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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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VOL. XXX.

LONDON, ONT., AND WINNIPEG, MAN., SEPTEMBER 16, 1895.

No. 390.



THE DIRECTOR AND STAFF OF THE DOMINION OF CANADA  
EXPERIMENTAL FARMS.

## EDITORIAL.

## The Dominion Experimental Farm Staff.

We feel sure that our readers, from one end of Canada to the other, will appreciate the distinguished group occupying the pictorial position of honor in this issue of the FARMER'S ADVOCATE. Our artist has succeeded in portraying, with his usual skill, in group form, the Director and staff of the Central Experimental Farm, at Ottawa, and the superintendents of the four branch farms, thus bringing into view the *personality* of those who guide the various operations of these important institutions, with the work of which the agriculturists of Canada have become so familiar. It affords us pleasure in this way to extend their acquaintance, and to this end also we append the following brief biographic sketches:—

## THE DIRECTOR.

Prof. Wm. Saunders, who has been the Director of Experimental Farms of the Dominion of Canada for nearly nine years, is a native of Devonshire, England, from where he migrated in 1848. He settled in London, Ont., where an earnest and practical study of science was commenced, which has continued until the present day. From 1855-66 he conducted a manufacturing chemical business, paying special attention to the scientific aspects of his work. He was an important factor in organizing the Ontario College of Pharmacy, of which he became a member of the council, was one of the examiners, and for two years held the presidency. In 1882 he was appointed public analyst for the western division of the Province of Ontario, where he did good work for four years. In 1882, when the Medical Faculty of the Western University, of London, Ont., was organized, Mr. Saunders was appointed to the chair of the Materia Medica, from which he retired in 1886, to accept his present position at Ottawa.

The Professor's recreative hours were spent in studying Canadian Botany and Entomology, in which sciences he soon became distinguished. In 1863 he published in the Canadian Journal, Toronto, a "flora" of the London district, which is noted for its richness. The Entomological Society of Ontario, which was organized in 1863, was substantially aided by him. He became and continued to be editor of the Canadian Entomologist for thirteen years. He was elected president of that society in 1883, which position he held until 1886.

In 1869 he was made a director of the Ontario Fruit Growers' Association, and from 1882 till 1886 that association claimed him as their president. For ten or eleven years, beginning with 1868, he carried on farming near London, where he had planted some sixty acres of trees and vines, which afforded the opportunity of ascertaining which varieties were most suited to that section, while he made use of this grand opportunity of observing and studying the insect pests which affect the different sorts of fruit. His popular work, entitled "Insects Injurious to Fruit," was largely an outgrowth of the study of those years. He is also a successful hybridist, and has originated many promising varieties of fruit and grains. He did valuable work in preparing exhibits of Canadian fruits, etc., for several of the world's great exhibitions.

In 1881 he was appointed one of the twenty Fellows who formed the biological section of the Royal Society of Canada, of which he finally was elected president. He was also a Fellow of the American Association for the Advancement of Science, also an active member of the American Forestry Association ever since its organization. In 1880 he was one of thirteen commissioners to inquire into the condition of agriculture of Ontario Province, and under his direction the information on fruit growing, forestry, insectivorous birds, insects, and bee-keeping, was collected and published.

In 1885 the Hon. Minister of Agriculture, John Carling, requested Mr. Saunders to visit the Experiment Stations of the United States, and to make inquiries regarding agricultural experimental work in Europe and America. Following this an Act was introduced by the Minister of Agriculture, which provided for the five Experimental Farms, which we now have at Ottawa, the Maritime Provinces, Manitoba, the Northwest, and British Columbia, of which work he became director in Oct., 1886. Since that time these institutions have gone on apace, affording much appreciated help to farmers throughout the whole Dominion. Reports and bulletins relating to agriculture and horticulture have been sent out giving advanced methods as they are being learned through experimental work.

He has lately been honored with the presidency of the Society for the Promotion of Agricultural Science, which is a select association of expert agriculturists. To this we may add that Prof. Saunders is Fellow of the Royal Microscopical Society of London, Eng.; Fellow of the Entomological Society of London, Eng.; corresponding member of the American Entomological Society, Philadelphia; of Buffalo Society of Natural Sciences; the Natural History Society of Montreal.

## DAIRY COMMISSIONER AND AGRICULTURIST.

Jas. W. Robertson was born at Dunlop, Ayrshire, Scotland, in 1857. He came to Canada in 1875, and shortly thereafter engaged in the business of manufacturing cheese. Beginning as an apprentice in 1876, at \$13 per month, in 1885 he had control of eight cheese factories in the Listowel district, of Ontario. In 1886 he was appointed Professor of Dairying at the Ontario Agricultural College, Guelph, Ont. In 1888 he succeeded Prof. L. B. Arnold as Lecturer in Dairying at Cornell University, New York, continuing to hold the position at Guelph at the same time. In 1890 he accepted the position of Dairy Commissioner for the Dominion of Canada and Agriculturist to the Central Experimental Farm.

Among the more noteworthy results of labor in which Prof. Robertson has been so actively associated with others are: The general introduction of the system of making ensilage, into Ontario and the other provinces; the far-reaching benefits to the reputation of Ontario cheese and creamery butter from the management of the dairy exhibits at the Colonial and Indian Exhibition; extending the work of the travelling instructors in dairying, under the Dairymen's Associations; the popularizing of meetings of the Farmers' Institutes; the raising of the standard of the quality of Canadian cheese in various provinces; the development of Travelling Dairies and their extension into different provinces; the establishment of branch experimental dairy stations, whereby winter buttermaking in creameries has been introduced in Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island; the extension of co-operative dairying in cheesemaking and buttermaking in all the provinces; the reputation won by the unequalled success of the exhibits of Canadian cheese and butter at the World's Fair; and the organization of a cold storage service on railways, at warehouse in Montreal, and on board ocean steamships, for the safe carriage of creamery butter in a fresh-made condition to Great Britain. From the experimental work conducted by Prof. Robertson, in his capacity as Agriculturist at the Central Experimental Farm, much information of a very serviceable character has been derived in the domain of economical feeding for the production of meat and milk; the "Robertson mixture for ensilage" being a noteworthy effort in that direction. The high feeding value of wheat, even where damaged by frost, was demonstrated by experiments which rendered particular service. And the experimental work in the separation of cream and the making of butter and cheese has furnished data of inestimable value for the guidance of those engaged in that branch of farm work.

Prof. Robertson early recognized the superiority of the press as a means of quickly and effectively reaching the people for educational purposes. His writings have been clear and forcible, and many of his addresses earned him deservedly high rank as a public speaker. His aim has ever been to rouse people to intelligent activity on their own behalf.

It is expected that the large commercial undertakings of the dairying branch of the service, which were gone into for the purpose of introducing and establishing co-operative dairying into provinces and districts where the people would not have been in the way of adopting them, if left unaided, will be finished by next year. It is learned that after that time Prof. Robertson intends to withdraw from the service of the Government and to spend several years abroad in study and research for better equipment for further work for the people.

## ENTOMOLOGIST AND BOTANIST.

James Fletcher, F.R.S.C., F.L.S., was born in 1852 at Ashe, near Wrotham, in the County of Kent, England; educated at the King's School, Rochester, England; came to Canada, 1874, in the service of the Bank of British North America. He was appointed on the 1st of July, 1876, Registry Clerk to the Dominion Library of Parliament, Ottawa, and afterwards Accountant to the same department; acted as Honorary Dominion Entomologist to the Department of Agriculture from 1881 until transferred 1st of July, 1887, to his present position of Dominion Entomologist and of Botanist to the Dominion Experimental Farms; he was elected Fellow of the Royal Society of Canada in 1885, and Fellow of the Linnean Society of London, England, when attending the Colonial and Indian Exhibition in 1886, where he went at the request of Sir Charles Tupper, the Executive Commissioner, in order to lay out a Canadian garden, showing the useful and ornamental plants of the Dominion; has been president of the Entomological Society of Ontario three times, of the Ottawa Field Naturalists' Club four times, of the Association of Economic Entomologists once, and of the Entomological Club of the American Association for the Advancement of Science once; is an active member of the Royal Society of Canada, having filled the offices of honorary secretary in 1892, of treasurer in 1894 and 1895, and having been president of Section IV., Geological and Biological Sciences, 1894.

Prof. Fletcher's seasonable contributions to the press, as readers of the FARMER'S ADVOCATE and other periodicals well know, have been very extensive and at all times highly appreciated. He has labored indefatigably and most unselfishly in furnishing the very latest information at his command that would enable agriculturists, horticulturists and others to overcome insect and weed

pests in order to the prosecution of these industries with greater success. Genial in all his relations with the public, he is moreover a most painstaking scientific investigator.

## THE HORTICULTURIST.

John Craig, the subject of this sketch, is a native of the Province of Quebec, and was born in 1864, at Lakefield, Argenteuil County. When he was eight years old his father moved to Abbotsford, to take charge of that well-known experimental farm belonging to the late Charles Gibb, where so many hardy Russian and other apples were under test; a property which has since come into the possession of Mr. Craig's people. It was on this farm at Abbotsford, and associated with so learned a horticulturist as Mr. Gibb, that Mr. Craig received his first impressions in horticulture. After completing his public school course at Abbotsford, he was sent to the high school at Montreal. This course completed, he returned to Abbotsford and spent two years as the private secretary and assistant of Mr. Charles Gibb. It was at the suggestion of the latter that he entered the Iowa Agricultural College, as a special student of horticulture and economic botany; he thus came into contact with Prof. J. L. Budd, whose visit to Russia in company with Mr. Gibb, to gather hardy fruits for testing in North America, has been frequently referred to in our reports. Mr. Craig remained at this college for three years, completing his course of study there, and receiving a diploma in the class of 1887. During his college work, he employed his summer and winter holidays in practical nursery and greenhouse work, and his last year, as assistant of Prof. Budd, in the important branches of hybridizing, propagating and testing varieties.

On the organization of the Iowa Experiment Station, he was elected assistant director, and was given the special charge of the Department of Horticulture. During his stay at this Station, he was sent out by the Board of Control on a botanical expedition, with the especial object of making as complete a collection as possible of the wild and cultivated grasses. In the pursuit of this work he made an extended tour through Dakota, Montana, Washington, Oregon, Utah and Colorado.

In January, 1890, he was appointed Horticulturist of the Central Experimental Farm, a position which he still fills in a most creditable manner. Of his work since that time, it is scarcely necessary to speak, as our readers are kept well posted concerning it, by means of his reports, addresses at meetings, published articles, etc.

Some of the more important lines of work which he is pursuing at Ottawa are indicated under the following heads: (a) testing fruits for the north, (b) crossing and developing new varieties, (c) systematic study of the methods of propagation, (d) fungous diseases and the best way to destroy them.

Mr. Craig is a member of the principal horticultural and pomological societies of the United States and Canada, of the American Forestry Association, and of the American Association for the Advancement of Science, as well as vice-president of the American Promological Society, and vice-president for Canada of the World's Horticultural Society. Thus, by frequent contact with the leading students of horticulture and allied studies in America, he is enabled to keep the fruit-growers of the Dominion posted as to the very latest discoveries which promise to help them to greater success.

## THE CHEMIST.

Mr. Frank Thomas Shutt, M. A. (Toronto), Chief Chemist of the Dominion Experimental Farms, is an Englishman by parentage and birth. Coming early in his youth to Toronto, he entered the laboratory of Dr. W. H. Ellis, Professor of Applied Chemistry, Toronto University, and Public Analyst. He continued with Dr. Ellis, as pupil and assistant, for six years, when he entered the Honor Science course of Toronto University, studying more particularly under Dr. Pike and Professors Ramsay, Wright, and Chapman. Mr. Shutt, after winning the McMurrich and silver medals in Biology and Chemistry, graduated with first-class honors in Chemistry, Mineralogy, Geology, and Biology, in 1885, receiving the appointment of Fellow in Chemistry at his Alma Mater. This honorable post he continued to hold for two years, when he was appointed to his present position in Ottawa. During the eight years that have since elapsed Mr. Shutt has carried on many important investigations in Agricultural Chemistry, and notably in the examination of the virgin soils, the cereals and native fodder crops and waters of Canada. The naturally-occurring fertilizers of the Dominion, such as swamp muck, marsh mud, peat, and marl, have also received special attention. The annual reports of the Department show that special help has been rendered to the dairying and fruit industries of Canada, from time to time.

In 1893, upon the nomination of Sir Henry Freeman Wood (Secretary to the Royal Commission of Great Britain), Mr. Shutt was appointed a professional juror on cereals at the World's Columbian Exposition. While in Chicago he was engaged in the analyses of the cereals competing for awards. He had the honor of being the only foreign chemist appointed on the board of jurors.

Mr. Shutt is a Fellow of the Institute of Chemistry of Great Britain, and is also a Fellow of the Chemical Societies of England and the United States.

**SUPERINTENDENT MANITOBA FARM.**

Mr. S. A. Bedford, Superintendent of the Experimental Farm at Brandon, Man., is a son of Jacob and Elizabeth Bedford, both descendants of a race of English tenant farmers. He was born February 1st, 1852, in Sussex County, and emigrated to Ontario in 1863. His education was commenced at Hadlow Academy, Kent, Eng., and was continued at different schools in Ontario. Mr. Bedford removed Northwestward in 1877, and took land near Thornhill, in Southern Manitoba, the same year. In 1880 he married Minnie, daughter of J. F. Bolton, of Newboro, Ontario. From his arrival in Manitoba, Mr. Bedford's energies were directed largely towards encouraging emigration to that Province and the Northwest Territories, both personally and in the interest of colonization companies. He was instrumental in settling large numbers in the Pembina and Rock Lake districts.

He has held the position of Inspector for the Scottish Ontario, North British Canadian, and Canada Northwest Land Companies, and for some years had 400 families of different nationalities under his care; was elected by acclamation a member of the Northwest council for Moosomin district, September, 1885. Mr. Bedford followed farming on his own account in Oxford County, Ontario, and at Thornhill, Manitoba; he also managed a large farm at Fleming and Moosomin, N.W.T. In 1888 the Dominion Government purchased what is now the Experimental Farm, lying two miles from Brandon, on the north side of the Assinaboine River, appointing Mr. Bedford Superintendent. Prior to the final selection, he went very carefully with Professor Saunders over a great portion of the Province, inspecting various locations. Besides his work as Farm Superintendent, he has rendered Manitoba agriculture great assistance by his Farmers' Institute addresses, his contribution to the agricultural press, and otherwise.

**SUPERINTENDENT N. W. T. FARM.**

Mr. Angus MacKay, Superintendent of the Experimental Farm for the Northwest Territories, at Indian Head, was born in the township of Pickering, Ontario, fifty-four years ago; was educated in the common and grammar schools of Ontario, and farmed in the township of Pickering until 1882, when, in company with three Ontario farmers, he went to the Northwest and purchased a large tract of land near Indian Head and worked it until 1887, when he took charge of the Northwest Experimental Farm. He married a daughter of Dr. Gunn, Whitby, Ont. In Ontario he was a Justice of the Peace, and for many years has held numerous offices in agricultural and other societies. He acted as chairman of the Executive Board of Reference in connection with the late Territorial Exhibition, and received from His Honor Lieut.-Governor Mackintosh a gold medal and address for work in connection therewith. Agriculture and stock rearing in the Territories have ever had a most trustworthy friend in Mr. MacKay.

**SUPERINTENDENT MARITIME PROVINCES FARM.**

Wm. M. Blair was born at Onslow, Colchester County, N. S., on the 25th of May, 1836. His forefathers were of U. E. Loyalist stock, and came to N. S. from Massachusetts in 1760, but originally from Blair Athol, Scotland. He received very little school discipline, attending only a country school previous to 1850, being largely self-instructed. He has always been a farmer, being one of the most enterprising, hard-working men in Onslow, being ever foremost in the ranks as an advocate of a higher education for those engaged in agricultural pursuits, taking an active part in any organization that attained to this end. He was president of the Agricultural Society of his native place for nine years; commissioner of the Colchester County Exhibition grounds and buildings, and president of the Exhibition Association, for twelve years; also Master of the Provincial Grange of the Patrons of Husbandry, which was organized in 1880, and master of Dominion Grange for 1881, and for years was one of the foremost men in the local Grange.

He ever has had the dairy interests of the country at heart, and was ever improving his stock with new importations. He was instrumental in organizing a company for the purpose of cheesemaking, and in 1871 started on his farm the second cheese factory in N. S.

At twenty years of age our subject joined the militia of the Province, and gradually worked his way up until he became Lieutenant-Colonel of the 78th Nova Scotia Highlanders. He was elected to Parliament at the general election held in Sept., 1878, representing Colchester county in the Local House for eight years. He is a Freemason of 4th degree, and was for some years Master of the Truro Lodge. He accepted the position of Superintendent of the Maritime Experimental Farm at Nappan, N. S., in 1888. Since then much valuable work has been carried on. The Farm is constantly being improved with a view to further and extended experimental work, and the various lines of experiments as conducted are proving of great profit to the farmers of the Maritime Provinces.

**SUPERINTENDENT B. C. FARM.**

Mr. Thos. A. Sharpe, who took charge of the British Columbia Experimental Farm at Agassiz as Superintendent, on September 19th, 1889, was born in Frontenac County, Ontario, in 1817. He sums up his own educational advantages himself by modestly saying, "I attended school for some years,

and have been trying to learn a little ever since." An indefatigable worker, he has accomplished a vast amount of work since the Farm was established, and to the agriculture to the Pacific Province it has proved a most valuable object lesson. Our illustration given elsewhere stands in evidence of this, especially when one bears in mind the condition of the Farm at the outset. It is indeed a monument to the intelligent perseverance of the Superintendent.

**THE POULTRY MANAGER.**

Mr. A. G. Gilbert, Poultry Manager at the Central Experimental Farm, Ottawa, was born in Georgetown, Demerara, British Guiana. When eight years of age he was taken to Glasgow, Scotland, where he was educated under the guardianship of his grandmother, who was a Grant of Cromarty and the recognized head of the clan, a fact of which she was very proud. She was highly connected, and married an English officer, to do which she had to get, as it were, special dispensation from her Highland relatives. His mother was a Fraser of Inverness. At seventeen years of age he returned to the West Indies and was an overseer on a sugar plantation for nearly eighteen months, when he was attacked with an incipient form of yellow fever and had to leave the country and come to Canada, making his home for the time being with his uncle, William Fraser, of Port Hope, who had one of the most charming residences in that pretty place. He was in the service of the Bank of Toronto for five years respectively as junior clerk, teller and accountant. At the end of that period he took to journalism, for which he had always a strong liking, and served on the staffs of several of the leading papers of the country. In 1882 ill-health compelled him to take a subordinate position in the Department of the Interior. He occupied a residence in the country and made a study of poultry. He put up his own fowl houses, got plenty of eggs in winter, and raised the finest and largest chickens in the district. He was appointed to his present position in 1887, and the work he has accomplished since is well-known to the country. Few persons fully realize the importance of the poultry interests of the country or how susceptible they are to enormous development.

**Notes on the Dominion Experimental Farms Report.**

With the steady development of the Dominion Experimental Farm system, and the investigations conducted in connection therewith, the comprehensiveness of the annual reports duly keeps pace. Since the first their size has more than tripled. The eighth now before us is a volume of some 420 pages, containing an immense fund of information, which the studious, practical farmer will find a valuable addition to his agricultural library.

The experiments with grains, roots and potatoes, and with different crops, under different conditions, with and without fertilizers, etc., form a prominent part of the directors' report. Some idea of the interest awakened may be seen in the fact that last year no less than 23,414 grain samples were sent out to 14,942 applicants. We are pleased to note that extensive trials have been given a large number of hedge plants, which are described and commented upon. Hints are given to hedge planting, trimming and propagating, which should be known by every one who takes any pride in a home and its surroundings.

Forest and ornamental trees and shrubs.—Under this department there were, in 1890, 1,000 packages, containing 100,000 forest trees, each variety labelled, and with each package a circular giving instructions for their planting and care. In 1891, 2,000 packages, containing 200,000 forest trees, went out; also 3,782 bags of tree seeds. This work was conducted under the direction of Prof. Craig. Most of this distribution was to Manitoba and the Northwest Territory. This is most commendable. We might add just here that from the establishment of the Manitoba and Northwest edition of the ADVOCATE, we have specially urged the advantages of this line of forestry upon the settlers of the prairie country, and gladly record the great progress that many have made. Florists will note with interest the chapter on geraniums.

The cases of tuberculosis at the branch experimental farms are reported on, and the Director adds his testimony to the value of tuberculin as an indicator of the disease. We note the following hint of value to any who may have dropped into the error alluded to:

"It is most unfortunate that so many intelligent people, including some members of the press, fail to realize that tuberculosis is a disease entirely distinct from pleuro-pneumonia. Pleuro-pneumonia is a terribly contagious disease, which, when once established in a herd, carries its victims off suddenly and rapidly; while tuberculosis, although contagious, is usually very slow in its workings, and an animal may have the disease for years without its being manifested by any external symptoms. Pleuro-pneumonia is essentially a lung disease, under the influence of which the lungs become rapidly congested and very shortly lose the power of discharging their natural functions, and the animal dies. Tuberculosis is not essentially a lung disease. Out of 74 cases of post-mortem examinations, in more than one-third of the cases no disease whatever was found in the lungs. The Director is happy to be able to say that pleuro-pneumonia is not known to exist anywhere in Canada."

During the year, about 12,000 farmers and others visited the Farm, many of whom came in excursion parties. On most of such occasions, opportunities were given for some of the officers of the Farm to address the assembly.

Prof. J. W. Robertson, the Agriculturist, gives a rather brief report, principally on experiments in feeding swine, and work in the experimental dairy. He reports that "there was no constant or appreciable superiority in the breeds and breeding tested, in respect to the quantity of feed consumed per pound of increase in live weight; the difference in the thriftiness, or power to increase in live weight per pound of feed consumed, was greater between different animals in the same litter than between breeds or breeding as such, in different litters; on the whole, for fattening purposes, cross-bred swine and grades gave better results than pure-breeds." From the experiments of three years with 112 hogs fattened upon grain, it appears that on an average, 4.38 pounds of grain (barley, rye, peas, wheat, frosted wheat and wheat bran) was the quantity consumed per pound of increase in the live weight. It is profitable to feed the grain ground and soaked in water for an average period of about thirty hours. It is profitable to add three or five pounds of skim milk or buttermilk per head per day to the grain fed to fattening swine.

The report of the experimental dairy department takes up comparative tests of pure cultures of bacteria in ripening cream, a summary of which has already appeared in the ADVOCATE, and churning cream at different stages of ripeness. The conclusions drawn from churning sweet cream, cream 12 hours ripened and 20 hours ripened, are: (1) A slightly greater yield of butter was obtained from cream which was ripened for 20 hours than from cream ripened for 12 hours; (2) the butter from cream ripened for 20 hours was slightly richer in flavor, but was of no higher commercial value than that from the cream ripened 12 hours; (3) the butter from the cream churned sweet was slightly less in quantity than from the other two lots; (4) the sweet cream butter was two points lower in flavor than that from the ripened cream.

In 1891, about 40 acres of land were set apart for the purpose of growing fodder crops for cattle, in order to illustrate how many cattle might be fed each year upon the products of that area. The crops grown were mixed cereals, fall rye (fed green), clover, roots, Indian corn, horse beans, and sunflowers and pasture. It was found that 37 cows were fed, and gave 50,806 pounds of milk, which, had it all been made into butter, would have yielded 2,651 pounds, from July 7th to December 31st. A larger product was expected for the next half year.

Prof. Robertson's time is so fully taken up with his duties as Dairy Commissioner that very little special attention could be devoted to the work of Agriculturist.

The report of the Horticulturist, John Craig, is interesting at this juncture. Much is being done to develop a fruit trade. Extensive experiments have been conducted with cold storage. It has been found that fruit for storage should be picked when fully grown, but before it has thoroughly matured. Early peaches, pears, and large varieties of plums, should be wrapped separately in tissue paper. Tight wooden boxes are best for storing and handling. Store fruits, such as peaches and plums, under ordinary circumstances, should not be held for a longer period than two or three weeks. The marketing season for early pears and apples may be extended from 30 to 60 days, and under favorable circumstances for a longer period.

The reports of the Botanist and Entomologist, Mr. Fletcher; the Chemist, Mr. Shutt; the Poultry Manager, Mr. Gilbert, are replete with data of special value in their respective departments, while those of the superintendents of the branch farms are exceedingly complete.

Judging from this report, sheep husbandry does not appear to be receiving attention on these farms, barring the reference to a couple of Dorsets on the B. C. Farm. In fact, speaking generally, we incline to the view that the scope of investigation along the lines of live stock husbandry, which admittedly lies at the foundation of successful Canadian agriculture, might with advantage be extended.

The volume contains numerous useful illustrations, and we can heartily commend it to the attention of our readers.

**SUMMARY OF EXPENDITURES FOR YEAR ENDING JUNE 30, 1894.**

Central Farm	\$31,514 34
Nappan "	8,437 58
Brandon "	12,825 48
Indian Head Farm	13,211 39
Agassiz Farm	9,729 15
	\$75,708 94
Seed grain distribution	3,066 08
Forest tree "	84 65
Printing reports, etc.	2,309 88
Total	\$81,799 55
Stock, machinery, implements, etc., on hand June 30, 1894.	\$38,687 68

**Indispensable on the Farm.**

Geo. J. McCormac, Prince Edward Island, writes: "We have been taking the ADVOCATE for a number of years. We deem it an indispensable auxiliary to our farm, and feel that we could not do without it."

### The Purpose and Plan of the Canadian Experimental Farm System.

"It is henceforth indispensable that agriculture, which, in our country, has been hitherto a science of observation, should become at the same time an experimental science."—Report of Mr. L. Grandeauro to French Minister of Agriculture in 1868.

"In Canada, agriculture may be said to lie at the foundation of the nation's prosperity, and involves interests of such magnitude and importance that any reasonable expenditure might well be incurred, providing the results were likely either to add directly to the profits of the tiller of the soil, by enabling him to increase the products of his land, or to save him from some of the losses incident to want of knowledge or experience."—Report of Mr. Wm. Saunders to the Canadian Minister of Agriculture, in February, 1886.

It was in November of 1885 that Mr. Wm. Saunders, then of London, Ont., received authority from the Dominion Government to make a report upon the Agricultural Colleges and Experimental Farms of the United States and other countries, pursuant to the recommendation of a select committee of the House of Commons in 1884, favoring the establishment of an experimental farm. In Feb., 1886, Mr. Saunders laid the results of his investigations before the then Minister of Agriculture, Mr. Carling, recommending in outline a proposed plan for organization and management. The extensive system, as it exists to-day, consisting of the large Central and four branch provincial farms, embracing about 2,500 acres of land; buildings, and other improvements, stock, staff, etc., may be said to be the embodiment of the conception formed by Mr. Saunders ten years ago, and whose careful directorship during that period has left its unmistakable impress.

At the Central Farm at Ottawa, Ont., the experiments conducted cover nearly all departments of agriculture, horticulture and arboriculture, and the information which is being disseminated from year to year in reports, the agricultural press and bulletins, giving particulars of the results obtained at all the experimental farms, have done much to awaken a more intelligent interest in this most important of all our national industries, and in conjunction with other agencies, is fast leading to the adoption of improved methods, and to the selection and cultivation of more profitable varieties. The annual distribution of samples of grain for test has also placed in the hands of a large number of farmers the material which is enabling them to determine for themselves the varieties of grain and other products most useful for growth in their districts, and in this way all the different climates of the Dominion are rapidly being supplied with those sorts most suitable and most profitable for cultivation in each locality. The scientific branches of work carried on at the Central Farm in connection with the destruction of injurious insects, the subjugation of pernicious weeds, together with the important chemical work constantly in progress relating to the solution of agricultural problems, are also proving of value.

On the branch Experimental Farm at Nappan, N.S., established for the benefit of the Maritime Provinces, special attention has been given to experiments with grain, especially oats and barley, also with roots, fodder plants and grasses, with the main object of furthering the dairy industry. A large number of different varieties of fruits are being tested. Experiments are being conducted with different breeds of cattle, swine and poultry, and much attention has been given to the draining and general improvement of the land.

On the Northwestern Farms at Brandon, Man., and Indian Head, N.W.T., the best methods of growing wheat and other varieties of grain, with best methods of treatment of soil, have naturally claimed a large share of attention. Experiments have also been conducted along all promising lines of agriculture and horticulture, and much attention has been paid to the growing of trees for shelter and other economic purposes. Useful work has also been done with stock and fodder crops, looking towards a greater development of the cattle and swine industries, and an enlarged output of dairy products.

At the Experimental Farm for British Columbia, which has been located at Agassiz, B.C., a large share of attention has been given to the testing of varieties of fruit. Much useful work has also been done with fodder plants, roots, grasses, and clovers, also in testing different breeds of cattle, swine and poultry. In addition to the extensive orchards and plantations of fruit, which now include more than 1,800 varieties in all, large plantations have been made of useful hardwood timber trees, of which that section of the Dominion, with all its forest

wealth, is very deficient. These special lines of work, on which reliable information is much needed, have awakened great interest in the Experimental Farm there, and the results obtained from year to year are carefully watched by a large number of intelligent settlers.

Being experimental in their purpose, such farms are not to be regarded merely as direct money-making enterprises. Their design is to attain helpful knowledge and stimulate others to its application. A public farm, too, let it be remembered, is not exempt from many of the difficulties that meet those under private management, and is subject to many of the same natural conditions that make for success or otherwise in its varied operations.

It would be impossible in a brief sketch to mention all the different lines of work in progress at each farm, but they have been so arranged as to cover all those departments believed to be of benefit to the district, the greater attention in every instance being given to those branches which are deemed to be of paramount importance in each case. Further points of interest will be noticed in our references elsewhere to the annual report.

### Australian Prospects.

(BY AN OCCASIONAL CONTRIBUTOR.)

Australia has passed through a very fiery ordeal of late. The collapse of more than half of their banks proved the ruin of thousands of families. Some that had been paying interest as high as 20 per cent. on their original capital for nearly a quarter of a century came to grief; a few managed to stand the crisis; but many have closed their doors never to be opened again. Some are struggling on, and hope to recover; but it is an uphill game, as they have promised to pay their creditors, or depositors, at the rate of five per cent. on their money invested; and at present, in consequence of the low rate of interest ruling, it is found a very difficult job to pay this amount, and they are endeavoring to induce them to take less.

One of the great questions of the day is the federation of the various colonies, and the time is near when this will be brought about; and one great Southern nation, having the same laws and the same customs-house duties, and probably one governor and one parliament, instead of five of each, will save a great amount of expense and much trouble and annoyance that now exists. Southern Britain might, perhaps, be suggested in preference to a commonwealth;—a rose will smell as sweet by any other name. The feeling is gaining ground that the time has come for a union of the several small states; and one united nation, like the Dominion of Canada, would be a grand thing for Australia, and is necessary for her own protection now that the Japs have come to the fore.

I think that things have taken a turn for the better now that wheat, wool and silver are looking up.

The discovery of very extensive gold mines in Western Australia has lent a great stimulus to gold mining; and the richness of some of them, and the vast extent of their fields, will take ages to exhaust. Some of the reefs in the Murchison district have been tested in depth to hundreds of feet, and have proved themselves to be of a permanent character. This will go far to the making of the colony, and will prove profitable to the other colonies in relieving the congested state of the labor market.

The farmers in Australia, as well as in all parts of the world, have suffered greatly from the extreme low rate of the price of wheat; but the silver lining to the cloud is showing, and good times and prices may be nearer at hand than many expect.

### Our Premium Wheat.

We have received from Mr. C. A. Zavitz, Experimentalist at the O. A. C., Guelph, a copy of his winter wheat report for this season, based on reports of successfully conducted experiments in thirty Ontario counties. The Dawson Golden Chaff again heads the list, with a yield of 32.9 bushels per acre; Early Genesee Giant ranking next, with 30.8; then Early Red Clawson, 28.9; Jones' Winter Fyfe, 28.8; Pride of Genesee, 28.8; American Bronze, 28.6; Surprise, 28.1; Early Ripe, 27.8; Early White Leader, 27.4. In the summary of results we note the following:—

"Dawson's Golden Chaff was decidedly the most popular variety with the experiments in each of the past three years; and during the present season it was chosen by over 60 per cent. of the farmers who sent in full reports, as being the best among the varieties tested."

As we chose this sort as our leading wheat premium for obtaining new subscribers for the ADVOCATE, and have sent out a large quantity of it, we are pleased to find that this season's threshing has proved so satisfactory. The experimental lots sent out by Mr. Zavitz this season are as follows:—

Set 1—Dawson's Golden Chaff, Early Red Clawson, Jones' Winter Fyfe, Surprise, and American Bronze.

Set 2—Dawson's Golden Chaff, Early Genesee Giant, Pride of Genesee, Bulgarian, and Jones' Square Head.

### Editorial Notes.

It is gratifying to note that the British sheep sales are proving most successful this season.

"FINEST CANADIAN HAY" stands out conspicuously in the advertisement of an Aberdeen firm in one of our Old Country exchanges.

A general revival of trade and industrial activity throughout the United States is reported by the Massachusetts Ploughman.

The Farmer and Stock Breeder (of London, Eng.) notes that, after a lapse of some years, the foreign trade in pure-bred stock is showing signs of improvement.

Our readers will note with satisfaction the growing popularity of Canadian bacon in England, as stated by Hodgson Bros., the well-known Liverpool importers, in our market department.

Mr. John Lowe, who for many years has so efficiently filled the post of Deputy Minister of Agriculture at Ottawa, has been superannuated, being succeeded by Mr. H. H. Smith, Land Commissioner at Winnipeg.

There is said to be room for an increased wheat production in Russia by two distinct processes: Agricultural methods may be improved, and fresh areas may be brought under cultivation; but, according to a recent consular report, progress in either direction will be extremely slow.

In view of the light hay yield, corn fodder, of which there is a large crop, and straw are by far too valuable to be carelessly handled this fall. (The prudent man will never waste either.) Suggestions, therefore, as to the best plans of caring for—and feeding them also—are in order. We commend the concise and practical suggestions of Mr. Thos. Baty, in another column, giving his method of handling and preserving corn fodder.

A fresh canard, calculated to be of service to those who desire to check the incoming tide of Canadian food supplies, has been started in England, to the effect that "filled-cheese" from Canada has been received there. As is very well known, this abomination is absolutely prohibited in Canada, under a penalty amounting to as high as \$500 fine. Canada has found it more profitable to devote her attention exclusively to the production of pure, high-class dairy goods, that are now crowding hard the home-made article.

### The Manitoba Crops.

From reliable reports and from personal inspection, we have no hesitation in pronouncing the crop of 1885 the record-breaker.

We believe the last Government estimate of 25.5 bushels per acre will prove to be below the mark. Yields of 40 bushels per acre are by no means uncommon, and some limited areas are reported to have gone as high as 45 and even 50. Putting it at 30 bushels, the wheat area of 1,140,276 acres would yield a total wheat crop of 34,208,280 bushels. Other grains are in proportion. Of course the harvesting of these phenomenal crops costs more than ordinary ones; it takes much more time to reap them; double the amount of twine is required—hundreds of acres requiring as much as five pounds of twine per acre; then the great bulk of stuff to be stooked, stacked and threshed greatly increases the cost of production. Frost has, to some extent, in a few districts, left its mark on the wheat kernel, but the average of the crop will not be materially affected thereby.

Prices are, however, very disappointing, the high values reached during the summer months, when practically all the wheat was out of the farmers' hands, and the corresponding increase in the price of flour, raised people's hopes that at least a fair price would be obtained this fall; but before a single load of new wheat was put on the market, prices all went to smash, and buyers seemed afraid to risk a bid, finally opening the market at 40 cents or a little better.

The big millers seem to be masters of the situation; for the past year they have played their cards well, and it seems as though there was nothing to prevent them manipulating the prices again this year to suit their own ends; for the great majority of the farmers will have to sell almost immediately and take what they can get for it. Only those least in need will be able to hold any quantity for a better market.

THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED BY THE WILLIAM WELD COMPANY (LIMITED), LONDON, ONT., and WINNIPEG, MAN.

JOHN WELD, Manager.

1. The Farmer's Advocate is published on the first and fifteenth of each month.
2. It 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.
3. Terms of Subscription—\$1.00 per year in advance; \$1.25 if in arrears; sample copy free. European subscription, 6s., or \$1.50. New subscriptions can commence with any month.
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Should Have Started Sooner.

J. E. B., Ontario Co., writes:—"Although I have taken the FARMER'S ADVOCATE only two months, you cannot imagine how much I have learned from it."

The Education of Farmers' Daughters.

[Paper read by Mrs. McEwan before the Manitoba Central Farmers' Institute.]

I have come to you to-night with no elaborately prepared essay pointing out how the daughters of farmers should be educated, but simply with a few thoughts on the subject, hurriedly put together in the rush of a busy life. That these may suggest points worthy of your consideration is my earnest desire.

Allow me first to place before you, by way of a dark background, a picture of woman's condition in one part of our beloved Queen's dominion, which will serve to throw up in brilliant colors the glorious privileges and possibilities of the daughters of Canada.

Said a highly-cultured Hindoo gentleman, speaking of the daughters of India: They are unwelcomed at their birth, untaught in childhood, enslaved when married, accursed as widows, and unlamented when they die. Could words picture a sadder contrast to our lot as Canadian girls and women? Thank God for birth in a Christian land, for woman owes everything to the Gospel, which enthrones her queen of hearts and home. Woman with Christ's love in her heart is the true homemaker. There are no homes in heathendom.

How differently we welcome the girl-babies of our land: Their baby fingers unlock our selfish hearts, and we find our lives enriched and blessed by all the love and service we pour out upon them. But they are not merely playthings, not only sources of joy and pride to us, but beings for whose training we parents are responsible. They are soul, body and spirit, a threefold nature bound up in one personality, with spiritual, intellectual and physical powers and faculties, forming one wonderful whole.

True education must lay hold of all three of these parts of their nature and draw out and strengthen the latent powers of each, thus developing well-balanced and symmetrical lives. Such education will fit our daughters for filling their places worthily, not only as members of the home circle, but also as citizens of our vast Dominion.

When my babies were in the nursery of our city home, I used to think what a good time babies in the country have, with room and freedom to move about, with numberless object-lessons on flowers and grain, insects and animals, lying on every hand and awaiting the loving and intelligent mother's help to open up to her little one, by easy and natural steps, the wonders of botany and natural history. It is so different in the crowded streets of a city. What a prize a dandelion by the wayside used to be? How often have we gone miles to show our children a cow with her calf, and a goat with its little kids on the outskirts of the city was a rare treat to them. Yes, for little children there should be no happier, better life than that on a farm. But that they may get the most out of it, the mother must herself be trained to observe the beauties of nature so that she may lead them to enjoy the glowing sunset or the play of the lightning among the clouds, or the loveliness and perfection of the tiniest wild flower.

This knowledge of things around them will broaden and expand their lives so that as they grow older no object, however small or trivial, will be without significance to them; no scene, however dull or dreary the day, but will beam with interest; while the treasures of field or grove bathed in the light of the sun will give joy and happiness not dreamt of by one whose mind has not been instructed or whose eye is untrained. I could wish that all mothers on farms were trained kindergarteners. How easily and naturally their children would acquire much useful knowledge in a natural way. How well they would be prepared to learn thoroughly and accurately the more difficult branches of learning as they are from time to time placed before them. They would become students in love with study for the sake of the knowledge to be acquired.

The training of a girl's physical powers should not be a difficult problem upon the farm. If, as physicians say, there is no better exercise for the whole body of woman than just what is called housework, in its different departments and countless duties, then the farmer's daughter is not likely to lack plenty of this branch of training. The pity is that in the pioneering work in a new country most women, older and younger, have so much of this kind of work to do that the poor body is overtaxed and burdened to the injury of the whole nature. Before leaving this point it is but right to say that there is no reason why farmers' daughters should not share with the daughters of the city father such healthful and exhilarating outdoor sports as riding, tennis-playing, skating, tobogganing, etc. In most cases all that is needed is to recognize the right of the girl on the farm to have such recreations and enjoyments and they will be provided for her.

We are told that part of the aim of education is to fit the children for usefulness in their future stations. Well, so it is. But who knows what may be the future station in life of the farmers' daughters? Of course, many will become farmers' wives, and the special knowledge of farm duties which they have acquired will then stand them in good stead. But many others will be taken to grace-homes in the city, or will go forth to win name and place for themselves in "the world's broad field of battle." How wise, then, to give them as liberal an

education as possible. By this is not meant a smattering of all the "isms" and "ologies" of the schools, so much as an honest, thorough grounding in the correct use of our own language at least,—a knowledge sufficient for practical purposes of arithmetic and bookkeeping (I name the latter, for I believe a conversance with it would tend to do away with unbusinesslike habits in women); acquaintance with the history and geography of their own land and of as many others as possible. To these I would add such a knowledge of music as would enable them to make home happy and attractive. Training in vocal music should be a branch of the early education of both the sons and daughters of farmers. Besides this, there should be intelligent reading of the best books of the world's best authors, in so far as circumstances permit. This age is one of great privilege in education as in other matters, and to have a good sound education is a birthright of every Canadian girl. By thus familiarizing our daughters' minds with the best thoughts and experiences of the wise of earth, their own minds become ennobled and their whole nature broadened and enriched. No matter how poor one may be or how obscure one's dwelling if the works of the world's great writers have there their abode, and if that sacred word which is truly "The power of God unto salvation" of the whole nature, physical, intellectual and spiritual, have there the most honored place, one will never lack intellectual companionship or cultured society. Oh! the starved minds and narrow, petty ambitions of many of our women! One cannot help exclaiming, "The pity of it, the pity of it, in a land of plenty!" The fault lies not in the minds themselves, but in their lack of training. How many farmers seem to be of opinion that books, except, perhaps, the needful school text-books (and some grumble even at their number), are an uncalled-for expense. Oh! be careful how you refuse nourishment for your daughters' minds while you provide food without stint for their bodies. Remember, "Tis the mind that makes the body rich." Take fresh, bright magazines for your daughter—such ones as she finds helpful and stimulating to her. If she cannot leave home to travel in other lands, let her in imagination, at least, roam the world over with those who have been more fortunate in this respect and have given us the story of their journeys. If possible, give her the opportunity from time to time of visiting some city, so that she may have a taste of the rich feasts there provided for eye and ear and mind.

I was very much startled some years ago to learn that in Ontario by far the largest number of the insane come from the ranks of farmers' wives. At first I was inclined to question the fact. I thought this could surely not be the case with women whose lives were spent away from the crowded, bustling city, and amongst the beauties of nature, sunrises and the sunsets, the waving grain and the flowery meadow. Upon reflection, I saw that the trouble lay in the almost unbroken monotony of their lives. Whilst their husbands frequently met with other men and discussed matters social and political, they themselves rarely left home, and not being trained to find pleasure in the society of good books, gradually grew morose or melancholy and finally insane. The mind in common with the body needs that variety which is called "the spice of life." Farmers' daughters are citizens and should be taught the duties of citizenship. They should know how our country is governed, should be encouraged to study politics, as they affect women and children in their homes, that they may rightly use their influence in furthering the welfare of society. I have little sympathy with the woman whose interest in the well-being of her country is not enough to make her inform herself on the vital questions of the day. There is too much reading of newspapers for the sake of the trivial, and ignoring the progress of movements that do or may affect the peace and purity of the home. Education is not a hindrance but a help to woman in doing well the daily duties of the home-life. Experience and observation teach that the homes, either in town or country, presided over by women of education and refinement are those where one may look not only for good, intelligent conversation and ability to discuss the affairs of the world, but also for those excellent creature comforts, well-prepared food, daintily-cared-for tables, neatness and attention to the minor courtesies, which, after all, so much enhance the pleasure of living.

True education, instead of puffing up, really humbles, for the more one knows the more one finds there is yet to know, and if we have become true students the love of knowledge will draw us upward and onward, broadening and enriching our natures till we rise nearer and nearer to that standard for which we were created. After all, character-building is the best test of true education. The value of all our mental training is to develop our powers of analysis and investigation, to make us thinking and reasoning beings, to enlighten our understanding and correct our tempers. The stores of facts we acquire will only be really useful to us in so far as after passing through the alembic of the brain they furnish food for reflection or motive for action.

"With all thy getting get understanding," says the wisest of men, and there is no more significant truth to the student than that. "The fear of the Lord is the beginning of wisdom." Until one learns this, however otherwise informed and instructed, one is really ignorant.

## "Our Canadian Prairies."

MANITOBA COURSE OF AGRICULTURE—  
(FIRST SERIES).

The educational value of the study of Natural History in its various branches has long been recognized by those engaged in the training of the young. To some extent, too, the sciences treating of plant and insect life, the formation of soils, and their chemical composition, have found a place among the subjects considered necessary in our Canadian schools for preparing boys and girls to become useful men and women. Believing that these studies of Nature's work are of special value in the formation of habits of exactness, neatness, and careful observation, we approve highly of the wise step lately taken by the Educational Advisory Board, of Manitoba, in introducing into their Provincial schools an elementary course of Agriculture. Under the above title a neat little octavo of 162 pages has lately been placed in the hands of teachers and scholars, as the first of a series of handbooks for this course. As a second explanatory title states, it is "a description of the most notable plants of Manitoba; the chief noxious weeds, and how to destroy them; the trees and wild fruits, along with Arbor Day exercises and poems."

It begins with a short account of plant life in Manitoba, the pleasure and advantage of growing flowers, and the advisability of having school gardens. Concise instructions are given as to the best way of collecting, preserving, and studying the plants which grow wild on our beautiful Western prairies. Thirty of the most notable Manitoban plants, which ought to be known to every boy and girl, are then treated of at some length, and scientific details, which are generally looked upon by the student as drudgery, are skillfully hidden in attractively-written treatises on these thirty plants in turn. In this way much valuable information is imparted in an entertaining manner.

In the proceedings of an imaginary convention on Noxious Weeds, will be found much of great value on this most important subject, and if the children, of farmers particularly, will learn carefully and practice all that is taught in this chapter, it will be of incalculable value to the country.

Arbor Day—Its importance to Manitoba is a plea for tree planting, with advice on the subject.

At the end of the book is given a key to the families of plants, as well as an explanation of the terms used, schedules for classifying plants, and short lists of some of the chief plants, trees, noxious weeds and wild fruits.

On the whole, this is a very serviceable little work, skillfully prepared so as to present much useful knowledge in a pleasant and attractive manner. Some may object to the short poems distributed through its pages, but it is to be remembered that this is not a botany but a hand-book designed to educate the mind by drawing it to the objects treated of so that they may become well-known and easily distinguished from many others like them. In this way school children of to-day, the farmers of the future, will soon know, as all should, the common weeds on their farms, and recognize at once a new enemy when it appears.

J. F.

## Winnipeg Industrial a Financial Success.

We feel sure that many of our readers, and especially live stock breeders and those who visited the Winnipeg Industrial, will be pleased to learn that in spite of the very unfavorable weather during the week of the fair, that financially it has been a success, rather than a failure. At the last meeting of the Board of Directors, the Manager presented a summary of receipts and expenditures, which just about balanced at \$23,300.00. The disbursements included the wiping off of a debt of \$2,000 from the previous year; \$600 insurance on buildings, and about \$3,000 on buildings and permanent improvements. A large saving was effected by Manager Heuback in running expenses, office assistance, etc.

## Prof. Robertson's Retirement.

As our readers will observe in the biographical sketch published in another column, the retirement of Prof. Jas. W. Robertson, Dominion Dairy Commissioner, and Agriculturist at the Central Experimental Farm, from his present position at no distant date, is foreshadowed for the purposes therein indicated.

## Bloat from Rape.

When sheep or cattle are first turned onto rape there is more or less danger of bloat or hoven. This can be largely prevented by turning in only when the leaves are perfectly dry and the animals are not very hungry. A feed of clover hay or other relished dry food, given every morning, will tend to make rape feeding safe. When a case of bloat does occur it can be readily relieved by a drench of salt water, and by fastening the animal's mouth open by means of a wooden bit tied on like a bridle. Stock seem to crave something dry when eating a very succulent food such as rape or rank green clover, and will often feed greedily at a stack if given an opportunity. If stock feeding on rape have access to grass pasture, there will rarely be any trouble from bloat.

## STOCK.

## Our Scottish Letter.

The advent of a new Government, with a new Minister of Agriculture, has not, unnaturally, to many seemed a favorable opportunity for reopening an agitation in favor of the admission of Canadian store cattle into this country. The new Minister has, however, been quite as firm as the old, and the likelihood of any change being made in the policy of the home Government is very remote. The result is that the outlook for the breeder in this country has brightened considerably, and there is a general cheeriness of tone which is most gratifying after so long a period of discontent. In the meantime, of course, the policy adopted operates against the interests of the comparatively small number of farmers who are graziers and feeders, and not breeders at all. When both United States and Canadian stores were coming in without let or hindrance, the price of home-bred cattle of the second quality went down, and bit by bit the influences adverse to the breeder became too strong, and many abandoned an unprofitable method of farming. When the ports were finally closed there was a scarcity of stores, and prices went up; now, however, breeding is becoming more general, and prices will by and by adjust themselves to the altered conditions of the farming industry. What view the Canadians may take of this determination of Mr. Long, we don't know; at any rate it has secured the hearty support of the great majority of farmers here.

A welcome visitor to these parts during the past few weeks has been Mr. Robert Graham, Claremont, Ont. He is at present prospecting amongst the Hackney breeders, and will, we imagine, buy a few of that kind, and a few Clydesdales for exportation to Canada. The Hackney business is brisk, and although there have been and will yet be many sales, good prices continue to be paid for animals with any pretensions to merit whatsoever. The Sandringham sale set the fashion, when 53 horses made the highly respectable average of £135 13s. 9d. each, but during the present week Mr. R. G. Heaton, of the Ferryhill Stud Farm, Chatteris, has had in many respects as good a sale with an average of £120 0s. 6d. for 57 Hackneys, of which no fewer than 15 were foals and 23 brood mares. Mr. Heaton is owner of a crack stallion named Agility, whose stock are coming well to the front, and have grand size, coupled with plenty of the right kind of quality. Mr. Morton, of Gowanbank, Darvel, has bought The Champion, the winning two-year-old colt at the Yorkshire show, for, it is understood, £1,000. This colt is a get of the celebrated champion horse, Ganymede, to our way of thinking, about the best piece of horseflesh we ever set eyes upon, and the young horse is by no means unlike his sire. Canadians favor Hackneys of the harness type, and they are right in so doing. One great complaint made about Hackneys amongst foreigners is that many of them are too small, and to such a charge no answer seems possible. It is too true that more Hackneys are under 15 hands than is at all desirable in the interests of the breed, and it is no answer to the complaint that the old Hackney was not a large animal. Horses with some height, and corresponding thickness, are always more to be desired than little cobs not much better than ponies, and this view of the case is beginning to dawn upon breeders in this country. Talking about ponies, a very notable sale of such will take place at the Flordon Stud Farm, Norwich, in a week or two. Sir Humphrey de Trafford, Bart., is giving up farming, and has let the place on which his Hackneys and ponies were kept; consequently all of them are to be sold, without reserve, on an early day. Sir Humphrey is owner of the most successful pony tribe in England; that of Snorer, a mare bred by C. W. Wilson, Pigmaden Park, Lonsdale. To this tribe belongs Sir George II., the champion pony at Dumfries, and the Londonderry pony stallion, Little Wonder II., the sire of Sir Horace, the champion at the Royal, which was lately sold for £525 by public auction. The policy of inbreeding has been carried to a great length in this family, one of the best of them having been got by Sir George 778, dam by Sir George 778, and granddam by Sir George 778. The stallion recently in use in the Flordon stud, Snorter 4995, was got by Little Wonder II., out of Snorer 2456, and Little Wonder II. was out of Snorer 2456. The result of this course of procedure has been to impress a wonderful uniformity of type on these animals. The champion at the Highland, Sir George II., was also bred in the same fashion; his sire was Sir George 778, and his dam was by the same stallion.

We are now in the heat of the lamb and ram sales, and all breeds are commanding good prices, the highest, however, being recorded for Lincolns and Shropshires. At the great ram sale of the latter, recently, the average price was £11 16s. 6d. for 45 rams; one selling for 230 gs. The Shropshire is bred on the better lands in the Scottish Midlands with great success. Mr. David Buttar, Corston, and the Earl of Strathmore, having flocks which are held in high repute with breeders.

SCOTLAND YET.

## Horse Breeding from a Western Farmer's Standpoint.

BY "CLAUGHBANE." (Concluded from page 152.)

Size is the most important point in an English city draught horse. They are required to draw heavy loads, but this is accomplished more by their ponderosity than by snap. It is easy to understand that a smaller horse would do just as much at the same work, and, perhaps, stand it as long, but he would have to do it by his greater quickness, and at the expense of more muscular force, and while farmers, as a rule, would prefer this smaller, quicker horse for their own work, he is not the animal that commands a big price. Size the Englishman must have, even suppose the horse is a little plain, for, by putting plenty of flesh on him, he can be made to look all right. Fat will hide quite a few defects that in a comparatively thin horse would be very apparent. It is really a fine sight to see three or four of these big horses, with a big load behind them, walking along with a slow and stately step, their heads carried high—more like our stallions than ordinary work horses. It is claimed that a horse's feet and legs must be of the best to stand the street pavement, and I am sure no one admires a good set of pins more than I do; but if we watch these big horses at work we find that there is comparatively little heavy, straining work done by them, and it is this sort of thing that tries a horse's legs. The loads are heavy, but the road is good. Then, again, the work is slow, and there is no "ammer, ammer, ammer on the 'ard 'ighway to 'urt the 'orses' 'ooofs." The smaller horse the better feet and legs he requires, as the work is more straining to him, and he must go faster at it. It is weight that the English market demands in a draught horse, and if we would sell in that market, we must produce big colts, whether we think them the best or not.

Action is something which some persons think most requisite in a draught horse, but good action means a sloping shoulder, and a sloping shoulder is not the best for slow, heavy work. In heavy collar work the line of draught should be as near as possible at right angles to the shoulder, and with a really good-actioned horse this is difficult to get. Good action is nice to see in any horse, but in breeding heavy dray horses, the farmer should not sacrifice any other point to get it.

I would now say something about the agricultural horse, of which so many have been raised in Canada, and for good specimens of which there will always be a limited market. This horse, as he has been raised, is a grade draught horse varying from 1,200 to 1,500 pounds. Right here I might say that a 1,300-pound horse is quite heavy enough for farm work, and he is generally more active than a heavier animal. Sometimes we see much heavier horses with plenty of activity about them, but it is not generally the case, and the lighter horse, as a rule, does his work in a more satisfactory way. In breeding a good farm horse we should aim to get a good-tempered, intelligent animal, with good legs, muscular quarters, and a comparatively well-sloped shoulder, for he will have considerable work on the roads, and must be able to do it at a good pace and with ease to himself. Most of this class of horses that we have have been bred from Clyde sires and have inherited their good qualities. Some, too, though comparatively few, are of Percheron blood, and they also appear to be superior animals; but there is a very strong prejudice against them—for what cause it is hard to say. I have for some years, whenever hearing the Percheron condemned, made a point to question the person doing so, and I have invariably found that he had never owned or handled one: while, just as invariably, those who have them speak most highly of them and prefer them to anything else. They are always ready for their work, and easily kept in condition. Another point in their favor is that they are clean-legged. And here let me say something about feather. Of what use is it? Certainly none whatever to a farm horse. It is rather a defect, for it gives extra work in keeping clean, and is also an indication of poor bone. As a rule, the best-boned Clydes and Shires have the least feather. Its one advantage is that it makes a horse look bigger, and this is a consideration in breeding heavy draught horses; but in anything lighter, feather is worse than useless.

The Suffolk-Punch is a horse of great substance, and it is surprising that there are so few of them in Canada, for where they have been used as sires their colts have given general satisfaction. They are noted for their power in the collar, and three-fourths of the drawing matches in England have been won by this breed. The Suffolk grade is the very best draft foundation on which to use the Thoroughbred sire in raising big light horses, and for this reason it is a pity they are not more popular with us. Why these two clean-legged breeds of draft horses (Percheron and Suffolk-Punch) are not in greater demand I am at a loss to understand, for they are undoubtedly most suitable for getting agricultural horses.

In conclusion, I would say: do not breed a mare unless she is likely to raise a good colt; and again I say, avoid hereditary unsoundness. Look well ahead for the horse that is likely to be in the greatest demand in six years from now, for your matings this year will want a market about that time; it is not this year and next that we are breeding for. Do not think that because horses are now down in price that they will always be so, for even to-day a good horse of the right kind brings good money, and they will continue to do so.

Prince Edward Island and Its Government Stock Farm.

Ill-health, brought on by the long-continued heat of my Western home, having made a change of climate a necessary preliminary to a return to my former state of robust strength...

For many years past the Island Provincial Government has maintained a breeding establishment at Falconwood, near Charlottetown, where Shorthorn and Ayrshire cattle and several breeds of sheep are kept...

The Shorthorn herd consist of sixteen breeding cows and a lot of heifers under two years, and a full complement of bull and heifer calves...

The Ayrshire herd is composed of about the same number of breeding cows and a like proportion of young stock as the Shorthorns...

Leicester, Shropshire and Southdown sheep had all been sold, as dogs from Charlottetown were too fond of pure-bred mutton...

Such is a brief statement of the present condition of this Government Institution. I confess I was not delighted with its general appearance...

The Kingston Exhibition.

The Midland Central Fair opened up the campaign of 1895, and proved a thorough success throughout. It was considered by many to be the most successful exhibition held in the City of Kingston since the old Provincial...

The exhibit in the Main Building was hardly up to the mark, but the Carriage and Implement Building was well filled with a good exhibit...

The vegetable display was considered much better than last year, notwithstanding the exceptionally dry season, and the fruit was mostly a very fine sample...

The Poultry Department was remarkably good in some sections, while others were conspicuous by their absence...

Horses.—The horse exhibit was considerably the strongest in the Carriage and General Purpose classes. The former was numerically the best represented...

matched teams, and Mrs. J. H. Metcalfe won 1st on a fine single carriage horse over 16 hands, and C. Holder 1st on carriage horse under 16 hands...

Cattle.—As already stated, this department was unusually good, most of the different breeds being represented most creditably. In Shorthorns W. C. Edwards & Co., Rockland, Ont., captured the majority of prizes...

Sheep.—This department was better represented, both in numbers and quality of the stock, than any year since the Provincial. In Cotswolds, A. T. Frink, Napanee, took the bulk of the prizes...

Pigs.—There was a fine exhibit of pigs in most of the classes. This was the first year out for some of the most successful winners, and judging from what was brought forward we would not be surprised to see some of these herds represented at the Toronto Industrial another year...

Owing to the success of this fair the present year, both financially and otherwise, the officials will be encouraged to work still harder another year...

Comments on Mr. A. W. Smith's Paper.

"MISTAKES OF SHORTHORN BREEDERS." (BY "CLAUGHBAE.")

The third mistake which Mr. Smith refers to is the neglect of the milking qualities of Shorthorns, and he is not alone in this...

Some upholders of the Shorthorn would seem to think that good specimens of the breed are not only ideal butcher's beasts, but also fine dairy cows, and that these two qualities can be combined and perpetuated in their favorites...

their dairy qualities, just as certainly will they lose their thick backs, and tend in conformation toward the dairy cow in proportion to the milking capacity which they attain.

Mr. Smith says: "The Shorthorns are naturally grand dairy cows; this quality was established with the breed, and all the strength of atavism is at hand for the assistance of the breeder who is endeavoring to re-establish this grand quality in his herd..."

As I have already said, many breeders have advocated the desirability of keeping up the milking qualities of Shorthorns, but none have yet pointed out any way by which it could be done...

Cattle Raising in the Argentine Republic.

Notwithstanding the fact that agriculture occupies a large extent of land each year in the Argentine Republic, meat products still constitute the principal wealth of the country...

Table with 4 columns: PROVINCES, Cattle, Horses, Sheep. Rows include Buenos Ayres, Entre Rios, Corrientes, Santa Fe, Cordoba, and a Total row.

The cattle are said to consist for the greater part of the old race of the country, and are said to be something like the Shorthorn breed. For many years the Argentine breeders have been introducing the best kind of bulls and cows from Europe...

Hitherto the exports of live cattle from Argentina have consisted mainly of consignments to

other countries in the South American continent, but attention has recently been directed to the possibility of developing the trade with Europe, and particularly with Great Britain.

The number of Argentine cattle imported into the United Kingdom in 1890 was 653, out of 150,003, the total export. This, in 1894, increased to 9,546, out of a total export of 220,490. In the three months ending March, '95, 5,005 head of cattle from Argentina were received in the United Kingdom, as compared with an entry of 3,174 head in the first quarter of 1894.

Besides the trade in live cattle, large quantities of beef, preserved in various ways, are exported from the Republic, of which the larger portion is shipped to Cuba and Brazil, in the form of jerked beef, or "tasajo."

The cattle are largely fattened on alfalfa or lucern, either in the form of pasture or hay. In 1893 the estimated area under this crop was about 3,000,000 acres. It is claimed that four acres of good lucern will support two animals in winter and four in summer, which numbers may be largely increased after heavy rain. With a suitable sub-soil, good crops of alfalfa have been obtained for twenty years in succession, yielding five cuttings and upwards annually.

In addition to the benefits derived from the abundance of cheap and excellent forage in the shape of alfalfa, the pastoralist in the Argentine Republic possesses a further advantage in the circumstances that owing to the favorable climate of the country cattle require neither housing or hand feeding.

Steers sent to England are usually over 1,320 pounds live weight, for which efforts are being made to secure better accommodation and attendance on ships, so that the cattle may arrive in European ports in prime condition. The voyage to Europe by cattle ships is calculated to occupy twenty-eight days.

**Periods of Gestation.**

The following table will be found valuable if made use of. It should be preserved, and kept where it can be readily referred to:—

Time of service.	Mares. 30 Days.	Cows. 28 Days.	Ewes. 150 Days.	Sows. 112 Days.
Jan.	1 Dec.	6 Oct.	10 May	30 April
"	6 "	11 "	15 June	4 "
"	11 "	16 "	20 "	9 May
"	16 "	21 "	25 "	14 "
"	21 "	26 "	30 "	19 "
"	26 "	31 Nov.	4 "	24 "
"	31 Jan.	5 "	9 "	29 "
Feb.	5 "	10 "	14 July	4 "
"	10 "	15 "	19 "	9 June
"	15 "	20 "	24 "	14 "
"	20 "	25 "	29 "	19 "
"	25 "	30 Dec.	4 "	24 "
Mar.	2 Feb.	7 "	9 "	29 "
"	7 "	12 "	14 Aug.	3 "
"	12 "	17 "	19 "	8 July
"	17 "	22 "	24 "	13 "
"	22 "	27 Mar.	29 "	18 "
Apr.	1 "	6 Jan.	3 "	23 "
"	6 "	11 "	8 "	28 "
"	11 "	16 "	13 Sept.	2 "
"	16 "	21 "	18 "	7 "
"	21 "	26 "	23 "	12 Aug.
"	26 "	31 Feb.	28 "	17 "
May	1 April	5 "	2 "	22 "
"	6 "	10 "	7 Oct.	27 "
"	11 "	15 "	12 "	30 "
"	16 "	20 "	17 "	12 Sept.
"	21 "	25 "	22 "	9 "
"	26 "	30 Mar.	27 "	14 "
"	31 May	5 "	9 "	27 "
June	5 "	10 "	14 Nov.	1 "
"	10 "	15 "	19 "	6 "
"	15 "	20 "	24 "	11 Oct.
"	20 "	25 "	29 "	16 "
"	25 "	30 April	3 "	21 "
"	30 June	4 "	8 "	26 "
July	5 "	9 "	13 Dec.	1 "
"	10 "	14 "	18 "	6 "
"	15 "	19 "	23 "	11 Nov.
"	20 "	24 "	28 "	16 "
"	25 "	29 May	3 "	21 "
"	30 July	4 "	8 "	26 "
Aug.	4 "	9 "	13 Jan.	5 "
"	9 "	14 "	18 "	10 Dec.
"	14 "	19 "	23 "	15 "
"	19 "	24 "	28 "	20 "
"	24 "	29 June	2 "	25 "
"	29 Aug.	3 "	7 "	30 "
Sept.	3 "	8 "	12 Feb.	4 "
"	8 "	13 "	17 "	9 Jan.
"	13 "	18 "	22 "	14 "
"	18 "	23 "	27 "	19 "
"	23 "	28 July	2 "	24 "
"	28 Sept.	3 "	7 "	29 "
Oct.	3 "	8 "	12 Mar.	1 "
"	8 "	13 "	17 "	6 "
"	13 "	18 "	22 "	11 Feb.
"	18 "	23 "	27 "	16 "
"	23 "	28 Aug.	1 "	21 "
"	28 Oct.	2 "	6 "	26 "
Nov.	2 "	7 "	11 "	31 "
"	7 "	12 "	16 April	5 "
"	12 "	17 "	21 "	10 Mar.
"	17 "	22 "	26 "	15 "
"	22 "	27 "	31 "	20 "
"	28 Nov.	1 Sept.	5 "	25 "
Dec.	2 "	6 "	10 "	30 "
"	7 "	11 "	15 May	5 "
"	12 "	16 "	20 "	10 April
"	17 "	21 "	25 "	15 "
"	22 "	26 "	30 "	20 "
"	27 Dec.	1 Oct.	5 "	25 "
"	31 "	5 "	9 "	29 "

Mr. W. S. Hawkshaw, of Glanworth, Ont., reports great success this season with rape, in proof of which he showed us a sample stalk some 45 inches long. He turned 120 of his fine Shropshire sheep, and lambs upon nine acres of it when they were hungry, and though considering it somewhat venturesome, realized no ill results, and the flock was doing well at last accounts.

**FARM.**

**British Columbia Experimental Farm.**

The illustration on the opposite page represents a view of the Experimental Farm and buildings at Agassiz, B. C., under the able superintendence of Mr. Thos. A. Sharpe.

**Experience with Rye.**

J. H. Berryman, Allen Co., Ohio, relates the following experience with this crop, in the Ohio Farmer:

"By good luck, or good management, I seeded fifty acres to rye last fall. I pastured sixty ewes that had yeaned in February, giving us ninety lambs upon the rye all through the spring, and never did lambs do better. They average now eighty pounds. Sixteen lambs ran on it all fall and as soon as it would do to turn them out in the spring, and they did excellently. About the middle of April I turned the cows in, fifty head, and by the addition of a little ensilage the milk flow was immense. Twenty acres we shut the stock off from about the 10th of May and allowed it to grow, expecting to harvest it; but the failure of the hay crop compelled me to cut it for hay when the grain had formed, but before it was ripe. It made from one to two and a-half tons to the acre. I count it as good as timothy hay; have been feeding it to the farm teams for two weeks and they are doing first-rate. Fifteen acres the cows have had access to all summer, in connection with blue grass pasture, and they have kept the flow of milk fully up to the average season, and the rye is still sprouting and growing green from the roots. This field is bottom land. Fifteen acres that I had on a rented farm was too unhandy to pasture; have cut it for seed. The May frost damaged it one-half, which would not have happened could I have pastured it and kept it back. I would advise every farmer to plan to sow some rye for early spring pasture. Should it be an open winter the rye would afford forage for light stock, and be available for all stock one or two months before the grass. My time for seeding to rye is the last of August or first of September, right after the corn is removed for the silo; I sow everything to rye. We find that it will not do to sow in the corn during the drouthy seasons in July, for the seed perishes. If the drouth continues two months longer we will have no corn. If rye be sown, generally it will be worth millions to the farmers and help to tide them over a bad place in their experience."

**How to Save Corn Fodder.**

SIR.—In regard to our method of handling and preserving corn fodder I would like to state, first, that we grow ordinary hill corn and feed it to fattening cattle, ears and all, without husking. When the corn is ready it is cut by hand and laid down in bunches; four hills to a bunch if the crop is good. After wilting for a day, more or less, it is bound (stalks being used as ties) and shocked; twelve bunches to the shock. If the shocks are too big the corn moulds; if too small they don't stand well. After standing for a month or six weeks the corn is fit to be hauled off and stacked. In preparing for a stack a pole about fifteen feet long is set in the ground two and a-half feet, and pieces of old rails, from four to six feet long, are laid on the ground around the pole and crossed in such a way that the centre is considerably the highest. The stacker stands close to the pole, with his left arm around it to hold himself on, and lays the corn bunches,—butts away from the pole, the tops reaching past the pole on the side next himself two feet or more, according to the length of the corn. So he goes on, bunch after bunch, round and round, going against the sun, until he is high enough to suit himself, when the last four or five bunches are placed with their tops up the pole and firmly tied, and the stack is finished. About twelve shocks are put into each stack. We find that the greater the diameter of the stack the more danger there is of heating and moulding. As the stacks settle, the centre alone being tramped, the outside droops more and more; so that they are absolutely weather-proof.

The advantages claimed for this method as compared with that of putting the corn on end in a barn-mow are that the stalks do not get so dry, and the mice do not work in them nearly so much, eating the corn and spoiling the flavor.

If hill corn is to be husked I put thirty-six hills (six each way) in one shock, and, without cutting, tie the four centre ones together diagonally. Such shocks do not fall. I much prefer this plan to using a wooden horse. The four centre hills are cut at husking time. The stalks are tied in small bundles and stacked just as above described.

Middlesex Co., Ont. THOMAS BATY.

"L. S. H." in Practical Farmer, suggests that much valuable time, and worry, could be saved by charging a brother farmer up with everything that he borrows, and give him credit for it on its return. The practice of continually borrowing plows, cultivators, saws, etc., has very little to commend it, and, indeed, is often a great nuisance. Remember that "the borrower is servant to the lender."

**Toronto Industrial Exhibition.**

Toronto, Monday, Sept. 9th. The Industrial Exhibition of 1895 was duly opened last week, and is now in full swing, with a largely increasing attendance of visitors daily. Great improvements in the way of buildings, etc., are noted in several departments. The magnificent display of exhibits is indeed a wonderful tribute to the breeding, agricultural, manufacturing, and artistic capabilities of Canada. There is an immense turn-out of pure-bred stock, for which, long ago, Canada became famous throughout the world, and the quality of which, as seen here, still entitles her to a position of pre-eminence. Detailed reports will be given in our next issue.

**A GLANCE AT THE AGRICULTURAL MACHINERY.**

The Fair might give to the casual annual visitor an impression that the whole Machinery Hall contained the show of last year, running as it did then, but a careful examination shows improvements in very many lines. More attention is being given to shallow-cultivating implements, disc harrows, etc., year by year. Each season brings about lighter, handier and more complete implements than have previously been seen. It seems a great pity that farmers have not always the ready cash to be able to secure the most improved labor-saving machines, which not only make the work of the farm lighter and more pleasant, but also far better done, and more remunerative, because more rapidly executed.

Coulthard & Scott's (Oshawa) stand contained a nice display of cultivating and seeding machinery. Their spring-tooth riding cultivator has a movable tongue to allow three horses, if necessary, to walk between the wheels. The drill and seeder combined are fitted with hoes, spring-teeth and diamond-pointed teeth to suit them to any ground desired. These machines can be held at any depth desired with a spring adjusted by a lever. They also exhibited disc and diamond-frame harrows.

The Cockshutt Plow Co., Brantford, made an extensive display of plows, both walking, sulky and twin; also Manitoba breakers and stubble plows, potato diggers and root cultivators. Their Western corn cultivator and bean harvester is a complete machine.

The Wilkinson Plow Co., Toronto Junction, filled a good large stand with a varied assortment of plows, single, twin, three and four-furrowed; also Manitoba breakers. We were particularly impressed with the brilliancy of the mouldboard, which are made of American soft-centred steel. Their potato digger has a round couler arranged to prevent clogging with tops. The bars at the back, while at work, are continually jumping to shake the potatoes free from soil. They also exhibited straw-cutters, root pulpers and slicers, wide and narrow scrapers, steel rollers and scufflers.

T. T. Coleman, Seaford, had an interesting and well-filled stand. Their root pulper has a simple but valuable attachment in the shape of a pair of blunt prodders which, at each revolution of the wheel, bob up and shake the roots loose from clogging in the hopper. Their two-furrowed gang plows are fitted with slip axles, which can be renewed, when worn out, for a few cents. They also have long mouldboards. The roller grain crusher cannot be unevenly adjusted. The corn cultivators exhibited in this stand have round-shanked teeth so that they can be easily set square to their work when working wide or narrow rows. The steel roller is admirably suited to uneven surfaces. Mr. Coleman has the sole agency in Western Ontario for Matthew Moody & Sons' (Terrebonne, Quebec) machinery.

Copp Bros., Hamilton, exhibited, besides a complete set of plows, spring-tooth and diamond-frame harrows, a potato digger and a Champion road machine, which has become very popular. Root and corn cultivators, with different sets of teeth for different purposes, were also to be seen in this space.

J. W. Provan, Oshawa, did not fill much space, but his exhibit—slings and forks, running on steel, iron and wooden tracks,—was worthy of much praise, so completely do they do their work.

The Verity Plow Co., Brantford, filled a good large space with a fine exhibit of plows. Their line of root and corn cultivators have numerous varied attachments.

Watson Mfg. Co., Ayr, showed a fine display of ensilage and straw cutters. They have the concave, convex and cylinder knives, and carriers to any desired length. Their root pulper and slicer combined is a good machine. They also exhibited a grain crusher, and a corn and cob crusher. Their wheeled feed carrier, with box and barrel attachment, is a handy contrivance for any stock farm.

Cossit Bros. Co., Brockville, always had a crowd around their exhibit, viewing and asking questions about the Bindlochine, a singularly constructed binder, which has just one canvas, that being on the table. Although it looks somewhat complicated, it is said to draw lightly and do good work. They also exhibited horse-rakes, mowers, single reapers, as well as disc and spring-tooth harrows.

David Maxwell & Sons, St. Mary's, occupied their accustomed stand, besides a considerable addition, all of which was well-filled—not with a lot of duplicates, but a full line of harvesting and hay-



ing machinery. Their bicycle-wheeled steel rake is a good-looking machine. Their hay tedder and loader are labor-savers. They also showed a nice line of root pulpers, and a sower, as well as a line of sulky plows, scufflers and reversible disc harrows.

M. Moody & Sons, Terrebonne, Que., attracted considerable attention with their farm threshers, run by two-horse tread powers. They also exhibited the only potato planting machine seen by us at the exhibition. Their power ensilage cutter and spring-toothed harrow are both good machines.

John H. Grant & Co., Grimsby, showed a full line of plows, root and corn cultivators. Their disc harrows are fitted up with steel ball and roller bearings, which reduce the friction to the least possible amount. They also have a single shaft horse grape hoe, which can be worked successfully right up to the rows.

The Brown Manufacturing Co., Whitby, had on exhibition their celebrated ball-bearing centre-cut "Clokey" mower, also their "Hero" four-horse power, which is strong and light-running.

J. Fleury's Sons, Aurora, filled an extensive stand with a full line of walking and sulky plows, also stock food preparing machines of all sorts. Their silage and straw cutters are of various sizes and capacities. The same may be said of their roller, hand and power grain crushers.

M. T. Buchanan, Ingersoll, interested people with his hay and grain carriers, working on steel, iron and wooden tracks. The double harpoon forks, and end and centre trip slings, were conveyed upon reversible malleable cars.

ments for garden and farm cultivation. Their small hand cultivators are extremely handy tools, and their horse cultivators can be adapted to a great many uses by applying their different attachments. Their potato digger is unique.

The Essex Centre Manufacturing Co. made a creditable display of walking plows and disc harrows. Their lance-tooth harrow looked like a dandy for hard ground. They also showed a post-hole auger, which looked like a rapid working tool.

The Waterloo Manufacturing Co. showed a varied assortment of high-class machinery. Their grain crushers and ensilage cutters, with flat and cylinder knives and extension carriers, appeared to have an extensive capacity. Their stand also contained a McCloskey Counterbalance and a Champion thresher, run by their return-flue and locomotive-boiler engines. We also observed a cream separator in this stand.

Tolton Bros., of Guelph, show four pea harvesters, adapted for short and long-vine peas, and to one of these machines they have a new patent buncher attached, which bunches the peas as soon as they are cut. They also show three different kinds of plows, two set of flexible steel harrows, four double and two single root pulpers, and a model engine operating a small model thresher and intermitter, which shows the mode of driving steam threshers by through line of rope transmission of power, which places the engine at a safe distance from the barn, in a straight line or at any angle.

Holmes & Halliday, Clarksburg, had out a complete set of sprayers attached to barrels and other

ent attachments are easily put on, and are capable of doing good work in all their lines.

The Prescott Disc Harrow Co. exhibited a scalloped disc harrow, which combines the disc and spade machine in one implement.

The Chatham Fanningmill needs no introduction. Manson Campbell made a fine display of these with sieves and screws for all grain and seed-cleaning purposes, with the cup bagger attachment.

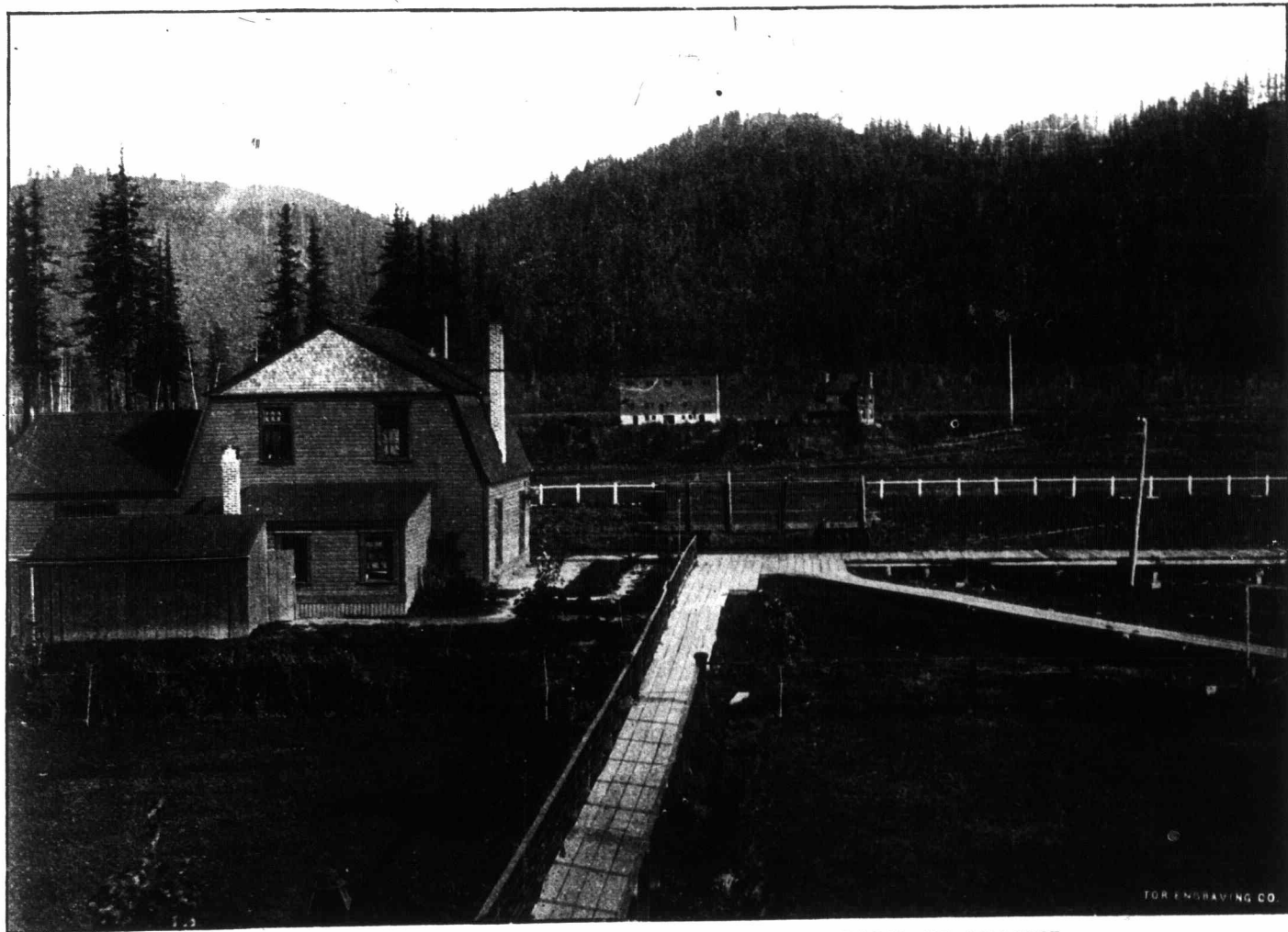
Bain Bros., Brantford, had in their varied wagon exhibit, the Holley patent, low down, bent axle, with stock rack, etc., has its platform about twenty inches from the ground.

The Adams, Snowball, Cruickshank, Chatham and Speight wagons were all on exhibit in their many and varied styles. The Chatham Government Standard Wagon, with malleable castings, new giant arms, should answer a good purpose.

Threshing machines, in operation, were shown by R. Woon & Co., Oshawa, who exhibited clover hullers, arranged to run by steam and horse power. Grain threshers were shown by J. Herrzott & Co., Mildmay; McDonald Mfg. Co., Stratford; MacPherson & Co., Fingal (the Challenge); Sawyer & Massey, Hamilton, filled a large space with grain threshers.

Neely, Durand & Co., Dorchester Station, exhibited their common-sense grain and hay carriers, forks and sling, on rod and wood trucks.

Richardson & Webster, St. Mary's, showed straw and ensilage cutters with concave and convex fly-wheel and cylinder knives, and hand and power



VIEW OF THE BRITISH COLUMBIA EXPERIMENTAL FARM AT AGASSIZ.

Something very light in a binder was seen in the stand of the McMaster Manufacturing Co., Orangeville. It is a rear-cut binder, which elevates only twenty inches at the back of the drivewheel, which is the only heavy part of the machine. This firm also exhibited a very nice grass mower, with a horserake attachment for bunching clover seed. The rake can be dumped by the driver from the seat.

The Waterloo Engine Works Co. had running a neat little French burstone grain crusher, which would last a lifetime on a stock farm. This appears to be a good thing. Their horizontal and Champion engines were doing much to keep the machinery at the fair in operation.

Wortman & Ward Manufacturing Co., London, had a varied display of cultivators. Their disc and spade harrows are reversible, and were fitted with the almost frictionless ball-bearings. Their stand also contained horse forks and slings, suited to all the kinds of tracks. They also showed scufflers, root pulpers, grain crushers, Daisy churns in different sizes, and a full line of iron pumps having brass and iron cylinders.

Something new in a tire-setter and cooler was exhibited by the Shelbourn Tire Setting Co. The large round plate is set just above a tank of water, so that when a wheel has just received a hot tire, it can be given a plunge bath by one turn of a lever.

Whitman Barnes Manufacturing Co., St. Catharines, had a nice exhibit of fruit, root and corn cultivators, also potato diggers.

S. L. Allen & Co., Philadelphia, are the people who make that world-renowned "Planet Jr." cultivator. Their stand contained a full line of imple-

wise. They manufacture the dash, also return-pipe agitator.

Hunt, Helm & Ferris, Harvard, Ills., and London, Ont., exhibited a nice display of hay and grain carriers, suited to steel and wooden tracks. They have a convenient attachment for transferring a pulley from end to end of the barn by means of a rope manipulated from the floor.

Gillies & Martin, Teeswater and Listowel, exhibited root pulpers and power ensilage cutters.

E. L. Gould & Co., Brantford, had a nice display of their G. S. M. patent gearless fanningmills, with bagger attachment.

The "Ripper" ensilage cutter, disc and diamond-frame harrows, and adjustable scuffer exhibited by D. Thom, Watford, were all good machines.

W. A. Gerolamy, Tara, had an attractive exhibit of farm machinery and implements, including fanningmills with some valuable late improvements, a very light and convenient single and double row root sower. The scuffer, besides being a good cultivator, can be used for banking potatoes and ridging up land for turnips.

J. W. Mann & Co., Brockville, make a specialty of spring-tooth broadcast sowers. Their 9-foot machines have movable tongues to admit three horses between the wheels. They have machines which simply cultivate, or cultivate and sow, or simply sow grain, flax and grass.

The American Harrow Co., Detroit, Mich., and Windsor, Ont., showed a good thing in their American harrow, seeder, fertilizer, corn cultivator, bean harvester and stalk cutter all combined. The differ-

ent attachments are easily put on, and are capable of doing good work in all their lines.

Peter Hamilton Mfg. Co., Peterboro, had a large space well-filled with a full line of cultivators, sowing and harvesting machinery; also something new and improved in ensilage and straw cutters. The large 14-inch feed ensilage cutter has an under-shot reversible carrier. Every implement and machine in this exhibit was well gotten up, and had many new and desirable features.

Noxon Bros. Mfg. Co., Ingersoll, showed a large exhibit of seeding and harvesting machinery. Their seven-foot drill and seeder can be very quickly arranged with two poles for three horses. Their new Buffalo lever harrow answers any purpose for which harrows are used; the teeth are given any slant desired by means of a lever. Their new slatted clover-seed table, attached to the mower, saves all the shelled seed.

Frost & Wood, Smith's Falls, exhibited a full line of harvesting machinery. The single apron binders are novel and complete. The new tubular-framed mower with brass boxing are the only ones exhibited so fitted. They also showed a full line of walking plows.

The Massey-Harris Co. had their accustomed large space well filled with their various lines of machines and implements. Their polished World's Fair exhibit attracted a lot of attention.

John Abell Engine and Machine Works, Toronto, made a striking display with their one, two and three-horse tread powers, grain and clover threshers,

hay presses, and duplex feed grinders. Their Little Giant Grain Thresher and Victor Clover Hullers are standard machines.

B. Bell & Son, St. George, had their accustomed large space well filled with their substantial farm machinery. Their one and two-horse tread powers and large power ensilage cutters with carriers attached are all good machines. Their pulpers have a simple but effective lever prodder to loosen up a jam in the hopper.

The Tweed Hay Carriers and Slings, manufactured by Emerson & Campbell, Tweed, Ont., have a new feature in being able to hold the draught at any point between the load and mow. It has a malleable iron swivel. Their combination sling and fork car should give satisfaction.

Metallic Roofing Co., Toronto, had a neat exhibit of Eastlake metal roofing, siding, and corrugated galvanized iron, and rock-faced steel siding, also metal lathing and eavstroughing. This firm uses oxide paints, which they claim is the most lasting and flexible dressing to be had. Over 50 buildings on the Industrial Fair grounds are roofed with Eastlake Metal Shingles.

Pedlar Metal Roofing Co., Oshawa, had a large and attractive exhibit of metallic shingles, siding, and ornamental ceiling plates. Their pure graphite dip for steel roofing is taking the place of all oxide mixtures in their work. This graphite is a mixture of pure plumbago and linseed oil, and has very retentive qualities. This firm supplied the roofing for all new Toronto Fair buildings erected in 1895, including the large sheep-pens.

The agricultural machinery was run by Brantford, Haggart, John Abell, Waterloo, Sawyer & Massey, Chatham, St. Thomas, and the Geo. White & Sons engines.

The Perfection Spring Wire Fence (Windsor), has a double stay, which allows contraction and expansion without fear of breaking or sagging.

Truss Cable, Toronto Lead and Barb Wire Co., has capacity for expansion, is easily visible to stock.

The Buchanan Steel Picket, Ingersoll, is constructed of smooth wire, stayed by broken steel pickets, which makes it firm and still elastic.

Champion Stay Wire Fence, Rostock, Ont., has steel continuous stays, which are notched every inch, so that as many wires as is desired can be used.

Page Wire Fence Co., Walkerville, Ont., showed their eleven and sixteen wire fences. They have, as usual, a suspending 300-pound bunter in operation for showing the strength and elasticity. Their lawn fence is handsome and strong.

The Ross Braid Fencing made by the Safety Barb Wire Co., Mimico, appears easily to be strong. Each strand is a braid two inches wide.

The Casey Diamond Grip (Canada Fence Co., London) is a good thing, as it cannot slip. Their new twisted stay is a positive improvement.

The Collins Fence, Toronto, is a twisted wire fence with twisted stays which connect each two wires.

Kitselman Bros.' (Ridgeville, Ind.) Star Woven Fence Machine (in operation on the ground) shows that a woven wire fence can be made cheaply by any man on his own farm. They sell the machine, which also gives right of use.

The Locked-Wire Fence, Ingersoll, has the crimped uprights which prevents any slip whatever. It is built with smooth galvanized wire.

The Lock Grip Section Wire Fence and Picket Wire Fences, 221 River street, Toronto, are bound together from end to end and from top to bottom.

Woodstock windmill runs on the almost frictionless graphite lubricated bearing. We noticed this mill has a well-braced steel derrick.

The Aergiant wind wheel, Stratford, is a substantial wind-power machine.

The Airmotor, Chicago, tilts down to the ground for oiling and repairing.

The Gould, Shapley, Muir Co., Brantford, runs on the up-to-date ball and roller bearings. They are said to transmit much more power than the old oiled bearings.

The Ontario Wind Engine and Pump Co., Toronto, showed their Gem Windmill, Canadian Airmotor, Steel Wind Engine, and the Halliday Standard Windmill. These were all in operation, running circular saw, cutting-box, feed grinder and pumps. Full line of pumps were all in operation.

#### That Funny "Nitergen."

Professor Urley has rather facetiously touched up the early struggles of the farmers with some of the chemical and physical agencies that operate for his weal or woe. In the following lines he refers especially to the elusive nitrogen:

And the fellers from the college of agricultur, they  
Wuz thick ez lightning bugs in June, and had a heap to say.  
Their wuz one they called a chemist, and he kind a seemed  
to know

All that wuz in the air above and in the ground below.  
He said we needed nitergen, and showed us how the stuff  
Wuz awful high and skeerer for crops, while in the air enuff  
Wuz found to make us 'barnal rich if we could only get  
Some cheap and sartin projack of hitchin' on to it.

He sed that peas and clover, and other crops like them,  
Wuz just the stuff to do it and store it in the stem,  
And the yerth is full of critters that eat this stuff, you see,  
And change it in a twinkle into ammoniac.

Sence I come back from the institoot, it really appears  
That potash, nitrate, fosf-rus, wuz ringin' in my ears.  
And, Henry, it seems perty tuff that you and Jim and me  
Hev went along so ign'rant uv what we daily see.

Ji-t hauled manure out on the pints, and plowed and hoed  
and mowed,  
And worked so hard for little pay, and never, never knowed  
The clover, peas, and beans, and sich ez the chemist  
mentioned there,  
Hez the highly useful knack of suckin' niter from the air.

## DAIRY.

### A Co-operative Dairy in Belgium.

Co-operation and success go hand in hand in these days of division of labor. Baron L. Peers, who has a charming country seat a few miles from Bruges, Belgium, owns an extensive farm and co-operative dairy, which was visited by F. C. Loder-Symonds, and a description of which he gives in the journal of the Royal Agricultural Society of England.

The milk from the different contributors is hauled in churns to the dairy in carts by dogs. Every churn at its arrival is weighed and a sample for quality is taken in a small graduated and numbered glass tube. It is then emptied into a large vat which feeds the separators. The cream, which is separated by "Alexandra" separators, passes into a metal bucket in a recess in the floor. The skim-milk is raised by a centrifugal pump to a sterilizer, where it is heated to 185° Fahr., and from thence it flows over a "refrigerator" into a measuring apparatus, by which the churns of the contributors are refilled, each man getting skim-milk to the measure of 90 per cent. of the quantity of new milk sent in. The cream is kept in a cool cellar, with large windows open to the north, to ripen for 24 hours. Baron Peers lays great stress upon the ripening process being carried on in full light, as being favorable to the activity of the right kind of microbes and fatal to those which produce bad flavor. The cream is then churned in Dutch fixed churns, the operation taking 45 minutes, the proper temperature being maintained with warm water or ice, as the case may be. The fixed churn is preferred to any of the revolving English patterns, because the cream is always in free communication with the air, and is, therefore, not contaminated by the evolution of gas which has to be let off from time to time from close churns. The butter is removed in the granular stage, and at once made up on a circular butter-worker driven by steam, packed and sent off to London, Paris, or elsewhere.

Great importance is attached to the heating or "pasteurization" of the skim-milk, as this enables the contributors to receive it in a state fit for food. The buttermilk is also returned. A careful account of the quality and quantity of milk sent in is kept. The quantity multiplied by the factor of quality, obtained by the method described hereafter, is the "effective" of each contributor. The total cash received, divided by the sum of the "effective," gives the "factor" of profit. The "effective" of each contributor, multiplied by the "factor," gives the gross money value of the butter derived from his milk. From this is deducted about one-quarter of a cent as the cost of separating. The balance is then divided equally between the contributors and the Baron. Each farmer thus gets the whole of his by-products back and a trifle less than one-half the selling price of the butter. The butter, however, is quite 25 per cent. more in quantity and 25 per cent. higher in price than it would be if made up in the old-fashioned way by the peasant himself. He thus gets about the same pecuniary return, and is saved the trouble of making and marketing.

The cows of an improved breed are being kept, the first cross between the Jersey bull and the common country cow being the most valued. To assist this process two or three Jersey bulls are kept by Baron Peers. A "home herd" of some sixty pedigree Jerseys is maintained; these having replaced a former herd of Shorthorns, which gained many prizes in their day, but which have now been supplanted by the Jersey as a more profitable butter cow. The Baron lays great stress upon the "escutcheon" of a cow, and said he never knew it to fail as an indication. He finds the best daily winter ration to be:

4½ pounds maize meal—boiled.  
2½ pounds rye meal—boiled.  
6½ pounds turnips.  
1½ pounds hay.

That such a large amount of turnips can be fed without rendering the butter unsalable will be a source of wonder to many of our readers. Baron Peers explained that this could be avoided by proper methods of conducting the fermentation. To get rid of the turnip flavor it is advisable in the first place to separate the milk as completely as possible from the cream; hence the cream produced in the winter, when the cows are eating turnips, is much thicker than that separated in the summer months, and the operation of separation takes longer. After separation the cream is "pasteurized" by being heated to 185° Fahr.; then cooled and passed into the ripening room, when a small quantity of the ripened milk of a cow which has been fed exclusively on hay is added. The effect of this is to start a healthy ripening; the bacteria associated with the flavor having been either killed or rendered inert by the "pasteurization." This process is said to be so effected that no trace of turnip flavor can be detected in the butter, and the factory butter therefore sells during the winter months at a price proportionately much higher than that of ordinary butter.

Young women employed in Danish butter factories earn from 6s. to 12s. per week. Women do a large share of the work, except where heavy lifting is entailed and for driving the heavy milk vans. One establishment employs about 250 people.

### The Fall Feeding of Dairy Cows.

BY F. J. S.

We deem it essential to point out again some of the main principles in stock-feeding, since we feel assured they are often neglected. In the first place, it is proven that, generally speaking, it requires about two-thirds of the food eaten as food of support: full rations, then, are required in order to reap the greatest profit. Secondly, that quantity and cost of product considered, one-sided rations are less satisfactory than those well-balanced. Thirdly, that digestion is sometimes helped and sometimes hindered by combinations of fodders. These, among others, we shall endeavor to keep in view while discussing the subject.

We would first say a word or two as regards salt and water. Strange as it may seem to some, there are farmers who do not think it is necessary to give cows salt, and do not give them any. Let none who would reap the most possible from their dairy herd withhold salt—they should have it every day. Fall, when wheat is sown and corn cut, is a favorable time to get rid of the eye-displeasing and milk-contaminating frogpond. The stagnant pool that writhes with every undesirable form of life, plant and animal, is a veritable sink to the dairyman. These are not as common as dishwater, for that is found on every farm, but they form perhaps the next nearest approach to the perfection of that simile. Drain it now. It will pay. But we hasten.

We would speak for a moment upon quality, or, rather, the lack of quality in fodders. Many objectionable weeds grow upon our farms, and these take largely from the value of our dairy products in more ways than one. We have repeatedly noted that cream from weedy milk does not give up its fat as fully nor readily as does good milk, besides being of poor flavor; and be it remembered that flavor is the first and chiefest thing in butter and in cheese. In many sections high-class dairy products will never be made during the fall until this matter be remedied.

Grasses that have become dried and withered, even though plentiful, are not good fodder. Such give a poor quality of product, and a too limited quantity. The too common practice of confining cows to this class of fodder is a violation of our second and third principles of stock-feeding. Digestion and assimilation are alike impaired. To these evils another is frequently added, viz., the feeding of frosted fodders—grass, root-tops, rape, corn, etc. This practice is notoriously common in some parts, but gravely objectionable. It is a menace, physiologically, to the animal system, and a death blow to recherche dairy products. Frosted or frozen fodders should form no part of a dairy ration. But there are fodders which are fed (apart from the above objection) to milch cows during fall, that, to steak mildly, are undesirable. Rape is one of these, fall rye another, turnip and carrot tops, and like fodders. To these, Swedes may be added, as, except where they have been fed in small quantities, or the products marketed where the people have become accustomed to such flavor, they are not to be recommended. Many cheese factories and private dairies have come to grief pecuniarily because of carelessness in this respect. Certainly these fodders have a place in our stock-feeding—to furnish fall feed for dry cows and young stock, and thus leave the better class of food for our cows; in this they are important.

This leads us to a consideration of what these fodders are: First, grass; but this, even if abundant, is not sufficient, since as fall advances it loses its June quality and milk flow decreases, causing us to look for additional fodder, which, depending upon the season, we may find in one or more of the following: Clover of second growth, not to be fed alone, however, as the flavor of the product will suffer; fall growth of grain on cultivated stubble fields; corn fodder, with silage later on; and grains in combination. These, with cut straw or hay, as the season advances, will enable us to compound royal rations for the dairy herd.

A word upon the grain question. As a rule it is a mistake to feed very heavily with grain at this season, but a moderate allowance with less concentrated fodders very frequently gives results much beyond its cost. Resulting, as it does, in a narrower nutritive ratio, or, in other words, a better-balanced ration, the digestibility of the whole ration is materially increased. Hay is practically nil in much of Ontario this year, but with a fair amount of straw, grain will make a cheaper adjunct, at present prices, than will hay. Indeed, hay (clover is best), except in light proportion, we esteem an expensive fodder for milk production.

But of our staple fall feed we would proceed to speak—corn fodder. The whole crop should be cut when the ears are in the tough dough stage. We think there is a tendency to over-ripening of this crop, especially when intended to be fed as fodder and not siloed. How to store it is a disputed point. Suffice it to say that corn stooked in the field and exposed to sun and fall rains makes but ordinary feed. Rain causes much mechanical loss by washing out the carbohydrates of the fodder, leaving a large proportion of woody fibre; a deterioration of one-half is common. On many farms much may be safely stored, after it has been cured in the field, by standing it on end in the available space in the buildings; or, again, it may be stored in mows alternately with straw, a foot of straw to a thin layer of the fodder, and the two cut together. The writer has not practiced this method, but has met a number of intelligent

farmers who have, with much success. All corn fodder should be cut, or, better still, shredded (it is a double economy), and is best fed in conjunction with such food as clover hay (also cut), grass or grain. Oats, ground of course, make an unbeaten single grain addition, but a mixture of oats and wheat, oat and barley, or bran and shorts, will give excellent results. The quantity will depend largely on how well the corn is eared, but it is well to remember that corn in the ear is much cheaper grain fodder than our cereals and legumes, and to sow varieties accordingly. If hay is scarce, a well cured, not over-ripened, millet will add to the value of a corn fodder ration.

While appending these notes we do not forget that siloed corn is to be preferred, as soon as the silage is ready for use (perhaps about November 1st), before corn fodder, as generally handled.

Avoid violent changes in feeding. He who has learned how best to dovetail fall feeding into that of winter, and winter into spring, has learned not a little of the science of stock-feeding. Before closing we would mention the necessity, as a saving of fodder and cheapening of the product of the herd, of stabling milch cows at night early. The first cold, stormy nights are when cows drop off rapidly in flow of milk and hasten to the drying-up period if not comfortably housed. The stables are there, and cost nothing; let us not neglect this pound-wise and humane action, nor yet forget that this fall's feeding and care will very largely control next winter's profits.

Milk the cows in the stable always, and here, morning and evening, supply in goodly measure your cut fodder with its grain admixture to the outside limit of your bill of fare and of each cow's capacity, and so far as food is concerned, profit, safe and constant, will be assured.

**Our Western Dairy Interests.**

Mr. Andrew Clement, senior member of the firm of Andrew Clement & Son, produce merchants, Glasgow, Scotland, with branch houses at London, Liverpool, and Manchester, while making a trip across the continent, stopped off a few days in Winnipeg to look up the dairy interests. Mr. Clement owns some farm lands in Northwestern Manitoba, and spent a few days up in that section before continuing his journey westward. He was accompanied by Mr. Zufelt, of the Dairy Commissioner's staff, and they visited several creameries and factories along the line. Mr. Clement expressed himself as delighted with what he had seen, and considered the capabilities of the country as simply marvellous. In reference to the dairy products, he said he had seen some cheese equal to anything made in Ontario, and he thought, with such cool nights, even better cheese than that of Ontario might be turned out. Ontario must look to its laurels. Great attention, he said, must be paid to the quality of both cheese or butter, as there was now no market for the poor stuff. The favorite package was the square box, holding 50 pounds of butter. Mr. Clement is an admirer of the Aryshire as a dairy cow, and considers them well-adapted to Manitoba and the Northwest.

**English Butter Tests.**

The English Jersey Cattle Society has annual dairy tests, conducted by Mr. Edward Mathews, who carries on the work without any idea of booming, but everything is done of which honest Englishmen can approve. The average of all the cows of the recent test, including several that had been in milk six months, was 2 lbs. 11 ozs. of butter daily, and the average quantity of milk to each pound of butter was only six quarts. When consideration is taken of all the disadvantages attending such a test, when the cows did not have the advantage of their home surroundings, the results are decidedly satisfactory. The cream was churned at a very low temperature, and then spun for some minutes in a centrifugal drier, so that the butter produced was exceedingly free from moisture.

**GARDEN AND ORCHARD.**

**Autumn Strawberry Planting.**

It is often the intention of farmers to do a great deal in the spring, but when that busy season comes it becomes a matter of doing the big jobs of general work, while many of the lesser undertakings are entirely forgotten. Among the neglected jobs the setting out of a few strawberry plants may be often classed. Now the very cause of not planting last spring will in all likelihood hinder it being done next spring. A safe and sure way will be to take time by the forelock and put in a bed this fall. Mr. Crawford gives, in the Canadian Horticulturist, his method of doing the work; an outline of which we give:

While the soil for strawberries should always be rich, it is especially important that it be so with fall planting, as a good root-growth should be obtained before winter sets in. Well-rotted stable manure should be liberally used, being applied after the ground is plowed, then the bed should be harrowed until it has become firm and well mixed. If the bed is small, a hoe will answer to work in the manure. The ground should be made firm, before

planting, by means of a roller. In planting a small bed it is well to stretch a line where the row is to be and spat it down with the back of a spade, which leaves a smooth surface and an impression of the line to guide the setting of the row. When the holes are dug to receive the plants, they should be filled several times with liquid manure, which will soak into the soil and leave it in fine condition for the plants. After the plants are set, a mulch of some sort should be put on together with one good soaking. Short, green clippings from the lawn make a fine mulch, as it affords shade when it is needed, and as the grass dries up the plants become strong enough to do without the shade. After plants are set they should be hoed so frequently that no crust can form on the surface nor any weeds grow. It is a wise precaution to give fall-set plants winter protection. There is so much bare ground between them that they are liable to be heaved out. On sandy or gravelly soils, where the drainage is good, there is no danger. It is well to get the plants in early enough so that they may become firmly established before freezing weather comes.

**The Earth Mulch--Its Value in Fruit Culture.**

BY ELLIS F. AUGUSTINE, LAMBTON CO., ONT.

While a certain degree of moisture is indispensable to the life and growth of all vegetation, there is probably no other crop which demands so large a supply for its fullest development as fruit. To the fruit grower, then, one of the most important questions is: how can sufficient moisture be most readily and cheaply secured during a protracted period of drouth, such as we have had during the last three seasons? Where conditions admit, irrigation can most satisfactorily be made to overcome these climatic extremes. But with the majority of farmers this is impracticable, or too expensive, therefore some other means must be found. The means, then, which is within the reach of all, is to conserve all existing moisture which has been stored in the soil from winter snows and early spring rains. This can be successfully accomplished by keeping the soil constantly covered, to a depth of one or two inches, with a fine earth mulch.

Scientists tell us that moisture rises in the soil by capillary attraction, which process is thus explained: When a clean glass tube, with a fine bore, open at both ends, is plunged into a liquid capable of wetting it (such as water), the liquid is found: (1) To rise in the tube above the level of its surface in the vessel containing it; (2) to rise higher in the tube above that level, the finer its bore is. Now, in the soil there is a constant tendency to form these microscopic tubes, through which the moisture from below is drawn to the surface and evaporated into the air.

From this will be seen the necessity of deep tillage early in the season, in order that these tubes may be freely formed to bring up the moisture from below. But the desired results will be lost if they are allowed to find free vent in the air. Hence the necessity for stirring the surface frequently and shallowly in order to break these minute tubes, when evaporation will be checked and the moisture stored beneath this earth mulch, where it can be utilized by the rootlets of the growing plants, instead of escaping into the air. Thus it is that cultivation is always necessary after heavy dews or showers; for the wetting of the surface forms a crust, which tends to restore the normal conditions. This explains the reason why a straw mulch is so valuable in conserving moisture; for, while the moisture is attracted through these minute tubes to the surface, the straw prevents it from evaporating into the atmosphere. But while it is possible to use a straw mulch upon a limited area only, the earth mulch can be utilized to an unlimited extent.

Recent experiments in this line showed the result that upon an acre of light soil, where frequent cultivation was given, to a depth of one and one-half inches, the evaporation of water was 2,500 pounds less per day than upon an acre of similar soil receiving no cultivation. On heavy clay soil, this difference amounted to 4,000 lbs. per day per acre.

What wonderful opportunities for overcoming extremes of season a knowledge of the scientific principles of tillage and drainage opens up to the progressive farmer and fruit grower; and it is the putting of such knowledge into practical use that enables one to succeed where another fails.

Mr. T. B. Terry, one of the most earnest and widely-known Institute workers and successful potato growers of the United States, uses his knowledge of the value of the earth mulch to so good advantage that he succeeds in growing almost full crops of potatoes in the driest of seasons; and it is then that he realizes the largest profits by selling to those who are less thorough and systematic in their work. Mr. Terry tells us that within the first thirty-six days of their growth he went through his potatoes with the cultivator no less than nine times. This explains the "luck!" Mr. Terry meets with in potato growing. And still he believes that he has not yet reached the limit of success attainable by thorough tillage and use of the earth mulch.

In our work of growing both large and small fruits, we are yearly learning more and more of the practicability of conserving moisture by this means; and it is with a desire to stimulate others to take advantage of this method that I have written the above.

**POULTRY.**

**Cross-Bred Fowls.**

BY JOHN J. LENTON.

Farmers generally are partial to crossing breeds of poultry. This comes from the supposition that cross-bred fowls possess greater hardiness and merit than pure breeds, and that by crossing two breeds the good qualities of both can be combined. It is doubtful, however, if any one has greatly improved his flock by cross-breeding. True, the common fowls may be improved, as an infusion of new blood of any kind will prove beneficial to a certain extent; but when flocks are composed of pure breeds, and crossing is resorted to, a gain may be made in one season to be lost the next. When a farmer destroys the purity of his flock by crossing he starts on a down-grade, and does not stop until he gets to the bottom. The flock is soon left to itself, and the result is in-breeding and degeneracy, with loss of size and prolificacy.

Crossing is not objectionable when a careful selection of males and females is made, and there is an object in it. To simply cross two breeds, without knowing what the probable result will be in advance, is to incur a risk of failure. Some breeds will cross well with others, and for one season there will be a seeming advantage; but when breeds not suited to each other are crossed the progeny will be worse than mongrels. To explain this it may be stated that when a Brown Leghorn is mated with a Partridge Cochin female, the progeny will be hardy birds and the pullets will be excellent layers. Both breeds have single combs, black breasts, and plumage similar in many respects, though they differ greatly in shape. Should such a cross as mating a Black Spanish male or Polish male with a Cochin or Brahma female be made, failure will result, as such a cross is too violent. The progeny will not possess the hardiness of the Brahma nor the prolificacy of the breeds from which the males were taken. Yet just such haphazard crossing is made by farmers every year,—destroying the good qualities of the flock and exterminating the pure breeds. It is better every way to keep breeds in their purity than to cross them where the breeds are entirely dissimilar.

That the characteristics of the breeds are thus destroyed may be easily shown by an experiment. Select a number of hens of any breed preferred or a number of breeds, and mate them with a Houdan cock. The chicks that may be hatched will apparently be pure Houdans, as the Houdan very strongly impresses its characteristics on its offspring, and uniformity will prevail—each chick being nearly black and having five toes on each foot, as well as a crest on the head. It will appear that the cross is excellent; but wait until the next year, and allow these cross-bred fowls to breed together, and the chicks will resemble the hens of the first cross. Uniformity will be lost, no two chicks will be alike, and a lot of mongrels result. The first cross was successful with the Houdan because he was pure-bred and was selected for the purpose; but the second cross was a failure because there was no judgment used in crossing. No cross can be made that will result in securing qualities that cannot be found in one or more of the pure breeds. If the pure breeds are not perfect, the same may be said of the cross-bred birds. If a pure-bred possesses only one dominant quality, the same may be said of the cross-bred fowl. A perfect bird cannot be secured by crossing any two selected breeds. It requires more than two, or a dozen, to blend into one the qualities of all, and when some one point is gained something else will be lost.

There are so many different pure breeds which have been produced by judicious crossing and selection, that to attempt to produce a bird of merit by crossing would be simply producing something that can be found among the pure breeds already. In fact, such work will be but a repetition of what has already been done, and it is in one respect a waste of time. Anything that is wanted can be procured from among the pure breeds.

Crossing cannot unite extremes. A breed intended to be contented under confinement cannot be an active forager. An active forager, such as the Leghorn, will not give satisfactory results in close confinement. By crossing a breed that forages over a wide area with one that cannot fly over a low fence, nothing is gained. The pure breeds offer greater variety from which to select. Some are very prolific, some very hardy, some large, and others small. Beauty of carriage, gorgeousness of plumage, courage, and quality of flesh are characteristics not possessed by all; yet each will excel in one of these particulars. A hundred years have passed by since some of the breeds were established, and their characteristics are firmly fixed.

Farmers should take greater interest in the breeds. The only way to make a profit is to use that which converts the raw material into the most paying product in the shortest space of time. In poultry, the pure breeds are capable of yielding the greatest number of eggs and the heaviest carcasses at the least cost. The cross-bred fowl or the mongrel is an uncertainty. It has no fixed quality, and cannot transmit uniformity to its offspring, and occupies space that can be better filled by pure breeds.

**Hints on Turkeys.**

BY M. MAW, WINNIPEG.

Young turkeys by September should be out of all danger from damp and the numerous diseases they are liable to before shooting the red, and with a free range on the stubble, and proper, well-ventilated quarters, will grow very fast. A great many have been lost in the early season, and the causes are numerous. Lice and damp have claimed their share, but all the readers of the *ADVOCATE* have had their eyes opened to these dangers. In some localities a large percentage of birds have drooped and died, although every care was taken, and for a long time I was unable to answer the numerous enquiries as to the cause. The same trouble was experienced on the large Rhode Island turkey farms, and to such an extent that Government experts were sent to locate the cause. On examination, over 60 per cent. of the birds taken from separate farms were found to be infested with tape-worms. There are a great many cures; almost any of the various worm medicines mixed with soft feed, first thing in the morning, will rid the birds of these pests. I find a little turpentine, either in the water or feed, very effective. But great care must be taken to destroy all the dead birds and thoroughly clean out and disinfect the quarters where the sick birds have been—burning the litter and manure. If the ground is once contaminated with the tape and gape-worm eggs, it is useless to try to raise either chickens or turkeys, and the best plan is to commence in new quarters, and during the winter and spring give the old birds a little worm medicine.

Do not allow the young turkeys to roost on hard, narrow perches, or their breastbones will be crooked and deformed and spoil their appearance, both for market purposes and breeding. It is a good idea to give them a feed in the evening, and they will come home for it. Later, when preparing the birds for market, select the very best for breeding purposes, and shut up the balance in a large, well-ventilated building, and, if possible, keep it dark. Before feeding in the morning let them all out for a short run, then drive them in, giving all the fattening feed they can eat up clean. Do the same at noon and again in the evening, allowing plenty of gravel and water. Birds treated in this manner will fatten very quickly and fetch the highest prices in the market, if properly dressed.

**The Hens in Autumn.**

BY E. JOHNSTONE.

At this season of the year the hens begin to lay more freely. At least, mine do. Just as soon as the wheat is threshed, and they can have the range of the stacks and yards, their combs begin to redden and the sound of their cheerful, exultant cackle is heard again. And that nice, clean, fresh straw-stack is such a temptation to nest-making! I don't know of any better proof of the value of wheat as a food for poultry than this resumption of business by the hens as soon as they can glean the yards and fields after harvest.

I remember that some ten years ago we had a wheat stack that was imperfectly built, and in consequence "wet in." Ten or fifteen bushels of grain were damaged. The wet sheaves were thrown out, and I persuaded the man of the house to give them to me for the hens. They were dried out in the sun and wind, and then piled up in a corner of the barn. There they stayed till the next New Year's, when I began giving half a bundle to the hens every day, with a ration of meal and boiled potatoes for breakfast, and I never had hens lay as mine did that winter. I ascribed it to the wheat, and to the fact that the exertion they had to make to scratch it out was good, healthy exercise. I've sometimes been mean enough to wish the disaster—wet stack—might be repeated, for I find farmers hold queer ideas relative to the value of wheat. I can have all the corn and oats I want, but I've been warned away from the wheat bin so many times that I hardly dare glance in that direction when I'm in the barn for fear of being suspected of designs on it. Often the other grains are worth just as much, relatively, but the wheat seems the most precious, somehow. It is hardly necessary to say that I claim all the screenings, and always fill some barrels with the chaff and fine straw, which is always more or less mixed with grain at the end of the machine when we thresh. I would certainly advise any one to whom eggs are an object in winter, to make liberal use of wheat in the feeding ration.

I have learned what seems to me an important fact by a little observation, and hereafter the chicks I mean to keep over and depend on for winter layers I don't want hatched before April. Of course if you want broilers or chickens for market, that's different. Hatch them as early as you can, the earlier the better. But for winter layers April hatching is the best.

A pullet that is hatched in February or March is very apt to go through the process of molting or shedding feathers, just like an old hen. She does not begin as early in the season as the hens, but along in November and December, just when she ought to be laying, or about to begin, you find she's shedding her feathers. This process of re-feathering is debilitating it must be, for the hens never look so "down on their luck" as when molting—and she will not lay till it is complete, and she has her full new suit. No matter what you feed her it all goes to feathers instead of eggs. But an April pullet does not molt—at least, not in the sense of

losing her coat and getting a new one; in fact, she's been making feathers ever since she was hatched, and doesn't need to. She will go to laying in November, if properly treated, and in a warm house yield a good many eggs before spring, while your early-hatched pullet, that you expected would do great things, is eating her head off.

Right here is where a good many women who raise poultry fail. They work hard for early hatches, thinking to secure winter layers. Then they sell off the hens that seem to have stopped laying, early in the season, thus disposing of these that would molt early and thus lay in winter. The hens that lay along through the summer and early fall are the ones that ought to be disposed of, for when they stop laying they begin to molt and don't complete it till eggs are low-priced and plenty. It takes from ten weeks to three months to get through molting, and then, as soon as the hen has got in condition again, she will lay, but not before.

The hen, then, that stops laying early in the season is the one to keep over, and those that keep on laying through September should be got rid of, if one's object is eggs in winter. If you can get molting started in August, it means a full egg-basket in December and January. There is a good deal more in this disregard of the molting period than we think for, and want of knowledge is often the cause of those unexplainable failures, where every other point is carefully attended and this particular one not taken into consideration.

Anyhow, I have "the courage of my convictions," and hereafter April pullets and early molters will occupy my hen-house.

**Shipments of Poultry to the British Markets by Cold Storage.**

The fact that the perishable food products of the country might be made a greater source of wealth to the agricultural community of the Dominion received practical recognition from the Government during last session of Parliament, when a sum of money was voted to promote the shipment of dairy products by cold storage. As our readers are aware, the Dairy Commissioner was authorized to arrange a cold storage service, which includes: (1) Cold storage transportation on railways; (2) refrigerating chambers in Montreal; (3) cold storage compartments on steamships. These arrangements were intended for the shipments of choice creamery butter and other dairy products. The shipments of butter by the cold storage service have been a great success, and have led to arrangements being made for trial shipments of fruits in a similar way.

It is thought that the shipments of fine poultry by similar cold storage conveniences would result in the development of a large and profitable trade; and Mr. A. G. Gilbert, Manager Poultry Department, Experimental Farm, Ottawa, is now in communication with the various poultry associations, in order to inaugurate shipments of the choicest poultry. He desires information as to the capabilities of various districts, and the names of individuals best able to furnish good quality, together with any suggestions that may be made leading to the introduction of the best Canadian poultry in an unimpaired condition on the British markets.

**APIARY.****Failure of the Honey Crop.**

BY JOHN MYERS.

From all the information I am able to gather, I conclude that the honey crop for this season is a total failure in the northern and western part of Ontario; a very small crop in the southern part of the Province, and a medium crop in the eastern portion. I have been keeping bees for over fifteen years, and I never saw as poor a season as the one just past. The nearest approach to it was in 1875 or 1876. But that year was not nearly so bad as the present one, as at that time I took an average of five pounds of surplus to the hive, and the bees had plenty left to winter on. But this year I have not taken one pound of surplus, and my bees have had hard work to gather enough to keep themselves alive during the summer season, and at the present time I do not think, if I extracted all the honey out of every hive, I could get enough to winter over one colony.

I am pleased to know, however, that in some localities not far from here the bees have gathered about enough for wintering. I think the cause of the great shortage of the honey yield this year was, in the first place, the exceedingly hot weather we had in the early part of May, which brought on the bud, blossom and leaves of both trees and grasses in a manner that has been unprecedented in the history of this country, so far as I can learn. Then came that terrible frost which killed the fruit blossoms, cut off the buds on the basswood trees, and ruined the clover, so that we had no blossoms therefrom, nor hay for the cattle, and it even blighted that hardy, healthy plant, the Canada thistle, so that when it did bloom the blossoms were so dwarfed and dry that the bees were fairly disgusted with them. Then followed a season of the earliest and most severe drought known for some time. All these things together have given bee-keeping a setback that I fear it will take two or three years to get over; not because there will be no honey to gather, but because many bee-keepers will be so careless that they will not feed their bees, and I feel very certain that every colony

in the northern and western part of Ontario that is not fed will surely die of starvation. But I would like to whisper, and pretty loudly too, into every bee-keeper's ear in the land, to see to it that their colonies are well supplied with stores for winter. Twenty pounds of granulated sugar syrup will be sufficient to put a colony through until spring, and that can be purchased almost anywhere for \$1.00, and I feel quite sure that every colony that is wintered over will pay the owner double that amount or more next season. If you feel that you cannot possibly afford to buy feed for all the colonies you have, double some of them up until you have a number that you can afford to feed, as it is far better to be sure that a smaller number will come through winter all right than it would be to have a larger number of colonies, and expect some of them to have enough to winter on. Another thing: do not put off the feeding until it is too late; better to start now than to leave it too late, as the nights get cold and the bees do not get the feed sealed over, and then you run the double risk of losing both sugar and bees. I always like to have my feeding done not later than October 15th.

**QUESTIONS AND ANSWERS.**

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

**Veterinary.**

NASAL POLYPUUS.

ARTHUR SIMPSON, Westmoreland, N. B.:—"I have a cow three years old that has some obstruction in its head; breathes like a person snoring in their sleep. There is a slight discharge of colored matter, red and yellow; she has occasionally to open her mouth to breathe. Would you kindly advise me as to what the trouble is? Will the milk be affected? Is it to be feared? Will it affect her for beefing purposes?"

[Occasionally in cattle foreign bodies are swallowed, which get into the nostrils, fauces, posterior part of the mouth, remain for years, setting up irritation and growth of soft tissue known as *polypus*.

They may assume such a size as to cause annoyance to the animal, preventing free respiration and deglutition or swallowing; they should be removed by a qualified veterinary surgeon. The cases often present many difficulties; the tumors may be so situated as to be out of reach of any instrument; at other times the substance can be removed piecemeal. The milk will not be affected; the disease is purely local. The disease is very likely to increase and cause death of the animal by suffocation. It will not affect the animal for beefing purpose.

WM. MOLE, M. R. C. V. S.]

**Miscellaneous.**

WHAT IS RAMIE?

ENQUIRER, Middlesex Co.:—"I would esteem it a favor if you would state through the *ADVOCATE* what is the nature of the plant called ramie, which I understand has been introduced on this Continent; also if it will thrive in any part of Canada?"

[Ramie, rhea or China grass (*Boehmeria nivea*), is a perennial shrub belonging to the nettle family of plants. It is said to be indigenous in India, and probably China as well. It has long been grown for fibre in south-eastern Asiatic countries. It requires a hot, moist climate, with no extremes of temperature, and a naturally rich, moist soil. It has succeeded in some of the Gulf of Mexico States, and would not be adapted for Canada. We might add that its fibre is strong, durable, little affected by moisture, has about three times the strength of Russian hemp, and its filaments can be separated to almost the fineness of silk. Serious difficulties have been encountered in producing a decorticating machine for the production of commercial fibre, but these are being overcome.]

KEEPING CORN FODDER.

G. F. M., Frontenac:—"Can any of the readers of the *ADVOCATE* tell me if corn would keep put in a straw mow, making a cavity in the shape of a silo, or would the straw take too much of the sap of the corn?"

[One of the first principles of successful silo construction is to make it air-tight and strong enough to withstand great pressure. It is difficult to see how a "straw" silo would meet these conditions. See also August 15th *ADVOCATE*, page 322.]

CORN HARVESTER WANTED.

NICHOLAS TISDALE, Norfolk Co.:—"Does any firm in Canada manufacture or deal in a machine for cutting and binding corn? Please answer through the *ADVOCATE*."

[Some self-binders have been so used, but we are not aware that any machine specially for the purpose of corn harvesting has yet been introduced in Canada, though the need for it is rapidly growing. The grand corn crop of the present season, and the enlarged acreage, are compelling farmers to look for something more rapid and less laborious than the old sickle. Any manufacturer with a good implement of that sort cannot make the fact known through the *FARMER'S ADVOCATE* too soon.]

CARE OF ORCHARD—BLACK CURRANT TROUBLE.

JOHN B. WARREN, Ontario Co., Ont.:—"I. My orchard, planted ten years ago, is not bearing properly, although it has made good growth and had careful attention. I purposely refrained from pruning for five years after setting out, and the trees grew very thick, necessitating the removal of many large branches. I made no application to the cut surfaces, which have not healed well, and present a black and unhealthy appearance; nor are the trees as healthy a color as formerly, and the fruit is inferior in quality. For the last two seasons the orchard has been seeded. I did the pruning in March, and I think I was too severe. Please prescribe. 2. My black currant bushes have never borne, but run very much to wood; seven years of age. I propagated them by layering them from prolific stock. They blossom profusely, but fruit drops off after setting; have no trouble with red currants or gooseberries."

[Your method of pruning and cultivation has been about the worst that could be adopted. Trees should be pruned every season, and not too much at any one time. Seeding down will injure any orchard, except it should be located on a very moist soil; then the seeding down is an advantage, as it uses up the surplus moisture. On most soils suitable for fruit growing thorough cultivation should be carried on every season. If the trees are growing too rapidly, stop cultivating about midsummer and sow to rye; plow this under quite early in the spring. Never plow or cultivate deep among fruit trees.]

Cannot say what is the matter with the currants; would require to know more about the conditions and methods of growing, etc. Would expect to find that they are planted rather close together, and blossoms do not fertilize properly. Soil may contain too much nitrogen and not enough phosphoric acid and potash. W. W. HILBORN.]

CEMENT FLOORS.

J. E. B., Ontario Co.:—"Would you recommend a cement floor for horse, cow and pig stables; if so, please describe how to make it, and state probable cost per square yard?"

[This subject has frequently been dealt with in the ADVOCATE, but at the risk of a little repetition we will refer to it again for the benefit of the new subscribers, who have been coming in "thick and fast" of late. We have seen nothing equal to well-made cement floors for cattle. Remove the surface soil to reach solid clay to begin with. It should have a fall of at least an inch from manger to edge of the drop, which should be, say, eight inches deep and eighteen inches wide. Shape the ground accordingly. Mix the cement thoroughly dry on a tight door or floor of boards with clean sharp sand and gravel (absolutely free from clay), one part to six, if the sand and gravel be coarse; one to four or five if very fine. Then add water, and work thoroughly to the consistency of stiff mortar (it must not be sloppy). Next lay five or six inches of this for bottom of floor and ram down thoroughly. Cobblestones may be used plentifully in the bottom, thus saving a lot of the cement mixture. As soon as wet, the mixture must be laid and rammed down; finish with about an inch coat, one part cement to three of fine sharp sand, so as to get a smooth surface. Sprinkle occasionally till set hard. Nothing should be allowed on it for, say, a month, and it must be perfectly hard and dry before frost comes.]

Horses that paw and stamp are apt to wear holes in a cement floor, unless extra well made and very hard; but in that case boards may be laid upon it. A much shallower gutter will answer.

In a hog pen the gutter need not be so deep either, but ought to be about four feet wide. It is desirable to cover part of floor where hogs lie or sleep with some common boards or planks, with a scantling on upper side to keep bedding in place. Our own experience is that pigs do better where the cement floor is so covered, but by all means use cement in the bottom. Write Isaac Usher & Sons, Thorold, Ont., mentioning the FARMER'S ADVOCATE, and you can secure a pamphlet giving full directions for the use of cement.]

LIVE STOCK MARKETS.

Toronto Markets.

Local live stock men report very little change in the condition of the market. The offerings of stock were good, and the quality no better. Seventy-eight head on offer. Total receipts for the week: Cattle, 1,400; sheep and lambs, 2,811; hogs, 2,100.

Export Cattle.—Several buyers were operating, and the market was barely steady. Mr. Macdonald picked up a few export bulls at from 2½c. to 3½c. per lb., and he requires a few more. Figures for export steers and heifers were from 3½c. to 4½c. per lb. A few went a little higher than the last quotation, selling at 4½c. per lb., but this was the top figure. The quietness of the trade is caused by the markets on the other side not being good, and the quality of the cattle being only ordinary. Poor cattle were hard to dispose of, and most of the loads were picked up in ones and twos. Two carloads of cattle, 1,200 lbs., averaged \$55 per head; one carload of cattle, 1,200 lbs., \$52; and four cattle, 1,225, 4c. per lb. About 20 carloads of export cattle were sent forward by Mr. Aiken, of Port Hope, to Montreal, for the Old Country market.

Butchers' Stock.—The butchers were present in large numbers and seemed anxious to obtain good-sized beef in anticipation of the Toronto Fair visitors. The best butcher cattle fetched 4c.; a lot of ten, for which that price was offered, were held for more. Offerings were heavy, and quality never this year so poor, which prevented any stiffening effect on trade. Light cattle, weighing from 700 lbs. to 900 lbs., sold slowly at 2½c. to 3c. per lb., in one case 3½c. per lb. was paid. A few of the poor class of cattle were left over at the close of the day; the outside demand being very light.

Stocks and Feeders.—There seems to be some uncertainty with regard to the removal of the embargo against Canadian

cattle at Antwerp, Belgium. Mr. Hv-aulandegheim, who has the commission, says that they must be slaughtered at the port of landing, and if satisfactory, other shipments to follow may be allowed. Mr. I. B. Roy informs me he is open to buy 1,000 head of stockers for that market. Mr. Halligan is open to buy 2,000 light stockers for the distilleries. Mr. Lamness is buying a few good feeders, averaging 1,000 lbs., for the Walker-ville distillery. Mr. Dunn is also buying for the City buyers; he will feed about 1,500 this year at Miss Gooderham's. Mr. Thos. Crawford, M. P. P., was on the market to-day and is open to purchase 2,000 yearling and two-year-olds for the Northwest, and will give 2c. per lb., or \$10 to \$20 per head. They are not taking many from this market just at present, and are making arrangements to buy these steers in different parts of the country.

Butchers are pretty numerous for this time of year, and selling from \$6 to \$9 each; common, \$2.50 to \$3.00; 28 calves on offer.

Milk Cows and Springers.—Only 15 on offer; not many wanted; \$25 to \$45 per head for choice; one or two cases of overstocking were visible, and will have to be discontinued or prosecutions will follow.

Hogs.—A further decline of ¼c. since my last report, with every prospect of another drop ¼c. per lb. next week. Anything but the very best hard to sell. Good bacon hogs sold down to 4½c. per lb.; about 900 on offer. A very fine load of all-black Berkshires were on sale; these fetched top price for the day—\$1.75. Good bacon hogs sold at \$1.70, weighed off cars. A few stores sold for 4c. per lb.; none wanted just at present. Thick fat hogs from \$4.40 to \$4.50.

Sheep and Lambs.—Shippers are paying from 3½c. to 3½c. per lb. for good large sheep. More attention should be paid to dipping sheep. Good lambs sell at 3½c. to 3½c.; some of the poorest were offered at \$1 each. There were 2,556 sheep and lambs on offer; although a little steeper, were hard to sell; many remained over at the close of the day.

Cheese.—Offerings to-day were 2,455 boxes at 7½c.—highest bid; market dull.

Butter is in better demand; supply of good dairy does not equal requirements; prices advanced; 18c. to 22c. for rolls.

Eggs.—The receipts are small; demand good; prices 11½c. to 12½c. per dozen.

Hay and Straw.—The receipts were small; demand very good; prices held and firm at \$14 to \$17, new; and \$17 to \$18, old. Ten loads on offer; all sold easily. Good straw wanted; loose, \$6.50; baled, \$5 to \$6.

Wool.—No change since my last report, but stocks are light, prices well-maintained, with some enquiry from home mills. Prices quoted at warehouse are 22c. for extras; 20c. to 22c. for supers. About 50 per cent. of this year's clip is in to-day, and it is our belief that as the season advances prices will stiffen up somewhat as the demand increases. About 80 per cent. of the combing fleeces has been shipped to the United States, at an advance over last year's prices.

Hides are in good demand, and steady; the movement is small; local dealers say they do not see how prices can decline. Cured are quoted at 9½c., and green at 8c. Lamb skins and pelts are in good demand at 50c.

Wheat.—The receipts of grain on the market to-day were small. Wheat weaker and steady at 65c., a further drop of ¼c. since my last report.

Oats easier. 1,000 bushels of new at 26c.; two loads of old at 37c.; being a fall of 6c. since my last.

Horse Market.—Trade fairly good for best heavy delivery horse, 1,000 lb. and upward. Quite a spirited battle took place between three buyers for a gray gelding, mixed Clyde and Percheron breed; he was eventually knocked down for \$175. There is always a steady demand for heavy horses. We notice the fire engines are getting heavier horses; the City express and transfer agents want them to haul larger loads, and it will be well to breed the largest and best horses for this market. Just as steam increased the use for horses, so, too, does electricity, but only for the larger and better draught horses. Electricity is driving out steam in some cases, but can not take the place of horses, except for street cars.

PRICES RANGE AS TABULATED.

Table with 2 columns: Item and Price. Items include Milk and springers, Butchers' choice, Butchers' good, Butchers' common, Cattle export, Bulls, Sheep, Sheep butchers', Lambs, Calves, Hogs, Hogs thick, long lean, Eggs, Butter, Oats, Wheat, Hay, Straw, Hides, Wool.

Montreal.

Heavy receipts and inferior stock have been the means of making the last few markets about the worst of the season, and it only needed this morning's to cap the climax. One shipper who had refused 4½c. per lb. in Toronto on Friday last, shipped to Montreal and the best offered on this market was 4½c. per lb., after paying extra freight and feed. He refused the offer and is holding the cattle over until next market. With one or two exceptions, 3½c. was the highest price paid for shipping cattle to-day; one nice, even lot of 25 head running about 1,650 lbs., selling at 3½c.; another lot, averaging a fraction over 1,000 lbs., made 3c. per lb.

Export sheep is about the only stock that has remained steady, good ewes and wethers making from 3½c. to 3½c. per lb. Choice lambs (early) are now being taken for export, several lots having already been shipped. The average weights run from 72 to 90 lbs., and make from 3½c. to 3½c. per lb. Middling grades meet with a very slow demand, and the poorer lots to culls are unsalable. The reason for this is that the market is simply glutted with a quantity of half fat "runts" that are practically worth nothing on a good market, and unsalable on a poor one, whereas a few weeks' feeding would make them of some value to the owner.

The season for calves is practically over, and good calves are hard to get; the price ranging from \$2.50 to \$3, as to size, and as high as \$12 being paid for a very choice one.

Long lean bacon hogs sell all the way from \$5 to \$3.35, the lesser price being for small lots picked up at the various yards, but car lots of Western light weights cannot be had for less than the outside figure, and at these prices contracts have been made for the coming week's delivery.

Heavy shipments of Northwest cattle have been received, all of which have been exported, with the exception of a few culled out here and there. Of these, the majority are being handled by Messrs. Gordon & Ironside, Senator M. H. Cochrane has also received two train loads in to-day (Monday), which are for sale here. They are almost all Her-fords, and are, without doubt, the finest cattle received from the West this year. The first shipment of Northwest sheep made this season left on Friday; a well-selected lot, averaging from 100 to 112 lbs., live weight. Another shipment will leave on Wednesday, consisting of 1,000 head of Utah range sheep (U. S.), averaging 117 lbs., live weight. They will cost in the neighborhood of 26 shillings, landed in Liverpool. There is very little probability of any improvement in this market for a short period at least, owing to the nature of cables being received.

Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.)

Extreme top prices now, compared with two weeks and one and two years ago:—

Table comparing prices of CATTLE, FEEDERS, CANNERS, BULLS, CALVES, TEXAS STEERS, TEXAS C. & B., W. RANGERS, RANGE COWS, HOGS, SHEEP, NATIVES, WESTERN, TEXAS, LAMBS, SEPT. WHEAT, CORN, and PORK across three time periods: Present prices, Two weeks ago, 1894, and 1893.

Texas cattle receipts are down almost to the vanishing point. During the first week of September receipts were only about 1,700, against 10,000 a year ago, 15,500 two years ago, and 27,000 in 1892.

Chicago receipts and shipments of live stock during the first eight months of the year were as follows, with comparisons:

Table showing Receipts and Shipments for Cattle, Hogs, and Sheep for eight months in 1895, 1894, and 1893.

Receipts at four markets the first eight months of 1895, with comparisons:

Table comparing Receipts at Chicago, Kansas City, Omaha, and St. Louis for 1895, 1894, and 1893.

Receipts at Chicago for 1895 to Sept. 8, 1,617,200 cattle, 4,941,400 hogs, and 2,228,000 sheep, showing a decrease of 308,000 cattle and an increase of 67,000 hogs and 293,000 sheep, compared with the corresponding period of 1894.

Western range cattle receipts for the season to date foot up about 154,500, against 72,000 a year ago.

A salesman says:—"With range cattle about 75,000 ahead of last year, that talked of decrease from last year for the season ought to begin to get in its work pretty soon."

The great bulk of the range cattle consists of double wintered Texans averaging 1,500 lbs. to 1,225 lbs., and selling at \$3.25 to \$3.50 per 100 lbs. on the hoof. These cattle make beef that is quite as good as that from so-called "natives" worth \$4.00 to \$4.25 or better.

In this year of long grass and fat range beeves they are common, but ordinarily they would be classed as good.

In regard to the unusually heavy receipts of Western range cattle an authority says:—"We certainly do not believe that these excessive receipts can continue throughout the season, but two or three weeks more of such runs would tend to further demoralize the trade, and lighter receipts is the only hope for a favorable reaction in prices."

A cattle man wants to know what the beef men would do but for the northwestern rangers. He thinks the great shortage may not show itself before spring, owing to the unusual efforts being put forth to scrape up cattle to eat the big corn crop, but thinks it will be all the more pronounced for being kept covered, as it were, until then.

There are about 200,000 Texas cattle engaged by Texas feeders. Col. Tamblin thinks the winter's feeding will be 30 per cent. short, while many others do not think it will be short of last year.

The hog market is in a peculiar situation. Prices are very low, with receipts light, the quality poor, and about the only bear argument in sight the big corn crop. A packer calls attention to the erroneous assumption that provision stocks are, the whole West included, heavy compared with last year. The figures of Chicago, Omaha, St. Louis, Nebraska City, and Kansas City bear him out. They show that the total stock of ribs is less than 2,000,000 lbs. ahead of last year; that the stock of shoulders is 8,000,000 lbs. less, and the stock of hams 1,500,000 lbs. less.

The sheep market is in fair condition, with sales making about as follows:—Good to choice natives, \$3 to \$3.50; poor to fair, \$1.50 to \$2.75; Western, \$2.25 to \$3.25; good to choice lambs, \$4.50 to \$4.75; common to medium, \$3 to \$4.25.

The wool clip of forty-eight States and Territories growing wool in 1895 was 294,296,726 lbs., against 325,210,712 lbs. last year and 348,538,138 lbs. two years ago.

Good horses are not plenty and are in good request. The market, however, is over-stocked with common, plain, thin and blemished offerings that are difficult to move with satisfaction to sellers. The domestic and foreign demand for drivers, blocky chunks, heavy coaches, and sound, rugged drafters, shows more strength, and such offerings have met with a quick sale at the top quotations for the past four weeks. Heavy drafters of extra quality are in very limited supply, as are also high-acting drivers and fancy coaches, which are taken by Eastern buyers and foreign dealers at firm prices of current quotations.

Canadian Bacon Popular in England.

Editor FARMER'S ADVOCATE:—SIR, in reply to your letter of 14th August, in our market report we have not separated the quotations for Canadian and States meats, our quotations being for the chief kinds of American unless otherwise specified. There is not sufficient volume in Canadian bacon as yet to establish a regular quotation. The meat is appreciated more than States, and, as a rule, commands a higher price. We should like to see the trade increase, as we believe the article can be produced as well and as cheaply as in America, and certainly it will generally bring more money, but some experience will have to be gained by beginners in cutting, etc., unless they engage packers and cutters from old-established firms in Canada or the States. Hobson Bros., Liverpool, Eng.



AN EMBARRASSING PARTNERSHIP.

A THANKSGIVING EPISODE.

BY SUSAN CURTIS REDFIELD.

It all began with a turkey. Aunt Polly Briskett's old mother turkey made her nest in the long grass in Farmer Lincoln's meadow and when the mowing machine came along it cut off her legs. And then there were ten miserable little orphans left behind for Aunt Polly to bring up.

Certainly no stepmother was ever more faithful to her trust, and when one warm morning she took her young charges out of the basket and bade them seek their fortunes in her back yard, she had a right to considerable pride in the little flock.

"They look fine," exclaimed Jothan. "They'll be all right now, won't they, mother?"

"Well, if 'twas any other livin' critter, I'd say yes, but there ain't no tellin' what a day'll bring forth when young turkeys is concerned, for there ain't nothin' on the face o' the earth half so puny, and seein' these hain't any ma neither. It's one thing to get 'em on their legs and its another to keep 'em there.

The truth of this assertion was soon proved, for a few days later Aunt Polly ran over to "Mis' Winters," her next door neighbor, with a tail of woe.

"Just to think of it—after I'd got 'em all so far along, and they were so nice and fat! But they never did seem to feel easy and contented in their minds. I guess they suspected they hadn't had a fair chance, and they jest stood 'round kinder disgruntled and complainin', actin' for all the world as if they were lookin' out for excuses to die. Well, they weren't long findin' 'em! Dear me! There goes the last one out into the road this very minute, on purpose to get run over, I dare say! Mercy on us! Jothan, come quick! There's Lincoln's dog after—oh, he's got it, and he's shakin' the very life out of it!"

Jothan came, he saw, he conquered, and presently laid in Aunt Polly's hands a small fowl much the worse for fright and wet feathers.

"I should think you might give it to me now," said Jothan. "Well," said his mother carelessly. "I don't s'pose it makes much difference whose it is. If it's alive and flourishin' next November we'll have a Thanksgivin' dinner of it, and if it ain't we'll go without Thanksgivin'."

"We'll have Thanksgivin'," said Jothan confidently.

November came, bringing dreams of mince and pumpkin pies, plum pudding, and above all, of turkeys, brown and savory. Aunt Polly, standing on the back doorstep with arms akimbo, gazed with a complacent smile upon the magnificent turkey at her feet.

"Reckon nobody in this house 'll have occasion to go hungry Thanksgivin'," she said. "Jothan, it's only a week, did you know it?"

"Yes'm," answered Jothan gloomily. "I wish 'twas a year!"

"Why, I thought you liked it!" exclaimed his mother.

"You used to be fond enough of turkey."

"I'm just as fond of turkey as I ever was," said Jothan. "but it beats me how I'm going to get it, and eat one-half of that turkey, and leave the other alive and kicking."

This extraordinary speech called forth numerous ejaculations and interrogations from Aunt Polly, and it presently came out that Jothan had sold one-half of the turkey to Bert Winters last July for fireworks.

"Well," said Aunt Polly, "you'll jest have to buy it back again. I ain't goin' to buy a Thanksgivin' turkey with one s'ruttin' round in my own back yard."

Jothan had forthwith a business interview with his partner, whom he found quiet ready to buy the Briskett half of the turkey, but most unwilling to sell his share. Mrs. Winters and Mrs. Briskett then took the matter in hand, and after a lively discussion each returned to her kitchen, with the firm belief that her former friend was capable of almost any villainy.

From that time on Jothan fastened the turkey in an old hen-house by itself every night, instead of allowing it to roost in a tree, as had been its custom. Still Aunt Polly felt uneasy about it, and the Monday before Thanksgiving she told Jothan to watch the hen-house that evening. It so happened that Mrs. Winters gave the same charge to Bert, and at nine o'clock the boys discovered each other and fought furiously, each being fully persuaded in his own mind that the other was just about to make away with the turkey. Again did Mrs. Winters and Aunt Polly arm themselves and rush into the fray, and many and sharp were the words that they hurled at each other. When the two boys were tired they sat down on an old log in front of the hen-house, one at each end.

"Bert," said Mrs. Winters, "you'll set out that log all night, and you'll keep your eyes and ears wide open, too."

"Jothan," said Aunt Polly, "them's my orders to you, and 'Liza Winters, you'll find out that my boy can keep on settin' and seein' and listenin' jest as well as you're. I'll bring you out a big shawl, Jothan. It's a nice night for November, but 'tain't exactly campin' out weather for all that."

The tumult of Aunt Polly's feelings kept her awake for a time that night, but toward morning she fell into a heavy sleep, from which she was suddenly aroused by the shouts of Jothan, who rushed unceremoniously into her room.

"It's gone!" he gasped. "I fell asleep once, but when I woke up I felt first thing in my pocket for the key, and 'twas all right. Then I felt along the log for Bert, and he was all right too, and I've been awake ever since."

Aunt Polly's grief and wrath knew no bounds. She spent the morning in the front doorway, proclaiming her loss to every passer-by, never failing to bemoan the fate that had cast her lot among neighbors who would stoop to pick pockets and rob turkey-roosts. Mrs. Winters did not bear this in silence. She advanced upon the enemy and attacked her in her own front hall, accusing her before the bystanders of stealing Bert's half of the turkey. For an instant Aunt Polly was dumb with anger and amazement. Then she retired to the kitchen, and ostentatiously locked herself within its walls.

Just as might have been expected of a delicate lad, Jothan took cold on the night of the watch, and was ill in bed for many days, causing his mother as many wakeful nights.

"It's mighty unpleasant," said Jothan to his sympathizing friend, Bob Nicks, as he sat propped up in bed with his neck swathed in red flannel. "Thanksgivin' mother and Mrs. Winters held a levee, as you might say, for the whole parish turned out to see who was eating turkey. Then they went 'round, saying that the one who'd got it daren't cook it. But that was no more than mother and Mrs. Winters said. And the day after Thanksgiving a lot of those feathers,—yes, they taken them in before our door,—done up in an old newspaper, was left at our door, and mother had 'em, just rakin' tellin' us they wd added insult to injury by sending the turkey's feathers to her. She wouldn't listen to anything, and mother put her right out of the house. Then there's a fine doctor's bill to pay now."

"Your ma'd got off cheaper if she'd bought another turkey," ventured Bob.

"Some folks are so blind they can't never see a principle in anything," retorted Aunt Polly, who had entered the room unobserved. "Bobby, you better go home. It's more'n likely your ma needs you to help her, and Jothan, don't let me ketch you doin' any more gossipin' about this turkey. It's enough to

have the minister preachin' at me, and the church members all meddlin', and me not able to go peaceable to a sewin' society nor a church social on account of 'Liza Winters without havin' my own kin and kin botherin' me with it too. I've give up our settin' in Mis' Winters' pew, and I'm goin' over to the Baptists."

The winter passed away. Spring and summer came and went, but still Aunt Polly continued to declare to friends and neighbors that she should "never speak to Liza Winters as long as she lived."

Before she thought of it Thanksgiving was at hand once more. Jothan wanted to know one day if they would have a Thanksgiving dinner, but his mother told him shortly that "folks that had such neighbors had no occasion to feel specially thankful."

Jothan looked disappointed, but went out of the kitchen without making any reply.

A moment later Zeph, the colored man, who sometimes did extra work for Aunt Polly, walked in. He was arrayed in his best clothes, and seemed strangely awkward and nervous as he stood by the fire twirling his hat in his hands.

"What's the matter with you, Zeph?" cried Aunt Polly, irritated that he paid no heed to her remarks.

"Now you see 'em, missis," said Zeph, brightening visibly, "case dat's jes' what I've come fer to tell. I've done spered religion."

"Well," responded Aunt Polly, "you need considerable if it's going to strike clear through."

"Dat's so, missis, but I've done got 'im, sure, an' I've houn' to give de proof to my 'quaintances; de preacher done tell me, an' so I've gwine 'roun' de country 'fessin' my sins."

Here Zeph paused, and rolling up his eyes, gazed solemnly at the ceiling.

"If it's that job of whitewashin' you're repentin' of," said Aunt Polly, "there's occasion enough, for I never see a wuss-lookin' cillin'."

"Taint the cillin', missis," replied Zeph, slowly shaking his woolly head. "It's dat tukkey!"

"That tukkey?" shrieked Aunt Polly.

And then her best vegetable dish dropped out of her hands and broke in twenty pieces, and poor Aunt Polly sank pale and trembling into a chair.

"Yes, missis," continued Zeph. "When de young gemmen was sleepin' I croke up might silent and took off dat tukkey."

"How did you get into the hen-house?" inquired Aunt Polly.

"I knowed dey was a loose boad in de back, an' I jes' slips it out easy an' quiet, an' den I slips it in again."

"It's dreadful queer that those boys didn't hear that turkey holler," said Aunt Polly.

"I wrang her neck dat sudden she don't fin' no time fer to holler," said Zeph with a grin. "Dead tukkeys don't make no more noise'n dead folks."

"You've done a dreadful wicked thing!" cried Aunt Polly.

"Yes, missis; dat's jes' what I was thinkin' when we was all settin' 'roun' dat table eatin' dat tukkey, an' so I done sen' de fadders to you an' Miss Winters. But," he concluded, with a sigh, "I was mighty fine eatin'; it makes my mouth water now jes' thinkin' of it."

Aunt Polly vouchsafed no reply to this, but when Zeph ventured to look at her face he retired without an instant's delay from the kitchen.

As soon as he was out of sight Aunt Polly threw her shawl over her head and went straight over to Mrs. Winters' house. That lady turned quite pale when she saw who her visitor was, and she lost no time in reminding Aunt Polly that when she last called upon her she was put out of the house.

"I knowed 'bout all about that as if 'twas yesterday," said Aunt Polly very meekly, "but do let me in 'Liza; I've got something dreadful important to tell you."

Mrs. Winters returned to the sink, and proceeded to finish washing the dishes, while Aunt Polly entered and seated herself.

"I've been a dreadful wicked woman," she began.

Then, observing that Mrs. Winters threw up her head, she hastened to add that before she had finished her story, 'Liza Winters would see that there wasn't much to choose between them, and it really seemed for a time as if a quarrel instead of a reconciliation was about to take place. But at the end of an hour Aunt Polly returned to her home, and smiling.

"Jothan," she said, "kill the finest turkey we've got. I've changed my mind about keepin' Thanksgivin', and we're goin' to our own church again and take our own settin' in Mis' Winters' pew. And, Jothan, don't never forget that these ain't nothin' in this world so tryin' to human natur' as partnerships, nor so deceivin' as appearances."

Autumn Pickles and Preserves.

The grand pickling time of the year is in autumn. Walnuts come in June or early in July, but October and November bring onions, shallots, peppers, cucumbers, French beans, radish pods, and tomatoes for the million. There are also late preserves to be made, and housekeepers like to make up apple and quince jelly and marmalade.

QUINCE JELLY.

Cut quinces in small pieces without paring; cover with cold water, stew until soft, then drain through a jelly-bag. Boil the juice fifteen minutes, then to four teacupfuls juice add one teacupful sugar, and boil fifteen minutes longer, or until it jellies when dropped on a cold plate.

The quince pulp left in the jelly-bag may be used by pressing through a sieve, and adding an equal quantity of apple pulp, stewing the whole ten minutes, adding one teacupful sugar for every three teacupfuls of pulp, and stewing one hour, stirring often.

APPLE JAM.

Peel sour apples, chop quite fine: to each pound of apple use three-fourth of a pound of sugar, and the juice and finely-cut rind of one lemon, and for three pounds of apple one heaping teaspoonful of ginger. Stew apples, sugar, lemon and ginger one hour, then put in jars and cover well. Keep in a cool, dry place.

LATE PEARS.

The large hard pears known as baking pears are nice preserved for winter, when they make a welcome change from other fruits. Peel the pears and cut them in quarters. Make a syrup with one part of sugar to two of water; stew the pears in it till tender, but not broken, and then put into a big jar with the syrup well covering them. When served, long strips of lemon-peel should be laid over them.

THE QUIET HOUR.

"The Choice of the Christian Heroes."

It was the hour of evening prayer,  
It was the holy Sabbath night,  
Sunset was glowing in the air,  
Placid, and calm, and bright;  
When fierce Saladin did call  
To his side his warriors all;  
And in proud array they wound their way  
Up green Tiberia's height.

With fettered hand and weary soul  
Each Christian captive followed on,  
Submissive to that base control,  
Till the fair hill was won.  
Oh! what depth of fire's suprest  
Must have burned in every breast!  
For they were the knights of a thousand fights  
Of the Temple and St. John.

They stood, and held their very breath,  
With rising heart and ailing eye,  
For the blue sea of Genesareth  
Beneath their feet did lie:  
Yon hills are guardians of the shore,  
Where oft their Saviour trod before;  
And their hands are bound, and the holy ground  
Is the prey of Moslemrie!

And, lo! it is the very hour  
When, on their far, their Christian shore,  
Those they best love from hall and tower  
Wend to the Church's door.  
Full many a heart is lifting prayer  
For them, the lonely captives there.  
The old knights frown, and the young look down,  
For their eyes are running o'er.

Stately and sad, an old knight spake:  
"Why, tyrants, have ye brought us here!  
Say, did ye wish to see them break—  
The hearts that cannot fear?  
Know, our God will give us might  
Even to look upon this sight.  
My brethren, dry each drooping eye,  
The foe beholds your tear!"

The Moslem chieftain answered him:  
"Captives, look 'round ye, as ye stand!  
Look, ere the twilight closeth dim  
Upon this lovely land;  
See how the clouds yon hills enfold,  
Turning their purple into gold;  
For the sun's last light makes all things bright,  
Save you the captive band."

"Is not the earth around you fair?  
And do your hearts desire to die;  
Nor breathe one more the gladness air,  
When morning paints the sky?  
A precious thing is the light of day,  
And life should not be flung away.  
Say, would ye be on the green earth free?  
Pine ye for liberty?"

"Free shall ye be by a sultan's word.  
A word that ne'er was broken yet;  
Take ye but Allah for your Lord,  
And bow to Mahomet.  
Your trusty swords I will restore,  
Your heads shall wear the helm once more;  
By the Moslem band who rule this land,  
Ye shall be as brethren met."

"Refuse—yon scimitars are keen;  
A stern and speedy death is near!  
Full awful were those words, I ween;  
They 'brilled against the ear.  
What did that true band reply?  
Every knight knelt down to die,  
For they looked on the Sea of Galilee,  
And one word they answered—'Here!"

"Here, should the brave deny their God?  
Here, should the true forsake their faith?  
Here, where the living footsteps trod  
Of Him they owned in death?  
Here, where the silent earth and sea  
Bear witness to the Deity?  
There was not a heart wroth from Christ depart  
By blue Genesareth!"

So one by one they knelt and died,  
That band of heroes and of saints;  
And the deep, deep stain of a crimson tide  
The hill's lone greenness taints.  
The hurrying work of death was done  
Ere in the pure wave sank the sun;  
And the twilight air was full of prayer,  
But not of weak complaints.

Oh! many tears, ye brave and true,  
Oh! many tears for those were shed,  
Whose corpses by the waters blue  
Lay piled—unhonored dead?  
Shrined in many a bleeding heart,  
Never did their names depart;  
And heaven's own light for many a night  
Played round each sleeping dead.  
But a purer light than that whose ray  
Around their tombless corpses shone  
Was kindled in hearts far away  
By the deed which they had done!  
And if the warriors' tempted faith  
Grew feeble in the hour of death,  
"Remember," they cried, "how the Templars died,  
And the true knights of St. John."

"Carrying One's Cross."

Taking up one's cross means simply, writes Mr. Ruskin, that you are to go the road which you see to be the straight one, carrying whatever you find is given you to carry, as well and stoutly as you can, without making faces or calling people to come and look at you. Above all, you are neither to load nor unload yourself, nor put your cross to your own liking. Some people think it would be better to have it large, and many that they could carry it better if it were small, and even those who like it largest are usually very particular about its being ornamental and made of the best ebony. But all that you have really to do is to keep your back as straight as you can, and not think about what is upon it—above all, not to boast of what is upon it. The real and essential meaning of "virtue" is in that straightness of back.

MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES,—

I have been more than amused reading Max O'Rell's "A Frenchman in America." He has such a keen sense of the ridiculous and such an inimitable way of describing his impressions and feelings, that you can almost imagine he is personally addressing you. I read most of his works as they came out and have had the pleasure of hearing him lecture as well, so it is like meeting an old friend now to read his books. Having resided in England for some time, he speaks the language of that country remarkably well, and very seldom has recourse to a French word. He seemed to take kindly to Canadians and was especially charmed with the people of Quebec. "These folks have given their faith to England, but they have kept their hearts for France: and not only their hearts, but their manners and their language. I shall never forget my feelings on landing under the great cliff on which stands the citadel, and on driving through the quaint winding, steep streets, till I was set down at the door of the 'Florence.' It looked like St. Malo strayed up here and lost in the snow, and the illusion became complete when I saw the grey houses, heard the people talk with the Breton intonation, and saw over the shops all the names familiar to my childhood." The "Windsor" at Montreal he considers the best hotel he stopped at on the American continent, and he was very much interested in watching the Snowshoe Club start from there in their picturesque costumes.

I must ask you not to detain me long because I am off in a few minutes."

"I understand, sir, that some time ago you were engaged in teaching the French language in one of the great public schools of England."

"I was, sir," I replied.  
"Well, I have a son whom I wish to speak French properly, and I have come to ask you your views on the subject. In other words, will you be good enough to tell me what are the best methods for teaching this language? Only excuse me, I am very deaf."

He pulled out of his back pocket two yards of gutta-percha tube, and applying one end to his ear and placing the other against my mouth, he said, "Go ahead."

"Really!" I shouted through the tube. "Now, please shut your eyes. Nothing is better for increasing the power of hearing."

The man shut his eyes, and turned his head sideways so as to have the listening ear in front of me. I took my valise and ran to the lift as fast as I could. That man may still be waiting for aught I care.

My greatest objection to America is the sameness of everything. I understand the Americans who run away to Europe every year to see an old church, a wall covered with moss and ivy, and some good old-fashioned peasantry, not dressed like the rest of the world." His parting speech was characteristic of the man. "Farewell, my dear American friends! I shall carry away sweet recollections of you, and whether I am re-invited to lecture in your country or not, I will come again."

MINNIE MAY.

The First-Born.

FROM THE ORIGINAL PAINTING BY AMOS CASSIOLI.

Profoundly interesting is the reflection that amid all the changes wrought by time and sin since our race began, certain sentiments—and those the purest and noblest—have persisted in the heart of man. Among these are domestic love and parental affection. As our first parents watched, with fond looks and swelling hearts, the sportive tricks of the first-born of our race,—the infant Cain,—so, after thousands of eventful years, do these young Roman parents hover over their first-born with the same freshness and fervor of parental love, luring him to daring efforts to stand and walk alone, evoking by many loving arts his infant prattle, fruitfully devising new forms of amusement for the exacting little despot, unconsciously breathing all the while fond prayers for his future, and, it may be, even detecting, as they fancy, in his infant traits, auguries of the fulfilment of their choicest hopes in his behalf. Happy is it for parental hearts, that an impenetrable veil hangs between them and the future of their heart's idol. When mother Eve rejoiced that she had "gotten a man from the Lord," no presentiment of the dreadful fact that he should one day bear the brand of murderer clouded the deep joy that filled her maternal heart. Who can tell the depths of that joy, who exaggerate the brightness of the visions that came to the first human mother as she bent above her first-born son? Her joy was



THE FIRST-BORN.

"In the States the people say 'it's too cold to go out.' In Canada they say 'it's very cold, let's all go out.'"

Toronto reminded him of England, and he considered the Toronto ladies "very English-looking, with that peach-like bloom that their outdoor exercise gives them. The clear, healthy-looking complexion of the Canadian women is easy to account for when one sees how deep-rooted, even after transplantation, is the good British love of exercise in the open air. In an afternoon drive I counted twenty-eight churches in a quarter of an hour—all denominations. Churches, churches everywhere. The Canadians must be still more religious—I mean still more church-going—than the English." Max O'Rell's comments on England's way of managing the Indians is as sarcastic as his remarks on the "unco' guid": "Whereas the Americans often starve, swindle, and shoot the Indians, England keeps them in comfort. She makes paupers and lazy drunkards of them, and they gradually disappear. They become so lazy that they will not even take the trouble to sow the land of their reservations. Having a dinner supplied them, they give up hunting, riding, and all their native sports, and become enervated. They go to school and die of attacks of civilization." The statue erected to the Indian Chief Brant, at Brantford, he considered to be a proof of England's success as a colonizer.

He was a long and patient sufferer to "interviewers." A card was one night brought to him of a gentleman who was most anxious to see him. "Very well, bring him here."

The gentleman entered the room, shook hands and said, "I hope I am not intruding?" "Well,

"Breaking up Superstition."

The late Count de Lesseps attended to the education of his children, and not even a little detail likely to make an impression upon their sensitive minds was overlooked.

One morning at breakfast a beautiful Dresden tea-cup was broken. "Ah!" cried the Countess, "a disaster! Two more of that set will now be broken. It always happens so."

"Are you so superstitious," asked the Count, "as really to believe that two more will be broken?"

"I know it."

"Then let us get it off our minds," and taking two of the cups by the handles, he clashed them together. The dismay of the Countess proved conclusively that she had not seriously held to her superstition. It also loosened any hold the absurd idea may have had on the minds of the children. Such vigorous treatment would go far towards curing many equally foolish superstitions.

"A Rag-bag Rug."

Gather up all your odds and ends—quite small pieces will do, a quarter of an inch wide and an inch long—and knit them into a rug. Twine will do for the yarn. Cast on a steel needle as many stitches as it will hold—forty or fifty, probably. Knit a stitch, then place one of the bits of cloth between the needles, knit another stitch and bring strip through, so that both ends are on the right side. Knit another stitch and place another bit of cloth and proceed as before. A rug of this kind, made of silk bits, was very pretty. If too narrow, knit another strip and join the two together. The rug should be nicely lined.

close akin to that of the mother of our own day and generation; and if Eve suffered the cruel pangs of disappointed hopes, why, that is only another experience that links her life in the far-distant past to the lives of mothers in all times. Yes, the scene of our picture has been enacted in every land, in every age, from the birth-day of Cain down to this very day. It has been enacted, and is now being enacted, in the palaces of kings and in the cottages of peasants, among peoples civilized and tribes barbaric—and everywhere this parental joy over the first young lives that came to crown a true and faithful wedlock has been a pure, strong, uplifting influence. Times may change, fashions and customs change, but wedded love and parental affection are happily among the things upon which the lapsing ages work no change.

Amos Cassioli was born at Siena in 1838, and was a pupil of Luigi Mussini. He has achieved a high reputation by his historical paintings; his excellence as a painter of *genre* is attested by the present work. He is Honorary Member of the Academy of Siena, and Professor in the Academy of Florence.

A Good Way to Reseat a Chair.

A neat, strong, and durable chair-seat can be made at home with little trouble or expense. Get some brown paper, cut out the shape of the seat, with a firm paste stick six thicknesses of paper together, trim the edges smooth, get some small brass tacks and nail it to the frame, allow it to get quite dry, then varnish it, and you have quite a nice-looking seat to the chair.

N. B. Size with thin glue before varnishing; put it on with a brush.

**Kitchen Helps.**

To remove egg stains from silver spoons, rub with damp salt.

To polish a copper kettle, rub with lemon and salt. Brass preserving kettles are cleaned and brightened by scouring with salt dampened by vinegar.

Did you ever try filling your new butter-tub with sour milk and letting it stand a few days to get rid of the woody taste?

Tinware can easily be brightened by rubbing with a damp cloth dipped in soda.

For cleaning old brass, many people pin their faith to a careful application of oxalic acid.

Chandeliers may be renewed by applying a mixture of copal varnish and bronze powder, applied with a brush.

Keep your sink clean by flushing it very frequently with boiling water, in which a little copperas has been dissolved.

To keep irons from rusting, wrap in brown paper and keep dry. If they have become rusty, they may be brightened by rubbing them briskly over some white sand, spread on a smooth board, or by rubbing well with a flannel cloth wet with kerosene.

Goldsmith, in the "Vicar of Wakefield," says of Sophia, the timid, beautiful and virtuous daughter: "She often represses excellence from fear of offending." How often at the present day one sees manifested the same characteristic. Very frequently you meet with it in the country, in the homes of the less fortunate. I have known girls with the means to dress, not expensively but tastefully, go shabbily around the house, and why? "Father and the boys thought it foolish to curl one's hair or fix up nice around home, and always make fun of us when we do it." When such girls appear abroad, notice their shy, awkward air, and how painfully self-conscious they are.

How often, too, one sees a bright boy or girl, who either by reason of innate refinement or from association with refined people, is familiar with the little niceties of etiquette, yet acting as if such things were to him or her as unintelligible as Greek. They don't want the folks at home to think they're "throwing on style, putting on airs," etc., etc.

How frequently little Miss Muchafraid will allow herself to lapse into a careless, ungrammatical style of speaking. Not because she doesn't know any better—oh no, but she doesn't want to draw attention to herself by rising above her daily associates. She hasn't the courage of her convictions, either. You'll see her sit as silent as a mouse while her shallow but confident neighbor upholds her side of the question. It may be utterly absurd, but the well-informed, shrinking bit of humanity will assent to the absurdity rather than draw attention to herself by disputing the question.

Such characters never appear at their best—never do themselves justice among their friends or early acquaintances—not, at least, until they have been out in the world and secured a measure of recognition there. In an atmosphere of suspicion or distrust they shrivel up, and expand only in the sunny presence of some one who sees or suspects the talent hidden there. At once funny and pathetic, it is a characteristic of a gentle, sensitive nature—a little too anxious to please—to be well-liked by everybody, but very lovable withal.

Are you burdened with care? You may not confide it to your neighbor—it may be of such a nature that you can pour it into the ear of none save the Man of Sorrows. And yet, your own load will seem lighter when you have put your shoulder under your neighbor's burden. There is one sovereign remedy for discontent, and that is, to see and sympathize with someone worse off than ourselves.

Get out, my friend—get away from home if only for a half day—long enough to get the cobwebs blown from heart and brain, and see if you don't come back a braver, brighter woman, able to take up the duties of life with a lighter heart, prepared to face to-morrow with a clearer brow. As true to-day as when first spoken are the words, "No man liveth unto himself." . . . "It is not good for man to be alone." A. M. C.

**"Jest Her Way."**

BY JULIE M. LIPPMANN.

"Don't min' ma," I heard her say,  
"She's growin' old, you know,  
An' ef she seems a trifle queer,  
Or—leastwise—some'at odd 't appear,  
Why, don't you min' her, let it go—  
It's jest her way."

"When folks has kind o' hed their day,  
It's nat'ral, I suppose,  
That they should sort o' like to jine  
In other folks's. Don't you min'  
Ef ma does seem t' admire your clothes—  
It's jest her way."

"An' ef you hear her sing some day,  
Or laugh, or ef she seems to care,  
To hear the city news you talk,  
An' when you drive, an' whar you walk,  
An' ef you're gettin' plump or spare—  
It's jest her way."

"Or ef the children at their play  
Should rent their frocks (as like they will),  
An' she should mend 'em up, to spare  
A scoldin' to the young uns' share,  
You musn't take her meddlin' ill—  
It's jest her way."

"An' ef she strikes you—as she may—  
A mite enquirin' into things  
As isn't jest affairs o' hern,  
Don't min'. She alays will concern  
Her head 'bout what the boarders brings—  
It's jest her way."

"I mean by what they brings, to say  
Their troubles an' sechlike. You see  
She never can seem quite to sense  
Folks' 'fun' rals' ain't at her expense.  
To watch her grieve you'd think they be—  
It's jest her way."

"But, law! she's like to be as gay  
As ef she war a girl o' 'leven;  
As ef luck is only middlin' good,  
An' things is goin' as they should,  
She'll sing—you'd think she war in Heaven—  
It's jest her way."

"That trick she's got, it seems to stay  
(I mean o' happiness). An' land!  
She's hed enough, her hull life through,  
To make a corpse o' me or you.  
She shakes off blues like they was sand—  
It's jest her way."

"Ma never war a hand to say  
Much as to grumblin' or complain,  
She's odd, ma is—leastwise, mebbe  
You'd think her odd. But seems to me  
She's purty nigh onto a saint—  
It's jest her way."

**THE CHILDREN'S CORNER.**

A prize will be given in January for the best short original fairy tale. The writer must not be more than sixteen years of age. Send the stories, with name, age, and address of writer, to Cousin Dorothy, FARMER'S ADVOCATE, London, Ont.

**Pearl and Daisy.**

(Continued from page 346)

One day Madame Severe, her governess, came to Margaret with a pair of corsets, which, she said, would give her the most elegant figure in the world. Then Madame proceeded to put them on, and, by the help of the waiting-maids, laced them so tightly that the poor child shrieked for mercy. As they took no notice of her struggles and tears she shook one of her daisies in the hope of escaping from her persecutors. When the shower of white petals fell, she found herself standing on a lonely mountain. She was now a little shepherdess, and led her flock out at early morning to distant pastures, bringing them home at night to the sheltered fold. She slept in a little hut in the midst of her sheep, and lived upon the store of bread and goats'-milk cheese that was left for her there. But Margaret soon grew lonely and pined for companions, so she rolled her last pearl off the string, and found herself once more in a splendid palace. She was now little Princess Stella, the sole heiress of a lordly realm, the King, her father, having just expired. The warm heart of Margaret beat under the pearl-broidered bodice of the little new Queen, and therefore, sobbing and weeping passionately, she begged to be taken to her dead father. "Your Royal Highness must calm yourself," said a grave physician. "You must remember your duty and subdue your emotions!" The poor little shivering child, dressed in sable, silk and lace, hushed her wailing, and tried to look composed. Then they smoothed her fair hair, covered it with a crape veil, and, with ladies of honor and pages, she was escorted to the chamber of mourning. The great wax candles burned dimly in the darkened state chamber, and the solemn velvet pall and black hangings awed her so that she could hardly refrain from a second burst of weeping. But the grim Lord Chamberlain approached, and in formal terms announced that the Council of State was waiting to do homage to the new Queen. "My head aches so," sighed the poor little Princess to one. But no one could help her, or go through her part for her, but they bathed her red, swollen eyes, then, carrying her silken train, marshalled her into the State Chamber. Then all the nobles assembled, haughty dukes knelt and kissed the little cold hand, and swore allegiance to the helpless child, who gazed at them with frightened eyes, and then they held the golden crown, that was a world too wide, over the fair drooping head of their young Sovereign.

Then, when trumpets had clanged and the banners waved, the assembly began to depart, and the poor little Princess laid her head on the shoulder of one of the ladies, and said, in a timid, weak voice, "May I go to bed?" So they ushered her into the State bedchamber, and one page took off one slipper and another page took off its fellow, with a great many bows between, and the pages all retired, bowing separately, and the ladies of honor took charge of the Princess. Poor exhausted little soul, it cost her the reception and acknowledgement of three profound bows before she could have her train taken off, a courtesy between every other article, and six deep reverences from the bedchamber women before she could get her nightcap. Margaret could bear it no longer, so while the silver warming-pan was being solemnly ushered towards the grand State-bed, she took advantage of the moment, and shook her last daisy, finding herself suddenly in her own dear old garden beside the Michaelmas daisy bush. While she was pinching her arm to see if she were really awake, up popped the old Fairy out of the bush.

"Well, my dear," said she, "I hope you have benefited by your insight of life: and I daresay you have found that the existence of a Princess is not without thorns,—poor people and rich all have troubles. The best thing little folks can do is to be contented and happy. You have one comfort beyond all other created things, in the motherly love that is as true in the cottage as in the palace, and that beats equally beneath silk or cotton.

Having your due share of this, you are in reality very rich indeed, and ought to be as happy as any little Princess in the world. And so good-bye to you, little Margaret, and try to become like the pearl drawn from the deep sea, a pure treasure to your mother, and live like the contented wayside daisy, that smiles cheerfully, whether it be sunny or stormy weather."

"Margaret, Margaret," cried the loving voice of her mother, "come in, darling, tea is ready and your father has come." F. F. BRODERIP.

**The Dead Doll.**

You need not be trying to comfort me, I tell you my dolly is dead; There's no use saying she isn't, with a crack like that in her head. It's just like you said it wouldn't hurt much to have my tooth out that day. And then when the man 'most pulled my head off you hadn't a word to say.

When my mamma gave me that ribbon—I was playing out in the yard— She said to me most expressly, "Here's a ribbon for Hildegarde." And I went and put it on Tabby, and Hildegarde saw me do it, And I said to myself, "O, never mind, I don't believe she knew it!"

But I know that she knew it now, and I just believe, I do, That her poor little heart was broken, and so her head broke, too. O, my dolly! my little baby! I wish my head had been hit, For I've hit it over and over, and it hasn't cracked a bit!

But, since the darling is dead, she'll want to be buried, of course; We will take my little waggon, nurse, and you shall be the horse; And I'll walk behind and cry, and we'll put her in this, you see, This dear little box, and we'll bury her then under the maple tree.

And papa will make her a tombstone, like the one he made for my bird, And he'll put what I tell him on it—yes, every single word! I shall say, "Here lies Hildegarde, a beautiful doll, who is dead; She died of a broken heart, and a dreadful crack in her head!" —Home Queen.

**Puzzles.**

1—POETS ANAGRAMMATICALLY EXPRESSED.

- 1. BEN, ALL TRUANCY WILL I'M sure meet with is proper reward.
- 2. HOMLIER NOVELS DWEL where his are found not.

2—CHARADE.

A word of one syllable, easy and short,  
Reads backward and forward the same;  
Expresses the sentiment felt by the heart,  
And to beauty lays principal claim.

3—REVERSAIS.

Reverse "to free" and find to "abused."  
" " "a mechanical power" and leave "a carousal."  
" " "to exist" and leave "wickedness."  
" " "cosy" and leave "articles of warfare."

4—TRANSPPOSITION.

Menteunet si a htegribe meg  
Anth kersparis ni a amided.

5—ENIGMA.

There's a lady 'mong our number, I am very loath to say,  
Who brings us endless trouble by her heedless, wilful way.  
For 'tis said, must I repeat it, that she helped to bring about  
A spanking for Fairbrother, though this I greatly doubt;  
And Miss Armand, whom we look upon as being pretty good,  
Went to bed without her supper; and just because that rude  
Young lady I have told you 'bout, got our cousin in a scrape.  
Then there's Harry Woodworth, too—well, he acted like an ape—  
Flirting with the girl in church, his father caught his eye.  
Do you wonder that we never hear from Harry now? That's why.  
Henry Reeve and Irvine Devitt, coming home from school,  
Met this troublesome young lady, and spying then a mule,  
They tied a tin pan to his tail. I shudder to relate.  
They've never since been heard of, and I'm fearful for their fate.  
What has happened to the others who were puzzlers in our band?  
They followed this young lady; there's their traces in the sand.  
Down the beach they went together, took a boat and sailed away.  
Leaving ne'er a clue behind them, save this alluring fay.  
And she's waiting, watching ever for fresh victims for her wiles.  
Dragging down the least unwary by her most engaging smiles.  
Do you ask me what her name is? Well, you surely must be blind,  
For among the human family she is chief of woman kind.  
CHARLES S. EDWARDS.

**Answers to Puzzles in August 15th Issue.**

- 1—1, Because he's a swain without an i (eye); 2, E E (ease); 3, Because her shortest word must be a Polysyllable.
- 2—Bat, cat, eat, fat, hat, mat, Pat, oats, rat, sat, vat.
- 1—Who does the best he can does well, acts nobly, angels could no more.
- 5—Wel-come.

The winners for answers to July and August puzzles are Bertha Jackson, Abingdon, Ont., and Mary C. Clazie, Belleville, to whom the books will be sent as soon as possible. The other competitors were very close. Uncle Tom now offers three books for the best original puzzles sent until New Year's, and also three books for the best answers during that time. All the books are well-bound, and are chosen as much as possible with a view of being suited to young people. U. T.

**Do Not Be Critical.**

Whatever you do, never set up for a critic. I do not mean a newspaper one, but in private life, in the domestic circle. If you don't like anyone else's nose, or object to anyone's manners, don't put your feeling into words. If anyone's manners don't please you, remember your own. People are not all made to suit one taste; recollect that. Take things as you find them, unless you can alter them for the better. Continual faultfinding, continual criticism of the conduct of this one, and the speech of that one, and the dress of the other, will make home the unhappiest place under the sun. Always tugging and working at the chain that galls only makes it dig deeper.



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### STOCK GOSSIP.

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

**A SWINE BREEDER'S DEATH.**  
We learn with regret of the death from typhoid fever of an enterprising young swine breeder, Mr. Frank Row, of Avon, Ontario, recently, at the age of 29 years. He had built up fine herds of Poland-Chinas and Tamworths, that were very successful in the show and otherwise, but they will now be dispersed.

**DEHORNING.**  
We have received from Mr. A. C. Brosius, Cochranville, Pa., a copy of his new Keystone Dehorning Clipper circular, the third annual issue. He reports an increase of fully 70 per cent. over the previous year. By means of increased and improved manufacturing facilities, he has been enabled to reduce the cost of production \$1 on each outfit, the benefit of which he gives his customers. Dehorning continues to grow in popularity as its practical advantages become known. A special feature of this circular is the published testimony from leading experiment stations, as well as from numerous Canadian and American farmers and ranchmen. Canadian customers will be supplied from Hamilton or Picton, Ont., shops being located at the latter place, but correspondence should be addressed to Cochranville, Pa., for any additional information required on the subject of dehorning, or for Clipper outfits.

**THE ISLINGTON HERD OF ESSEX SWINE.**  
A few miles north-east of Toronto, at Islington, Mr. A. B. Cooper has succeeded in establishing a remarkably fine herd of the Essex swine, a breed of which there is as yet comparatively few in the country, and which have many good qualities to recommend them. They are already becoming very popular wherever they have been given a trial, and no doubt when they are better known throughout the country they will be very favorably received. The Essex are not a large breed, but are very solid and compact in the flesh; short-legged, with splendid backs, and smoothly built. They are noted as being producers of pork of fine quality; they are of a very contented disposition, good grazers, and very easy feeders. Mr. Cooper claims that after giving most of the other breeds a trial, he considers the Essex by far the best all-round pig he has had, and believes them to be the coming "farmer's hog." Mr. Cooper speaks from experience, and practical experience is certainly a good guide. Some twenty-one head of show animals were seen, intended for the Toronto and the other large fairs. One thing well worthy of mention about this herd, is the scarcity of any inferior animals; the stock being throughout in fine shape and of high quality. Mr. Cooper has followed the large fairs up the last four years with remarkably good success. Mr. Cooper has a grand stock boar in King William, a wonderfully smooth, nice qualified boar, and the getter of a grand lot of young stock; he has been very successful in the show ring, having won last year in the open class for Essex, Victorias, and any other breeds; 1st in the aged class and 1st for boar and four of his get. Owing to the increasing popularity of the breed, a class has been formed for them at Toronto, and most of the larger fairs this year. In the next pen to King William was The Marquis, from Lucy and by King William; this boar will be shown in the yearling class, and we considered him superior in many respects to his sire, King William, having a remarkably straight, level back well sprung in the rib, a thick ham, and standing very squarely on short, flinty legs. Lucy is a grand brood sow from which most of the present stock are descended. The Duchess is a remarkably fine young sow, full sister to The Marquis, and very much like him in build; she is due to farrow Sept. 25th, by King William. A few other very fine young sows were seen, and an exceptionally grand lot of young pigs of both sex, from 12 months down to 4, from the above sows and by King William. Mr. Cooper will have some twenty-one head of this breed at Toronto, and a creditable lot they will be, and well worth looking up. Mr. Cooper's advertisement will be seen in our columns offering choice young stock.

### Write for Catalogue.

If you will send us your name and address, on a post card, we will take great pleasure in mailing to you one of our new fall catalogues. These books are free to all who ask for them. No matter in what part of Canada you live it may pay you to buy your goods from us; at all events it will do no harm for you to know our prices. We sell everything that farmers use, as follows:—

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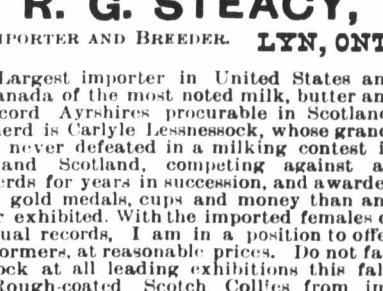
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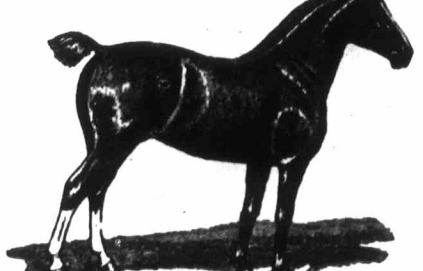
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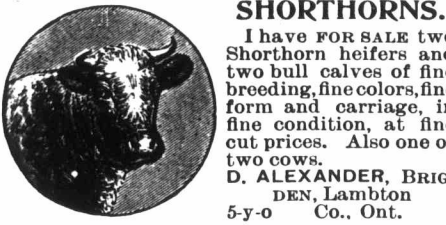
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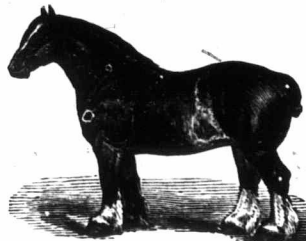
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 Montreal, Que. Sept. 12th to 21st.  
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 Guelph Sept. 17th to 19th.  
 Whitby Sept. 17th to 19th.  
 Belleville Sept. 17th to 20th.  
 Renfrew Sept. 19th and 20th.  
 Ottawa Sept. 20th to 28th.  
 Peterborough Sept. 23rd to 25th.  
 St. Catharines Sept. 23rd to 25th.  
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 St. John, N. B. Sept. 24th to Oct. 4th.  
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 Orillia Sept. 24th to 26th.  
 Woodstock Sept. 25th and 26th.  
 Lindsay Sept. 25th to 27th.  
 Stratford Sept. 26th and 27th.  
 Brampton Sept. 26th and 27th.  
 Paris Oct. 1st and 2nd.  
 Walkerton Oct. 1st to 3rd.  
 Goderich Oct. 1st to 3rd.  
 Markham Oct. 2nd to 4th.  
 Em-dale Oct. 3rd and 4th.  
 Midland (North Eastern) Oct. 3rd and 4th.  
 Ridgeway Oct. 7th and 9th.  
 Tilsonburg Oct. 8th and 9th.  
 Norwood, E. Peterborough Oct. 8th and 9th.  
 Simcoe Oct. 15th to 17th.

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Montrose, The Ruler, Carruchan Stamp, Knight Errant and other celebrities. My stock in the above lines were very successful at all the large shows last year. Call and examine our stock before purchasing elsewhere. Terms reasonable. 19-1-y-om

I have on hand the best young **GLVES-DALE** Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darley, Macgregor, Energy, Lord of Waleys.



**SHROPSHIRE.**  
 Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also Rams and Ewes of this year's importation.

**SHORTHORNS!**  
**CHOICE YOUNG HEIFERS and BULLS**  
 by the celebrated Cruickshank bulls  
**NORTHERN LIGHT**  
 —AND—  
**VICE CONSUL**



**ROBERT DAVIES, Proprietor. P. O., Toronto.**

**SPECIAL OFFERINGS AT REDUCED RATES**

— TO THOSE WHO WISH TO —  
**DOUBLE THE BUTTER YIELD OF THEIR HERDS.**

6 Jersey bull calves, 2 to 4 months old, bred entirely for **GREAT BUTTER YIELD.**  
 Sired by bulls whose dams make **17 1-2 to 26 3-4 lbs. Butter a Week.**  
 As my fall cows gave an unusual number of bull calves, I have decided to place them within reach of all who want an extra bull for next summer, viz.: \$60 to \$90 each, registered, and express prepaid by me to their destination. **MRS. E. M. JONES, Box 324, Brockville, Ont., Can.** Mrs. Jones' great book, Dairying for Profit, 30c. by mail. Address, **ROBT. Y. BROWN, Agent, Box 324, Brockville, Ontario, Canada.** 8-y-om

**FOR SALE.**

A choice lot of Shorthorns—bulls & heifers—of good quality and of the most approved breeding. Show animals a specialty. The accompanying cut represents Fair Queen 2nd, the foundation of my herd. Her produce offered for sale. Come and see us, or write for particulars. **JOHN MORGAN & SONS, KERWOOD, ONT.** 21-y-om



**MAPLE HILL HOLSTEIN-FRIESIANS.**

Have you the blood of the great butter cows, DeKol 2nd, Empress Josephine 3rd, Mechthilde and Pauline Paul, in your herd? If not, why not? The demand for this blood exceeds the supply. Speak at once if you want some of it. 11-y-om **G. W. CLEMONS, St. George, Ont.**

**DOMINION PRIZE HERD OF AYRSHIRES**



We have the oldest established, largest and best herd of Ayrshires in Canada. Choice young stock for sale at liberal prices. Satisfaction guaranteed. **JAMES DRUMMOND & SONS, Petite Cote, Montreal, P.Q.** 8-2-y-om

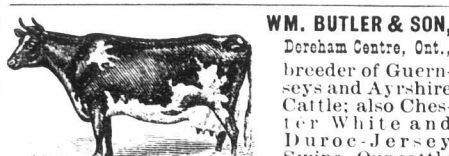
**Prize-Winning AYRSHIRES FOR SALE.**



I have at present one of the largest and 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. MCGORMICK & SON, ROCKTON, ONT.** 20-2-y-om

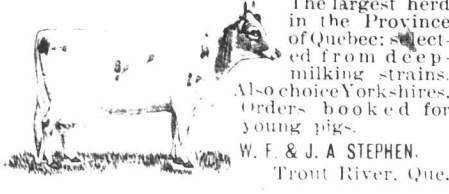


**Champion Dairy Herd of Ayrshires at various government tests. Prize winners at the World's Columbian Exposition, Chicago. Write MESSRS. ROBERTSON & NESS, Howick, Ont.** 19-y-om



have been selected with care from the best of milking strains, and we will now offer for sale a grand Guernsey Bull, fit for service, the winner of first in Toronto, Belleville and Ottawa; also one Ayrshire and one Jersey Bull Calf. The dam of the latter tested 8.20. Both are fashionable colors. For the next thirty days we will allow 25% discount off price in order to reduce our stock of swine to make room for exhibition stock. Choice young stock from imported and sweepstake herds. Write for catalogue, description and price list. 7-y-om

**AYRSHIRES - AND - YORKSHIRES.**



The largest herd in the Province of Quebec; selected from deep-milking strains. Also choice Yorkshires. Orders booked for young pigs. **W. F. & J. A. STEPHEN, Trout River, Que.**

**DANIEL DRUMMOND**

BURNSIDE FARM,  
**Petite Cote, P. Q.,**  
**BREEDER OF AYRSHIRE CATTLE.**  
 16-2-y-om

**WILLOW GROVE HERD OF JERSEYS.**

Sweepstake herd of 1894. Stock from imp. bulls and imp. and home-bred dams of St. Lambert, St. Helier, and Signal strains. Young of splendid individuality always for sale; also Plymouth Fowls. Eggs, \$1.00 per setting. Highfield St., G. T. R. 6-2-y-om **J. H. SMITH & SON.**

**JERSEY-CATTLE**

Of the heaviest milking strains. One of the largest herds in Canada; bred closely to the great dairy cow at Chicago, also the famous two-year-old. Sires of both were sold from this herd. Also Welsh Blood Ponies for ladies' and children's driving. Stock for sale always on hand. **GEO. SMITH & SON, Grimsby, Ontario.** 3-y-om

**CHOICE COWS FOR SALE**

**No. 1** "Julia Reid of St. L." 99022, A.J.C.C., dropped Apr. 7, 1890; solid light fawn, black points; quiet and vigorous; due to calve March 27th. Has a handsome udder when fresh. Canada's John Bull. Sire—Nell's John Bull 21,921. Nell of St. Lambert. 48 lbs. of milk first calf. Dam—Miss Stoke Pogis 23,385. 21 lbs. 4 ozs. in 7 days. Price, \$115.

**No. 2** "Sapphire" 13488, A.J.H.B., dropped Mar., 1891; silver-gray with dark shading, black points; healthy and vigorous. Has never been dry; a very rich milk and capable of making a test. Due to calve Jan. 12th. 100. Sire—Yankee's Pogis 22,218, A.J.C.C. Yankee's Dream. 23 lbs. Dam—Sweet Briar 13,460. 17 lbs. 4 ozs. Price, \$90.00. Both of above-mentioned cows are in calf to Lord Harry 3rd, whose dam has a record of 19 lbs. 10 ozs. on winter feed; and her dam, Land-seer's Fancy, 29 lbs. 2 ozs. Good reasons for selling. **R. REID, 18-0 BERLIN.**

**Pure St. Lamberts**

**YOUNG BULLS** fit for service, and bull calves sired by Jolie of St. Lambert 3rd's Son, 29731, and Lady Fawn of St. Anne's Son, 25703. The get of these two bulls have swept everything before them at the Toronto, London, Ottawa and Quebec Shows of 1893-4. Dams of the young bulls are daughters and randaughters of **The Famous St. Lambert Cows**, Jolie of St. L., Pet of St. L. and Lady Fawn of St. A. Farmers! If you wish to double the butter yield of your herd, buy a pure St. Lambert Jersey bull. The St. Lamberts, for size, constitution, and wonderful production of milk and butter, lead all other strains known.

**PRICES VERY LOW.**  
 Apply to **W. A. REBURN, St. Anne de Bellevue, P. Q.** 20-y-om

**SPECIAL OFFER for SEPT. & OCT.**

Several solid colored 2-year-old A.J.C.C. Jersey heifers due to calve soon. Also fine bull calves, St. Lambert strain. At reasonable prices, to reduce stock before winter. Address—**R. PHELPS BALL, Lee Farm, Rock Island, P. Q.** 17-y-om

**JERSEY HURST HERD OF JERSEYS**

**ROBERT REESOR, LOCUST HILL, ONT.**—Choice Jerseys for sale at all times; grand individuals of the St. Lambert and St. Helier strains. Locust Hill is 20 miles from Toronto, on C. P. R. 6-2-y-om

**JOHN YEAGER,**

OSAGE AVENUE, SIMCOE, P. O.,  
 Breeder of Choice Jerseys, Berkshire Swine, and Scotch Collie Dogs. 6-2-y-om  
 Correspondence solicited.

GLEN ROUGE JERSEYS

WILLIAM ROLPH, Markham, Ont., offers Twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 21-y-om

C. & E. WOOD, Locust Lodge, Freeman P. O.,

Breeders of high-class LEICESTER SHEEP AND POLAND-CHINA SWINE. Stock for sale at prices to suit the times. Correspondence solicited. 10 2-y-om

FOR SALE.

Six Leicester Shearling Rams, \$12 each; also Ram Lambs. One Shorthorn Bull Calf (red), nine months old, \$75. Also young Cows and Heifers VERY CHEAP. 17-d-om MUXCO McNABB, Cowal P. O., Ont.

W.S. Hawkshaw

Glanworth, Ont. IMPORTED SHROPSHIRE EWES and their lambs for sale; singly or by car lots. Glanworth Station, 7 miles south of London. 142-y-o

THE GLEN STOCK FARM Shropshires

We will sell at moderate prices a number of Yearling Rams and Ram Lambs, also a choice lot of yearlings and two-year-old Ewes and Ewe Lambs. Our herd of Ayrshires are in splendid form, and parties in need of young stock of either sex will do well to see what we have to offer before purchasing elsewhere. WHITESIDE BROS., INNERKIP, ONT. 7-y-om

SHROPSHIRE FOR SALE.

One and two-shear Rams and Ram Lambs, descended from the best English flocks. My stock are all of No. 1 quality, and the rams offered are strong, lusty fellows, with fine quality of wool and extra well covered. Write me at once for prices if you wish to secure a bargain. 18-2-y-o JAS. F. DAWSON, Odessa, Ont.

SHROPSHIRE

Our importation of show sheep has arrived in good form. This addition to our splendid lot of home-bred shearling rams and ewes, ram lambs and ewe lambs, enables us to offer such a variety of good animals and at such prices that we can suit any person. Write for particulars, or come and see. JOHN MILLER & SONS, Brougham, 12-2-y-om Ontario.

IF YOU ARE IN WANT OF IMPROVED Chester White Swine or Dorset Horn Sheep of first-class quality, at rock-bottom prices, write to R. H. HARDING, Importer and Breeder, 20-y-om Mapleview Farm, THORNDALE, ONT.

LARGE IMPROVED WHITE YORKSHIRES AND ENGLISH BERKSHIRES

Now ready, boars fit for service; young sows ready to mate, and sows in farrow. Prices reasonable. Pairs supplied not akin. Apply to WILLIAM GOODGER & SON, 11-y-o Box 160, Woodstock, Ont.

Specialty of Large White Yorkshire Swine.

Over 250 pigs of different ages on hand of the most desirable type. Quality of stock guaranteed as described. All stock delivered free of express charges. J. E. BRETHER, Burford, Brant Co., Ont. 3-y-om

IMP. LARGE WHITE YORKSHIRES FOR SALE

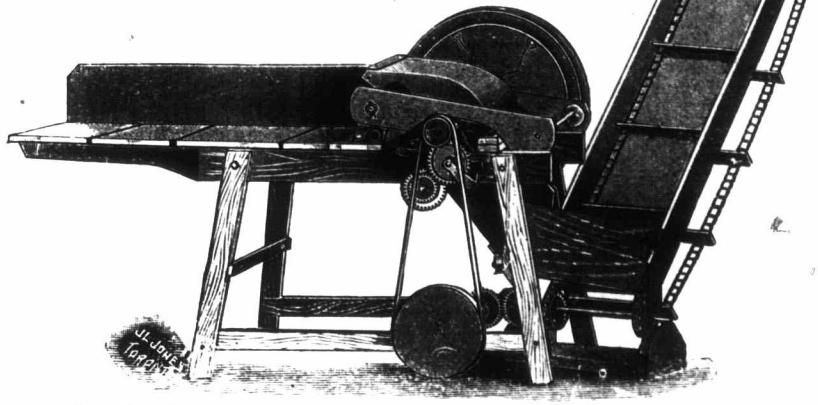
I am now prepared to supply young pigs of this noted breed at hard times prices. Orders booked for young pigs due Oct. 1st. Write me for prices and particulars. Mention "Advocate." 18-2-y-o WM. TEASDALE, Doliar.

40-BERKSHIRE PIGS FOR SALE-40

Four to ten weeks old, eligible for registry. Prices right. Call or write to 12-y-om A. J. C. SHAW & SONS, Thamesville.

You Will never need another dose of Dyspepsia Medicine after a meal, if your food is cooked with Cottolene, the new vegetable shortening, instead of lard. Cottolene aids the digestive powers—lard destroys them, which will you choose? The genuine Cottolene is identified by this trade mark—steer's head in cotton-plant wreath—on every tin. Made only by The N. K. Fairbank Company, Wellington and Ann Sts., MONTREAL.

THE RIPPER FEED AND ENSILAGE CUTTER

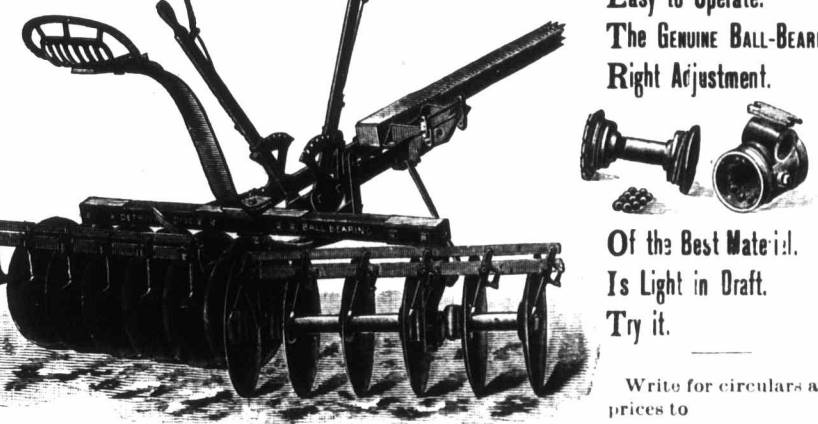


STOCK FEEDERS' FAVORITE MACHINE—HAS NO EQUAL AS A CORN CUTTER. Also Manufacture Disc Harrows, Riding Plows, and Tread Powers, etc.

THOM'S IMPLEMENT WORKS

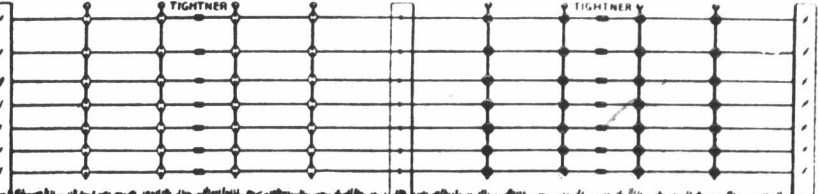
Established 1875. WATFORD, ONT. 13-a-o

THE DETROIT BALL-BEARING DISK HARROW



AMERICAN HARROW CO.,

Detroit, Michigan. 17-a-o Windsor, Ontario.



No better wire fence built than the Casey Diamond Grid. Just the thing for farmers—neat, strong and durable. Will last a lifetime, barring accidents. Uses only straight wires with so little depression as not to cause the galvanize to crack or peel. If there is a dealer who wants something better to handle than he's had, try it. We also supply the Double Lock Wire Fence, which is claimed by some to be second to none, the lateral wire of which, as well as the upright stay, being crimped at joints. Our agents build either on premises. Agents wanted everywhere in Canada, to whom sole territory will be allotted. County and Township Rights for sale. Our Gas Pipe Frame Gate takes the lead. Patented January 23rd, 1895. See our exhibit at all the leading fairs—Toronto, London, Ottawa, Kingston, etc.

CANADA FENCE COMPANY, Corner Bathurst and Clarence Sts., London, Ontario. 17-y-om

IMPROVED LARGE YORKSHIRES MARYSVILLE STOCK FARM

FOR SALE of the best type and breeding. Young boars fit for service and sows fit to breed. Can furnish young pigs of all sizes and ages, and No. 1 quality. Can supply pairs not akin. R. G. MARTIN, Marysville, Ont., breeder of choice York-hires and Berkshire swine, Leicester and Shropshire sheep. Young stock of the above always for sale of the best quality and breeding. All stock guaranteed to be as represented. Write for prices and particulars. 18-2-y-o E. DOOL, Hartington, Ont.

STOCK GOSSIP.

W. M. Smith, Fairfield Plains, Ont., made a very successful trip to the summer fairs in the West, attending the Winnipeg Industrial, Brandon, and Regina Exhibitions, and taking many prizes with Ayrshire cattle, Merino sheep, Poland-China swine, and poultry. He sold Ayrshires to the following parties: To Finlay McCartney, Longburn, Man., one bull calf, one two-year-old heifer, and two heifer calves; to J. S. Cochrane, Crystal City, one bull calf; to Wm. Cranston, Clearwater, one cow.

MR. LENTON'S APPOINTMENT. For a couple of years past, Mr. John J. Lenton, of Oshawa, has done good service on the contributing staff of the FARMER'S ADVOCATE in the department of practical poultry-keeping. Though in one sense a matter of regret, we must at the same time congratulate Mr. Lenton on his recent appointment by a wealthy American, Mr. Geo. W. Vanderbilt, to manage his poultry farm on the Biltmore estate, at Biltmore, N. C. The best specimens of several leading varieties will be there kept. Hundreds of chicks will be raised, and those not strictly first-class will be used as broilers. His poultry business at Oshawa (Ont.) will be continued as heretofore, under the personal supervision of his brother. Mr. Lenton writes: "I have just added the first prize Golden Wyandotte hen at New York last winter; the third prize cock of same variety at same show, and the first prize cockerel at Rochester of Silver Wyandotte to my yards. No one need expect anything but first-class birds and eggs to be sold by my brother." Mr. Lenton will continue his contributions to our poultry department.

MR. DANIEL DRUMMOND'S AYRSHIRES. Mr. Drummond's farm is located at Petite Cote, near Montreal. Ayrshires have been bred by the present owner and his father before him for the last forty years. A continual effort has been put forth to produce a herd of extra milking qualities. The best of sires have been used, and the choicest animals retained, so that the present stock now contains some twenty head of a very fine type. The young two-year-old bull, Glencairn of Maple Grove, is now being used on the herd, and a richly-bred, remarkably good bull he is. He was bred by L. Pilkington Ravens, Scotland, and was sired by the noted bull Lord Glencairn, who was a winner of 1st at the Royal, at Windsor. Another very fine young bull is Matchless, calved Oct. 24th, '94; he was sired by Glencairn, Mr. Reford's stock bull at St. Anns, and from the noted imported cow Nellie Osborne. Nellie Osborne was the sweepstakes cow at Chicago, and also 1st in her class; she was also the sweepstakes cow twice in Montreal, and has won many firsts at all the leading fairs; she is again in calf, and is due to calve in September. Maggie of the Hills is another grand imported cow, a credit to any herd; she was fourth at Chicago, the only time ever shown. We also saw a couple of grand twin two-year-olds, Snowflake and Snowflake, by Silver King, and from Mermaid, an extra good milking cow. Another fine two-year-old from Nellie of Burnside, also by Silver King, a winner of first wherever shown, with one or two exceptions. An extra good three-year-old by Silver King will no doubt do her share towards sustaining the reputation of the herd this fall. The above-mentioned heifers are of a fashionable color, and grand specimens of the Ayrshire breed as are the majority of the herd.

BOOK TABLE.

The Templar Publishing House, Hamilton, has begun the issue of another bright, aggressive publication, entitled "The Templar Quarterly," an illustrated social reform magazine, containing some 32 pages, exclusive of cover. It contains portraits of prominent Canadian temperance workers, striking cartoons, and numerous facts and figures bearing on the prohibition movement.

A continuation of Vol. I. of the Swiss Record, published by the Brown Swiss Cattle Breeders' Association, has been received from the Secretary and Editor, N. S. Fish, Groton, Conn. It contains the pedigrees of bulls Nos. 423-738; cows Nos. 608-1159. It also contains a transfer list of bulls and cows. The volume is made up of three supplements. It contains a number of fine illustrations, and is well bound and edited.

We have received from President Mills, Ontario Agricultural College, Guelph, copies of the annual circular both for the College proper and the Dairy School. The former reopens on October 1st, the latter on January 11th. This circular contains complete information as to course of study, expenses, etc. A post card to President Mills will secure a copy. Young men should, without fail, avail themselves of the splendid advantages offered at this institution.

Volume VII. of the Oxford Down Flock Book, containing the pedigrees of rams from No. 1833 to 1995, and of ewes from No. 842 to 983, has been received from the Secretary, Mr. H. Henry Hew, Norfolk House, Norfolk St., London W. C., England. At a recent council meeting the Association membership was reported at 98, a list of which appears in this volume, together with statement of objects, by laws, council report, 1894 show record, flock entries, index of registered rams, etc., making in all a compact volume of some 90 pages. Price 10s. 6d.

The Ontario Department of Agriculture has recently issued a pamphlet containing Acts of Parliament relating to Agriculture, passed by the Ontario Legislature. This is for free distribution, and should be in the hands of every farmer, both for his information and a guide to escape conviction by a neglect of duties demanded of citizens. It contains fifteen Acts, among which are Acts to prevent frauds in the sale of milk, frauds in the sale of fruit, the spread of contagious weeds, the spread of contagious diseases among horses and other domestic animals, and others of equal importance. Ignorance of the law is no excuse, therefore it is well to look after one's own interests by being informed in these matters.

BERKSHIRE, Chester White, Jersey Red & Poland China Pigs, Jersey, Guernsey & Holstein Cattle, Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs, Catalogue, S. W. SMITH, Cochraneville, Chester Co., Pa. 17-y-om

**STOCK GOSSIP.**

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

Mr. Thos. Scott, of Glenmorris, has established a small herd of choice Jerseys of the best breeding, containing the St. Lambert and St. Helier blood. Beginning on a small scale a few years ago with one or two choice cows, they have gradually increased until at present they number some sixteen head in all. The herd is headed by John Brant (31000). This bull traces back to Canada's John Bull, one of the most noted Jersey stock bulls ever owned in the country.

Mrs. E. M. Jones, Brockville, Ont., writes:—"Mr. F. Birdsall, of Birdsall, Ont., was looking for a Jersey bull calf fit to head any procession, both in beauty and breeding, and I am happy to say, he found just what he wanted in my herd—Regal St. Lambert 41438, now 7 1/2 months old, and pure St. Lambert without any out-cross whatever; sire Canada's Sir George 18290, who won first prize over all Canada, as a calf, Toronto, 1887; Ottawa, 1887; as yearling, Kingston, 1888; as two-year-old, Toronto, 1889; headed first prize herd, Toronto, 1889; first prize over Canada as two-year-old, London, 1889; headed first prize herd, London, 1889; sweepstakes as best of any age, London, 1889. All before he was 33 months old. Since then he has had to divide the honors with his stable companion, Massena's Son, but took second prize at Toronto, 1891; third prize at Ottawa, 1891; first prize at Toronto, 1892; third prize at Ottawa, 1892; sweepstakes as best of any age, Toronto, 1892; headed first prize herd, Toronto, 1892. I believe him to be the handsomest, best and highest-bred Jersey bull alive in any country. His sire was Mr. Fuller's Famous Canada's John Bull, that was never beaten in the show ring, except by me. His dam was Allie of St. Lambert, 57 pounds milk a day; 26 1/2 pounds butter a week. His stock are grand, both as to looks and yield. A gentleman has lately been here from Pa. He said he came 700 miles just to see this bull, because he bought one of his daughters from me as a calf, and she had just come in at two years old, and was giving 35 pounds of milk a day, and had the handsomest udder in Pennsylvania. The dam of Mr. Birdsall's young bull is the pure St. Lambert cow, Muriel of St. Lambert; she is half-sister to the beautiful cow (whose picture appears in my book, Dairying for Profit), Rioter's Queen, 17 1/2 pounds butter a week, and 47 pounds milk a day, at 4 years old. Muriel is fully as good, and I paid \$1,000 cash for her when only a few months old. When I add that Regal St. Lambert looks equal his pedigree, it will be evident that Mr. Birdsall has made no mistake."

**DAVID MORTON & SONS' AYRSHIRE SALE.**

The dispersion sale of David Morton & Sons' (Hamilton) Ayrshires occurred on August 29th. As will be noticed, many of the animals sold were quite young. Following is the list of animals sold, purchasers and prices:—

**BULLS.**

- Dundonald—1718—, A. & H. Foreman, Collingwood, \$40.
- Royal Chief 2nd—1716—, T. Ballantyne & Son, Stratford, \$120.
- Bull calf, sire Dundonald, E. H. Disbrowe, Creemore, \$25.
- Bull calf, sire Monarch, W. Nicholl, Platts-ville, \$37.50.
- Bull calf, sire Monarch, Wm. Baldock, Mt. Charles, \$26.
- Bull calf, sire Monarch, Wm. Thorne, Lynedoch, \$35.
- Bull calf, sire Monarch, J. A. R. Anderson, Barton, \$27.50.
- Bull calf, sire Monarch, John Cunningham, Norval, \$15.

**COWS.**

- Beauty of Ayrshire (5508)—1202— [4885] (imp.), John Newman, Lachine, P. Q., \$132.
- Nancy Lee of Barmoorhill (5424)—1211— [4879] (imp.), Jas. Callander, North Gower, \$75.
- Blue Bell (5506)—1203— [4883] (imp.), William Wylie, Howick, P. Q., \$140.
- Primrose (5507)—1205— [4884] (imp.), J. B. Carruthers, Kingston, \$75.
- Sprightly (5507)—1210— [4886] (imp.), R. Jamieson, Perth, \$105.
- Jess 2nd—2002— (imp. in dam), Jas. McCormack & Son, Rockton, \$50.
- Sprightly 3rd—1859—, Jas. McCormack & Son, Rockton, \$175.
- Lottie—1856—, Wm. Thorne, Lynedoch, \$110.
- Jean Armour—2058—, Wm. Stewart & Son, Menie, \$132.
- Bell of Loudounhill—2059—, T. Ballantyne & Son, Stratford, \$92.
- Bessie—2061—, E. H. Disbrowe, Creemore, \$75.
- Carrie—2056—, E. H. Disbrowe, Creemore, \$60.
- Rose McCormack—2186—, Thomas White, Branchton, \$75.
- Norval Rose—2158—, Wm. Thorne, Lynedoch, \$47.50.
- Maggie Stewart of Menie, D. & O. Sorby, Guelph, \$27.50.

**HEIFERS.**

- Jess 3rd—2588—, Wm. Baldock, Mt. Charles, \$37.50.
- Sprightly 5th—2587—, J. McCormack & Son, Rockton, \$55.
- Elsie—2219—, E. H. Disbrowe, Creemore, \$45.
- Blue Bell 2nd, T. Ballantyne & Son, Stratford, \$50.
- Nancy Lee 2nd, Wm. Baldock, Mt. Charles, \$32.50.
- Daisy, sire Royal Chief, Jas. Callander, North Gower, \$60.
- Yearling heifer, sire Rovin Robin, William Stewart (Jr.) & Son, Menie, \$50.
- Yearling heifer, sire Royal Chief, William Baldock, Mt. Charles, \$35.
- Yearling heifer, sire Monarch, J. B. Carruthers, Kingston, \$30.
- Yearling heifer, sire Royal Chief, John Newman, Lachine, Que., \$30.
- Yearling heifer, sire Monarch, D. & O. Sorby, Guelph, \$40.
- Yearling heifer, sire Royal Chief, D. & O. Sorby, Guelph, \$80.
- Yearling heifer, sire Monarch—77—, J. B. Carruthers, Kingston, \$35.
- Heifer calf, sire Monarch, D. & O. Sorby, Guelph, \$20.

**ADVERTISE IN THE ADVOCATE**

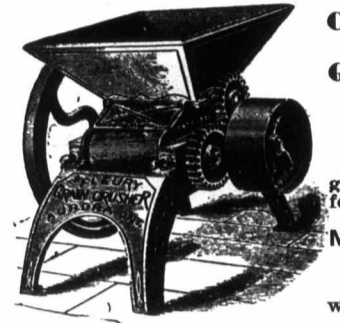
**Did you see our ad. of "Ensilage Cutters"**

in issue of September 2nd? If not, it will pay you to look it up.



NO. 5 ROOT-CUTTER.

Windmill use, as they are DURABLE, RUN EASY, CUT RAPID, and do not choke.



NO. 2 CRUSHER.

Of course you know that our Plows won Medal and Diploma at World's Fair? They always win! 180

In Root Cutters we recommend our No. 5 Slicer and Pulper, which we GUARANTEE will CUT MORE ROOTS with the same power THAN ANY OTHER CUTTER. No need to state REASONS here—but we KNOW WHY it is so. Will you prove it? Mr. R. H. Weddel, of Ravenshoe, has found that the No. 5 Cutter, owing to ease in running, helps to sell Windmills, and writes as follows:

"My experience with your No. 5 Rapid-Easy Root-Cutter is that it has been most satisfactory in use with our Air-motor Steel Windmill. Its capacity when so driven is from FIVE TO EIGHT BUSHELS PER MINUTE. Have found them to be SUPERIOR to ALL OTHER makes for

Crushers and Grinders—several sizes—from "Hand Power" to 15 H. P. Engine.

Great Capacity with least power. No wear out, SIMPLE in construction, nothing to get out of order. THOUSANDS in use. Mr. W. J. Holmes, Invermay P. O., says:

"I got a Crusher from you about 10 years ago, which has given me great satisfaction. I want Roller with short shaft, for which I will remit as soon as received."

Messrs. S. & J. Armstrong (Contractors), McKellar, Ont., write:

"Enclosed find settlement for Crusher. The Crusher works exceedingly well."

Write us for any information you want.  
**J. FLEURY'S SONS,**  
Aurora, Ont.

**To Smokers**

To meet the wishes of their customers The Geo. E. Tuckett & Son Co., Ltd., Hamilton, Ont., have placed upon the market

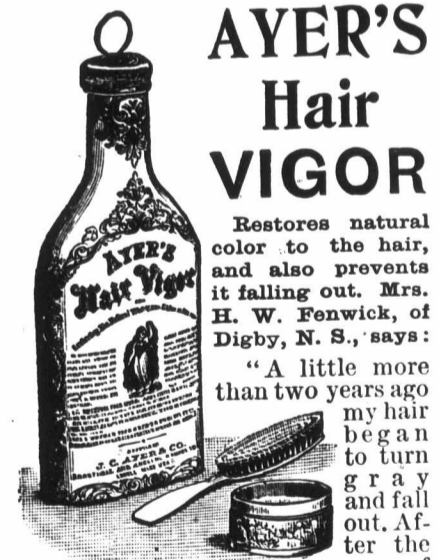
**A Combination Plug of**



SMOKING TOBACCO.

This supplies a long-felt want, giving the consumer one 20-cent plug, or a 10-cent piece, or a 5-cent piece of the famous "T & B" brand of pure Virginia Tobacco. 5-y-om

The tin tag "T & B" is on every piece.



**AYER'S Hair VIGOR**

Restores natural color to the hair, and also prevents it falling out. Mrs. H. W. Fenwick, of Digby, N. S., says: "A little more than two years ago my hair began to turn gray and fall out. After the use of one bottle of Ayer's Hair Vigor my hair was restored to its original color and ceased falling out. An occasional application has since kept the hair in good condition."—Mrs. H. F. FENWICK, Digby, N. S.

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Ayer's Pills cure Sick Headache.

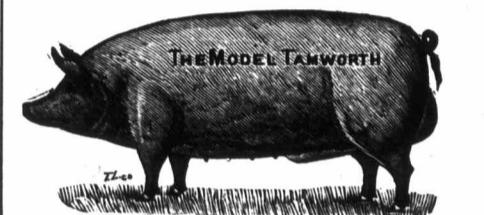
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**BERKSHIRE SWINE AND LEICESTER SHEEP**

We guarantee our stock to be of the best quality. Our Leicesters are bred from the noted stock of Kelly, Whitelaw, and Nichol, and our Berkshires of a desirable type. Correspondence solicited. 12-2-y-o

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Have an extra choice lot of young pigs. Sows in pig and ready to breed. Also a few of the choicest Shropshire Ram Lambs at reasonable prices. JOHN BELL, Amber P. O. Shipping at Agincourt, C. P. R. or G. T. R. 10-2-y-o

**ISAAC HOLLAND**  
SPRUCES GROVE FARM,  
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Breeder of Guernsey Cattle and Tamworth Swine. I have for sale a choice two-year-old or a four-year-old Guernsey bull of heavy milking strain. Also young Tamworths, either sex. Correspondence solicited. 8-2-y-o

**CHESTER WHITE AND TAMWORTH SWINE**

From imported stock for sale, having 75 head from eight to ten weeks old now ready to ship. Send for prices. H. GEORGE & SONS, Middlesex County, Crampton, Ontario. 7-y-om

**CHESTER WHITES AND BERKSHIRES**

Young pigs now ready for shipping, and young sows in pig to imported boars. All are held at reasonable figures. Can supply pigs at all ages. Orders by mail filled with care, and correspondence cheerfully answered. Write for prices, stating what is wanted. 18-om J. H. SHAW, Simcoe, Ont.

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My herd are imported or bred from imported stock, and have been winners at the leading shows for years. Pigs of all ages (both sexes) for sale. Pairs supplied not akin. Correspondence solicited. Inspection invited. D. DeCOURCEY, 4-2-y-om Bornholm.

**THE ISLINGTON HERD OF ESSEX SWINE**

I am now prepared to supply choice young stock, any age and either sex, of this class. This breed produces pork of the first quality; are of a quiet disposition and easy feeders. I am also breeding pure-bred Foxterriers. Correspondence solicited. Selling at farmers' prices.

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**DUROC-JERSEY SWINE**

We have the greatest prize-winning herd of Duroc-Jerseys in Canada. Our 2 stock boars and several of our brood sows won first prize at the Industrial, Toronto, 1894; also first on young pigs and herd. Pigs of either sex and all ages for sale. Address, TAPE BROS., Ridgeway, Ont. 20-2-y-om

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A grand lot of Suffolk Pigs, all ages, for sale at prices to suit the times. A. FRANK & SONS, The Grange, four miles from Cheltenham Stn., C. P. R. & G. T. R. 2-2-y-om

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Ont. Our herd took first place at the largest Fairs in Canada, '94; is headed by DARKNESS QUALITY, who took first prize over 41 entries at the World's Fair in Chicago, '93. Our stock is LARGE IN SIZE, FINE IN QUALITY, well adapted for the Canadian trade. Young stock for sale at all times. Prices reasonable. 15-y-om

**Large English Berkshires for Sale**

A number of very fine young Berkshire Boars fit for service; young sows fit to breed, and younger ones of all ages, either sex, of choicest breeding. All stock guaranteed to be as represented. Write me for prices, or come and see my stock. W. J. SHIBLEY, 18-2-y-o HARROWSMITH, ONT.

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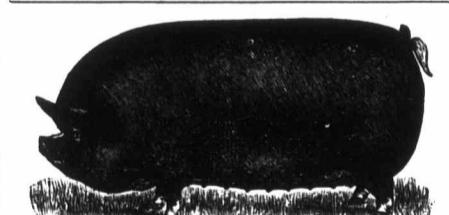
Breeders of Berkshires and Chester White Swine. We have for sale young stock of either sex, and any age, at prices to suit the times. 8-2-y-o Correspondence solicited.

**BOARS FOR SALE.**—We have a grand lot of Berkshire and Yorkshire boars fit for service, which we will dispose of cheap, as we are overstocked. 12-2-y-o W. R. BOWMAN, Mount Forest, Ont.

**Large English Berkshires!**

**J. G. SNELL & BRO.,**  
Edmonton, - Ontario.

We are now booking orders for young pigs. Have several litters now, and more to follow in Mar. and April. These are by imported Star One, 858 lbs., 1st prize aged boar, Toronto, 1894; Lord Ross, 1st p. yearling boar, Toronto, 1894; Regalia, 540 lbs. at 15 months old, 1st p. boar under a year, Toronto, 1894; Baron Lee 4th, 602 lbs. at 14 mos. We never had so many good sows to breed from as at present. Write for prices. 2-y-om



**Gold Medal Herd of Berkshires**

Young Boars and Sows of spring litters For Sale, bred straight from first-class imported stock. Size and quality combined. Orders booked for September and October pigs, and for young sows bred to our best boars. High-class Cotswold Sheep and Jersey Cattle of all ages for sale. J. C. SNELL, 8-y-om Edmonton, Ont.

**LARGE ENGLISH BERKSHIRES**

My herd are imported or bred from imported stock, and have carried winnings at leading shows for years, including sweepstakes over all breeds at last Guelph Fat Stock Show. Pigs of all ages for sale, pairs supplied not akin. 9-y-om GEO. GREEN, Fairview, Ont.

**FOR SALE.**

Pure-bred Berkshires. Eight fine young pigs just weaned; also two sows four months old. Address, R. J. DIXON, Gleneden P. O., Ont.

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—IMPORTER OF—

**Large - English - Berkshires**  
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Young stock of the best quality always on hand. A couple of young sows bred, and also some young boars fit for service to dispose of at right prices. Correspondence solicited. Mention Advocate. 12-2-y-o

R. B. McMULLIN, GOLDSMITH, ONT. Importer, Breeder and Shipper of REGISTERED POLAND-CHINA SWINE Stock of all ages for sale at low prices. All stock guaranteed as represented. Write for prices. Registered pedigrees furnished. Mention Advocate. 24-2-y-o

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Spring pigs ready to ship June 1st. 4 fall boars ready for service. Stock of all ages ready to ship. Prices Low, Quality Considered. Send for illustrated catalogue of Poland and poultry. Correspondence solicited. CAPT. A. W. YOUNG, Tupperville, Ont. 17-y-o

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JOHN J. LENTON, Park Farm, Oshawa, Ont., sells Bone Cutters and Pure-bred Poultry of the best quality at low prices. Send to him for catalogues, etc. 22-y-o

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Fertilizers containing a high percentage of potash produce the largest yields and best quality of Wheat, Rye, Barley, Oats, and all winter crops. Send for our pamphlets on the use of potash on the farm. They are sent free. It will cost you nothing to read them, and they will save you dollars. Address, GERMAN KALI WORKS, 93 Nassau Street, New York.

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AGRICULTURAL COLLEGE The Ontario Agricultural College will reopen on the 1st OCTOBER. Full courses of Lectures, with practical instruction in Agriculture, Horticulture, Live Stock, Dairying, Poultry, Bee-keeping, Veterinary Science, Chemistry, Geology, Botany, Entomology, Bacteriology, English, Mathematics, Book-keeping, and Political Economy. Send for Circular, giving terms of admission, course of study, cost, etc. JAS. MILLS, M. A., President, Guelph, July 6th, 1895. 14-c-o Guelph, Ont.

PURE OLD PROCESS Ground Linseed Oil Meal. The Best and Cheapest STOCK FOOD in the World! Most SATISFACTORY, because it preserves healthy action at all times. Most ECONOMICAL, because it fattens the quickest. Most PROFITABLE, because best conditioned stock are secured. MANUFACTURED BY THE NATIONAL LINSEED OIL COMPANY, Works: West Ganson Street, - BUFFALO, N. Y. Send for CIRCULARS and PRICES. 12-y-o

STOCK GOSSIP.

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

SOUTHDOWN GOSSIP. John G. Springer, Secretary of the American Southdown Breeders' Association, Springfield, Ill., writes: "Southdown sheep breeders are greatly encouraged by the demands made for these sheep from breeders who wish to utilize their present flocks. Long prices are not being had, but an increasing sale at fair prices is an indication of steady growth. The breeders of these sheep will regret to learn that the veteran Southdown breeder, Hon. C. M. Clay, White Hall, Ky., has decided to dispose of his entire flock, his age requiring that he give up this line of his business affairs. Mr. Clay is the oldest Southdown breeder in the world; has carefully bred his flock for many years, and without injury to their mutton product has produced a sheep that supplies an increased wool yield."

WOODLANDS FARM—TAMWORTHS AND POLAND-CHINAS. We recently called on Mr. H. Revel, near Ingersoll, and inspected his Tamworths and Poland-Chinas. The Woodlands herd numbers some thirty head. Mr. Revel selected his first stock of Tamworths from the Grant & Co. importation, and, although not an exhibitor himself, some of the stock of this herd and their descendants have been shown successfully at Toronto and other fairs. One of the best sows we saw, and the one from which the best animals have been bred, is Woodlands Queen (imp.) 144, bred by D. W. Phillips, Whitesacre, Eng., and imported by Jas. L. Grant & Co.; she is by Gunhill Prince—1591—; dam Dorridge Countess—2778—. Probably the two next best sows are a couple of Woodlands Queen's offspring, Maid of Oxford—281—, by Revel's boar—106— imp., and Gipsy Queen—212—, by the same sire. The herd boar is Woodlands Duke—196—, a yearling of good size and quality, by Gunhill Reliance (imp.)—175—, dam Lady Whitesacre—145— (imp.). The young pigs are mostly by this boar and the above sows. Poland-Chinas.—Mr. Revel is a new beginner in this breed, and has started out in the right way by selecting excellent foundation stock. The imp. boar, Senator—256—, is a grand one; he was bred by J. A. Shipley, Richwood, Ohio, U.S., and was shown successfully at leading fairs last season. A good sow is Countess, at the time of our visit suckling a litter of young pigs by Senator. Countess was sired by Kent Duke 468, dam Perfection Queen 625.

MR. JOHN L. REVEL'S TAMWORTHS. Our next visit took us to the Maple Stock Farm, near Putnam, where Mr. John L. Revel has built up quite a large herd of Tamworths. And Mr. Revel is now prepared to supply sows or young pigs from eight months down, and young litters expected soon. Stock from this herd have also been successfully shown at the leading fairs by different prominent breeders. One especially good young boar, 13 months old, was bred on this farm, thought by many to be one of the best pigs that has been raised in the Ingersoll district. Some of the best sows of this herd are Gipsy—178—, by Buffalo Bill—143—, dam Daisy—147— by Revel's boar—106— (imp.); Daisy—147— by Revel's boar, dam Woodlands Queen, imp.,—144—; and other good younger sows from Daisy and by Buffalo Bill. A good young boar about nine months old by Buffalo Bill and from Daisy was also seen, and a number of youngsters by the same boar and Woodlands Duke—196—, a boar bred from imp. sire and dam. Mr. Revel expects to make a change in his business within the next few months, and therefore wishes to dispose of the bulk of his stock; and, consequently, he has determined to offer choice young stock of the best breeding at greatly reduced prices. The stock are descended directly from imported stock, and this will afford a grand opportunity to the public to procure a first class bacon hog.

ENGLISH SHEEP SALE NOTES. Mr. John Harding's annual sale of Shropshire rams and ewes (conducted by Alfred Mansell) came off at Norton House, Shiffnal, Shropshire, Eng., on Friday, August 9th, when thirty-three rams were sold at an average of £24 11s. 2d. (\$122.68). The highest prices realized were 125 guineas for a shearing ram sold to Gen. Dyott, and 95 guineas for a shearing bought by J. L. Napier. Five rams, which were shown successfully at the Shropshire and West Midland show, realized the excellent average of 78 guineas (\$372.96) each. Fifty shearing ewes were sold at an average of about \$13 each. At the annual Harrington Hall sale, near Shiffnal (conducted by Alfred Mansell), the unprecedented average of £41 16s. 8d. was made for forty-five rams. Among the list of shearing rams was one for Mr. Davies, of Toronto, at 52 guineas. The ewes averaged £5 2s. 9d. At Prof. Wrightson's annual Hampshire sheep sale fifty-four animals averaged £3 11s. 3d., individuals going as high as 15 guineas.

A very satisfactory Suffolk sale was held at Ipswich. One lamb, got by Baron 10th, brought 33 guineas, and eight by the same sire averaged £16 8s. One hundred Chilmack Hampshire averaged £10 13s. Robert Garne's Aldworth Cotswolds averaged £9 15s. 9d., the best figure being 22 guineas. The great Shropshire sale at Birmingham was very successful, prices going as high as 42 guineas. Sheep were sold to go to all parts of the United Kingdom, as well as South America and South Africa. At Lord Ellesmere's Suffolk sale the best price was 42 guineas, and fifty-five rams averaged £11 6s. 6d. At the Oxford Ram Fair prices went up to 65 guineas, one lot averaging £16 19s. John Treadwell's annual Oxford-Down sale was successful, sixty rams selling at £15 17s. 7d., the top figure being 100 guineas. At the third annual sale of Southdowns at Chichester, under the patronage of the Southdown Breeders' Association, averages ran up to £13. At the dispersion of the noted Aidingbourne Southdowns, owned by Wm. Tomp, thirty-six rams averaged £14 7s. 10d., the one-year-old ram Waterbeach going at 35 guineas. The sale total was £2 271 5s. Wm. Kirkham's "Bangle Farm" Shropshires sold well, rams going up to 50 guineas. Robert Fisher, of Leconfield, East Yorkshire, had a most successful Lincoln sale, the top figure for rams being £56, a lot for exportation to Buenos Ayres going at £16 to £33; twenty shearlings averaged £24; the whole seventy averaging £14.

**STOCK GOSSIP.**

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

Mr. Mortimer Levering, Secretary of the American Shropshire Association, reports the demand for breeding sheep strong at good figures. Wool sold at an advance this season, and it is said that over one hundred new woolen mills are in operation.

F. W. Terhune, Brantford, Ontario, writes:—  
"Have sold a sow in pig, to Joshua Cook, Paris; sow pig and boar to E. Walker, Welcome; pair of sows to Thos. Lane, Brantford; boar to Frank Bryan, Mohawk; boar and four pigs to Thos. Robson, Bright; brood sow to F. Parsons, Carlisle. I still have a couple of nice salable sows on hand, also some young pigs farrowed in July and August."

**THE AVON HERD OF POLAND-CHINAS, CHESTER WHITES AND TAMWORTHS.**

We recently visited Messrs. Herron & Daffoe, of Avon, Ont., importers and breeders of the above-mentioned breeds of swine. A large herd is now on hand, a number of which are imported. Imported sires of the different breeds are used, so the young stock is descended from imported sires and imported and home-bred sows. These gentlemen are prepared to supply the public with young pigs, either sex, and all ages and almost any breed, at prices that will astonish them, if they will only write for prices and particulars. Look up Messrs. Herron & Daffoe's advertisement in our advertising columns.

**LEE FARM JERSEYS AND STANDARD-BRED TROTTERS.**

Just on the outskirts of the village of Rock Island, picturesquely located among the hills, is Lee Farm, the home of Dr. E. P. Ball. On arriving at the farm we were first shown through the stables, which contained a few nice Standard-bred horses, the stock bull and some of the younger things of the herd, the majority of the Jerseys being out on the hills to pasture; and a pleasing picture it made. From these hills we had a fine view of the surrounding country, and the hills and valleys of Vermont.

At the head of the Jerseys is Prince Hugo (23710), by Victor Hugo (imported), dam Queen Hugo. Prince Hugo is a grand bull, and the best of Jersey blood courses through his veins. He is very docile and likes to be petted as well as his female stable companions. This bull is giving much satisfaction to his owner as a sire, and a number of nice young things were seen got by him. In another stall was Stanley of Lee Farm (39127), a splendid two-year-old by Stanley of St. Annes. One of the foundation cows that has done much towards building up this herd is Chief's Princess (23781) (imp.), by Walnut Chief (31309), dam Princess of Walnut Farm. A number of excellent animals were seen in the herd, the descendants of this cow, Princess P (87083), a four-year-old by Romeo's Garnet (14182), pure St. Lambert; Prince S B, a three-year-old by Orloff of Lee Farm, from Chief's Princess; Princess Merrily (94997), by Orloff of Lee Farm; Fanny Lee (57011), by Romeo's Garnet 14182, dam Nona (119550), some of the best, and are excellent cows, mostly descended from Chief's Princess, and of much the same type. A fine yearling bull was also seen by Alexis of Lee Farm, and some extra good bull calves. The young stock are mostly sired by Edward H (27945) and Prince Hugo.

Standard-bred Trotters.—A couple of good stallions were seen. Sutton, by Epaullet, is a nicely-turned horse, with a record of 2.26; and Lambetine, by Daniel Lambert, is also a good one. A couple of the best mares were Lady Lee, rec. 2.19, by Abdallah Wilkes, dam Dairy Maid, a Kentucky-bred mare, and Bonnell, by Viking, who has a record of 2.19.

**SHORTHORNS AND BERKSHIRES AT GLENBURNE.**

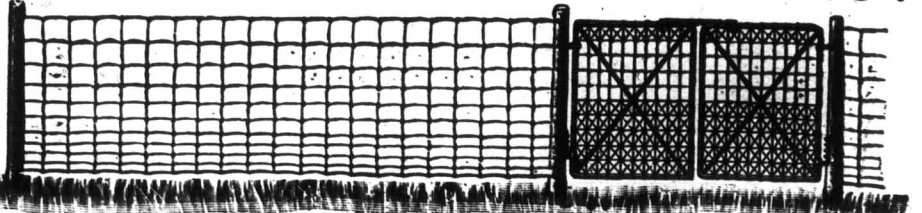
The writer had the pleasure a short time since of spending a few hours amongst the Shorthorns and Berkshires of Glenburne, the property of Mr. John Racey, jr., of Lennoxville, P.Q. The Shorthorns are a useful lot, and are kept for their combined qualities of a general purpose cow. None of the stock are pampered, or in high condition, but are simply kept on good pastures, and are just in healthy, thriving condition. At the head of the Shorthorns is Strathroy (9305), bred by John Miller & Sons, Brougham, Ont., and sired by the noted imported bull Vice-Consul, and from a Strathallan cow. Among the cows, some of the best are such ones as: Duchesse of Halton 4th (17850), by Prince Carignano, a Cruickshank bull, and from the Duchesse of Halton (5878). Another good cow is Duchesse of Halton 5th (19363), a daughter of Duchesse of Halton 4th, by Neidpath Prince (12318). One of the best milkers of the herd is Roseberry (20398), by Primrose Duke (imp.), dam Katharine (13338). Blooming Bell (15533) is also a very good cow, bred by J. C. Snell, and by Sir Charles, a bull bred by John Isaacs; his dam, Bell of Malton, being from a great milking family; a very good calf, coming a year old, was seen from this cow, and by Strathroy. Rose of Glenburne by Duke of Glenburne, and from Butter Cup, is another of the good ones.

Berkshires.—The Berkshires are a lengthy, even lot, and possess much quality, and are of a useful type. The stock boar, Randolph (2871) imp. in dam by Mr. Snell, Edmonton, bred by Mr. Benjafield, Eng., of the Topsy Duchesse family, is a boar possessing good length and depth, good strong back, well-sprung ribs, thick-fleshed hams, and strong bone; as he is only a yearling we look for him to mature into something good, and judging from some of his produce in the youngsters, he will prove himself a valuable sire. Among the sows, Reba (3222) is one of the best; she is by imp. Perry Lad, her dam being Katharine (imp.). Mr. Racey considers this sow one of the best breeders he has ever had on the farm, and we do not wonder that she is so highly valued, after seeing a number of her progeny, which certainly did her credit; one of her daughters, Rosette, by imp. Queen's Own, we were particularly well pleased with. Sally's fourth is a sow we thought much of also, by Negro, a boar bred by R. Gibson, Delaware; her dam being Stella, by an extra good Lord Derry. A number of grand young pigs, both boars and sows, from 3 to 5 months' old, were seen, from the above-mentioned sows and by Randolph, the present stock boar, and Clifford (1855), a boar of Mr. Snell's stock. The youngsters are a lengthy, smooth lot, in good condition, and should give satisfaction.

THE Fall Fairs give every farmer a good chance to see the Page and other fences, and decide what is best for his use. The Page Wire Fence will be on exhibition at Toronto, London, Ottawa, Kingston, Sherbrooke (P.Q.), and at most of the smaller fairs in Ontario. At the fairs named, and many others, we will use our "bunter" test. The "bunter" is a large weight hung so as to swing against a section of fence, and will show you in a few hours the effect of a year's ordinary usage on the farm. We are always willing to loan the "bunter" for testing other kinds of fence. In COMPARING FENCES, notice in connection with the price:

1. The number of wires, and the distance between them at the bottom where pigs and sheep are sure to try a fence. (Page standard has 11 wires.)
2. The distance between the cross or tie wires. (12 inches in Page Fence.) Of course cross wires, whether large or small, add to strength to a fence, but are put on to keep the horizontal wires from being spread apart. A man, a sheep or a hog can easily crawl through a smooth wire fence where the cross wires are 18 inches or more apart.
3. The strength of wires. (Page Fence is made of the strongest steel wire.) The strength of PageWire is increased by the coil, which

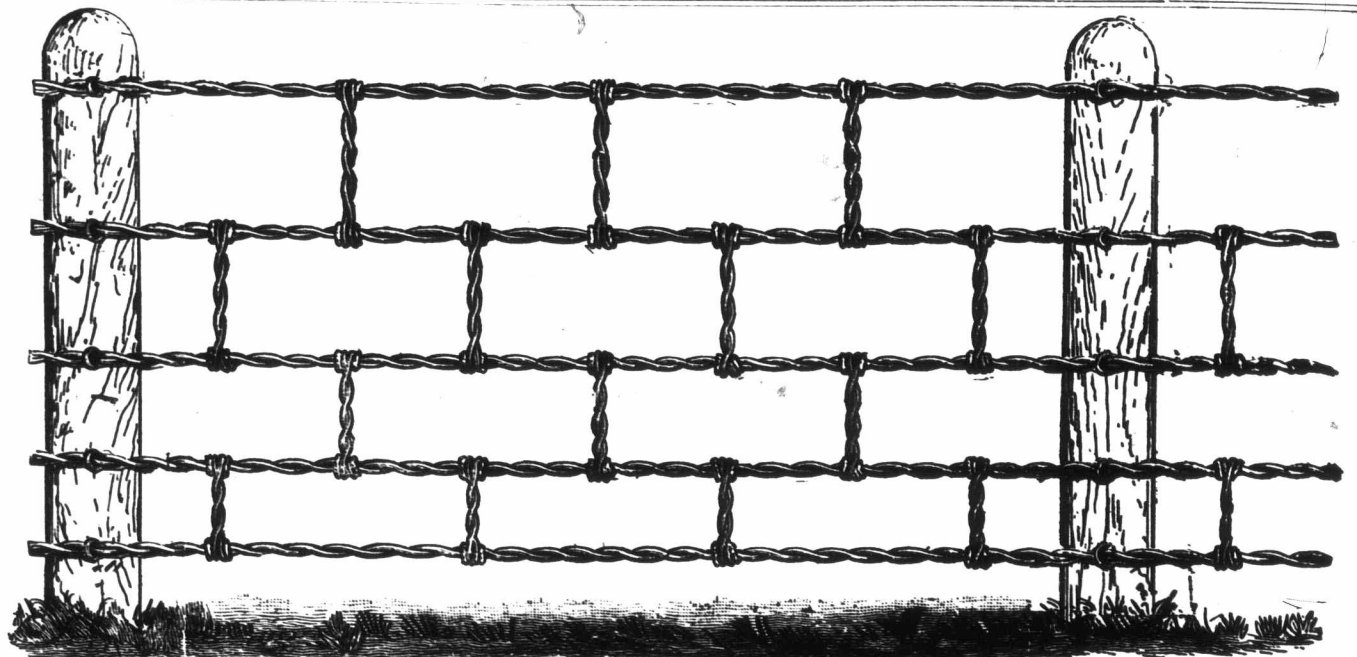
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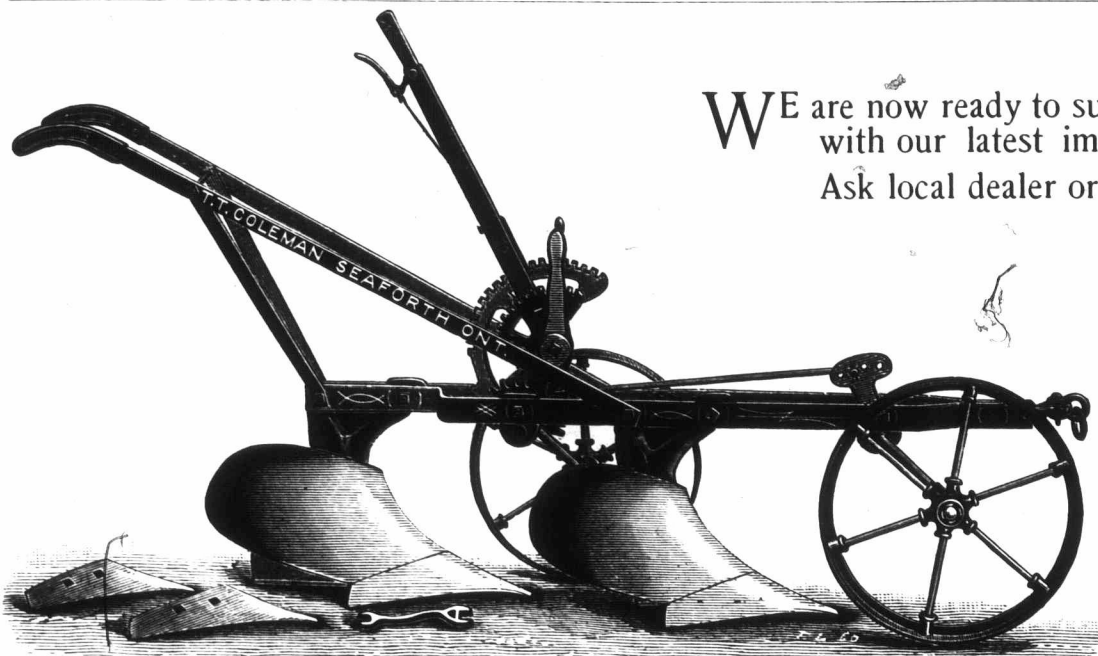
takes off the force of a shock by giving way a little at first, just as it is harder to break in two a branch of willow than a dead twig of equal size.

4. The means of overcoming the expansion and contraction of the wires. (Each wire in the Page Fence is made into a coiled spring, drawn out to its greatest length.) If the slack is taken up and let out at the end, all staples must be left loose and the wire must run perfectly level so that the wire can slip backward and forward. If there is no provision made, the wires stretch and become slack. If you cannot see us at the fairs, write for pictures and description, and we will direct you to the nearest Page Fence in use.

**THE PAGE WIRE FENCE CO. OF ONTARIO, LTD., WALKERVILLE, ONT.**



Have you seen our **LOOK GRIP SECTION WIRE FENCE?** The best wire fence on the market to-day at about half the cost of other wire fences. Our prices are from 40c. rod. Active agents wanted. Send for price list. Address, **TORONTO PICKET WIRE FENCE CO., - - 221 River Street, Toronto.**



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**THE GREATEST CHOICE! ABSOLUTE SATISFACTION!! REASONABLE PRICES!!!**

We hope to meet all our friends at the Fairs: Ottawa, London, Toronto.

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**OUR MOULDBOARDS**—The best United States Soft Centre Steel. Can't be approached on this continent.

**OUR CASTINGS**—Of a mixture which knows no rival for durability and toughness. Mouldboards all bear our name in full in the steel at the back.

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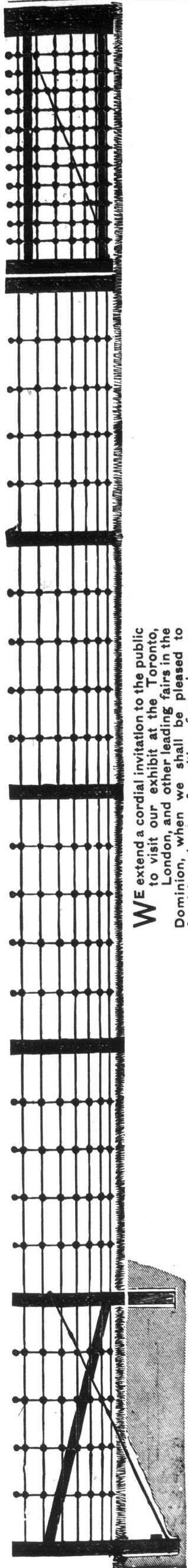
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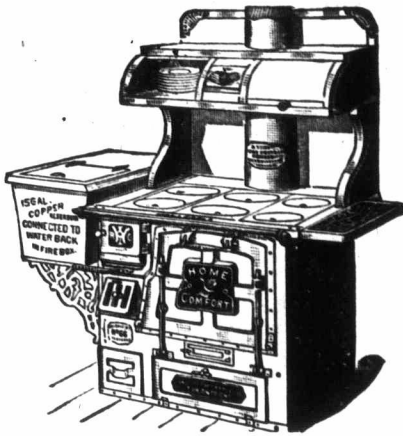
WE extend a cordial invitation to the public to visit our exhibit at the Toronto, London, and other leading fairs in the Dominion, when we shall be pleased to furnish estimates for either farm, lawn or railroad purposes.

LOCKED-WIRE FENCE CO., LIMITED, INGERSOLL, ONT.

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- THREE GOLD and ONE SILVER MEDAL THE WORLD'S INDUSTRIAL and COTTON CENTENNIAL EXPOSITION, NEW ORLEANS, 1884 and 1885.
- HIGHEST AWARDS NEBRASKA STATE BOARD OF AGRICULTURE, 1887.
- DIPLOMA ALABAMA STATE AGRICULTURAL SOCIETY, At Montgomery, 1888.
- AWARD Chattahoochee Valley Exp-sition, Columbus, Ga., 1888.
- HIGHEST AWARDS 25th ANNUAL F. ST. LOUIS AGRICULTURAL & MECHANICAL ASSOCIATION, 1889.
- SIX HIGHEST AWARDS WORLD'S COLUMBIAN EXPOSITION CHICAGO, 1893.
- HIGHEST AWARDS WESTERN FAIR ASSOCIATION, LONDON, CAN. 1893.
- SIX GOLD MEDALS MIDWINTER FAIR, San Francisco, Cal., 1894.



## STEEL HOTEL AND FAMILY RANGES. CARVING AND STEAM TABLES, BROILERS, MALLEABLE WATERBACKS, ETC., ETC.

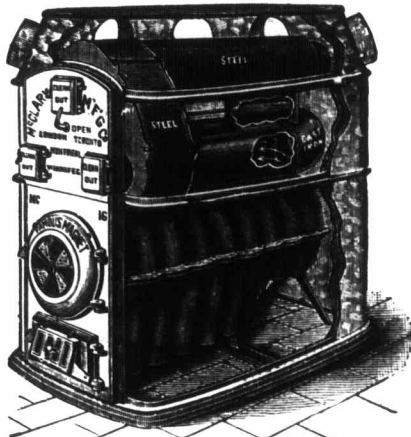
Above Style Family Range is sold only by our Traveling Salesmen from our own wagons at one uniform price throughout Canada and the United States.

Made of MALLEABLE IRON and WROUGHT STEEL and will LAST A LIFETIME if properly used.

SALES TO JANUARY 1st, 1895, 299,327.

ABOVE HONORS WERE RECEIVED BY WROUGHT IRON RANGE CO., MANUFACTURERS OF Hotel Steel Ranges, Kitchen Outfittings and "Home Comfort" Hot-Air Steel Furnaces. OFFICES, SALESROOMS AND FACTORIES, 70 to 76 PEARL STREET, TORONTO, ONTARIO, and Washington Avenue, 19th to 20th Streets, ST. LOUIS MO., U. S. A. Founded 1864. Paid up Capital, \$1,000,000. 7-y-om

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YOU can warm your house from cellar to garret, and do it cheaply, with one of our

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They can be placed in an old house as well as a new. Think this over, and if your local dealer does not handle our goods, write our nearest house.

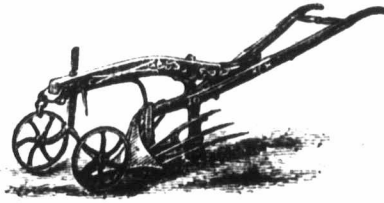
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Improved or unimproved, along the line of the Man. and Northwestern Railway, near Neepawa, Basswood, Newdale, or Strathclair stations! Can give you good selection and easy terms to actual settlers. Correspondence invited. Address: D. H. HARRISON, Neepawa, Manitoba. 8-1-f-om

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320 acres, in Municipality of Clanwilliam, Manitoba; E. 1/4 16, 17, 17 W. Splendid for stock: plenty of hay, timber, and good water; about 17 miles north-east of Minnedosa, Man.

Buildings thereon cost about \$2,000.

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## STOCK GOSSIP.

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

Some 2,000 young steers, for feeding purposes, are to be purchased in Ontario, by Thos. Crawford, M.P.P., of Toronto, for shipment to the Northwest, via the C. P. R., to be fattened there by one of the ranching companies. When about four years old they will travel again over the C. P. R. for the Eastern and English markets.

### THE CHICAGO FAT STOCK SHOW DECLARED OFF.

Owing to the collapse of the great Coliseum building, of Chicago, in which the American Horse and Fat Stock show was to have been held from Oct. 23rd to Nov. 2nd, the Committee appointed by the State Board of Agriculture recommend to the State Board that the show of 1895 be declared off. This is a matter for regret to many exhibitors and prospective visitors, as it also must be for the Illinois State Board of Agriculture. However, it is resolved that before another year's show season comes round, a magnificent structure will be in readiness.

### HOLSTEIN-FRIESIANS AT BROOKBANK STOCK FARM.

A few miles south of Woodstock, at Currie's Crossing, Messrs. A. & G. Rice have succeeded in establishing a remarkably fine herd of Holsteins, considering the few years since they began, their success as breeders and in the showing ring being accountable, we believe, from the fact that these gentlemen have a life experience in the dairy business, and therefore are competent judges of the qualifications of a first-class dairy cow. And having decided a few years ago that the Holstein "filled the bill" (also the pail) to a nicety, Messrs. Rice visited York State and selected a few excellent cows from the herd of Mr. Whipple, a noted breeder, who owned in his herd the famous cow Pietertje II., with a record of 112 lbs. milk in a day and 30,318 lbs. in one year. The cows Messrs. Rice selected were in calf to a son of this cow. From this importation the present herd was developed, and since then a number of importations have been made from the best herds in the United States. In 1894 Mr. G. Rice visited Ohio and selected a number of the best he could find in different herds, believing in the old adage that the best is none too good, a maxim which, if closely followed by the majority of breeders, would soon cause a marked improvement in the herds and flocks of Canada. The best animals in the last importation are from the herd of the well-known breeders, W. B. Smith & son, Columbus, Ohio. It was from this herd that the noted cow Eunice Clay was selected. This cow has a record of 84 lbs. 10 ozs. of milk in twenty-four hours, the largest amount of milk produced in twenty-four hours in an official test of which we have any record. Eunice Clay won first prize at Ohio State Fair in 1893 in milking test and solids; her butter record is 23 lbs. 9 ozs. in seven days. She was the winner of the special \$100 prize in Toronto last year in the milking test. She also won first in her class and silver medal.

We were out in the morning and saw the cows milked, and a pail-filling lot they proved. Eunice Clay gave 25 lbs., which she repeats noon and night. Her stable mate, Dew Drop 4th (imp.), a grand five-year-old cow that will be exhibited this fall, gave 21 lbs., which she also repeats at noon and night. Calamity Jane is a very fine wedge-shaped cow, with a grand udder and milk veins. She has a record of 46 lbs. milk in one day as a two-year-old. Her dam's record is 64 lbs. in one day. Calamity Jane was purchased from Messrs. Smith at the same time as Eunice Clay, and also the yearling heifer, Iolena Fairmont 3rd; her dam has milked 70 lbs. milk in twenty-four hours, equal to 3 lbs. butter. Iolena Fairmont 3rd was sired by Hollander 2nd's Sir Henry, who was bred by R. S. Stevens, Attica, N. Y. Orrioc 3rd is a very handsome heifer of grand dairy type, imported from the herd of Mr. T. S. Porter, Findlay, Ohio. We saw an extra fine bull calf from this cow, from which we predict some good work in the show ring. Messrs. Rice intend keeping him for service on the herd, as he is royally bred, uniting the blood of the three noted families: Pauline Paul, DeKol, and Clothilde. Nineteen of his nearest female relatives averaged 21 lbs. 14 ozs. butter in seven days, and fourteen averaged 16,283 lbs. 5 ozs. milk in a year. His sire, Paul DeKol, is the only son of Pauline Paul, the champion butter cow of the world. Among the best cows of the herd is Daisy Texel, a winner of second in Toronto last year in milking test. She is one of the best breeders of the herd, having produced three straight winners. A number of her descendants (extra good ones) were seen, and we do not wonder that Messrs. Rice set such a high valuation on her as a breeder. Catholine 5th, and her stable mate, Lady Pietertje, are remarkably fine three-year-olds. Catholine has already won eleven firsts in Ohio, and has given 51 lbs. milk in a day, and 200 lbs. in four days. She was imported from the herd of Mr. J. A. Saffel, Deshler, Ohio. Daisy Jewel 2nd, now giving 40 lbs. milk per day; Marceca's Pot Jewel, and Jewel's Mercesion, Artis Queen, are grand two-year-olds. In all some eighteen head were fitted for the leading fairs. The herd in all now numbers some forty head, and many more are very worthy of special mention. This year's crop of calves are an especially good lot, sired by Steepje 3rd's Mink Mercedes Baron, the present stock bull. This bull was a winner of second money at Chicago as a three-year-old and many firsts in Canada, and is an animal hard to beat in our estimation. The yearling and two-year-old heifers are mostly sired by Jewel 3rd's Daisy Netherland, a bull used on the herd for four years with excellent results, as the stock seen by us testifies.

German Coach Stallion - We also saw here the imported German Coach stallion Adam, a syndicate horse being fitted for exhibition by these gentlemen. He is a bright blood-bay of handsome conformation; very stylish and high-spirited, and a good mover; weight 1,450 lbs., and 16 1/2 hands high. He was imported from Germany by A. B. Holbert, Greely, Iowa, and sold by him last spring to the company which now owns him.

Poland Chinas - Poland Chinas are also kept at Brookbank Farm, and a number of nice young shoats were seen. The original stock were from the herd of Messrs. W. & H. Jones, Mt. Elgin.

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Cards up to six line space inserted under this heading, one issue a month, 23 per line per annum; every issue, 25 per line. Payable in advance.

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MATTHEW HOWSON, Ashgrove P. O., Ont., breeder of Cleveland Bay Carriage-Horses 12-2-f

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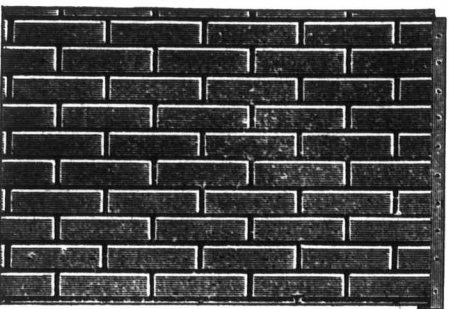
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SHOULD EXAMINE THE LABELS ON THE BARRELS, TO MAKE SURE THAT ORDINARY FINE SALT HAS NOT BEEN SOLD THEM INSTEAD OF SPECIAL DAIRY OR CHEESE SALT, RESPECTIVELY.

All Dairy and Cheese Salt Barrels are paper lined. 11-y-om

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AS WARM AS A BRICK WALL. CHEAPER THAN WOOD. ENTIRELY WATER, WIND, STORM, FIRE AND LIGHTNING PROOF.

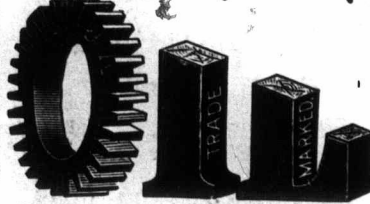
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They produce large crops of wheat of superior quality. Try our Fertilizer for FALL WHEAT, which is especially manufactured for that class of crops. Terms easy. Prices low.

Having used your Sure Growth Fertilizer for the past three seasons, it is with pleasure I recommend its use to others. I commenced with one ton the first season, and two years ago purchased from you two tons, and last season two and one-half tons. Always use it on fall wheat at the rate of about 200 pounds per acre, and am fully convinced I had at least one-third larger yield and finer sample than where no Fertilizer was used. Thanking you for your prompt delivery, I remain, (Signed) RICHARD SELDON, Township Clerk, North Oxford. 15-y-o

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The improved KNITTER Family..... Will knit 15 pairs of sock a day. Will do all Knitting required in a family, homespun or factory yarn. SIMPLEST KNITTER on the Market. This is the one to use. A child can operate it. We guarantee every machine to do good work. We can furnish Ribbing attachments. Agents wanted. Write for particulars. Price, \$8.00. Dundas Knitting Machine Co., Dundas, Ont. 17-y-om

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People and invalids will find in CAMPBELL'S QUININE WINE A pleasant restorative and appetizer. Pure and wholesome, it has stood the test of years. Prepared only by K. CAMPBELL & Co., Montreal. Beware of imitations. 20-2-y-om

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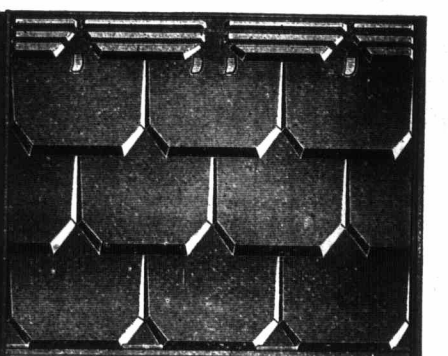


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