported five Hampshire Downs from the flock of Mr. Hobbs, Gloucestershire, England. These he intends to give a fair trial. If he likes them he will continue to breed them. In his hand they will no

doubt grow in favor in Canada. The entire flock now numbers 76. Mr. Kelly writes that he has not sold an animal for breeding purposes since 1883 for less than \$30. In 1890 the sheep sold by him averaged a little over \$38; in 1891 the average was \$43. The success of the flock in the show rings of Canada and the United States has been phenomenal. At the principal exhibitions he has won no less than 33 sweepstake prizes given for best pen, often winning the first and second. The prizes won in the various sections are correspondingly numerous. Among Canadian live stock breeders there are few indeed who understand the science of producing and rearing good stock as well as Mr. Kelly. He is a breeder, not a dealer. His judgment on all matters relating to his business is to be relied upon, and his honesty is unquestionable.

OXFORD-DOWNS.

MR. PETER ARKELL'S

flock of Oxford-downs was founded in 1880 by an importation of fifty head selected in person from the renowned flocks of William Arkell and Charles Hobbs, of Gloucestershire, England. Since then he has made six importations of the best he could find, including the first prize pen of shearing ewes at the Bath and West in 1883, the second prize Royal winners at Norwich, and the second prize pen of shearing ewes at the Royal Show held at London in 1889. He has been a very successful exhibitor, his flock winning seven silver medals and over thirty diplomas and pen prizes. His flock was also awarded the gold medal given by the American Oxford-down Record Association at the Toronto Industrial for the best flock of Oxfords, and the silver medal given as a sweepstake prize at the Central Canada Exhibition held in Ottawa in 1890, for best pen of any breed. The flock consists at present of 150 head. During 1891 there was sold upwards of sixty head which were scattered over all parts of Canada and the United States. The demand for Oxfords this year was greater than ever before, exceeding the supply.

JAS. TOLTON.

was born on the 21st of January, of the year 1830, in the township of Eramosa, in the county of Wellington, within about four miles of the then village, but now the Royal City, of Guelph. Residing with his father (who kept a flock of Leicester sheep) on the farm until the year 1861, when having heard through the press and otherwise of the natural productiveness, and the comparative ease of the cultivation of the prairie lands of the Western States, he determined to see them before settling down for life, and visiting and remaining in different parts of the States of Illinois and Iowa for two years. Returning he commenced to make himself a farm out of the bush in the township of Brant in county of Bruce. As soon as some of the bush was cleared away, and the land under grass, he commenced to keep sheep, starting with a small flock of Leicesters, then, as well as now, a very popular breed. Soon after this a brisk demand having sprung up not only in Canada but also in the U. S. A. for the Cotswold, then a comparative new breed of sheep in America, he commenced a flock of this breed by the purchase of a few ewes from the late Thos. Arkell, Esq., of Arkell, continuing to keep both breeds until 1881. Mr. Peter Arkell, of Teeswater, the veteran breeder of Oxford-down sheep, in that year having made his first importation of Oxfords of this, then quite new, but since getting to be a popular breed of sheep, Mr. Tolton being pleased with the sheep made a small selection from this importation of two shearing ewes and a ram lamb, thus founding his present flock. Mr. Arkell making a second importation the following year, he made another selection of two shearing ewes, and in 1883 making another selection of a shearing ewe and a ram lamb out of an importation made by Mr. Arkell in that year. In the year 1890, his eldest son went to England and brought out for his father's farm, forty shearing ewes and four rams of this breed, amongst them being the first and second prize pens of shearing ewes and first-prize shearing ram at the Royal Show of that year, the same sheep also being the winners of the sweepstakes over all breeds in their respective classes at the Oxford show. The flock now comprises upwards of forty breeding ewes, making with the ewe lambs on hand, and a few ram lambs unsold, a total of seventy-five.

HENRY ARKELL.

Farnham Farm, Arkell P. O., pioneer importer and breeder of Oxford-down sheep, whose farm of three hundred acres is situated in what is called "The Plains of Puslinch", five miles from the city of Guelph, and five minutes walk from Arkell station, C. P. R. and G. T. R. It is the family homestead, his father, the late Thomas Arkell, settling there in 1831. He was a successful breeder of Shorthorn cattle and Cotswold sheep for many years, and the subject of our sketch has all his life been among high class stock. His first importation of Oxford-downs was in 1881, and comprised eight ewes and ten rams. In the following year he imported fifty ewes and fifteen rams, and since then an occasional ram, until 1891, when Mr. Jas. Main selected and imported for him fourteen ewes and three rams, among them being several Royal winners. He exhibited those at Toronto, Montreal and Ottawa, where he won many honors, including the pen prizes, amid very strong competition in Toronto. Mr. Arkell has not exhibited until this year since 1886, when he was also very successful at Toronto, "the Provincial", and at Guelph. Again in 1881, 1882 and 1883 his sheep won many prizes at Toronto, London, Guelph and Provincial at Kingston. In 1887 he sold his show flock to Frank Wilson Jackson, Mich., in whose hands they won the pen

prize at Michigan State Fair, Toledo, Ohio, and at St. Louis, also sweepstakes for ram and five of his get. Each year since 1883 Mr. Arkell has sold to George MacKarrow, Sussex, Wis., a show flock, with which Mr. MacKarrow has captured a large number of prizes at many of the leading fairs in the U. S. Mr. A.'s flock was founded on importations from the flocks of Messrs. Hobbs, Arkell, Brassey and Adams, well known British breeders.

SHROPSHIRE.

J. & J. SMITH'S

flock of Shropshires was established in 1888 by an importation of twenty-five ewes, chiefly from the flock of Richard Thomas, Shrewsbury, England. It has now increased to ninety-five head bred from this importation, and a few valuable ewes from the flock of Jno. Miller & Sons, Birmingham. The young stock are sired by Royal Duffington 11116, bred by Arthur Gibson, Nottingham, England. This ram has proved a valuable sire, and was sold to the States for exhibition at the fall fairs. He has been replaced by a fine imported ram, bred by the Messrs. Bradburne. The Messrs. Smith are natives of Cumberland, England, where they formerly carried on a farm of 400 acres. In 1879 Mr. Smith, Jr., emigrated to this country, and immediately engaged as head herdsman at Bow Park, where he continued until May 1891, when he joined his father who had previously established a flock of Shropshires as above mentioned. Their flock has already become noted because of the large size and fine quality of the lambs each year exhibited at Ontario's leading exhibitions by the proprietors.

W. H. BEATTIE.

Shropshire Park Farm, the property of the above named gentleman, is situated four miles south of London, Ont. Mr. Beattie commenced breeding Shropshires in 1873. He made his first importation from England in 1887. Each year since that date he has made large importations, selecting the animals in person from the best British flocks. That good judgment has been used in choosing his stock has been shown by its success in the show ring. Animals selected by him have been very successful winners, not alone in Canada, but also in the U. S. A. His flock, among other honors, has captured the first prize given for the best flock of Shropshires at the Western Fair for three years in succession, viz., in 1890, 1891, and 1892; in 1891 besides many other prizes they won the same high honor at the Detroit International Fair, as well as sweepstakes given for best ewe. This flock is one of the largest in Ontario, numbering 91 head, 75 of which are ewes in lamb, nine are ewe lambs, seven ram lambs and three imported rams.

MR. R. GIBSON'S

flock of Shropshires are principally imported, and number about 40 head. They are even in quality and very well bred. Three imported rams are kept so that suitable crosses can be made. Burwell Prince, a royal winner, is one of these rams. No reasonable expense has been spared in laying the foundation of this flock. Nothing but choice specimens have been imported, the best of each importation being retained by the importer.

MR. J. P. PHIN.

of Hespeler P. O., Ontario, was born in the township of Waterloo in 1841, in which township he has continued to reside ever since. His father, a native of Roxboroughshire, Scotland, emigrated to Canada and settled in the wood of Waterloo in 1832. Mr. P. was brought up on the farm, and has been engaged in agricultural pursuits all his life, except three years (in early youth) spent in teaching the public school in the U. S. in which his father resided. He has had considerable experience in public affairs, having been a J. P. for over twenty years, school trustee, superintendent, member of the County Board of Education, license commissioner, reeve of the township for several years and warden of the county in 1890. Mr. Phin has always been an admirer of good farm stock of all kinds, preferring to see a good show of animals to the best equipped circus or best rendered theatrical performance. He is now making a specialty of importing and breeding Shropshire sheep. His flock, which was started in 1881 by an importation bred by the Earl of Zeland, now Lord Lieut., of Ireland, consists of over sixty breeding ewes, mostly imported, selected carefully (some of them personally) from the flocks of some of the most noted breeders in England, such as Mr. Bowen Jones, President of the English Shropshire Down Association; W. Thomas, Alfred Tanner, R. Barber and Mr. J. E. Farmer. Mr. Phin reports his sales as very satisfactory for the past season. He has still some ewe lambs and a few ram lambs for sale. His flock is always open for inspection, and visitors are made welcome.

HON. JOHN DRYDEN'S

flock of Shropshires was started in 1880 by an importation from the flocks of the best English breeders of a number of choice shearing ewes. It has been replenished by new importations year by year, and now numbers fifty breeding ewes. The sire principally used is Prince of Wales, bred by J. Bowen Jones, and winner of Prince of Wales's prize of \$60. He is assisted by Corston Patriot, bred by D. Buttar, Scotland, and by Sir William, bred by W. Nevitt. The flock has always taken a foremost place in the show ring at all the leading exhibitions, winning twenty-eight first prizes in one season. Prize-winning specimens are annually sold to intending exhibitors in Canada and the States. Style, quality and size are always prominent characteristics in the product of the flock.

W. D. REESOR'S

flock of Shropshires was added to the well-known Elm Park Jersey herd in the winter of 1889, by the purchase of ten selected imported ewes from the well-known flocks of T. & S. Bradburne, Thomas Dickens and M. Williams, a number of them being daughters and grand-daughters of the great ram The Rector 1769, E. F. B., and all in lamb to Messrs. Jno. Miller & Sons' first prize ram at Toronto of that year. In the spring of 1890 he had the good fortune of raising eighteen lambs, selling the ram lambs and keeping the best of the ewe lambs to add to the flock, Mr. Reesor, being so impressed by the hardness of the Shropshires, that he concluded to add still more to the flock, which he succeeded in doing by securing five very fine shearlings, bred by Mr. H. Williams, and in lamb to the prize-winner Royalist, in addition to above. Mr. R. also secured ten more imported shearlings from the flocks of Joseph Everall, R. Jones and T. & S. Bradburne, and had them all served by Binningham, 1st at Toronto in 1890. As may be supposed from such sires as Royalist and Binningham, good lambs were to be expected, but the result was ahead of expectations, and Elm Park flock showed as even a lot of lambs of extra quality as could be found among any of the older breeders. Since disposing of the ram lambs and a few ewe lambs, the flock goes into winter quarters in fine condition, numbering some fifty head. Though this flock is comparatively young we must say it has been started right, and from present appearances must rank among the best in Ontario.

W. S. HAWKSHAW.

The Shropshire flock belonging to Mr. Hawkshaw was started ten years ago, but a few years ago, seeing the demand for a better class was on the increase, he visited England with the object of buying the best, and brought out a consignment of the choicest ewes from some of the leading flocks, since that time his sales have doubled themselves every season. Sheep from his flock can be found in most of the neighboring states and from Halifax to British Columbia in the Dominion. He has now a large flock of imported ewes in lamb to the stock ram which proved himself a grand sire last season.

MR. D. G. HANMER.

of the firm of D. G. Hanmer & Sons, has given particular attention to sheep breeding for twenty-five years, the last ten of which has been devoted to the production of high class Shropshires. The present flock was founded from an importation selected from the flock of Mr. Evans, of England. Yearly additions have since been made from some of the following British flocks:—Bradburne's, Barber's, Everell's, Nevell's, Blanters', and Sir Wm. Ward's. Messrs. Hanmer's flock numbers over 60 head, and has won over 200 prizes at Ontario exhibitions during the last five years. Mr. G. D. Hanmer writes: "The success of our sheep is largely due to the attention of my son James H. who will in future have the chief management of the flock, and will spare no pains in keeping it up to the present high standard." Mr. H. and his sons occupy a high place among the sheep breeders of the Dominion.

JOHN MILLER

came to Canada in 1835, bringing with him sheep and pigs. Shortly afterwards Shorthorns and Clydesdales were added to the other breeds of pure stock. In 1865 Shropshires were tried, but the fleece was then getting nearly all the attention from the breeders of sheep. Quality of mutton was so little thought of that no medium woolled sheep would pay. Cotswolds were bred and imported extensively until the people were ready for a change. This season their importation of sheep was the largest that came to America, containing animals that won more premiums at the leading shows in Canada and the States than have ever been won by the animals of one importation. They have also imported the whole of the bull calves and half the heifers from the Cruickshank cows still in Scotland, except one bull calf retained by Mr. Duthie. These cattle are now in quarantine at Halifax, and will be home about the 20th January. They now have 40 horses, 70 Shorthorns and 260 Shropshires.

SOUTHDOWNS.

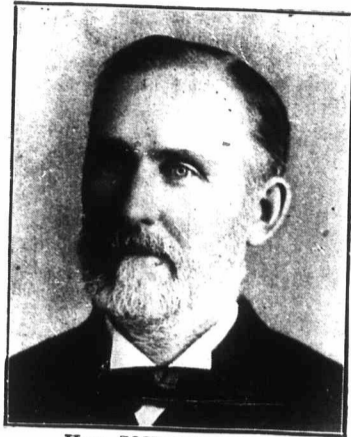
MESSRS. ROBERT SHAW & SONS

are the owners of the Glanford Station Flock of Southdowns which was established in 1856, and from that date until the present it has been the aim of the proprietors to breed only from the best. The first importation was made by this firm in 1853 and comprised one shearing ram and six yearling ewes. Since that date several selections have been made from the most noted flocks of England. At present the flock is headed by the imported ram Duke of Cambridge 2944, bred by Mr. Geo. Jonas. Ever since its establishment sheep from this flock have been among the successful winners in their class at the leading Canadian shows.

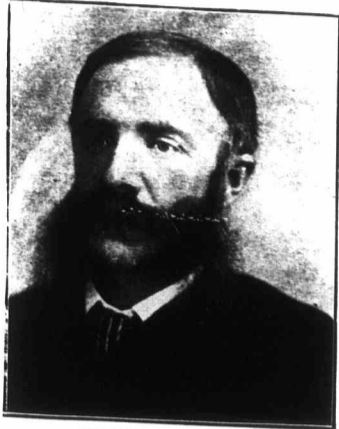
MR. T. C. DOUGLAS

founded his fine flock of Southdowns in 1869. The present high standard has been maintained by careful breeding and occasional purchases of selected animals from the best flocks in Canada, and subsequently by frequent additions drawn from such English flocks as that of H. R. H. the Prince of Wales, Messrs. Jonas, Colman, Lucas and Ellis. The rams used in the flock have always been of high individual merit and breeding. At present are an imported two-shear, bred by Mr. Jonas, the winner of ten first and five second prizes. The sweepstakes yearling ram at the Bath and West of England Show and at Detroit in 1891, bred by Mr. Ellis. Also a ram lamb of grand character, bred by Mr. Lucas. This last is also a prize-winner.

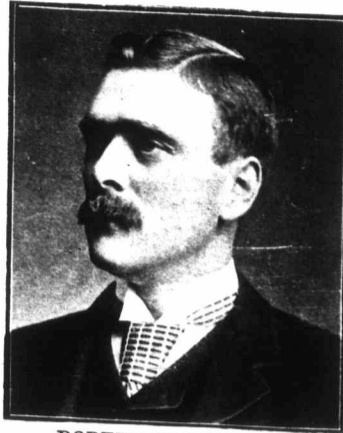
SUPPLEMENT TO FARMERS ADVOCATE, JANUARY, 1892.



HON. JOHN DRYDEN,
BROOKLIN, ONT.
Shropshires.



JAMES HANMER,
MOUNT VERNON, ONT.
Shropshires.



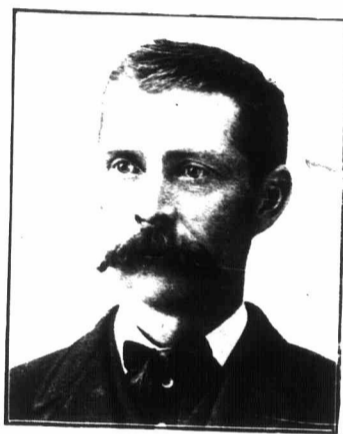
ROBERT MILLER, JR.,
BROUGHAM, ONT.
Shropshires.



W. S. HAWKSHAW,
GLANWORTH, ONT.
Shropshires.



JAMES SMITH,
PARIS, ONT.
Shropshires.



W. H. BEATTY,
WILTON GROVE, ONT.
Shropshires.



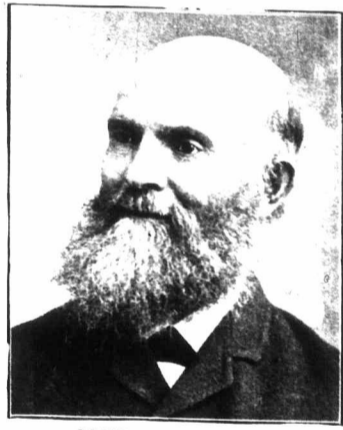
JAMES PHIN,
HESPELER, ONT.
Shropshires.



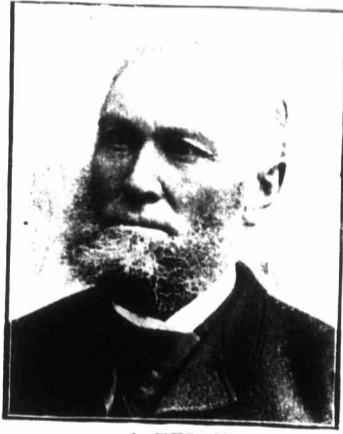
W. D. REESOR,
MARKHAM, ONT.
Shropshires.



R. GIBSON,
DELAWARE, ONT.
Shropshires.



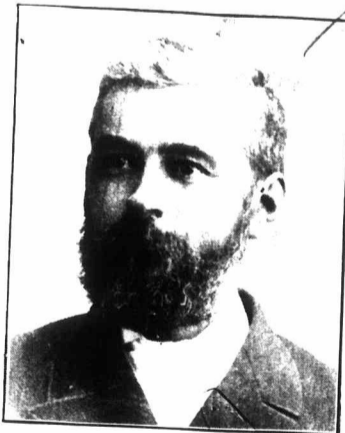
JOHN JACKSON,
ARINGTON, ONT.
Southdowns.



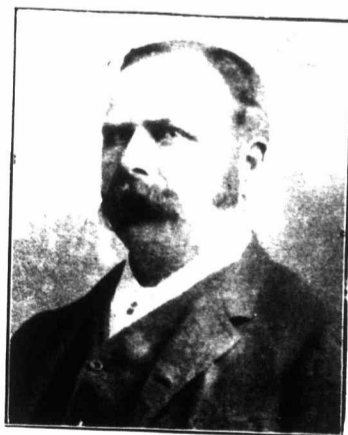
A. TELFER,
PARIS, ONT.
Southdowns.



T. C. DOUGLAS,
GALT, ONT.
Southdowns.



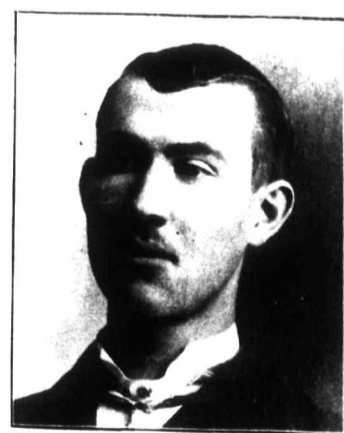
JOHN A. MCGILLIVRAY, Q.C.,
UXBRIDGE, ONT.
Horned Dorsets.



JOHN TAZEWELL,
PORT CREDIT, ONT.
Horned Dorsets.



F. W. HECTOR,
SPRINGFIELD ON THE CREDIT,
Horned Dorsets.



BURNIE DEO, (Of firm of G. & B. Deo)
NEW SARUM, ONT.
Merinos.

A Number of Ontario's Foremost Sheep Breeders.

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MR. ANDREW TELFER.

Mr. Andrew Telfer (of A. Telfer & Sons), of Springfield Farm, Paris, came from Scotland in the year 1845 with his parents, and settled along with them on the farm where he now resides, on the banks of the Grand river, two and a-half miles north-east of Paris. He commenced breeding Southdown sheep over thirty years ago. During the last five years he has secured over 350 prizes at the leading fairs of Ontario. The breeding flock consists of about thirty head, selected principally from the noted flocks of Messrs. Jonas, Colman and Ellis, England. A stock ram, the Duke of Summersbury, bred by Mr. Edwin Ellis, stands at the head of the flock.

MR. JOHN JACKSON.

The Woodside flock of Southdown sheep, the property of Mr. John Jackson, has been established thirty years. It now numbers 55 head of breeding sheep. It has been entirely renewed in the last twelve years by importations of rams and ewes from the most fashionable flocks in England. In the last three years at the largest shows in the United States and Canada sheep from this flock have been awarded 156 first prizes, being 94 per cent. of all offered. During the last twelve years they have won over 1,200 prizes, including a large number of diplomas, sweepstake and champion prizes for best flock. Also a champion silver cup and ten gold and silver medals. The importations have been from the flocks of H. R. H. the Prince of Wales, Messrs H. Webb, Geo. Jonas, J. J. Colman, Chas. Chapman, F. M. Jonas and Edwin Ellis. The stock rams at the head of the flock the present season are the noted prize-winners Norwich Beat 2919, and Ellis No. 84. Mr. Jackson takes pleasure in showing his flock to all interested in this famous breed of sheep. Orders are now being booked for next season's trade. The aim of the proprietor is to supply to his customers at moderate prices sheep possessing the highest individual merit and good pedigrees combined.

HORNED DORSETS.

JOHN TAZEWELL.

is of the firm of Tazewell & Hector. These gentlemen are the largest breeders of these sheep in America. They have been importing and breeding them for the last nine years. Their flock now numbers 140, all of which were selected from the pens of the leading English breeders of Dorsets. Many of the animals in this flock have been successful prize-winners both in England, Canada and the U. S. A. Mr. Tazewell is an Englishman reared in Somerset, where he resided until about ten years ago. He has had a long experience with the sheep of his choice. Knowing intimately many of the best English flocks he was in a position to secure the best specimens. Mr. Hector, his partner, is a Canadian, a gentleman of pleasing address and upright character.

JOHN A. MCGILLIVRAY, Q. C.,

Toronto, has for the last seven years, in addition to practising his profession, carried on farming on his farm adjacent to the town of Uxbridge. During these years he has reared Shropshires, Cotswolds, and Dorsets, experimenting with a few to discover which he would select as most suitable. He concluded, finally, to keep the Dorsets, and for the last five years has bred nothing else. He considers them hardy, easily kept, and very prolific. He has now a flock of fifty-eight, at the head of the flock being Dougall, a shearling which he bought from Mr. Beattie, his importer, for the sum of \$125. Of his sheep about forty are imported. He has great confidence in his favorites, and proposes to keep at least 100 breeding ewes.

MERINOS.

G. & B. DEO,

Messrs. G. & B. Deo, Evergreen Stock Farm, are importers and breeders of the highest type of registered American Merino sheep. They exhibited this fall at Toronto, Montreal, Ottawa, London and other fairs, taking over 90 prizes, including 38 firsts, 39 seconds and 5 diplomas, capturing all the diplomas offered. They started breeding registered Merinos by purchasing the prize-winning flock of Mr. Rock Bailey, Union, Ont., which was established by Mr. Bailey's careful, personal selections from such noted flocks as A. D. Taylor, Goyer Bros., Partch's, Beal's, Deibl's and Randall's, of Michigan; J. W. Peck, of Vt., and L. E. Snattuck, of Mo. These trace back to the flocks of H. Taft, Batavia, N. Y., and F. H. Dean, of Vt., Mr. Dean being one of the greatest importers of the Spanish Merino. The flock also traces direct to the earliest importations made by Col. Humphries, Jarvis, Crownshield, Cuff, Heaton and Cook's flock. This flock is recorded in the Michigan Sheep Breeders' Association as flock No. 298.

FAT SHEEP.

MR. JOHN RUTHERFORD

so well known as the most successful exhibitor of fat sheep on the continent, commenced to breed Leicesters and Lincolns in 1864. In 1881 he took another farm, and on it he commenced to breed Southdowns. At various times he has imported Hampshires, Shropshires and Cotswolds. Each year he fattens specimens of each of the above breeds.

He now keeps all the breeding stock on one farm, and those being fattened on another. Mr. Rutherford has been an almost continuous exhibitor of fat sheep since 1864, and has won the sweepstakes in his class at all the provincial fat stock shows but one. He commenced to exhibit at the American Fat Stock Show in 1885, since then he has won at the annual shows held at Chicago 123 first prizes, 65 seconds, and 42 thirds, 20 sweepstakes given for stakes for best wether, and each year for the heaviest sheep, and also for the one making greatest gain per day. Six times he has won the prize given for best carcass, and twice the grand sweepstake for best carcass any breed—1887 a Leicester yearling won this coveted honor, and 1891 a Southdown yearling was successful.

Wisconsin Farmers' Institute.

BULLETIN NO. 5.

We have just received a copy of bulletin No. 5, issued by the Wisconsin Farmers' Institute. We could not help comparing it with the report of the Central Farmers' Institute of Ontario which we recently received, and which falls very far behind the splendid volume issued by our Wisconsin friends. The following is a partial list of the topics and speakers:—

- "The Dairy Temperament in Cows," ex-Gov. W. D. Hoard;
- "Science and the Clover Patch," "Wisconsin System of Agricultural Education," Prof. W. A. Henry;
- "Shall We Have Pure Food?" Hon. H. C. Thom;
- "The Construction of the Silo," Prof. F. H. King;
- "Manure and Fertility," "Sheep Husbandry," "Grain Raising," George McKerron;
- "Plowing, Cultivation and Tillage," Thomas Convey;
- "Swine Husbandry," A. Selle;
- "Hog Pens," George Wylie;
- "Noxious Weeds," W. H. Cole;
- "Pastures and Meadows," "How I Feed Dairy Cows," Butter-making on the Farm," C. P. Gooderich;
- "Cheese Making," T. J. Flemming, W. H. Phillips;
- "Advantages of the Creamery," N. G. Williams;
- "Creamery or Cheese Factory?" S. Faville;
- "Steps in the Progress of Extracting Butter Fat from Milk," J. A. Smith;
- "Potato Raising," George Martin;
- "Common Sense in Farming," A. X. Hyatt;
- "Now and Then in Farming," T. J. Van Matre;
- "The Farmer's Reading," Frank S. Grubb;
- "Public Highways," Dr. S. L. Marston;
- and a number of others pertinent to the occasion.

We would advise our readers to obtain copies of this work. Apply to W. H. Morrison, Madison, Wisconsin, U. S. We notice that 12 cents in postage was required to bring the volume to us. At least that sum should be enclosed by each applicant.

The Mulberry as a Wind-Break.

To the Editor of the FARMER'S ADVOCATE.

Sir,—Having read the article, "Poplars and Willows for Manitoba and the Northwest," in the December number, I beg leave to suggest an opinion that the Russian mulberry would make a good wind-break. 1. It is said to be *hardy* in Manitoba and the Northwest, and hardiness is the first requisite. 2. It is easily propagated, hence the plants are cheap enough in quantities. 3. It is tenacious of life when once rooted. 4. It grows rapidly in fairly fertile soil. 5. It grows with low branches when unpruned, and when pruned the limbs droop somewhat. 6. It will grow quite tall and with interlacing branches, with numerous small limbs, making a dense shade when planted close together. 7. It affords fruit that is much relished by our feathered friends, as well as shelter for their nests. These seven reasons in its favor are worthy of attention. What are its most prominent failings? Yours, W. S. H.

Stock.

Our Scottish Letter.

INBREEDING.

In the annals of scientific investigation the name of Charles Darwin will ever occupy a prominent, if not the first, place. The patience with which he prosecuted experiments during lengthened periods of time, the breadth of the area within which he collected his facts, the shrewd inductions which he derived from these facts, and above all, the modesty, that unflinching test of true greatness, with which he advanced his opinions, entitle him to rank as one of the greatest benefactors of the race, and especially of all who are dependent on or interested in the rearing of stock. His views, therefore, on that method of breeding which has proved the most potent of all means in developing our modern breeds, are worthy of careful attention, and in now giving some notes as to what these views were I am not to be regarded as identifying myself with opinions and results which have sometimes been asserted to be the corollary of Darwin's investigations and opinions. I merely wish to state, as clearly as I may, what I have gleaned from various quarters regarding these views.

It has often been a source of speculation to us whether a herd of wild horses would exhibit so much variety of character as an equal number of the same genus in the domestic state; and it is interesting to find Darwin setting forth that as a matter of fact animals in the domestic state are marked by a greater variety of individual characteristics than those in the wild state. Changes can be made in the conformation and constitution of animals when in captivity in a way that one never sees in wild animals. The size can be increased apart from all other considerations by the amount of food that is consumed. The same race of animals in the plains of South America and in the Falkland Islands vary in size; and the further north, as well as the further south we travel, animal life becomes more and more stunted. Iceland ponies are smaller and less comely than Shetland ponies, and the latter cannot be kept down to the desired size on the more luxuriant herbage of the low country so easily and so surely as on their native heather. The Clydesdales of the bleak western islands of Scotland—Mull, etc., cannot be grown to the same size as in the Lowlands of Galloway; and Clydesdales reared in the Midlands of England are larger than in the Highlands of Scotland. The pasturage accounts for most of the difference. The color of a race can also be modified by the nature of the food on which its members are reared; and as we all know the thickness of the skin and hair is greatly affected by the climate. It is not an exaggeration to say that placed under the same climatic influences, the Galloway and the West Highlander would soon become as thin and soft in the skin as the Aberdeen-Angus or the Shorthorn, and *vice versa*; and it is easy in a spring show yard to distinguish the animal that has been wintered out and the one that has been reared in the house. This susceptibility to change from comparatively simple causes when carefully observed may become a most important factor in the improvement of a breed.

There is, however, a more powerful means of improvement at hand. The influence of environ-

ment is greater than may sometimes be supposed, but there can be no gainsaying the influence of heredity. On this point it is of importance to note, that inheritance of every characteristic should in Darwin's opinion be the rule, and non-inheritance the anomaly. Why, then, it will perhaps be asked by some unfortunate breeder, does it happen that the anomaly is so painfully in the ascendant? Perhaps it is because when one is engaged in improving an indifferent race by the use of a member of an improved race, he is very apt to forget that both parents have influence, and unless he has been careful in selecting a representative of the improved race, not improbably the influence of the older and inferior race may be the stronger. The wish here may be father to the thought. The desire is to reproduce the features of the better animal, and the thought is that these will certainly be produced. Hence the disappointment when the opposite result is obtained. Another source of disappointment is to be found in a mistaken notion that by crossing two animals one may infallibly secure progeny having something of the nature and characteristics of each. That is to say, one mates a very fine animal with an indifferent one, and looks for produce better than the worst, although probably not so good as the better parent. Regarding this Darwin says:—"Many cases are on record showing that a race may be modified by occasional crosses if aided by careful selection of the individuals which present the desired character; but to obtain a race intermediate between two quite distinct races would be very difficult. Sir John Sebright experimented with this object and failed. The offspring from the first cross between two pure breeds is tolerably and sometimes (as I have found with pigeons) quite uniform in character, and everything seems simple enough; but when these mongrels are crossed with another for several generations, hardly two of them are alike, and then the difficulty of the task becomes manifest."

How then, it may be asked, is improvement at all to be brought about? It is for one thing clear that a violent cross will fail, and it is further clear that breeding from the result of a violent cross will also fail. Price, the great Hereford improver, has placed the opinion on record that he never arrived at any good result by crossing a medium sized cow with a very heavy, large bull. All such experiments signally failed. The one safe method is to advance step by step: the American word "grade" is in this connection most apt, and he who uses medium-sized Clydesdale sires on Morgan or Texas mares will reach the goal more speedily than the breeder who uses great gross horses, which undoubtedly have their uses but are out of place in attempts to improve stock. An inbred sire is always the most impressive. There is, however, a danger to be guarded against in the use of such, and concerning it Darwin gives no uncertain warning. He says that having collected a large body of facts, and made so many experiments, he has arrived at results which show in accordance with the almost universal belief of breeders, that, with plants and animals, a cross between different varieties, or between individuals of the same variety, but of a different strain, gives vigor and fertility to the off-spring, whereas on the other hand he has found that close interbreeding diminishes vigor and fertility. He, therefore, concludes that it is a general law of nature that no organic being fertilizes itself for

a perpetuity of generations, but that a cross with other individuals is occasionally, although perhaps at long intervals, indispensable.

No doubt the naturalist has in these words chiefly in view such extreme cases as those of hybrids and hermaphrodites, but in another place and in further development of the same line of reasoning, he says: "Both with plants and animals, there is the clearest evidence that a cross between individuals of the same species which differ to a certain extent, gives vigor and fertility to the offspring; and that close interbreeding continued during several generations between the nearest relations, if these be kept under the same conditions of life, almost always leads to decreased size, weakness, or sterility."

These opinions, although stated in quiet language, are not the less on that account strongly put, and it is interesting to find that the writer at a later stage, so far from modifying these opinions seems to have found himself under the necessity of stating them with even greater point. In an interview with a prominent breeder, towards the close of his life, he said that the prevention of free crossing—by which, I suppose, he meant breeding within herd or stud book lines, and the matching of individual animals whose relations to each other were thoroughly understood were the cornerstones of the breeders' art; but he added that with the evidence before him he was convinced that it was a great law of nature that all organic beings profit from an occasional cross with individuals not closely related to them in blood, and that on the other hand long continued interbreeding was injurious. Close interbreeding, he thought, might with some animals be carried on for a considerable period with impunity by the selection of the most vigorous and healthy individuals, but sooner or later evil would follow. The visibility of the evil effects might not in such cases be readily recognized because the deterioration was gradual, but of its existence there could be no doubt. Barrenness was one of the most common forms in which this deterioration manifested itself, and blindness and idiocy has also been known to result from prolonged inbreeding. Now, of course, it would not be difficult to show that many very eminent breeders, whose praise is in all the histories, have acted on lines contrary to those suggested by Darwin's views, but I question whether there has been such a general departure from his principles as on the surface might be supposed. For example, it must not be overlooked that he includes the similarity of the conditions under which inbred animals are reared as one of the determining causes towards the deterioration against which he warns us. I would understand him to indicate by that, that good results might flow from the mating of an inbred male reared in Aberdeenshire with an inbred female reared in Galloway or Yorkshire, even although they were of the same family and closely related. Change of air is a most important element in promoting convalescence, and it is an illustration of the same law, although we might regard it as operating in an opposite direction, that certain animals although in perfect health will not breed in captivity. Farmers and gardeners are frequently found changing seeds, tubers, etc., from one soil or climate to another, and back again, and in this way without any interference with the individual seed or plant interested its health and constitution may be strengthened.

I have not a sufficiently intimate acquaintance with Shorthorn history to warrant me in affirming that this actually was the means whereby the Aberdeenshire Shorthorns were improved as they have been; but it seems to me from the little that I have read that the conditions under which they have been reared have had a great influence in determining their highly appreciated characteristics.

The testimony of Mr. Richard Booth in favor of the principle of line-breeding is an interesting contribution to the discussion. He said: "It is clear that the only consideration which would justify me in having recourse to a cross would be the discovery of a tribe which, besides possessing in an equal degree with my own the good qualities we have been aiming at, are superior to them in utility and symmetry. Where is this tribe? The result of the last three crosses upon which I ventured—Walter King, Exquisite and Lord Stanley—has made me distrust the policy of any further step in that direction. Nor have the results I have witnessed of the experiments of others in crossing animals of my blood with the most fashionable bulls of other strains tended in any instance to remove that distrust." These opinions are not to be confounded with the foolish utterances of gentlemen who are unable to see merit in any animals but their own. They are the matured views of a gentleman who was not averse to experiment, who as a matter of fact did experiment with outside crosses, and as such they must be carefully weighed and compared with Mr. Darwin's views. I imagine that the more one reflects on the whole question the less disposed will he be to dogmatise; and while it is impossible at this time to give the reasons for the view, I cannot close without declaring that after a careful investigation the conclusion has gradually taken shape in my mind that Clydesdale breeders have in this country with a very few exceptions during the past ten years been observing the golden mean—neither going to the extreme against which Darwin warns us, nor neglecting the benefits to be derived from judicious line-breeding.

SCOTLAND YET.

A Wonderful Dairy Record.

To the Editor of the FARMER'S ADVOCATE:

I foolishly took Massena around to the exhibitions. She was travelling for one month, and suffered so, at her age, in a crowded car that I thought I would lose her. I did not think when she came home she would make one pound per day, but resumed her test with the following result:—

1891.	Lbs. Milk.	Butter.
Oct. 7 to Nov. 6, inclusive.	627	50 6 $\frac{3}{4}$
Previous to going to the fairs.		
Mar. 6 to Sept. 5, inclusive.	5,413 $\frac{1}{2}$	416 10
Total in seven months.	6,040 $\frac{1}{2}$	467 6 $\frac{3}{4}$

The cow is nearly 16 years old. She is due to calve again in 4 months. She has travelled nearly 2,000 miles by rail in the past 10 months. Before going to the fairs she was making 70 lbs. butter a month, and after returning 50 lbs. It during September she had been left at home, she would, at the very least, have made 60 lbs., which would have been in 8 months 527 lbs. butter. What would this cow have done 10 years ago on high feed? Her persistence is remarkable. She has now been 8 $\frac{1}{2}$ months milking, and will calve in 4 months, yet she is averaging 21 lbs. milk daily, and 11 $\frac{1}{2}$ lbs. butter a week. And it only takes 12 $\frac{1}{2}$ lbs. of milk to make 1 pound of butter on moderate feed.

Mrs. E. M. JONES.

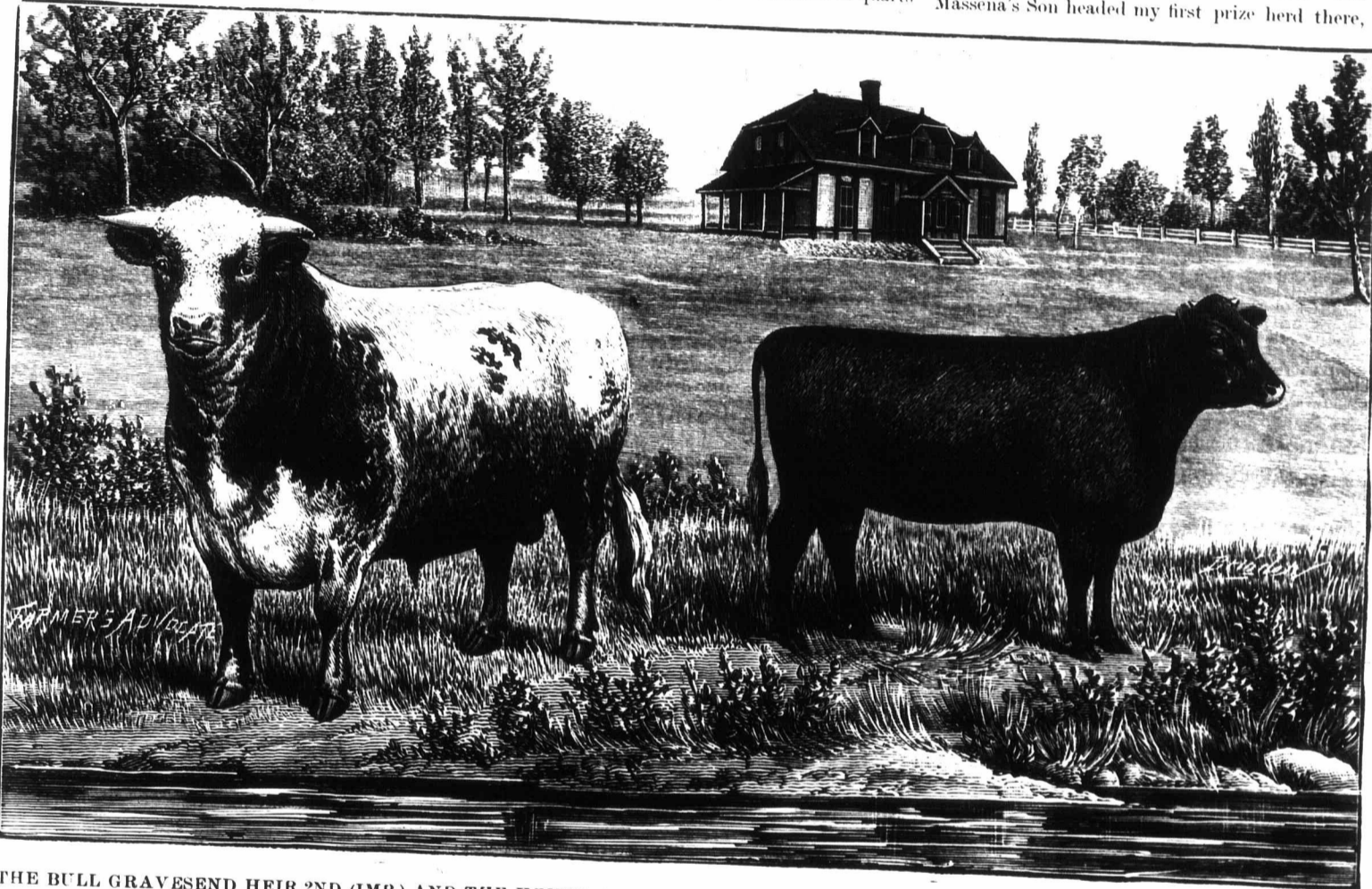
Our Illustration.

The accompanying illustration represents the magnificent bull Gravesend Heir 2nd (imp.) and the grand heifer calf Rosabella, owned by Mr. W. S. Lister, Middlechurch, Man. Gravesend Heir 2nd was bred by the Messrs. Redmond, of Peterborough, Ont., and imported by Mr. Lister to Manitoba in September of 1890, when two years old. Since his arrival in this country he has made a steady and continuous growth, and put on the flesh just where it was most required to develop him into one of the very finest animals ever shown in the country. Gravesend Heir 2nd is a roan in color, and is a good handling. He has won all the prizes for which he has

Mrs. E. M. Jones' Prize-Winners.

You have not got the prizes stated correctly, and a California gentleman who is purchasing my famous pair of first prize calves naturally wishes the mistake corrected. At our three great exhibitions I showed a bull and a heifer calf younger and smaller than any I ever remember to have shown before, and they, of course, competed against animals up to one year old. So beautiful were they, and with such dairy promise, that they were the centre of attraction, though only "babies"; and no wonder. Both were sired by my great bull, Signal of Belvedere, whose sire was a son of old Signal, and his dam a grand-daughter of Signal, the most perfect cow I ever saw, and she made me, on second calf only, 20 lbs. 6 oz. butter a week, and milked 20 quarts

made. I may add that my four-year-old bull, Massena's Son, took first prize at Toronto in the *grandest ring of aged bulls I ever saw*, and he also took silver medal as best of any age, and stood at head of my first prize herd there, Mr. Crozier being judge. Some disappointed exhibitors criticised the awards, so I felt well pleased when, at Montreal, with *two judges, and different ones*, Massena's Son again took first prize and silver medal and headed my first prize herd! Then, at Ottawa, Mr. Crozier, judged again, and saw, for the first time, Mr. Burgess' beautiful bull Carlo, the living image of old Carlo, from whom he is descended. As Mr. Crozier has always been enthusiastic about old Carlo, he gave first, on this occasion, to his handsome descendant, and second to Massena's Son. But Massena's Son headed my first prize herd there,



THE BULL GRAVESEND HEIR 2ND (IMP.) AND THE HEIFER CALF ROSABELLA, PROPERTY OF MR. W. S. LISTER, MIDDLECHURCH, MAN.

competed since he came to the province. It is his owner's intention to have him in the ring again next year, if all is well.

The grand calf, Rosabella, was a winner at the late Winnipeg Exhibition. She is by the well-known imported bull Vice-Consul, formerly owned by the Messrs. Miller, Brougham, Ont., but now at the head of the herd of Messrs. Sanger & Sons, Waukesha, Wis., whose herd won so many honors last fall in the Western States. Rosabella is a beautiful red, and will develop into a grand animal if she meets with no misfortune.

Mr. Lister's herd is a credit to himself and the Province of Manitoba.

We request each one of our old subscribers to send us at least one new name. The larger our subscription list the better paper we can furnish our readers. See our list of subscription prizes.

a day. Sired by such a bull, what were the dams of these calves?

The bull calf, Massena's Combination, is out of Massena's Maggie, an elegant grand-daughter of my famous cow Massena, while the heifer, Juliana of St. Lambert, is out of Miss Judy of St. Lambert, a daughter of Rieter's Pride and a grand-daughter of Stoke Pogis 3rd. Juliana was only ten weeks old when shown, and such tender development was never seen. I think, on anything of her age, or so yellow a skin, nor was she at all fat, but rather the reverse. She took first prize at Toronto and first at Ottawa, and she well deserved them. Wm. Crozier, of Northport, Long Island, judging. The young bull, Massena's Combination, half-brother to Juliana, took first at Toronto, second at Montreal and first at Ottawa.

It is only due to me, and to the intending purchaser of these calves, that this correction be

and he also headed my herd that won the special gold medal donated by the Mayor of Ottawa. And even young Carlo would not have gained the one advantage he did over Massena's Son had the latter been in his usual form. But it was then his *third week* in cars and on the fair grounds, and the heat and worry, and change of water, purged him terribly, while Carlo only came a few miles and made his first appearance.

Also, after showing at Toronto and at Montreal for two weeks, my cattle were led out to Milk-End, only to find mismanagement about the cars, and from 5 p. m. till 9 o'clock next morning, my 20 head of cattle stood on the roadside, 16 hours, without food or water, in the dark, the females tied to the fences and my men holding the bulls. It is a wonder they were alive; but in spite of all they made a pretty clean sweep at Ottawa, as at both Toronto and Montreal.

MRS. E. M. JONES.

Reports of the Meetings of Canadian Live Stock and Agricultural Associations.

THE WORLD'S COMMITTEE.

The World's Columbian Exhibition committee for the province of Ontario met in the rooms of the Agriculture and Arts Association at 2 o'clock, p.m., November 25th, 1891. Members present: Ira Morgan, J. C. Snell, Edmonton; Albin Rawlings, Forest; Robert Vance, Ida, President of the Agriculture and Arts Association; R. Gibson, Delaware, President of the Shorthorn Breeders' Association; John Jackson, Abingdon; Mr. N. Awrey, M. P. P., Binbrook, and F. W. Hodson, London. Mr. Awrey, the chairman, called the meeting to order. After much discussion and deliberation the following preamble and resolutions were unanimously adopted, and addressed to the board of the Agriculture and Arts Association:—

PREAMBLE.

Whereas the members of the World's Columbian Exhibition to be held in Chicago in 1893 will in all probability be the greatest aggregation of live stock and agricultural products that has ever been brought together on the American continent, it is of the utmost importance to this province that a good representation of its products should be made on that occasion. The selection of Chicago, the great live stock emporium of the world, as the place for holding the exhibition is one especially favorable to the interests of Canadian stockmen, as the demand for our improved stock is mainly from the great Western States and Territories, and in making preparation to exhibit at Chicago our stockmen will be taking their stock right into its natural market. Canada has long been and is likely to be in the future the principal breeding ground from which the farmers and breeders of the United States look for first-class animals to replenish their herds and flocks, and this exhibition will afford an opportunity which may not occur again in a century to demonstrate to the world the facilities of this country to produce animals of the highest merit as to breeding, quality and vigor of constitution, as well as our ability to exhibit in all departments products unexcelled for excellence. Be it therefore resolved that in order to carry out efforts to a successful issue the following recommendations be adopted:

RESOLUTIONS.

- 1st. That the Dominion Government be asked to provide for all expenditures in connection with the transportation, care and maintenance of all the exhibits from the time of shipping until the return of the same.
 - 2nd. That the Dominion Government be asked to provide for the insurance of the live stock from time of shipment to return.
 - 3rd. That the Ontario Government be asked to appoint a Provincial Commissioner, who shall devote his attention to securing a complete exhibit in every department, and who shall represent the province at Chicago.
 - 4th. That the Ontario Government be asked to appropriate at least \$19,000 to be offered as prizes to live stock and poultry from this province, the above sum to be divided amongst the various classes in the same proportion as at last Provincial Exhibition.
 - 5th. That the Ontario Government be asked to confirm the appointment of sub-commissioners elected by the Board, one for each of the following classes, namely: Horses, cattle, sheep, hogs, poultry, agricultural products, horticultural products, and the dairy, who shall select the exhibits to represent their various departments, said sub-commissioners to be selected either from this Board or some one of the existing live stock associations, all expenses incurred by the sub-commissioners in their duties to be paid by the Ontario Government.
 - 6th. All entries to be made through the Secretary of the Agriculture and Arts Association on forms provided for the purpose.
- The members of the committee were very enthusiastic and unanimous in their work. All the gentlemen present regretted very much the fact that they were not allowed to recommend as Commissioner one of the gentlemen present. That gentleman was the chairman of the committee, Mr. N. Awrey. Some of the members were quite determined to move a resolution recommending the Ontario Government to appoint that gentleman, but he steadfastly refused to have his name brought forward, and insisted that the Ontario Government be left free to select their Commissioner where they pleased. Notwithstanding, the prominent gentlemen present were unanimous in their opinion that Mr. Awrey should be appointed. He possesses in a marked degree the qualities to make a successful Commissioner. His executive abilities are very good—one of the prime requirements in filling such a position. He is eminently a fair-minded man, and honorable. Though gentlemanly, his inclination to handle "hoodlers" without gloves is well known. He is a man of strong convictions and possesses the moral courage to carry out these convictions. The farmers of the province have long recognized him as a man worthy of trust. He has for several years ably represented a rural constituency in the Local Legislature, and for three years he has been on the Board of the Agriculture and Arts Association, and for the last two years has been President of the Central Farmers' Institute, thereby representing upwards of 10,000 farmers. We are sure we are voicing the views of the province at large, and especially the farmers, when we say that his appointment as Chief

Commissioner to represent this province at the great fair soon to be opened would be received with satisfaction. The appointment of sub-commissioners is also an important task. None but practical and honorable men who possess much executive ability should be selected.

The World's Fair Committee of the Agriculture and Arts Association, together with representatives of the various stock breeders' associations, met again at Guelph Dec. 9th. The following were present:—N. Awrey, Binbrook (chairman); R. Gibson, Delaware; A. Rawlings, Forest; R. Vance, Ida; J. C. Snell, Edmonton; Ira Morgan, Metcalfe; F. W. Hodson, London; J. Featherston, Streetsville; J. C. Rykert, St. Catharines; J. Jackson, Abingdon, and Henry Wade, Secretary, Toronto.

The minutes of former meeting were read and confirmed.

The Secretary submitted prize lists for Ontario live stock at the World's Columbian Exposition to be held in Chicago in 1893, which he had prepared under instructions given at a former meeting of the Committee. The prize list was discussed section by section, and after some amendments were made, it was adopted.

The sum of \$1,220 was given in prizes to each of the following breeds of horses:—Thoroughbreds, Hackneys, Coach horses, Clydesdales, Shires and Suffolk Punch; \$945 each to breeds of cattle, viz., Shorthorns, Herefords and Ayrshires, and \$703 each to Galloways, Devons, Jerseys and Holstein cattle; \$330 to each of the following breeds of sheep:—Cotswolds, Leicesters, Lincolns, Southdowns, Shropshires, Oxford Down and Dorset Horns; \$330 to each of the following breeds of swine:—Berkshires, Improved Yorkshires, Poland China, Chester Whites, Essex, Tamworths.

It was moved by C. Rykert, seconded by J. C. Snell, that the words "and poultry" be struck out of the resolution passed at the last meeting wherever they occur. Carried.

The chairman called upon Mr. Gibson to give a report concerning his interview with Hon. John Carling, Minister of Agriculture, respecting the World's Fair. In reply, Mr. Gibson said: "I heard that Mr. Carling was in London and I took the opportunity to meet him. He expressed himself in this way: 'That until we presented our views to him in definite shape he would not give any answer as to what the Dominion Government were prepared to do. When we were ready and had arranged what we wanted he would be glad to meet a delegation to learn what was really required. He seemed to think it a little premature to talk about the matter now, 1893 being a long time to look forward to. But when I see the stockmen, not only of this continent, but the whole world, working hard to get their stock into proper condition, it seems to me if the men of Ontario are to win prizes the work must begin at once.' After discussion on the subject, it was moved by A. Rawlings, seconded by J. Jackson, that N. Awrey, R. Gibson and R. Vance be a committee to wait upon Hon. Mr. Carling and present to him the wishes of the Committee concerning the Dominion Government, as set forth in the resolution passed at the last meeting. The meeting adjourned.

AGRICULTURE AND ARTS ASSOCIATION
met at Guelph, Dec. 10. Members present: Ira Morgan, Metcalfe; Joshua Egge, Gananoque; James Haggarty, West Huntingdon; Robt. Vance, Ida; J. C. Snell, Edmonton; N. Awrey, M. P. P., Binbrook; J. C. Rykert, St. Catharines; Wm. Dawson, Victoria; James Rowand, M. P., Dunblane; C. M. Simmons, Ivan; Albin Rawlings, Forest; Jonathan Evans, Crown Hill, and the Secretary, H. Wade, Toronto. Correspondence was read from the city of Kingston, Midland Central Fair and county of Frontenac agricultural societies, as well as a long petition from thirty-seven Reeves and deputy-Reeves from counties adjoining Kingston, asking that the Provincial Exhibition be held in Kingston in 1892. A deputation consisting of the Mayor of Kingston, Mr. Drennan, Ald. Hardy, representing the merchants, and Robert Meek, late secretary of the Midland Central Fair, was then introduced. They stated their case, asking that the Provincial be held there, and that the cattle be chosen at it to go to the World's Fair at Chicago. The delegation then left, and a resolution was carried asking the Provincial Government for \$5,000, four members voting against it; if the Legislature vote this grant the next Provincial will be held in Kingston. The following report of the finance committee was presented by Mr. N. Awrey, M. P. P.:

Your Finance Committee, after careful consideration, have decided to ask the following appropriations. Your Committee have kept our ordinary expenditure within the narrowest possible limits, but realize that in view of abnormal expenditures in the near future our wants will be largely augmented. You will notice that an appropriation of Chicago's World's Exposition is being asked for; but at the same time you will bear in mind that the year 1893. In order to ensure confidence amongst breeders throughout the province, your Committee have deemed it advisable to ask the Legislature to make appropriation for the incoming year, as an inducement to exhibitors to prepare exhibits for the Columbian Exposition:—

Spring and fat stock shows.....	\$1,500
Ploughing matches.....	600
Expenses of Council.....	500
Printing.....	700
Salaries.....	700
Prize farms.....	250
	\$1,220

Your Committee would recommend that a sum

not to exceed \$1,000 be granted to the Dominion Shorthorn Breeders' Association to complete the printing of old pedigrees.

Your Committee would further recommend that the following sums be asked re expenses:—Columbian Exposition, selecting stock, etc., \$2,000; for prizes to be given in Chicago or elsewhere from Ontario, per schedule proposed by World's Fair Committee, \$19,000, all of which is respectfully submitted.

In accordance with resolutions of your Council, your Committee have added the following for the Provincial Exhibition: \$5,000.

Carried. N. AWREY, Chairman.

Mr. John I. Hobson, Mosborough, and James Bigelow, Port Perry, were appointed auditors.

The report of the four provincial ploughing matches were read and accepted.

It was decided that a fat stock show be held in 1892, and that \$1,000 be granted towards it.

The reports of the prize farms' judges was read and adopted and ordered to be printed, and it was decided to go on with the work next year.

It was also resolved that the Secretary commence printing at an early date the 1st vol. of the Dominion Swine Record, containing the pedigrees of the different breeds of swine in the same book, keeping each breed separate. In accordance with a resolution passed at a swine breeders' meeting held March 14, 1890, and that all parties recording swine in the different records of the Agriculture and Arts Records after the 1st of January next be charged double fees, unless they join the Swine Breeders' Associations. The Secretary was ordered to print not more than 400 copies of a book to cost not more than \$1.00 each.

The Secretary was also authorized to print the 6th vol. of the Clydesdale book.

The Secretary was also authorized to employ a stenographer and typewriter to assist him in his work.

A committee, consisting of J. C. Rykert, N. Awrey, M. P. P., R. Vance, Richard Gibson and the Secretary, were appointed to wait on the Hon. John Carling re a grant from the Dominion Government for World's Fair as to transport and maintenance.

EXECUTIVE MEETING OF THE DOMINION SHEEP AND HOG BREEDERS' ASSOCIATION.

The Executive of the Sheep Breeders' Association met in Guelph, December the ninth, and instructed the Secretary to request the following gentlemen to prepare papers to be read before their next annual meeting, to be held in Toronto early in the month of February. The exact date is not yet fixed:—Mr. Henry Arkell, Teeswater, Ont.; Mr. Beverley Jeffs, Bond Head; Mr. John I. Hobson, Mosborough; Prof. James, Toronto; President James Mills, Guelph, Ont.; Mr. Richard Gibson, Delaware; Mr. James Tolton, Walkerton; Mr. J. C. Snell, Edmonton; Mr. W. S. Hawkshaw, Galt; Mr. Andrew Telfer, Paris; Mr. John A. McGillivray, Toronto; and James Phin, Hespeler, Ont.

The Executive of the Dominion Hog Breeders' Association met at the same place, and on the same date, and decided to hold their annual meeting the day before or the day following that of the above named Association. The Secretary was instructed to request the following gentlemen to prepare papers to be read before their next annual meeting:—Dr. Cowan, Galt; J. C. Snell, Edmonton; J. J. Payne, Chatham, Ont.; Danl. DeCoursey, Bornholm; C. H. McNish, Markham; John Ackland, Delaware; Jos. E. Brethour, Burford; R. H. Harding, Thorndale; James Grant, Ingersoll; and E. D. George, Putnam.

HEREFORD BREEDERS' ASSOCIATION.

On December the 9th the annual meeting of the Canadian Hereford Breeders' Association convened. The president being absent Mr. F. A. Fleming was requested to take the chair. In his annual report the secretary stated that enough pedigrees were already received to warrant the Association in publishing their first volume. The following were elected officers for the ensuing year:

President, F. A. Fleming, Vice-President; J. R. Martin, for Ontario; Hon. H. M. Cochrane, for Quebec; Sir Donald A. Smith, for Manitoba. Directors—Messrs. A. Waldie, A. Stone, J. M. Cairns, Geo. Brent, H. D. Airth, D. Jackson, M. M. Boyd and James Cochrane. Secretary-Treasurer, H. Wade, Toronto.

CLYDESDALE.

A meeting of the Executive of the Clydesdale Association was held Monday, Dec. 21st, 1891, at Agricultural Hall, Toronto. Present, J. Bell, L'Amaroux; D. Sorby, Guelph; J. Duff, Everton; Robt. Miller, jr., Brougham; Robert Graham, Claremont; Wm. Smith, Columbus, the President in the chair. A letter was read from Col. Otter, D. A. G., promising the use of the drill shed for the Stallion Show if used prior to March 15th. It was resolved that F. M. Tuckett, of Toronto, has in the opinion of this committee been found guilty of fraud in connection with the pedigree of the mare Gip, and that Mr. Tuckett be expelled from membership of this Association, and that his signature be not taken as authority in connection with pedigrees handed us for registration.

This motion, subject to the approval of the annual meeting, was adopted.

It was resolved to ask the Agriculture and Arts Association to grant the sum of \$200 and a gold medal towards the prize list for Clydesdale horses to be awarded at the Spring Show, and that the additional amounts be made up by this Association. The appointment of judges was left till the annual meeting, which is to be held about the second week in February.

SPRING STALLION SHOW.

A joint meeting of the Agriculture and Arts Association stock show committee and a committee from the Clydesdale Association met at 2 p. m. Present, J. C. Snell, Edmonton, in the chair; J. Legge, Gananoque; Albin Rawlings, C. M. Simmons, Robt. Vance, N. Awrey and J. Gardhouse and the Clydesdale committee as above. A vote of condolence was tendered Mrs. Morgan, and J. Legge and H. Wade were delegated to attend the funeral. The prize list was then gone over. It will remain the same as last year with the following exceptions:—Roadster stallions must either be recorded in, or satisfactory evidence be given that they are eligible for entry in Wallace's Trotting Register.

HACKNEYS (2 CLASSES).—3 YEARS OLD AND OVER.

1st Prince of Wales Prize	\$50
2nd	25
3rd	15
4th	10
5th	5

UNDER 3 YEARS.

1st	\$30
2nd	20
3rd	10
4th	5

Percherons were struck out. The section for Clydes is almost the same as last year, except that in Canadian-breds, a class for 3-year-olds was added.

The show will be held on the 9th and 10th of March in the Drill Shed, Toronto.

A committee was appointed to meet at the Queen's Hotel to appoint judges the first or second week in February.

A meeting to form a Hackney Association will be held about the second week in February, due notice of which will be given.

Chatty Letter from the States.

The packers are taking in the big crop of hogs just as if they were making a rich harvest, and that is what they are doing. Prices for hogs are low, but feeders are not losing anything. Uncle John Start, who used to buy hogs for Canadian pork packers, thinks no money is being lost in hog feeding at present prices. Years ago he weighed in a lot of 120-lb. pigs of poorer quality than the present average. They ate 15 lbs. of corn each in sixty days, an averaged 280 to 300 lbs. The following packers are operating in the Chicago hog markets this winter:—Armour & Co., Anglo-American P. Co., C. P. & P. Co., Swift & Co., International P. Co., N. Morris & Co., Underwood & Co., T. J. Lipton & Co., Jones & Stiles, J. Cudahy & Co., Allerton P. Co., J. C. Hatley & Co., J. Moran & Co., J. Healy & Co.

In some parts of Texas the grass is long and rich, while in other places the grass is dead from drought. In the southern part of the state three-year-old steers have been offered at \$1.50 @ \$3 per head, but in such cases the cattle are usually too poor to stand a trip to where feed is more plenty. It looks as if it would pay in some such cases to ship feed to them, at least enough to give them strength to stand a journey.

Christmas cattle sold this year at \$6 @ \$6.75, with twenty head of extra fine Polled-Angus steers at \$7 @ \$7.15. A lot of rough, but very fat 1,822-lb. steers sold at \$5.10, while in an adjoining pen a lot of 1,209-lb. steers sold at \$5.25, and still another lot of high bred steers, 1,177 lbs., sold at \$5.50. Still another lot of 1,474-lb. steers, fat but old-fashioned, sold at \$4.25. Its an awfully threadbare tune, but the fact remains that blood does tell. S. P. Clark, Dover, Ill., marketed one 1,970-lb. Galloway steer at \$6.

There were some good sheep on the holiday market. L. B. Bacon, of Chrisman, Ill., received \$5.60 for 72 head of black-faced sheep of his own feeding which averaged 126 lbs. A bunch of choice fed Western sheep, averaging 142 lbs., sold for \$5.20. C. D. Hudson, of Marshall, Mo., marketed two loads of choice Christmas sheep, which sold for \$5.65. They averaged 139 lbs.

Studs, Herds and Flocks.

CRESCENT STOCK FARM,

the property of Messrs. J. & J. Smith, is situated four miles from Paris, on the G. T. R. Although Mr. Jas. Smith, the junior member of the firm, has long been known as one of the best cattlemen in the province, having had charge of the stables at Bow Park, the firm at present devotes itself exclusively to Shropshires, and an even or more uniform lot of ewes than those we were shown here it would be hard to find. The original stock of ewes, having been personally selected by Mr. Smith from the flocks of the well-known English breeders, Messrs. Richard Thomas, of Shrewsbury, and Jas. Whittaker, by careful handling and the use of none but the very best males, the flock has been brought to a standard of rare excellence, the lambs from this flock never having been beaten by lambs bred in Canada, their winnings in the last year or two including first for ewe lambs in Toronto and London in 1890, as well as the special prize given at each place for the best pen of lambs, to consist of two rams and three ewes, by the English and the American Shropshire Association. The ram last in use was Royal Uffington (11116), bred by A. Gibson, Esq., Springhill, Notts. This ram has since been sold, and we learn since our visit that Messrs. Smith have purchased from Mr. Robt. Miller a grand shearling ram bred by T. & S. Bradburne. This ram, we are told, was considered the pick of the lambs in this celebrated flock, and his breeding, combining the blood of such sires as The Rector, Royal Chief, Royal Taunton and Sir Arthur, being of the very best, we may look for something extra good next year from the Crescent Farm flock.

MONTROSE FARM.

Adjoining the Crescent Stock Farm is Montrose Farm, owned by Mr. H. Chisholm, well known to all exhibitors at the old Provincial Fair, as for many years superintendent of the sheep department. Mr. Chisholm is now devoting his attention to breeding Shorthorns, Berkshires, Bronze Turkeys and Plymouth Rocks. Of these his Shorthorns are principally bred from stock imported by Bow Park. Among them we noticed a grand show cow, Wave Foam 5th, by Roan Duke 13th, with a capital heifer calf by the Bow Park bull Waterloo Banner. Another good one was the yearling heifer Wave Lily 2nd, by Ingram, out of Wave Lily, a roan in color. She promises to grow into a rare, good cow. Mr. Chisholm has, for the past few years, gone to the trouble and expense of sending his best cows to Bow Park to be bred, believing that nothing pays like the best, and we noticed in the stable a very promising young bull sired by Waterloo Banner. In Berkshires the sows are principally of Messrs. Snell's stock, five sows having found their way from Willow Lodge to Montrose Farm in the past six years. At the time of our visit the stock of pigs was pretty well reduced, still a few young boars and yelts were on hand. In poultry Mr. Chisholm is a strong fancier of Plymouth Rocks, and certainly some of the young birds he showed us were enough to justify his choice, they as well as the Bronze Turkeys being bred from prize-winning stock at Chicago.

MR. TEGART'S CLYDESDALES.

About a mile and a-half from the thriving little town of Tottenham lies the farm of Mr. A. K. Tegart, who has for over seven years been en-

gaged in the business of breeding and importing Clydesdale horses. At the time of our visit Mr. Tegart had only two imported stallions left on hand, having disposed of the balance of his importation, made last August, early in the fall. Of these two horses one is a three-year-old and one a four-year-old. The first, St. Kilda (8972), is a useful looking colt, very short legged, and of a good blocky pattern. He is by Laird o' Reir (5947), his dam being by the well-known Roseberry, a son of Prince of Wales (673). The four-year-old Prince of Pictur (7158), a big, massive horse, dark colored, and showing any amount of clean, flat, heavy bone, with good feet, is a son of the famous Pickwick (3885), so well-known to Clydesdale men in Canada, and now we believe owned in Indiana. Prince of Pictur (7158) should prove a very valuable stock horse, containing as he does in his breeding some of the best blood in Scotland. Among the young stock we especially noticed the yearling filly Rose, by Lord Wilton (5180), dam by McDougal (2269). This is a very sweet mare, a good bay in color, and combining size with plenty of quality. Besides the imported stallions, Mr. Tegart has a fine pair of imported mares, and a very promising yearling stallion and some fillies bred from imported stock on both sides, as well as a few nice Shetland ponies, among them a very handsome stallion pony five years old. Mr. Tegart is rapidly coming to the front as a Clydesdale importer, having imported some very useful sires in the last few years. Among them we might mention Lord Wilton (5180), by Lord Erskine, winner of first and diploma at Hamilton 1890, and Balderdash (7447), by McCamon (3818), both sold to Enright Bros. of Dundas and Winnipeg. Also Gallant Times (7730), by Old Times (579); Earl Craig (6705), by Brigadier (4266), a grandson of McGregor, and Tullyfergus (9073), by Gallant Lad (2781), a son of Col. Holloway's famous old Druid. Mr. Tegart's card will be found in another column, and we can recommend him to intending purchasers as a reliable man.

MAPLE HILL HERD OF RED POLLS.

Among the exhibits of cattle at Detroit this year (1891), we were very much struck by the uniform excellence of the herd of Red Polls exhibited by Mr. W. P. Crouch, of Maple Hill, Randolph, Crawford County, Pennsylvania, U. S. These cattle, which are great favorites with the farmers and graziers of the eastern counties in England, are rapidly coming to the front in the U. S., and although, as far as we know, the only specimens of the breed in Canada at present are those imported this summer for the Agricultural College at Guelph, we have no doubt that were they once given a trial they would very soon win their way into popular favor. Mr. Crouch's herd, he tells us, now numbers some 27 head, the stock bull being Duke of Crawford, a well-known prize-winner on the other side. Although not fitted for show, this bull struck us at once as being a good pattern—thick fleshed, with a nice even top, and a grand rib. He is a wonderfully good handler, while his excellence as a stock-getter was amply attested by two of his get, viz., the two-year-old bull Ben, and the yearling bull Fearless, both of whom won first in their classes, in the face of strong competition. Among the females were several cows whose capacious udders and well-developed milk veins gave evidence of their being good milkers; indeed, Mr. Crouch tells

us that on fair pasture the cows will give from four to five gallons a day of very rich milk. The Maple Hill Herd has now been established over six years, and contains a number of imported animals from the herds of such well-known breeders as R. H. Mason, Garret Taylor, and W. Bradfield, among them being a number of daughters and granddaughters of the famous royal winner Falstaff, purchased in England by G. Faber, of New York, who paid no less than \$1,000 for him there. Randolph is situated in the north-western part of Pennsylvania, about thirty miles from Erie, the nearest station being Meadville. Mr. Crouch's card will be found in another column, and we would advise any of our readers who are interested in these cattle to pay him a visit.

NITHSIDE FARM.

Between two and three miles from Paris, and almost on the banks of the river Nith, is the farm of Mr. E. Martin, well known among Berkshire breeders as an ardent admirer and a successful breeder of Berkshires. Owing to the heavy drafts made on his stock this last spring by his customers, at the time of our visit Mr. Martin's herd was somewhat smaller than usual, the boar at the head being Showman (598), a first prize pig at the Industrial, bred by J. G. Snell & Bro., and got by their famous Top Gallant. Among the sows we were particularly taken with Nithside Queen (1896), a grand, good, lengthy sow, with a capital middle, good hams, and a light fore end. Her sire was Nimble Dick, her dam being by imported Real Briton. Another excellent sow is Dinah (1321), a daughter of Showman. Besides his Berks Mr. Martin keeps a flock of pure-bred Southdowns, and also one of Shrops, and pure-bred Silver Grey Dorkings, his foundation stock of birds having been purchased from the yards of Messrs. J. W. Akers, of Paris, and Allan Bogue, London, the present cock bird being one purchased from the well-known fancier and judge, Mr. Jas. Main, of Milton. The Southdown lambs, sired by a ram of Mr. John Jackson's breeding, and the Shropshire lambs from Mr. Jno. Conworth's stock were looking very well, and we think anyone needing a lamb for stock purposes at a reasonable figure need not go any further to suit himself. Mr. Martin's advertising card will be found in our columns, and we would also draw our readers' attention to the fact that a portion of Nithside Farm is devoted to growing seed grain of the best varieties, special pains being taken to keep the land perfectly clean, and the different varieties pure.

MESSRS. W. M. AND J. C. SMITH,

who rank among the largest live stock exhibitors in the province, own adjoining farms about one mile from the village of Fairfield, in one of the very best sections of Ontario. Messrs. Smith's specialties for many years have been Ayrshires, Merinos, and Poland China hogs, as well as numerous varieties of land and water fowl. Their bull, *Boy of Oxford* (300), bred by Mr. Nicholl, of Plattsville, is well known in the show ring, having won second in '89 and '90 at Toronto and first and diploma in 1890 at Hamilton, and second in 1891 at Ottawa; red and white in color. Rob Roy is rather larger than most Ayrshires, but very smooth and nice, with wonderfully heavy, lengthy quarters. In his present owner's hands he has proved valuable as a stock-getter, some of his heifers giving promise of making grand cows. Among the cows we soon

found *Empress*, the winner of no less than six first places at provincial fairs, as well as many local prizes. *Empress*, like Rob Roy, shows more size than most Ayrshires, but combines with her size the characteristic wedge-shaped appearance, while her beautiful udder and large milk veins show her to be no mean performer at the pail. In Messrs. Smith's hands she has proved herself a wonderful producer, a calf of her's winning first place in the class for yearling bulls at Kingston in 1888. A very pretty heifer is *Alma*, a two-year-old half-sister to *Empress*. This heifer had just calved at the time of our visit, and a better show of milk we have never seen in a two-year-old. *Hamilton Chief* (875) is a very nice young bull, bred by D. Morton & Son, of Hamilton, and purchased by Messrs. Smith to use on females got by their present bull. Since our visit he has had placed to his credit a second prize at Toronto and also at Montreal; in both places in very strong rings. We might also mention that this year (1891), with nine head of Ayrshires, Messrs. Smith have won twenty-one prizes at Toronto, Montreal and Ottawa. Their flock of Merinos, which is one of the largest in Canada, has been equally successful in the show ring, the twenty-seven head exhibited at Toronto, Montreal and Ottawa having won over half the money given at these fairs, including first and third at Toronto on pens. The Poland China herd, which comprises representatives of several of the leading American herds, is too well known to need much notice, it being enough to say that with fourteen pigs Messrs. Smith won every first prize but one at Toronto and also at Montreal, while at Ottawa they took nine prizes against all large breed hogs. Messrs. Smith have now been in the show ring for some 25 years without missing a year, and this year their winnings at three shows aggregated nearly \$1,000.

Sound. Clean Wool.

BY D. M'CRACK.

The Canadian farmer, to get the best results from wool growing, must see to it that his wool is sound and clean. This is a point that is almost self-evident. At a meeting of the sheep breeders, held during the "Industrial Fair" at Toronto, a leading dealer in wool declared that Canadian wool was lacking in these two points, and that year by year it was, instead of improving, growing worse. We can grow good wool in Canada, and if it is not sound and clean it is not the fault of the climate so much as the fault of the grower. Soundness of staple is a very important point. For the worsted spinner it is an essential. He cannot possibly make good level yarn with unsound wool. When you consider that in the process of manufacture each fibre of the wool is drawn till it is very much longer than when it came from the sheep (say to three times normal length), it will be evident that if there be a weak spot in the fibre, it will break at that place and cause imperfect yarn. For making worsted yarns wool must be sound and of a uniform strength. For carded yarns it is not so important, but no manufacturer can make good yarn from weak, unsound wool. Careful, regular feeding, and good, uniform care, will give good wool. Irregular feeding, careless attendants, allowing the sheep to be chilled, and overfeeding, or surfeit, will cause a stoppage of the wool growth, and a weak place in the wool will be the result. If the fleece be carefully examined it

will be found that on applying tension to the fibres they will break just at this place. Such wool is useless for worsted, and not nearly as valuable as sound wool for carding purposes. In the past there has not been any large proportion of Canadian wool sent to market in this unsound condition, and when there was, few of the ordinary buyers knew enough of the trade to detect the imperfection. It was only when it came to be graded by the wool sorter that it was noticed. Such fleeces should then be thrown among the "rejects" and have the company of the "cotted" fleeces. A sheep giving a cotted fleece should be marked, and at once put in the lot for feeding off. When once a sheep has given a cotted fleece, in the majority of cases the next and all the succeeding ones will be of the same character. Sheep out of condition, or in ill health, will sometimes give brittle or "brashy" wool. The fibre has a harsh feel and breaks readily. This is very poor wool. A very small percentage only of this kind of wool has been marketed in Ontario, but a good deal of the wool from the Northwest has had this character, especially from those flocks with ranch blood as their basis. Sheep sent from Ontario to the Northwest, and their immediate descendants, have not this very objectionable feature. From this it will be seen that only sound, healthy sheep, will grow good, sound wool, and that any breed of sheep if carelessly attended are apt to produce inferior wool. The fleece should not only be sound, but it should be clean—we Canadians are very remiss in this particular. Much of the wool is taken to market in a very bad shape; clean wool is wool free from foreign substances, such as the many kinds of burrs grown on the average Ontario farm, bits of hay and straw, and other foreign matter. Grease and dirt are not as objectionable as are foreign substances; the grease and dirt can be readily washed out, but these other foreign substances require much more elaborate treatment, and all injure the wool more or less. Careless weeding is to blame for many of the burrs; roadside pasturing may account for a few more; anyway, our wool has a bad reputation in this respect. The small, hard burr is most easily removed; the very common burdock is, perhaps, the worst. Recently, by a country roadside a sheep was seen by the writer with a good deal more burr than wool visible; each of these burrs when the wool comes to the sorters' table has to be removed by hand. The usual way is to clip out the burr, leaving as little wool with it as possible. These bits of wool and burr are then chemically treated to destroy the vegetable fibre, but in doing this the wool is always more or less injured. The remedy for this is evident; destroy the weeds before they go to seed; clean farming in this instance will help to give clean wool. But burrs are not the only trouble; bits of straw, chaff and hay-seeds are very common in our wool; they are difficult to remove. English wools are free from this, and the difference is caused by different treatment. Our climate causes us to feed our flocks under cover in the winter. Feeding from racks they get these bits of straw, etc., into the wool at this time, and once in they stay there. This is not so easily avoided, but some of the modern feeding racks have closed troughs for the hay above the sheep, and only a narrow feeding space at the bottom, which prevents much of the feed getting into the wool. Watch this point; see that as far as possible the wool is kept free from these impurities, and in so doing you will help to raise the standard of the Canadian clip.

Berkshires vs. Yorkshires.

To the Editor of the FARMER'S ADVOCATE:

SIR,—The following extract from the Irish Farmers' Gazette of the 14th November appears to be so confirmatory of the views of Mr. W. Davies, as opposed to those of Mr. Snell, Mr. Benjafield and others, who wrote in favor of Berkshires, that I have no hesitation in asking you to be good enough to give it in your next issue. Last week I had a native gentleman from the Philippine Islands here to purchase some Improved Yorkshires to breed pure, and to cross on the native pigs. It appears that as many as two thousand pigs are sold each week at Manila, the consumption of pork being very large owing to there being so many Chinese in the district. The native pigs are small, coarse and lean, and very like wild hogs, whilst the Chinese like their pork to be very fat. I sold a boar and four young sows to be shipped about Christmas, but I recommended Senor Manuel Amor to purchase some Berkshires, as they would produce meat so much fatter; but the reply was that the Berkshires were too much of the same size as the native pigs. The desire was to breed a quick-growing, early-maturing pig, as everything matured at an early age in that country. Last week I shipped some pigs to Austria, and have now an enquiry for ten boars from Germany and some pigs from Holland.

Yours, etc.,

SANDERS SPENCER.

Holywell Manor, Eng.

PROVISION CURERS' ASSOCIATION OF ULSTER.

We have been favored with a copy of the second annual report of this Association, which was submitted at a meeting of the members recently held in the offices, Garfield Chambers, Belfast.

The chairman, Mr. W. F. Biggar, J. P., moved the adoption of the report, which referred in grateful and complimentary terms to the Pig Improvement Association, as well worthy of encouragement.

Mr. McCartney (Ballymena), in seconding the adoption, said the quality of pigs brought to the market was of the utmost importance. They did not get as fine a class in the north as they did in the south, as those here had a greater tendency to fat, and they all knew they would not accept fat meat on the other side of the channel as they did formerly. This matter should again and again be brought more forcibly before the farmers, and they should be pressed to pay more attention to the class of pigs they raised. A circular had gone out amongst them, containing the wishes of the Association; and, if it were attended to, and if they brought a better style of pork to the market, they would, no doubt, secure better prices.

Mr. Burnett said that some rules had been drafted for the government of the Pig Improvement Association. Prizes had been offered, and influence had been brought to bear on the Royal Dublin Society, with the result that these rules were adopted, and all with the view of having better animals for commercial purposes raised. Their association took the matter up, and issued circulars on similar lines. Prizes were also given locally, and the North-East Agricultural Association agreed with the suggestions, and they also altered their conditions. They wanted the judges in the local society to be the same as those in the Royal Dublin, so that the same quality of pigs might be raised in the north as in the south. In the south of England they gave a premium of half a crown for every pig that was lean. Fat pigs were now no use; American pigs, even, must be lean. Unless the farmers of the north did the same as in the south, the merchants would get the bacon left on their hands. If the curers all joined and supported the Association liberally, the existing state of affairs in the north would soon be changed. The Government had promised £200, a year, to be distributed in prizes over the country, and he looked upon this as one of the best things that could happen to improve the breed in the north.

Mr. Thomas Sinclair said the most important work to which the committee could direct their attention was the improvement in the breed of pigs. They had not realized yet how far in that respect they had fallen behind other parts of Ireland. There were too many Berkshires offered for sale here, and their farmers should be made aware how undesirable these fat, short, thick pigs were. The buyers from his own firm were told to avoid all such, and he believed others were doing the same. If they could get the Large White York introduced here, it would be an advantage both to farmer and curer.

The report was adopted, and the proceedings terminated with a vote of thanks to the chairman.

Extracts from an Address to the Listowel Dairymen's Board of Trade, by Prof. Jas. W. Robertson, Dairy Commissioner.

VALUES OF CORN.

In the growing of corn for cattle feeding it has been settled clearly that when the stalks have reached the tasselling stage, they do not contain much more than a quarter of the feeding substance per acre which they afterwards possess when the ears are almost mature. Hence the advantage of planting corn in rows from three to three and a-half feet apart, in order to permit the stalks to carry ears and to bring them to maturity. If a crop of corn at the tasselling stage be valued at \$16 per acre, a similar crop at this stage when the ears are nearly mature will be worth \$72 per acre for feeding stock.

BENEFITS FROM SILOS.

The most economical plan for the storing of corn for winter feeding is found in the use of a silo. A few years ago when the speaker first commenced to agitate this matter in good earnest, the silos in Ontario could almost be counted upon the fingers of one's hand. Now it is estimated that there are about 5,000 silos in Canada; and the people of Ontario, with all their vaunted advantages, have not made so much progress in this matter as have the farmers of Quebec. About one-half of the number of silos in the Dominion are outside of the premier province of Ontario. Silos can be constructed inside of an ordinary barn in the country at a cost not exceeding \$75 for each silo of one hundred tons capacity. Ensilage provides the cheapest, most convenient, and suitable feed for milking stock during the winter. The use of succulent fodder during that period would enlarge the yield to the average cow about 30 per cent. more than it would be in the case where dry fodder, hay or straw, is fed during the winter.

BETTER COWS WANTED.

Not only should farmers increase the number of cows in their herds, but a serious and persistent effort should be made to enlarge the capacity of each animal which is kept. One farmer in the province of Quebec who kept an accurate report of the yield of his cows, made this statement:—In 1888 the average yield from each cow in his herd was 78 pounds of butter for the season. In 1889 it had increased to 121 pounds; in 1890 to 204½ pounds. That was accomplished mainly by the growing of corn and feeding of succulent feed during the winter season.

FEEDING FOR BEEF.

In the matter of feeding steers last winter at the Central Experimental Farm, Ottawa, some information of great value to the farmers was brought out. Three sets of steers were put up to fatten. The ration of one lot was composed of hay, roots and meal. The ration of the second lot was made up of corn ensilage and meal; in the third lot the ration was a mixture of hay, roots, corn ensilage and meal. The animals of each lot were allowed to consume as much of the mixture as they would eat up clean daily. The ration of the first lot was composed of

Hay	.....	Lb.	40
Turnips	.....	.....	20
Straw	.....	.....	5
Chopped barley	.....	.....	2
Chopped peas	.....	.....	2
Oilcake	.....	.....	1
Cotton-seed meal	.....	.....	1

Of that mixture each animal consumed an average of fifty-four pounds daily.

The ration of the second lot was

Corn ensilage	.....	Lb.	50
Straw	.....	.....	5
Chopped barley	.....	.....	2
Chopped peas	.....	.....	2
Oilcake	.....	.....	1
Cotton-seed meal	.....	.....	1

Of that mixture each animal consumed an average of fifty-eight pounds daily.

The ration for the third lot of steers was

Corn ensilage	.....	Lb.	20
Turnips	.....	.....	20
Hay	.....	.....	10
Straw	.....	.....	5
Chopped barley	.....	.....	2
Chopped peas	.....	.....	2
Oilcake	.....	.....	1
Cotton-seed meal	.....	.....	1

Of that mixture each animal consumed an average of fifty-three pounds daily.

The steers fed upon hay, roots and meal cost nineteen cents each per day. Those upon corn ensilage and meal cost 11.6 cents each per day. Those upon the mixture of hay, roots, corn ensilage and meal cost 15.6 cents each per day. The steers which were fed upon corn ensilage and meal gained over thirty pounds each more than the others, and the cost per head was only eleven cents per day against nineteen cents, the cost of those that fed upon hay, roots and meal. That points to the economical production of beef by dairymen, as well as cattle raisers when they use ensilage generally. In my judgment every dairyman should keep on an average half as many fattening steers as he keeps milking cows, and but few farms have at all sufficient help to attend to as many cattle in the form of milking cows as a farm should keep of stock. On most farms enough corn ensilage can be produced to feed all the milking cows which can be attended to by the help available on the place, and half as many steers besides. There is still room for very large increase in the number of live stock, since we send to Great Britain now only about twenty per cent. of the cattle which she imports. To grow steers to advantage, the cows, as far as they can be controlled, should be made to come in in the fall of the year. By that means a sufficient supply of skim-milk and whole milk will be available on the farms to raise calves of the best constitution and form. So far as has yet been learned in cattle husbandry, there is no cheap and efficient substitute for milk and skim-milk in the raising of calves and young pigs within reach of the ordinary farmer.

ECONOMICAL FATTENING OF SWINE.

The supply of milk during the winter would also make it possible to engage in butter-making upon an extensive scale in creameries; but one most important advantage would be the increase in the number and the improvement in the quality of the cattle and swine kept upon the farm where that practice prevailed.

In the matter of feeding swine to advantage, the experiments which were made on the Experimental Farm last winter were full of advice to dairymen for guidance in this branch of their business. In feeding 24 swine in six lots of four each, it was found that there was no additional profit from the steaming of feed or the feeding of it warm. The pigs fed upon steamed and warm feed gained in weight more rapidly than the others, which received a similar diet fed raw and cold; but the former consumed so much more feed than the latter, that there was no extra profit. Another point brought out was that the largest returns for the feed consumed were realized when the pigs weighed from 50 to 125 pounds live weight.

The following table shows the average weight of the swine at the commencement of each month:—

First month	.....	62 lb.
Second month	.....	84 "
Third month	.....	128 "
Fourth month	.....	166 "
Fifth month	.....	191 "
Sixth month	.....	205 "

During the feeding period of six months the swine were fed upon a mixture of equal parts of ground rye, barley and peas. The following table shows the quantities consumed during each month for every pound increase in live weight:—

First month	.....	3.31 lb.
Second month	.....	3.07 "
Third month	.....	4.04 "
Fourth month	.....	5.73 "
Fifth month	.....	6.45 "
Sixth month	.....	6.93 "

This shows that the lowest cost of production was during the second month of the feeding period. Every pound of increased live weight during the third month cost 31 per cent. more than during the second month; and the increased

cost during each of the three following months over the cost during the second month was 86, 110 and 125 per centages respectively. Dairymen who support cheese factories would make better returns from the by-product of whey, if the young pigs were reared liberally on skim-milk during the winter and early spring. The extension of the economical feeding of swine in the country would be a source of increased income and profit to dairymen. This practice would also enable them to fatten and market hogs at the season of the year when the prevailing price is higher than during the fall or winter, which is too often the selling time for the fattened swine in Ontario. The average price in the Toronto market for six years has been almost \$5.50 per hundred pounds live weight; while the average price between July and September has been \$5.78. The average price between November and January has been \$4.92. The average price paid for Canadian-fed hogs in the Toronto market has been quoted at \$1.10 higher than the average price paid on the same dates in the Chicago and St. Louis markets. As yet Canada sends to England only about one and one-half per cent. of the bacon and other swine products which is imported there. Our proportion might be raised to compare favorably with the quantities of cheese and live stock which we export.

EXPERIMENTAL DAIRY STATIONS.

Most of the dairymen in Ontario are now familiar with the commencement of the work of the Dominion Experimental Dairy Stations. Every experimental action has within itself a two-fold power of service. It has the possibility of discovering some fact that was before unknown; it also has the function of illustrating and teaching in an impressive way the advantages that result from the best practices of procedure. The work of the outside branch stations during the past summer has been mainly investigations of matters connected with the manufacture of cheese. The work of the experimental dairy at Ottawa has been directed towards butter-making.

CHEESE-MAKING.

In the investigations which have been carried on in cheese-making, an effort has been made to discover the relation that exists between the percentage of butter fat in milk and the quantity and quality of the cheese which can be made from it. Full particulars of that work will be given in the annual report, and also at the annual conventions of the dairymen's associations. Meantime, it might be said with safety, that a very large number of experiments point to the conclusion that the percentage of butter fat in milk may be taken as a basis for rating its actual value for the manufacture of cheese. Milk containing four per cent. of butter fat on an average is worth for the manufacture of cheese one-third more per hundred pounds than milk containing three per cent. of butter fat. In short, the experiments all point to the conclusion that the total quantity of butter fat in the milk which the several patrons furnish to a cheese factory might be used for determining with equity what share of the total proceeds from the sales of cheese should be distributed to each patron. The use of a Babcock milk tester makes it easily possible for every cheese-maker to test the milk of every patron twice a week. The milk furnished by the several patrons should be paid for according to its real quality and quantity. By the adoption of this practice the irritating, although present unavoidable, prosecutions in connection with cases of adulterated milk, would have no cause for existence. When every patron is paid for his milk according to its real quality there will be no incentive towards dishonesty in the matter of skimming, watering or retaining strippings. The conduct of a large number of patrons of cheese factories will be made decidedly more creditable when it has been arranged so that the furnishing of honest milk pays the patron in direct cash better than the furnishing of dishonest milk. The present practice of pooling widely different qualities of milk at precisely the same rate per hundred pounds puts a premium upon dishonest practices. The infirmities of the ordinary cheese factory patron are not always equal to resisting the attraction of that premium. By putting the

premium the other way, the cheese, the profits and the men will all be improved by the same act and at the same time. I hope to see the Babcock milk tester in every cheese factory during next season, and to see most factories paying for milk according to its true value as revealed by the percentage of butter fat which it contains.

"CANADIAN" BRAND.

Many tests have been made during the year to discover the effect of rennet upon the curing and the keeping of cheese. A discussion of this will be more suitable for a convention of cheese-makers than for a general audience of farmers. However, in this connection one matter is of importance and concern to every Canadian. While cheese buyers and exporters have during an average of five years paid the highest possible price which could be afforded by the English market for cheese in this country, our best factories have not realized their rightful share of the prices which have been paid by the English consumers for cheese of fancy quality. A large proportion of our fancy cheese are still retailed over the counters in England as fancy English cheddars. All the best factories in the country should brand on the cheese as well as on the boxes, the word "Canadian," so that it could not be mistaken in England. The difference on the retailers' counters in England between cheese of the common quality and cheese of a fancy quality is from four to six cents per pound. The difference here seldom exceeds half a cent per pound. Our best factories would receive the higher price, providing this extra profit, which is retained by the English retailer, could be brought to this side. The persistent and general use of the word "Canadian" on the cheese, as well as on the boxes, will help to remedy the matter complained of. The cheese from the Dominion Experimental Dairy Stations are branded "Canadian Full Cream Cheese" on the cheese as well as on the boxes.

WINTER BUTTER-MAKING.

An effort is being made through the Experimental Dairy Stations to change the practice of the dairy farmers of Canada, from having their cows dry all winter to having butter-making carried on during that period of the year. One of the advantages that would accrue from winter dairying would be the increased quantity of milk that would be realized from every cow. A cow will give about 30 per cent. more milk during ten months if she calves between October and December, than if she calves between April and June. By winter dairying a large supply of milk would be available for use during the time of the year when the price of milk and its products is highest. On an average, milk is worth from 50 to 100 per cent. more during December, January and February than it is worth in June and July. Winter dairying would provide a liberal quantity of skim milk to the farm for raising larger numbers of calves. The common practice for killing calves from dairy cows is a most wasteful one. A well-bred calf has in its life the possibility of leaving \$20 of profit for somebody, even if the life be cut short at the end of two years, as a well-fattened steer. The more calves that can be raised for the dairy and for the feed in stalls, the more chance of profit is there for the farmers who adopt the practice. Then, winter dairying will make it possible for Canada to develop an export trade in butter, which may by and by exceed her present export of cheese. During the past year, the total value of our exports of cheese in round figures was nine millions of dollars. Great Britain imported altogether about \$20,000,000 worth of cheese. From this country we sent altogether about 42 per cent. of the total quantity that Great Britain purchased abroad. Of butter, Great Britain imported about \$40,000,000 worth, we Canadians contributing to her supply a little more than one half of one per cent. Through winter dairying and the altering of cheese factories into creameries for the winter season, it is quite possible to build up and develop an export trade in butter to a greater magnitude than that presently attained by our cheese trade. During the present winter this change will be effected in two cheese factories in the Oxford district. Near Woodstock one factory will be operated as

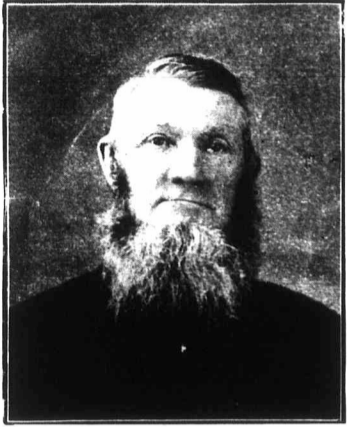
a cream-gathering creamery. Cream alone will be collected and the skim-milk will be left at the farms for such uses as have been suggested. At Mount Elgin the whole milk will be taken to the factory and run through a centrifugal separator. The skim-milk will be carried home by the farmers while it is still sweet. These two factories will be operated under the direct supervision of the Dairy Commissioner and will be managed by his assistants. The butter product will be shipped regularly to the British markets for the purpose of calling attention to the possibility of a Canadian supply of fancy fresh-made creamery butter for the winter months. Cheese makers from all districts will be welcomed at these factories, where they will have an opportunity of learning the methods of butter-making and using the milk-testing apparatus at the season of the year when they will have leisure time. It is expected that operations at both places will begin about the 20th of the current month (November). The probability is that 30 or forty factories will be altered into creameries for next winter, and the cheese-makers who are first and best equipped for this work will secure the best places. The milk from over 700 cows has been promised at the Mount Elgin creamery from within an area of 3½ miles around the factory. In the Listowel district there are several factories that could adopt this winter dairying with advantage during the next year. Every help and encouragement towards making the change will be given by the Dairy Commissioner's office. Cheese-makers, salesmen, patrons and all others interested are invited to correspond there for information on the subject. It is to be hoped that the Listowel district will not be behind the Oxford and London districts in this regard in the course of next winter. When the Listowel Dairymen's Board of Trade continues its market the year round, and has an offering of butter equal in quantity to its offering in the cheese branch of the industry, the whole district will feel the effect of the increased prosperity among the dairy farmers.

American Pork Abroad.

American hog producers have expected much from the removal of the German embargo on their pork products. The two great hog killing establishments located near Boston have not increased their output, nor is there any liability that they will until our government provides money enough for the sufficient maintenance of a much larger corps of inspectors than is now the case. The present number employed at the port of Boston is but fifteen, only enough to inspect about 800 per day, about one-eighth of the number killed. If the export included the whole carcass, perhaps this number would be sufficient, but as only certain parts of the carcass can be exported, it is obviously plain, that about all the animals killed will need inspection. If the truth was known, our great American pork packers care little whether the embargo was removed or not, for it was only necessary in order to reach the German citadel to send their products through the doors of Denmark or England, then to be rebilled to Germany. These two latter countries are not prohibited in their exportations, consequently, after pork was received there, Germany did not know whether it was raised there or not. It would probably be a little cheaper to send direct to Germany, but since the price there was sufficient to cover the roundabout course, American packers are not beholden to the sufficient inspection force of this country, or the provisions demanded by the new order of things in Germany.

Secretary Rusk, of the United States Board of Agriculture, in his annual report asks for an increased appropriation, so that the Bureau of Animal Industry may provide means to maintain a sufficient force of inspectors to fully comply with Germany's demands; but it is thought that the increased appropriation will not be available until the commencement of the new fiscal year, July 1st, 1892. In the meantime our exporters will be content to reach their goal through the backdoors of unrestricted countries.

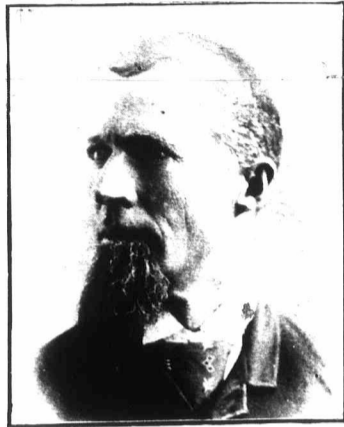
SUPPLEMENT TO FARMER'S ADVOCATE, JANUARY, 1892.



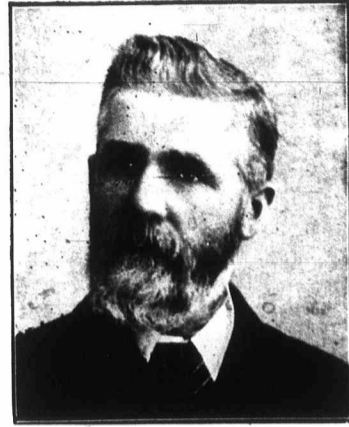
JAMES MAIN,
MILTON, ONT.
Cotswolds.



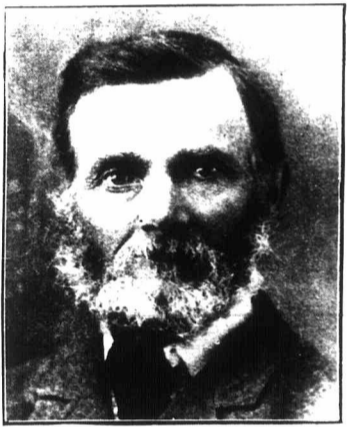
WM. THOMPSON,
XBRIDGE, ONT.
Cotswolds.



JOHN PARK,
BURGESSVILLE, ONT.
Cotswolds.



J. C. SNELL,
EDMONTON, ONT.
Cotswolds.



JOSEPH WARD,
MARSH HILL, ONT.
Cotswolds.



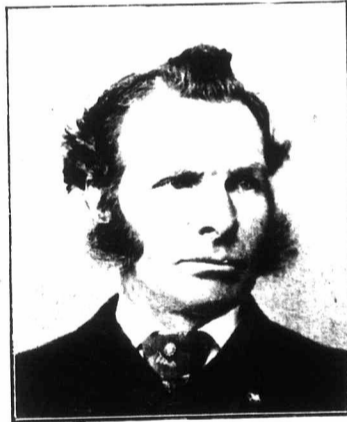
JOHN RUTHERFORD,
ROSEVILLE, ONT.
A breeder of long wool and fat sheep.



JOHN KELLY, JR.,
SHAKESPEARE, ONT.
Leicesters.



WM. WHITLAW,
GUELPH, ONT.
Border Leicesters.



WM. WALKER,
(Of Wm. Walker & Son),
ILDERTON,
Leicesters.



WM. TOLSON,
WALKERTON, ONT.
Oxfords.



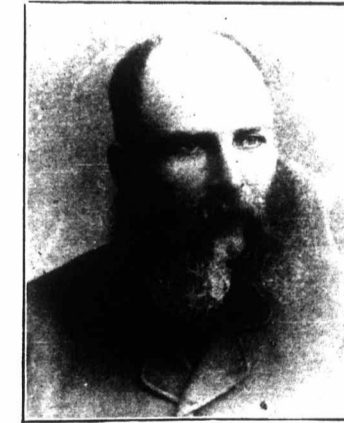
PETER ARKELL,
TEESWATER, ONT.
Oxfords Downs.



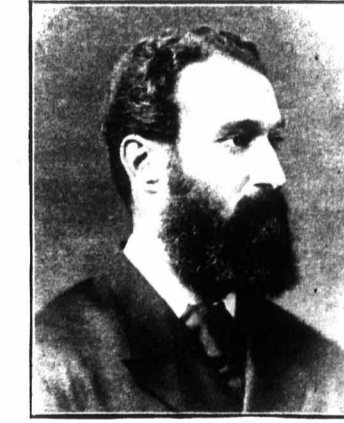
HENRY ARKELL,
ARKELL P. O.
Oxfords Downs.



J. T. GIBSON,
DENFIELD, ONT.
Lincolns.



WM. OLIVER,
AONBANK, ONT.
Lincolns.



JOHN GEARY,
LONDON, ONT.
Shropshires and Lincolns.



ROBT. SHAW,
GLANFORD STATION, ONT.
Southdowns, Lincolns and Merinos.

A Number of Ontario's Foremost Sheep Breeders.

The Farm.

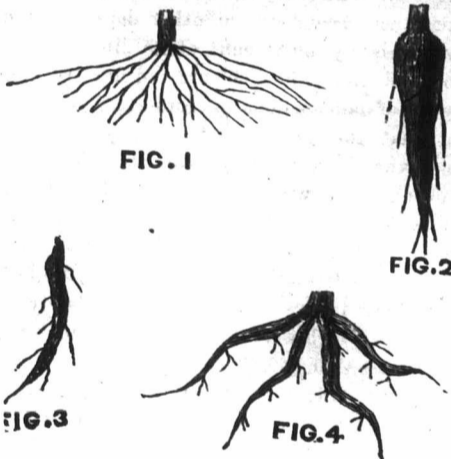
Weeds.

Means by which weeds are distributed :-

1. Grain imported from other districts.
2. Animals transplanting seeds attached to their bodies.
3. The nature of seeds aids greatly in their distribution; some plants bear great numbers, e.g., purslane, thistle; some possess great vitality, e.g., mustard may be buried fifty years and yet germinate; some have forms well suited to aid in spreading rapidly—burrs, dandelions, etc., whose seeds can be readily carried long distances by the wind.
4. Threshing machines often carry seeds from one farm to another.
5. Manure from city stables.
6. Renting farms aids to some extent in spreading weeds, especially where the tenant is utterly careless as regards the condition in which he will leave the farm when his lease is up.

Classification of weeds based on the nature of their roots :-

1. Annuals complete the period of their existence in a year; they generally have fibrous roots (see fig. 1), and produce many seeds; when young they are weak and tender, consequently they are more easily destroyed at this period. If annuals are kept from seeding we must soon get rid of them. In some the seeds are very hardy, and possess great vitality, often reappearing when you think all danger is past—wild oats, twenty years old, have germinated.



Examples: — Shepherd's purse, mustard, penny cross, cockle, wild oats, lamb's quarters, climbing buckwheat, chess, foxtail, groundsel, purslane, ragweed, chickweed, mayweed, sow thistle, pigweed, red root, pepperwort, false flax, small burr.

2. Biennials complete their growth in two years, the first being spent in storing up food, usually in a taproot (see fig. 2), for the production of seed in the second. Unless these plants are cut below the surface, cutting increases their vigor and intensifies the trouble.

Examples: — Wild carrot, blueweed, burdock, mullein, coarse burr, bull thistle, teasel, evening primrose.

3. Simple perennials continue growth from year to year (see fig. 3), and will reappear till the root is utterly destroyed. Some of the hardest weeds are in this group:

Examples: — Ox-eye daisy, mallow, sorrel, plantain, St. John's wort, bladder campion, chicory, dandelion, golden-rod, vervain, mother-wort, common campion.

4. Creeping perennials embrace some of the worst weeds we find. Their reproduction by seed is less to be dreaded than by root. The root is apparently jointed (see fig. 4), each joint capable of growing, if separated. Continual cultivation and smother, so as to exclude light, are necessary to destroy plants of this class.

Examples: — Couch grass, Canadian thistle, toad-flax, milkweed, sow thistle (perennial form), yarrow and bindweed.

General rules for the destruction of weeds :-

1. Never allow weeds to seed. This will certainly kill out the annuals.
2. Cultivate the land thoroughly, especially when the weeds are young and tender.
3. Keep the roadsides and fence corners clean.
4. Never allow weeds to have the benefit of sunlight, especially the perennials. The absence of light will certainly result in death to the plant.
5. In dealing with biennials, cut them well below the surface.
6. Cut the weeds at a time unfavorable for growth, either in the condition of the plant or the weather.
7. Secure, as far as possible, the co-operation of fellow farmers.

The principles involved in these rules will be carried out to a great extent where a system of farming is followed in which green manuring, hoeing, soiling and summerfallowing are leading factors. If such a course is adopted there is no doubt but clean fields will result, and much better returns be obtained. All weeds must perish either by cutting, rooting or smothering, if done in a proper way and at the proper time.

ANALYSES OF WEEDS.

Weeds furnish us with a knowledge of the soils in which they grow, and what useful elements they take from the soil at the expense of other plants among which they are found. A chemical examination of weeds shows great diversity in their composition, as seen in the following tabulated statement :-

	Ash.	Silica.	Sulph. Acid.	Phos. Acid.	Potash.	Soda.	Lime.	Magnesia.	Alumina.	Iron.
Blueweed ..	4.09	4.8	2.2	2.8	16.6	1.4	22.4	3.5	3.6	5.1
Purslane ..	1.52	2.46	3.2	5.2	30.2	3.5	10.7	9.5	4.9	5.4
Ragweed ..	1.93	3.16	8.0	7.9	31.4	8.35	8	11.7	1.4	4
Mullein ..	1.01	3.28	7.3	6.1	50.1	3.3	19.0	5.5	1.15	1.01
Dock ..	1.50	4.3	8.3	7.0	52.6	7.3	8.6	3.4	4.5	2.4
Dandelion ..	1.99	4.3	41.9	21.4	29.9	14.3	11.9	2.7	2.7	2.7
Cockle ..	2.4	2.4	7.2	22.9	29.3	6.1	1.2	1.2	1.2	1.2
Buttercup ..	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Ox-eye Daisy ..	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Plantain ..	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Pigweed ..	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36

From the above we can see that weeds gather phosphates and alkalies from the soil in considerable quantities, and thus rob useful plants of their food.

The Clover Hay Worm.

The Ohio Experiment Station reports the ravages of an insect which has not made its appearance in any part of the Dominion as far as we have learned. In bulletin No. 52 an officer of the Station, writes: — "Clover hay that has been standing in the mow or stack for some time is liable to become infested by small, brown worms, which web the dried stems and leaves together and feed upon them. In one case, to which the attention of the Station was called this spring, the lower half of the stack of clover hay was almost totally destroyed by this worm.

"These worms are more likely to prove troublesome when old hay is left over from season to season for them to breed in; consequently hay mows should be thoroughly cleaned out each summer, and new stacks should not be put on old foundations until all the leavings of the previous season are removed. Hay which is infested with the worms should be burned."

Mr. W. C. Edwards

APPOINTED A MEMBER OF THE BOARD OF THE AGRICULTURE AND ARTS ASSOCIATION.

Just as we go to press, we learn that Mr. W. C. Edwards, of Rockland, Ont., is appointed to fill the vacancy on the Board of the Agriculture and Arts Association caused by the death of Mr. Ira Morgan. This appointment is a most happy one. Mr. Edwards is a very suitable man in every respect. His appointment will strengthen the Agriculture and Arts Association very materially. The Hon. Mr. Dryden could not have made a better choice.

Subscribe Through Us.

We have completed arrangements with each of the best newspapers and periodicals published in Canada or the United States, and can offer our readers splendid terms by subscribing through us. See our clubbing rates for 1892. All the papers offered are of a high order.

Tanning Hides with the Hair On.

Gentlemen,—Will you tell me how to tan hides so as to retain the hair. I wish to do the work myself.

S. K., Lansing, Ont.

We have found the receipts given in Dr. Chase's book good; we therefore give following selected therefrom.

TANNING SHEEPSKINS, ETC., APPLICABLE FOR MITTENS, DOOR MATS, ROBES, ETC.

For mats, take two long-wooled skins, make a strong suds, using hot water; when it is cold enough wash the skins in it, carefully squeezing them between the hands to get the dirt out of the wool; then wash the soap out with clean cold water. Now dissolve alum and salt, of each half a pound, with a little hot water, which put into a tub of cold water sufficient to cover the skins, and let them soak in it over night, or twelve hours, then hang over a pole to drain. When they are well drained, spread or stretch carefully on a board to dry. They need not be tacked if you will dry them out, several times, with the hand, while drying. When yet a little damp, have one ounce each of saltpetre and alum, pulverized, and sprinkle on the flesh side of each skin, rubbing in well; then lay the flesh sides together, and hang in the shade for two or three days, turning the under skin uppermost every day, until perfectly dry. Then scrape the flesh side with a blunt knife, to remove any remaining scraps of flesh, trim off projecting points, and rub the flesh side with pumice or rotten stone, and with the hand; they will be very white and beautiful, suitable for a foot mat, also nice in a sleigh or wagon of a cold day. They also make good robes, in place of a buffalo if colored, and sewed together. And lambskins (or sheepskins, if the wool is trimmed off evenly to about one-half or three-fourths of an inch in length), make most beautiful and warm mittens for ladies and gentlemen.

TANNING FUR AND OTHER SKINS.

First.—Remove the legs and other useless parts, and soak the skin soft; then remove the fleshy substances and soak in warm water for an hour; low:

Take for each skin, borax, saltpetre, and glauber-salts, of each ½ oz., and dissolve or wet with warm water sufficient to allow it to be spread on the flesh side of the skin.

Put it on with a brush, thickest in the centre or thickest part of the skin, and double the skin together, flesh side in, keeping it in a cool place for twenty-four hours, not allowing it to freeze, however.

Second.—Wash the skin clean, and then: Take sal-soda, 1 oz.; borax, ½ oz.; refined soap, 2 ozs. (Colgate's white soap is recommended as the best, but our "White Hard Soap" is the same quality); melt them slowly together, being careful not to allow them to boil, and apply the mixture to flesh side as at first—roll up again and keep in a warm place for twenty-four hours.

Third.—Wash the skin clean, as above, and have saleratus two ounces, dissolve in hot rain water sufficient to well saturate the skin, then:

Take alum, 4 ozs.; salt, 8 ozs.; and dissolve in hot rain water; when sufficiently cool to allow the handling of it without scalding, put in the skin for twelve hours; then wring out the water and hang up for twelve hours more to dry. Repeat this last soaking and drying from two to four times, according to the desired softness of the skin when finished.

Lastly.—Finish by pulling, working, etc., and finally by rubbing with a piece of pumice stone and fine sandpaper.

This works admirably on sheepskins as well as on furskins, dog, cat, or wolfskins also making a durable leather well adapted to washing.

A man paid fifty dollars for this recipe, and has made his money out of it many times. It is very valuable.

Choice Flower and Vegetable Seeds as Premiums for New Subscribers.

We have made arrangements with Messrs. John S. Pearce & Co., seedsmen, of London, to supply us twenty packages each of flower and vegetable seeds. These have been carefully selected by an expert and are the best seeds of the choicest sorts, all of which have been extensively tested, and are known to be good. Carefully read pages 28 and 29, where full descriptions are given.

We will guarantee these goods to give entire satisfaction when given proper care.

This is a grand opportunity for any one who wants a choice selection of seeds, to procure such at about half price.

Entomology.

Injurious Insects—No. 1.

BY JAMES FLETCHER, F. L. S., F. R. S. C., DO-MINION ENTOMOLOGIST, OTTAWA, ONT.



FIG. 1.

In response to an invitation from the editor, I have promised to prepare a series of illustrated articles for publication in the FARMER'S ADVOCATE upon injurious insects, and the best remedies for their attacks. In these articles, the most injurious insects which attack the crops in Canada will be treated of as nearly as possible a little before the season of the year when it is most advantageous to apply the best known remedy. It will be impossible always to carry out this plan closely, but I hope to warn farmers who read the ADVOCATE, before the injuries occur, so that they may be on their guard to protect their crops on the first appearance of the enemy.

The study of the habits, classification and structure of insects, is known by the name of entomology, which is a compound word derived from the Greek, and means a discourse on insects. Economic entomology deals particularly with injurious insects, and its object is the discovery of remedies for their attacks, or of means to protect our crops or other property against their depredations.

To the question, What is an insect? many people would probably answer, "Oh! an insect is a bug." Speaking accurately, this is not the case, although, on the other hand, it is true that a bug is an insect. The name bug properly belongs only to the members of the small order Hemiptera, which are known by the nature of their wing, by their mouth parts being always in the shape of a hollow tube, and by their generally having the power to emit an



FIG. 2.

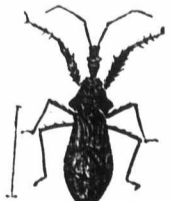


FIG. 3.

unpleasant odor. Examples of true bugs are shown enlarged at fig. 2. and 3. The first of these, the Tarnished Plant-bug, is an exceedingly injurious pest, attacking almost all kinds of vegetation, and the latter has the delectable habit of feeding upon its relative, the common bed bug. Most people know in a general sort of way that a certain object, as a locust (fig. 1), a bug (fig. 2), a fly (fig. 3), or a beetle (fig. 4 d), is an insect, but it may not be amiss to give a proper definition of the word. An insect is a small animal having its body divided (*insected*,—whence the name insect) into rings, with an external skeleton, and breathing not through its mouth like other animals, but by means of air tubes running through its whole body, and which generally have external openings along the sides. An insect passes through four distinct stages of development, in all of which it may present very different aspects. In the perfect state it has the body divided into three main divisions, viz., (i) the head, bearing the mouth parts, the eyes and the sensitive organs called the feelers; (ii) the thorax, which bears the organs of locomotion—the wings (generally two pairs) and feet (three pairs); and (iii) the abdomen, the seat of the organs of digestion and reproduction.

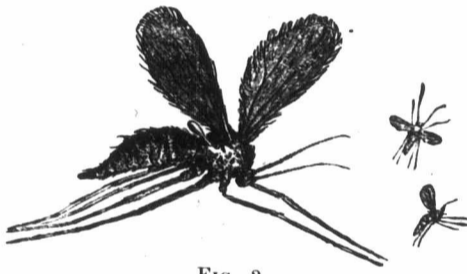


FIG. 3.

Hessian Fly.—Enlarged and Natural Size.

Insects are never, as some people think, generated spontaneously from decaying animal or vegetable matter; but all are produced from eggs (fig. 6 a, c, d,) laid by a mother insect, to which when they are mature they will be exactly similar. From the egg hatches the larva or second stage of an insect's life. The word larva means a mask, and signifies that the true form of the perfect insect is hidden from view in this stage of its growth. It is in this second stage that most of our insect enemies commit their depredations. The larvae of the different orders of insects vary very much. The larvae of moths and butterflies are caterpillars (fig. 5); of flies, maggots; of beetles (fig. 4 a) and wasps, grubs; the word worm should never be applied to insects.

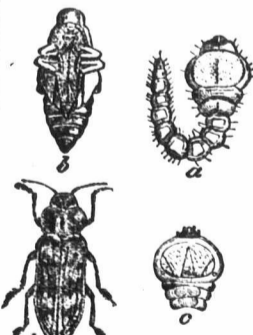


FIG. 4.



FIG. 5.

The third stage of an insect's life is called the chrysalis or pupa. The first of these names means golden, and was given because some but-

terflies in this stage are frequently ornamented with golden marks. The word pupa signifies a mummy or a baby trussed in bandages, as was formerly the custom amongst the Romans, and is to-day still practised by some Indians. It is appropriately applied to this stage, as may be seen at fig. 4 b, where all the parts of the future beetle are recognizable; but as yet they are soft and weak. From the pupa in due time the perfect insect emerges. At fig. 4 the grub, pupa, and perfect insect of the Flatheaded Apple-tree Borer are shown, and at fig. 6 a is a cluster of the eggs of the Forest Tent Caterpillar. At c and d enlarged views of the eggs are given. Fig. 5 shows the caterpillar, fig. 6 b the perfect moth. Few farmers recognize the true extent even of their own losses from the attacks of injurious in-

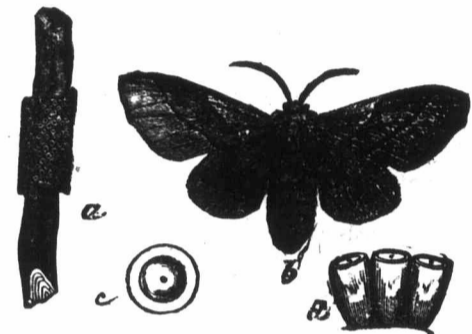


FIG. 6.

sects; but they see enough to convince them that of all the enemies against which they have to contend, there are none which demand such constant attention as these apparently insignificant foes. The study of insects has assumed an importance second to no other department of natural history, on account of its direct bearing upon agriculture, horticulture and forestry. The amount of damage done to crops every year is so vast, that the figures excite incredulity from those who do not study crop statistics. The following figures will illustrate this: In 1864 the loss from the attacks of the Chinch bug on cereals in the one state of Illinois was \$73,000,000. In Missouri in 1874 it was \$19,000,000, and in 1887 in Iowa \$25,000,000, and lastly, in nine states which were infested by this insect in 1887 no less than \$60,000,000 worth of grain was destroyed. This is only one example of what serious injury a single kind of insect can do when it is allowed to increase in undue numbers. It has been stated that there is probably no crop grown which is not reduced every year one-tenth by its insect depredators, and that each plant supports an average of 4 or 5 different kinds of insects. Many forest and fruit trees are particularly liable to attack by insects. Dr. A. S. Packard says that the oak harbors between five and six hundred species; the hickory, 140; the birch, over 100; the maple, 85; the poplar, 72; and the pine over 100, while the apple tree affords maintenance to over 200 different kinds.

Now, this loss is going on around us every year, and comparatively little is being done to prevent it. For most of the troublesome injurious insects remedies have already been discovered, and this great loss is, therefore, unnecessary. It is my wish to make known as soon as possible any remedies which may save the farmer from loss. I shall, therefore, be pleased to answer, through the columns of the ADVOCATE, any questions about injurious insects and their treatment which may be sent in either through the editor or to me direct to Ottawa.

Farmers' Societies.

Richardson & Webster.

The steady growth of business in manufacturing agricultural implements and cheese factory supplies by this enterprising firm, of St. Marys Ont., may be largely attributed to the general satisfaction given by their goods. Growth acquired in this way is necessarily of a substantial nature, and will at once commend them to all interested in securing good material and workmanship at living prices. While visiting their shops recently we were pleased to learn that those who purchased "The Monarch Ensilage and Fodder Cutters" from them were so well pleased that they had written expressing their satisfaction after a thorough trial, thus showing their high appreciation of the machines they had bought. In addition to a fine stock of plows, horse-powers, grinders, etc., etc., we would especially mention a root pulper made by them. The season is now upon us for the use of this useful implement, and we feel assured those who intend purchasing will lose nothing by communicating with the manufacturers at once for prices and further information in regard to these machines. While in conversation with a member of the firm we were pleased to learn that they are doing business in their various lines with the Patrons of Industry, and we feel sure this must be a cause of mutual satisfaction and profit to both manufacturer and consumer. We think every farmer should do all in his power to bring about a cash system of business, as well as direct dealing with those who manufacture what they require, and thus relieve themselves from the present burden of keeping up an army of middlemen. From their determination to give satisfaction to their patrons, the push and energy manifested in their business, we predict for them a prosperous future.

Patrons, Commercial Travellers and Merchants.

In looking over the November number of the FARMER'S ADVOCATE, I noticed an article by Uncle Tobias. Who is he? Is he a man who understands what he reads? He says: "The organizers are making rich out of the farmers whom they profess to serve." This is a mistake. As a patron, I do not think they are paid in proportion to the services rendered; they are promoting an honorable cause, and enlightening the farmers in matters of vital importance to them. Tobias states the merchant cannot live if only allowed twelve per cent. over invoice prices after paying rent, interest, breakage account, etc., etc. We claim merchants pay travellers too high salaries, viz., from \$800 to \$1,500 per year and all expenses. Who pays these salaries? Why the merchants' customers.

The aims of our organization are not to rob any man out of what belongs to him. Our motto is "fair and equitable terms to all men." We consider agents and commercial travellers unnecessary and burdensome, taking the cream from off the producer's milk and appropriating it to their own use. Mr. Tobias is mistaken when he says merchants who sign contracts to sell at an advance of twelve per cent. are fools, and that such have no capital and are not ranked among the foremost and best business men. Does Tobias remember the season when farmers throughout Ontario threshed from five to eight bushels per acre of wheat, and sold at from 70c. to 95c. per bushel. In many cases the crops were never harvested. Did the merchants then sell their goods to farmers and laborers at a reduction? The manufacturer and merchant did not ask the producers whether they could afford to pay thirty, fifty or ninety per cent. advance over cost in these depressed times. What profits does the farmer receive on the capital he has invested? Stop and consider! Few, indeed, are making three per cent. over expenses. Many are just making both ends meet, and hundreds of hard-working men are yearly losing money. Few, if any, are receiving fair wages for themselves and families, after allowing say five per cent. on money invested in their business.

What merchant would be willing to pay the farmers for produce twelve per cent. over actual cost of production?

Tobias instanced butter, and asked: "If it cost eight cents per pound to produce, how would farmers like to sell it for nine cents?" If the questioner knows anything about farming, he must know that if it were not for the calves that are reared, butter would not pay for the food the cow eats. Concerning the Grange, alluded to by the writer, this was and is a grand organization, but it was not supported by the farmers as it should have been.

There are too many farmers who do not think for themselves. These men allow others to transact business for them. Tobias states the farmers are getting too big for their boots. Not so; farmers are entitled to far more consideration than they have ever yet received in America. They are the pillars of our country. The time has come when they should and will demand their rights.

FIRST PRIZE ESSAY.

Would it be Wise to Increase the Indemnity to Members of the Legislative Assembly to \$800 per Annum?

FROM HULLETT GRANGE.

The question is one of vital importance to the people of Ontario. We are of opinion that in the social, as well as the political and moral interests of the province, it would not be wise to increase the said indemnity to \$800 per session. To consider this problem of interest, it will be necessary to note closely the ability of members of the Assembly—the time which is spent in political matters and which is lost to his own private business, and consider whether or not they are at present overpaid. We think that the majority of our members are men who could not command a salary approaching \$800 for a short portion of the year, or do a business that would give such good returns. A large number of the members can procure the services of a substitute to prosecute their business at a much lower rate than they enjoy. Of course there are exceptions to that, such as an editor, physician or lawyer, very few of whom enjoy a seat in the Assembly. The farmer, who forms 75 per cent. of the rate-paying population, and who is the backbone of our noble country, cannot realize \$800 above expenses for the whole year. The objection may be raised, "Farmers have not the ability to legislate for us." We say, if the farmer represents 75 per cent. (and he does) of the voters, let us have a like proportion of them in the Assembly, and we venture to say we will have a more economical and just as efficient government.

Every man should be amply remunerated, if possible, for the labor done. A farmer often labors long and hard and has scarcely anything to show for it. A lawyer or doctor, too, may spend all the year at his business, and will be well pleased if \$800 appears on the right side of his balance sheet.

Let us consider two and a-half months to constitute the average length of each session, and about one and a-half months as the aggregate loss of time outside of the session, that would really interfere with his business, either in thought or action, thus making a total of four months lost time, besides, of course, that lost during elections. This, then, would be at the rate of \$2,400 per annum. We feel certain that there are very few M. P. P.'s whose incomes exceed the half of that sum.

In the three ridings of our county (Huron) we are represented by two farmers and a lawyer, the united incomes of the former being, so far as we know, less than that of the latter, who is a leading barrister of the province. Now, when we average the incomes of these three men we feel sure the average net income would not be \$800 for a year. Of course part of this \$800 is paid out in expenses; but most of the members are at an unnecessary expense while in session, and even then it would cost them something to board at home. Then there is a certain amount of honor connected with the office for which the holder might sacrifice a little.

Other countries carry on their government on a cheaper plan than we do. The members of

the Congress of the United States do not receive as much as the members of our Assembly would receive at \$800 per session. While trade and business are so much depressed as at present, every means should be employed to lessen expenses.

Garden and Orchard.

How to Grow Plums for Profit.

BY G. W. CLINE.

In the first place select your soil, which should be rather heavy. Although sometimes plums do well on a sandy land it is rare, but on a clay loam, or even a good heavy clay—the very heaviest possible, if well drained—plums often do the best. Having grown this fruit for some twenty odd years for market I have studied the question pretty well, and have noticed in my own orchards, as well as in others through the country, that plums require a good heavy soil. If not heavy on top, if there is a good heavy clay subsoil in under, well drained, they will do well if properly planted and cultivated; but soils for plums must be either naturally drained or have underdrains to free it from standing water. The plum, like the peach, requires dry feet, or rather, dry soil for its roots to run in to grow thrifty. A wet, soggy soil will kill any fruit tree in a short time. Soils with plenty iron, salt and potash are the best for plums. If not naturally in the soil they must be supplied, more especially the potash and salt, by commercial fertilizers. Soils that are very slippery or "greasy" when wet you will generally find strong with potash. Having selected your soil, and drained it, if not naturally dry, the next thing is the trees and planting, which is another very essential part in growing fruit of any kind, and too often overlooked as something trifling. A very heavy soil, or any soil that does not work up finely after spring plowing should always be well plowed in the fall in ridges, the same width that the rows of trees are to be apart, which I claim should be about one rod. I plant mostly 12 by 15 or 16 feet apart, but a very strong, light soil will grow much larger trees than a very heavy one. Persons planting can judge for themselves. One orchard now planted 17 years, 12 by 16, the larger growing varieties have filled up all the space. Another orchard, planted some 21 years, on a heavy red clay subsoil, same distance, has plenty of room yet. Both orchards are doing well, or I might say first class, the first mentioned orchard being on rich alluvial soil.

Trees.—Don't run away with the idea that only large or extra large trees are the best, for they are not. They have to be grown to suit an ignorant class of customers who expect by buying trees of almost bearing size to get fruit much sooner, but as a general thing they do not. A good, thrifty, small-sized tree, not forced as the larger one is, and having plenty of fine fibrous roots, which you cannot get on a large, overgrown tree at any price; but on the smaller tree you will always get the best roots, and it is the roots that count in growing a top. A large top generally catches the eye of the uninitiated, and they order a lot of large trees at an enormous price. Nurserymen cannot grow and deliver large trees nearly so cheaply. The extra manures for forcing, the extra cost in digging, the extra cost in packing and freight all combine to give you the larger and poor tree at an exorbitant figure.

Ordering Trees.—Don't pick up with every travelling salesman for trees. If he can't give papers that show that he is selling for some responsible firm don't swallow his taffy and bright colored lithographs of fruit he shows, as they are entirely too highly drawn or colored; but look up some of the nurserymen advertised in the columns of the *ADVOCATE*, who are, I believe, reliable and honest; write out your list and send direct to them—several of them, if possible—and get their best prices for mentioned stock, and no substitutes. Don't take substitutes without you know what you are getting, as this "equally as good," as nurserymen often quote, is misleading. Some of them may be as good, but that is not the question. Who wants a lot of Lombards or Yellow Egg when they may have both of these kinds in plenty, but want some other? Never sign an order for trees of any kind and allow their reading in under ("if we are out of what your order calls for will substitute varieties equally as good") to remain uncancelled. Don't sign it, I say. If you do you will in nine cases out of ten get what you don't want. When you have quotations from several of the nurserymen, give your order to the one you think you are getting the best stock from—have it delivered early in spring. I believe spring planting is the best for general planting of all fruit trees or vines, except berries.

Varieties for profit.—I have found that for plums or peaches a good number of varieties are the best, as sometimes gages are called for, sometimes large white, sometimes large blue or red, and again, "send more Lombard" is the order. I, therefore, suggest the following, as having done well with me:—Lombard, Yellow Egg, Washington, Pond's Seedling, Coe's Golden Drop, Duane's Purple, Renne Claude de Bavy, Glass' Seedling, Bradshaw, Niagara, Ger Prune, Imperial Gage, Victoria, Haling's Superb, Gen. Hand, Quackenbos, Smith's Orleans, Columbia, Lawson's Golden Gage, Peach, Bingham, Jefferson, Moyer's Seedling, Munroe Egg, Red Egg, Fellunburg, Prince's Yellow Gage, Canada Orleans, Lawrence Favorite, Shippers' Pride, and I might mention many others that are good to plant, but for a small orchard of a hundred trees or so I would not plant so many kinds—perhaps less than half of those mentioned would be better. Will quote as follows, ripening in succession:—Washington, Niagara, Imperial Gage, Duane's Purple, Yellow Egg, Lombard, Quackenbos, Glass' Seedling, Renne Claude de Bavy, Coe's Golden. These might be changed as climate varies in temperature for hardiness, but I would not plant many of the varieties that are often forced on the public under the guise of hardiness and being free from curculio, they being mostly of the wild plum nature and qualities, as Marrianna, De Loto, Wild Goose, De Caradene, Newman, Weaver, Moore's Arctic, Miner, Langsdon, Indian Chief, Golden Beauty, Forest Garden. These above mentioned are often spoken of as hardy, of good size and free from curculio. It is not true; they are no more hardy than plenty of the larger and finer flavored varieties mentioned first, and as for being free from curculio, there are no plums that are free, in my experience of 20 years growing for market.

[TO BE CONCLUDED IN NEXT NUMBER.]

Apples for Ontario Planters.

BY JOHN CRAIG, EXPERIMENTAL FARM, OTTAWA.

It is not so generally known as it should be that the Ontario Fruit Growers' Association have published a list of apples which are recommended for cultivation in each electoral division of the province, including 12 varieties, made up of 3 summer, 4 autumn and 5 winter varieties. In presenting the fruit lists the committee, composed of Messrs. Beall, Dempsey and Allan, make the following statement:—"We have consulted the directors, as well as the leading fruit growers throughout the several districts. We have also tried to frame the lists, so as to advise the planting of such varieties as bear the highest points for each district, for hardiness, growth, bearing, shipping, quality of fruit and commercial values,

both in local and foreign markets. In point of season we have drawn a line for summer apples up to September 1st; autumn, to December 1st; and after that date winter, upon the understood principle that varieties arriving at maturity within the periods named belong to such seasons, although many, if not all the varieties named, are often kept and sold in market later in the season. We are also well aware that a few of the varieties named are placed in this list a little out of proper season, so far as some sections are concerned; but as it is necessary to draw a line, we have done so, taking the province into consideration and the area within which such varieties can be most successfully cultivated."

The importance of this move to the amateur should be thoroughly understood. A beginner, no matter what portion of the province he may reside in, can, by referring to the report of this committee, obtain names of such varieties as it will be safest to begin with, till added experience and knowledge of local climatic conditions may lead him to make changes or additions to the varieties planted.

It is interesting to note the universal adaptation of some varieties. For instance, Duchess of Oldenburg, summer, is recommended in each of the 13 districts; Yellow Transparent in 11 out of the 13. Among fall apples, Alexander and Wealthy are recommended in 8 of the northern districts, Gravenstein being recommended for 9 districts towards the south. Among winter sorts Golden Russet is recommended in 10 districts, and Pewaukee for 8 out of the 13.

No doubt the catalogue will be somewhat modified from year to year, but as it stands it is a move in the right direction, and one of much value to the prospective planter.

The Boston Market Gardener.

With the advent of Thanksgiving (November 26th) the Boston market gardener ends his business year. At that date all preparation has been made for the early spring work. Celery is in its pit, hot-bed plants are all set, land has all been plowed, and from now until the first of February men and teams will have a two months' season of comparative rest from the hurry and drive incident to the market gardener's life.

The intervening time between seasons will afford time for preparation of hot-bed mats, repairing of glass and implements; for as time waits for none, work that can be prosecuted now will be to the gardeners' advantage two months hence, when every moment is needed to enable him to keep pace with his competitors, as well as to take every advantage possible of "Old Sol's" increasing influence.

We have time now for recapitulation. With note-book in hand we review the past season's work, and how often do we note, if we had calculated otherwise, the results would have been pecuniarily to our advantage; but the lesson has been bought and paid for, and as we grapple with the new season's work we do so with the examples of the past vividly before our mind, governing us accordingly.

The seasons of 1890-1 in this latitude have been marked with many extremes. The extremely late spring frost was very damaging to semi-tropical vegetation, necessitating the replanting of our spring beans. The spring and early summer drouth retarded growth of seasonable truck to the extent that prices received were extremely high, but the latter end of the season, owing to copious rains, has been marked by extremely low prices; and it is a query, when the average is struck, whether prices have not been lower than usual. Surely, with some it is a fact.

A dry year is the market gardeners' salvation. This seems difficult of association, but it is a fact. The well-fertilized acres of the market

gardener is in a condition to conserve moisture; and while his crops have the appearance of abundance of moisture, his less advantageously situated neighbor, located, as they are, too far distant from a centre of a city's manure supply, their crops are brown and sere. As I walked through Boston's great vegetable mart, the streets around the Quincy and Faneuil Hall markets during the drouthy season, it could be plainly discerned upon viewing the different loads of truck, those that had been grown upon well-fertilized soils. These soils have in many instances been reclaimed from practically barren sandy wastes, where thirty years ago an acre would not afford grazing for but a single goat. So barren was this territory that it went under the name of "poverty plains." By the aid of the excremental droppings of the great city stables, this territory has been transformed into a veritable "Garden of Eden."

It would be supposed with a soil as above described, the path of the owner might be "strewn with roses." Not so altogether; a soil with such a large amount of vegetable matter affords the lurking place for criminal parasites and vegetable fungi, which at times is very troublesome. Fall plowing tends to obviate the difficulty, by exposing to the weather the annual parasites, but it has no effect upon vegetable fungi. Since the list of edible vegetables is so large, some of them can be found, however, which are not affected, at least not destructively so. Among the list can be mentioned early cabbage, spinach, lettuce, string beans, parsley, beets, celery, onions and parsnips. The vine family is badly infested with one annual parasite and another. Cucumbers cannot be grown except under glass; melons grow luxuriantly until the first fruit is about formed, after which the vine drops its foliage, dying away, and leaving myriads of half-formed fruits; squashes some years are affected, but generally speaking not badly so; turnips, both flat white and ruabaga cannot be grown, and radishes are often affected with worms, especially those harvested after the middle of June; cauliflowers are a treacherous crop, often not paying for its cultivation; tomatoes are not a paying crop. The abundance of nitrogenous fertility in our market gardens forces luxuriant crops of foliage, which obscures the small number of fruit produced from the influence of the sun's ripening influence, until it is so late in the season there is no price received for the crop.

The bordeaux mixture is proving an agent for the remedy of the vegetable fungi difficulty, but as yet our gardeners have not become perfectly familiar with its use; still, the possibilities that will accrue appears to be unlimited.

Many of our market gardens at this date (December 1st) are clothed with the green of the spinach and shallots. Spinach some years is a very remunerative crop—when it winters well. The greatest difficulty comes during March and early April. The continual freezing and thawing at that time throws out the plant from the soil. Another difficulty is experienced by covering up the plantation with litter too early. This covering up is done, not to prevent the soil from freezing, but to prevent the sun's action thawing the ground the latter end of cold weather. Litter should not be put on until the ground is well frozen, which in this latitude does not occur until soon after the new year, and even then there is a possibility of the January thaw softening up the ground and sweating the spinach plants under the covering, thus destroying them.

The cultivation of the shallot is quite profitable when too many do not go into their cultivation. The sets, which look like small onions, are planted September 1st, in rows 12 inches apart and 3 inches apart in the row. Considerable growth is made before the end of the growing season. Upon being overtaken by the cold weather, they remain in winter in a green condition, starting to grow again as soon as the frost leaves the ground in the spring. Upon starting to grow again the bulb, instead of confining itself to one sprout divides, sending up sometimes as many as five sprouts, sending up sufficient growth May 1st, is pulled and bunched by tying four or five sprouts together with bass grass, thus furnishing the first onion scullions of the season.

The Orchard as Part of a System of Mixed Farming.

BY G. C. GASTON.

It is generally the case that where any considerable quantity of apples are grown, the bulk of them are handled by buyers who pay about an average price of \$1 per barrel in the orchard. Under this arrangement the grower picks the fruit and leaves it in piles in the orchard. The buyer brings his barrels and packs and grades the fruit, and the grower then delivers them at the nearest railway station. Sometimes in years of scarcity higher prices are paid, but the price paid is not often much above \$1 per barrel. With a good yield and a good sample even this apparently small price would be quite remunerative in a well kept orchard, and is no doubt quite satisfactory to most of the growers who dispose of their fruit in this way. It saves them the trouble of looking for a market for it, or of carrying it till danger of frosts makes trouble, or carrying all or part of it over winter till spring when better prices prevail. More or less loss occurs from spoiling during the winter, even among the best kinds. All this trouble is avoided by selling *en bloc* in the fall, and the grower gets his money all in a lump, as they say.

But I see no reason why the farmer, who, with a snug little orchard as part of his system of mixed farming—one producing say from 50 to 100 barrels of surplus fruit for sale—should not market the fruit himself, and save to himself the profit that the buyer or middleman makes. For fruit, like many other commodities, passes through too many hands between producer and consumer. The middlemen often make a larger profit on the fruit than the grower, and still making the price high to the consumer. The first thing to consider is the kind of fruit to grow, always remembering that an apple of good size and color, free from fungus or other blemish, and of good flavor, is always sure to bring the highest price, and if an orchard already in bearing is not producing apples of that kind, proceed to top graft it with the varieties that bring the highest price, and which are in the greatest demand, while the trees are yet young and vigorous. I have given a list of varieties before in former articles, which I consider advisable to grow; but it may not be amiss to repeat it here, as I deem this matter one of great importance. For early, Duchess; for fall, Alexander, Red Beitigheimer and perhaps the Calvert, a good fall cooker—good for shipping to the Northwest; and for winter, Pewaukee, Wealthy, Golden Russet, Baxter or La Rue, Northern Spy, King and Greening, the last three to be top grafted on hardy stock. I might add the Spitzenburg and Seek-no-Further, both of which are all right in point of quality, but shy bearers, and, of course, not so profitable as others I have mentioned. Then as to the picking and packing. This is a very important matter, and must be properly performed, or else all other work will be in vain. Fruit that is expected to command the top price must be carefully hand picked and selected; every specimen must be perfect and the size as near uniform as possible throughout the package. And just here I may remark that it seems hard to get the average farmer to exercise the same care with his fruit as he does with his grain or potatoes. He does not think of taking these to market without first extracting the inferior stuff. He tells you that it pays him better to keep the poor stuff at home and feed it than to try to sell it among the good, and lose on the whole lot. This is sound reasoning and good logic. Let him apply it to the marketing of his fruit and he will find that it will work to even greater advantage than in the case of other products.

[TO BE CONTINUED IN NEXT NUMBER.]

Dairy.

How Shall we Improve our Dairy Herds?

BY W. J. PALMER.

The average dairy farmer does not, as a rule, take into consideration what a great share his cows have in determining whether his profits shall be great or small at the close of the year. Although much has been written and said during the last few years in regard to the handling of milk and cream, the making of butter and cheese, and the use of improved appliances with which to make these articles cheaper and better, still the very foundation stone upon which the dairyman must necessarily build his future success—yes, and his present success also, has, until the last year or so, been comparatively little understood except by dairy scientists. I refer to the dairy cow. This is chiefly due to the fact that until very recently there have been no accurate tests within the reach of the farmer by which he could determine whether his cows were paying for their board, or simply boarding at his expense. Much has been written on the individual points of good dairy cows, and on the best foods for milk production; but the farmer needs more than this. He should understand how to test his cows, to find out which are bringing him in a profit, and which are kept at a loss. Thus he can gradually weed out the unprofitable ones and greatly increase his ultimate gains.

The profits in dairy farming, whether devoted to the making of butter or cheese or the sale of milk, must necessarily depend largely on the kind of cows that are kept; not on the breed alone, but on the individuality and producing power of each cow in the herd. Each separate breed, however, has its own distinct characteristics, and the dairyman should consider what he requires before introducing new blood into his herd. To make butter or cheese at a profit we must have cows that will produce milk rich in the elements that go to make up these products, at the same time consuming the least amount of food.

It is computed that there are about 800,000 cows in Ontario, and that the average cow produces about 3,000 lbs. (300 gals.) milk per year. It will take at least 25 lbs. of this milk to make 1 lb. of butter, or a total of about 120 lbs. butter per year for each cow. Taking this at 20c. we find a return of \$24 per year for each cow—very little, if anything, over what it cost to feed and care for her. Or reckoning 10 lbs. of milk to 1 lb. cheese, the milk from each cow would make 300 lbs. cheese, which at 10c. would bring in \$30, still a very small return, especially when the amount of fertility sold off the farm in the 300 lbs. cheese is considered. While the average cow in Ontario is said to give only this amount of milk, there are many cows that give much heavier yields, while some do not give nearly that amount. The Americans are somewhat afraid of us in this respect. There are many herds across the line which a few years ago produced not more than 120 lbs. butter per year per cow, but which have been so improved that they now produce from 250 to 300 lbs. and over; and how is this done? Simply by careful and systematic breeding and feeding, and by gradually weeding out of the herd all those cows that do not produce a certain amount of milk of a certain quality.

During a trip through portions of Ontario this summer with the Travelling Dairy, I was especially struck with the lack of knowledge among the farmers as to what their individual cows were producing. Some seemed to think it necessary to keep a certain number of cows in the herd to keep up the supply of milk, regardless of the fact that some produced double the quantity of milk with the same consumption of food. By the use of the Babcock test (the practical value of which is now thoroughly proven) we tested at our different meetings nearly 500 samples of milk from as many cows, which showed all the way from under 2 per cent. to over 8 per cent. of fat. A cow giving milk testing as low as 2 per cent. fat would hardly prove a very profitable butter cow, or cheese cow either, unless the owner was making "skim cheese." Still the owner of that cow was keeping and feeding her with the rest of his herd in blissful ignorance of the fact that she was "eating up," and not "adding to" his cash returns. Many people seem to think that the quantity and quality of the milk is regulated altogether by the feed, no matter what the cow is like. Feed certainly does exert a great influence in increasing the quantity of milk, and the quality also to a lesser extent, but the cow must have the ability to apply her food to the production of milk or she will make use of it in some other way, with the result that the milk pail suffers.

The question now arises, how are we to handle our dairy herds so that their productive power will gradually increase from one generation to another? My answer is, weed out all the poor cows systematically, and keep only those cows that produce at least 5,000 lbs. of good, rich milk per annum—milk that tests from 3½ to 4 per cent. fat, and gradually raise the standard till every cow in the herd gives her 6,000 lbs. milk per year. Cultivate the "habit" in the cows to milk 10 or 11 months in the year instead of six or seven, and the profits will be greatly increased. It is not a very difficult matter nowadays to find out which are the unprofitable cows by the use of the Babcock or Beimling test. This can be done at a very small cost. Even those who are supplying milk to cheese factories will find it to their advantage to "grade up" their cows, for in a very short time milk delivered at cheese factories will be paid for according to its quality, to a certain extent at least. Supposing a number of farmers clubbed together and bought one of the testers. They could keep it at some farm house centrally situated, and take samples of milk from their different cows, say once a week, and test them, to find out the percentage of fat. Then by weighing the milk of each cow and knowing the percentage of fat, it can easily be calculated the amount of butter each cow will make in the course of a week. Balance that against the food consumed and it can be roughly calculated whether the cow is profitable or not. Of course, there is the skim-milk and manure to be placed to the credit of the cow also. Then having found out which are the best cows in the herd give them good nourishing food and breed them to some good thoroughbred dairy bull. The calves from such cows if well fed and properly cared for will turn out profitable dairy cows—cows that will help their owner to make a success of his business.

In regard to taking samples of milk it has been clearly proven at the Illinois Experiment Station, and also at the Guelph Experimental Dairy, that just as accurate results are obtained by making a weekly test of a "composite" sample of milk of each cow as by making daily tests. This composite sample can be obtained by putting in a bottle (a quart glass pint jar is a convenient receptacle) a small quantity of the milk given by the cow each day. At the end of the week the jar contains a mixture of the milk given during the seven days, and a test of this mixture will give the same results as the average of seven daily tests. The jars must be kept in a cool place so that the milk will not become very sour and thick.

Both the Babcock and Beimling tests are very easy to manipulate, but the former is generally preferred owing to its being the simpler of the two. Any person with an ordinary amount of brains can manage this test successfully after one or two trials.

Poultry.

Poultry on the Farm.

Read at the Farmers' Institute at Minnesota State Fair by Mrs. Ida E. Tilson, West Salem, La Crosse county, Wis.

(Continued from November Issue.)

Ideas differ on size of nest boxes. I like 13 inches square by 16 inches high. If any intelligent hen (mine are all intelligent) chooses a nice quiet barrel or manger in which to set up for herself or sit down by herself, I let her be, for the God-created maternal instinct has never been improved on by human contrivance. Since one hen from a shelf in the barn, and two others out of mangers, have brought me respectively 18, 16 and 12 chicks, I have ceased sprinkling eggs. Sitters that get their wings and feet in the morning dew carry back sufficient moisture. I do not even clean nest and eggs where a breakage has occurred, unless they are very soiled. After hatching I leave a brood undisturbed on the nest as long as they are quiet. When there begins to be music and dancing I remove them to a coop. Although the mother herself would still do well enough in a state of nature, she needs some help in training a parcel of giddy little chicks. The coop used is an improvement on a plan from that excellent paper, The American Agriculturist. A floor, perpendicular walls and a high window, are calculated to discourage skunks and rats. If not the best coop in the world, it is good enough for any fowl, however blue-blooded. About the third day Mother Biddy is given an airing. On good behaviour, liberty is daily increased, till soon the coop is occupied only nights, dewy mornings and rainy days. A slat dining-room, resembling an overturned and open work box, gives chicks a chance to eat unmolested by greedy "grow-ups." For the first few days no food exceeds bread and milk, varied with stale bread crumbs, custard and milk curd. Cooked potato and hard-boiled egg each may be fed once a day. Wheat is freely given as soon as it can be swallowed, and, with meal pudding, replaces the early and more expensive bill-of-fare. Chicks are fed five, three, and finally two times a day, according to age, weather and range. For neither chicks nor hens is meal mixed with cold water, but is always scalded and swelled outside the fowls. To them, also, life is "flat, stale and unprofitable" without some seasoning. Such ingredients are mixed through the dry meal before wetting. Even salt thus treated can safely be added to the extent of a half or level teaspoon per quart of meal, and is an excellent preventive of gapes. As experiments at various agricultural stations show, corn is favorable to plumpness and warmth, but lacks the elements of growth; its meal is improved when reduced by one-third bran, ground rye, beans or oats. So many ambitious mothers desert broods but three or four weeks old that I am compelled to hasten the education and graduation of their offspring. Chicks must be taught to lodge in the hen-house while still accompanied by their valiant mother; able to command respect and to "show who is who." Sometimes the brood may be driven in, but "if they won't, they won't." Then I wait till they are settled for the night and carry them there within the coop or within my big apron. Some temporary little ladders guide their young feet upwards; and though they will soil nests such cleaning is easier than handling coops. Pullets early

accustomed to the house seldom abandon it, nay, not even to steal their nests. Our trees are never decorated with chickens, as I have often seen them on autumn's leafless branches, looking decidedly like over ripe fruit that needed gathering. One friend told me some of her fowls did not so much as know there was a hen-house. Another lost half a fine flock because of their irregular habits at night. It is a waste of time and food to raise chicks for such a fate. One had better be painting plaques, or taking a Chataqua course. My houses are locked every night, and have inside slats or wire at all doors or windows. Neither four nor two-footed intruders have troubled. The middle of May is a popular hatching time. Early chicks, if not chilled and stunted, command high prices and make fall or winter layers. Later chicks, with warm weather, grow rapidly, and in size overtake earlier ones, but are not apt to lay till spring, since size and maturity are not identical—a musk melon is ready before the big pumpkin is. The egg-producer, perhaps, will want some of both ages, so that her eggs will not all be laid in one day, or put in one basket, as the saying is. Given the house, hens and wherewithal, she who finds no eggs upon arising and searching diligently, should go away by herself and think. Egg production can be made to vary but little from month to month by studying the fine art of feeding. My accounts for two Novembers showed a difference of one egg solely. A gentleman, hearing this statement, said such was the case with hens, excepting that the first November they laid only one egg, and the next year's November none. The hen is, as often remarked, a good "egg machine," but any machine needs the careful and constant oversight of some person to see that it runs as intended to do. Nature largely provides for poultry in the season of warmth, verdure and life. When these disappear, the fowls should feel, as they welcome a faithful, thorough, sunny keeper—

"Now is the winter of our discontent
Made glorious summer;"

I use the following programme in winter:—One day, gravel and cooked meat; next, crushed bone and meal pudding; third day, crushed charcoal and chopped vegetables; and so round and round. There are in addition to grain rations daily—about a pint each time to every 8 or 10 hens—wheat, buckwheat and barley being staples. Some corn on the cob and clover hay are given to promote exercise. Raw ground bone is obtained for two cents per pound from the North Western Fertilizing Co. Union Stock Yards, Chicago. Pressed cakes of lard or tallow scraps cost 12½c. per pound at packing houses, and \$1.25 worth lasts eighty towels all winter, as a small chunk soaked, cooked and thickened with table leavings develops unexpected possibilities. From a convenient place a few miles distant there is drawn every fall a wagon load of gravel, wholesome "filling," and cheap. Twice a day in winter the hens have water about as warm as old ladies like their tea. The person kind to animals elevates and blesses both himself and them by such treatment. He who is not pitiful to dumb, helpless creatures in his charge usually shows little humanity and much selfishness elsewhere. A great change of sentiment has indeed taken place since those old times when Biddy roosted on a fence, stole her food from the other stock, and was beset on every side by dogs and other terrors. Intelligent enthusiasm, which will dignify any pursuit, is the great requisite in poultry culture. Be assured, whatever of brains and of real liking one puts into this business can be drawn out again cashed. Let poulterers, therefore, read and learn; but, above all, watch and remember their own experiences. In the noble army of poultry lovers have shown a Queen, Marie Antoinette, and a President's wife, Mrs. Hays, while individual fowls of distinction antedate the one that reminded Peter. An old teacher of mine gave an account of a hen temporarily buried under hay which outlived even Dr. Tamer in fasting. But you will all agree this is a large subject, and you will see I am no fairy to put a girdle about it in twenty minutes.

Family Circle.

A PATIENT WAITER.

"Be sure you sweep it clean, Lily."
"Yes, 'm. I ain't leavin' a single stone on it."
"I'm 'most afraid to trust you. I think likely as not he may come to-day, an' not wait to write. It's so pleasant, I feel jest as if somebody was comin'."

"I'm a-sweepin' it real clean, Aunt Fidelia."
"Well, be perticler. An' you'd better sweep the side-walk a little ways in front of the door. I saw a lot of loose stones on it yesterday."
"Yes, 'm."

The broom was taller than the child, but she was sturdy, and she wielded it with joyful vigour. Down the narrow path between the rows of dahlias she went. Her smooth yellow head shone in the sun. Her long blue gingham apron whisked about her legs as she swept.

The dahlias were in full bloom, and they nodded their golden and red balls gently when the child jostled them. Beyond the dahlias on either side were zinnias and candytuft and marigolds. The house was very small. There was only one window at the side of the front door. A curved green trellis stood against the little space of house wall on the other side, and a yellow honeysuckle climbed on it.

Fidelia Almy stood in the door with a cloth in her hand. She had been dusting the outside of the door and the threshold, rubbing off every speck punctiliously.

Fidelia stood there in the morning light with her head nodding like a flower in a wind. It nodded so all the time. She had a disease of the nerves. Her yellow-grey hair was crimped, and put up carefully in a little coil, with two long curls on either side. Her long delicate face, which always had a downward droop as it nodded, had a soft polish like ivory.

When Lily Almy, who was Fidelia's orphan niece, whom she was bringing up, had reached the gate with her broom, she peered down the road; then she ran back eagerly.

"O Aunt Fidelia," she said, in a precise slow voice which was copied from her aunt's, "there's a man comin'. D'you s'pose it's him?"

"What kind of a lookin' man?" Fidelia's head nodded faster; a bright red spot gleamed out on either cheek.

"A real handsome man. He's tall, and he's got reddish whiskers. And he's got a carpet bag."

"That's the way he looks."

"O Aunt Fidelia, do you s'pose it's him?"

"Taint very likely to be."

"Here he is."

Fidelia ran into the house and knelt down by the parlor window, just peering over the sill. Her whole body seemed wavering like her head; her breath came in great gasps. The man, who was young and handsome, walked past.

Lily ran in. "Twa'n't him, was it?" said she. "He didn't much expect it was. I've always thought he'd come on a Tuesday. I've dreamed 'bout his comin' Tuesday more times than I can tell. Now I'm goin' to fix the flowers in the vases, and then I'm goin' down to the post-office. I feel jest as if I might git a letter to-day. There was one in the candle last night."

Fidelia moved, nodding, among her flowers in her front yard. She gathered up her purple calico apron, and cut the flowers into it.

"You run out into the garden an' git some sparrow-grass for green," she told Lily, "an' pick some of that striped grass under the parlor window, an' some of them spider-lilies by the fence."

The little white-painted mantle-shelf in Fidelia's parlor was like an altar, upon which she daily heaped floral offerings. And who knows what fair deity in bright clouds she saw when she made her sacrifice?

Fidelia had only two vases, tall gilt-and-white china ones, with scrolling tops; these stood finely in the centre, holding their drooping nosegays. Beside these were broken china bowls, cream-jugs without handles, tumblers wine-glasses, saucers, and one smart china mug with "Friendship's Offering" in gold letters. Slightly withered flowers were in all them. Fidelia threw them out, and filled all the vessels with fresh ones. The green asparagus sprays brushed the shelf, the striped grass over-topped the gay flowers.

"There," said Fidelia, "now I'm goin' to the post-office."

"If anybody comes I'll ask him in here, an' tell him you'll be right back, sha'n't I?" said Lily.

"Tell him I'll be back in jest a few minutes, an' give him the big rockin'-chair."

The post-office was a mile away, in the corner of a country store. Twice a day, year out and year in, Fidelia journeyed thither.

"It's only Fidelia Almy," people said, looking out of the windows, as the poor solitary figure with its nodding head went by through summer suns and winter winds.

Once in a while they hailed her. "See if there's anything for me, won't you Fidella?"

At last it was an understood thing that Fidella should carry the mail to the dozen families between her house and the post-office. She often had her black worked bag filled up with letters, but there was never one of her own. Fidella Almy never had a letter.

"That woman's been comin' here the last thirty years," the postmaster told a stranger one day, "an' she ain't never had a letter since I've been here, an' I don't believe she ever did before."

Fidella used to come in a little before the mail was distributed, and sit on an old settee near the door, waiting. Her face at those times had a wild, strained look; but after the letters were all in the boxes it settled back into its old expression, and she travelled away with her bag of other people's letters, nodding patiently.

On her route was one young girl who had a lover in a neighboring town. Her letters came regularly. She used to watch for Fidella, and run to meet her, her pretty face all blushed. Fidella always had the letter separated from the others, and ready for her. She always smiled when she held it out. "They keep a-comin'," she said one day, "an' there don't seem to be no end to it. But if I was you, Louisa, I'd try and git him to settle over here, if you ain't married before long. There's sips, an' it ain't no waste trustin' to letters."

The girl told her lover what Fidella had said, with tender laughter and happy pity. "Poor thing!" she said. "She had a beau, you know, Willy, and he went away thirty years ago, and ever since then she's been looking for a letter from him, and she's kind of cracked over it. And she's afraid it'll turn out the same way with me."

Then she and her sweetheart laughed together at the idea of this sad, foolish destiny for this pretty, courageous young thing.

To-day Fidella, with her black broadcloth bag, worked on one side with a wreath and the other with a bunch of flowers, walked slowly to the office and back. As the years went on she walked slower. This double journey of hers seemed to tire her more. Once in a while she would sit down and rest on the stone wall. The clumps of dusty weed-side flowers, meadowsweet and tansy, stood around her over her head was the blue sky. But she clutched her black letter bag, and nodded her drooping head, and never looked up. Her sky was elsewhere.

When she came in sight of her own house, Lily, who was watching at the gate, came running to meet her.

"O Aunt Fidella," she said, "Aunt Sally's in there."

"Did she take off her shoes an' let you brush 'em before she went in?"

"She wouldn't. She went right straight in. She jest laughed when I asked her to take her shoes off. An' Aunt Fidella, she's done something else. I couldn't help it."

"What?"

"She's been eatin' some of Mr. Lennox's plum-cake up. I couldn't stop her, Aunt Fidella. I told her she mustn't."

"You didn't say nothin' 'bout Mr. Lennox, did you?"

"No, I didn't, Aunt Fidella. Oh, did you get a letter?"

"No; I didn't much think I would to-day. Oh dear! there's Sally eatin' cake right in the front entry."

A stout old woman, with a piece of cake in her hand, stood in the front door as Fidella and Lily came up between the dahlias.

"How d'ye do, Fidella?" cried she, warmly. "Pretty well, thank you. How do you do, Sally?" Fidella answered. She shook hands and looked at the other with a sort of meek uneasiness.

"Hadn't you just as soon step out here whilst you're eatin' that cake?" asked she timidly. "I've just swept the entry."

"No; I ain't goin' to step out there an' inch," said the other, muzzling the cake vigorously between her old jaws. "If you ain't the worst old maid, Fidella! Ain't seen all the sister you've got in the world for a year, an' wantin' her to go out doors to eat a piece of cake. Hard work to git the cake, too."

"It don't make any difference," said Fidella. "I'm real kind o' used up every time I sweep nowadays, that's all."

"Better stop sweepin', then; there ain't no need of so much fussin'. It's more'n half that's got your nerves out of kilter—sweepin' an' folks to take off their shoes before they come in, as if they was goin' into a heathen temple. Well, I ain't goin' to waste all my breath scoldin' when I've come over to see you. How air you now, Fidella?"

"I'm 'bout the same as ever." Fidella following her sister into the parlor, stooped shyly to pick up some crumbs which had fallen on the entry floor.

"Just as shaky, ain't you? Why, Fidella Almy, what in creation have you got this room rigged up so fur?"

"Rigged up how?"

"Why, everything covered up this way. What hev you got this old sheet over the carpet fur?"

"It was fadin' dreadfully."

"Fadin'? Good land! If you ain't got every chair sewed up in calico, an' the pictures in old pillar-cases, an'—Fidella Almy, if you ain't got the solar lamp a-settin' in a little bag?"

"The gilt was gittin' real kind o' tarnished."

"Tarnished! An' every single thing on the table—the chiner card-basket and Mrs. Heman's Well, I've always heard tell that there was two kinds of old maids—old maids an' consarned old maids—an' I guess you're one of the last sort. Why, what air you outtin' on so fur?"

Fidella gathered up all her trembling meekness and weakness into a show of dignity. "Things are all fadin' and wearin' out, an' I want to keep 'em decent as long as I last. I ain't got no money to buy any more. I ain't got no husband nor sons to do for me, like you, an' I've got to take care of things if I hev anything. An'—I'm goin' to."

Her sister laughed. "Well, good land! I don't care. Cover up your things if you want to. There ain't no need of your zittin' riled. But this room does look enough to make a cat laugh. All them flowers on the mantel, an' all those white things. I declare, Fidella Almy, it does look jest as if 'twas laid out. Well, we won't talk no more 'bout it. I'm goin' out to hev a cup of tea. I put the teapot on, an' started the fire."

Poor Fidella had a distressing day with her visiting sister. All her prim household arrangements were examined and commented on. Not a closet nor bureau drawer escaped inspection. When the guest departed at length, the woman and the child looked at each other with relief.

"Ain't you glad she's gone?" asked Lily. She had been pink with indignation all day.

"Hush, child; you mustn't. She's my sister, an' I'm always glad to see her, if she is a little tryin' sometimes."

"She wanted you to take the covers off an' let 'em things git spoiled before Mr. Lennox comes, didn't she?"

"She don't know nothin' about that."

"Are you goin' to make another plumcake to-night, Aunt Fidella?"

"I don't know. I guess we'd better sweep first."

The two worked hard and late that night. They swept every inch of floor which that profane dusty child had trod. The child helped eagerly. She was with the sweetest faith and sympathy. Nothing could exceed her innocent trust in Fidella's pathetic story and pathetic hopes. This sad human experience was her fairy tale of childhood. That sweetheart for California thirty years ago, and promised falsely to write and return, was her fairy prince. Her bright imagination pictured him beautiful as a god.

"He was about as handsome a young man as you ever see," said poor Fidella. And a young Apollo towered up before Lily's credulous eyes. The lapse of thirty years affected the imagination of neither; but Lily used to look at her aunt reflectively sometimes.

"I wish you could have some medicine to make you stop shakin' before that handsome Mr. Lennox comes," she said once.

"I'm in hopes that medicine I'm takin' will stop it," said Fidella. "I think, mebbe, it's a little better now. I'm glad I thought to put that catnip in; it makes it a good deal more quietin'."

On the narrow ledge of shelf behind Fidella's kitchen sink stood always a blue quart bottle of herbs. She prepared it herself from roots and ingredients, and added new ingredients, and sweetened it with a touching faith that it would cure her. In the light of this bottle stood another of sage tea; that was for her hair. She used it plentifully every day in the hope that it would stop the grey hairs coming, and bring back the fine color. Fidella used to have pretty golden hair.

Lily teased her to make the sage tea stronger. "You've been usin' it a dreadful long time, Aunt Fidella," said she, "an' your hair's jest as grey as 'twas before."

"Takes quite a long time before you can see any difference," said Fidella.

Many a summer morning, when the dew was heavy, she and Lily used to steal out early and bathe their faces in it. Fidella said it would make people rosy and keep away the wrinkles.

"It works better on me than it does on you, don't it?" asked pink-and-white Lily, innocently once. The two were out in the shining white field together. The morning lit up Lily as it did the flowers. Her eyes had lovely blue sparkles in them; her yellow hair, ruffled by the wind, glittered as radiantly between one and the light as the cobweb lines across the grasses. She looked wonderingly at her little yellow hands into the dewy green things.

Those dull tints and white hairs and wrinkles showed forth so plainly in the clear light that even the child's charming faith was disturbed a little. Would the dew ever make this old creature pretty again?

"But—You can't expect it to work in minute," replied Fidella, cheerfully. And Lily was satisfied.

"I guess it'll work by the time Mr. Lennox comes," she said.

Fidella was always neat and trim in her appearance, her hair was always carefully arranged, and her shoes tidy; but summer and winter she wore one sort of gown—a purple calico. She had a fine black silk hung away in the closet upstairs. She had one or two good woollens, and some delicate cambrics. There was even one white muslin, with some lace in neck and sleeves, hanging there. But she never wore one of them. Her sister scolded her for it, and other people wondered. Fidella's

child-confidante alone knew the reason why. This poor, nodding, enchanted princess was saving her gay attire till the prince returned and the enchantment ceased, and she was beautiful again.

"You mustn't say nothin' 'bout it," Fidella had said; "but I ain't goin' to put on them good dresses an' tag 'em right out. Mebbe the time'll come when I'll want 'em more."

"Mr. Lennox'll think that black silk dress is beautiful," said Lily, "an' that white muslin."

"I had that jest after he went away, an' I ain't never put it on, I thought I wouldn't; muslin don't look half so nice after the new look gits off it."

So Lily waited all through her childhood. She watched her aunt start forth on her daily pilgrimage to the post-office with the confident expectation that one of these days she would return with a letter from Mr. Lennox. She regarded that sacred loaf of plum cake which was always kept on hand, and believed that he might appear to dispose of it at any moment. She had the sincerest faith that the time was coming when the herb medicine would quiet poor Fidella's tremulous head, when the sage tea would turn all the grey hairs gold, when the dew would make her yellow, seamy cheeks smooth and rosy, when she would put on that magnificent black silk or that dainty girlish muslin, and sit in the parlor with Mr. Lennox, and have the covers off the chairs and the mantel-piece blooming with flowers.

So the child and the woman lived happily with their beautiful chimera, until gradually she vanished into thin air for one of them.

Lily could not have told when the conviction first seized her that Mr. Lennox would never write, would never come; that Aunt Fidella's grey hair would never turn gold, nor faded cheeks be rosy; that her nodding head would nod until she was dead.

It was hardly until she was a woman herself, and had a lover of her own. It is possible that he gave her the final overthrow to her faith, that it had not entirely vanished before. She told him all about Mr. Lennox. She scarcely looked upon it as a secret to be kept now. She had ascertained that many people were acquainted with Fidella Almy's poor romance, except in its minor details.

So Lily told her lover. "Good Lord!" he said. "How long is it since he went?"

"Forty years now," said Lily. They were walking home from meeting one Sunday night.

"Forty years! Why, there ain't any more chance of hearing anything from him—Did he ever any folks here?"

"No. He was a clerk in a store here. He fell in love with Aunt Fidella, and went off to California to get some more money before he got married."

"Didn't anybody ever hear anything from him?"

"Aunt Fidella always said no; but Aunt Sally told me once that she knew well enough that he got married out there right after he went away; she said she heard it pretty straight. She never had any patience with Aunt Fidella. If she'd known half the things—Poor Aunt Fidella! She's gettin' worse lately. She goes to the post-office Sundays, I can't stop her. Every single Sunday, before meeting, down she goes."

"Why, she can't get in."

"I know; she just tries the door and comes back again."

"Why, dear, she's crazy, ain't she?"

"No, she ain't crazy; she's rational enough about everything else. All the way I can put it is, she's been pointed one way all her life, and going one way, and now she's getting nearer the end of the road, she's pointed sharper and she's going faster. She's had a hard time. I'm going to do all I can for her, anyhow. I'll help her get ready for Mr. Lennox as long as she lives."

Fidella took great delight in Lily's love affair. All that seemed to trouble her was the suspicion that the young man might leave town and the pair be brought to letter-writing.

"You mind, Lily," she would say, "don't you let Valentine settle anywhere else before you're married. If you do, you'll have to come to writin' letters, an' letters ain't to be depended on. There's sips. You'd get sick of waitin' the way I have. I ain't minded it much; but you're young, an' it would be different."

When Valentine Rowe did find employment in a town fifty miles away, poor Fidella seemed to have taken upon herself a double burden of suspense. In those days she was much too early for the mails, and waited, breathless, in the office for hours. When she got a letter for Lily she went home radiant; she seemed to forget her own disappointment.

Lily's letters came regularly for a long time. Valentine came to see her occasionally, too. Then, one day, when Lily expected a letter, it did not come. Her aunt dragged herself home feebly.

"It ain't come, Lily," said she. "The trouble's begun. You, poor child, how air you goin' to go through with it?"

Lily laughed. "Why, Aunt Fidella!" said she, "what are you worrying for? I haven't missed a couldn't write Sunday, that's all. It don't trouble me a mite."

However, even Lily was troubled at length. Weeks went by, and no letter came from Valentine after day. The girl had a brave despondent day began to shudder, watching her. She felt as if she were looking into her own destiny. She felt as if suddenly, one day, after Fidella had returned from her bootless journey.

Fidelia looked at her fiercely. "Lily Almy," said she, "whatever else you may do, don't you do that. Don't you force yourself on any feller, when there's a chance you ain't wanted. Don't you do anything that ain't modest. You'd better live the way I've done."

"He may be sick," said Lily, pitifully. "The folks he's with would write. Don't you write a word. I didn't write. An' maybe you'll hear to-morrow. I guess we'd better sweep the parlor to-day."

This new anxiety seemed to wear on Fidelia more than her own had done. She now talked more about Valentine Rowe than Mr. Lennox. Her faith in Lily's case did not seem as active as in her own.

"I wouldn't go down to the post-office, seems to me," Lily said one morning, Fidelia tottered going out the door; "you don't look fit to. I'll go by an' by."

"I can go well enough," said Fidelia, in her feeble, shrill voice. "You ain't goin' to begin as long as I can help it." And she crawled slowly out of the yard between the rows of dahlias, and down the road, her head nodding, her flabby black bag hanging at her side.

That was the last time she ever went to the post-office. That day she returned with her patient, disappointed heart for the last time.

When poor Fidelia Almy left her little house again she went riding, lying quietly, her nodding head still forever. She had passed out of that strong wind of Providence, which had tossed her so hard, into the eternal calm. She rode past the post-office on her way to the little green graveyard, and never knew nor cared whether there was a letter for her or not. But the bell tolled, and the summer air was soft and sweet, and the little funeral train passed by; and may be there was one among the fair, wide possibilities of heaven.

The first day on which Fidelia gave up going to the post-office, Lily began going in her stead. In the morning Fidelia looked up at her pitifully from her pillow, when she found that she could not rise.

"You'll have to go to the office, Lily," she whispered, "an' you'd better hurry, or you'll be late for the mail."

That was the constant cry to which the poor girl had to listen. It was always, "Hurry, hurry, or you'll be late for the mail."

Lily was a sweet, healthy young thing, but the contagion of this strained faith and expectation seemed to seize upon her in her daily tramps to the post-office. Sometimes, going along the road, she could hardly believe herself not to be the veritable Fidelia Almy, living life over again, beginning a new watch for her lost lover's letter. She put her hand to her head to see if it nodded. She kept whispering to herself, "Hurry, hurry, or you'll be late for the mail."

Fidelia lay ill a week before she died, and the week had nearly gone when Lily flew home from the office, one night, jubilant. She ran in to the sick woman. "O Aunt Fidelia!" she cried, "the letter's come!"

Fidelia had not raised herself for days, but she sat up now erect. All her failing forces seemed to gather themselves up and flash and beat, now the life-giving wind for them blew. The color came into her cheeks, her eyes shone triumphant. "Ansel's letter!"

Lily sobbed right out in the midst of her joy: "O poor Aunt Fidelia! poor Aunt Fidelia! I didn't think—I forgot. I was awful cruel. It's a letter from Valentine. He's been sick. The folks wrote, but they put on the wrong state—Massachusetts instead of Vermont. He's comin' right home and he's goin' to stay. He's goin' to settle here. Poor Aunt Fidelia! I didn't think."

Fidelia lay back on her pillow. "You, dear child," she whispered, "you won't have to." Valentine Rowe came the morning of the day on which she died. She eagerly demanded to see him.

"You're a-goin' to settle here, ain't you?" she asked him. "Don't you go away again before you're married; don't you do it. It ain't safe trustin' to letters; there's slips."

The young man looked down at her with tears in his honest eyes. "I'll settle here sure," said he. "Don't you worry. I'll promise you."

Fidelia looked up at him, and shut her eyes peacefully. "The dear child," she murmured.

Along the middle of the afternoon she called Lily. She wanted her to put her head down, so she could tell her something.

"Them dresses," she whispered, "upstairs. You'd better take 'em an' use 'em. You can make that white one over for a weddin' dress. An' you'd better take the covers off the things in the parlor, when you're married, an' eat the plum-cake."

Near sunset she called Lily again. "The evenin' mail," she whispered, "It's time for it. You'd better hurry, or you'll be late. I shouldn't be—a bit—surprised if the letter came to-night."

Lily broke down and cried. "O dear, poor aunt!" she sobbed. The awful pitifulness of it all seemed to overwhelm her suddenly. She could keep up no longer.

But Fidelia did not seem to notice it. She went on talking. "Ansel Lennox—promised he'd write when he went away, an' he said he'd come again. It's time for the evenin' mail. You'd better hurry, or you'll be late. He—promised he'd write, an'—she looked up at Lily suddenly; a look of triumphant resolution came into her poor face—"I ain't goin' to give it up yet."

Minnie May's Dep't.

Why Christmas Comes.

Hang up the holly and the mistletoe,
Build up the fires and let them redly glow,
Set out good cheer in all your happy homes,
For this is why the Christmas yearly comes.

Renew old friendships and forgive all wrongs,
For loving kindness to the time belongs,
Be generous to the poor and needy ones,
For this is why the blessed Christmas comes.
—Lillian Grey.

MY DEAR NIECES:—

During the holiday season when everyone is looking forward to fun and frolic, we shall discuss the possibilities of a real old fashioned New Year's festivity. It need not be held on that night, but any time during the two weeks of the New Year, and though some rules will be given you, they can be altered to suit almost any company or circumstances. You must choose the number of your guests according to the room you have and the number of your company; but twenty is a good many at once, and we will provide for that number. First let me impress upon you the importance of having your house in shining array, the windows bright, and curtains white; stoves polished and floors spotless; and from attic to cellar all should be neat and clean. All this will cost a little time and trouble, but you are well repaid by the bright, cheery aspect of your home. Have all the fires warm and glowing, for warmth imparts such a sense of hospitality. Be ready dressed in your best before the hour of your guests' arrival, and put every other feeling but that of enjoyment far from you for that night. If you have a piano you have the enjoyment of your guests secured, but if not you must secure music.

Now we have attended to all that is necessary in this part of the house, unless you will decorate it with evergreens, and what so pretty or festive looking as wreaths of hemlock and cedar everywhere. Your supper may be just what you can afford—sandwiches and coffee only—but let them be good and abundant, and the coffee hot, sweet and strong; or you can provide a substantial supper for your guests at a very little trouble and cost. All can be cold, cooked before the day, and nicely decorated with green leaves, or the tender tops of turnips or cabbages as they sprout in the root cellar. You can provide salad if you like of celery, chicken or beet root, and so many sweet dishes can be made by my bright girls from the delicious cream that only a farm home can supply, that there need not be any difficulty to select them. Lay your table with a clean white cloth, and put the dishes tastefully upon it, the largest at each end, and in the centre you might put a plain fruit cake—the recipe for making and icing was given in the last number of the *Advocate*. This centre piece can be made to look very gala by dipping small sprigs of cedar in gum water, then rolling in fine sugar and drying. Arrange these all around the cake, and a piece out of the top of it, or a small flag may be placed there. You can make the flags from colored tissue paper. Believe me, a plain supper, well cooked, will be much better relished than a more elaborate one badly done. A cup of hot coffee served to each guest upon their arrival will just begin the evening, and be relished after a long drive perhaps. If you serve only refreshments the sandwiches can be placed upon large plates with a white cloth beneath, and this will make them look very appetizing. I am only offering temperance beverages, as there is no need of anything else among my happy young people.

MINNIE MAY.

Kitchen Hints.

Brooms before using should be dipped in hot suds and hung up to dry by the handle; treated thus they wear longer.

Granite ware can be cleaned of anything sticking to it by scouring with coarse salt.

A special saucepan should be kept for boiling onions; if obliged to use another, fill with hot water and wood ashes to cleanse from the smell.

Brush out the flues of your cooking stove at least once a month. On the morning of your scrubbing day is the best.

Do not use old pieces of shirt or corsets for dishcloths. Unbleached muslin is so cheap and will last so long. There is a suggestion of nativeness about using old clothing about your kitchen, and except for floor cloths should not be done.

Butter cloths should be of new cloth. A piece of old shirt around a butter print is enough to spoil the sale of it. Many a woman has turned in disgust from it. Soap and water will not wash away memories.

Try a spoonful of sugar in your pancakes before cooking, and you will have an agreeable variety.

Peel apples before baking them; there is not half so much waste, and they look better.

Cheese that has become too hard to use, can be grated and put between slices of bread and butter for sandwiches for tea.

Bread need not be wasted if too hard to use; stew apples and sweeten; put a layer of apples and one of bread; another of apples until the dish is full; put some little bits of butter on the top and bake for one hour; after pouring one cup of sweet milk over it; a wholesome and delicious pudding. Serve with cream.

When you use the white stalks of celery, tie up the green part and hang in a cool place to flavor stew or soup with.

Baked quinces are delicious served with cream and sugar.

Treat the family to coffee, or cocoa, for a variety at breakfast.

Cold meat, thinly sliced, looks far more tempting if a few sprigs of parsley or celery tops are put around the edge of the dish.

Parsnips fried are good with roast meat; cut in slices long ways and fry in hot lard.

Vary the shape of your loaves of bread and they will taste nicer. Make them in twists, or rolls, or bake in long, fancy cake pans. When they come out of the oven, brush over with milk and sugar or butter.

Save all your brown paper; use it for setting pots and kettles upon the painted dresser, or wiping the face of smoothing irons upon, or putting under and over a pan of cake in the oven to prevent scorching, or over a roast of beef or poultry; and when dressing poultry for the table do it on a big sheet of brown paper.

See that your kitchen stovepipes and chimney are clean; it will save you the discomfort of smoke, a slow oven, or, perhaps, the fright of a blaze out some breezy morning.

Throw a liberal supply of fresh lime into closets and sinks, or drains; or common salt is a very good purifier, and boiling water will carry away any grease that may accumulate in the pipe. If the pipe does choke, light a roll of newspaper and hold the blaze under the pipe until it heats it and the grease will go through with a rush; follow it with a deluge of boiling water and soda, so as to carry it away into the drain.

Treat the family to stewed celery occasionally; it is a little more trouble than ordinary vegetables, but it is a delicious relish with beefsteak. Stewed cranberries are good also.

The Challenge of Thor.

"I am the God Thor!
I am the War God!
I am the Thunderer!
Here in my Northland,
My fastness and fortress,
Reign I forever!"

Such is the nature of man that some form of belief relating to his being and future state are essential to him.

The Christian doctrines prevailed in the south of Europe about the year fifty, and spread into Britain about the middle of the second century; from thence they extended over the north of Europe from the fifth to the twelfth century. Thor and Odin were the principle gods of the Norseman, who were a wild and quarrelsome race of warriors. In 826 Lewis the Pious, Emperor of Germany, sent "Ausgar," called the "Apostle of the North," to Denmark to preach the Gospel, and confirm and promote the faith there and spread it more widely. Ausgar obtained great influence over Horick, King of Denmark, from whom he obtained a letter of introduction to Olaf, King of Sweden. Horick wrote to the effect that "He had never in his life seen so good a man; that he never found one so trustworthy; and since he had found so much goodness in him, he had permitted him to undertake what he wished in reference to Christianity in his own land, and he hoped that King Olaf would also permit him to publish the Gospel in his kingdom." When Ausgar arrived in Sweden he found the Pagans greatly opposed to him. He invited the King to an entertainment, and made him a great many presents, and so won him over to the cause that he was ready to do anything to promote it.

The following lines by Longfellow describe the incident portrayed in the illustration:—

"There in the temple, carved
in wood,
The image of great Odin
stood,

And other gods, Thor supreme among them!
King Olaf smote them with the blade
Of his huge war-axe, gold inlaid,
And downward shattered to the pavement flung
them.
King Olaf from the doorway spoke:
'Choose ye between two things, my folk;
'To be baptized or given up to slaughter!'
In their temples Thor and Odin
Lay in dust and ashes trodden,
As King Olaf onward sweeping
Preached the Gospel with his sword."

Christianity is the grandest and most deeply interesting subject that can engage our atten-

tion. Recollections of its antiquity go back to the creation of the world. It has dispelled the dark shades of heathenism, and is the most humane, the most favorable to liberty, and to the arts and sciences that ever existed. Wherever Christianity has gone she has carried civilization with her, and elevated the people to refinement, intelligence and happiness.

A relic of the old paganism still remains with us in the names of the days of the week—

"Over the whole earth
Still is it Thor's-day."

The Brotherless Girl.

The girl without a brother is especially to be pitied, writes Ruth Ashmore in the December Ladies' Home Journal. She is the girl who is never certain of getting the pleasures of life unless she is very attractive. Of course, she has no brother who she is certain will take her everywhere; she is apt to get a little bit vain, for she has no brother to tell her, as only a brother will, of her faults and mistakes. It is only the somewhat doubtful tact of a brother that announces "I wouldn't walk up street with you in that frock," and the girl whose brother says this to her may be certain that he is only

expressing the opinion of other girls' brothers. He may do it in the most gentle way, but he does tell the truth, and if you ask him why paying a visit to another girl is more desirable than to one you know, he will sit down and look at you, and then he will say: "Well, you see, it is just this way: From the time you get there she is a nice girl who gives you a pleasant welcome and yet doesn't gush over you. She is entertaining, and yet she has a fashion of putting down nasty gossip or silly talk among whoever is there. She is a restful sort of a girl, she is not always wanting to do something that tires you half to death, and where the game isn't worth the candle, and when she says good-bye to you, you feel certain that she is pretty glad you came, and that she will be glad to see you another time, but that she doesn't look upon you as the one and only man in the world;" that is the kind of a description that the brotherless girl can't get. Then she doesn't hear of men that a fellow would rather not have his sister go with. Probably the wisest course for her to pursue is for her to choose as her most intimate friend a girl who has a wise brother; then she can reap the benefit of his counsel.

AMOUNT OF SLEEP REQUIRED.—Dr. Cold, a German specialist, gives us his opinions concerning the amount of sleep required at different periods of life as follows:—"A new-born child finds its want of sleep completely satisfied; when in good health it sleeps almost during the whole of the first weeks of its life, and it wakes up only for the purpose of nursing. In the first years people are very much disposed to let children sleep as much as they like; the time being that of tranquility for the parents. But from six or seven years, which is the time for going to school, things are reversed. When ten or twelve years old, the child has no more than eight or nine hours' sleep, while it needs at least ten to eleven hours, and the more the child progresses in age the more its resting time is curtailed. The author is convinced that an adolescent up to twenty years of age requires nine hours of sleep, and that even an adult still needs eight or nine hours. If the time devoted to sleep is insufficient, the brain has not a sufficient repose, ceases to perform its functions in a normal way. Exhaustion, excitability, intellectual troubles take gradually the place of the love of work, of general ease and of the spirit of initiative."



THE CHALLENGE OF THOR.

Odds and Ends.

Venezuela has 56 holidays. On these occasions the people clean out their stores, indulge in chicken fights and other amusements of tropical climates.

An average hive of bees will contain 30,000 workers, all of the female sex.

A stick of celery rubbed on the hands after peeling onions will take away the odor.

A doctor says that one person in nine is left-handed, but the left hand can be trained to iron, bake, whip eggs, in fact do anything that the right hand can.

But from six or seven years, which is the time for going to school, things are reversed. When ten or twelve years old, the child has no more than eight or nine hours' sleep, while it needs at least ten to eleven hours, and the more the child progresses in age the more its resting time is curtailed. The author is convinced that an adolescent up to twenty years of age requires nine hours of sleep, and that even an adult still needs eight or nine hours. If the time devoted to sleep is insufficient, the brain has not a sufficient repose, ceases to perform its functions in a normal way. Exhaustion, excitability, intellectual troubles take gradually the place of the love of work, of general ease and of the spirit of initiative."

PRIZE ESSAY.

The Lights and Shadows of Country Life.

BY MISS FLORENCE B. M. COLLIER, ORANGEVILLE, ONT.

Were we permitted to carefully examine the picture of country life portrayed by the imagination of each individual, whose own peculiar tastes and opinions lend a coloring to the whole, we should frequently behold a picture dark and gloomy, and a prospect distasteful and repulsive.

But all are not equally uninviting, for we might find many who would willingly exchange their city life for a more retiring and quiet one.

The lights and shadows of a country life vary in particulars, according to the wealth and industry of the individual. In Canada the typical occupation of the countryman is farming; in England we have the wealthier and more scientific agriculturist; in Europe and Asia we have the fruit and spice grower, the vine dresser and the shepherd. However, though the countryman's employment differs according to the nation in which he lives, and his position in the trade world is important or unimportant according as he is poor or wealthy, peasant or farmer, nevertheless there are common advantages and drawbacks belonging to country life as seen in the old or new world.

Let us in the first place consider his daily employment. Is it not invariably peaceful and quiet? Free from the noise and bustle of a city life, where the rolling of carts in the street, the ceaseless tramp of the busy multitude, the buzzing and whirring of factories and mills, almost drive us wild, and make us long for a secluded nook into which we may creep to escape from the turbulent crowd, and commune with our own thoughts. Fresh air, out-door work, and plenty of bodily exercise, are looked upon as some of the greatest benefits of rural life. Ought we not, then, to value that path in life which will most fully develop man's bodily health and strength?

We have spoken of pure air, healthy exercise and quiet surroundings as advantages, all tending to strengthen and bring to perfection man's physical nature; but that is, perhaps, the least important element of man's person; for there is the intellect needing careful and diligent training that it may efficiently perform that work for which it was designed. But far before even this comes the soul—God's Kingdom. To purify and elevate this most valued part of our being is the chief duty of every human creature; and the lights and shadows that pass across that creature's soul are the lights and shadows of the human life.

What does a life in the country do for our mental qualities? We have seen its benefits to the physical man, but what are they to the intellectual? A fine constitution, a strong, vigorous and symmetrical body, backing a healthy and active mind, is a human creature only half developed. Here the townsman will declare the countryman must necessarily be deficient; "for," he will say, "where are his books, his schools, his society, to cultivate his mind?" But stop! hasty citizen; from what does the delicately wrought mind obtain its nourishment? From what source does the poet derive his poetry? What subtle charms and strange influences imbue the poet's mind with dreamy pictures, weird music and odd fancies that pass through his busy brain and lend a magical touch

to his poetry? It is pure healthy nature, the poet's companion; it is nature with whom the refined mind ever delights to associate; it is God's own handiwork, displaying in its every mood and aspect the Creator's wonderful skill. And who has a better chance to study the beauty and picturesqueness of nature than the rustic? Instead of the profane language caught in a passing word, the ill-natured remarks, the noisy laughter, the dust, mud and dirt, that daily greet the ears and eyes of the business man as he hurries to his work, there is the delicious notes of the little bird pouring forth sweet melody from a neighboring elm, the gentle lowing of the cattle, the busy bee humming in the scented clover, the bright flower shedding its fragrance abroad, the soft bubbling of the brook as it rolls merrily over the pebbles in its tiny bed, with the glorious sun overhead pouring down a flood of warmth and heat on the beautiful scene below.

Oh! if there is any poetry in a man's nature will not this daily companionship with things pure and beautiful nourish and strengthen it? Will not our thoughts be raised to contemplate the Maker of this glorious scene around us. But you will say, this is not all; there are schools, books, colleges, libraries and society needed to bring man's intellect to perfection.

Certainly; but cannot a country child obtain a public school training in the country? In our highly favored nation he can, and if he has not sufficient money to obtain a higher training in a college he can surely get books, and himself assist nature in bringing mental abilities nearer to perfection.

Again, you will say newspapers are delayed. Books can only be procured at long intervals, and the world will get ahead of this self-educated man. But newspapers seldom obtained will be carefully read, and you will very often find that a farmer who only gets a paper once a week will know much more about the world's doings than the man who hastily glances over his daily paper before beginning his work.

So it is with books; they are diligently read, and reread; they become wholesome food to the mind, and instead of hurriedly devouring their contents, to read the latest novel, we read slowly and thoughtfully, gradually assimilating our knowledge and making it a part of ourselves.

As for society I do not think we need lament its absence, for the countryman may create a better, purer and holier atmosphere around his own hearth than was ever breathed in the highest literary and most fashionable circles. Society has its good and evil influences, both of which the countryman escapes. Nevertheless, were he ever living in the town, and possessing the same abilities, he might still be unable to gain that right of mingling in cultured society, which is so zealously guarded. And last of all let us remember that the countryman, whatever nation be his home, holds by no means an inferior position in the commercial world. The farmer is Canada's most valuable workman, the peasant of European nations is a steady, industrious and important workman. The fruit grower and vine dresser fill important places in the crowd of France's busy workers, as well as among those of other nations. Then comes the shepherd of the east, the mountain dweller of Switzerland; their position in the world is, perhaps, not very high, but on what picture does the mind love to dwell more than on that of the wild scenery of a Swiss peasant's home, or the peaceful night scene of an eastern shepherd's watch. Thus, while one occupation towers far above the others in the nation's trade and commerce, the other touches the chords of a human heart, delights the mind with romantic fancies, and soothes the soul with peaceful and holy thoughts suggested by the surroundings of a humble and solitary workman's calling.

Thus after earnest consideration of the lights and shadows which cast bright or dark rays across a country life, we are led to the conclusion that a man with moderate wealth, and a fair share of natural abilities, will develop a stronger and more vigorous manhood were his abode in the country, than if it were in a town or city. In the latter his manners might be more polished, and his mental activities become sharper, but I am sure he could not unfold so pure and noble a soul.

Uncle Tom's Department.

MY DEAR NIECES AND NEPHEWS:—

A new year begun. A new book of three hundred and sixty-six pages, all clean and white, lies open before you. On it the title page is written in indelible characters—1892. In some of my young friends' diaries for the past year there are marred and blotted pages, and some cut out altogether, as if the writer had grown ashamed of what was therein written. There are records, too, of other days, which are simply regrets for misspent time, and longings expressed for something better, truer and nobler, to satisfy the heart. These are the wandering, if not the wanton, desires which like tongues of flame in the evening firelight reach out into the unknown, the quality of which soon affects my boys and girls, and goes so far in the building of character for after years.

It is these desires which take a young man from a home of luxury to bear the brunt of the hardest of lives in the outposts of our country—this desire which takes possession of a boy, and makes him, if he really love the sea, submit to insults, do menial work to be, indeed, a slave without a murmur, if he be but allowed a home on the ocean wave. It is this which makes the earnest student laugh at impossibilities in the lack of money to educate him, and to work on, hope on, pray on, till his end is accomplished—his goal reached.

Nor is this lacking in the training of my nieces. Where there are several girls in the family the liking for dressmaking or millinery, for nursing or for studying, will, with patient watering and airing of the project, often bring it to pass.

It is a sad thought to many parents the amount of money spent on the education, musical or scholastic, of their children, with such small returns. Years of practice in music, and numbers of lessons, spent on a boy who by his own voluntary will lives where no instrument is at command, or, in the case of so many of our elder nieces who have married, and allowed the household duties to crowd completely out the practice which one requires to keep up if she play at all.

But we have wandered far from our new book. Let me see, we had it named, but every page was yet white and clean. What the future holds we know not. What changes have been made in the past year! Some who then were so bright and clever and beloved—who seemed the most needed, and the least likely to be taken away, have gone, and already, like the stone that sinks in the water, the place is filled.

On this January evening as you look at the leafless trees in their sober winter attire, do you think, my nieces and nephews, how there, hidden from view, the preparations for the coming spring are going on. Let us learn the lesson. In these long, quiet winter evenings, when the ice has bound lake and river, when the robe of white is over earth, when, aside from school lessons, a little feeding of stock or splitting kindling wood, snow-balls, sleigh riding, skating, or playing shinty, there is little to take up the attention of my farm boys and girls, so, like the trees, be quietly busy making preparation of mind—food that will carry you through the coming summer, and through your after life.

Your loving

UNCLE TOM.

P. S.—I am sure you will all be looking to see who were the lucky prize winners as soon as the *Advocate* arrives this month, although you might guess, I fancy, who have worked faithfully all through the year. For puzzles—1st, Miss Ada Armand; 2nd, Henry Reeve; and 3rd, Fair Brother; and for answers, 1st, Henry Reeve; 2nd, Miss Ada Armand; 3rd, Miss Mattie Wood.

worth; 4th, I. Irvine Devitt. Now, these names must be familiar to you all, for they have worked earnestly for prizes for years, and, of course, by this time ought to be good at puzzling. Now, I propose to make a change, and for this year we will exclude all who won prizes last year, though we still hope to hear from them; but, remember, none of them are to compete for prizes. This will give all new comers a chance, and I hope there will be lots of them.

For best original puzzles, I offer: 1st, \$2.00; 2nd, \$1.50; 3rd, 75 cts. For the most correct answers: 1st, \$1.00; 2nd, 75 cts.; 3rd, 50 cts.; 4th, 25 cts. Answers must accompany all puzzles. Write on one side of the paper only; all correspondence to be in our office not later than the 18th of each month. Now, I hope to hear from a great number of new nephews and nieces, whom we shall gladly welcome to our happy circle.

I think you will agree with me that children's stories are quite played out, or run out, I don't know which; however, if anyone has something very interesting I shall try and find a corner for it. Your loving
UNCLE TOM.

Puzzles.

1—DOUBLE LETTER ENIGMA.

I'm in the "soft and fleecy snow"
That falls against the pane;
I'm in the "ocean billows", too—
I travel o'er the main.

You'll find me in a "lady's fan",
Upon a summer's day;
I also stay with "gentlemen"
She meets upon the way.

On "New Year's" day I doff my hat
To ladies and to gents;
And everyone who guesses me
Will get just fifty cents.

FAIR BROTHER.

2—A GAME OF NATIONS.

What nation has reached the highest point?
Which crowns both kings and queens?
What nation shows the greatest light?
Which but a little means?
What nation has a purple firm?
What nation is a evil scheme?
What nation clears all doubt away?
What nation ends this little theme?

ADA ARMAND.

3—NUMERICAL.

My 1, 2, 3, 4 you'll find
Travelling by rail will bring to your mind.
If you are always my 5, 6, 7, 8
The doctor you'll never have cause to hate.
My whole's a word that's hard to say.
I'll not say it, dear cousins, but *Au Revoir*.

HENRY REEVE.

4—NUMERICAL ENIGMA.

My 9, 12, 13, 15, 5 is an Anglo-Saxon title.
My 6, 2, 17, 16, 7 is a carousal.
My 1, 8, 4, 11, 18, 14 to make fat.
Total is an old adage.

ADA ARMAND.

5—ILLUSTRATED REBUS.



6—CHARADE.

Dear friends and puzzlers, one and all,
I'll take **TOTAL** for my text;
And preach a sermon? did you say.
Ah! **FIRST**; I feel perplexed.

I'll something out of nothing make.
A tale to you I'll tell;
'Tis older far than Noah's ark,
And lived ere Adam fell.

I was long before time began;
I travelled on through space;
I had no place to lay my head.
My tracks I'll now retrace.

The miser covets all but me,
And Satan passed me by;
And now perchance you'll say to me,
This **LAST** is in your eye.

But if this puzzle you read aright,
With me you'll all agree;
I've something out of nothing made,
And had a jubilee.

FAIR BROTHER.

Answers to November Puzzles.

1. Plum pudding, roast turkey. 2. Make someone else happy. 3. Fun which gives pain to others is a very mean kind of sport. 4. "Deceit for the deceiver is fair dealing." 5. Tour.

Names of those who have Sent Correct Answers to Dec. Puzzles.

Ada Armand, I. Irvine Devitt, Henry Reeve, Elsie Moore, Geo. H. Cowan, Frank Somerville, Minnie A. Kirkpatrick, Jessie Allison, Gus. Elson, Jack Wyld, R. W. Cooper.

NEW ADVERTISEMENTS.

Hereford Cattle and Chester White Pigs—Jos. Cairns, Camlachie, Ont.
For Sale—Shorthorns and Leicester—James Gardhouse & Sons, Highfield, Ont.

Shorthorns and Improved Large Yorkshires—Wm. Cowan, V. S., Galt, Ont.
Barred Plymouth Rocks, Fruit Plants, etc.—C. W. Eckardt, Hodgeville.

Imp. Clydesdales—T. W. Evans, Yelverton, Ont.
DeLaval Cream Separators—F. Wilson, Montreal.
Two-Horse Threshing Machines—M. Moody & Sons, Terrebonne, Que.

Auction Sale—Shorthorns, Shropshires, Shetland Ponies, Fat and Grade Cattle—R. Gibson, Delaware, Ont.

Auction Sale—Reg. Holstein Cattle—John Leys, 18 Court St., Toronto.

Mail Contract—Post Office Inspector's Office, London
The Grange Wholesale Supply Co., Toronto, Ont.
Fertilizers—W. A. Freeman, Hamilton, Ont.

Belvedere Jerseys—Mrs. E. M. Jones, Brockville.
For Sale—Shorthorns, Leicester, Scotchdowns, etc.—E. Jeffs & Son, Bondhead, Ont.

Cream Separators—Dominion Dairy Supply Co. Quebec, Que.
Champion Evaporator—G. H. Grim Mfg Co., Hudson, Ohio.

Cross-Cut Saws, etc.—S. Mills & Co., Hamilton, Ont.
Farm Implements, Harrows, etc.—J. F. Millar & Son, Morrisburg, Ont.

Improved Yorkshire Pigs and Scotch Shorthorns—J. E. Brethour, Burford, Ont.

Shorthorns, Shrops., Berks., Ayrshires and Jerseys—W. C. Edwards & Co., Rockland.

Shorthorns, Berkshire pigs and Oxford-down sheep—Henry Arkell, Arkell, Ont.

Clydesdales, etc.—A. K. Tegart, Tottenham, Ont.
Sale of Entire Herd of Shorthorns—R. R. Sangster, Lancaster.

Ohio Improved Chester White Swine and Dorset Horned Sheep—R. H. Harding, Thorndale.

Shorthorns—M. J. Ireland, Copetown, Ont.
Impregnators and Diators—C. C. Lyford, Minneapolis, Minn.

Improved Large Yorkshires—Levi Pike, Locust Hill, Ont.
Shorthorns—Imp. Yorks. and Berkshires—J. G. Mair, Howick.

Hillhurst Hackneys—M. H. Cochrane, Hillhurst, P. Q., Canadian Pacific Railway.
Shropshires—J. & J. Smith, Paris, Ont.

JERSEY HEIFER!

Handsome, solid fawn color; 2 years old; due to calve D.C. 25th to 1st prize bull Toronto Exhibition. Rich butter stock. Address,
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IMPORTANT AUCTION STOCK SALE

—OF—

**HIGH-BRED - SHORTHORN - CATTLE,
SHROPSHIRE SHEEP, SHETLAND PONIES,
FAT AND GRADE CATTLE.**

Mr. R. Gibson, Delaware, Ontario, will sell by Auction at his farm, Delaware, on

Wednesday, Jan. 27th,

About Forty head of Bates Shorthorns, bred for beef and milk; imported Shropshire Ewes and Lambs; Shetland Ponies, etc.

The above are well worthy the attention of intending purchasers, as they are the best of their respective breeds.

Liberal terms. Write for Catalogue.

Delaware can be reached from following points:
London, 12 miles; Komoka, 3 miles (G. T. R., where trains will be met on morning of Sale); Melbourne, 6 miles (M. C. R.); Caradoc Station, 4 miles (C. P. R.)
313-a-OM

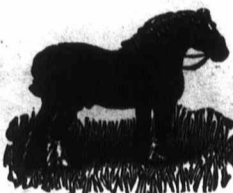
STALLIONS BY AUCTION!

**CLYDESDALES, SHIRES, PERCHERONS,
HACKNEYS AND THOROUGHBREDS**
(IMPORTED & CANADIAN BRED),
**FEBRUARY 10th, 11th and 12th,
LONDON, CANADA.**

Also about 300 Mares—geldings and fillies—of all classes direct from the breeders. Catalogue of stallions issued Jan. 20th; can be had on application to **DOUGLAS H. GRAND,**
Manager Breeders' Sale Association,
179 Dundas-St., LONDON.

The world-famed imported Hackney stallion, "Firefly," will be sold at this sale. 313-a-OM

STOCK FOR SALE.



**CLYDESDALES
For Sale.**

First Prize-winning Stallions, the get of Darnley (222) and Lork Erskine (1744).

JAS. HENDERSON,
302-y-OM BELTON, ONT.

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FASHIONABLY BRED CLYDESDALES



We always have on hand a large number of imported and home-bred Clydesdales (male and female) of good breeding and quality, which we will sell at honest prices. Our specialties are good and well-bred horses and square dealing. Come and see us or write for particulars.

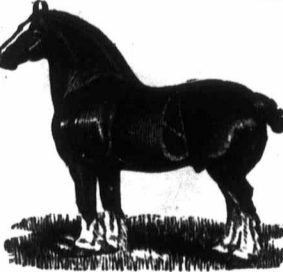
is at the head of our stud.
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**CLYDES, SHIRES
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MR. FRANK RUSSELL, Mount Forest, Ont., offers for sale at low figures and on easy terms choice stallions of the above breeds; also pedigreed Improved Large Yorkshire Pigs, at \$15.00 per pair. 310-y

**Prize-Winning Clydesdales
FOR SALE.**



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303-y-O
SPRINGVILLE P. O.,
Cavanville Station, C. P. R.**

Clydesdales, Shropshires and Berkshires.

Choice Registered Canadian-bred Clydesdale Colts and Fillies. Shropshires, Imported and Home-bred of the very best strains. Berkshires, bred from Snell Bros.' stock. Prices right. Always glad to show stock. T. M. WHITESIDE, Ellesmere P. O., Ont., Agincourt Station on C. P. R. and Midland Div. G. T. R., 1 mile. 304-y-OM

ADVERTISE IN THE ADVOCATE.

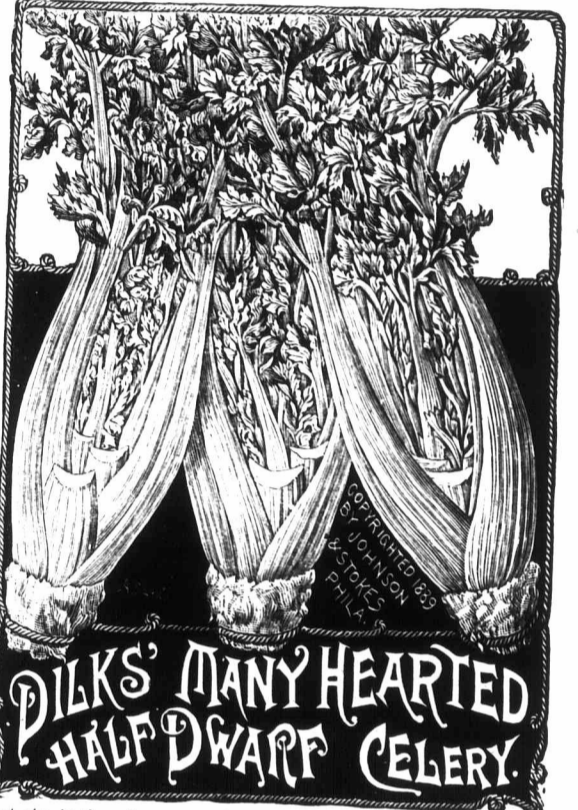
OUR GRAND SEED OFFER!

Vegetable Seeds.



THE OREGON LONG KEEPER ONION.

We will send the "Farmer's Advocate" for one year and twenty packages of seeds described below for \$2.00, or we will send the twenty packages post-paid to the address of the person sending us the names of two new subscribers and \$2.00. These seeds are put up for us by John S. Pearce & Co., seedsmen, of London, and were selected from among the sorts that have proved most satisfactory when tested on their trial grounds. They are not CHEAP SEEDS, but in every case are the choicest varieties selected from the best stock, and if given proper attention will give entire satisfaction. We hope every one of our old subscribers will take advantage of this offer and send us the required new names. This selection would cost in the regular way \$1.50; it is put up for our exclusive use as a premium to our subscribers, and cannot be procured in any other way.



DILKE'S MANY HEARTED HALF DWARF CELERY.

IMP. LONG BLOOD BEET—A favorite with all, and really the best all-round beet in cultivation; skin dark; flesh nearly black; fine quality and excellent flavor.

THE GOLDEN EYE WAX BEAN.—Has already passed the ordeal of public opinion, and earned for itself the first place among wax beans. It is early, a vigorous grower, and yields a great profusion of tender, succulent pods of a beautiful waxy appearance; pods long, very brittle, of a rich golden color, and entirely stringless and of excellent flavor.

THE SCARLET MODEL CARROT is, without a doubt, the finest stump-rooted variety in the market. The roots, which are about six inches long, regular in shape, thick at the shoulder, skin smooth and even, of a bright scarlet color; flesh sweet and of fine flavor.



THE ROSEDALE LETTUCE.

CAULIFLOWER, ERFURT (first quality)—There is nothing so annoying as to go to the trouble of raising plants and then have them fail to head. Having this fact in view, we have imported a strain of Cauliflower from Denmark, its native home, which we have found to have the following good qualities:—First, it is the earliest of all Cauliflowers; second, under the best conditions of an ordinarily favorable season, nearly every plant will form a perfect snow-white head, averaging nine inches in diameter.

DILKE'S MANY-HEARTED CELERY is very distinct in appearance, being much stouter, thicker and heavier near the root than any other variety. This celery has never shown a burnt or dry leaf, or soft or spongy stalk in the most trying seasons. Excellent keeping quality.

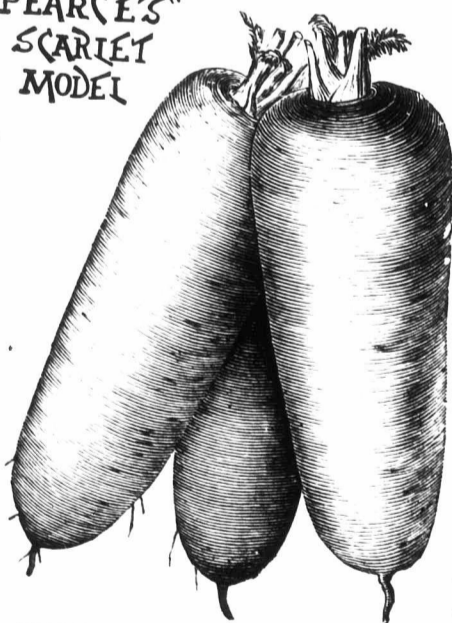
THE ROSEDALE LETTUCE has proved one of the best all-round Lettuces in the market today. Its shape is very distinct, heading up like a pointed cabbage, and almost as solid; of a beautiful light green shade, almost white; tender, crisp, and of a rich, buttery flavor.

THE OSAGE MUSK MELON is a very early variety, of large size, flesh deep and thick; salmon color; very productive and excellent keeper. It is 10 days earlier than any other variety.

THE FORDHOOK WATER MELON has been grown side by side with all other early sorts, and has proved itself to be the earliest of all. The form is nearly round, the average weight being about fifteen pounds each.

THE OREGON ONION is a selected strain of the Yellow Globe Danvers, being fully as large and by far a better keeper than that favorite variety. The introducer says:—"My stock of the Oregon Long Keeper is a selection made twenty years ago from the best Buxton stock, and by selecting each year the largest and finest onions for seed, I now have an onion that will keep in our climate until April, and sometimes as long as May, and I will guarantee my onion to keep longer than any other strain of Yellow Danvers Onion grown in America." In size, color and shape it is identical with our strain of Yellow Globe Danvers (private stock seed) but longer keepers. We found the past season in our test of this variety that it was the truest type in our large test of onions.

PEARCE'S SCARLET MODEL



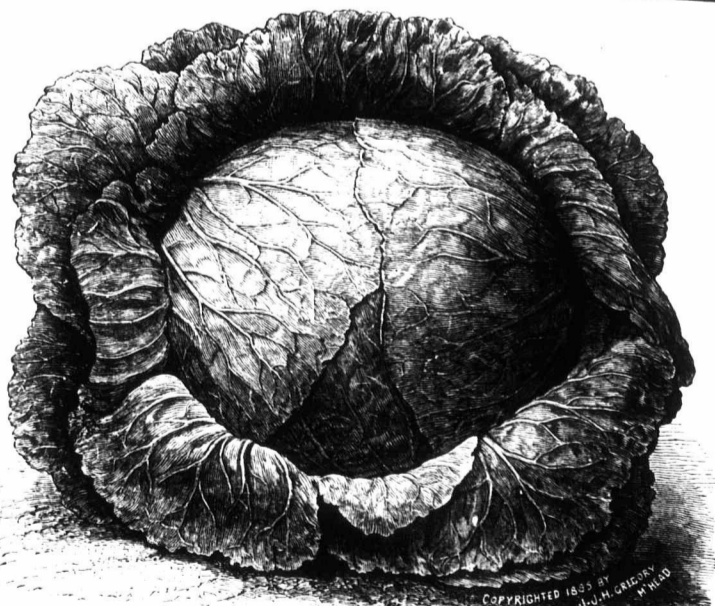
SCARLET MODEL CARROT.

THE RUBY KING PEPPER—The finest exhibition variety grown, being of a beautiful shape, enormous size, of a bright ruby-red color, and very productive.

THE LONDON MARKET CUCUMBER was first introduced a year ago, and we find it to give good satisfaction. It is very smooth, prolific, of good flavor and very long; is a very desirable variety for table use.

IMPROVED HOLLOW CROWN PARSNIP.—A carefully selected strain of this well-known Parsnip. The roots do not grow as long as the common Hollow Crowned, but are of greater diameter and more easily gathered.

THE SCARLET BUTTON RADISH is one of the earliest foreign varieties in cultivation, being ready to pull within three weeks after sowing. It is of round form, short leaves, with deep scarlet skin and white flesh. For crispness and tenderness it surpasses all other strains of Scarlet Turnip Radish.



ALL SEASONS CABBAGE.

THE ALL SEASONS CABBAGE derives its name because it is just as good for late market or to keep over winter as it is for the early market. Many market gardeners say that they prefer it to the Henderson Early Summer, as it is just as early and grows a third larger.

CORN Talbot's First and Best or White Cory—One of the earliest of all Sweet Corn. The cob and kernels are white as any other variety of sweet corn. This is a White Cory obtained by selecting nothing but the whitest corn and cobs.

VEGETABLE SEEDS.—(CONTINUED.)

BUSH VEGETABLE MARROW SQUASH is a decided improvement on the old trailing Vegetable Marrow. The fruit is larger, handsomer, more ribbed or fluted than the ordinary kind. It is very prolific.

THE WHITE EGG TURNIP.—A quick grower; thin skin, sweet and delicious flavor, with grain as firm and hard as the Swedish varieties.

BISHOP'S LONG POD PEAS is a well-known English variety; good stiff straw, about two feet high; pods long, round, and well filled with from eight to ten large, plump peas. A first-class variety.

THE ATLANTIC PRIZE TOMATO is one of the earliest of all tomatoes. The vines grow strong, stiff and very rapidly, setting the crown fruit when young. The fruit is borne in immense clusters.

KING OF THE MAMMOTH PUMPKIN, also called Genuine Mammoth, Large Yellow Mammoth, True Potiron, Mammoth \$50 Pumpkin and Jumbo Pumpkin.—The great interest taken in growing the largest Pumpkin, and the great demand for the seed explains the reasons for the multitude of names given to it, as no other Pumpkin ever introduced has reached such enormous weights and been awarded as many prizes.

OUR GRAND SEED OFFER!

FLOWER SEEDS.

We will send the "Farmer's Advocate" for one year and twenty packages of seeds described below for \$2, or we will send the twenty packages post-paid to the address of the person sending us the names of two new subscribers and \$2. These seeds are put up for us by Messrs. John S. Pearce & Co., Seedsmen, of London, and were selected from among the sorts that have proved most satisfactory when tested on their trial grounds. They are not CHEAP SEEDS, but in every case are the choicest varieties selected from the best stock, and if given proper attention will give entire satisfaction. We hope every one of our old subscribers will take advantage of this offer and send us the required new names. This selection would cost in the regular way \$1.50; it is put up for our exclusive use as a premium to our subscribers and cannot be procured in any other way.



BALSAM.



POPPY.

ASTER—Mixed Varieties.—For beauty and variety of habit, form and color the Aster stands unrivalled, and with every lover of floral beauty it is a favorite.

BALSAM (Lady Slippers)—Rose-Flowered Double Mixed.—Old favorites with every one owing to their handsome double flowers, brilliant color and stately growth.

CANDYTUFT (Mixed Colors).—Yields an abundance of fragrant flowers throughout the whole season; deserves to be cultivated in every garden.

DOUBLE DAISY—Fine Mixed.—One of the prettiest dwarf hardy perennials in cultivation. It flowers the first year from seed.

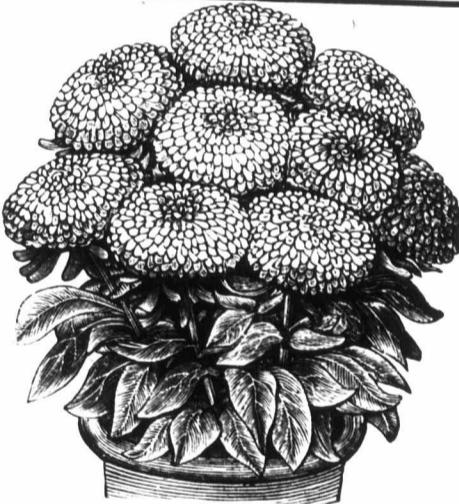


ZINNIA.

DIANTHUS CHINENSIS, fl. pl. (Double Indian Pink)—A magnificent genus, which embraces some of the most popular flowers in cultivation. Their rich and varied colors in beds or masses are remarkably attractive.

HELICHRYSUM (Everlasting flowers).—They are generally cultivated for their rich and varied colored flowers, which are desirable for bouquets, &c. Easily cultivated.

GOSETIA—Mixed Colors.—Ornamental hardy annual, two feet high; flowering in a great many shades; grows in any soil.



ASTER.

MARIGOLD—Mixed Colors.—Popular hardy annual; border plants of magnificent effect, varying in height, form and color of flower.

MIGNONETTE—Large Flowering (Reseda Odorata).—The delicious fragrance of the Mignonette makes it indispensable for bouquets and cutting. Sow seed early in the garden; will bloom first of June.

NASTURTIUM—Dwarf Mixed.—For showy and constant bloom few garden flowers equal the old Nasturtium. They are sure to bloom in any situation, hot or cold, wet or dry.

PANSY—Large flowering Splendid Mixed.—Everybody knows, loves, and cultivates the Pansy. They give such a profusion of bright bloom during spring and summer months.



DIANTHUS.

PORTULACA—Mixed Colors.—About six inches high, covering the ground in a beautiful carpet-like form of most vivid colors. No matter how dry the weather, they will grow and flourish even on very poor soil.



STOCK.

SWEET PEAS—Mixed Colors.—Among the most popular garden flowers, their pretty colors and delightful perfume making them one of the most charming flowers. Eight different shades.

PETUNIA—Very Large-flowering.—A bed of Petunias is a mass of gay colors from early spring to late fall.

PHLOX DRUMMONDII Fine Mixed.—Little need be said in favor of this grand annual. Everybody knows and cultivates it for its brilliant colors. This mixture contains sixteen distinct shades.

SCABIOSA—Fine Mixed (Mourning Bride).—Among the earliest of all flowers to grow, and sure to bloom well; contains a great variety of colors and one of the most beautiful flowers for bouquets, &c.

STOCKS—Large-flowering Dwarf German, 10-Week Mixed.—With its great variety of fine colors and large spikes of beautiful double, sweet-scented flowers, the Stock is suitable either for garden or pot culture. Twenty-six beautiful shades mixed.

POPPY—Finest Mixed.—This grand old flower is fast gaining the universal popularity which it justly merits, and is to-day occupying a place beside the Chrysanthemum, and even the Rose.

ZINNIA ELEGANS—Double Mixed.—A bed of Zinnias makes a grand show, and is always greatly admired, being constantly in bloom.

ALSO AN EXTRA PACKET OF ONE OF OUR NOVELTIES OF GREAT BEAUTY:—**GLIANTHUS**.—A flower of the Pea family, and sometimes called the black Pea of Australia. Has gorgeous scarlet flowers, with large glossy black in the centre, very distinct. Prefers sandy or gravelly soil. Can be sown in the open ground from May 15th to 24th with excellent results.



PANSY.

THIS COLLECTION IF BOUGHT IN THE REGULAR WAY WOULD COST \$1.25, AND WOULD BE GOOD VALUE AT THAT MONEY.

Any of our subscribers who would prefer half of each of these collections, viz., 10 packets of vegetables and 10 of flowers, can make their own selection from these lists by writing out a list of what they want, but in no case can this be done unless the parties make out a list of what they want and mail with the order.

Any person sending us \$3 will receive the "Advocate" for one year and both collections, viz., 20 packages of each (vegetable and flower seeds), or to the person sending us four new names and \$4 we will send both collections.

We also offer as subscription prizes pure-bred live stock. See page 494, December number, 1891.

ROBT. NESS, WOODSIDE FARM,
—IMPORTER AND BREEDER OF—
Clydesdales, Shires, Coachers, Shetlands, and
Ayrshire Cattle.

I have still a few of the twelfth yearly importation of high quality on hand, notably, James Arthur (5888); sire Macgregor (14-7); sire of dam Prince of Wales (673); Macheemie (7009); sire Macgregor (1487), own brother to the great breeding horses, Macpherson, Macalium and Energy. Yorkshire Coachers Seven imported mares from Druid, Darley, etc., four in foal. Also some good Shetlands. Having every facility for purchasing direct from the breeder myself, neither acting agent in Scotland or here, and paying cash, I am prepared to sell on any terms agreed upon. Quality and pedigree of the best. Give me a call. The farm is situated 40 miles southwest of Montreal, on the G. T. R., and 100 miles east of Ottawa, on the C. A. R. Station on the farm.

308-y-OM **ROBERT NESS, HOWICK P.O., Que.**

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STALLION
FOR SALE.
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Apply—
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BRATTIE & TORRANCE, Summerhill Farm, Markham, Ont., importers of and dealers in Imp. Clydesdale Stallions and Mares, of the choicest strains; also Reg. Canadian-breds always for sale.
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New importation of most fashionable pedigree and action, by the celebrated sires Danegelt, Matchless of Londesborough, Wildfire and Prince Alfred. For sale—young stock by Fordham 287 son of Denmark 177.

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Electioneer, Almont, Happy Medium and Wilkes blood. For sale—Bay Stallion, Courage 13181; foaled 1888; 16.1 hands; handsome and speedy; sire Hermod, 22294; dam by Meredith, by Hambletonian 10. Aberdeen-Angus, Hereford and Jersey cattle. Shropshire sheep and Yorkshire swine.
For Catalogues address—
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HILLHURST ST'N P. O., P. Q.

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Headed by Mambrino Rattler, alias Crown Prince (12447), the best bred son of Mambrino Patchen in the Dominion. Write for his terms of service. Also standard Mares of choice breeding. A grand young Stallion for sale. **A. M. VANSIEN,**
Jerseyville Stock Farm, Jerseyville, Ont. 305-y-OM

Registered Rough-Coated Scotch Collies.
Young dogs for sale from the imported sires Turk II., first prize Toronto, and Moystone, value \$500, and out of the choicest prize-winning bitches money could buy in England. **A. BURLAND,** Sec. Ont. Collie Club, Grimsby, Ont.
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CHIEFTAIN. 7 years, imported; 2nd prize at Royal Show '87; **ACTIVE.** 4 years, imported; 1st prize at Buffalo Show '88; **CHARLIE.** 3 years, imported; 1st prize at Toronto Show '90. Also a two-year-old and a yearling, both from imported sires and dams. All these horses are registered, and are sound and right in every way. We will sell any or all of them for far less than their value, as we are overstocked and have no use for so many stallions. This is a rare chance to get a good registered Shire at your own price. Address—

MORRIS, STONE & WELLINGTON,
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Standard-Bred Trotters and A. J. C. C. Jerseys for Sale.

Produce of such sires as Gen. Stanton (2545), 5 in 30 list this year; Almont Wilkes (11242), 2.20, trial 2 16; and Superior, sire of Canadian Girl. Brood Mares, daughters of Gen. Stanton, Almont Wilkes, Clear Grit, Brown Douglass and Winfield Scott, including dam and three full sisters of Fides Stanton 2.28 1/2, last half in 1.12. Jerseys principally of St. Lambert strain, all young stock, sired by sweepstakes bull Toronto 1890.—**J. CARPENTER,** Ingledale, Winona, Ont.
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BY PRIVATE BARGAIN. THE ENTIRE
HERD OF SCOTCH SHORTHORNS

consisting of 22 cows and heifers and 4 bulls. Some of the cows are imported and the rest are bred from imported stock. For prices and other information, address—

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Shorthorns & Improved Large Yorkshires.

WM. COWAN, V. S.,
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Offers for sale, at reasonable figures, Registered Shorthorns, bulls and heifers of the very best milking strains, and Improved Large Yorkshires of all ages. Herd is headed by imported boar "Lincoln Lad," and contains choice sows, both imported and home-bred.
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SHORTHORNS AND SHROPSHIRE.
I have three nice young Bulls, and a lot of good Heifers; also some choice yearling ewes.

W. G. PETTIT, FREEMAN P.O., ONT.
305-y-OM Burlington Station.

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We breed Scotch Shorthorns, founded on choice representatives, from the famous Aberdeen herds of Duthie, Marr and B. Cruickshank, headed by the Cruickshank Victoria-Noupareil bull INDIAN PRINCE. Produce only for sale. Address—

THOS. BALLANTYNE & SON
302-y-OM STRATFORD, ONT., CAN.

Shorthorns, Yorkshires and Berkshires.

My Shorthorns are bred from stock imported by such noted breeders as Arthur Johnson, J. C. Snell and Green Bros. I have a few choice heifers for sale. My Improved Large Yorkshires were imported directly from the famous herd of C. E. Duckering, Kirton, Lindsay, England. I have some young pigs imported in their dam, for sale. Prince Regent, bred by Snell Bros., heads my Berkshire herd. Times are hard and my prices are right. Write or call.
A. F. MCGILL, Hillsburg, Ont.
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OAK RIDGE STOCK FARM

Shorthorns & Berkshires

My herd of Shorthorns are from select milking strains. Young animals at right prices. A few fine yearling bulls now ready. For particulars and pedigrees of stock address
DAVID HAY,
309-y-OM ARKONA, ONT.

Shorthorns, English Berkshires & Improved Large White Yorkshire Swine. Some choice Short-horn Bulls from six to sixteen months old, the get of "Roan Prince." A number of first-class Berkshire Boars fit for service; also young pigs six weeks old, good quality and from imp. stock. Also Improved Yorkshires of same age and from imported stock. Prices reasonable.
305-y-OM **H. J. DAVIS, Woodstock, Ont.**



"SHORTHORNS ARE LOOKING UP."

But times are hard, and money still scarce. I will sell a few well-bred bulls of Bates blood, and one Sta lion (General Purpose), rising three years, at hard-pan prices. Write me, or come and see them.
310-d-OM **M. J. Ireland, COPETOWN P.O., ONT.**

SHORTHORNS.

6 Show Bull Calves



from imported cows and their daughters, grandly bred and first class stock; red and rich roan. Prices reasonable.
308-OM

D. ALEXANDER, Bridgen,
Lambton Co., Ont. 308-OM

FOR SALE!

Four Shorthorn Bulls and 8 Heifers, 30 Leicester and Southdown Ewes, and a number of Berkshire and Yorkshire Pigs. Good animals of good blood. Send for catalogue.
311-y-OM **E. JEFFS & SON, Bondhead, Ont.**

SHORTHORN BULLS AND HEIFERS
A CHOICE LOT FOR SALE.

H. & W. SMITH, Hay, Ont.
312-f-OM

SHORTHORNS, BERKSHIRES,
Plymouth Rocks, Bronze Turkeys. Write me for prices on the above. I have one of the finest show cows in Ontario for sale. Waterloo-Booth strain. H. Chisholm, Montrose Farm, Paris, Ont. 309-y-OM

BOW PARK HERD

—OF—

PURE-BRED SHORTHORNS.

Have always on hand and for Sale young Bulls and Females, which we offer at reasonable prices.

ADDRESS—

JOHN HOPE, Manager,
308-y Bow Park, Brantford, Ont.

ARTHUR JOHNSTON,
Greenwood, Ont.,



Announces that he has for sale, at MODERATE prices, a large and exceedingly good lot of young things of both sex. The calves, yearlings and two-year-olds, are particularly good—all by imported sires and mostly from imported dams of the best strains obtainable in Scotland.

EXCELLENT CLYDESDALES OF BOTH SEX FOR SALE.
New Catalogue for 1891 now ready for delivery. Send for one; they are sent free.

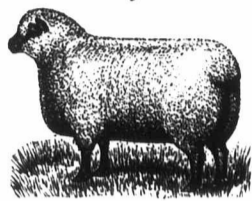
My motto: "No business no harm."
Greenwood P. O. and Telegraph Office, Claremont Station on C. P. R., or Pickering Station on the G. T. R. Parties met at either station on shortest notice. Come and see them.
290-tf

SCOTCH-BRED : SHORTHORN : BULLS,
Scotch-Bred Heifers,
Imported Shropshire Rams, Imported Ewes,
Home-Bred Rams, Home-Bred Ewes,
FOR SALE,

in any number. All of very best quality, and at the lowest prices. We want 500 recorded rams for ranches. Correspondence solicited.

John Miller & Sons,
 Brougham, Ont.

Claremont Station, C. P. R., 22 miles east of Toronto. 306-y



SHORTHORNS, CLYDESDALES & COTSWOLDS.



I have now on hand FOR SALE an extra good lot of Truly-Bred Shorthorns, Clydesdales and Cotswolds.

Among my Cows, Heifers and young Bulls are some fine show animals. The Clydesdales are of equal quality.

My Prices are low and Terms liberal. Visitors welcome. Correspondence solicited.

DAVID BIRRELL,
 Telegraph and Post Office—GREENWOOD, ONT. 312-b-OM

CHOICE SHORTHORNS

Mr. John Ackrow & Son, Hillside Farm, Highfield P.O., Ont., have been breeding Shorthorns for over thirty years, and now offer a few young bulls and heifers of the richest breeding for sale at reasonable figures. Our cattle are the smooth, short-legged, beefy kind. Imported Scotch bull Reporter heads the herd. Station and Telegraph, MALTON, ONT. 307-y-OM



SHORTHORNS AND BERKSHIRES

The herd is headed by the noted Sir Christopher =3877=, and Mina Chief = 3870=. The females consist of Mina and Strathallan families. Our Berkshires are prize-winners wherever shown. Choice young bulls and Berkshires for sale.

C. M. SIMMONS, Ivan P. O., Hlderton Stn., Ont
JAMES QUIRIE, Delawon, Ont. 309-y-OM

HOLSTEIN-FRIESIAN CATTLE.

My stock is selected from the leading herds. My principle is "Live, and let Live." Before you buy elsewhere, write me for quotations.

W. McCLURE,
 Mint Creek Farm, NORVAL, ONT. 310-y-OM
 On main line G. T. R.

Holstein-Friesians

My herd is composed of the choicest individuals obtainable, and belong to the best milking strains. Young stock at the lowest living prices. Communications promptly attended to. Watford R. R. Station. 306-y

S. D. BARNES, - Birnam P. O.

HOLSTEIN-FRIESIANS

Several very choice bulls now fit for service. Heifers in calf by our Colanthus Abbekerk, and remarkable fine bull and heifer calves. All will be sold at greatly reduced prices if taken soon before the dissolution of partnership is made. Come and see our stock and get prices.

306-y-OM H. & W. F. BOLLERT, Cassel, P.O., Ont.

BROCKHOLME STOCK FARM

Ancaster, - Ontario.

R. S. STEVENSON,
 Breeder of Holstein Cattle and Improved Yorkshire Pigs. Holsteins recorded in advanced registry. Yorkshires bred from imported stock. Young stock for sale at all times. 307-y-OM

HOLSTEIN BULLS FOR SALE.

Two nicely marked Yearling Bulls of the best milking strains.

JOHN TREMAIN,
 302-y-OM FOREST, ONT.

REGISTERED HOLSTEIN BULLS AND HEIFERS.

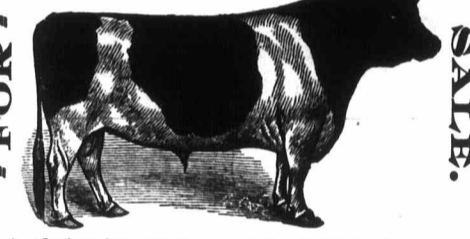
John Pringle, Maple Lawn Farm, Agr. Ont., offers for sale a few well-bred bulls and heifers of the above breed at reasonable figures. My bull, Ira's King, was bred by Dudley Miller, and my cows are all of choice breeding. 309-y-OM.

HOLSTEIN-FRIESIANS

THE CHOICEST HERD IN CANADA.

Stock of highest excellence and most noted milk and butter families of the breed. Stock of all ages for sale. Prices right. Railway Station, Petersburg on G. T. R.; New Dundee P. O., Waterloo Co., Ont. Send for catalogue. 307-y-OM

A. C. HALLMAN & CO.



A choice lot of thorough-bred Holsteins. We have on hand a large number of choice bull and heifer calves which we offer for sale at reasonable prices. They can be seen at Wyton, which is on the St. Mary's Branch of the Grand Trunk R. R. Before buying, give us a call. For further information apply to **W. B. SCATCHERD, Secretary,** 312-y-OM Wyton, Ont.

HOLSTEINS AGAIN IN FRONT.

At Toronto show we showed eight head, and we brought away 4 firsts, 1 second, 2 thirds and 3rd on the herd. Stock for sale.

J. C. McNIVEN & Son,
 Lansdown Farm, WINONA, ONT. 13 miles east of Hamilton on the G. W. Div. G.T.R.

THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS.

SMITH BROS., Credit Valley Stock Farm,
 CHURCHVILLE, PEEL COUNTY, ONT.,
 (24 miles west of Toronto).



MINK 402, H.F.H.B.
 This is the place to get stock of best quality at reasonable prices. We have seventy-five head, including prize-takers; best strains, cows and heifers, with large milk and butter records; young bulls of superior quality. Send for catalogue. 304-y-OM

Holstein-Friesians

OF THE CHOICEST MILKING STRAINS.
 Extra individuals of both sexes for sale.
J. W. JOHNSON,
 313-y-OM SYLVAN P. O.

PARK HILL HERD OF AYRSHIRES.

This herd took all the first prizes in Quebec in 1887 and 1888, and in Ontario in 1889, in competition with all the leading herds. Young stock for sale, all of which is from the celebrated bull ROB ROY (3971), which is at the head of the herd.

JAMES DRUMMOND,
 302-y-OM PETITE COTE, MONTREAL, P. Q.

MAPLECLIFF STOCK FARM
Choice Ayrshire Cattle for Sale.

We make a specialty of these grand dairy cattle, our stock consisting of very heavy milkers, and have some fine young stock for sale; also high grades. One mile from Ottawa. **R. REID & CO.,** 311-y-OM Hintonbury, Ont.

Imported and Canadian-Bred



AYRSHIRES AND CLYDESDALES FOR SALE.

I have on hand a large herd of finely-bred Ayrshires of splendid quality. My Clydesdales are also first-class. Stock for sale. Prices and terms liberal.

THOS. BROWN,
 310-y-OM Petite Cote, P.Q., near Montreal.

Prize-Winning Ayrshires for Sale



GURTA 4th (1181)
 Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors welcome. Address

THOMAS GUY,
 302-y Sydenham Farm, Onhawa, Ont.

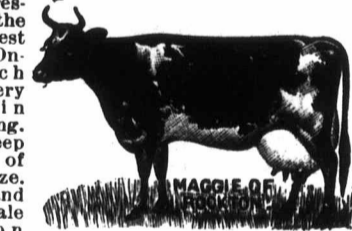
Ayrshire Cattle & Poland China Hogs, MERINO SHEEP AND FANCY FOWLS.

We have the largest herd of Poland Chinas in Ontario. At the last Industrial Fair we carried off 17 prizes out of 26, including both prizes for pens. We breed from none but the best, and our aim is to supply first-class stock at living prices. We mean business. Write, or come and see us.

W. M. & J. C. SMITH,
 310-y O M. Fairfield Plains P. O., Ont.

PRIZE-WINNING AYRSHIRES FOR SALE.

I have at present one of the largest & best herds in Ontario, which has been very successful in the prize ring. They are deep milkers and of a large size. Bulls, cows and heifers for sale always on hand.



JAS. McCORMICK & SON,
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HEREFORD--CATTLE

—AND—
Chester White Hogs.

The undersigned offers for sale three grand bulls and a few heifers of the above breed. Also pigs of both sexes. Prices dead right.

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 14 miles from Sarnia. 313-y-OM

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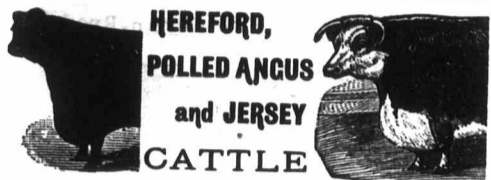
The famous Norfolk Red Polled Cattle have for years been favorites with American farmers, combining, as they do, easy fattening and deep milking properties. Canadian farmers, it will pay you to introduce them to your country.

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THOROUGHbred & SHIRE HORSES



HEREFORD, POLLED ANGUS and JERSEY CATTLE

BERKSHIRE AND YORKSHIRE SWINE.

The largest breeding establishment in Canada. Inspection and correspondence solicited. 303-y-OM

1835—ESTABLISHED—1835



SHERIFF-HUTTON :- HERD.

Three yearling Bulls for sale from imported sire and dam. Good, strong animals. Prices to suit the times. **WM. LINTON, AURORA, ONT.** 310-y-OM

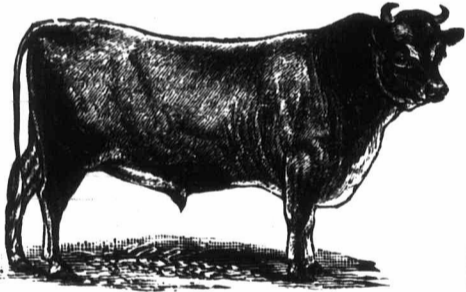
JERSEYS AND TROTTERS.

Herd headed by Carlo of Glen Duart (17037), the champion bull of 1891, and Pussy's John Bull (21260), a son of Canada John Bull.

Stud headed by Arklan (10931), a son of the world-renowned Guy Wilkes, 2154.

I breed none but the best and keep no culls. **A. C. BURGESS, Arklan, Farm, Carleton Place, Ont.** 312-y-OM

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My herd consists of choice animals. I breed for the best performers. Have now five bulls for sale of St. Lambert's blood. Quality and prices to suit the times. Address, **ELGIN ROW, Brockville, Ont.** 310-y-OM

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WM. ROLPH, Glen Rouge Farm, Markham, Ont., offers for sale Jerseys of all ages from his famous herd. The world-renowned St. Lambert blood a specialty. Also registered Clydesdale Horses. 305-y-OM

REGISTERED DUROC JERSEYS.

The Pioneer Herd of these famous American hogs has its headquarters in Essex County, Ont. Address, **PETER LAMARSH, WHEATLY, ONT.** 310-y-OM

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ST. LAMBERT JERSEYS.

The prize-winning herd of the Eastern Townships, headed by Rene of St. Lambert (20343), winner of 1st prize and sweepstakes wherever shown. I make a specialty of pure St. Lambert blood, and breed none but the best. Choice young stock for sale. Terms, prices and pedigrees on application.

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Sunny Braes Farm, HILLHURST, P. Q. 310-y-OM

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Canada's Sir George, Canada's John Bull. Pure St. Lambert. Allie of St. Lambert, 2634 lbs. butter a week; 56 lbs. milk daily.

Hugo Chief of St. Ames, Pure St. Lambert. Massena's Son, Massena, over 20 lbs. a week; 9,099 lbs. milk, estimated to have made 902 lbs 2 oz. butter in 1 yr., 11 days.

Signal of Belvedere, Miss Satanella (Signal cow), 20 lbs. 6 oz. butter a week, on 2nd calf.

Believed to be the three greatest living bulls. Silver cup at the Kellogg Combination Sale; Silver Tea Set (Farmer's Advocate) for milk test; over 20 medals, gold, silver and bronze; over 300 prizes in money, also numerous diplomas, commendations and special prizes.

Special Offering Now.

3 Sons of Canada's Sir George, (pure St. Lamberts), 2 Sons of Massena's Son, from tested cows.

Registered and express paid to any reasonable distance. **MRS. E. M. JONES, Brockville, Ont. Can.** 313-y-OM

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ROBT. REESOR, importer and breeder of A. J. C. C. Jerseys of the choicest breeding, with the St. Heller bull Otolie 17219 at the head of the herd. Stock of al. ages on hand and for sale. 308-y-OM

DORSET HORN SHEEP

MY SPECIALTY.

These sheep drop their lambs at all seasons of the year; are good mothers and most prolific. Devon Dairy Cattle, good milkers and grazers. Flock and Herd established nearly one hundred years. Also Shire Horses and Berkshire Pigs. Sheep, Horses and Pigs exported to America have given every satisfaction.

THOMAS CHICK, Stratton, Dorchester, Dorset, England. 295-zv-OM

TAZEWELL & HECTOR,

Importers and breeders of Dorset Horned Sheep and improved Yorkshire Pigs. **JOHN TAZEWELL**, Indian Village farm, Port Credit, Ont. **THOS. HECTOR**, The Cottage, Springfield-on-the-Credit, Ont. Stations—Pt. Credit, on C. W. R., Streetsville, on C. P. R. 310-y-OM

SHROPSHIRE :- SHEEP.

This flock has won numerous prizes in England for the last twenty years, besides America, France and Africa. Has been established over seventy years. Several of the best flocks in England started from this flock thirty years back. Sheep always for sale.

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SHROPSHIRE.

Imported Ram Lambs, Shearling Rams, Imported Breeding and Shearling Ewes; Ewe Lambs imported or bred from imported sire and dam. **W. E. WRIGHT, 307-y-OM Glanworth.**

SHROPSHIRE SHEEP

DAVID BUTTAR, Corston, Couper-Angus, N.B., Scotland

Has taken all the principal prizes in Scotland for several years. His sheep are of the purest blood, and carefully bred; every sheep eligible for registration. Pedigrees and prices on application. 294-y-OM

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MAPLE SHADE

—NOTED FOR—

SHROPSHIRE

—AND—

Shorthorns.

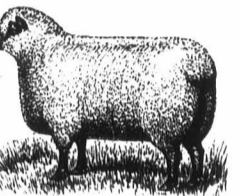


Now ready for inspection—a choice lot of strong, fleshy young bulls, sired by the imp. Cruickshank bull Sussex (56625). Call or write for prices. Address

JOHN DRYDEN, 302-y-OM BROOKLIN, ONT.

Greenhouse Short-horns & Shropshires.

I offer for sale at very reasonable prices a very choice lot of imported 2-shear ewes, imp. rams and ewe lambs; also several home-bred lambs and one grand 2-shear ram. Plymouth Rock & White Leghorn Cock-crows cheap and good. Write or come and see me. **W. B. COCKBURN, ABERFOYLE, ONT. G. T. R. Station, Guelph; C. P. R., Corwin.** 310-j-OM



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The Lougherew flock has been very successful in England and Ireland wherever exhibited. It consists of 300 breeding ewes of the most fashionable appearance & blood. Ravens, Beach, Barrs, Coxon and Mansell. The Annual Sale first Wednesday in September.

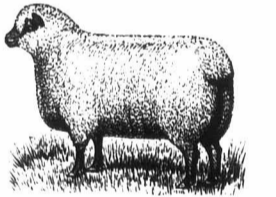


EWES AND RAMS FOR SALE.

Apply to **J. DIXON, Lougherew, Oldcastle, Co. Meath, Ireland.** 307-y-OM

A Choice Lot of SHEARLING EWES,

Two-shear Ewes and a few Three-shears, bred to Sheldon's Pride and Prince Royal (imp.), and a choice lot of Ewe Lambs of our own breeding; also a few **YOUNG BOARS.** PRICES LOW.



COME AND SEE THEM.

WM. MEDCRAFT & SON, Sparta P. O., Ont., 309-y-OM Eight miles south-east of St. Thomas.

SHROPSHIRE.

Imported Breeding and Shearling Ewes; Shearling Ewes, Ram and Ewe Lambs from Imported Sire and Dam.

Prices lower than the lowest.

SHORE BROS., White Oak, 310-y-OM

SHROPSHIRE.

A fine selection of **SHEARLING EWES, RAM AND EWE LAMBS**

from imported ewes and sired by Royal Uffington 11116. Address—

J. & J. SMITH, Paris, Ont. 313-a-0



SHROPSHIRE



We handle none but the best. We sell at living prices. We have one of the most successful flocks in the show yard in England. We import direct from our English to our American flocks. Write for prices. We can suit you.

THONGER & BLAKE BROS.,

Wolf's Head Farm, NESSCLIFF, Salop, Eng.,
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SHROPSHIRE

Having sold all my ram lambs, I can offer for sale my large flock of imported Ewes, most of which are safe in lambs. Purchasers requiring real good sheep, not fattened for show purposes, will find flock as represented. My flock represents sheep from six different English breeders. Come and see me. Visitors welcomed.



W. S. HAWKSHAW,

GLANWORTH, P. O.
(7 miles south of London.) 291-tf-OM

LINCOLN -- SHEEP



I always have for inspection and sale a large flock of pure Lincoln Longwool Sheep, including many prize-winners, having taken eighty prizes the last two years at the Royal and other shows, for both rams and ewes, also the first for the best collection of Lincoln fleeces of wool at the Royal Windsor show last year, which proves the character of this flock, which is most famous for their great size and 120 years' good breeding. Also breeder of

WHITE -- YORKSHIRE -- PIGS

Address—
HENRY DUDDING,
Riby Grove, Gt. Grimsby,
Lincolnshire, Eng.
307-y-OM

TO STOCKMEN AND BREEDERS.

LITTLE'S PATENT FLUID
NON-POISONOUS
SHEEP DIP
AND CATTLE WASH.

For the destruction of Ticks, Lice, Mange, and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.
Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.
The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS.
BROOKLIN, ONT., Sept. 4th, 1890.
DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.
JOHN DRYDEN.
Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WICHTMAN, DRUGGIST, OWEN SOUND, ONT.
Sole Agent for the Dominion. 308-y-OM

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Messrs. A. Telfer & Son, Springfield Farm, Paris, Ont., have been breeding Southdowns for thirty years. A fresh importation just arrived. Stock for sale. 308-y-OM

LORRIDGE FARM, RICHMOND HILL, ONT

MESSRS. ROBT. MARSH & SONS

offer for sale choice Southdown Sheep of all ages, from their well-known flock, which has taken over 2,000 prizes since its establishment. Correspondence promptly attended to. 307-y-OM

THOROUGH BRED -- BERKSHIRES.

A few choice fall pigs from prize-winning stock for sale. Am booking orders for spring pigs. Prices to suit the times.



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Alliston, Ont.
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CHOICE PURE-BRED BERKSHIRES—Two grand boars fit for service, also a few sows. Cheap. A. D. ROBERTS, Walmer Lodge, Ancaster, Ont. 303-y-OM

BERKSHIRES

—AND—
COTSWOLDS.

J. G. SNELL & BRO.

EDMONTON P. O.,
Brampton and Edmonton Railroad Stations.

Now is the time to secure young pigs from choice imported sows, and got by the renowned imported boars "Enterprise [1873]" and "Perry Lad [1878]." "Enterprise" won first prize at the two leading fairs in Ontario last year. He weighed just after landing from England 850 pounds. His pigs are coming fine, and are particularly well marked. We have for sale a grand lot of Yearling Cotswold Rams and Ewes which are well worthy the attention of those in want of such. Will be pleased to have visitors come and see our stock. Write for prices. 310-y-OM

S. COXWORTH,

CLAREMONT, ONT.
Breeder of Pure-Bred Berkshires of the choicest strains. The imported boars Royal Standard and Prince Albion (1113) head my herd. My Sows comprise some of the best specimens that money could buy from such breeders as Snell Bros. and Geo. Green. I guarantee every pedigree, and furnish to register. Write for prices, and you will find them and the stock right. Satisfaction guaranteed. 304-y-OM

BERKSHIRES, SOUTH DOWNS,

Silver Grey Dorkings.
Breeding right. Quality right. Prices right.
E. MARTIN, Nithside Farm,
Paris Station, Canning, Ont.
309-v-OM

MAPLEWOOD STOCK FARM.

SCOTCH SHORTHORNS, IMP. YORKSHIRE AND BERKSHIRE PIGS. Herd of Yorkshire headed by Favorite (Imp.) and Royal Duke, both prize winners; also registered Berkshires of Snell's stock. Pairs supplied not akin, and satisfaction guaranteed. Correspondence invited. Address, 310-y-OM
J. G. MAIR, HOWICK, P. O.

Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.

Sweepstakes herd of Yorkshires wherever shown in 1891. The largest herd in Canada. Breeding stock selected from the most noted English breeders. All stock registered. Shipped to order and guaranteed to be as described.
J. E. BRETHOUR, Burford, Brant Co., Ont.
301-y-OM

YORKSHIRES ONLY

Messrs. BUNBURY & JACKSON, Oakville, Ont., have for sale choice young Boars and Yelts of the Improved Large Yorkshire breed, bred from stock imported from the best herds in England. Orders booked now for spring pigs. P. O., Telegrams and Station, Oakville, on G. T. R. 303-y-OM

The MARKHAM HERD of IMPROVED LARGE YORKSHIRES

Markham Physician [96] at head of herd. Am booking orders for spring pigs. Pairs or trios not akin. Call or write to
LEVI PIKE,
Locust Hill, Ont.
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IMPROVED LARGE YORKSHIRES

Sixty head of the best strains and quality. Write for prices.



SMITH BROS., Credit Valley Stock Farm,
CHURCHVILLE, ONT. 302-y-OM

IMPROVED -- LARGE -- YORKSHIRES!

One of the oldest herds in Ontario. Imp. Boars of Spencer's and Duckering's stock in use ever since founded. Choice stock for sale. **JAS. FIELD & SON,** Castle Hill Farm, ANCASTER, ONT. 305-y-OM

Improved Large White Yorkshires, Pedigreed.

We have lately added to our herd, which are from the strains of Sanders Spencer, Charnock, and F. Walker-Jones, England. Young stock on hand at all times for sale. Apply to



Wm. Goodger & Son,
306-y-OM WOODSTOCK, ONT.

Pedigreed -- Improved -- Large -- Yorkshires.

Mr. G. S. Chapman, of the late firm of Ormsby & Chapman, is still breeding pedigreed Yorkshires, and is prepared to book orders for young stock.

Address:—**G. S. CHAPMAN,** The Grange Farm,
305-y-OM Springfield-on-the-Credit, Ont.

TAMWORTHS

Improved Large Yorkshires.

Our stock is all imported from the very best herds in England, and every pig traces to the English Herd Book. We offer for sale at lowest figures Boars and Sows of the above breeds and of all ages. Write for prices, or give us a call and see our stock. Over forty head on hand.

JAS. L. GRANT & CO.,

Ingersoll, Ont. 308-y-OM

E. D. GEORGE

PUTNAM -- ONT.,
Importer and Breeder of
Ohio Improved Chester White Swine

I make this one breed a specialty, and furnish a good pig at a fair price. Pedigrees furnished.
Write for prices. 305-y

R. H. HARDING,

Mapleview Farm, Thorndale, Ontario,
Importer and Breeder of Ohio Improved

CHESTER WHITE SWINE

—AND—
DORSET HORNED SHEEP.

Prices low. Satisfaction guaranteed. Write for particulars. 310-y-OM

H. GEORGE & SONS, CRAMPTON, ONT.,

Importers & Breeders of
OHIO IMP. CHESTER WHITE SWINE.

Size and quality combined. Our herd of Chesters won the sweepstake herd prize both at Montreal and Toronto fairs, 1891. Choice young stock for sale. 310-y-OM

PURE-BRED TAMWORTH HOGS AND CLYDESDALES

JOHN BELL, Clydesdale Farm,
L'AMAROUX P. O., ONT.,
offers for sale young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them, it will pay you. Orders now booked for spring pigs. Some A 1 Clydesdale Stallions kept for service. Imported and home-bred Colts and Fillies for sale. 304-y-OM

PURE-BRED REGISTERED VICTORIA HOGS.

Choice young pigs, both sexes, from Geo. Davis' stock, sire a prize winner at Toronto. **Charles Brown,** Drumquin P. O., Ont. 306-y-OM

FOR SALE.

The entire Oakdale Herd of Registered Holstein Cattle. Although considerable sales have been made lately the herd now numbers 55 head, including bulls, imported cows, heifers and calves. This is undoubtedly the finest lot of Holstein cattle in the Dominion. We have no pen and ink records for our cows, but we invite farmers and others wanting to buy Holstein cattle to go to the farm, spend a day there and test and weigh for themselves the milk produced. The herdsmen will gladly afford them every facility for so doing.

The bulls in use up to this season were the great prize-winning animals Presto and Adanac. Presto was the only bull ever brought to Canada that was a first prize-winner at the great Alkmar Fair in the Netherlands and was a great prize-winner in Canada. Adanac, whether judged by Canadian judges or an American expert, always took first. He was never beaten, and was so perfect as a show bull that Mr. Stevens, the expert, said he would score a full hundred points. This is a dispersion sale and all animals not disposed of by first of March will be sold by auction, as the farm will be sold or rented by first of April next. Catalogues will be issued in a few days, for which, address John Leys, 18 Court street Toronto.

This herd at the large exhibitions of '87, '88 and '89 won more diplomas, more gold and silver medals and more money prizes than was ever won by any herd of any breed of cattle at same number of exhibitions in the Dominion. At the Industrial in 1889, when F. C. Stevens of Attica, an American expert, was judge, this herd literally swept the show ring, taking first for aged bull, sweepstakes for best bull of any age; first for yearling bull; first, second and third for cows and first herd prize for bull and four females.

This was enough glory, and the herd was not exhibited in 1890 and 1891. 313-a-OM

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Mr. Arthur Johnston, of Greenwood, Ont., reports enquiries for really good Shorthorn as very much improved, especially first class young bulls. Cattle came in from the pastures exceedingly lean, but they are now beginning to improve, and they will soon be in their normal condition. Young calves now arriving are an excellent lot, both as to color and shape. There are now twelve arrived and eleven due between January and June. Young bulls fit for service are a capital lot and number eight. Yearling heifers are a wonderful lot of good ones.

Messrs. D. P. McPhail & Son, of Vernon, Ont., inform us that they intend travelling their imported Hackney stallion Brilliant (1434) in the townships of Markham and Scarborough again in 1892, his season of 1891 in these townships having been most satisfactory. Brilliant (1434) was imported by Thos. Irvine, of Winchester, he is a very handsome, dark bay, six years old, weighing about 1,350 pounds. Last fall he won first at Ottawa Central Fair, while at the spring show in his district he won a silver cup and medal for the best horse in the class. That horse such as Brilliant can be crossed successfully with our mares has always been our contention, and in proof of it we may instance the fact that a yearling colt from this horse was sold at Toronto Fair for \$300.

Messrs. W. Medcraft & Son, Sparta, report the demand for Shropshires has been very good, at satisfactory prices. The following is a list of our sales: To Messrs. Burpee & Campbell, New Brunswick, 8 ram lambs; 1 to Richard Hopkins, Middlemarch; 1 ram lamb to W. E. Wright, Glanworth; 12 ram lambs to Mr. Harkness, N. W. T.; 1 ram lamb to Richard Axford, Jun., Union; 6 ram lambs and 1 imported shearling ram to W. Beattie, Wilton Grove; 1 ram lamb to H. Marshal, Sparta, Yorkshires—1 boar and 1 sow to Mr. Chute, Vienna; 1 boar and 2 sows to Mr. McConnell, Lake View; 1 boar to Mr. Merritt Charlton, Aylmer. Our sheep are all doing well. We have some choice ewes for sale bred to our grand imported rams Sheldon's Pride and Prince Royal; also some young boars and some choice ewe lambs for sale.

Messrs. D. G. Hamner & Sons, Mount Vernon, Ont., in a recent letter, say:—Our recent importation of Shropshires are doing remarkably well, and go into winter quarters in as good shape as we could wish. The Hill Home Flock were winners of as many first prizes at the two largest exhibitions held in the Dominion this year as any other flock placed on exhibition. It is worthy of note that while other breeders were scouring England in search of exhibition stock, the Hill Home Flock were being quietly put in shape at their Canadian home, and when placed in the exhibition ring at Toronto and London, divided honors with the best brought across the sea. Our ram lamb Victor was placed first wherever shown, and stood a first winner eleven times, a record never beaten, if equalled in Canada. His dam was imported, his sire the imported ram Birmingham; we also have his half brother, nearly as good a lamb. Our sales this year far exceed any previous year. We are carrying over a choice lot of young stock for another year.

GLENHYRST.

50 acres, bordering on the City of Brantford.

JAMES MAXWELL, SUPT.

Shropshire Sheep.

Shetland Ponies.

Apples—in quantity—Plums.

Registered Stock, all ages, for sale.

JOSEPH STRATFORD, PROP.,

OAKWOOD FARM.

100 acres, bordering on the City of Brantford.

GEORGE WALKER, SUPT.

Have on the farm a modern wooden Silo, Capacity 250 tons.

Dorset-Horned Sheep. Jerseys.

A.J.C.C. Holsteins (Royal Aagie family). Advance Register.

Chester White Pigs.

Three grand modernized stock farms under one management.

[309-y-OM]

CEDARS FARM.

175 acres, eleven miles from City of Brantford.

ROBERT WALKER, SUPT.

Oxford-down Sheep.

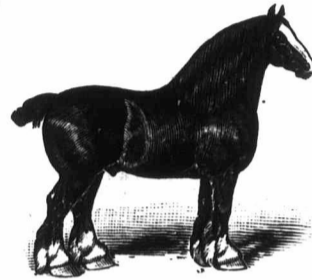
Shorthorn Cattle.

Medium Yorkshire Pigs.

BRANTFORD P. O., CANADA.

Imported Clydesdale Stallions and Mares,

Shetland and Welsh Ponies on hand and for Sale.



My last importation consists of a large number of Stallions and Mares from one to four years old, and the gets of such noted sires as Darnley (222), Macgregor (1487), Top Gallant (1850), Prince Gallant (6176), Knight of Lothian (4489), etc. Also a few choice thoroughbred Shorthorn cattle.

A call solicited. Visitors always welcome.

T. W. EVANS, YELVERTON P. O., ONT.

Pontypool Station and Telegraph Office on C. P. R., fifty miles east of Toronto. 313-c-OM

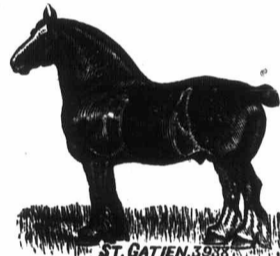
Imported Clydesdale Stallions and Mares for Sale.

Highest Prize Winners in the Leading Shows of Scotland and Canada,

AND THE GET OF FAMOUS SIRES

Such as Lord Erskine, Darnley, Old Times, McCammon, Prince Lawrence, Lord Hopton, Bold Magee, Sir Wyndham, Good Hope and Fireaway.

Prices Reasonable. Catalogues Furnished on Application.



ROBT. BEITH & CO.

BOWMANVILLE, ONT.

Bowmanville is on the line of the G. T. R., 40 miles east of Toronto and 294 west of Montreal. 301-y

— IMPORTED AND REGISTERED —

CLYDESDALE AND HACKNEY

STALLIONS AND MARES

CONSTANTLY ON HAND, AND FOR SALE AT REASONABLE PRICES



Our last importations comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (673). Also a few choice SHETLAND PONIES. Correspondence solicited, and visitors always welcome.

GRAHAM BROTHERS

Twenty-five miles east of Toronto, on the C. P. R. 305-OM CLAREMONT ONT.

THE GERMAN COACHERS

VICTORIOUS!

29 first, 23 second, one third, and four highly commended ribbons and two grand sweepstakes prizes taken at the American Horse Show and the Illinois, Iowa and Nebraska State Fairs, 1890,

by the Hanoverian Coach Stallions and Mares owned by

OLTMANN'S BROTHERS, Watseka, Ill.

Fourth importation arrived Aug. 2, last.

Fifty Stallions for Sale.

Every animal fully guaranteed. For particulars address as above.

Watsseka is eighty miles south of Chicago and one hundred miles east of Peoria. 312-c-OM

**MESSRS. JAS. GARDHOUSE & SONS.,**

ROSEDALE FARM, HIGHFIELD P. O., ONT.

Have on hand and for sale at low figures, Draught Cattle and Fillies, both from imported and Canadian bred mares, and mostly sired by their sweepstakes horse "King of the Castle." These are all good ones, and will make very heavy mares and horses. Also Shorthorns and Leicesters of the choicest strains of blood. Write for prices or come and see us. Station and Telegrams: MALTON on G. T. R. 313-y-OM

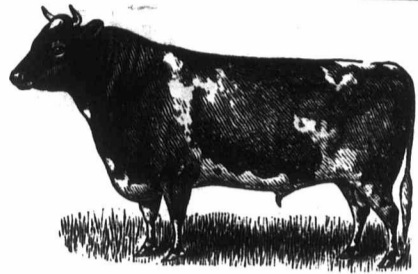
MANITOBA HORSEMEN, LOOK HERE

I can sell you an imported Clydesdale Stallion for less money than any other dealer. I handle none but sound, first-class stock, and sell at a small profit. I number among my customers such well-known horsemen as Enright Bros., Winnipeg, Man., and Dundas, Ont. Also a few choice Shetland Ponies.

A. K. TEGART,

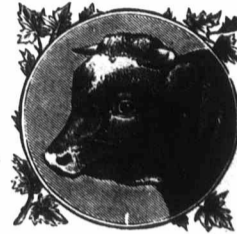
IMPORTER AND BREEDER,

TOTTENHAM, ONT.



W. C. EDWARDS & CO.

Importers and Breeders.



PINE GROVE STOCK FARM,
ROCKLAND, ONT.

Scotch Shorthorns

The imported Cruickshank bull **GRANDEUR** is at the head of this herd of Imported and Home-bred Cows and Heifers of the most approved Scotch families.



ALEX. NORRIE, Manager.

ELMHURST STOCK

DAIRY FARM

Clarence, Ont.

Shorthorns, Shropshires

BERKSHIRES.

Our flock is from the choicest English flocks, headed by the ram sent out by Mr. Thos. Dyke, also milking Shorthorns with imported bull **PIONEER** at the head of the herd.

HENRY SMITH, Manager.

LAURENTIAN STOCK

DAIRY FARM!

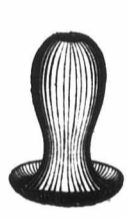
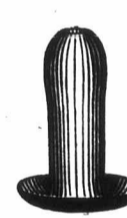
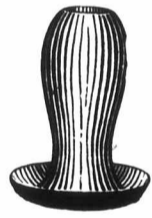
North Nation Mills, P. Q.

Ayrshires, Jerseys & Berkshires.

Imported **EMPEROR** at the head of a grand lot of Imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires.



GEO. CARSON, Manager.



Complete Set \$15.
LYFORD'S ORIGINAL.

Complete Set \$20.
LYFORD'S IMPROVED.

Complete Set \$25.
LYFORD'S MODELS.

FOR BARREN MARES.

Book of forty pages on Barren Mares and Sterility of Stallions with treatment; containing five colored plates of Generative Organs and two on surgical devices, sent post-paid \$1. Goods will not be sent unless money accompanies order. For pamphlets and particulars address

C. C. LYFORD, Minneapolis, Minn.

FREE Illustrated Publications, with **MAPS**, describing Minnesota, North Dakota, Montana, Idaho, Washington and Oregon, the **FREE GOVERNMENT** **AND CHEAP NORTHERN PACIFIC R. R. LANDS**. Best Agricultural Grazing and Timber Lands now open to settlers. Mailed **FREE**. Address **CHAS. E. LAMBORN**, Land Com. N. P. R. R., St. Paul, Minn.



DRS. ANDERSON & BATES, Surgeons of the Eye, Ear, Throat and Nose, 34 North James St., Hamilton, and 5 College Street, Toronto. Sole agents for Prof. North's Earphone for the incurable deaf.

NEW & 2ND HAND MACHINERY
ILLUSTRATED CATALOGUE **FREE**
H. W. PETRIE
TORONTO, CANADA

CREAM SEPARATOR EXCHANGE.

Write for our 28-page Separator Catalogue.

THE DOMINION DAIRY SUPPLY CO.,

313-a-OM 105 Mountain Hill, Quebec.

DAIRYMEN!

Take the direct road. Why go a long distance around when you can, by applying to the undersigned, immediately get catalogues, prices, etc., of the world-famed **DELAVAL CREAM SEPARATORS**? I can supply you with Hand-power Separators with a capacity of from 275 to 600 lbs. of milk per hour, and Steam-power Machines with a capacity of from 1,200 to 3,600 lbs. per hour. Wholesale Agent for the Dominion.

FRANK WILSON,
313-f-OM 33 St. Peter St., MONTREAL.

ADVERTISE IN THE ADVOCATE.

TO PARTIES NEEDING PURE-BRED STOCK.

J. Y. ORMSBY, V. S., (late of Ormsby & Chapman), writes:—"I am now in England, and I am prepared to purchase Pure-Bred Stock on commission for parties in Canada and the U. S. Satisfaction guaranteed. I expect to return by the end of March, and will accompany all stock bought myself. "My intimate acquaintance with the Breeders in Europe enables me to purchase fine stock at the lowest possible figures."

J. Y. ORMSBY,
Ballinamore House,
Kettimagh, County Mayo,
Swinford, Ireland.
313-e-OM

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Mr. Robt. Miller, Brougham, Ont., under recent date, writes:—"The fourteen calves purchased by us from Wm. Duthie landed at Halifax in good order on the 28th Oct., having been fourteen days en route. They are a very promising lot of smooth calves, but young to be subjected to the hardships of a sea voyage. The calves comprise the produce of the Sittyton cows at Collynie, with the exception of one bull and half the heifer calves. The bull calf was sired by a Bruce bull, and Mr. Duthie retained him for the purpose of introducing some new blood in his herd. The Sittyton cows were selected from the whole herd after Mr. Cruickshank had disposed of them to go to South America. Mr. Duthie paying a large price for them rather than see his native country left completely without any representation of the herd that has so materially assisted in keeping the Shorthorns in the front ranks as beef producing cattle throughout the world. Mr. Duthie knowing the Sittyton herd almost as well as Mr. Cruickshank, selected cows and heifers that were the dams of, and sisters to, the greatest animals produced in the herd in latter years. The produce of these cows must be extremely valuable, and especially so when that produce is of exceptional merit, as is the case with the present crop of calves. We have letters of recent date saying the calves are out everyday, and that that they are a very thrifty lot.

NOTICES.

S. Mills & Co., of Hamilton, are advertising in another column farm barn plans, fur robes, and cross-cut saws.

Our readers' attention is directed to the advertisement in another column of The Grange Wholesale Supply Co.

Messrs. J. F. Millar & Son's advertisement will be found in another column. We understand they are making a number of improvements in the new model Disc Harrow, also their Spring Tooth Harrow.

Bear in mind Mr. W. A. Freeman's prize of \$150 in gold for the best five acres of fall wheat and best acre of potatoes, grown from the use of fertilizers manufactured by Freeman's Fertilizer Works, Hamilton, Ont.

Mr. Frank Wilson, 33 St. Peter street, Montreal, advertises DeLeval cream separators in this issue—read his advertisement. Mr. Wilson reports the demand for these machines satisfactory; they always give good satisfaction wherever used.

The Knabe Piano, which has such a wide popularity, is considered by many experts to be superior in every way to any other Piano in the world. The success of this Piano has only been attained by years of careful study.—From the Boston Evening Traveller.

The steam threshers are all laid up. The snow and frost have put a stop to almost all threshing operations, except weedy & Sons' Tread Power Threshing Machines are in use, for which Anderson & Calvert, Winnipeg, are agents. These latter machines are independent of the weather.

Mr. Manson Campbell, the manufacturer of the famous Chatham Fanning Mill, writes:—"I manufactured and sold 4,500 fanning mills and 3,000 baggers in 1891. At this date we are turning out eighteen mills per day; the demand is equal to the supply. I enclose you two testimonials which I would like you to publish."

Mr. MANSON CAMPBELL.
Dear Sir,—The mill and bagger I bought from you has given me good satisfaction, I had a few loads of wheat that was nearly one quarter wild oats, and after running it through I sold the wheat in London to a grain buyer for seed. There was no oats in it, so you see I made it clean, and I can also make a clean job of smut. And the bagger I consider the very thing for any farmer to have.
Yours truly,
R. H. SCOTT,
Vanneck P. O.

Mr. MANSON CAMPBELL.
Dear Sir,—I send you the money for my mill. I think the Chatham mill is the farmers' delight. My neighbor has a Brantford, and he says it will not clean clover seed, and I let him have my Chatham mill and he cleaned it to perfection. He will buy one from you before long.
Yours truly,
FREDERICK JOHNSON,
Grassey Corners P. O.

DOMINION ILLUSTRATED.—We are in receipt of an advance copy of the CHRISTMAS DOMINION ILLUSTRATED and cannot but feel proud that such a magnificent issue is (as we are informed) entirely the product of Canadian skill and enterprise. It is far ahead of any Christmas issue we have seen: the English holiday issues just out do not compare favorably with it for beauty and variety of colored supplements and general illustration. The supplements are four in number; chief of these are two large reproductions of oil-paintings.—one "A type of Canadian Beauty," by Mr. J. W. L. Foster, of Toronto, the other "The Young Recruits," by Mr. C. Patterson, of Montreal; both are beautiful in design and color, and are well worth framing and places of honor in any room. Another supplement, also in colors, is an eight page series of comic sketches of the trials and mishaps of a corpulent English sportsman while hunting in the woods, away back in the French Canadian country. A fourth is a photograph showing all the Universities of the Dominion.

**MAIL CONTRACT.**

Sealed tenders, addressed to the Postmaster-General, will be received at Ottawa until noon, on FRIDAY, 8TH JANUARY, 1892, for the conveyance of Her Majesty's Mails, on two proposed contracts for four years, four and six times per week each way respectively, between London and London East, and London and Lucan, from the first April next.

Printed notices containing further information as to conditions of proposed contract may be seen, and blank forms of Tender may be obtained at the Post Offices of London, London East and Lucan and at this office.

R. W. BARKER, Post Office Inspector.
Post Office Inspector's Office,
London, 27th Nov., 1891. } 313-a-0

THE**TEMPERANCE AND GENERAL LIFE : ASSURANCE : COMPANY**

Offers the most desirable policies farmers can possibly secure. Speaking of its ordinary life policy, a prominent agent of one of the largest and best of the American companies truthfully said: "It is the safest and fairest policy I have ever seen."

Every farmer who can possibly get it, should protect his home by having one of these policies for such an amount as will save his family from em barrassment, in case of his premature death.

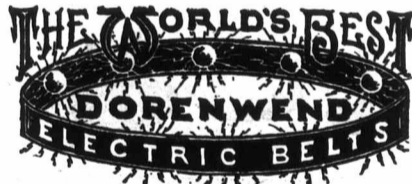
HON. C. W. ROSS, H. SUTHERLAND,
President. Manager.

309-y-OM

FARMERS -- IN -- ONTARIO

Wishing to settle in Manitoba or the Northwest should write us before purchasing improved farms or wild lands in any part of the province. Cheap farms on easy terms of payment. Write to

WAUGH & OSBORNE,
Or to 496 Main St., WINNIPEG.
JOHN STARK & CO.,
307-y-OM 26 Toronto St., TORONTO



CURES all nervous and chronic troubles—Indigestion, Rheumatism, Sciatica, Liver and Kidney troubles, Female complaints, Varicocle, Nervous Debility, Sexual Weakness, etc. Sure cures and no drugs. Can be used with any truss, and helps to cure ruptures permanently. Book and all particulars free by mentioning ADVOCATE.

DORENWEND E. B. & A. CO.,
312-y-OM 103 Yonge-St., Toronto.



HAZELTON FRUIT & POULTRY FARM
HEADQUARTERS FOR
Barred Plymouth Rocks
Unsurpassed prize winning stock. Superior birds for sale. Eight page catalogue free.
Small Fruit Plants.
Raspberry, Strawberry, Vines, etc. Unrivalled rates. Grand bargains in collections. Send for price list. It will pay you.
C. W. ECKARDT, Ridgeville, Ontario. 311-y-OM

PURE STANDARD-BRED PARTRIDGE COCHINS & MAMMOTH LIGHT BRAHMAS.

A few fine cockerels each variety for sale. Eggs in season, \$2.50 per setting. R. H. MARSHALL,
312-a-OM DUNNVILLE, ONT., CANADA.

TOULOUSE GEESE AND MAMMOTH BRONZE TURKEYS FOR SALE.

I have 100 Geese and Turkeys for sale. My geese won all the first prizes in their class at the last Toronto Industrial Exhibition. Turkeys equally as good. Prices to suit the times. Send post stamp for reply.

WM. HODGSON,
311-b-OM Box 12, Brooklyn, Ont.

FARMERS, READ THIS**IT WILL PAY YOU!**

To send to 35 Colborne street, Toronto, for a catalogue of the goods supplied to farmers by the Grange Wholesale Supply Company.

IT WILL PAY YOU!

When you get their catalogue to make out a list of the goods you are in need of, and get your friends to join with you and send direct to them for anything you may want.

We would specially recommend you to try our

BOOTS AND SHOES!

Any goods not to your satisfaction may be returned at once at our expense.

This Company was organized and is solely owned and controlled by farmers. All profits above legitimate expenses go to lowering prices. Therefore, co-operate with us; the more we sell the cheaper we can sell.

GRANGE WHOLESALE SUPPLY CO. (Ltd.),

TORONTO, - ONT.

R. Y. MANNING, Manager. 379-f-OM

\$500 A YEAR FOR 20 YEARS.

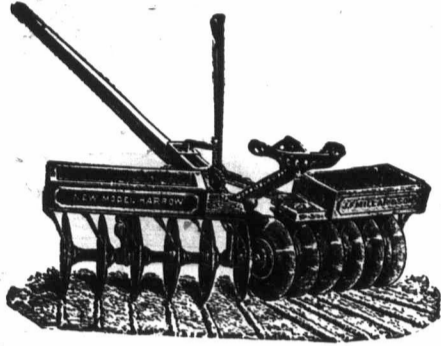
The plans of insurance operated by the Manufacturers' Life are universally admitted to be not only the most popular but also the most liberal and comprehensive now offered to the public. For a premium not very much larger than is charged for a \$5,000 policy, where the entire insurance is to be paid in one sum down, this Company will give a policy of \$10,000, payable in twenty annual instalments of \$500 each. That's the instalment plan. By insuring on the ten-twenty plan a man may carry \$1,000 for the insignificant sum of twenty three cents a week! No other company in the world can give cheaper insurance than this.

THE MANUFACTURERS' LIFE INSURANCE CO.,
COR. YONGE & COLBORNE STS., TORONTO.
307-3y-OM

AGENTS WANTED!

In every part of the Dominion to sell Gold Medal Nursery stock for the Toronto Nurseries, established over half a century. Best terms to reliable men.
GEO. LESLIE & SON, 1164 Queen St. East,
TORONTO. 313-c-0

MORRISBURG IMPLEMENT WORKS
ESTABLISHED 1858.



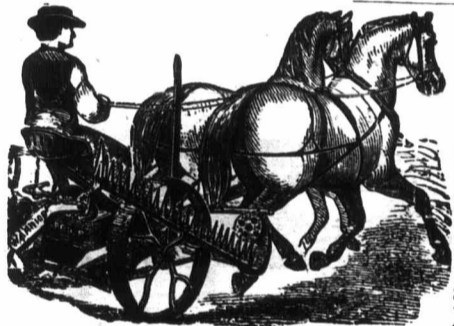
— THE —
"NEW MODEL"
(PATENTED)
ROTARY DISC
JOINTED PULVERIZING HARROW

With Patent Automatic Scrapers.
The only Disc Harrow made with Scrapers that will keep Discs clean in all kinds of soil without any attention from the driver.



WAY AHEAD OF ALL OTHERS.
— THE —
Celebrated Stevens
(PATENTED)
All Steel, Arched Frame
SPRING TOOTH HARROW.

All Steel Frame. No Wood to Decay or Wear out. Lightest Draft Spring Tooth Harrow made. Teeth Quickly Adjusted. Only One Nut to Loosen. Rigid Frame Arched Bars Passes Over Obstructions. Does Not Clog. Clears Itself. Best Spring Steel Teeth.

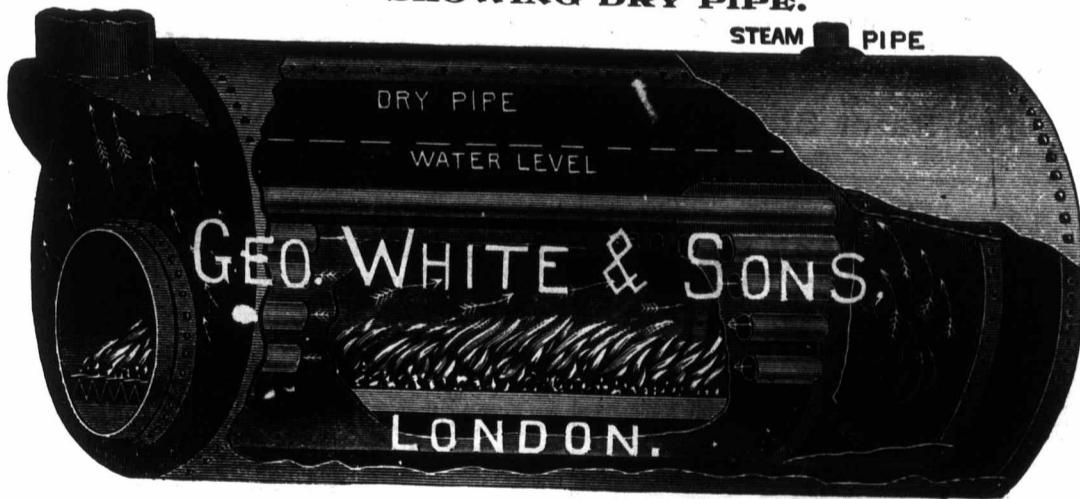


— THE ORIGINAL —
WARRIOR MOWER

The Simplest, Lightest Draft and most Durable Mower made. It is almost impossible to steam the knives as we use 2 1/4 inch sections, the finger-bar having a rolling or wabbling motion allows the points of the guards to rise or fall and adapt itself to the unevenness of the soil without having to use the tilting lever. We make the "Warrior" with either 22 or 24 section knife. We also manufacture Steel Plows, Metal and Wooden Stone Land Rollers, etc. Implement Dealers will find it very much to their advantage to get our prices and terms for 1892 before contracting.

J. F. MILLAR & SON,
Morrisonburg, Ont.
P.S.—We are making some very important changes in the "New Model" for 1892, and will give cuts in February issue of the ADVOCATE.

SECTIONAL VIEW OF WHITE SELF-CONTAINED RETURN TUBE BOILER,
SHOWING DRY PIPE.



This style of boiler is used with all our threshing engines, enabling our customers to produce abundance of steam with long, rough, cheap wood. We utilize water space surrounding and at back end of fire box in connection with our improved internal straw burner.

Manufactured only by **GEORGE WHITE & SONS, London, Ont.**

Ontario Veterinary College

Temperance Street, Toronto.
The most successful Veterinary Institution in America. All experienced Teachers. Session begins Oct. 21st. Apply to the principal, PROF. SMITH, V. S., Edin. TORONTO, CANADA.

Dr. A. Wilford Hall's Health Pamphlet.

Health without medicine. This is no fraud, but a practical thing which, in use, is giving health to hundreds of thousands. "Microcosm" extra sent free, giving particulars.

C. C. POMEROY, General Agent,
304-y-OM 49 1/2 King St., W. Toronto.

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Mr. Richard Gibson is out with an advertisement of an auction sale this month. See page 27.

Mr. John Lees, 18 Court street, Toronto, offers for sale his entire herd of Holsteins. See his advertisement in this number.

Hon. H. M. Cochrane, Hillhurst P. O., P. Q., has made a change in his advertisement this month. He now offers Hackneys and Standard-bred trotters.

R. H. Harding, Thorndale, Ont., writes:—"My Chesters are going into winter quarters in a very healthy and thrifty condition. Some first-class pigs yet for sale. Dorset Horned sheep are also doing well and are now dropping some fine lambs."

Mr. W. C. Edwards, M. P., Rockland, Ont., has enlarged his usual advertisement in this issue. This gentleman has a large number of Shorthorns, Ayrshires, Jerseys, Shropshires and Berkshires, which we heartily recommend to our readers. Write him for particulars.

Bell's Messenger says:—"A sale of the Queen's stock will be held on the Shaw Farm, Windsor, on Thursday, April 7th, 1892, where a nice lot of Shorthorns of the families for which the Royal herds are famous will be offered. The well-known Royal winner, New Year's Gift, will be included in the families offered. The herds are said to be in good condition now, and English stockmen anticipate a spirited sale."

Mr. Wm. E. Wright, Glanworth, Ont., reports his Shropshire sheep to be doing very well; he has recently made the following sales:—To the officers of the Dominion Experimental Farms, three ram and three ewe lambs; to John P. Rider, Delaware, ram lamb; to W. S. Hawkshaw, Glanworth, yearling ram; to J. Charlton, Hilderton, Ont., three ewe lambs; to J. H. Amos, West McGilivray, ram lamb; Francis Nicol, ram lamb; F. R. Shore, White Oak, yearling ram; H. H. Julean, Essex town, two ewe lambs; Ferguson Bros., Yarmouth, ram lamb; H. Burnell, Glanworth, ewe lamb; Thos. Harkness, N. W. T., two ram lambs.

The Agriculture and Arts Association of Ontario and the Dominion Swine Breeders' Association have affiliated for the purpose of recording swine and publishing a record, containing all the breeds in one book, although each breed is kept entirely separate and indexed separately. The volumes are to be given free to each member of the Dominion Swine Breeders' Association. Membership annual fee, which covers book, \$2. Fee to record, with certificate, to members, 50c. Fee to record, with certificate, to non-members, \$1. The recording secretary is Mr. Henry Wade, Toronto; secretary of the Association, Mr. F. W. Hodson, London, to whom all membership fees must be sent.

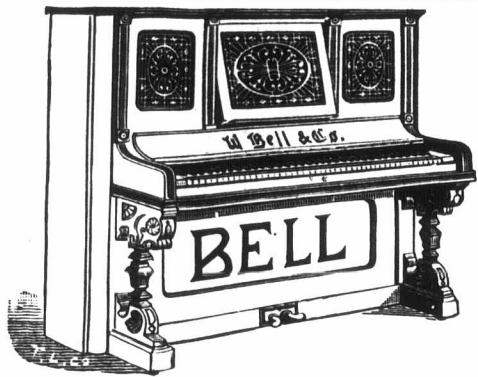
Mr. E. R. Sangster, Lancaster, Ont., advertises his entire herd of Scotch Shorthorns for sale. In this lot are twenty-two females and four bulls. Mr. Sangster sends the following particulars:—"Three of the bulls are under one year old; all are good colors. The cows are a grand lot, two are imported, one bred by Mr. Campbell, one by Mr. Bruce, the remainder are descended from imported cows, and bred by such men as the Hon. H. M. Cochrane, Compton, P. Q. Among the lot are five heifer calves, nearly one year old, all of which are fit to compete in the best company. Two of the bull calves are from my imported cows. All the calves are got by my imported bull." See his advertisement in this issue.

Mr. Chas. F. Mills, Secretary of the American Clydesdale Association, writes as follows:—"The attention of your readers is called to the resolution adopted at the late annual meeting of the American Clydesdale Association, held in Chicago, November 12, 1891, increasing the entry fees from and after January 1, 1892. In the printed report containing the resolution referred to above, and sent you some time since, you will find a resolution excluding future importations of stallions and mares from the stud book of the American Clydesdale Association that have less than the number of recorded top crosses prescribed under existing rules for American bred stallions and mares. Volume VI. of the American Clydesdale Stud Book is now in the hands of the printer, and will soon be ready for distribution. Entries for Volume VII. of the Stud Book are being filed in unprecedented numbers."

Mr. John Jackson, Abingdon, writes:—"The Woodside flock of Southdowns have made the rounds of the shows for 1891, with the usual success. In competing for 45 1st prizes at six shows, including Detroit, Toronto, Montreal and Ottawa, they have been awarded 42 of the number. Sales have been made at satisfactory prices as follows, viz.: Ram, 2 imp. ewes and 2 ewe lambs, to F. W. Harding, Wakeasha, Wis.; ram lamb and 4 ewes (2 imp.), J. M. Leonard, West Unity, Ohio; ram, Frank Mingie, St. Anns, Ont.; 4 ewes (2 imp.), D. W. Evans, Venedocia, Ohio; 2 rams (1 imp.), A. J. Alexander, Spring Station, Ky.; ram, A. N. Carr, Lyons, P. A.; ram, A. Frank & Son, the Grand, Ont.; ram, S. Wood, Ann Arbor, Mich.; ram, 2 ram lambs and 2 ewe lambs, W. T. Noble, Richfield, Ohio; ram lamb, Jesse Wellfare, Mulken, Mich.; imp. shearing ram, T. C. Douglas, Galt, Ont.; imp. ram lamb and ewe, Geo. Baker & Son, Simcoe, Ont.; ram, D. T. Strathearn, Orillia, Ont.; ram lamb, Geo. H. Pearson, Lockport, N. Y.; ram and 2 ewes, Experimental Station, Madison, Wis.; ram, Mr. Grant, Ottawa, Ont.; ram, H. J. Haight, Dover Plains, N. Y.; ram, L. M. Courtois, Courtois, Ont.; ram lamb, A. High, Jordan, Ont.; ram lamb, G. E. Cresswell, Edmondville, Ont. Ten head of the above brought \$1,005.

COUNTER & CO'S
IMPROVED
SELF-HEATING SMOOTHING
AND
Polishing Iron.

THE NEW PATENT IMPROVED GRATE which I now use in this iron makes it a most complete success. It can now be kept hot without the least difficulty, which, combined with its other superior qualities, renders it the most pleasant and profitable article in existence for performing this most necessary work. We will send them on approval. Write for terms and testimonials, also for Mrs. M. Counter's Patent Ironing Table and Shirt-board Combined. Awarded 1st prize at Toronto Exhibition. Only needs to be tried to be fully appreciated. Address—
COUNTER & CO.,
450 CHURCH STREET,
311-y-O TORONTO.



Pianos, Reed Organs & Church Pipe Organs

THE STANDARD INSTRUMENTS OF THE WORLD.

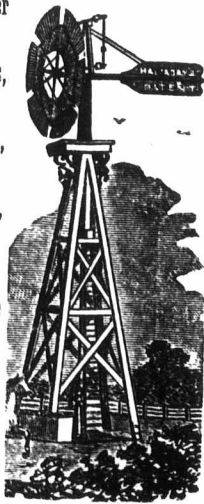
Send for Catalogue.

BELL ORGAN AND PIANO CO., Guelph, Ont.
309-y-O

HALLADAY STANDARD WINDMILLS

For supplying constantly pure and fresh water for the following purposes, viz.:

- | | |
|-------------------|-------------------|
| Pumping Water | Hotels, Colleges, |
| For Stock, | Pumping for |
| Farm Buildings, | Railway |
| Mansions, | Stations, |
| Villa Residences, | Fire Protection, |
| Public | Irrigation, |
| Institutions, | Tanneries |
| Gardens, | Breweries, |
| Green Houses, | Sewage, Mines, |
| Town & Village | Drainage |
| Water-works, | Low Lands. |



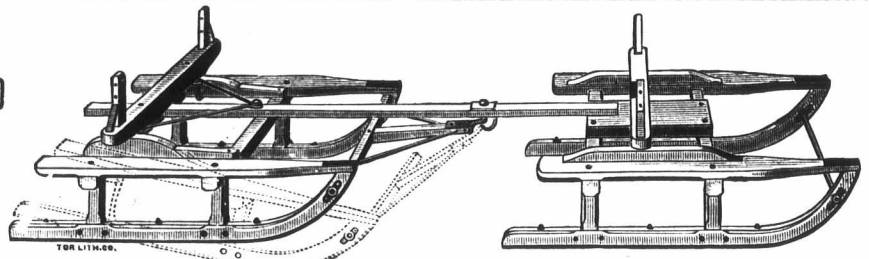
These celebrated Windmills are made from one man to forty horse-power. They are perfectly controllable in gates, and uniform in speed. Catalogue and Price Lists with references mailed free on application to
ONTARIO PUMP CO'Y,
TORONTO, ONT. 301-1f-OM



SPRAY YOUR FRUIT TREES & VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculio prevented by using **EXCELSIOR SPRAYING OUTFITS.** PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address W.M. STAHL, Quincy, Ill.

BAIN'S IMPROVED BOB-SLEIGH.



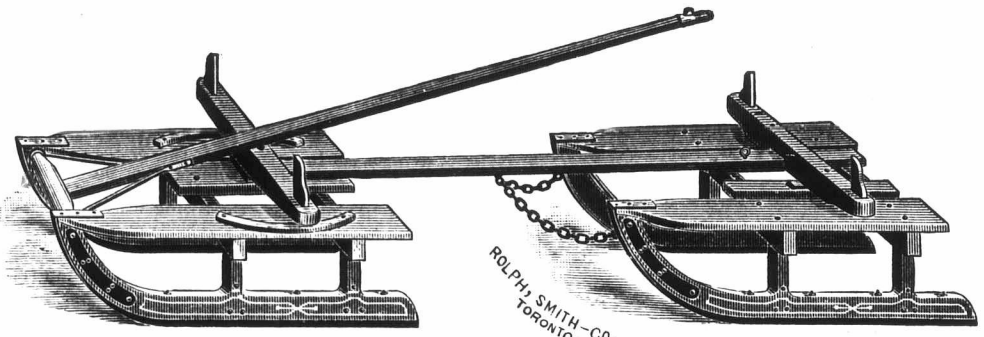
Patented January 13, 1888.

Reasons Why our Sleigh is the Best in the Market:

BECAUSE with our Patent Attachment to Hind-Bob, it is the easiest running Sleigh made. Because it will go in and out of pitch-holes without any strain on itself, even when heavily loaded. Because it will go in and out of pitch-holes, without hind bolster sliding back and forth on the box or rack, as it does with the old coupling. Because with our improved coupling it can be backed up the same as a wagon. Because with our swivel in coupling it can be used on the roughest roads without any twist to the reach. Because with our swivel in coupling it will allow either bob to turn up or its side when loading or unloading logs without any danger of breaking the reach. Because with our improved coupling it can be turned around in its own length. Because it is always in line and will track under all circumstances. Because it cuts off less than any other sleigh made. Because it is well made of the very best wood and iron. Because it has a good length of runner and faced with a two-inch steel shoe. Because all sleigh-makers who have seen our coupling, say that it is just what was wanted to make the bob-sleigh perfect, and wonder why such a simple and necessary improvement was not thought of before.

310-k-O MADE BY THE BAIN BROS. MFG. CO., L'td., BRANTFORD, ONT.

The Bain Wagon Co., Woodstock, Ont.



FOR THIS SEASON OUR SLEIGH IS STILL UP TO ITS FORMER HIGH STANDARD. MADE FROM THE BEST SELECTED STOCK.

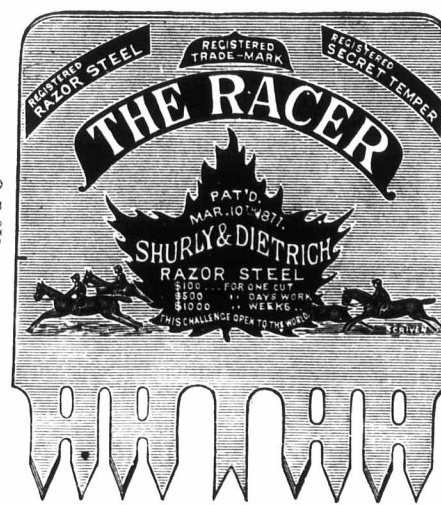
WE MAKE ALL KINDS FARM, FREIGHT OR DELIVERY WAGONS

Any size of arm or width of tire. The Studbaker Arm and Truss Rod used on all Wagons. We purchase them from the South Bend factory, and we have not had a broken arm reported to us this season. Write for prices.

WE WON'T BE UNDERSOLD.

BAIN WAGON CO'Y.

The Razor Steel, Secret Temper, Cross-Cut Saw



WE take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A Saw to cut fast "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These Saws are elliptic ground thin back, requiring less set than any Saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good ask your merchant to let you take them both home, and try them and keep the one you like best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a Saw for one dollar less, and lose 25 cts. per day in labor. Your saw must hold a keen edge to do a large day's work. Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.

MANUFACTURED ONLY BY
SHURLY & DIETRICH,
GALT, ONTARIO.

SPRAYING OUTFITS PERFECTION

Best, Latest Improved and Cheapest. Our Perfection and Empire Pumps stir the liquid automatically and will spray 100 Trees Per Hour. We have the Little Gem and Gardfield Knapsack Sprayers and the Vermont fine spray nozzle, most economical spray nozzle in the world. Also a Horse Power Sprayer at low price. We sell Sulphate of Copper, Paris Green and London Purple at wholesale prices. Catalogue free. Write address plainly, giving county. **FIELD FORCE PUMP CO. 127 Bristol Ave. LOCKPORT, N.Y.**



MANITOBA THE GREAT GRAIN AND CATTLE PROVINCE HAS WITHIN ITS BORDERS HOMES FOR ALL!

Manitoba is making rapid progress, as shown by the fact that in four years the area under crop has more than doubled.

In 1887 there was under crop 663,764 acres.
In 1891 there was under crop 1,349,781 acres.

Increase, - - - - 686,017 acres.

These figures are more eloquent than words, and indicate clearly the wonderful development taking place. NOT A BOOM, but certain and healthy growth

HORSES, CATTLE AND SHEEP

Thrive wonderfully on the nutritious grasses of the prairie, and MIXED FARMING is now engaged in all over the Province. There are still

FREE HOMESTEADS in some parts of Manitoba.

CHEAP RAILROAD LANDS—\$3.00 to \$10.00 per acre. Ten years to pay for them.

IMPROVED FARMS for sale or leasing, from private individuals and corporations, at low prices, and on easy terms.

NOW IS THE TIME to obtain a home in this wonderfully fertile Province. Population is moving in rapidly, and land is annually increasing in value. In all parts of Manitoba there are now

GOOD MARKETS, RAILROADS, CHURCHES & SCHOOLS,
AND MOST OF THE COMFORTS OF AN OLD SETTLED COUNTRY.

Investment of Capital. There are very good openings in many parts for the investment of capital in manufactories and other commercial enterprises.

For the latest information, new books, maps, etc., (all free) write to

HON. THOS. GREENWAY,

Minister of Agriculture and Immigration,
WINNIPEG, MANITOBA.

Or to

THE MANITOBA IMMIGRATION AGENCY,

No. 30 York Street, TORONTO.

311-f-0

MOODY'S 2-HORSE THRESHING MACHINE.

Cleaner than Sweep Power for your horses. You can get as much power on a Tread Power from your horses with CONSIDERABLE LESS fatigue to the horses. Threshes the grain fit for market, and leaves no grain in the straw.

MATTHEW MOODY & SONS,

TERREBONNE, QUE.
313-a-0M

Write for prices.



LAND FOR EVERYBODY.

FREE GRANTS OF GOVERNMENT LAND.

CHEAP RAILWAY LANDS FOR SALE ON EASY TERMS.

GOOD SOIL!

PURE WATER!

AMPLE FUEL!

The construction of the Calgary & Edmonton Railway, and the Qu'Appelle, Long Lake and Saskatchewan Ry, has opened up for settlement two new districts of magnificent farming land, viz., that between the North and South Saskatchewan Rivers, and that between Calgary and Red Deer. Full information concerning these districts, maps, pamphlets, etc., free. Apply to

OSLER, HAMMOND & NANTON,

LAND OFFICE, 381 Main Street, WINNIPEG.

Calgary and Edmonton Railway, Qu'Appelle, Long Lake and Saskatchewan Railway Company.

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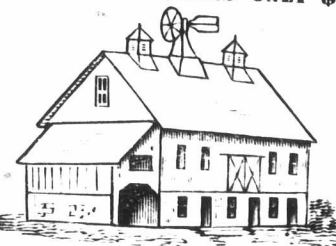
CROSS-CUT SAWS!

The **STANLEY BLADE** is probably the best tempered lance tooth cross-cut saw made, or ever made in the Dominion. The temper is warranted. They are perfect in temper, that part of their manufacture being done on the most modern principles. The lance tooth even electric light process. The lance tooth pattern is well known to be the fastest tooth ever made. These "Stanley Blades" require very little setting, as they are four gauges thinner on the back than at the teeth. The price is very low, 50c. per foot. A five-foot saw costs only \$2.50 each; a five and a-half-foot saw only \$2.75, and a six-foot saw only \$3. Patent handles, 25c. per pair extra. For ten cents in silver, or in postage stamps, we will mail to your nearest post office one of our patent gauges for drag teeth. Every owner of a cross-cut saw should have one of these drag tooth gauges.

We cannot say too much in favor of these "Stanley Blades." They are superior to every saw heretofore put on the market. We will send these saws by express, C. O. D., to any express office in Canada; that is, the buyer pays the money into the Express Company when he receives his saw.

FUR ROBES.—Our Australian Bear robe, size 46 inches, has met with remarkable success. The price is \$12 each, and for downright durability they are not outdone by the old buffalo robe. They are handsome and well made, the lining being of figured plush. An Australian bear is a species of the toughest of hides, which tans beautifully, and as a Canadian winter robe has few equals, if any. They are strongly recommended and are giving good satisfaction wherever used. We will send these robes also by express, C. O. D.

FARM BARN PLANS ONLY \$1.00.—A first-class barn plan in every particular, showing front view, side views and rear view; plan view; or layout of a modern barn, giving full working details of each part; shows many improvements.



ments, which are entirely new, and each one of which is easily worth the price of the plans. These plans are professionally drawn up by an architect of experience. Size of plan, 24 x 36 inches; size of barn, 40 x 80 feet. The whole is drawn to a working scale, and shows silo, feed room, cistern, windmill, hen house, tool house in addition to mows, stables, etc. This plan would be of very great assistance to every farmer who is about to build, every amateur architect and every carpenter; all should possess one. Mailed to any address. Postage paid on receipt of \$1.00.

S. MILLS & CO.

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FROM ATLANTIC TO PACIFIC

Herbageum has the reputation of being the premier **Animal Spice**. It secures pure and invigorating blood; it strengthens digestion and helps assimilation. **Cows** yield more, purer, and richer milk from the same food. **Fresh "whey"** or skim milk fed with **Herbageum** raises calves and pigs as well as pure milk. **Horses** out of condition are rapidly restored to vigor and efficiency, and are protected from "Epizootic." **Colts** and calves fed **Herbageum** will improve all winter. Fed to one half of a liter of pigs they will grow much faster than the others. **Hens** will lay in winter as well as in summer. **Small** feeds make it cheap to the feeder. Thousands of business men from sea to sea report their customers testify that it pays to feed **Herbageum**. Enquire for it of General Merchants, Drugists, Grocers and feed stores. They have it or can order it for you. **BEAVER MFG. CO.**
312-c-OM Galt, Ontario.

W. & F. P. CURRIE & CO.

100 Grey Nun St., Montreal,
MANUFACTURERS OF

CHAIR AND BED SPRINGS.
STOCK ALWAYS ON HAND.

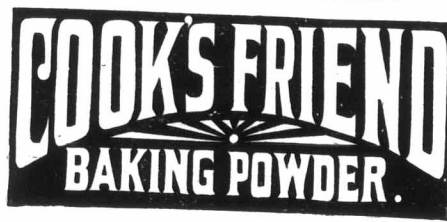
IMPORTERS OF
Rubber Linings, Flue Covers, Fire
Bricks, Fire Clay, Portland Cement, Roman
Cement, Water Lime, Plaster
of Paris, Borax, Whiting,
China, Clay, etc. 277-y

FARMERS!

If you want the best value for your money.
If you want an article that will never disappoint you.

If you want thoroughly good and healthy Baking Powder, into which no injurious ingredient is ever permitted to enter.

BUY ONLY THE GENUINE



REMEMBER THAT

McLAREN'S COOK'S FRIEND

IS THE ONLY GENUINE.

THE BEST GROCERS SELL IT.

302-y-OM

D. CAMPBELL & CO.,

REAL ESTATE

And Financial Agents.

415 MAIN STREET, - WINNIPEG.

A large number of choice farms for sale on easy terms. City Lots and House Properties at great bargains. 308-y-OM

FRED. D. COOPER,

Real Estate, Insurance and Financial Agent,

BRANDON, - MANITOBA.

A large number of choice improved farms for sale on easy terms in the fertile districts of Brandon, Souris and Pipestone. All information, advice and assistance cheerfully given to intending settlers. 308-y-OM

MEN WANTED—TO SELL FOR THE FONT-HILL nurseries of Canada, which have been increased to 700 acres; stock choice and complete in all lines; newest specialties; hardy Russian fruits, etc. Liberal pay weekly; can start men to work at once; first-class outfit free. Write without delay for particulars to Stone & Wellington, Nurserymen, Toronto, Ont. 309-f-OM

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Mica Roofing
On all your Buildings.
It is Cheaper than Shingles.
Water Proof and Fire Proof.

USE
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To Repair Leaky Roofs.
Shingle, Iron or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of 108 square feet each. 36 feet long by 3 feet wide, and costs 2 1/4c. per square foot, thus affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing again. Orders and correspondence answered promptly.

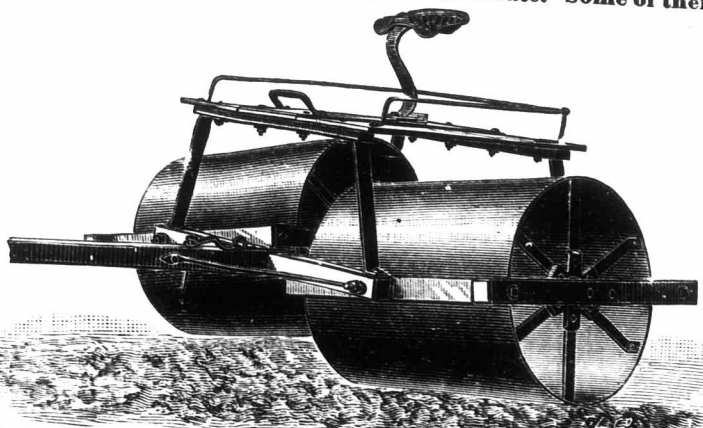
HAMILTON MICA ROOFING CO.

309 y-OM Office—108 James Street North, HAMILTON, ONT.

THE DALE PIVOTED LAND ROLLER

(Patented.)
A STEEL ROLLER, THE DRUMS OF WHICH OSCILLATE ON PIVOTS AND ADAPT THEMSELVES TO THE UNEVENNESS OF THE GROUND.

Its points of advantage are too many to enumerate. Some of them are:



The bearings are the only wearing parts and are guaranteed to last from Ten to Fifteen Years, and can be replaced at a nominal cost.

It rolls all the ground, no matter how rough. There is no axle shaft, no strain, and consequently no wear. It is easily rolled between the drums.

THE DEMAND IS STEADILY INCREASING. IT IS UNANIMOUSLY RECOMMENDED BY THOSE FARMERS WHO HAVE USED IT. Orders are now being booked for the fall trade. Description and price furnished on application to.

T. T. COLEMAN, SOLE MANUFACTURER, **SEAFORTH.**
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