

FARMER'S ADVOCATE

AND HOME MAGAZINE.

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THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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The FARMER'S ADVOCATE is published on or about the first of each month. 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.

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We Want Agents.

We want agents to canvas at the Fairs. To good men we will give most liberal terms, either commission or salary. Permanent employment, when desired, will be given to suitable persons, either male or female. Our readers who cannot take up the work, but know a reliable person who can, will confer a favor by sending the name and address of such an one.

We will continue to give valuable subscription prizes as heretofore. On page 361 will be found our list for the present season. Look them carefully over.

Farmers' sons and daughters can earn good wages by canvassing for us during the fall and winter months.

We ask each old subscriber to send us at least one new name. The larger our subscription list the better paper we can afford to publish. During the next year we wish to make the ADVOCATE more valuable than ever before.

Editorial.

Appointment.

Mr. Hugh McKellar, who has been appointed Chief Clerk in the Department of Agriculture and Immigration of Manitoba, as successor to the late J. W. Bartlett, was born in the township of East Zorra, in the county of Oxford, Ontario. His father, John McKellar, a farmer, was one of the pioneer settlers of that township. He received his early education in the public schools, and commenced to teach when sixteen years old. At the age of eighteen he took a course of study at the Toronto Normal School. Passing his examination successfully, he taught for over three years in East Zorra. Afterwards he studied and taught in the Galt Collegiate Institute, in the time of Dr. Tassie. Leaving Galt, he took charge of the Paisley Public School, where he remained for three years. Then for three years and a-half he had charge of the Teeswater Public School. At the close of this engagement, July, 1880, he came to Manitoba, via Emerson, and located near Pilot Mound, in what was known as the "Paisley Colony." In 1881 he lost his wife, a daughter of James Laidlaw, who resides near Clearwater. His only daughter resides with her grandparents, near Clearwater. For the next eight years he led an active life, principally engaged in farming, but travelled through all parts of the province. He always took an active part in agricultural societies and farmers' institutes. In March, 1890, he received the appointment of Immigration Agent, in company with Mr. Smith, in the Winnipeg office. In the fall of 1890 the Government sent Mr. McKellar, privately, to report on the condition of farmers generally in North and South Dakota, in response to the many letters of inquiry from those States about Manitoba. Mr. McKellar spent five weeks on the trip. His report was so practical and satisfactory that it may be said to have led indirectly to the work that has been going on since that time by the Dominion Government. In May, 1891, Mr. McKellar was sent by the Department to take charge of the Immigration Office in Toronto, where he remained until February last. On the first of March, 1892, he was sent to open and manage a new office for the Maritime Provinces, at Moncton, N. B., where he remained until called back to be promoted to the position of Chief Clerk in the Department of Agriculture and Immigration. The press has commented very favorably on the work done by Mr. McKellar in the past, and his experience in the various immigration offices, as well as his personal knowledge of all sections of the Province, combine to qualify him for the duties of his new position, upon the discharge of which he enters with zeal and strong faith in the future of Manitoba as a great agricultural country.

A cargo of two-rowed Canadian barley was recently sold in England, and netted the Toronto shippers 68 cents after all expenses were paid. More was required for at the same price.

Midland Central Fair.

The Secretary of the above Exhibition writes as follows:—The entries are now pouring in for the Midland Central Fair, which is the first of the big shows held this year in Ontario. It opens on Sept. 1, but the first two days are to be given to preparation. The formal opening by Lieut. Governor Kirkpatrick occurs on Saturday, Sept. 3rd, which is children's day. On Monday, Tuesday, Wednesday and Thursday, 5th, 6th, 7th and 8th, there will be special attractions, which, added to the usual features of the fair, will make a visit quite interesting. The bicycle meet on one day, and drill competition among uniformed societies, are promising incidents. The speeding is, of course, the drawing card among horsemen. The buildings are being considerably improved. The Poultry Association is enlarging its accommodation, in view of an unusually large poultry exhibit. Most of the judges are from a distance, and there will be one for each class. Get a premium list from J. P. Oram, the Secretary.

Toronto Industrial.

It is certain that the Toronto Industrial Exhibition, which opens September 5th and closes September 17th, will surpass all others. The area of the grounds has been doubled; a new grand stand, which will seat 12,000 people, has been erected, and a new half-mile track has been added. The entries so far received exceed any made at previous fairs. The exhibit of horses, cattle, sheep, swine and poultry will be very large and of great excellence. Farmers from all over Ontario, Manitoba, Quebec and the Maritime Provinces are making exhibits, while the demand for space for the display of farm produce, fruit and flowers is larger than usual. Dairy utensils and agricultural implements will be a prominent feature of the show. The sum of \$150,000 has been voted by the citizens of Toronto for improvement on the grounds, and that sum is now being expended. The entries for manufactured goods is also very large, and a grand display in the main building is guaranteed. The special attractions in the ring will be more numerous and better than ever. The dog show opens September 12th. A specially interesting display will be that made from the Canadian experimental farms, and the products of British Columbia and the great Northwest.

When Prof. Saunders was in Toronto last he had a long conversation with Manager Hill. It is the desire of the Dominion commissioners to make a full and fine exhibit of ladies' work from all over the Dominion at Chicago. To that end the Dominion Government will send a lady expert to Toronto during the fair, who will select the best specimens of ladies' work in all classes, and they will be sent to Chicago. The Toronto management has provided suitable glass cases with keys, in charge of the lady superintendent, for the exhibit of ladies' work, so that no damage from dust or handling can possibly interfere with the exhibits. Prof. Saunders states that the Dominion Government will provide similar cases for the Chicago Exhibition. On the strength of this fact the management of the Toronto Fair has decided to extend the time for making entries in the ladies' department, and it is hoped it will be taken advantage of. The

Dominion and Provincial commissioners to the World's Fair will occupy an office in the press bureau during the Toronto Fair. Selections in other classes of exhibits for exhibition at Chicago will be made by the commissioners from the grain and other departments. A selection of roots and fruit, to be kept in cold storage until the Chicago Exhibition opens, will also be made.

The Western Fair—London, Sept. 15th to the 24th, 1892.

"Everything in splendid shape for a grand exhibition," was Secretary Browne's reply to our question as to how entries were coming in for the show of 1892. "Entries are far ahead of last year's at this date. We are bound to beat all former exhibitions. We have just sent out 30,000 programmes of the special attractions, and will send out in a few days 30,000 daily programmes of the Fair. With the increase of \$2,000 in the prize list, and the purses in the speeding contests doubled, we expect to have the largest, and, what is more, we are going to have the greatest live stock and agricultural exhibition in Canada. The people of Ontario recognize the fact that this exposition is of material interest to one and all, more especially to the farmers of Ontario. We have the country to make an agricultural fair, and the western farmers appreciate the efforts of the directors in their behalf. The cheese exhibit will be larger than last year. Manufacturing in all its branches will be carried on in the main building. Tuesday, 20th Sept., we expect a large number of visitors from the counties of Wellington and Waterloo; the Patrons of Industry also take this day to visit the Exhibition, when it is expected fully 15,000 Patrons and their bands, with regalia and banners, will form in procession and march to the grounds, where they will be addressed by the grand officers. A commissioner from Ontario and for the Dominion will be at the Fair to take entries for the World's Columbian Exposition of 1893. The attractions will all be new and entertaining, and will be worth visiting London to see.

Alexandra Separators and Babcock Testers.

Messrs. John S. Pearce & Co., of this city, inform us that they intend making an exhibit of their most popular and useful machines in the Dairy Department of both the Toronto and London Exhibitions. Every reader of the *ADVOCATE* interested in dairy work should see these implements, if not at the Exhibitions, at Mr. Pearce's establishment, on Dundas street, London, Ont., or send to him for a catalogue containing full information. His advertisements appear in other columns.

Drader's Spade Harrow.

We would call special attention to Drader's Patent Spade Harrow, a cut of which will be found in the advertising columns of this number, and which has become quite popular in all parts of the Dominion. We predicted some time ago that the spading system would supersede the old way of cultivating, and from the increase in the sale of spading machines, our judgment has proved correct. A revolving earth-working machine must be lighter in draught than any machine that is trailed through the land. The wearage on the tool drawn through the ground must be much greater than one that revolves with the ground. The demand for rotary cultivators is rapidly increasing, and thus far the Spade seems to take the lead.

In Favor of Dehorning.

Messrs. Charles Drury, M. P. P., Crown Hill, president, and J. J. Kelso, Toronto, secretary of the dehorning commission appointed by the Ontario Government, have been busily engaged for the past two days drawing up the commission's report. The commission find in favor of dehorning, but it is expected that precautions will be urged whereby greater care will be exercised. This commission was appointed as a result of prosecutions entered in the neighborhood of London.

Winnipeg Industrial Exhibition.

The Winnipeg Industrial Exhibition of 1892 was a magnificent success, fully realizing the expectations of its promoters and justifying the stand taken by the *FARMER'S ADVOCATE* in favor of the summer show, though not till it was fairly under way did the doubters cease to shake their heads with an ominous foreboding of failure. The weather was simply perfect from the morning of July 25th to the evening of 29th, and from Calgary to Rat Portage the great Northwest was fairly represented, both in exhibits and in the attendance of visitors. This being essentially an agricultural country, the Provincial Exhibition should be so adjusted and run as to promote agricultural interests as far as possible. The time of the fair was very well chosen, only interfering, and that but slightly, with haying operations. After that, the harvest comes on rapidly, and while the farmer and breeder may snatch a day for the local fall show, they cannot afford to leave the great grain fields, or even to halt in the midst of threshing. Last year many learned a terribly severe lesson as to the losses which may be incurred through delay down to the actual selling of the wheat itself. It was a highly creditable exhibition to a young country like this, and was a great surprise to eastern visitors,—in fact, to Manitoba people themselves, when they looked about the spacious grounds and buildings, and reflected upon all that the aggregation of agricultural and industrial products implied. It was a great object lesson, illustrating strikingly the wonderful development of Manitoba and the Northwest. The general evidences of thrift and intelligence, as indicated by the dress, conversation and bearing of the people, were noticeable. There was a singular absence of anything like rowdiness or intoxication, either at the fair or about the city, during the entire week. In the substantial departments of the show there were large increases over last year, and the results were highly encouraging to the directorate for another year, and will no doubt enable them to devise more liberal plans. There was truly a marvelously fine display of live stock (all classes being ahead of last year) and agricultural machinery, and a heavy increase in the show of field grains, the samples of wheat and other cereals doing honor to the province that has wrested the trophy of pre-eminence in competition with all the world for wheat growing. As was expected, there was a falling off in roots and garden truck, though the horticultural display was varied and very beautiful. Poultry showed a large increase, but there was a falling off in canines. Compared with last year the dairy products made no numerical increase on the whole, there being fewer cheese than last year, but more butter. The latter was certainly of high quality, both creamery and private dairy samples, there being in all about one hundred and ninety entries. Mr. W. M. Champion's idea of a suspended pan filled with ice for refrigerator purposes was utilized to good purpose, but the new building was structurally very defective, so that the temperature was not kept so low as anticipated. The main building, which had been greatly increased in size, was well filled with artistic and other productions of interest. That there should have been a slight decrease in some of the classes was expected. In the minds of some there was a feeling of uncertainty as to the success of the

exhibition; it was early for such things as field roots, and, besides this, the time between the last show and the present was really limited, considering the vast amount of work to be accomplished.

The increase in the live stock classes is distinctly a hopeful sign for this country, indicating as it does that husbandry is settling down to a more permanent and certain basis. The success of the show is largely dependent upon the generous assistance of the railways in giving free transit for exhibits and special passenger rates; in fact, if it were not for the former, the bulk of the outside exhibits, notably stock, could not be got to Winnipeg at all, owing to the long distances to be traversed. These privileges will no doubt be continued. The amusements were varied, and had the tendency of increasing the attendance of town people, but ring sports divert attention from the more substantial features of the show, thus reducing its efficiency as an educator. And we would caution the management against the undue encroachment of the "circus" idea, which has injured many eastern and United States shows, by being permitted to monopolize the time and overtop what should be the essential features of such exhibitions. The parade of prize-winning live stock was a capital feature, and might, with advantage, be arranged to occur on more than one day. In future the track should be thoroughly sprinkled before a parade of this sort for the comfort, not only of stock and attendants, but sight-seers as well. The directors and officers of the fair devoted themselves indefatigably, both before and during the exhibition, to make it a success, and in the main the *ADVOCATE* can fairly congratulate them on the results achieved.

Summer Show at Melita.

The sixth annual exhibition of the county of Souris River was held on Tuesday and Wednesday, August 2nd and 3rd. The entries were unusually large, numbering over 900, which shows how quickly this part of the country is developing. In the heavy draught class the horses were all in good condition, and, as a rule, of superior quality. There was a large show of general purpose horses, and the winners were well deserving of the prizes awarded them. In the carriage and roadster class the entries were not so large as expected.

There was heavy competition in cattle, and most of them were forward in excellent condition. The Shorthorns attracted the most attention, there being many more shown than of any other class.

The show of sheep, pigs, and poultry was uncommonly good, and was a great attraction. The exhibits of wheat, roots, and manufactures were very good, and will no doubt be better next year.

At 2 o'clock Mr. Robert Cornett, Assistant Dairy Commissioner to Prof. Robertson, of the Experimental Farm, Ottawa, gave a lecture on "Dairying", but owing, no doubt, to more excitable attractions the audience was not as large as it should have been. Those who were there took great interest in Mr. Cornett's remarks, and no doubt profited by their attendance.

At 4 o'clock an adjourned meeting of the Farmer's Institute took place before a very fair number of members and farmers. Mr. S. Thomson, President, in the chair, reported with entire satisfaction on the Central Farmers' Institute meeting held in Brandon, and resolutions were passed endorsing the action taken at that meeting to abolish the elevator monopoly and the grading system, and in favor of the binding twine factory. A large majority of the farmers present held that the grading system as at present enforced was an injury to their interests.

James Mills, M. A., LL. D.,

PRESIDENT OF THE ONTARIO AGRICULTURAL COLLEGE, GUELPH, ONTARIO.

It is with no little pleasure that in this number we present our readers with a portrait of President Mills, of the Agricultural College, Guelph. To the farmers of this province he has been most favorably known for many years, and as the results of work done faithfully, quietly, and thoroughly during the past few years become more and more apparent, President Mills is further increasing in the esteem of the agricultural classes. Even though so well known, it may be interesting to the older farmers and stimulating to the younger, to refer briefly to his career.

James Mills was born of North-of-Ireland parents, in the County of Simcoe, Ontario, in the year 1840. There, until he reached twenty-one years of age, he received a most thorough training in all the practical details of Canadian farm work, as the farm upon which he was brought up, and upon which he worked, was one of the best managed and best cultivated of the province. So far his life had been intensely practical. A serious accident formed the turning point; at twenty-one he lost his right arm in a threshing machine, and, thus handicapped, he stood upon the threshold of his lifework with responsibility and, what some would call, disaster staring him in the face. He then entered the public school and began his education at the time when the majority of young men have already finished. Hitherto his training had been entirely manual or physical; now he began to develop the mental side of his nature. From the public school to Bradford grammar school, and thence to Victoria College, Cobourg, he was led in his studies. From Victoria College he graduated as Bachelor of Arts in 1868, taking the gold medal of the year for the highest rank in general proficiency. Thus closed the second period of his life—the seven years of study and preliminary mental training.

After graduation he taught for awhile in the Cobourg Collegiate Institute, from which position he was promoted to the headmastership of the Brantford High School. This institution was then in rank a third or fourth rate school; under Mr. Mills it soon became a Collegiate Institute and began to attract attention as one of the most successful for training young men and women for general work and for teachers' and university examinations. The growth of this school and its reputation for thoroughness and good discipline suggested a man for the Agricultural College when the presidency became vacant. The offer came to Mr. Mills from the Government entirely unsolicited and was accepted in the summer of 1879, when began the fourth period of his life—the work in which he is still engaged. The Ontario Agricultural College had been established in 1874, and for many years had great difficulties to contend with. We sometimes hear a great deal about the Agricultural Colleges of the United States, but they have been forced, in order

to maintain an existence, to enlarge the scope of their work by including technical, teachers', and even commercial courses. In many of these Colleges the agricultural course has been the least successful. The attempt, therefore, to maintain an Agricultural College on its own merits has presented peculiar difficulties, and the success achieved is much to the credit of the various officials who have from time to time guided its course. When Mr. Mills became president the College was still working up hill, fighting its way with little encouragement, and with much opposition; for the past thirteen years he has devoted his unstinted energies to the work. The College is a large institution, and has presented extraordinary problems to solve. It has had a hard struggle to gain the recognition and approval of the very class for which it was established. It has all the perplexities attendant upon a large boarding school. It has had to overcome the prejudice aroused by having had in its earlier days a number of students who were

factory manner. Travelling Dairies have been instituted by the Minister of Agriculture, and the work performed by the dairy department of the College. In this work President Mills has taken a most active part, and the labors of his office were thereby greatly increased. The Minister of Education requested Mr. Mills to prepare a text book on agriculture for public school work, and, having secured the assistance of Prof. Shaw, *The First Principles of Agriculture* was produced, a book that has already found a large sale, and has been very highly commended by specialists in agriculture, by traders, and by farmers generally. The high esteem in which President Mills is held by the farmers of Ontario, and the very high regard in which he is held by the leading agriculturists of the United States, prove that his work has been most successful.

In conclusion, we may say that personally President Mills has the best wishes of all; he is known as a man of energy and of thoroughness of work; he has shown the greatest courtesy to the many thousand farmers with whom his work brings him in contact at Guelph and elsewhere; he has kept himself free from politics, and is as acceptable to Conservatives as to Reformers; his administration of affairs is clear and above reproach; he has never been known to seek praise or publicity, to sound his own praises or to encourage others to sound them for him, to gain any notoriety by pulling or tickling the ear of the public; he has simply done his duty—and that not always a pleasant or popular one—and has allowed himself to be judged by the public on the merits of work done. His work speaks for him, and the agriculturists and others of this province know that the Ontario Agricultural College embodies the life work of President Mills and the many energetic workers by whom he has surrounded himself during the past thirteen years.

In private life, as well as in public, he is warm-hearted, kindly and generous, a manly, noble man—higher attributes no man possesses. The latest honor conferred upon President

Mills was the granting of LL.D. (Doctor of Laws) by his *Alma Mater* in May, 1892. May Dr. Jas. Mills still be spared to do good work for the farmers of Ontario.

World's Fair Exhibits.

The Northwest Territorial Legislature has appropriated \$5,000 towards a World's Fair exhibit, and the Manitoba Legislature at last session set aside some \$20,000 for that purpose. Prof. Saunders, the Canadian World's Fair Commissioner, has interviewed both these governments, and also that of British Columbia, arranging the general plan, and the provincial and territorial authorities are now at work on the details. The question of a live stock exhibit for Manitoba was left open for subsequent decision and action, if deemed desirable.

It is proposed to hold the Winnipeg Industrial Exhibition next year from July 17th to 21st, inclusive—one week earlier than this year.



MR. JAMES MILLS, M. A., LL. D.

not agricultural in their up-bringing or their inclination. The students now are coming from the best farms of this province, and the institution is becoming more and more every year an Agricultural College for Ontario.

Since President Mills assumed office, there have been great improvements in the buildings and equipment—large farm barns have been twice erected, a fully equipped dairy establishment added, chemical and botanical laboratories and gymnasium constructed, the main buildings of the College completely overhauled and improved, and such change accomplished that it is virtually a new institution.

The work of the College has been greatly enlarged during Prof. Mills' regime, by the addition of a third year's course and affiliation with Toronto University, whereby the degree of Bachelor of Science in Agriculture is conferred upon its students. By him the Farmers' Institutes have been thoroughly organized in Ontario, and work carried on in a most systematic and satis-

Freeman's Manures.

In a late issue we promised to give particulars concerning the different brands manufactured by Mr. Freeman at his Hamilton works.

FREEMAN'S SURE GROWTH.

In writing of this brand, the manufacturer says:—

It is a general fertilizer for all soils and crops, and has always proven to be the very best fertilizer in the market for all kinds of grain, root, grass and garden crops. It is made of the very best materials that can be used in the manufacture of fertilizers, and has for its basis bone, blood and potash.

It is not a stimulant, but adds permanent value to the land; is adapted to all soils, and not only yields immediate results, but is also lasting in its effects. Not only does it give the growing crop a vigorous start, but it will greatly increase the yield and give more perfect grain.

No better article can be manufactured for the general use of farmers, gardeners and fruit growers. Special care will also be taken to have it furnished to farmers in the very best condition for drilling.

For grain and general crops this manure cannot be surpassed, as hundreds have already tested its superior qualities, and each succeeding year use more largely of it.

In applying it to grain crops, it can be used in the drill or sown broadcast at time of sowing at the rate of from two to three sacks per acre. The results will be seen throughout the season, giving the plant an early start and more vigorous growth, and maturing a superior quality of grain.

This manure is also intended for top dressing in spring, for all kinds of grass lands, pastures, mowing lands, lawns, etc. Use one to three bags per acre, broadcast, by hand or machine. On poor land use three bags per acre. Pastures, timothy, etc., apparently worn out, have been brought up into good condition by a single application.

May also be used in the fall. Also for top-dressing, in the spring, grain crops, wheat, rye, etc., which have suffered by winter exposure. Crops that otherwise would have returned little, if any, more than the seed sown, have been made, by a single bag scattered evenly over the surface in very early spring, to bring a fair crop and greatly improved growth of the timothy.

FREEMAN'S PURE GROUND BONE.

Every farmer knows that bone is a good fertilizer, and in using it he is only returning that which has previously been removed by crops, which in turn have been consumed by animals. Of this brand Mr. Freeman writes:—

We guarantee our ground bone to be a strictly genuine article. It is made from clean, dry bones. We recommend it chiefly for grass and land used for feeding purposes. It is, however, under all circumstances and for all crops an excellent fertilizer, but does not give as quick results as our Sure Growth, Bone and Potash, or Potato Manure.

Pure ground bone will restore to the soil that carried away in the milk and in the bones of the young calf. Use finely ground bone at the rate of 400 to 600 pounds per acre, and the effects will be seen for years. It is better to double the productiveness of a pasture than to double the area of it.

In laying down to grass, finely ground bone, harrowed in at the time of laying down at the rate of from 500 to 1,000 pounds to the acre, will be found to be an excellent manure and a lasting one.

Particulars of other brands will be given in next issue. In our last article we requested subscribers who have used artificial manures to put the results of their experience on record. Since last issue we have received the following letter:—

TRENTON, ONT., 6th August, 1892.

FARMER'S ADVOCATE, LONDON, ONT.:
In your July issue you invite communications in regard to using W. A. Freeman's fertilizers.

Finding it difficult and expensive to make or buy sufficient barnyard manure to raise paving crops, I decided last spring to buy from W. A. Freeman, Hamilton, four tons of his best fertilizers, mostly Sure Growth, Potato Manure and Dissolved Bone.

On my potato ground, which had not been manured for years, I put at the rate of 1400 pounds Potato Manure to the acre, about one-half of which I broadcasted on the ground before harrowing, and the balance I thoroughly mixed with the earth in the drills. The potatoes came up quickly and grew rapidly, and my neighbors say nothing can equal them in the county. So remarkable was the growth of tops that in five weeks after planting I examined the bottoms and found plenty of tubers as large as hens' eggs. They are the White Star, Beauty of Hebron and Early Sunrise, and I expect a large yield.

I put fertilizer on nearly everything I grew this season, and the beneficial result is very gratifying. It looks as if I should get double or treble the cost of the fertilizers in extra crops, besides improving the soil. I have one acre of onions, the equal of which I never saw anywhere, and I attribute their extra stand and advanced growth principally to the fertilizers used. I believe in supplying proper and abundant food to all plant growth, and have heretofore scraped up more barnyard manure than most fillers of the soil during the same period, but never before obtained the crops that I am likely to harvest this season, and think I shall never again undertake to raise crops of any kind without commercial manures, and believe Freeman's are the best.

Yours truly, THOS. FULLER.

Several similar letters have been received, all of which expressed entire satisfaction with the result obtained. We invite these parties, and all others who have tested commercial fertilizers, to send us a complete record of cost and production, as soon as harvesting is completed and the exact results known.

Ontario Agricultural College.

NOTES AND COMMENTS.

DEAR SIR,—In compliance with your request, I venture to submit a few notes and comments on the recent work and present prospects of this institution.

FARMERS' EXCURSIONS.

I think we may fairly claim to have the honor of entertaining a larger number of visitors than any other educational institution in the Dominion. We have quite a run of callers from day to day throughout the year, and in this respect are like other public institutions; but between seed time and haying our experience is exceptional. At that time of the year our special friends and constituents, the farmers of Ontario, visit us in very large numbers. In the month of June last we had over twenty farmers' excursions, varying in numbers from 300 to 2,500 each, and making a total of between 12,000 and 15,000 people. These excursionists examine very closely what we are doing; and I think I can truthfully say that they nearly all return home well pleased with the work and equipment of the institution. Many of them look on the Ontario Agricultural College and Experimental Farm as peculiarly their own institution; and they are beginning to feel an honest pride in it as one of the strongest and best institutions in the country.

NEW BUILDINGS AND EQUIPMENT.

For years we pleaded in vain for additional buildings and equipment. At length most of our requests under this head have been granted. We now have a complete set of farm buildings, sufficient for all requirements in the live stock department. For the last five years we have had a first-class laboratory, furnished with everything necessary for our work in chemistry; and within the past year two large buildings have been erected on the College campus—a spacious convocation hall, for farmers' excursions, and a large botanical laboratory, with a complete set of new greenhouses, provided with every appliance for the most thorough and extensive work in botany and horticulture. This advance is largely due to the determined efforts of the Minister of Agriculture; and in consequence of his enlightened policy and wise liberality we shall soon be able to offer special inducements to students in botany and horticulture.

EXPERIMENTS WITH GRAINS, ETC.

Owing to largely increased grants and special efforts in this department, a marked advance has been made within the last few years. Mr. C. A. Zavitz, our experimentalist, under the control of the Professor of Agriculture, is working with great energy and much anxious thought in testing varieties of grain, methods of cultivation, different dates of seeding, the effects of special fertilizers, the results of cutting grain at different stages of maturity, methods of improving grass land, etc.

The following statement will give some idea of the work which is being carried on in this department at the present time:—

FIELD TESTS.

Variety Tests on Large and Small Plots—Winter wheat, 68 varieties; spring wheat, 63; peas, 61; oats, 116; barley, 67; fodder corn, 76; potatoes, 118; carrots, 22; sugar beets, 10;

mangels, 35; turnips, 63; millet, 10; clover, 20; grasses, 40; and rape, 3—making a total of 770 varieties on 942 plots.

Different Methods of Cultivation—Potatoes, corn, turnips, mangels, carrots and rape, on 233 plots.

Tests of Fertilizers with winter wheat, oats, potatoes, turnips and rape, on 60 plots.

Sowing at Different Dates—Spring wheat, oats, peas and barley, on 48 plots.

Cutting at Different Stages of Maturity—Spring wheat, oats, peas and barley, on 24 plots.

Methods of Improving Old Grass Land—Harrowing, re-seeding, using special fertilizers, and top-dressing with farm yard manure, on 38 plots; also a number of tests of different methods of preparing potatoes for planting, etc., and valuable live stock experiments on the feeding of steers, cows, calves, and sheep.

CO-OPERATIVE EXPERIMENTS.

In addition to the Station experiments, a considerable amount of co-operative work is being done throughout the province. At something over 700 places in Ontario twelve experiments are being made under the direction of our Experimentalist, with a view to test the value of certain fertilizers, and the adaptability of our most promising varieties of grain and roots to soils and climatic conditions which differ more or less from what we have at the College.

CROPS THIS YEAR.

The crops on our plots this year are fairly good.

Winter wheat—Rusted quite a little, but producing a large amount of straw and an average of 42.6 bushels per acre of fairly good grain, which weighs 60.5 per bushel.

Spring wheat.—A large amount of straw, slightly rusted, and an average yield of fairly good grain, but not nearly so good as last year's crop.

Barley.—Slightly rusted; straw abundant; grain, a good yield of more than average quality.

Oats.—Rusted to a very considerable extent; grain, not quite up to the average yield and of rather poor quality.

Peas.—Not a very good crop.

SPECIAL COURSE IN DAIRYING.

It is our intention to commence a special course in dairying on the 1st of February next, to give theoretical and practical instruction, by the best teachers, in butter and cheesemaking. This course will last till the end of March, and will be open to all, but is intended especially for Ontario farmers' sons and daughters, and for factory and creamery men throughout the province. We shall have the very best teachers in this country, and, if need be, we shall import some.

We have made large additions to our dairy buildings and appliances within the past year, and we think we now have nearly everything necessary for the most advanced and thoroughly practical instruction in both cheese and butter-making.

The Minister of Agriculture has decided to make the terms as easy as possible. No entrance examination will be required, and, to residents of Ontario, there will be no charge for tuition. The only payment required by the College will be one of \$5 for incidental expenses; and board in the neighborhood of the College or in the city of Guelph will cost from \$3 to \$3.50 per week. We cannot accommodate more than fifty students in this course the first year, and our intention is to take them in the order of their application.

EDUCATIONAL OUTLOOK.

Our educational outlook never was brighter than at the present time. We are rapidly gaining the confidence of the farmers in all parts of the province; the College farm is in better shape than at any time in the past, and our equipment in all the departments is very much better than ever before. Hence, we are hopeful and confident as regards the future. We are looking for a large attendance of students, and expect to commence work on the first of October with increased vigor and enthusiasm.

JAMES MILLS,

President O. A. C., Guelph, Ont.

More Honors For Canada.

Advices have been received by Prof. Robertson, Dairy Commissioner, of the results of the judging at the great Agricultural Show held at Liverpool on the last days of July and first of August, under the auspices of the Royal Manchester, Liverpool and North Lancashire Agricultural Society.

The Dairy Commissioner had superintended the sending forward of some cheese to be entered for competition in the class open to cheese of American or Canadian manufacture. The Canadian cheese carried off all the prizes which were offered. The Society's gold medal and first prize went to a Canadian cheese of September make, exhibited by a local shopkeeper in Liverpool. The Society's silver medal and second prize went to a lot of cheese from Messrs. L. C. Tilley & Son, of New Brunswick. The third prize was awarded to cheese of the "Empress" brand, from Messrs. A. A. Ayer & Co., Montreal. "Very Highly Commended" was the ticket placed upon the exhibit from the Palace Road Cheese Factory, exhibited by Mr. J. Gerow, Napanee, Ont. Another lot from the Dairy Station at Perth, Ont., was awarded the ticket "Commended."

One result of this Exhibition has been to call additional attention in the English markets to the uniform excellence of cheese of Canadian make. The work of the Dominion Department of Agriculture, through the Dairy Commissioner's branch, has been awakening a very great interest in the Maritime Provinces recently. Many new factories and creameries are being erected, and the fact that the second place in this very large exhibition in England was won by cheese of New Brunswick make, has demonstrated to the farmers down by the sea that they have natural facilities adapted to the production of cheese of the most excellent quality.

A report has been received this week from the Dominion Dairy Station in New Brunswick, where fancy creamery butter is being made. The quantity of butter made during the month of July reached 7,266 pounds. Farmers in that neighborhood are greatly satisfied with the operation of the Dominion Station, whereby they are relieved from the work of making butter in the home dairies. A product of uniform excellence is also being made, which will be suitable for either the home trade or for export to foreign markets.

This week's mail has brought some reports from outside persons concerning the work of the Dairy Station at New Perth, P.E.I. The following extracts are taken from a letter by a well-known and prominent farmer there, Mr. John Hamilton. He says:—"So far the establishment has exceeded our expectations, and is now an object of inquiry and interest to people of all classes throughout the Island. Since the work commenced, on June 22nd, probably no fewer than one thousand visitors have been attracted to the spot. The interest continues unabated, and scarcely a day passes but groups of well dressed men and women are to be seen walking about the building, making critical examination of everything to be seen both inside and out. This morning I counted on the shelves about 400 large cheese, weighing 70 pounds or thereabouts each. The Dairy Station at New Perth is under the capable supervision of Mr. T. J. Dillon, one of the best known cheesemakers of Western Ontario, who has been on the Dairy Commissioner's staff for two years."

Excellent educational work in regard to dairy farming is also being carried on by the Dominion Department of Agriculture in the province of Nova Scotia. An energetic instructor from the Dairy Commissioner's staff visits all the cheese factories periodically, giving instruction and demonstrations in the best methods of manufacturing cheese of uniformly fine quality. A large number of factories are being erected in Cape Breton and in the Antigonish district. In each of the provinces of our Dominion the Federal authorities are lending the farmers practical assistance to improve the quality of their products and thus to increase their receipts. At the same time no effort is being spared in foreign markets to attract attention to the quality of Canadian cheese and butter, and to bring their excellence under the notice of the consuming public.

The March of Invention.

At the present time the question of labor is a subject that occupies the thoughts of the operator in the factory, as well as the agriculturist on the farm, and in both places improved machinery has done much to lighten the labor and cheapen the production.

Labor-saving machinery for harvesting both grain and hay now enables a few hands to accomplish as much as it required a small army to perform in early days.

Among the necessary implements for preparing land for either spring or fall crops, is the land roller. During dry weather the free use of this implement compresses the surface so that evaporation is arrested and the needful dampness retained, while with root and corn crops it is impossible to bring about the desired fine tilth that is needed for the tender plant without the use of this implement. Again, in preparing fall wheat land a still greater necessity arises; not only has land to be reduced down fine, but it must be made sufficiently compact to prevent the winter frost from "heaving" the plant and killing it. Thus it matters not whether it be spring grains, meadow lands, hoe crops, or fall wheat, the roller is one of the necessities among modern farm machinery, and not only is it in the improved growth of the crop that this implement shows its usefulness, but where land has been rolled down the labor will alone be repaid by the comfort and ease of taking off the crops at harvest time. Should grain be lodged it is impossible on unrolled land to cut sufficiently low to secure the whole of the lodged grain, while the work is comparatively easy where the land has been properly prepared by rolling. The saving to expensive machinery and valuable horse flesh alone will repay the smoothing of the surfaces by this method; therefore, the equipment in the machinery of the farm is not complete without a properly constructed roller. Of these the writer has used every kind, from the old-fashioned log to the more modern drum, both of which performed the work fairly well until a better implement was presented.

The latest design which we have examined while working is the "Dale Pivoted Land Roller", manufactured by Mr. T. T. Coleman, Seaforth, Ont., which has been advertised in our columns for some time past. The easy draft, equal pressure, and the readiness by which it adapts itself to an uneven surface, renders it the peer of all rollers now made. Withal it is strongly constructed, simple and durable. The principle of hanging the frame on a pivot by which each roller is wholly independent of the other, contributes to easy draft, thoroughness and evenness of the work on all kinds of surfaces; while the large circumference makes a vast difference to the draft, yet it retains all its power for compressing the soil and smoothing the surface. The rollers themselves are of steel plate, mounted on a frame, and built throughout with a view to strength and durability. We cheerfully recommend this implement.

A New Confidence Game.

A new confidence game has been started, and the members of the Patrons of Industry will do well to be on the lookout for these individuals. It is reported that Oliver Reaume, of Anderson, was "taken in" by a stranger to the amount of \$10. The slick-tongued individual professed to belong to the Patrons of Industry near his home in the eastern part of the Province. He had written home for money and felt sure it would be along in a few days, and if Mr. Reaume would be so kind as to lend him \$10 he would return it in a few days.

We were shown last month handsome samples of Duckbill barley (two-rowed) and Prize Cluster oats, grown by Mr. Alex. Dixon, of Dugald, Man., which were ready for cutting in 90 days after sowing. Mr. Dixon expects to have some prize-winning grain to exhibit. His barley was certainly very promising. He obtained the seed originally from the Experimental Farm.

Stock.

Report of Holstein-Friesian Breeders' Association.

PREPOTENCY A LEADING CHARACTERISTIC OF THE HOLSTEINS.

(Continued from last issue.)

MR. PRESIDENT AND GENTLEMEN,—In offering you a few remarks on this subject my object shall be to describe to you, as briefly as possible, the reasons why prepotency is a leading characteristic of this breed, in a very marked degree. The Holstein-Friesian breed of cattle has been bred in absolute purity in their native country, North Holland and Friesland, from time immemorial and for a special purpose, so that the type has become so fixed that it will overbalance any other breed with which it may be crossed. For instance, if you cross a well-bred Holstein bull with a cow of any other breed the chances are one hundred to one the offspring will be black and white. Another proof of the prepotency of the breed is the fact that its dairy qualities are also transmitted. These qualities are, if possible, even more certain to be transmitted than color, from the fact that the Dutch breed their cattle more for their dairy qualities than anything else; so we find that grade heifers from good Holstein bulls are almost invariably good dairy animals. It is only where certain qualities are concentrated by a long line or close breeding that we can depend with any certainty on their reproduction; although it is very rarely that any quality appears in the progeny that was not a characteristic of some ancestor, more or less remote, it is certain that these characteristics of ancestors, though remote, show a strong tendency to re-appear. And as behind every well-bred Holstein there is a long line of ancestors that have been bred for certain qualities for hundreds of years, I think the claim of the Holstein of being a most prepotent breed is fairly well established.

Among Holsteins, as with other pure breeds, there are certain families which are valued very highly in comparison with the average of the breed, owing, no doubt, to the fact of their having fallen into the hands of skillful breeders who developed their good qualities, and there seems to be no doubt that the more the dairy qualities of cows are developed the more likelihood there is of their calves being large producers also. The deduction from the foregoing statements is that pedigree is of the greatest importance, personal and constitutional defects being absent. The great thing to be regarded is pedigree. Certainly if you have the choice of two male animals of equally good pedigree, always take the handsomest; but if you must choose between a somewhat inferior animal with a good pedigree and a good animal with an inferior pedigree, always regard pedigree as far outweighing individual excellence, because what you want of a bull is to transmit the qualities of his ancestors—his beauty or want of beauty he carries in his own person. The excellence or defects that he will transmit are an inheritance from his progenitors, and you have more to do with them than with him. In other words, we should look back as far as possible in all breeding to see what qualities we are likely to perpetuate. There are, no doubt, certain indications by which we may judge of the tendency of a bull to get good dairy cows; but if we can know that his dam and both his grand-dams and all four of his great grand-dams were first-class cows, we

may disregard the absence of indications of milk in the bull himself, as he is only the channel through which these dairy qualities are to be transmitted. We must look for transmissible excellence not in the animal himself but in his ancestry, for although like often begets like, it always begets the likeness of some ancestor, one or more. The Holstein, owing doubtless to its greater purity of blood compared with most other breeds, and to its greater antiquity of blood compared with any of them, possesses a force of hereditary transmission which is sufficient to overbalance any breed with which it may be crossed. Any one examining the grades from a good Holstein bull must be particularly impressed with this fact, as he will find that they have not only the markings of the breed, but they also have the early maturing qualities, the constitution, and the dairy qualities. In conclusion, I believe there is no breed more capable of improving in general usefulness the common cattle of this country than the Holstein.

R. S. STEVENSON.

THE BUTTER AND CHEESE PRODUCING QUALITIES OF THE HOLSTEINS.

Wonderful and rapid are the changes which constantly occur in this progressive age of ours. Almost daily new inventions are introduced which claim the attention and admiration of the world. Yet none was more wonderful, rapid and lasting than that of the Holstein-Friesian cow in demonstrating to the world her wonderful capacity as a butter producer. It unexpectedly broke into the camps of the other breeds like a thunderbolt from a clear, sunny sky, and caused awe and consternation everywhere. When Holsteins were first introduced into America their owners were satisfied with showing to the public their wonderful capacity as milk producers, and practically nothing was done to demonstrate their equally great capacity as butter producers. This caused their bitter opponents to admit that they produced large quantities of milk, but of all the blue things in the world the Holstein milk was the bluest, and such flattering titles as skim-milk and pump handle breed were constantly thrown into the face of their owners. But imagine their surprise when in 1883 they, for the first time, met their strongest foe, the Jersey, in public competition and gloriously defeated her, winning the Breeders' Gazette shield, in a thirty days' test (for producing most butter) competition, open to all breeds and the world. However, this was only once, and they would never be able to do so again. So strong was this conviction rooted that, when in 1887 all breeds again met in the Madison Square Gardens, New York City, in public competition, the Jersey breeders offered a beautiful gold cup, upon which they had engraved a neat little Jersey cow. But, oh! to their chagrin and consternation, the beautiful trophy was wrung from them, and by an Holstein, too, and now adorns the home of an owner of the so-called skim-milk breed, and was easily won at that, the special butter breeds being practically out of the race, and in nearly every public test since then, including the International Fair at Buffalo, have the Holsteins carried off the palm of honor, and they are to-day practically without a peer as butter producers, holding the 30, 60 and 90 days and one year records in an unbroken line. The year's record of 1,153 pounds, 15½ ounces of Pauline Paul has not been reached by over 100 pounds by any cow of any other breed. Though the Holsteins are among the latest introduced breeds, they to-day possess more cows that have produced 15 pounds of butter per week, more cows with 20 pounds, more cows with 25, and more with 30 pounds per week than any other breed, which record speaks for itself.

Here in this fair Dominion of ours, where Holsteins were introduced about nine years ago, they have, wherever tested, proved themselves superior as butter producers, though we have not attained the exceedingly high results that our American brethren have. I fully believe that with the treatment and care they have received by most of us young, inexperienced feeders and butter makers, that the results obtained are equally as gratifying. In the herd of the writer, so far as tested, the mature cows produced from 17 to 21 lbs. of excellent butter per

week, and this under herd care, and I am confident had the forcing system been applied, under which these high records are made, the results would have been much greater, and undoubtedly others among you will have similar experiences. As to their cheese producing quality, no special tests have been made, to my knowledge, in this country; but, were they made, I am satisfied the result would be equally as satisfactory as with the butter. As Holstein milk is very dense, the butter fats do not separate so readily as in the more open milk, which, 1st, makes the milk of a better keeping quality, as through its denseness it does not partake so readily of its surrounding odors, and 2nd, more of the butter fat is embodied in the curd, and therefore makes a superior quality of cheese, which is borne out by the fact that the Edam cheese made in Holland, the home of the Holstein, is classed among the finest in the world. I must beg your pardon for again referring to my own herd, but it is the only one from which I have any data. The owner of the factory to which my milk goes has repeatedly assured me that it compares well with the best delivered to the factory from about 80 patrons, which certainly should speak well for Holstein milk for the manufacturing of cheese.

H. BOLLERT.

SHALL WE HAVE AN ADVANCED REGISTRY THAT WILL RAISE THE STANDARD STILL HIGHER?

One of the fundamental principles of successful breeding is to have an aim and to use intelligence and judgment in attaining it. Some aim at nothing, and, generally speaking, they reach the object of their aim; others aim very high, and whilst they may not reach the acme of their ambitious intentions and desires, yet they reach a high degree of excellence and obtain most satisfactory results. The man that carefully aims at the bull's-eye is much more likely to strike the target near the centre than the man that shoots at random. The same principle holds good in breeding, therefore it is necessary that we as breeders should aim high. For these reasons it seems to me that we should have an advanced registry, and if we fix in it a very high standard and breed for that, we will, in a short time, raise the quality of our breed still higher.

I feel confident from experience, from observation, and from facts gathered from all parts of America, that our breed is the most profitable the most useful and most suited to our climate of any breed yet known in Canada. Yet, this is a progressive age, and it will not do for us to rest on our oars, else we may be overtaken by our competitors. Let us then bend to our oars and pull our boat still further ahead. To do this we must use judgment and common sense, and put forth efforts worthy of the noble breed we represent. In my humble judgment our American cousins made one mistake in their Advanced Registry by allowing too low a standard, and another in allowing cows and heifers to be registered on the milk production alone.

The most important constituent of milk to-day is butter fat, and, therefore, we must make it one of the essentials in breeding. Some of our wiser friends across the line have seen this, and, therefore, have bred, made records, competed in public tests, and, what is still better, have been remarkably successful. To-day seven out of ten of the prizes in the butter tests in America during the past four years have been taken by the Holsteins, and Holsteins hold the world's record in the one month's, the three months', the six months', and the year's records for greatest amount of butter, also the public test at the exhibitions for the day's and month's record, yet this is not enough. Let us go from success to success, from victory to victory. The quality is in our cattle, but it requires intelligence, skill and work to reach the top rung of the ladder, but we can and will reach it if we continue persevering. Let us strive earnestly, intelligently and continually. The conditions in which cows should be allowed to be registered in the Advanced Registry should be based on butter records, and upon build or "structural requirements." These are simple and essential.

The butter requirements that I suggest are as follows:—

Heifers under three years of age shall be required to produce 11 pounds of butter fat in a week by the Babcock tester. This is equivalent to 12½ pounds of marketable butter. This test to take place any time during the first four months after calving. She shall also be required to produce 4 pounds of butter fat in a week after being milked nine months. Under four years she shall produce 14 pounds and 5 pounds, respectively, under same conditions and rules as given. Under five years of age 17 pounds and 6½ pounds, and over five years of age 20 pounds and 7½ pounds per week. In addition to this, each cow or heifer must have been in calf at least six months before the second part of the test shall be made.

The "structural requirements" or build depend on measurements and scale of points. The animal shall be examined by an expert appointed by the association, and he shall conform to the scale of points laid down by the Association. When the animal has produced the required quantity of butter, and the inspector has declared that she has scaled a sufficient number of points to entitle her to be entered in the advanced register, a certificate shall be granted, showing her measurements, her scale of points and her butter records. The scale of points made by the American Association is very good, and they require a cow to scale 75 out of the 100. I am inclined to think it should be about 82 points at least. Thus in a butter record, in measurements and a scale of points, we have a sufficient guarantee of an animal's quality to buy it or its offspring. Bulls could be put in the advanced registry only when they have scaled over 82 points and produced offspring that had made the butter record. I would like if some of our friends would express their opinion on this scheme, so that wherein it could be improved might be pointed out, as it requires time and thought to find a proper standard. D. E. SMITH.

Factory Winter Butter-Making.

BY A. & G. RICE, CURRIE'S CROSSING, ONT.

As we are patrons of one of the experimental butter factories started by the Dominion Government, we are constantly being asked if we think it will pay. To such questions we would like publicly to say most emphatically, "Yes, with the right feed and the right class of cows." Practical dairymen raise the objection, "It costs too much to feed in winter." Such have in mind the old way, "grain and hay." To make winter dairying pay we want more suitable and cheaper feed, such as ensilage and roots, sandwiched with straw and hay, spiced with but little meal. We have heard others say: "Oh, but if we must keep one set of cows for winter and one for summer, don't see much in it." Neither does the writer. We don't want a six-month cow, but a "stayer," an all-the-year-round cow. To make this clear, we will but need to give a few facts. The butter-making was started last fall in our factory. We had but one cow fresh, that was the Holstein cow Daisy Texal, five years old. She calved in October, and in one month (part of November and December) gave 1,621½ pounds of milk with ordinary dairy care, and gave a good flow all winter, but the point we want to illustrate is not so much what she did when fresh, but all the year round. We find that in her tenth month after calving she was giving 42 pounds daily on pasture, and running with a score of others. Each fed but 2 pounds of bran per day at milking time; this is at the rate of about 1,200 pounds per month. We find in eleven months she gives us over 13,000 pounds of milk, which has gone to the factory (butter in winter and cheese in summer); current prices gives us 75 cents to 80 cents per 100 pounds of milk. Does it pay? You can figure it out for yourself; our conscience and pocket say, yes. Remember this is what a cow has actually done under ordinary care. Of course, she is "devoted to the cause." We have other cows doing well, and are breeding all our cows to calve in the fall and midwinter.

Maple Shade Shorthorns.

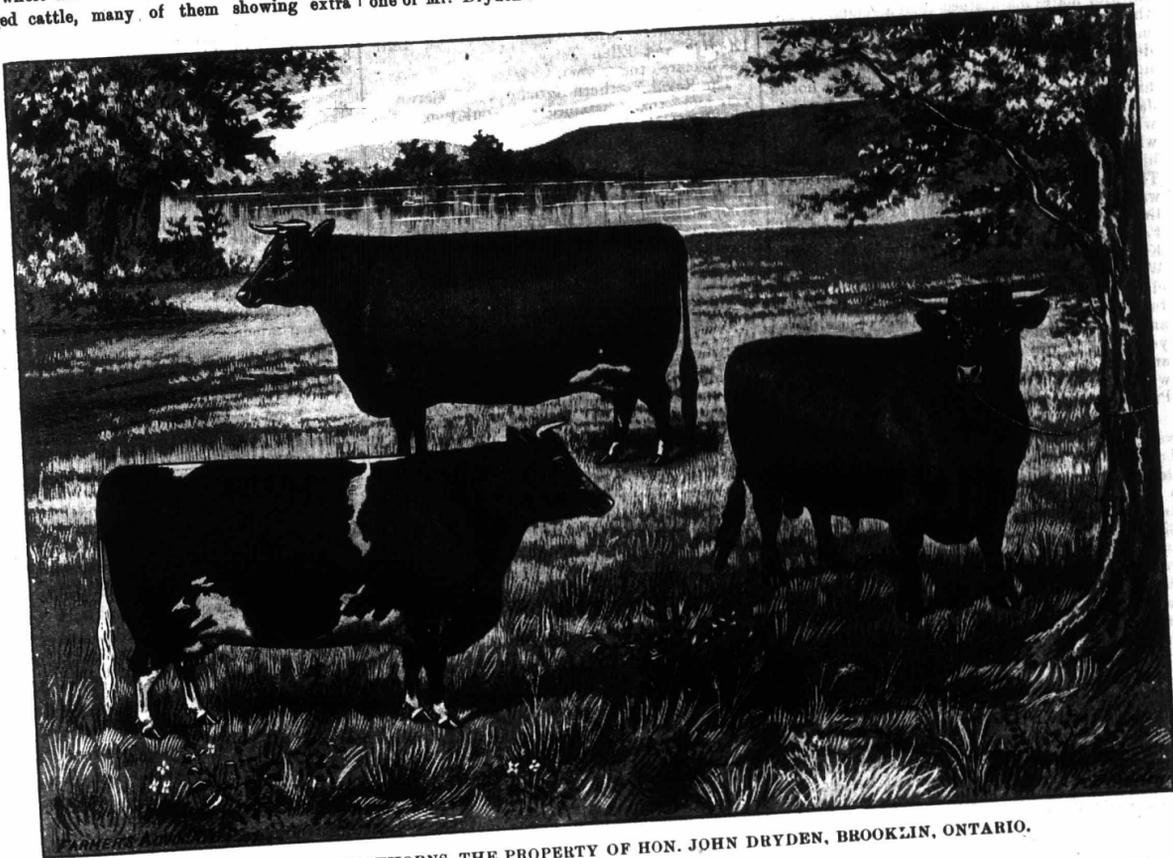
We are permitted to present with this issue three representatives of the famous Shorthorn herd at Maple Shade, the property of Hon. John Dryden, Brooklin, Ont. This herd is always in respectable dress, and fit to be inspected at any season of the year. The three represented in the cut were driven in from the field, and photographed by our artist. They have received no grain since they were turned to grass in May. Both the females are nursing calves, yet, in common with the whole herd, they are found in fine condition, proving conclusively the easy-keeping and thrifty qualities of the herd. Some difficulty was found in making a selection for our purpose, because of the general uniformity of the whole herd. They are broad, deep, short-legged cattle, many of them showing extra

Comfort was bred at Maple Shade, and is sired by the Victoria bull, Vensgarth, bred at Sittyton by Mr. Cruickshank. She belongs to Mr. Cruickshank's favorite Clipper family. The young bull sent across is a bright red, with a grand back and deep body well placed on short, straight legs. We shall watch with some interest the location of this bull in Great Britain, believing that his superior qualities will yet give him notoriety in the old land, as Barmpton Hero, also bred at Maple Shade, has achieved in this country.

The second cow represented in the cut was bred at Lethenty by Mr. E. Cruickshank, and was imported in 1857. She is a beautiful specimen, of great length and plenty of substance, showing also excellent milking qualities. She is one of Mr. Dryden's favorites, is five years old,

near the house a dozen beautiful heifer calves grazing contentedly on the abundant grass, which the frequent rains of this season have given in Central Ontario. In the stables were several young bulls of excellent merit, from seven to nine months old, every one of which showed by its fresh, cleanly appearance that the proprietor was their friend and insisted on a full ration and a clean bed.

We enquired the prices of these youngsters and were astonished to find that, while some of choice form, breeding and color combined were held at \$250 to \$300, a few white spots or some other slight defect from a showman's standpoint, rapidly reduced the price to \$150 and even \$100. No enterprising farmer need be without a choice breeding bull of the very highest quality for beef production for fear of the price being beyond his reach.



MAPLE SHADE SHORTHORNS, THE PROPERTY OF HON. JOHN DRYDEN, BROOKLIN, ONTARIO.

milking qualities, as well as aptness for producing a large quantity of prime beef at the very lowest cost.

The herd is known all over the United States, as well as Canada, and individuals are annually shipped to customers hundreds of miles distant. For the first time a sale has been made this spring of a young bull to go back across the Atlantic, from whence the foundation of the herd came. Mr. Bruce, of Darlington, England, one of the best judges of stock known in Great Britain, while on a business trip to this country, called to inspect the herd, and was so taken with the twelve-months bull, Royal Canadian, that he insisted on his purchase to accompany the beautiful heifer, Rowena, purchased at Col. Harris' sale in Chicago. He is sired by the imported Cruickshank bull, Sussex, and has for dam the thick-bodied red cow, Comfort, represented in our cut.

and a regular breeder, having dropped three calves—two heifers and one bull. The latter is now owned by Mr. Pierce, of Newcastle, Ind., and is pronounced by the herdsman of the great showman, Wilhoit, to be the best bull of his age in Indiana. He will be shown this fall for the first time.

The bull represented in the cut is Conqueror, bred by Mr. Dryden, and own brother to Comfort, the first cow mentioned above. He has been used for three years with unbounded success in the herd of J. S. Smith, of Maple Lodge. Mr. Smith is loud in his praise, and declares that his calves are so nearly alike that a stranger would have difficulty in distinguishing one from another. Conqueror has been in use at Maple Shade during the latter part of the present season.

While at Maple Shade, we noticed in a field

Lack of space prevents us fully describing the excellent Shropshire sheep seen at this farm. A bunch of twenty lambs selected for early sales are certainly among the best we have ever seen. Our artist remarked that he had previously some doubts whether he had not overdrawn the woolly heads of some of his cuts, but after seeing this lot, he declared that he had never yet done them justice. Several have already been sold. A bunch of lambs and ewes has been shipped to go the rounds of the New York State fairs. Three go to Manitoba, one to Pennsylvania, one to Michigan, a bunch to Quebec, and others nearer home. Some of the younger lambs will, we judge, when grown even exceed those that are older. The same characteristics are seen in the sheep which we have noticed in the cattle. They have deep bodies, short legs and good backs, with well woolled heads and heavy eeces, indicating robustness, strength and sturdiness, taken together certainly make them very attractive. We congratulate the Minister on the appearance of his farm, his herd and his flock.

Our Scottish Letter.

The early part of the month of July was wont to be the season during which the bulk of our American and Canadian friends arrived in this country, and many purchases were effected at the shows held during the month. Neither from the United States nor from Canada have many visitors come this year, but still our shows have suffered no apparent diminution in interest or enthusiasm. Stramaer show was held on Tuesday, 19th July. This town stands in the centre of what is called the Rhins of Galloway, at the head of Lochryan, and is one of the best known of Clydesdale breeding areas. For over forty years the Clydesdales of Galloway have been regarded with peculiar favor, and those bred in the Rhins have been foremost in the show ring. The beginning of this fame is an old story now, and there is no space at our disposal to go over it in detail. What is of chief importance is that the reputation of the district is being fully sustained, and the exhibits at the show were above the average. Darnley mares maintained their ascendancy, and there was a fine display of young stock. The most successful sires of such were seen to be the deceased young horse Prince Fortunatus and his uterine brother Darnley's Hero. These horses have done good service, and their breeder, Mr. James Lockhart, has good cause to be proud of what they have done. Prince Fortunatus died when rising three, and hence the only foals after him are the few he left when a two-year-old colt. The champion female Clydesdale at Stramaer was declared to be Mr. Robert Frederick's yearling filly, whose sire was the young horse Prince Fortunatus. Mr. James A. Wallace, Claycross, Kirkniner, in what is called the lower district of Wigtownshire, got first prize in the two-year-old class, and the male championship with a beautiful horse by Lord Erskine. One of the best animals on exhibition was the first-prize three-year-old filly owned by Mr. Matthew Marshall, and got by Prince Adino, a grand black horse which died when three years old. He was got by Prince of Wales, and was exceedingly well bred.

Two days later, namely, on 21st July, three very important shows were held, viz., at Tunbridge Wells, in the South of England, at Aberdeen, and at Berwick-on-Tweed. There is quite a Clydesdale colony in the South of England, and the studs of the Lords A. & L. Cecil, and Sir James Duke, Bart., render it a most important part of the Clydesdale world. So much interest is attached to Clydesdale breeding down there that the Society went to the expense of paying the expenses of a Scotch judge to perform the duty of deciding the awards. Mr. James Park, Dechmont was appointed by the Council of the Clydesdale Horse Society to perform this important duty, and reports favorably of the stock which he judged. Sir James Duke owns a stud of exceptionally good mares, and his Clydesdales as a whole are not easily excelled. The stud of the Lords Cecil was founded many years ago in Scotland, and transferred to Kent about four years ago. It is a good collection, and there are no greater enthusiasts for Clydesdales than these scions of the house of Cecil.

Berwick-on-Tweed is situated in very interesting ground, but hitherto the great border counties, although excelling in many respects, have not been specially distinguished in horse breeding. The show this year was a truly splendid one; but for this it was specially indebted to stock from a distance. Mr. David Mitchell, of Millfield, showed some grand animals, and was very successful. His celebrated mare Sunray was out in great form, and gave an uncommonly good account of herself. She wears well and is now giving good promise as a breeding mare. Her foals in 1891 and 1892 are likely to be heard of yet, and few better are to be seen at present. The fillies Lillie Langtry and Ellen Terry were both first in their classes, and Sunray's colt of 1891 was second in his. Lillie Langtry was the champion of the show. She and Ellen Terry are own sisters, and were got by Flashwood. The Marquis of Londonderry showed a lot of fine stock at this show. But for the presence of Mr. Mitchell's contingent he would have got first prize in almost every class. As it was, his Lord-

ship bred the second, third and fourth prize brood mares, the second being Nina, a beauty, owned by himself and got by Macgregor. Her daughter Nettle got second also in the class of three-year-old fillies. She was got by Prince of Avondale, and is very like her sire. His Lordship was first in the class of yeld mares with a grand filly named Olympia, got by Barrister. This is a mare of much excellence. One of the best studs in the border counties is that owned by Lord Polwrath. Miss Maggie, a handsome, big, dark brown mare from his stud, and got by Sirdar, was first in the class of three-year-old mares. Another fine local stud is that of Mr. Henry B. Howie, at Hazelrigg, Belford, in Northumberland. This gentleman has from time to time bred a number of really high class animals, and at Berwick he exhibited several choice beasts. His mare Victoria Cross, by Garnet Cross, got the championship for the best brood mare, the property of a tenant farmer, and he also showed a magnificent two-year-old filly of great substance, got by Lothian King, which gained second prize. The competitors for the open Clydesdale championship were Miss Maggie, Olympia, Lillie Langtry, and Ellen Terry, and Lillie Langtry was declared the winner.

The Royal Northern Agricultural Society this year more than sustained its reputation. The show of Clydesdales was an extra good one, and while Mr. George Bean got first in the aged stallion class with his grand horse Mount Royal, Mr. Lumsden, of Balmedie, was first with his big, dark-colored three-year-old stallion Honour Bound 8700, whose sire, Sir Maurice 4721, is now in Canada. The dam of Honour Bound, Lady Dorothy, was first in the brood mare class both at Aberdeen and at the H. & A. S. show at Inverness. She is a grand example of a true Darnley mare. Mr. Alex. MacRobbie got first in the class of two year-old colts with another son of a Darnley mare, namely, Prince Stephen, winner of first prize at Stramaer in spring. There were on exhibition and highly successful in the prize list a number of fine yearlings of both sexes got by the deceased Lord Montrose 7973. Mr. Alex. Leslie, Braeco Keith, was owner of the first prize colt, named Lord Montague. Mr. John Marr, Cairnbrogie, showed a lot of fine stock of the famous Darnley tribe from which sprang the world-renowned Prince of Wales 673. Mr. Geo. Bean also exhibited some fine mares. He was first with the three year-old mare Glow, by Young Duke of Hamilton. The lion's share of the prizes for two-year-old fillies went to Mr. Lumsden, of Balmedie, who was first with his home-bred, spl-ndid mare Balmedie Enchantress, and second with the Dunmuir-bred Flashwood mare Queenie Flashwood. The latter got the championship of the show, both Lady Dorothy and Balmedie Enchantress being disqualified from competition, having formerly gained the championship. The first prize yearling filly, like the first prize two-year-old filly, was got by Royalist, the Balmedie stud horse. She was bred and owned by Messrs. G. & J. Cocker, Hill of Petty, Fyvie.

The most important event of the month was, of course, the show of the Highland and Agricultural Society held at Inverness. This by general consent is conceded to have been the best show ever held north of the Grampians. The competition for the Cawdor Challenge Cup for mares fittingly took place here, and called out all the best Clydesdale talent. One significant thing about both competitions for the Cawdor cups is that the first winners in both cases have been tenant farmers, and the successful animals got by Prince of Wales 673. Mr. William Renwick won the Stallion Cup in February with Prince Alexander, and Mr. James Lockhart, Mains of Airies, gained the Mare Cup with Irene, own sister to Prince of Carruchan. The classes at Inverness were all well filled, and there were surprisingly few empty stalls. Several grand animals were exhibited by breeders of Clydesdales in the north of Scotland, and altogether the testimony borne to the advance made in horse breeding in the northern counties was quite an important element in the show yard. The leading honors, however, generally went to the south of the Grampians, although several northern owners were well forward, and one, Mr. J. Douglas Fletcher, of Rosebaugh, got to the

top. Mr. William Taylor, Park Mains, Paisley, got first in the aged stallion class with his beautiful, well-built horse Rosedale, which was also awarded the male championship. Mr. W. S. Park, Hatton, Bishopston, was a most successful exhibitor of three year-old stallions, being first and third with Gallant Poteath, the Glasgow premium horse, and Royal Signet, respectively. These are two grand horses, and were highly popular. Mr. William Montgomery, Banks, Kirkcudbright, was first with a first-class two year-old colt named Belvidere, got by Lord Polwarth's stud horse Knight o' Lothian, fourth with the Macgregor three-year-old stallion the MacCuaig, and third with the Macgregor yearling stallion the McHenry. These are a grand trio of horses—not free from defects, but wonderfully well balanced in merit. The Macgregor blood was asserting itself at this show. Rosedale was got by the Maclellan 4564, a son of the Netherhall stud horse; the second prize three-year-old, Royal Stuart, a thick, well-balanced, blocky horse, with sound feet and broad, heavy bases, that would be a prime favorite in Canada, was got by Lord Blackburn, another son of the same sire; and besides his own immediate progeny already named, several fine mares were in the prize list, bred in Morayshire, and got by the Macnab, another son.

The first prize yearling colt at the Highland was a magnificent animal, owned by Messrs. P. & W. Crawford, and got by Goldfinder. This grand youngster was first at Glasgow, and is uncommonly well bred. The same firm got second prize in the aged class with that choice example of the breed, Williamwood, whose sire was that much missed horse St. Gathien, which Mr. Beith exported to Canada some years ago. Williamwood is an evenly balanced horse, the symmetry of his parts being very marked.

SCOTLAND YET.

Chatty Letter from the States.

(From our Chicago correspondent.)

There is a strong tone to the hog market, and it would not be surprising to see prices \$1 higher before long.

Export cattle are costing \$4.50 to \$5.25 here, and selling at 11c. to 11½c. abroad. About the only people who are making money on cattle now are traders and grazers. The breeders are "not in it," but they find it hard work to get out, and by the time they are out they will regret it. Top prices for live stock:—Beef cattle, \$5.25; best hogs, \$5.95; sheep, \$5.50. Top prices a year ago were as follows:—Cattle, \$5.90; hogs, \$5.85; sheep, \$4.85; lambs, \$5.25.

There is a feeling among cattlemen that if there is not a big change in prices in a few years, that the production of cattle will fall far below the consumptive demand of the world. However, notwithstanding the fact that the government figures indicate not much more than half a beef animal for every unit of population, this country alone is producing vastly more than it can consume within its borders. If it were not for the good foreign outlet for American beef and beef cattle, prices would be far below what they are at present.

Col. W. L. Black, of Texas, who is trying to get the government to establish a cattle exchange or bureau by which shippers can avoid glutted markets, is working in a worthy cause, but the basis of his argument is faulty, or, it seems to us, he cites the excellent machinery of the boards of trade and the cotton exchange for collecting and posting up to date the visible supplies; but he seems to overlook the fact that fluctuations in cotton and grain were never so wild as they are now under the very system he regards as so admirable. His theory is based on the assumption that the fluctuations in prices are caused more by variations in the marketing than in the production of cattle.

R. H. Harding's Dorsets and Chester Whites.

One of our staff recently inspected Mr. R. H. Harding's fine stock of Horned Dorset sheep and his herd of Chester White swine. The sheep are a nice, smooth lot, in good growing condition, healthy and vigorous. The lambs are very large and well woolled; in fact, both the ram and ewe lambs are more like yearlings in size than lambs. These sheep are very docile, hardy, prolific and mature at an early age. Mr. Harding's, as well as all other Canadian flocks of this breed, are demonstrating that the ewes will produce and rear fine healthy lambs twice in the year, or three times in two years without any difficulty. It does not seem to injure the ewe lambs to produce and rear lambs when one year old.

Our illustration represents four of Mr. Harding's ewe lambs, now about six months old.

His flock now numbers twenty-eight head, among which are a number of very nice young ewes, several of which are in lamb, also several good young rams now ready for use.

Recently, when visiting the farm in connection with Cornell University, that able and judicious man, Professor Roberts, said that experiments in New York State had proved the value of Dorset rams when used as sires of lambs intended for market. This cross is giving excellent results, better even than when a Shropshire ram is used, so said Mr. Roberts. Several other breeders, both Canadian and American, made similar statements. The ewes of this breed certainly are capable of producing early lambs, which grow very rapidly, and when dressed present an excellent carcass.

Mr. Harding's Chester White swine are a good lot, numbering about forty. His breeding sows, some imported and some Canadian bred, are long, deep, handsome animals. Their hams are deep, shoulders fine and heads light. Two imported boars are in use, both very good, just such animals as the pork packer requires; but while they suit the packer they should also suit the farmer, for they are docile, easily fed, and, like an English Dorking pullet, ready to kill at any age. The young pigs, a fine lot of each sex, are such as one would expect from such sires and dams, are not only of good quality, but are exceedingly well bred. Mr. Harding understands his business, and is strictly honorable. He will not ship to customers animals not likely to turn out well.

This gentleman will show a flock of Dorsets and a herd of Chesters at Toronto and London exhibitions this season. The sheep will be taken from the pastures without any previous fitting. The swine have been given a little extra feed, but are not highly fitted.

Mr. Harding is also a grower of seed grain, and has now on hand a quantity of the best fall wheats. He writes as follows concerning the varieties grown this year:—"The American Bronze yielded better than any variety I have yet tried. It is almost free from rust and stands up well. Jones' Square Head has done well with me. Early Red Clawson is a first-class wheat. Jones' Winter Fyfe is not as good a sample as I could wish; the blight, so prevalent among winter wheats in this section this season, has badly affected it."

Germany will be represented at the Columbian Exhibition as she has never been at any previous International Exposition.

Recent Importations of Prize-Winning Poland-Chinas.

Mr. J. J. Payne, of Chatham, Ont., has recently purchased from S. M. Sheperd, of Indianapolis, Indiana, U. S., the noted prize-winning Poland-China hogs, viz.: Elected 8873, Countess 2nd 24480, C. R., and others. Elected is one of the best specimens of the breed, and won first in his class as a yearling, sweepstakes as best boar and five of his get at the Indiana State Fair in the fall of 1890. Countess 2nd won at the same State Fair in the fall of 1891 sweepstakes as the best sow of any age. Persons familiar with the fairs in the States will know that the Indiana State Fair has the reputation of being, and in fact is, the most hotly contested show in the United States. Hogs that can win there can win anywhere in the great corn belt. We present our readers with a good picture of the great Elected. Mr. Payne is to be congratulated on securing such noted and valuable animals. For such of our readers as are not familiar with the Poland Chinas, we here give a short history of their origin and a description of the best specimens. This breed originated in the Miami

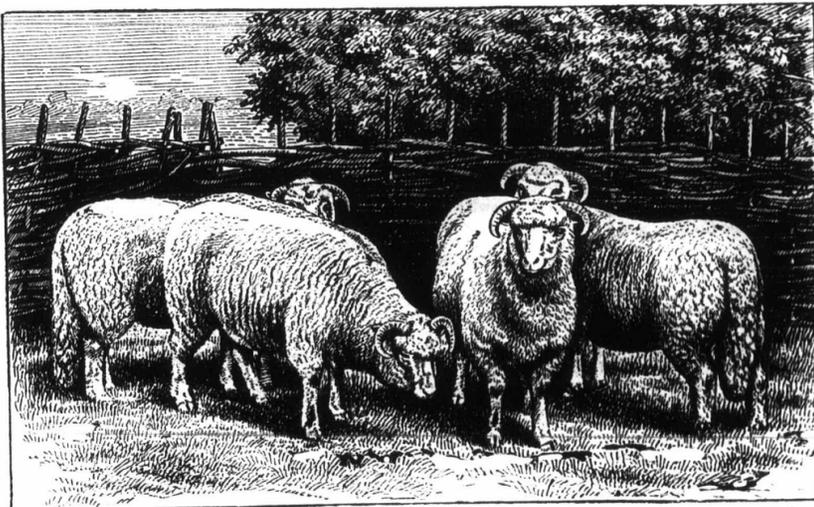
Is the Practice of Flushing Ewes During the Topping Season Safe and Profitable; and if so, What Kind of Food is best for this Purpose?

BY GEORGE D. CLARK, SHEPHERD, KIRKLAND HILL, DUNBAR.

In answer to the above query, I would say that it is profitable if well and judiciously carried out. By-the-by, does it not altogether resolve itself into a question of profit, leaving the safety to be swallowed up in the larger term? In careless hands it is not safe, and consequently is not profitable, because it may result in a large percentage of illness amongst the ewes. I doubt if it is possible to say what form of food is best, as on various farms the facilities vary, and what can be easily had on one would not be so on another. It should, however, take the form of a fresh green bite, and it is often practicable and profitable to select the most backward and give them first run on it. A short close lambing time is within certain limits best, and I opine it is for this, to a certain extent (with a prolific crop), that flushing ewes is practised. Of course it is sometimes dangerous to give a sudden change of food, and so care should be exercised to give it gradually at first.

A glance round the country shows that where possible breeders use this means, and this plainly show that they think it good. Ewes to be in proper condition when the tup is put amongst them should be neither too lean nor too fat. Perhaps, of the two extremes, that of fat is the worse. Yet, even when in such a condition, much may be done by judicious feeding to promote a successful season. It must be confessed that really little is known of the true bearings and effects of various treatments, and especially is little known of the methods of working, so that we are more or less working in the dark. The highest

principle which I can give is to have both sexes in a perfectly healthy, and if anything a fattening, state. I don't mean by this a fat state, but simply a state of progressive fattening. I do not think that a mere change of food does any good, unless the change is towards a more nutritious as well as succulent article of diet. Indeed, sometimes a change towards a more nutritious, though drier food, produces a favorable effect towards the sheep owner's benefit. Therefore, my directions would be, that it is profitable to give a green bite to the ewes, whether in the form of rape, young grass, or turnips, because it will probably be a change in the direction of a more nutritious food; and perhaps the looseness of bowels, etc., may conduce to favor the end we have in view, viz., a larger and better crop of lambs. I have heard it stated that it is better to put the ewes on a less nutritious diet; but on inquiry, it has transpired that this in reality meant a change to fresh green food from old pastures, which was considered to be from good to bad. I should not consider it so. And now I see that I have not as yet answered the specific query as to what kind of food would be the best when a change is desirable. If I had my choice (which is seldom got), I should say young grass and the run over stubbles. In these are to be found both the nutritious and succulent forms of diet which I hold to be most of use in producing a favorable result.



FOUR DORSET HORNED LAMBS, PROPERTY OF MR. R. H. HARDING, THORNDALE, ONT.

valley, in the State of Ohio, as early as 1840, and is the result of a cross of Irish Grazer, Byfield, Berkshire, Bedfords, and Big China and possibly others, the first crosses being made as early as 1820. So rapidly have they grown in favor that in the great corn belt of the United States more than three-fourths of the improved swine are of the Poland China breed. There are in the States no less than five different records of this famous breed, and each record is so well patronized that it issues a large volume of pedigrees each year. The hogs purchased by Mr. Payne are registered in the Central Record, but they and their produce are eligible in all the records of the breed. The breed is thus described by Mr. J. J. Payne: Black with six white points; although a few small white spots on the body are not objectionable. They are of medium length, deep bodied, straight, fine backs, large, full hams, and smooth shoulders; large, deep chest, low in flank; short, full, high crested neck, heavy joint, short and slightly dishd face; fine muzzle, small, thin, fine, drooping ears; short legs, well set apart and standing on excellent, tough feet; hair fine and without bristles. They are prolific breeders and excellent nurses, fatten readily and rapidly at any age, and will make more pork for the amount of food consumed than any other breed of swine.

Stockmen in Huron County.

A couple of months ago a member of our staff left London to take a trip among the stock breeders of the counties of Middlesex and Huron, and among the first places visited were the establishments of Messrs. Gibson and Walker, well known to sheep breeders as enthusiastic champions of Lincoln sheep.

At the time of our visit the flock numbered some sixty-five head, of which fifty-two were ewes, including twenty-seven imported from the famous flock of Henry Dudding, Great Grimsby, Lincoln, Eng., the balance being all bred direct from the best imported blood, the rams at the head of the flock being both imported direct from Mr. Dudding, one of them, the second pick out of the whole flock, being sired by the second-prize ram at the Royal Show at Windsor. This ram, we might add, was imported last fall, and this spring he clipped twenty-four pounds of washed wool; the other being sired by Mr. Dudding's famous stock ram, The Swell, who was himself out of one of the first-prize ewes at Smithfield.

Besides Mr. Dudding's sheep, specimens have been imported from the flock of Mr. J. Wigram, Collingham, and perhaps the best evidence given of the care with which the flock has been bred is the fact that last fall it was awarded every first prize at Toronto and London, the only two shows attended, as well as the bronze medal at the latter place for the best six sheep of any breed. Messrs. Gibson and Walker intend, we believe, making a large exhibit this fall, and we can advise any one needing a Lincoln ram to take a look through their flock. Besides Lincolns, Mr. Gibson is breeding Shorthorns, and we cannot pass them by without noticing the grand cow, Elvina 12th, bred by Robson Bros., sired by an Ingram bull and out of a cow of mixed Campbell and Sheriff-Hutton blood. This is a grand cow, combining plenty of quality with great size. The bull now in use is a nice thick-fleshed youngster, Jocelyn, bred by John Miller & Son, sired by Vice-Consul, and out of a Jilt cow.

SPRINGHURST FARM,

the property of Messrs. H. & W. Smith, is situated about one and a-half miles out of the village of Exeter. Messrs. Smith were formerly residents of Oxford County, and while there they founded their herd in 1885 by the purchase of the cow Lapwing, by Earl of War, and also of an imported Duthie bull, Enterprise, from Green Bros., of Innerkip. In 1886 they purchased from J. & W. Watt the Cruickshank cow, Village Blossom, dam of two of the greatest show bulls in America, viz., Scotland's Pride, formerly owned by Robt. Miller, West Liberty, Ia., and the incomparable young Abbotsburn, now owned by Col. Moberly; and also the grand show heifer of Cruickshank blood, Canadian Duchess of Gloster 14th, from Messrs. Wm. Heron & Son, Ashburn, Ont. At the time of our visit the herd numbered some thirty-five head, the bulls in use being the well-known Prince Albert, by Old Barmpton Hero, and a yearling, bred by Mr. Jas. I. Davidson, a nice fleshy roan, got by the Cruickshank bull Hospodar. Among the young things we noticed a few very nice heifers got by these bulls, among them a white yearling, winner of second prize last year as a calf in London, and fifth in Toronto in a big class. This heifer shows a lot of quality, and is by Prince Albert and out of a cow by the Village Blossom bull Vocalist. A very nice, sweet calf is Vanity, by Village Hero (out of Village Blossom), and out of the cow Vista 2nd, by Prince Albert; while among the cows we noticed old Village Blossom, looking as fresh as possible in spite of her sixteen years, and the fact that she has been a very steady breeder, among her produce still in the herd being the cow Village Lily, a grand, big, thick cow, by Prince Albert.

MR. JAS. COOPER'S SHROPSHIRE,

Among the pioneer importers of Shropshires in Canada was Mr. Jas. Cooper, of Kippen, whose first importation was made in 1881, comprising a number of ewes of such strains of Messrs. Palley, Beach, Tenn, etc. In the succeeding years dams were purchased from such breeders as Messrs. F. Shore, of White Oak, and

D. D. Wilson, of Seaforth, until the year 1886, when another importation was made from the flock of S. Simpson, the ewes this time being principally of Bradburne and Nock blood. Again, for a few years rams were purchased from the principal importers, including a very fine shearer from the flock of H. Williams, of Shrewsbury, Eng. Again, last year an extensive importation was made from the flocks of T. & S. Bradburne and H. Parker.

At the time of our visit the flock consisted of some sixty head, the ram in use being a very nice, compact shearer from the flock of T. & S. Bradburne, sired by Precentor (4733), and out of a ewe by The Dean (2356), both well known as Royal winners. The lambs were a very nice, even lot, well covered and showing both size and quality. Mr. Cooper's farm, we may say, is only half a mile from Kippen Station, and he is always glad to see visitors to his flock.

ELMHURST FARM.

A few minutes' ride on the train brought us to Clinton station, and then a walk of half a mile took us to the farm of Mr. W. J. Biggins. Here we spent a very pleasant time looking over the select herd of Shorthorns, established here over twenty years ago, and since bred with the greatest care by the genial proprietor, who boasts of having in his boyhood days gone to school with the Booths of Killerby, and other noted English breeders.

The bull in use this last year at Elmhurst is the imported bull Gen. Booth, a very thick-fleshed dark red, well-known in Scotland as a sire before he crossed the water. Gen. Booth was used by that eminent breeder, Sylvester Campbell, in his own herd before he was exported to Canada, and he left a reputation as a stock getter there by siring that grand heifer, Maid of Promise I, winner of first as a yearling at the Highland Society Show, and first and sweepstakes for the best animal on the ground as a two-year-old at the Royal Northern Show at Aberdeen. Among the cows are several representatives of the Matchless family, among them the well-known prizewinner, Matchless of Elmhurst 6th, by British Statesmen 2nd, an Isabella bull bred by Jas. Russell, Richmond Hill, and also a very nice, sweet cow, Matchless of Elmhurst 10th, a rich roan in color, got by a son of the old cow. Another good family is represented by the cow Rosebud 2nd, a Golden Drop, sired by the Campbell bull Royal Duke, an H. A. S. winner, and has at present a very promising bull calf, four months old, by Gen. Booth; a dark roan in color; he promises to make a good animal, and will, we fancy, be heard of again; while the imported cow, Red Rose, is a very smooth, short-legged pattern of pure Cruickshank blood, being bred by E. Cruickshank, Lethent.

MAPLE GROVE FARM.

A few miles from Elmhurst is the property of Messrs. Jas. McFarlane & Son, who are actively engaged in importing and breeding Clydes, Polled-Angus cattle and Shropshires.

At the time of our visit the stud of Clydes contained two stallions and two mares, all imported. Of these, two, a stallion and a mare, both four-year-olds, are by the well-known horse Knight Errant, owned by Col. Sterling, of Kippendavie, while the other colt, a two-year-old, is sired by Prince of the Glens, he by Prince of Wales, his dam by President. This is a short-legged, thick colt, a dark brown in color; as a foal he won first at Perth, and as a yearling first at the Strathcarr Central. The other mare is a nice, smooth bay, by Callendar, dam by King of Clydesdales. At the time of our visit the herd of Polleds was somewhat reduced, owing to numerous sales having been lately made. The bulls on hand were Hillhurst Chief (13750), by the well-known sire, Waterside Jimmie, bred by the Hon. M. H. Cochrane, Compton, P. Q., and the home-bred bull Clinton Jock (13369) by Ardgowan Nubian (S088), and out of the imported cow Dewdrop of Dernanean. This last cow is still in the herd, and has proved herself a very successful breeder.

The Shrops number over eighty head, and are headed by the Buttar ram, Corston True Blood, by Corston True Blue, a very useful sheep, well woolled, and of the thick, short-legged kind. The ewes are all imported from the flocks of

Messrs. Buttar, Bach and Edwards, and have proved very prolific, this year twenty-four ewes having raised forty lambs. Messrs. McFarlane have been importing since 1886, and have been very successful in local show rings. Their lambs are a very good lot, and are well worth the attention of buyers.

MR. WM. GRAINGER'S SHORTHORNS.

About two miles from Londesborough is situated the farm of Mr. Wm. Grainger, who has been for some years quietly building up a herd of Shorthorns, and by paying strict attention to the milking qualities for which Shorthorns years ago were justly famed, has succeeded in establishing a family that can hold its own at the pail with most of the dairy breeds.

Mr. Grainger started his herd by the purchase, in 1877, of the three-year-old heifer, 2nd Fair Maid of Atha, at the dispersion sale of Mr. Wm. Miller. Since then he has never bought a female, but has purchased a number of bulls of the best dairy strains that he could get, among them, in 1881, the Strathallan bull Prince of Strathallan, from Jno. Miller & Sons; in 1884, the bull Evergreen Prince, from Col. Milliken, of Markham; in 1888, from Wm. Douglass, Caledonia, Britannia's Duke 10th; in 1891, the Waterloo bull Waterloo Duke 24th, from the Bow Park herd. At the time of our visit the bull in use was Truce Bearer, a very promising yearling by Gen. Booth and out of Red Rose (imp.), bred by Mr. W. J. Biggins, Clinton. Among the females we especially noticed the roan cow, Fair Maid of Hullet 2nd (9047), a beautiful roan, with a capital milk vessel. This cow we saw milked that evening, and found on weighing it ourselves that she had given exactly twenty-five pounds of milk. Mr. Grainger tells us that last year she and her half-sister, a red cow by Evergreen Prince, made thirty pounds of butter between them in seven days on grass, two months after calving. Among the younger cattle, we fancied very much the heifer Red Britannia, now heavy in calf to Waterloo Duke 24th. This is a very nice, sweet heifer, and promises to make a grand milker. Mr. Grainger has a few young things, including in-calf heifers, to spare, and we can confidently recommend him to intending purchasers as a reliable man. Besides Shorthorns, he keeps a few registered Clydes, and we found here a couple of nice yearling fillies by the imported horse Andrew Laminie, and out of registered dams.

WILLOWDALE FARM,

the property of Messrs. E. Gaunt & Son, St. Helens, Ont., is situated about two miles out of Lucknow. Here, for many years, the proprietors have been breeding Shorthorn cattle and Leicester sheep of the best types. At the time of our visit the bull in service was Earl of Moray, got by Eclipse, a son of the famous Baron Linton, while a number of the young things were sired by Lord Lovell, a son of old Barmpton Hero, and out of a Matchless cow; a few being by the imported Campbell bull, President. The herd now numbers thirty-five head, the foundation blood having been purchased from the herds of such breeders as H. Snell, T. & A. B. Snider, R. & S. Nicholson and John Isaac. Among the young things we noticed several very promising heifers by Lord Lovell and President, including a very handsome heifer calf by Lord Lovell and out of a cow by Prince Albert, bred by S. Nicholson. A very nice cow, even and well fleshed, with a well sprung rib, is Lady Lovell, by Baron Stanley, out of Vacuna 6th, while the red cow Eva Buckingham, by Lord Lovell, out of Miss Booth, struck us as a very useful pattern. The Border Leicesters number some sixty head, the original stock having been purchased over twenty years ago from H. Snell, of Clinton, and T. Penwell, of Exeter; since when rams have been bought from Wm. Whitlaw, the O. A. College, Wm. Oliver, etc. The lambs this year are very promising indeed, while the shearing rams, which have been kept to supply the fall demand, are a very nice, even lot. We understand Messrs. Gaunt intend holding an auction sale this fall, and as they have a number of very nice young things by Baron Lovell, who was sold last year to head a herd, although ten years old, we would advise parties needing young bulls or heifers, or Leicester sheep, to bear them in mind.

Two Shorthorn Herds.

MAPLE LEAF FARM.

Among the first breeders of Shorthorns in the county of Oxford was Mr. Valentine Ficht, of Oriel. Mr. Ficht purchased his first cow just thirty-two years ago, in 1860, from an Englishman named Ureford, who imported her from England. Since then purchases have been made from the following herds:—Bow Park, F. W. Stone, Capt. Chambers and Jos. Thompson, St. Marys, among the most noticeable being the purchases at Bow Park, in 1870, of the heifer Duchess of Aylmer, by Grand Duke of Thorndale 2nd, and again in 1878 the Bates bull Hilper Duke, for whom \$400 was paid, while in 1869 the imported cow Polyanthus was added to the herd. At the time of our visit the herd numbered over seventy head, headed by the bull The Governor (12289), bred by J. W. Watt, and the home-bred bull Just in Time (14926), by Barmpton Hero's Duplicate. The females number some sixty head, among them being representatives of the best blood in Canada, including several Whimples, Minas, etc., amongst others a very nice, smooth, two-year-old heifer by Baron Linton. Among the older cows the imported cow Eve, bred by Lord Polwarth, is a very nice roan, sired by Rapid Roan, a well-known bull in his day, and the home-bred cow Duchess of Aylmer 5th, got by the Campbell bull Red Duke, is a big, useful red. The Cotswolds have, like the cattle, been bred for over thirty years, none but imported rams being used, and Mr. Ficht has, he tells us, shipped sheep into all parts of the United States. Among the ewes are several imported from the famous flocks of Messrs. Jacobs & Sons. The horses at Maple Leaf Farm, like the cattle and sheep, are both imported and from imported sires and dams, among them being two imported Shire mares, both bred by that well-known breeder, S. Fyson, Warboys, Hunts, and one imported Clydesdale mare, together with two fillies out of her by imported stallions, one two-year-old and one yearling, as well as a black three-year-old Shire stallion, out of one of the imported Shire mares, and got by the imported horse Just in Time. The colt won second last spring at Toronto, and Mr. Ficht offers him for sale at a very moderate price.

THE BRIARS.

The residence of Dr. F. C. Sibbald is situated a couple of miles out of the pretty village of Sutton, and on the shores of Lake Simcoe. The farm, which contains some 350 acres of loamy land, has undergone a vast change since coming into its present owner's hands. Previous to that it had been rented, and, as a result, allowed to fall into a very bad state of cultivation. Now, under Dr. Sibbald's energetic management, it has become one of the model farms of North York. The house and grounds are a pattern of neatness and good taste, while the ample barn room shows that every care is exercised for the welfare of the extensive herd of Shorthorns which is maintained at the Briars. At the time of our visit the herd, which numbers some fifty head, was headed by the home-bred bull Duke of Athol 33rd, a very lengthy, deep yearling, dark red in color, got by Duke of Athol 20th, and out of Lady Daraley (18628), by Duke of Athol; dam by Ercildonne, a very handsome cow, and, we were told, a heavy milker. Among the other cows we noticed more especially the red and white cow Lady Constance 5th, a very nice pattern, got by British Hero, and the red cow Crumple Horn, by Ercildonne, a capital type of a dairy Shorthorn, with a well shaped udder and big prominent milk veins. This cow had at foot a very nice bull calf, by the Bow Park bull Butterfly Duke, a grandson of the famous Duke of Clarence 4th. Another

very good cow is Sybul 3rd, a nice roan, whose breeding we did not get. Although the stock is well kept, no pampering is permitted at the Briars, and as a result the young things all look strong and vigorous. Dr. Sibbald has a big crop of calves this year, and we would recommend parties breeding young bulls to look his herd up before buying elsewhere. Besides cattle, we may add, considerable attention is paid to horses at the Briars, and this year there are a number of promising colts of all ages on hand, mostly by the two stallions Veteran, a son of Thorndale 2.22½, and Norland 2.35½, among them a pair of chestnuts by Veteran, three and four years old, sixteen hands high, that are offered for sale.

The Farm.

Growing Spring Wheat.

MR. J. GRAHAM REPLIES TO MR. A. P. KETCHEN.

To the Editor of the FARMER'S ADVOCATE:

Sir,—In your August issue Mr. A. P. Ketchen, in reply to a communication of mine on the cost of the production of spring wheat in this province, made it necessary that I should again address you more particularly on the details of said communication. I notice he observes that I made no allowance for the rent of land nor the marketing of the grain. I was not then, neither am I now, satisfied that either charges should form any part in the labor of production. In reference to plowing, he doubts my ability to plow four acres per day in clay loam soil. Would Mr. Ketchen say that a man, a good plowman, with a single plow turning a furrow twelve inches wide, could not plow two acres per day? I speak from experience, when I say the two-furrow plow will double the single plow, unless it exceeds a twelve-inch furrow. While engaged last fall plowing in a stubble field 135 rods long, I found no difficulty in plowing five acres per day, turning two furrows at a time, each twelve inches wide. My calculation of reaping fourteen acres per day, which "looks beautiful in print" to Mr. Ketchen, is a veritable fact notwithstanding. My experience justifies me in stating that with a six foot binder it can be daily accomplished. I see no force in the argument "that I could not hire a man with a self-binder and three horses to do this amount of work for \$3.00 a day". As a rule, farmers are not depending on having this class of work in a hurried time. Mr. Ketchen, in his reply, selects ten acres of sod for his basis. Was it in the interest of making a fair and impartial showing that he made the selection all of sod, or is this the only kind of land upon which to grow spring wheat? Very doubtful. In his first item I notice a charge of \$4.00 per acre rental. Why charge on the rental and ignore the interest on the capital invested in the real estate, which would be less than \$3.00 per acre. The next item, \$15.00 for plowing ten acres; six days at \$2.50 per day. Well, well; I am sadly disappointed. I thought this whole country was living in an age of improvement; but, alas! I have been greatly mistaken. Why, sir, we could have done this same quantity of plowing with Buck and Bright, and the old pot mettle plow of fifty years ago, in less time. I also notice in the reply particular stress laid on the item of plowing being too low, the result of which kept the total cost per bushel below what it should have shown. On this point I have should have shown. On this point I have to say that on the sod portion, 36 acres, I plowed it twice for \$1.48 per acre, while he only did it once at a cost of \$1.50 per acre, hence the objection falls easily. "Cultivating in the spring, \$3.00." I think this very much re-

sembles a "patch" which was to be avoided. "Sowing, \$3.00." It is not stated whether by hand or machine, but in either case it could only be for a part of a day's work, for the reason that the ordinary seed drill is calculated to cover six feet; then, doubtless, 12 acres is a day's work. "Seed wheat, 20 bushels, at 90 cts. per bushel." Here, at the very least, is five bushels too much seed. I can see no excuse for a farmer making such a blunder. See next item: "Harrowing 10 acres, \$2.50." I suppose intended for a day's work. Now land cultivated before drilling the seed in never gets more than one stroke of the harrows after seeding to smooth off the top of the ground, and sometimes only for the purpose of covering small seeds, if any are sown, but to say \$2.50 for this work of harrowing is absurd. We could have done it with the old crotched drag for less money. Now, the principal harrow in use is the old diamond harrow, of four sections with eighty teeth, covering thirteen feet wide, and has a capacity of about 40 acres per day. According to Mr. Ketchen's figures the use of this harrow would be worth \$10.00 per day. Again, take the item, "\$7.50 for reaping and binding twine." We all know that two pounds of twine, say 25 cts., will bind any ordinary acre of wheat; enough to tie the 10 acres would cost \$2.50. Here is left 50 cts. per acre for cutting, the very identical amount that was formerly paid for cutting wheat with the old cradle—a thing of the past. I am satisfied no farmer would pay this at the present time. Again, take the item of "\$6.00 for hauling in, three men and team one day." Think of the arrangement. Who will say what these men were doing when the team was gone for a load, or were they all marching round the field with forks on their shoulders to the tune of one wagon? Here we must say that by the addition of a second wagon they could have handled 20 acres instead of ten, for they had the men to do it. Regarding the next item, "Threshing one-third day, at \$30.00 per day." It is a fact well known that the cost of a steam thresher is \$10.00, one-third of which is less than \$3.50, allowing for the labor of five men at 50 cts. each for their time (the rate being \$1.50 a day), we have a total cost of \$6.00. The work of those engaged in stacking straw for another purpose should not be considered a part of the cost of production of wheat. I feel compelled to say that I agree with Mr. Ketchen in one thing if in no other, that I object to patchwork. Hence, I will not attempt to put together the little pieces into which his items have been clipped, especially as some of them are so small that they have slipped through my fingers. I have no hesitation in saying, however, that any practical experienced farmer will say my estimate as given in my last letter is pretty accurate, and to those who conduct their business on the old lines and are hindered by lack of experience, observation and enterprise, I have nothing to say.

Straw Sandwich.

The wasteful practice in the West of burning straw to get rid of it should cease, and this product be utilized for all it is worth. As its feeding value is about three-quarters of that of hay, it would be almost as reasonable to burn the latter. A few years ago rather green corn fodder was packed in alternate layers with straw. The fodder kept well and imparted a portion of its aroma to the straw, and stock ate the latter with as much avidity as the former. Similar recent experiments in California in preserving green alfalfa (lucerne) were abundantly successful, and cattle relished both equally well.

As haying occurs before harvesting and threshing, it is suggested that those who have been in the habit of burning their straw, stack it nicely this season, and next year use it in preserving green hay of any kind. Grass thus put up would be preserved in its entirety, instead of losing much of its nutriment by being cured in a burning sun, for unless great care is observed it is permitted to become so dry that the best part (the leaves) shells off and is wasted. This dry silage system would utilize every particle of nutriment in both straws and grass.

Fertilizers and Their Effects on Wheat Tabulated.

The fourth successive crop of wheat has just been harvested from the land devoted to fertilizer tests at the Ohio Experiment Station. The plan of this experiment is briefly as follows:—

Twenty-two plots, of one-tenth acre each, are laid out on a piece of clay land; between these plots, in pairs, tile drains are laid; every third plot is left continuously without manure of any sort, but upon the remaining plots various fertilizing materials are applied each year, either alone or in combination, as shown by the following table. The superphosphate used is dissolved bone-black, and is used in every case at the rate of 320 pounds per acre. Muriate of potash is used at the rate of 80 pounds per acre, and nitrate of soda at the rate of 160 pounds per acre, except on plots 12 and 14, where it is used at the rate of 320 and 480 pounds respectively. Sulphate of ammonia is used on plot 15, in such quantity as to give the same amount of nitrogen as that contained in 160 pounds of nitrate of soda. On plot 17 dissolved Carolina rock is used instead of dissolved bone-black, and on plot 18 Thomas or basic slag is used, the aim being to make these plots comparable with plot 11.

The table gives the yield per acre and increase per acre from each fertilizer:—

Plot No.	Fertilizers.	Yield		Increase	
		Grain.	Straw.	Grain.	Straw.
1	None	26.2	3015	..	..
2	Superphosphate	31.2	4265	4.7	1250
3	Muriate of potash	28.2	3190	1.3	418
4	None	27.2	2650	..	..
5	Nitrate of soda	27.9	2710	0.2	-13
6	Nitrate and superphosphate	28.9	3830	0.8	1033
7	None	28.6	2870	..	..
8	Superphosphate and potash	30.2	3625	1.7	778
9	Nitrate and potash	29.1	2990	0.8	167
10	None	28.1	2900	..	..
11	Superphosphate, potash and nitrate 160	29.1	4390	1.4	1582
12	Superphosphate, potash and nitrate 320	29.2	4360	2.0	1517
13	None	26.8	2825	..	..
14	Superphosphate, potash and nitrate 480	29.2	4235	2.1	1442
15	Superphosphate, potash and ammonia	30.4	3860	3.0	1108
16	None	27.8	2715	..	..
17	Rock phosphate, potash and nitrate	31.1	3720	4.1	1080
18	Slag phosphate, potash and nitrate	31.6	3870	5.4	1325
19	None	25.4	2460	..	..
20	Barnyard manure	25.4	3110	1.1	787
21	Linseed oil-meal	27.5	2835	4.2	648
22	None	22.2	2050	..	..

If we divide plots 1 to 19, inclusive, of this experiment into two groups, those which have received superphosphate and those which have not, we shall have nine plots in the first group and ten in the second. The average yield of the first group is 30.1 bushels of grain and 4,057 pounds of straw per acre, and of the second 27.5 bushels of grain and 2,822 pounds of straw, a difference in favor of the superphosphate plots of 2.6 bushels of grain and 1,250 pounds of straw. The 320 pounds of superphosphate would cost, if bought at \$24.00, \$4; hence wheat would have to bring a dollar a bushel and straw about two dollars and a-half per ton in order that the increase should pay for the fertilizer.

This is on the supposition that all the increase seen is due to the superphosphate, a supposition which the facts will not warrant, as in other seasons in this same series of experiments nitrate of soda has unmistakably produced a greater effect than superphosphate, while last year there was an absolute loss of grain on every plot dressed with superphosphate.

A study of the column showing the increase of straw shows that superphosphate is the prime factor in producing that increase, and this was as plainly shown last year as this. The average yield of the eight unfertilized plots was 26.5 bushels of grain and 2,673 pounds of straw—almost exactly 100 pounds of straw to a bushel of grain. Could we have maintained this proportion of grain to straw on the fertilized plots, the increase on the best plots would have been ten to fifteen bushels per acre, instead of two and a-half bushels, and we confidently expected the increase to reach nearly or quite ten bushels, judging from the appearance before harvest.

This experiment forcibly reinforces the lesson

taught by all the other experiments of this series, which is that reliance upon the eye alone in judging of the effect of a fertilizer is sure to mislead.

Field Drainage.

It is not necessary to dwell upon the fact that farm drainage is a necessity. As an investment it is more certain to pay than any other connected with farm operations, not only a dividend, but, if properly performed, will pay the whole outlay in two or three years, at furthest. Where draining is contemplated there is generally no system laid out before beginning the work—it is simply begun without any prescribed plan, and the results are not so satisfactory as would be the case if a little forethought were brought to bear on the subject.

The best time to drain a field is just previous to its being broken out of sod, when the work can be done with the least possible labor, and the greatest satisfaction. There is less danger of the sides slipping in during wet weather, and, therefore, a greater length of the drain may be left open at once, which will insure a more uniform level the whole length of the drain, one of the chief points to be studied.

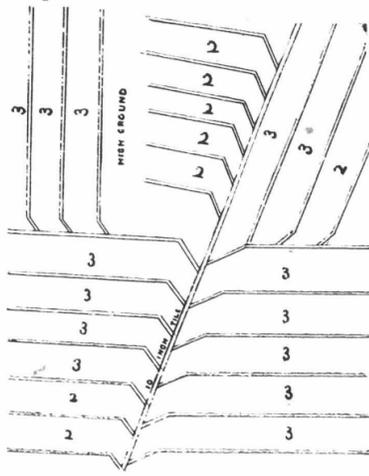
Again, where a drain is cut through sod, especially where the land is heavy, the filling may be left more open over the tile, and is less likely to run together, and thereby a freer access of water is obtained.

There are places where the ground becomes puddled above the drain—water will at times stand right over the drain itself. This often happens after a heavy splash of rain or in continued wet weather. The ground becomes impervious to either water or air, which shows the necessity of insuring an opening over drains by filling them with as porous a substance as possible.

The first requirement that presents itself whenever a system of drainage is to be begun is to lay out a plan of the drains, a map of which should be kept; then should an obstruction in the drain occur it can be more easily discovered.

In order to make a map of the drains, the field fences are the best landmarks which can be used as a basis of measurements, a record of which is to be kept, thus saving an immensity of trouble, if drains have to be inspected for defects.

The same should be done where the lateral drains enter the main, then the difficult task of searching for drains is avoided, and all is plain sailing.



The subjoined diagram will show a plan of laying out an area for drainage, allowing for water beside that which falls in the field to be carried away. In this the laterals are shown to come into the main diagonally, thus the impetus of the water running in the main is increased instead of being partially arrested, as in the case of water coming in at right angles.

The next point is to find out what fall is at command, and the depth of the main drain must be laid out accordingly, the after success depending on the main being laid out on the proper incline, together with the free discharge at mouth.

It is better when practicable to lay out the drains parallel with the boundary of the fields, in order that in heavy rain falls dead furrows may be made to work in conjunction with the tile drains. In the case of heavy tenacious clay this will be found still more necessary, as this land does not become sufficiently porous after tile draining to draw all the waters at the time of a heavy fall of rain directly into the tile, hence the necessity of utilizing what fall may exist on the surface, which we will endeavor to describe more fully further on. The first implement required in laying out drains is a spirit level. In the absence of any better instrument, such as the regular engineer's telescope level, an ordinary carpenter's spirit level may be used by fixing this in a straight-edged board, which should be at least ten feet long to ensure correct work. A pair of light tressels should next be made on which to lay their home-made instrument, and which should be of such a height that the top of the straight-edge should be just three feet from the ground, in order that the after calculations may be more easily made. Now, take your levelling board and tressels to the highest point of your proposed main drain, level them up exactly and take a sight over this to the outlet.

An assistant is required here with a pole on which feet and inches are marked, and a sliding cross head which he moves up and down as he receives directions from the man looking from the level. When the cross head is exactly in line with the straight-edge level a fixed signal is given, and the man holding the pole calculates and marks down the depth on a pin, which is placed in the ground close beside where the proposed drain is to be cut. The man with the pole or staff then moves up the track of the proposed drain, always marking its exact depth in feet and inches on each pin. Where there is only a slight fall these should be placed not more than two rods apart. The fall is calculated and the depth is marked on the pin, as the depth of the drain is calculated from the height of the pole. For example: An outlet will not allow the drain to be more than two feet deep where it discharges. The pole or staff, which should be at least fourteen feet long, is placed at the bottom or level of the outlet, and the fall from where the level stands to the outlet is seven feet. The figures will show thus:—

Height of straight edged level	Feet.	3
Fall from where level stands to surface of the ground at outlet	7	
Depth of drain at outlet	2	
Figures that show on the staff	12	

But the main drain is required to be four feet deep at the upper end, therefore the fall for the bottom of drain is five feet, thus:—

Height shown on staff	Ft.	12
Height of level from ground	Ft.	3
Depth at upper end of proposed drain	4	
	7	
	5	

Amount of fall at command reduced to inches, or one inch to the rod for say sixty rods

You now move up the course of the proposed drain, and at an interval of two rods place the pins with the calculated depth, always subtracting the sum of the height of the level, three feet, and the amount of fall, five feet, less one inch for every rod from the outlet from the figures shown on the pole, thus:—

Figure shown on the pole one rod from outlet	Ft. In.	10	0
Height of level	3	0	
Amount of fall, less one inch	4	11	
Depth of required drain at this point	7	11	

The laterals should be laid out in the same manner, and a hard and fast rule followed as the level indicates, no matter what the surface of the ground may be. If less or more fall is given, you will not have a perfect drain, as the water will run just as your drain is laid out; and wherever there is little fall, there the stream will be sluggish, which tends to clog the drain, and if this should be through a hollow will make it wet instead of dry, as here the water will have a tendency to accumulate.

Weeds.

BY J. HOYES PANTON, M. A., F. R. G. S.
(Continued from page 306.)



Ambrosia artemisiifolia (Ragweed). Fig. 22.

This is a very common weed in the western part of Ontario, and is considered a very serious trouble by many farmers. It bears two kinds of flowers on the same plant, the upper are staminate and the lower pistillate. It is on the lower parts of the branches you find the helmet-shaped seeds. The stem is much branched and the leaves much cut. Being an annual and only a portion of the flowers bearing seeds, this plant should not be difficult to suppress, and certainly must give way to thorough cultivation, and a rotation of crops which will prevent the plants flowering. A good plan is to plow stubble under as early as possible, and make thorough work of fall cultivation.

Ambrosia trifida (Horse Ragweed) resembles the preceding but is much larger, and the leaves usually show 3 to 5 divisions, instead of being much cut as in the former.



Leucanthemum vulgare (Ox-eye Daisy). Fig. 23.
A common weed in many parts. Its large

flowers bordered by white rays, having a yellow disc in the centre, make it easy to identify. It is a perennial with stems one to two feet high, but sometimes bears flowers, when repeatedly cut down, when only a few inches in height. It is a difficult weed to master; the seeds are numerous and possess much vitality; the roots last from year to year, consequently where it once gets a good foothold it is exceedingly difficult to eradicate. The following methods have been adopted to get rid of this plant waif:—

1. Bare fallow; if any appear in the crop sown thereafter, pick by hand when in flower, or spud a short distance below the surface.
2. In case of a field in sod, break it up and sow a corn crop.
3. Handpicking. In doing this, the gathered weeds should not be left to lie upon the ground or thrown in fence corners, for many seeds often develop in this condition.
4. In badly affected places, plough the sod thoroughly and plant a hoed crop, which should be well cultivated. Next year sow and plow in two crops of buckwheat. The third year plant corn. If this is thoroughly cultivated the daisies will be entirely destroyed.

Achillea millefolium (Yarrow).

This perennial occupies a doubtful position in economic botany. By some it is considered a worthless weed, by others a valuable plant in the pasture field. Seedsmen in England sell it among their grass mixtures. Canadians give it no attention, but view it as a weed by the way-side. By some it is considered of medicinal value and is, on that account, frequently gathered for the purpose of making a tea, reputed to have an excellent effect in toning up the system. It grows from one to two feet high; the foliage is much cut, and in spring before the flowers appear bears some resemblance to a fern. When matured it presents a mass of small white flowers, clustered together like the flower of Sweet William. Sometimes the flowers have a purple tinge instead of white. It is seldom seen in cultivated fields, but sometimes grows in fence corners, and in some cases becomes too common on lawns. It has a vigorous rootstock, which, when once established, maintains its hold under very adverse conditions. This weed should be cut in early summer, before the formation of rootstock has begun for its continuance the next season.

Tanacetum vulgare (Tansy).

Another perennial having much resemblance to Yarrow, but bearing a mass of yellow flowers. The foliage is a deep green, and the plants usually grow in groups. As a weed, it seldom proves troublesome. By some it is esteemed for its medicinal value, as a source from which excellent bitters can be made. Horticulturists sometimes apply a strong decoction of it upon cabbages affected with the common green worm. Where it becomes troublesome, it can soon be overcome by cutting and pulling.

Solidago Canadensis (Golden-rod).

This perennial, growing from two to three feet high, is very common in fence corners and newly cleared fields; flowering late in the season, it adorns many places with its golden flowers when all others have gone. The railway track in many places is greatly improved in autumn by the presence of this almost "last rose of summer." Its rich yellow flowers, its location in fence corners, etc., together with its blooming late in the season, serve to recall it to the general reader without a technical description of the plant. It is easily overcome by good tillage in the fields, and by pulling or cutting where it grows in the fence corners.

Much has been said in favor of this plant on account of its affording bees a last opportunity to provide honey for a coming winter. Many voted for it to be the national flower of the United States.

Rudbeckia hirta (Cone Flower).

Resembles the Ox-eye Daisy, but has yellow rays and the centre disc purplish-brown. The plant bears large single heads; leaves, three-ribbed; stem, rough and hairy, somewhat naked above. It sometimes occurs in the hay fields, but is not very common, and being conspicuous can be readily pulled.



Centaurea Cyanus (Blue-bottle). No 24.

A garden plant which has become a weed in the fields. This is the German national flower. It grows about a foot high, bearing blue flowers and presenting a somewhat ragged appearance. The scales beneath the flowers are fringed; leaves linear and stem erect; the heads are single at the ends of the branches. A single plant bears many flowers, which produce innumerable seeds. While blue is the common color of the flowers, still they vary much in color.

C. nigra (Knapweed)

is a variety found in the experimental plots at the O. A. C. It has come in imported seed. The flowers are purple, more compact than the former, something like those of the common thistle, and the scales are almost black. It is a weed in Europe.

Experimental Farm, Agassiz, B. C.

The report of the progress made at this farm is very gratifying. Since the work was begun in August, 1889, 105 acres have been cleared of brush and stumps and brought under cultivation, 26 acres of which have been planted with fruit. Taking into consideration the condition of the land, the crops reported may be considered as very good.

The yield of wheat, barley and oats, sown in successive crops a week apart, for six weeks, seems to show that, as far as these cereals are concerned, there is no special advantage in early sowing in that part of British Columbia. During the early part of last year, when the weather was cold and wet, much of the seed early sown was injured by these unfavorable conditions; a repetition, however, will be needed of such experiments for several years, before any general conclusions can be drawn from them.

There being more than the usual amount of summer heat last year, the season was favorable for corn, and the crop of the heavier yielding sorts ranged from 20 to 28 tons per acre. It is worthy of notice that the corn planted in hills, in nearly every instance, exceeded in weight of crop that sown in rows, showing the great advantage to the plants of plenty of air and light.

The yield of the plots of peas was quite phenomenal. The heaviest crop was given by the Mummy pea, 128 bushels 5 1/4 lbs. per acre; next in order was the Crown, with 116 bushels 15 lbs. per acre, closely followed by the Prince Albert, with 115 bushels and 25 lbs. per acre.

A new fodder plant which has been largely advertised, *Lathyrus Sylvestris Wagneri*, has produced seed quite freely at Agassiz, while at Ottawa it was almost an entire failure in this respect. The vines also made a very strong and

vigorous growth, but Mr. Sharpe was unable to induce either the cattle or horses to eat any of it.

The crops of turnips, mangels, carrots and sugar beets have been excellent, and the heavy weights produced per acre of these succulent, nutritive roots, and the ease with which they can be preserved in that mild climate, is a most encouraging indication of the future possibilities of dairying and stock-raising in British Columbia. The experimental plots of potatoes have also yielded remarkably well. The prevalence of rot in some of the varieties shows the importance of thoroughly testing the sulphate of copper as a remedy, which is now being so extensively used in Europe for this disease.

The results of the planting of fruits have been most encouraging. The growth of the trees has been very luxuriant, and it is expected that a large number of the varieties planted will bear fruit during the coming season. The future prospects for fruit production in that province are very bright, and no effort will be spared in the endeavor to make the testing grounds at the Experimental Farm as useful as possible to the settlers. From the particulars given by the superintendent in his report, it will be seen that examples of every promising sort which could be obtained are under trial there.—[From the annual report of Prof. Saunders, director Dominion Experimental Farms.

The Coast of British Columbia.

To the Editor of the FARMER'S ADVOCATE.

Everyone who knows anything of Canada knows that British Columbia possesses, in the Fraser River valley, lands as rich and productive as any in the world; and no one who is acquainted with the nature of that country is surprised at the fact that such land is held at prices which seem high to the uninitiated. But it is the knowledge that such land is held at prices which are not within the reach of the ordinary farmer that has deterred many who would otherwise be inclined to emigrate to a country where the severe winters of Eastern Canada are unknown, from making a move westward. Some of your readers will, therefore, be surprised probably, and certainly those who would be glad to avoid the rigor of eastern winters will be pleased, to know that only the heavy timbered lands close to the cities are held at what I consider exorbitant prices, and that the lands on the mainland and the islands of the coast of the province are being proved to possess the same fertility, and are equally susceptible to profitable cultivation as those in the valley of the Fraser, or south of the international boundary; and the fact that intending settlers who passed through British Columbia and went into the States looking for cheaper lands have returned, and are returning to locate in the province, speaks volumes for the outlook. In evidence of the above the names of George Simpson and Messrs. A. and J. Mowatt, of Aberdeenshire, Scotland, will suffice to prove our assertion. The above parties are located at Langly, on lands purchased from Messrs. T. Prest & Co., Langly and Vancouver, B. C. After a residence of eight months in the State of Washington they were glad to locate in Langly, where they now are in a flourishing condition. Messrs. Gregory & Co., real estate agents, Vancouver, have located several, and have enquiries from others south of the line. For fruit raising and mixed farming these lands have been well tested. The result is gratifying even beyond the most sanguine expectations, and in view of the fact that nearly all the fruit, and a great proportion of all farm products are now being imported into the province from Eastern Canada, Oregon, and California, it is clear that a good market is ready to hand for those who settle here, and the prices at which these lands can be bought place them within reach. Messrs. MacKinnon & Co., of Vancouver, B. C., offer land in choice locations on the water front at prices which are but a slight advance on those charged by the government to actual purchasers.

Yours,
W. FERGUSON.

Vancouver, B. C.

Garden and Orchard.

Our Flower Garden.

BY J. W. HUNTER.

Those who desire a show of what is known as Holland bulbs in the spring must secure the bulbs and plants in the autumn. Thousands when they see a fine display of hyacinths and tulips in the gardens of their neighbors in the early spring, resolve to have at least a few next year, but the matter is forgotten until the spring's flowers remind them of their neglect. They then often write to the seedsman for bulbs, and almost feel injured and scold because they cannot get them. Everybody worthy of a home strives to make it pleasant and cheerful. This is necessary at all seasons of the year, but particularly the tedious and long evenings of our Canadian winters. Nothing will aid in this desirable work so easily, cheaply and effectually as flowers. They are a constant, and yet ever changing, source of delight; every day presents new leaves and buds and blossoms, and new forms of loveliness, and we look and wonder and admire. A little skill and knowledge is necessary for the management of house plants, and with these, as with all other things, success is necessary to enjoyment.

In the garden there are usually a few plants that may be taken up and potted.

The ivy Madeira Vine and *Cabaca Scandens* are graceful climbers, and will bear almost any amount of bad treatment.



PARROT OR DRAGON TULIP.

Tuberose that have not bloomed in the garden and are showing flower stems may be taken up and potted, and will flower in early winter. The Ten Weeks Stocks is a fine winter bloomer, and can be treated in the same way. A pot of Mignonette costs but a few cents, and not many expensive plants will afford as much pleasure. Sow the seeds in September or October, and it is as well to prepare two or three pots. The Sweet Alyssum, treated as advised for Mignonette, will also please. The Brownelia is also an excellent winter flower. A few larger plants are desirable, and the Calla, Drocarina and Begonia are very patient under almost any kind of treatment. The Hyacinth is the most beautiful and fragrant and popular of all bulbs, and seems particularly adapted for house culture. It is cultivated in every northern country in the world, where it does more than any other flower to make winter cheerful. A very small pot will answer for the Hyacinth. Fill the pot with sandy, porous soil; make a space in the soil for the bulb so that it will be about half below the earth, then press it down, so that it will just show its upper surface above the soil; then water, giving all the earth will hold. The pots can now be set away in a cool, dark place for from four to six weeks, when they are ready to bring into the room, which should not be more than a temperature of 70 degrees.

For *Glasses* the base of the bulb should just touch the water, and set away until the roots of the Hyacinth touches the bottom of the glass; then bring to the light.

For the Garden.—Plant in the garden from three to four inches deep, and in ground not likely to be much affected by freezing and thawing; be sure and give a good covering before severe frosts. When the bulbs are done flowering other plants can be put in between, such as some small annual—Phlox, Verbena, etc.

The Tulip is so perfectly hardy, flourishes so well under the most ordinary care, and is so varied and brilliant that it never fails to give the greatest satisfaction. Nothing in the floral world can equal the dazzling brilliancy of a bed of tulips. Any good garden soil will do for the Tulip. A very rich soil is not necessary, though well rotted manure, rotted sods or leaf mould may be applied when the earth is poor. Plant about six inches apart and three inches deep. See that the drainage is good before planting.

The Narcissus is a very fine, early blooming flower, including the well known Daffodil and Jonquil. They may remain in the ground a number of years, after which they will become so matted together as to make a division of them necessary.

The single varieties are extremely hardy. The double ones are much prized, and the common Daffodil is well known under that name, though not so well by its true one, Van Sion.

The Colchicum or Autumn Crocus is a curious and interesting flower. The leaves appear in the spring, and the flowers in the autumn, and the seed the next midsummer. This singular habit makes the flower very interesting both to the botanist and florist. The bulbs are perfectly hardy. Each bulb gives quite a cluster of flowers, generally six or eight, and so persistent is it in its determination to flower that if taken up in the autumn before time for flowering and placed in a pot or basket it will bloom just as well as if left in the ground.

Snowdrops.—The first flower of spring is the delicate Snowdrop—white as snow. Its appearance about the first of March is a joyful surprise. The leaves and flowers are about six inches high, and if planted in beds or masses of about a dozen or more they are very beautiful. They can be planted in the lawn, as mowing will not destroy, for they have flowered and the leaves are ripe before the grass needs cutting.

Crocus can be planted in the same way.

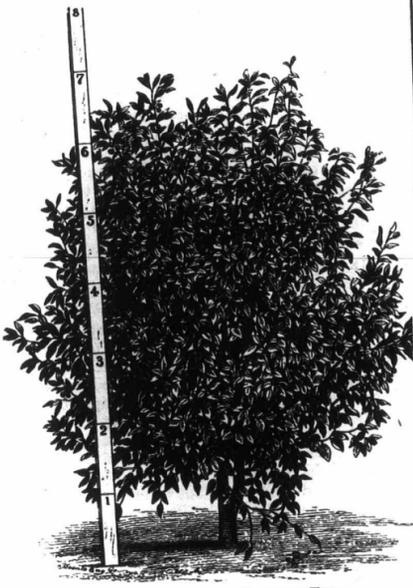
Scilla—About the same time as the Crocus the pretty little Scilla may be seen throwing up a cluster of flowers of the most intense blue imaginable. The flower stem is about four inches, and it is just the flower that everybody craves for the buttonhole. No bulb is more hardy or more competent to take care of itself.

The list of hardy bulbs will be continued in next number.

Hardy Cherries—1.

BY JOHN CRAIG, HORTICULTURIST CENTRAL EXPERIMENTAL FARM, OTTAWA.

The original home of the cherry is in Asia. The Romans are credited with bringing it to Italy, and thence to England. Our cultivated varieties have arisen from two original forms, the one tall growing, now sprouting (*prunus avium*) bird cherry, the other more shrubby and throwing up suckers or sprouts. The first of these is the parent of the black and white varieties; more or less sweet; known as Hearts & Bigarreaus. The second is the parent of the red cherries; more or less sour; now known as belonging to the Morello class. Seeds of both of these were brought from Holland and England to New England by the early colonists. The two families have become so intercrossed lately that in many cases it is now impossible to distinguish their descendants. Among other things for which Ireland is noted are its cherry trees of great size. One near Dublin is said to have a circumference of nineteen feet and a height of eighty-five feet. Mr. Gibb, speaking of cherry growing in East Europe, says: "There is a district in Russia where cherry growing is the industry of the population. It is in the



HARDY DWARF CHERRY TREE.
(From a Photograph.)

Province of Vladimir, between Moscow and Nigni-novgorod, where the winter temperature is about three degrees colder than the City of Quebec. The little trees only grow three feet high. So extensively are the cherries cultivated that they are shipped by the carload in all directions, and I am told that entire trains have been loaded with this one product."

The natural distribution of the wild representatives of both classes, the Hearts and Morellos, seems much the same, though the cultivated representatives of the latter have a much wider distribution in northern and eastern Europe at the present time. This class seems to have had a greater climatic adaptability than their tenderer relatives, the Hearts, and to have gradually worked northward and eastward till they have become common roadside trees in Poland and Central Russia. Before reaching this northern latitude they have become, however, specialized forms, differing materially from our west European types. The west European Morellos, which in ordinary or average seasons have been fairly successful south of the forty-third parallel, in the somewhat dry western and middle States, and further north in the moister, though colder, portions of Canada, have in late years, from one cause or another, as, in the west, injury from winter and black knot, and bark bursting in the east, been dying so rapidly and giving such poor returns as to compel the thoughtful planter to look for varieties more suited to the vicissitudes of our northern climates.

Within a few years several varieties, as instances Ostheim and Wragg, have been brought into notice as having special qualifications in the way of hardiness and adaptability to climate. As far as we can learn, these varieties have been "incidental seedlings from east Europe importations, and to have inherited their hardiness from typical varieties of those regions." The result of investigation is that several importations followed, being special and personal selections made by Prof. J. L. Budd, of the Iowa Agricultural College, and Mr. Charles Gibb, of Abbotsford, Que., in 1883-4. These introductions comprise about forty varieties. From five years of personal observation, and from reports received from widely-separated sources, I am led to believe that we shall find among them many adapted to the more trying districts of Quebec and Ontario, and the milder portions of the Northwest. But should our success be only partial with the originals, we can still use them as stepping stones to something better, by means of crossing and selection, and this line of advance is taking a prominent place in the horticultural work of the farm.

Experiments in Tree Planting at the Central Experimental Farm.

BY WM. SAUNDERS, DIRECTOR.

In the spring of 1888 some experimental work in tree planting was planned on the Central Experimental Farm, and the work begun. It was decided to plant a belt of forest trees, extending across the western boundary, consisting of a row of native linden or basswood six feet from the fence line and forty feet apart; and beginning at a distance of twelve feet east of the lindens, to plant ten rows of trees five feet apart each way, followed by ten rows ten feet apart, making in all a belt of about 160 feet in width. In this belt all the trees were to be planted in clumps, differing in form and size, so as to break the monotony which would attach to more regular groups, and by a judicious mixture of evergreen with deciduous trees to make the belt attractive at all seasons of the year.

Since differences of opinion exist as to the relative advantages of planting trees in mixed clumps as compared with groups composed of one variety only, a second belt was arranged for, about sixty feet wide, to be planted along the entire northern boundary of the farm, the rows to be ten feet apart, with the trees five feet apart in the rows.

In the spring of 1888 two mixed clumps were planted along the north line, containing 1321 trees, while about 1500 were put out in clumps on the western boundary, the latter consisting of Scotch Pine, Black Walnut, Butternut, Oak and European Larch. In 1889 the number of trees in the belts was increased to 8283 in all; in 1890 the belt on the western boundary was completed, and large additions made to the mixed planting on the northern limit. This latter was still further extended during the seasons of 1891 and 1892, and it is intended, if possible, to complete it within another year. The mixed belt includes most of the more useful, hardy sorts of trees from all parts of the world.

The objects in view in the experiments in tree planting referred to were to gain as much information as possible as to the relative growth of different sorts of timber trees in this district; to test the relative advantages of planting in mixed clumps as compared with groups where one sort only was used; also to ascertain the results of planting five feet apart each way with one variety as compared with ten feet apart, and to compare the results obtained from mixed planting in rows ten feet by five with the two former methods. The information being gained by these experiments will no doubt prove very valuable to those who may desire in future to undertake the growth of forest belts or groups, either for timber, shelter or ornament, and will furnish ocular demonstration as to the most rapid growing and valuable trees for the purpose.

In the clumps of single varieties of trees on the western boundary, it is clearly shown that those planted five feet apart each way have made a more vigorous and rapid growth than the same varieties planted ten feet apart, demonstrating the advantage of close planting. Observations on the relative growth of the trees in the mixed clumps as compared with the groups of one sort have not been continued long enough to admit of very positive opinions being given, but from the very thrifty growth of some of the earlier planted groups of this series I think that the close planting of mixed trees will give the best results.

These tree belts, from their extensive and varied character, will soon become a very attractive feature in connection with the farm work, forming a beautiful background to the cultivated fields, and will in the course of time excellent wind-breaks.

Rochester Star Nurseries.

Attention is directed to the advertisement in another column of the "Rochester Star Nurseries" (Thomas W. Bowman, Proprietor), of Rochester, N. Y., and Peterborough, Ont. This firm is anxious to secure the services of good, reliable men to represent them in the sale of their goods in Manitoba, Ontario, and Quebec. They offer superior inducements, in the quality of their goods, and in their system of doing business. Long experience, energy and capital place this firm in the front ranks of the nursery business. Purchasers of large lots of nursery goods should consult them before ordering. They employ men to act as local representatives, and give special inducements to those who will give their whole time and attention to the business, with exclusive control of as much territory as can be handled. The goods which this firm place in the hands of their customers are guaranteed to be first-class and true to name. Every order received gets the best possible attention, and satisfaction is guaranteed. Energy, experience and capital are combined to produce the best possible results in handling this class of goods. Fruit raising in our Dominion is becoming one of the leading industries, and is attracting the attention of our best men. The business is honorable, legitimate, elevating, and profitable. Drop a postal card, addressed to Thomas W. Bowman, Peterborough, Ont., asking for terms to salesmen, and you will receive a reply by return of mail.

Apple Packing for the Old Country Market.

First of all the apples must be picked most carefully, no careless hands being allowed in the orchard. The fruit ought to be treated like eggs from start to finish, except in the matter of pressing them in the barrel, which treatment, of course, eggs would not stand. Some pick and barrel in the orchard, but if you have room I think it to be a better plan to pick into barrels, empty in the barn and pack there. I have three sugar barrels on a stone-boat drawn by one horse, and a spare barrel for the men to pick into while I draw and empty into the barn. The apples are emptied gently into these barrels from baskets. There are two advantages in this plan over barrelling in the orchard:

Firstly, your fruit does not ripen so much in the barn under cover as it will if exposed to the sun and the weather, especially if you begin picking on the early side, as those who have large orchards are compelled to do.

Secondly, you are independent of the weather, for if it be wet or very cold you can go on packing with comfort in the barn. Let us suppose that you are going to pack in the barn. For Old Country market use only good, sound, new barrels, made by some reliable maker, and, if possible, purchase them early and have them stored under cover some time before you begin to pack. Have a two-inch plank not very wide to place your barrel on that is about to be packed, so that the ends of the press can easily grip the sides of the barrel. I should certainly recommend a lever in preference to a screw press. It is unnecessary to describe one here, they are so well known. Any blacksmith will make one for about two dollars, or a handy man can make one for himself. First of all, then, the barrel must be prepared before an apple is laid in it. The bottom should be fastened with two slips across the ends of the quarter heads nailed firmly with inch and a quarter clout nails, or same length iron nails. I generally use willow slips, some use apple shoots, and others barrel hooping—any of these will do. Use a wooden mallet for driving the hoops down, as well as for hammering the quarter heads. Then the second and third hoops should be nailed and clinched inside the barrel, which must then be reversed, the third hoop knocked gently tight and nailed, the head taken off and the two top hoops knocked down a little.

It is then ready for the fruit. Lay the bottom course all by hand with the stems down, fitting each apple into its place, select well colored specimens of even size, and remember that the bottom of your barrel is to become the top when finished. The rest of the barrel can

be packed by emptying the baskets one by one into it. Only remember after each basket is emptied to give the barrel a shake; this is most important, for no matter how well packed the barrel may be in other respects, if this item is neglected the result will probably be a "slack."

When your barrel is filled a little above the top, smooth down a little by hand, take the top hoop entirely off, knocking the second hoop up as far as it will go without coming off, and lay the lead on the top of the fruit, then fix the ends of your press on the bottom of the barrel and press firmly down, shaping the head into place with your mallet, then stand on the press and force the head well down; do not be afraid to use a considerable amount of force for this purpose. See that the head is evenly down to the rim, then knock down hoop No. 2 as far as it will go, nail on two slips across the quarter heads; take the press off and put on hoop No. 1, nail it, reverse the barrel, brand it with your brand and the variety of apples, and the deed is done. If properly done you ought to be able to kick your barrel all around your farm without an apple moving; if not, your barrel runs the risk of being returned "a slack." I would also earnestly impress upon farmers and fruit-growers the vital importance of honest packing.

Let No. 1's be No. 1's in very truth, and let no wormy or mishapen fruit be allowed to get in on any pretext. It is folly to send such fruit to the Old Country, they do not want it there; and if you do send such, the pecuniary result will not tempt you to repeat the experiment. Except in years when apples are very scarce, I think it is a mistake to send second-class fruit to any market except, perhaps, to the open market in Canadian cities, where they always seem to want cheap fruit, and are not consequently very particular as to quality. Far better keep the seconds at home, and either dry them yourself or take to a drying factory, if one be in your neighborhood, or else make cider of them, or feed them to stock; they are excellent food for pigs, milch cows, fattening steers and horses, if fed judiciously, as I know from experience, having fed them for years to all kinds of stock with good results. We cannot be too particular about the quality of fruit we send to market, especially to the Old Country market; at present our name as regards apples stands high there.

Entomology.

Injurious Insects—No. 7.

BY JAMES FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA, ONT.

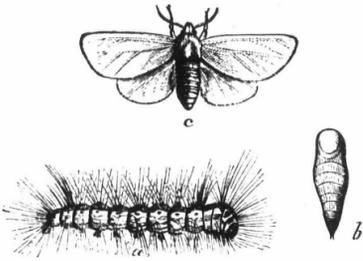


FIG. 1.

1. THE FALL WEB-WORM (*Hyphantria cunea*).

The unusual abundance this season of the webs of the caterpillar figured above is attracting attention in many parts of Ontario. The Fall Web-Worm is one of the greatest pests we have to contend with in orchards and on shade trees. The moth (Fig. 1 c), which in the northern form, as it occurs in Canada, is pure white, with gray feelers, yellow front thighs and dark feet, appears in July and lays its eggs upon the leaves of a great many different kinds of trees and shrubs, and also sometimes upon herbaceous plants. The eggs are laid in clusters composed of a large number, and are more or less hidden

by a loose covering formed by the female of her own scales. They soon hatch, and the young caterpillars at once begin to spin a protecting web. They are pale yellow at first, with black heads and two rows of black spots along the body. The whole body is covered with slender hairs. When small they eat only the upper surface of the leaves, skeletonizing them. They grow rapidly, enlarging the web as they develop, and remain under its protection until almost full grown. These webs frequently cover from three to five feet of a branch, and the caterpillars, having destroyed all the foliage, leave instead their unsightly web filled with masses of excrement. These webs first appear in July, and are at all times conspicuous objects. From the social habits of the caterpillars a whole colony can be easily cut off and destroyed at once. When the caterpillars are full-grown they are about an inch long, and they vary very much in the colour of their markings and hairs. The head is black, and there is a broad dark stripe down the back. Along each side there is a yellow stripe, dotted with black. The long, soft hairs which cover the whole body arise from orange or black tubercles. When the caterpillars are almost full-grown they give up their social habits and scatter in all directions, to continue their depredations upon almost any plant they meet with. They pass the winter in the chrysalis state within slight cocoons, which they spin either amongst fallen leaves, in crevices of bark, or a short distance beneath the surface of the ground, where they remain until the following summer.

Remedy.—Cutting off the webs and trampling the caterpillars under foot is a sure remedy. When the webs are too high to be reached, a sponge saturated with coal oil and tied to a light pole may be used to burn them out. Showering foliage with Paris green in the vicinity of the nests also answers the purpose of destroying the caterpillars; but the webs will afterwards have to be removed, or they will remain on the trees as unsightly objects through the winter.



FIG. 2.



3.

2. THE BEAUTIFUL WOOD NYMPH (*Eudryas grata*).

There are few of our Canadian moths more beautiful than the one shown at Fig. 3. The upper wings are creamy white, bordered widely with rich seal brown, which is marked with fine white lines. The outer margin is bordered inside with deep green. The lower wings are deep yellow, bordered with the same rich brown as the upper wings. The head is black and there is a wide black stripe running down the middle of the back. The shoulder-covers are pure white, and the sides of the body deep yellow ornamented with black spots. The moth appears in June and July and flies actively at night, but during the day rests, frequently in full view on the top of a leaf. The forelegs are tufted with white hairs, and are extended in front of the body. When at rest, strange as it may seem, this lovely moth resembles so closely a large drooping of some bird on a leaf as to have been frequently overlooked as such by casual observers. The caterpillar (Fig. 2), which is frequently very destructive to the foliage of grape vines and Virginian creepers during August and September, is a very gaily colored creature. The

body is smooth, of a pale bluish tint, crossed by bands of orange dotted with black points and many fine lines of black. The head is orange. These caterpillars are most voracious feeders, and when occurring upon Virginian creepers these latter should be showered with Paris green and water as soon as the insects are observed. Upon grape vines it will be safer, owing to the advanced condition of the fruit when they appear, to remove them by hand-picking. When full-grown the caterpillars fall to the earth and turn to dull brown, rough chrysalides, either under rubbish or a short distance below the surface of the soil.

3. THE WHEAT-STEM MAGGOT (*Meromyza Americana*).

Some time before wheat, barley and some grasses should be ripe, the ear and the top joint of many stems in the fields may be seen to have turned white. This effect is known in some districts as "Silver-top," and is caused by a small green maggot inside the stem having eaten away the base of the top joint and cut off the supply of sap. When full-fed this maggot is about a quarter of an inch in length, pointed at one end and having black horny mouth parts. It pupates inside the stem, but before changing to this state it usually works its way up to the upper portion of the sheath. The perfect fly of this brood emerges about the end of July and during August, and there are three broods in the year. The flies are active little greenish-yellow flies, one-fifth of an inch in length, with shining green eyes, and three dark stripes extending down the back. The hind thighs are much thickened. Soon after emerging the sexes pair, and the eggs for another brood are laid on volunteer grain growing on stubble and on the root shoots of various grasses. The flies of this second brood emerge late in September, and the eggs of an autumn or third brood are laid on young winter wheat and on the shoots of grasses. The flies from this brood do not appear until the end of May and in June the next year. This brood lays eggs either in the root shoots or on the leaves of the stems of wheat and barley, and the young maggots work their way down into the centre of the shoots and destroy them. In the latter case the terminal joint is injured at the base and the "Silver-top" is produced.

Remedies.—1. The picking by hand and burning of the whitened ears early in July before the flies emerge. 2. Harrowing the stubble directly the grain is cut would start an early crop of volunteer wheat or barley, in which the second brood would oviposit, or the planting for the purpose a strip of wheat near infested fields to be ploughed in during August would destroy large numbers of the half-grown maggots. 3. The last brood, like the Hessian Fly, lays its eggs on fall wheat. If, therefore, the sowing of fall wheat be delayed until after the 25th September, it would not come up until after all the perfect insects of the last brood had disappeared.

THE HORN FLY (*Hematobia serrata*).

A new pest has unfortunately appeared in Canada in the shape of a serious cattle pest. On 30th July Mr. Elmer Lick, of Oshawa, sent me specimens of the Horn Fly which has been giving so much trouble in the United States. This is a small fly one-third the size of the ordinary house fly, the bite of which is most irritating to cattle. There is no doubt that it will be found in many places before long. [Note.—It has since been found, as recorded in the Globe, at Toronto and London, and I have received specimens from Quebec and Ottawa—J.F.] I shall treat it at length next month; but in the meantime would mention that the remedies which have been found most successful in the United States are smearing the bodies of cattle with kerosene emulsion, or with fish oil or other grease, to which a little carbolic acid has been added, and the spreading out, so that they dry up quickly, all cattle droppings in which the eggs are deposited and in which the maggots breed, but can live there only while the droppings are in a semi-fluid state. The name Horn Fly is given to this insect from their habit of congregating especially on the horns of cattle but they only breed in the droppings.

Dairy.

Cream Separators—Their History and Use.

BY W. J. PALMER, AGRICULTURAL COLLEGE, GUELPH.

Milk when freshly drawn from the cow is a thin emulsion of butter fat in a watery solution of albuminous matter, milk sugar and mineral matter, having an average specific gravity of 1.032, water being taken as 1.000. Under the microscope it appears as a clear liquid in which an immense number of fat globules are suspended. The object in butter-making is to remove these fat globules as thoroughly as possible from the watery solution in which they are suspended, and by the process of churning and working to mass them together, forming what is known as butter. That process, therefore, whether it be natural or mechanical, which separates the fat globules most efficiently, will be the more generally adopted sooner or later by those who wish to obtain the greatest possible results from their creameries or dairies.

If new milk be allowed to stand quietly for a time the fat globules, together with a certain amount of the milk serum, will gradually separate from the skim-milk, and raising to the surface constitute what is called cream. This separation is due to the relative difference in the specific gravities of the fat globules and the skim-milk, that of the former being about .930, and of the latter about 1.036. Any means whereby this difference in specific gravity is increased will cause a more rapid and thorough separation; thus by warming milk up to a certain temperature the fat globules expand first, and becoming lighter rapidly raise to the surface.

Centrifugal force applied to cream separation is simply another method by which to increase the tendency of the two parts of the milk to separate on account of the difference in specific gravities. In the modern separators this method has been so perfected that the force applied is a thousand times more active than any design yet proposed, or that probably ever will be proposed. Machines can be procured now with a capacity of from 2,000 to 3,000 pounds of milk per hour, which under good management causes such a complete separation of the cream, that it is hard to find even a trace of fat in the skim-milk. When we consider the tremendous rate at which the bowls of the machines revolve, (over three miles per minute), we can realize to a small extent the enormous force which is brought to bear on the fat globules and milk serum respectively.

The development of this process of mechanical cream separation may be divided into three distinct stages: 1. The pail machines; 2. The drum centrifuge; 3. The continuous separators.

THE PAIL MACHINE.

Probably the first to suggest the centrifugal method as an agency in separating cream was Prof. Frichs, of Germany, who in 1859 suggested the use of swinging test tubes to determine the richness of samples of milk. In 1870 the Rev. H. F. Bond, of Northboro, Mass., invented a small crude hand machine, which separated cream in one hour. This consisted of two glass jars attached to a spindle, which made about 200 revolutions per minute. Later, in 1873, Mr. Jensen, of Denmark, built a machine consisting of two pails suspended at the ends of a horizontal

revolving stick. These pails made but 400 revolutions per minute, and did not give a very encouraging yield though the cream was of good quality. But it was left for Mr. Lefeldt, of the firm of Lefeldt & Lentsch, manufacturers of dairy apparatus at Schrevingew, Brunswick, to produce the first large centrifugal creamer, which he exhibited at the Bremen International Agricultural Fair in 1874. This machine, a cut of which is given below (fig. 1), consisted of a strong vertical pulley, which, by means of a transmission of pulleys and belts, was made to revolve at from 600 to 700 revolutions per minute. At the

Lefeldt, of Brunswick, mentioned before. This gentleman brought out his second machine in March, 1877. As shown below (fig. 2), it resembled somewhat in appearance the Danish Western used at the present time, but Mr. Lefeldt's machine had to be stopped, and the skim-milk and cream removed separately.

At the close of '77 Messrs. Lefeldt & Lentsch put four machines of this description on the market with prices as follows:—

No. 0 for 110 lbs. milk.	\$230 00
" 1 " 230 " "	300 00
" 2 " 440 " "	600 00
" 3 " 600 " "	750 00

In the same year they established the first practical centrifugal working creamery at Keil, Holstein, where four machines were soon running. To this firm belongs the honor of constructing the first practical centrifugal creamer (fig. 1), and also of constructing the first machine of the kind ever practically used in a creamery for any length of time (fig. 2). Soon after the establishment of the Keil creamery another important improvement was added, namely, an arrangement whereby the cream could be removed while the machine was in motion as shown in fig. 3.

(3) CONTINUOUS SEPARATORS.

Already at an early stage in the system attention had been directed to the desirability of perfecting the machines so that the milk could be separated continuously without stopping to remove the cream or skim-milk. Approaches toward continuous running were made by Winstrup drawing the skim-milk, and Lefeldt & Lentsch removing the cream without stopping, but none of these machines were in action perfectly continuous. In one the supply of new milk had to be stopped while removing the cream, in the other while removing the skim-milk. In October '77 Messrs. Houston & Thomson, of Philadelphia, applied for a patent for the continuous separators of new milk. This patent was allowed and issued, bearing date April 3rd, '81. In '78 and '79 two new continuous separators appeared in Scantania, namely, the Nelson & Pitson and the De Leval separators, the former a Danish, the latter a Swedish invention. These machines brought the system into its third stage, and were soon followed by others all built on the same principal, but differing in matters of detail. The process of modern centrifugal cream separation is about as follows: As the milk enters the rapidly revolving bowl the centrifugal action causes the lighter cream to gather in the centre and at the top, while the heavier portion of the volume—the skim-milk—is forced to the outside. This being the case it only needs some additional outside power to force it out of the drum. This is provided by the constant stream of new milk. The result is that the skim-milk is forced through a tube to an outer chamber from which it escapes by a pipe. As the new milk enters and is skimmed the enlarged volume of cream likewise demands an outlet, for it cannot get to the periphery of the bowl, nor escape with the skim-milk, hence it is forced up and through a special tube into a chamber from which it escapes by a pipe resembling that for carrying the skim-milk.

Since the introduction of cream separators into America a great change has come about in creamery and dairy practise. Creameries in the States managed under the cream gathering plan, are now looked upon as relics of by-gone days. In nearly all the creameries

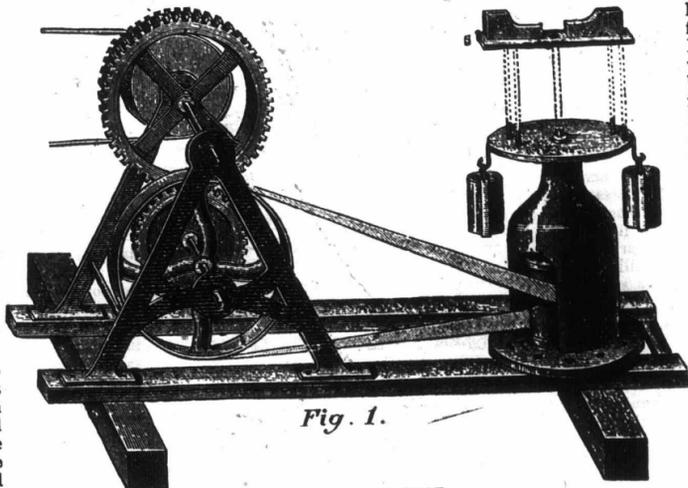


Fig. 1.

LEFELDT'S MACHINE.

top of this pulley a strong wooden desk was fixed, having at its penphiny hooks for the support of heavily built milk pails. A frame could also be attached to the table to support two shoe shaped vessels one opposite the other.

By revolving these pails at from 600 to 700 revolutions per minute the cream was separated and could be removed after stopping the machine. In this machine the first series of experiments, with a view of separating cream by centrifugal force, culminated. The possibility of a new system was settled, but an entirely new shape of machine had to be adopted before further improvements could be made.

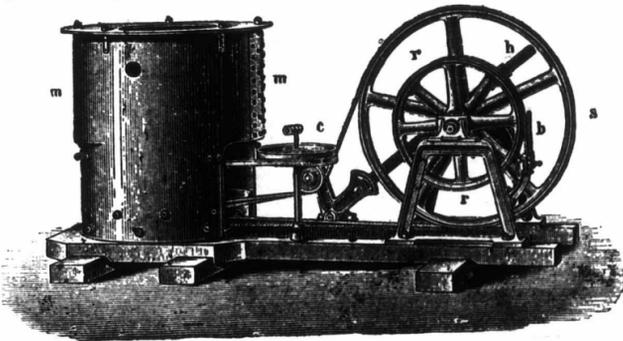


Fig. 2.

LEFELDT'S MACHINE.

(2) THE DRUM CENTRIFUGE.

In July 1876 Mr. Winstrup, a noted engineer of Denmark, brought out a machine resembling in shape the common centrifugal hydro extractor for drying sugar, paints, etc., namely a vertical cylinder or drum revolving round its own axis; the walls were solid, however, not perforated. This drum was so arranged that the skim-milk could be drawn off while the machine was in motion; the drum was then stopped when the cream was removed and new milk added as before. This machine, in one feature especially, was a forerunner of all the modern machines, namely, in its "single centrifugal chamber." The next machine to appear was that of Mr.

in the different states, one or more separators are in constant use. The Danish Western, Alpha and Alexandria, are probably the most generally used, though several new machines have lately been put on the market, which do their work well. In creameries run on this plan the new milk is hauled by the patrons, and the skim-milk and buttermilk taken back in the same cans. From ten to twenty per cent. cream is removed, which is ripened and then churned.

In many private dairies also the hand separators, such as "Baby De Laval" and the "Alexandria" have been introduced with the result that a much larger amount of butter has been obtained from the same quantity of milk, owing to the more perfect separation of the fat. The main advantages of this system over that of any other method of separating cream from milk are:—

1. A MORE PERFECT SEPARATION OF THE CREAM AND, IF IT IS HANDLED PROPERLY, A CORRESPONDING LARGER YIELD OF BUTTER.

Even in the spring, taking any average herd of fresh calved cows, no method of gravity creaming will remove the fat from the milk as thoroughly as one of the best cream separators if run as directed, while in the autumn or winter there is always more or less loss in the skim-milk in any system of gravity creaming, but the separator removes the fat almost completely.

2. THE REMOVAL OF IMPURITIES FROM THE MILK.

However cleanly and carefully the milking be done, and however carefully the milk be strained there will always be a certain amount of dirt and foreign matter remain. This is all removed in the process of separation, and sticks to the inside of the drum in the form of a slimy, dark colored mass which often amounts to as much as one-tenth of one per cent. of the weight of the new milk. If any body doubts the fact, let him examine the inside of the drum of a large separator after it has been running for an hour or so, and his eyes will be considerably opened; he will see a mass from one-sixteenth to one-eighth inch thick somewhat resembling a thin sheet of putty. One analysis of this slimy material showed it to be composed of water, 67.38 per cent.; fat, 3.25 per cent.; ash, 3.88 per cent.; albuminoids, 25.48 per cent.

Dr. Babcock, of the Wisconsin Experiment Station, found that this albuminoid matter on the inside of the drum was largely lactofibrin (similar to fibrin in blood) which entangles the fat globules and hinders their rising to the surface in gravity creaming, or of massing together in the churn. Thus the cream from the separator is pure, all foreign matter is removed as well as albuminoid matter (fibrin), which would hinder the churning process, and a purer and cleaner butter can be made.

3. THE SMALL AMOUNT OF SPACE REQUIRED TO RUN THE MACHINE.

When large amounts of milk are handled a great deal of space is required in which to set the cans or pans; this is done away with when a separator is used.

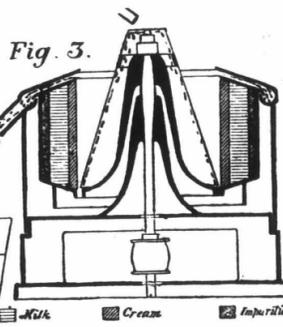
STYLES OF SEPARATORS.

As mentioned above, the three styles of separators most generally used in America are the Danish Western, Alpha and Alexandria, while the "butter extractor" (for making butter from fresh, new milk) is also used as a separator. The Russian Sharples, a new machine patented in '92, has lately been introduced; it is run by steam instead of belt power, a jet of steam striking the side of the bowl causes it to revolve rapidly. The capacity of this machine is from about 800 to 3,000 pounds per

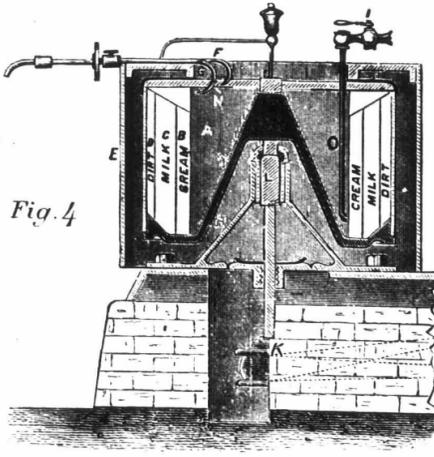
hour. The Danish Western, a sectional cut of which is given below (fig. 4.) is one of the oldest machines on the market, and is in very general use. It is a clean skimmer when well handled, though it is apt to partially churn the cream under careless management. The capacity of the largest size (twenty-five inch bowl) is rated at 2,500 pounds milk per hour, but it will hardly skim this amount perfectly.

O—The tube through which the milk is fed to the drum. G—The cream tube. F—Skim-milk tube.

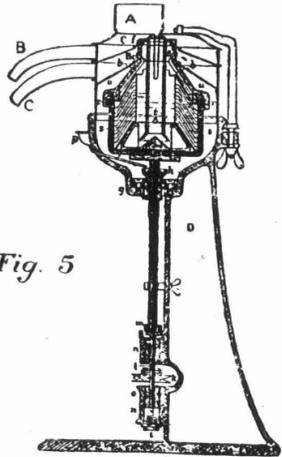
The Alpha, or improved De Laval machines, have met with great favor wherever they have



been used. A sectional view of one is given below (fig. 5). A system of separating plates or discs in the bowl divide the milk into thin sheets, thus making the separation of the cream almost absolutely complete. I have seen these machines run for four hours at a stretch, separating 2,000 pounds of milk per hour, and doing such neat work that there was only a trace or one-twentieth of one per cent. of fat in the skim-milk. The cream is generally smoother and less frothy than that coming from other machines. The one objection offered is that the plates are liable to clog, necessitating the stopping of the machine occasionally so that it can be cleaned. In some creameries this is found to be necessary.



DANISH WESTERN.



ALPHA.

A—Milk reservoir. B—Cream tube. C—Skim-milk tube.

The Alexandria, the largest size of which is called the "Jumbo," with a capacity of 3,000 pounds is also a reliable machine, and is being used in a good many creameries. It is, perhaps, not as clean a skimmer as the "Alpha," but its large capacity enhances its value in the eyes of many creamerymen. One advantage of this machine is that it need not be fixed solid to the floor, but can be moved aside when not in use. A cut and full description of this machine appeared in a recent number of the ADVOCATE.

Canadians may lead the Americans in cheesemaking, but in buttermaking they are certainly behind. Among the forty or more creameries

running in Ontario there are only a few that are operated under the cream separating plan, a great many of them, especially in Western Ontario, are still being run under the old cream gathering methods, with the oil test churn as a guide to divide the proceeds fairly among the patrons. This method, not being sufficiently accurate, has caused some dissatisfaction among the patrons, while in some cases the poor returns, resulting from improper methods of setting the milk on the farms, thus causing a great loss of fat in the skim-milk, have made many farmers decide that the creamery business was a failure so far as they were concerned. Recently I had an opportunity of visiting some large creameries in the state of Illinois where cream separators were in daily use, and where the milk was paid for according to its quality as shown by the Babcock test. The patrons all expressed themselves as well pleased with the returns. One of these creameries had a skimming station about four miles off where the milk from surrounding farms was skimmed and the cream taken in every morning, thus a great deal of hauling was avoided.

Let us have more creameries and cheese factories in Ontario—there is room for hundreds more of them. We have an unlimited market for dairy products across the water if they are made and put up in the right way. There should be no competition between creameries and cheese factories, as the best butter can be made, and will be made (especially in these districts), in winter, when cheesemaking must necessarily stop. There is certainly money in co-operative dairying if the business is conducted properly, but in creameries nowadays the separator should be an established thing. If the milk has to be hauled many miles it would pay to establish skimming stations at certain points, where the milk could be taken morning and evening and skimmed, the cream only being hauled to the creamery. If some plan such as this were adopted the yearly dividends from our creameries would be somewhat larger than they are at present, while a great amount of labor would be avoided on the farms.

Dairy Notes and Comments.

There are drones in the dairy herd as well as in the hive. A drone in the shape of a poor cow is far worse than any bee drone. A cow that does not earn her board is truly a drone, and a very expensive one at that.

Sell your poor cows and fill up the vacancy with better ones. Breed your good milkers to a good dairy bull. Don't be afraid of the expense. "Nothing ventured, nothing won." Make a venture and go in to win, and stick to it. Breed your dairy cow according to the law of dairy breeding. Get some good work on this subject, and read the best dairy literature. You cannot succeed without it.

It is a very common remark that it costs no

more to keep a good cow than a poor one. This is true with regard to the food of support and true to some extent even further than this, but it is not true when carried to extremes. The cow that produces a thousand pounds of butter in a year, or even six or four hundred pounds, cannot well consume more food than the one producing only one hundred and fifty pounds of butter. Dairymen cannot expect something from nothing. This is one of the nice points in dairying, and one that every reader of the FARMER'S ADVOCATE should study out. Cows differ very much in their capacity to work up or manufacture food into milk. Some can work up a large amount of food with but little waste; others cannot do this.

Too many dairymen refuse to profit by the experience of others, or take any stock in the enterprise or energy of their neighbors. This is a grand mistake. Do not think you know it all. If you do, there is mighty little to know. We know men who have been reading, studying and trying to keep up with or go in advance in all lines of dairy work, and they frankly confess that they don't know half as much as they would like to.

It is no use for dairymen to try or think they can control the price of their products. But there is one thing they can do, and that is reduce the cost of production. This is a most important point, and one that every dairy man should keep constantly before him. It should be the uppermost thought in his mind both early and late. To do this he must depart from the customs and practices of his forefathers. In fact, he need not go further back than his father, or even his own practices or methods of procedure ten years ago. He must get out of the method of keeping cows that milk only one-half or two thirds of the year. This is a most important factor in cheapening the cost of production. He must also see that there is not one-third or one-half the butter-fat allowed to go off in the skim milk. He must also see that there is no waste at the churn by butter-fat or butter passing off in the buttermilk. He must know the exact value of each individual cow. He must not keep twenty cows to do the work that ten could and should do.

Canadian Dairy Products at the Liverpool Show.

The following report taken from the Canadian Gazette will be read with interest by many of our readers:—

A fine lot of cheese was sent by Professor Robertson from the several Dominion Experimental Dairy Stations in Canada to the show of the Manchester, Liverpool and North Lancashire Agricultural Society last week, and created a large amount of interest at this most important show. The cheese was of this year's make, and came into competition with cheese made last autumn, but the results must be looked upon as highly satisfactory.

The three cheeses which took the first prize and gold medal were stated to be of Canadian manufacture, although the source of their origin was not indicated. The prizes gained by the cheeses sent by Professor Robertson were as follows:—2nd prize, silver medal and £2, for three cheese, manufactured by S. Tilley & Son, New Brunswick; 3rd prize, £2, to Messrs. Ayer, of Montreal; Very Highly Commended, to Mr. J. Gerow, of Napanee, Ontario; Commended, to the Experimental Dairy Station, Perth, Ontario.

Messrs. Mitchell and Greenwood, both of Canada, were successful competitors, and Messrs. Marples, Jones & Co., of 8 Mathew Street, Liverpool, were none the less fortunate with their display of Canadian Cheddar cheese and mild creamery butter. Besides a variety of cheese under the "Imperial" and other brands, special mention must be made of the large Cheddars, some of them nearly 500 pounds each, made expressly by Mr. A. P. Reid, one of their Canadian agents. These were much admired by distinguished visitors and many merchants, and Messrs. Marples, Jones & Co. won a medal.

On Friday, considerable interest was created by the arrival at the stand of this firm of several cases of fresh Canadian eggs just as landed from the ship's side. They were opened in the show ground, and, as stated in the London Times on Monday, "proved to be in perfect condition." The entire parcel was sold within an hour at 6s. 6d. per hundred (of 120), netting the shipper a very good profit. Messrs. Marples, Jones & Co. receive regular weekly shipments, and assure us that they have not yet received a single consignment but what has turned out satisfactory and profitable to the shipper. They only encourage consignments of the freshest and best, but are anxious to receive firm offers of large quantities of limed or pickled eggs, having good inquiry for such for winter trade.

As to the several packages of butter sent, it is evident that most Canadians have much to learn before they can hope to compete with Danish,

French, and other butters. The Canadian packages were not noticed by the judges.

The Mark Lane Express says:—"The classes of produce were very good, the noteworthy feature being the all-round winning of Canadian cheese and eggs. The latter were very fine."

A number of Canadians were present, including several from Manitoba and the Northwest. Mr. McGregor, of Brandon, Manitoba, made several purchases of Shire horses. Sir Charles Tupper, accompanied by the Hon. C. H. Tupper and Mr. Dyke, who, by the way, was one of the stewards, paid a flying visit to the show on Thursday previous to Mr. Tupper's departure for Canada.

Dairying for Profit; or, the Poor Man's Cow.

BY MRS. E. M. JONES.

Of all the numerous publications on dairying, the dairy cow, and butter-making, the most pithy, the most terse and brief and yet sufficiently lengthy to be intelligent is the little work "Dairying for Profit; or, the Poor Man's Cow." We think we are not exaggerating when we say that every chapter in this book is worth ten times the cost of the work (there are sixteen) to every one who keeps a cow. The very first remark made can be applied to ninety-nine out of every hundred persons who keep a cow. The sentence is this:—"In no branch of farming is there such deplorable waste and shortsightedness as in dairying. Such a large amount of labor for so small a result, and that result, too, of a very indifferent quality." Here is a whole sermon in itself, "deplorable waste and shortsightedness" resulting in "large amount of labor" with little or no results, and these results of a most indifferent and inferior quality. He who knows anything about the quality of the butter and the prices obtained for such butter by three-quarters of our farmers, will say that Mrs. Jones' remarks are true as gospel.

"The poorest tool on the face of the earth is a poor cow," is another sentence from chapter one. What could be more to the point than this, or what could be more explicit? The writer then goes on to describe a poor cow and what are the good points in a good cow, and these are given so plainly and simply that any reader can understand. Another good point is made in this chapter on the question of buying a cow costing \$30 and one costing \$50. The \$30 cow may run the buyer \$10 in debt, whereas the \$50 cow, if well and properly handled and fed, should show a profit of \$30. The feeding and care of the cow is ably treated. What is the best butter breed? In treating this question she says:—"Having decided what breed is best suited to your conditions and locality, get the very best specimens of that breed. Don't waste your money, and don't haggle about the price. If you can buy but one animal, let that be a thoroughbred male." Chapters six, seven, eight, nine and ten treat on the milking, skimming, creamers and separators, together with churning, marketing, etc. One of the most important chapters in the whole book is on "The Care of Dairy Utensils." This chapter should be committed to memory by hundreds of dairymen and dairymen, and not only those who make butter but by the patrons of every cheese factory in the land. Our readers will bear in mind that Mrs. Jones is a practical woman, who keeps a herd of Jersey cows and sells her butter at fancy prices, and consequently is guided by the best of teachers' experience. She gives some of her mistakes as well as her success; also describes how she keeps her cattle, her farm accounts and sundry other items of interest. Altogether it is a work that any one can read and grasp the ideas and meaning, being brief and to the point. The work is full of what might be called proverbs, one of which is this, "A good cow is a good cow all the world, over be she what breed she may."

This valuable little work may be obtained from Mrs. E. M. Jones, Brockville, Ont., price 30c. We recommend everyone of our readers to send for a copy. In order to stimulate its circulation, we will give two copies to every old subscriber who will send us one new yearly subscriber and one dollar.

Notes for Cheesemakers for September.

BY PROF. JAS. W. ROBERTSON, DOMINION DAIRY COMMISSIONER.

1. Invite your patrons to co-operate with you in the effort to bring the September cheese from your factory to the very front at the World's Columbian Exposition in 1893.

2. Urge them to see that the cows have an abundant supply of succulent, wholesome, nutritious feed, and access to pure water. When salt is not provided where the cows can reach it every day, they will drink foul and stagnant water if they can get it. Plenty of salt and prohibition from impure water will effect a double cure.

3. All the vessels used in the handling of milk should be cleaned thoroughly immediately after their use. A washing in tepid or cold water, to which has been added a little soda, and a subsequent scalding with boiling water, will prepare them for airing, when they may remain perfectly sweet.

4. Cows should be milked with dry hands, and only after the udders have been washed clean.

5. Tin pails only should be used.

6. All milk should be strained immediately after it is drawn.

7. Milking should be done, and milk should be kept only in a place where the surrounding air is pure. Otherwise the presence of the tainting odors will injure the milk.

8. All milk should be aired immediately after it has been strained. The treatment is equally beneficial to the evening and morning messes of the milk.

9. Some of the qualities that are expected and desirable in the cheese of September make are:— (1) Rich, clean, creamy flavor; (2) Solid, firm, buttery body; (3) Fine, silky, flaky texture; (4) Bright, uniform color; (5) Attractive, neat, symmetrical appearance.

10. Use from 3 to 3½ lbs. of salt per 10,000 lbs. of milk.

11. Put two bandages on each cheese, and finish them on the ends in such a manner that the outside one may be stripped off before the cheeses are put on exhibition.

12. In other respects follow the Bulletin of Notes for Cheese Makers for August, from which I take the following extracts:—

Patrons are more likely during this month than at any other time to forget to provide salt for their cows, and to neglect to supply an abundance of pure cold water. Cool evenings are no excuse for the neglect of the aeration of the milk. It should be most thoroughly aired immediately after it is strained.

The making of cheese for exhibitions is usually undertaken during the two first weeks of this month. Send a circular to every patron, making mention of those matters which are referred to in this Bulletin, and inviting their co-operation, that they may aid you in the manufacture of cheese fine enough for exhibition and prize-taking.

Making the Cheese.—When the evenings are cool and the milk needs ripening, don't fail to leave it in the vat until it reaches the proper state of maturity before the rennet is added.

Use enough rennet to coagulate mature milk to a state fit for cutting in forty minutes when set at 88° Fahr. Dilute the rennet extract to the extent of one pailful of water for every vatful of milk, and then mix it thoroughly by vigorous, rapid stirring.

After the whey is drawn, air the curd thoroughly and make provision for keeping it warm. Let the temperature be kept above 94°. Frequent turning and aeration will facilitate the development of acid, providing the temperature is maintained.

After the curd-cutter has been used, the curd should be stirred and aired for fifteen or twenty minutes before the application of salt. The curd should be put in the hoops within twenty minutes after the salt has been mixed in.

Pressure in the hoops should be applied very gradually. The cheeses should be banded neatly when they are turned in the hoops, within two hours after they are put in the presses. They should again be turned in the hoops some time in the following morning.

E endeavor to get everyone who sends milk to your factory, or who is concerned in its management, to try to bring it to the very front in point of reputation for the excellent quality of its product.

Poultry.

Poultry on the Farm.

BY IDA E. TILSON, WEST SALEM, WIS.

A lady in a distant State lately wrote asking recipe and price of my "egg food," assuring me she was willing to pay therefor. I replied it was an "open secret," and should be equal parts of the three C's—care, cleanliness and common sense. If there is disease or failure in a poultry yard, probably some conditions of success have been neglected, and examination will reveal poor stock, insufficient shelter, unvaried food, or lack of method. Then, when roup and dysentery appear, perhaps they are considered mysterious dispensations, or said to be "in the air," and every cause is assigned but the right one. Most fowl ailments can be classed under the heads of colds, filth diseases and indigestion, where an ounce of prevention is worth a ton of cure. The modern tendency is decidedly toward decapitating rather than doctoring, since about \$2 worth of time and medicine are required to cure every 25-cent bird. My former title of "Dr.," given in compliment by friends whose fowls I helped restore, has fallen into entire disuse, and I shall never found a hen hospital. Such remedies as I still recommend are certainly safe and simple.

Chronic roup is a catarrh. Acute roup, more contagious, is like an influenza. Top or side draughts often occasion it, likewise do prolonged damp weather and tramping about in mud-puddles. For mild cases and simple colds, a little camphor or turpentine in the drinking water will relieve the throat. If a fowl has red and swelled eyes, glycerine may be rubbed on, using only a little of it in this case, or at any time, as grease and oils, except kerosene, are such cold applications. An experience of mine last fall has been so well seasoned, assuredly the due time for revealing it has come. At a fair I had a coop of fowls on exhibition, but was so busy in another department I could give their surroundings little attention, though I subsequently remembered hearing a group next them sneeze and snuffle. In about two days after coming home, my trio began to sneeze and cough. As I actually never had a case of roup before, I did not take alarm till my whole flock were exposed; then I attempted to separate sick from well, but gave up when it became apparent that the majority were affected. Some few had watery eyes and nostrils, swelled face and asthmatic breathing, while many were simply "off condition." Seventy of my flock were fine young pullets. As I had read that any fowl which once got roup would be worthless ever after, I had a real troublesome trouble, and prospects were anything but bright. However, I gave each fowl a one grain quinine pill as a general tonic, then rubbed its throat thoroughly with kerosene as a counter

irritant and incidentally to kill the lice which fasten there and weaken a sick bird. Cooked meat and pudding were fed rather oftener than usual, as they are easily digested and warming foods, and a teaspoonful of tincture of iron, another tonic, was generally put into each drinking pan half full of water. Nearly every fowl lived and eventually thrived. For the first six months of 1892 my hens have averaged 70 eggs apiece, a record not guessed but accurately made out.

Adapting lines by Mrs. Lucy Washington:

Those famous biddies out in the West
Determined to do their level best
They gave to their nurse a roundelay,
Repeating the chorus day by day,
"Ca-dah-cut! here's an egg from me,
Ca-dah-cut! here's another, you see."
Eggs-tremely egg-citing the day
And the whole flock cackled in eggs-tacy.
When, changing these eggs to silver and gold,
Such eggs-tra, eggs-cellent eggs-ample
Their mistress could fully behold.

Two morals may be pointed, namely: Never get discouraged, it does not pay, and, Observe the neighboring breezes and birds when you are exhibitors at a show, for eternal vigilance is the price of health as well as of liberty. Had I then known more about Dr. Keely's assafetida cure for gripple, I might have substituted that for quinine, and I have since read, too, that diluted vinegar is a good wash for roup faces. I once overheard a large boy ask a little one, "Do you know how to fish?" "No," was replied. "Well," rejoined the former, with more sense than grammar, "if you go with me I will learn you some things." To many questions concerning roup, I formerly made answer, "I don't know," but whoever has an invasion of that disease will thereupon learn some things.

Scaly legs can be run out if afflicted fowls are never used as brooders, for this is a contagious, parasitic disease which should not perpetuate itself in the chicks. A thorough washing of the legs with strong soap suds and an old toothbrush, or an application of kerosene, is a sure cure. For gapes give a few drops of camphor or turpentine on a bread crumb, or a lard and pepper pill, or two pieces of salt pork, size of a corn kernel. The last does not involve catching your fowl and harrowing her feelings and your own too, for pork thrown to her will be greedily devoured. It is a good general tonic, so if somebody else gets a bite, that is all right too. Drawing gape worms from the throat by a feather, or causing chickens to sneeze them up by inhaling vapors, requires an expert. No hen house is large enough to hold comfortably both hens and lice, and no doubt many a biddy sighs, "Give me liberty—from vermin, or give me death!" a desire that will probably be answered by one alternative or the other. Road dust can be laid up in summer for the precious dust bath. Ashes are equally efficacious, but as they bleach plumage and legs somewhat, are not used where fowls are intended for exhibition. Coal ashes must be sifted, they contain so many sharp rocks, but wood ones need not be, if no nails, needles nor unburned fish bones be in them. I once had a hen running around for two or three days with open mouth. Caught, she proved, not to be developing teeth, but to have a fish bone in her throat. We removed the bone, and she was always the tamest and most grateful of creatures.

How to Make and Work an Incubator.

To the Editor of the FARMER'S ADVOCATE:

SIR,—I would much like to hear from some of your readers how to make and work an "incubator." A correspondent out West some time ago wrote saying he would describe his incubator and method of running it, and perhaps he may be induced to send along some information regarding it.

Yours truly, TYRO.

The Apiary.

Cross Bees.

BY R. F. HOLTERMANN, A. O. A. C., BRANTFORD.

Having been asked to reply to the following question, it was thought advisable to take up the entire question of cross bees, etc. The question asked reads as follows: "I have one swarm of black bees which have given me up to date (July 25) over one hundred pounds of honey, and are cross as bears. Can I do anything for them? E. G. M."

It may appear strange, but bees may be cross through natural disposition, or through the treatment they receive. You should handle your combs, bees and hive carefully; that is, do not jar the hive, or crush bees when taking out or putting in combs, or otherwise injure the bees in handling. If you crush a bee she emits an odour which angers other bees and causes them to sting. This is a means of defence to them. Again, bees strongly dislike any offensive odour. Anyone having to handle bees frequently require, especially in warm weather, to be very cleanly about their person, and bathe frequently. It has also been noticed by some that of the materials used to produce the smoke blown upon them, cedar bark, or partially decayed maple or elm wood, are very good. Rags or paper, as used by some, are condemned. Next, bees dislike fuzzy clothing, such as wool or felt hats; a cotton shirt and overalls, with a straw hat, answer very well. I have found bees are angered when a drone brood is uncapped and replaced in the hive.

Some will ask, Is it advisable to wear a bee veil? There is no doubt that if a bee veil is worn frequently in the apiary the bees are angered, and are more liable to sting people not having a veil. I have known bees so spoiled by rough and careless handling that they were a torment to everyone within sight of the apiary. I have within ten yards of the corner of the house an apiary of about ninety colonies and sixty to sixty-five nuclei, and a family of three small children playing about the house are very rarely stung. They often play about in the apiary. Now, if the crossness of the bees cannot be traced to any of the above causes, the fault must be in the breed or the progeny of the individual queen. The question should then be, Shall I put up with the inconvenience of having cross bees on account of some other merit they possess, or can I have equal advantages without the present disadvantages? One hundred pounds of honey from one colony by July 25th is a good yield, yet not very remarkable. I myself secured two hundred and twenty-five pounds from a single colony one season, and the bees were gentle. It is not necessary to have the disposition to be cross combined with good working qualities, although we perhaps often for comfort take less care than we ought to retain the worker qualities when we do away with the temper. Under the above circumstances, I should go slow to do away with a queen whose progeny had given me such excellent results. The black and hybrid bees are generally, though not always, better for comb honey than pure Italians. Yet there is scarcely a bee-keeper who would not improve the condition of his apiary by having one or more Italian queens introduced. When we aim at having them pure, there is generally enough black blood gets in to make the bees good honey gatherers. For extracted honey the pure Italian bees are quite as good or better than the black, and you have many excellent qualities the black do not possess. The Italians are gentle. They keep to their place on the combs better when handled. They are less liable to be robbed, and many claim they can reach further into the flowers and get more honey out of them.

HONEY AT THE WORLD'S FAIR.

Mr. N. Awrey, M. P. P., Commissioner for Ontario for the World's Columbian Exposition, is making very energetic efforts to get up a large exhibit of comb and extracted honey at the World's Fair. Bee-keepers in Ontario, or Canada for that matter, should unite in an honest effort to capture the prize from the world for quality of honey. A bee-keeper in Ontario took the sweepstake prize at the Philadelphia Cen-

ennial, and we should try and take it now. Only fifty pounds of clover, or any one kind of extracted honey, is allowed to be exhibited. That is not much. The government pays for the cost of transportation to Chicago; also returns it free of cost, if desired. Everyone should show. Mr. Awrey's address is simply Toronto. Anyone communicating with him will hear full particulars.

Apiarian Exhibits.

[Read by R. H. Smith, Bracebridge, at last annual meeting of Ontario Bee-Keepers' Association.]

During the past ten years bee-keeping as a specialty, or side issue, has very much increased in many parts of the Dominion, owing as much to increased knowledge of the subject as its attraction as a health-giving pursuit. It has a fascination peculiar to itself that few lovers of the busy little insect can resist. Bee-keepers have awakened to the fact that they have a good thing, and that it should be in every household, not to be used as a luxury or medicine, but to take the place of less healthful syrups, etc. Honey, although seen in most groceries, is not understood or used so extensively as it ought to be. Now, how to educate the public as to the nature and uses of honey is clearly the duty of the bee-keeper, if he wishes his honey to find ready market. One way of doing this is by a fitting exhibit of his goods. Now where is he to exhibit? In the first place I should say at home, in the honey room, or, if more convenient, in the house. Let one spot be devoted to an exhibit of honey—comb honey, extracted honey, beeswax in small cakes, etc., and to every customer let him give some instruction in the science. All may not appreciate, all may not understand, but some will.

After straightening up the exhibit and taking a complacent look at it, a customer comes; it may be a small boy, accompanied by a few sisters, who wants five cents' worth of honey because the baby has got a sore mouth. He asks a few questions, not always to the point, but as you answer you can set him right as to how the bees get the honey into the holes, and as to whether they made the boxes. Next time he asks more questions, and makes no secret of the knowledge he has acquired; set him right every time, he will understand you by and by, especially if the answers are illustrated by a taste of the honey. A little bit of capping or a small piece of broken comb will enlighten him wonderfully. When he has a house of his own he will see that honey is used in it, and some bee-keeper will have to supply it.

A lady comes for a pail of honey—show her your samples, tell her how you get the different kinds of honey; extract a comb before her—likely she will want to turn the handle of the extractor; explain granulation, show her the sun wax extractor, etc.—she will go away a friend to you and a customer in future. Let the home exhibit be supplemented by the grocery exhibit. By fair dealing, and neat and not sticky packages, you can get a place in the grocer's best window, and in a prominent place in the store. Put up the honey so that it will be a credit to you, and in a way that it will attract notice amongst the other goods.

On special days make special exhibits with a frame of bees in an observatory hive—in the window a few special notices to draw attention to them. One who knows all about bees explains to his friends what the bees are doing, sometimes startling statements are made, but an interest is aroused, honey is sold, and some knowledge is spread. Then there are the local fairs, when the bee-keeper shows his wares in their holiday attire, put in packages to suit every customer. Many can remember the time when the Apiarian Department was represented by two or three bottles of strained honey, and a box or two of comb, that were, perhaps, mixed up with miscellaneous products of the farm and passed with little notice, but of late years bee-keepers have taken more interest in the management of fairs, and have seen that their products were properly classed. The managers of these fairs see that it is to their interest to help the bee-keeper by giving him a good stand, and making things convenient for him generally.

The well-put-up displays reflect credit on them, and it is a decided contrast to much that is there.

Honey can be sold at fairs to those who would never see or taste it but for this occasion, and once tasted and told where it can be had they often avail themselves of the chance of getting a supply. Cull sections disappear like magic here from the much discussed honey on a stick form, the only comment being general approval. Emboldened by success at home the bee-keeper tries abroad, it may be at the great industrial or provincial exhibitions. Not that he expects to take prizes! Oh, no! but only to see how his honey compares with others; a modest third is the highest he aspires to. Then, again, we have at our large exhibitions displays of honey and bee-keepers' supplies that create the wonder and astonishment of visitors, not only our own people, but visitors from Great Britain and the United States, and the attendant often hears such remarks as "what a splendid display, doesn't it look lovely," etc., and the visitor will stop and ask questions, and perhaps purchase.

One skeptical visitor, pointing to my exhibit, put the question to me once at Toronto, "Did this honey come from Muskoka?" I replied that it did. "Now did it really?" he repeated. I again assured him that it certainly was gathered there by bees, and that it was as good a district for honey as any part of the province. "Well, now!" he exclaimed, "I thought it was too rough;" but after I had explained that the uneven surface was no disadvantage; that we had a succession of bloom, beginning with the many varieties of willow in the early spring, followed by the soft and hard maples, elm, dandelion, cherries, apple, berry bushes of various kinds, clovers, lindens, and the numerous fall flowers; how the bloom on the high ground gave honey in wet seasons and low ground in dry seasons,—he went away with a better opinion of Muskoka. Not only do the people get enlightened as to the sources from which honey is derived, the mode of harvesting, its granulation and manner of liquifying, but bee-keepers themselves are likely to be benefited, each sees what the other has done, and the practical eyes are opened to all improvements. They will compare notes as to experiments with different implements and ventions, will hear how others succeed with them, what the yield of honey has been in different sections of the country, and will discuss as to what are the favorable conditions for good crops, and how far they can be controlled and made the most of, giving ideas for future thought and discussion. Therefore, apiarian exhibits are a benefit to the bee-keeper, and one of the best means of educating the general public.

Veterinary.

Lumpy Jaw.

We received the following from the United States Department of Agriculture:—

The interest which has been shown by the stockmen in regard to the disease known as "lumpy jaw," or that form of actinomycosis which appears as external swellings on the head, renders it desirable that a preliminary statement should be made concerning the treatment of this disease. Until recently it has been the opinion of the veterinary profession that a cure could only be obtained by a surgical operation, and that this should be performed in the early stages of the disease in order to insure success.

In March last an important contribution to our knowledge of this subject was made by M. Nocard, of the Alfort Veterinary School, in a communication to the French Central Society of Veterinary Medicine. He showed clearly that the actinomycosis of the tongue, a disease which appears to be quite common in Germany, and is there known as "wooden tongue," could be quickly and permanently cured by the administration of iodide of potassium. M. Nocard calls attention to the success of M. Thomassen, of

Utrecht, who recommended this treatment as long ago as 1885, and who has since treated more than eighty cases, all of which have been cured. A French veterinarian, M. Godbille, has treated a number of cases with the same remedy, all of which have been cured. M. Nocard also gives details of a case which was cured by himself.

All of the cases referred to were of actinomycosis of the tongue, and no one appears to have attempted the cure of actinomycosis of the jaw until this was undertaken by Dr. Norgaard, veterinary inspector of the Bureau of Animal Industry. He selected a young steer in April last, in fair condition, which had a tumor on the jaw, measuring fifteen and a-half inches in circumference, and from which a discharge had already been established. This animal was treated with iodide of potassium, and the result was a complete cure, as stated in the reports which were recently given to the press at the time the animal was slaughtered in Chicago. If lumpy jaw can be cured so easily and cheaply, as this experiment would lead one to suppose, the treatment will prove of great value to the cattle raisers of the country. As is well known, there is a considerable number of steers weekly coming to our markets which are condemned because they are diseased to such an extent that the general condition of the animal is affected. If these could be cheaply and readily cured by the owners, it would prevent the loss of the carcass, and solve all the troublesome questions which have been raised in regard to the condemnation of such animals.

The curability of the disease does not affect the principles which have been adopted in inspecting and condemning animals affected with it. This Department has never considered it necessary to condemn animals affected with actinomycosis on account of the contagiousness or the incurability of the disease. Such condemnations have been made when the disease was so far advanced as to affect the general condition of the animal, and all such carcasses would be condemned whether the disease from which the animal suffered was contagious or not, or whether it was curable or incurable.

The treatment with iodide of potassium consists in giving full doses of this medicine once or twice a day until improvement is noticed, when the dose may be reduced or given less frequently. The size of the dose should depend somewhat upon the weight of the animal. M. Thomassen gives one and one-half drams of iodide of potassium daily in one dose dissolved in a pint of water until improvement is noticed, which he states is always within eight days. Then he decreases the dose to one dram. The animals do well under this treatment, showing only the ordinary symptoms which follow the use of iodine, the principal ones being discharge from the nose, weeping of the eyes, and peeling off of the outer layer of the skin. These symptoms need cause no uneasiness, as they never result in any serious disturbance of the health.

M. Godbille has given as much as four drams (half an ounce) in one day to a steer, decreasing the dose half a dram each day until the dose was one and one-fourth drams, which was maintained until the twelfth day of treatment, when the steer appeared entirely cured.

M. Nocard gave the first day one and one-half drams in one dose to a cow; the second and succeeding days a dose of one dram in the morning and evening, in each case before feeding. This treatment was continued for ten days, when the animal was cured.

Dr. Norgaard gave two and one-half drams dissolved in water once a day for three days. He then omitted the medicine for a day or two, and continued it according to symptoms. These examples of the treatment as it has been successfully administered by others will serve as a sufficient indication for those who wish to test it.

Experiments are now being conducted on a large scale by the Bureau of Animal Industry in the treatment of lumpy jaw with this remedy, and the results will be published as soon as possible. In the meantime, it would be well for all who have animals affected with this disease to treat them according to this method, and report results to us for publication.

Miscellaneous.

Hamiota, Man.

Hamiota, situated in the centre of Oak River municipality, at the terminus of the Great Northwest Central Railway, is thirty miles from any other important place. Established about the first of January, 1892, now contains about 50 buildings. It is the centre of a splendid country for mixed farming. On account of a lack of railway facilities until this year the farmers of the surrounding districts have made a specialty of raising horses, cattle and sheep, and to-day a large number of them are in comfortable circumstances. Besides being good for stock, the districts surrounding Hamiota are excellent for grain growing. Although the railway only commenced running about the first of this year, a large quantity of wheat and oats of first class quality were shipped out, amounting, during the first four months, to 53,946 bushels of the former, and 47,027 bushels of the latter. Other coarse grains, roots and small fruits are growing in abundance. The Hamiota district affords to the incoming settler rather a better opportunity of securing a good farm at a low price, and easy terms, than any other part of Manitoba, for the reason that there is still a large quantity of virgin prairie yet to be sold cheap.

There are several businesses now carried on in most of the ordinary lines. Among the most prominent may be mentioned the Pioneer store of Mr. G. O. Elliott, who is also postmaster, where will be found a complete stock of goods suited to the requirements of his numerous customers. His hobby is to supply anything that may be wanted, which in a new place is a laudable ambition. Mr. Elliott was one of the first to open up business in the town, and the neat, thrifty appearance of his store attests his good management, while the constant increase of stock testifies to the demands of the surrounding district and its purchasing ability.

The fine new store of Scott & Chambers is one that would do credit to any town in the Northwest, being commodious and attractive, while on the inside will be found a fine general stock of goods, and willing and obliging parties to attend to the wants of purchasers. The wisdom of the proprietors in selecting Hamiota as a place of business needs no further proof than its continual growth and extension from the beginning.

John H. McConnell, who has the important business of supplying building material of all kinds for the rapidly growing town, is a man of ability and energy, and fills his position in a way that would be hard to duplicate, being not only able but willing to assist his customers in every way possible that is consistent with business principles. He is also ever ready to assist in the promotion of the general good, by aiding in the successful completion of all enterprises considered in the interest of the town.

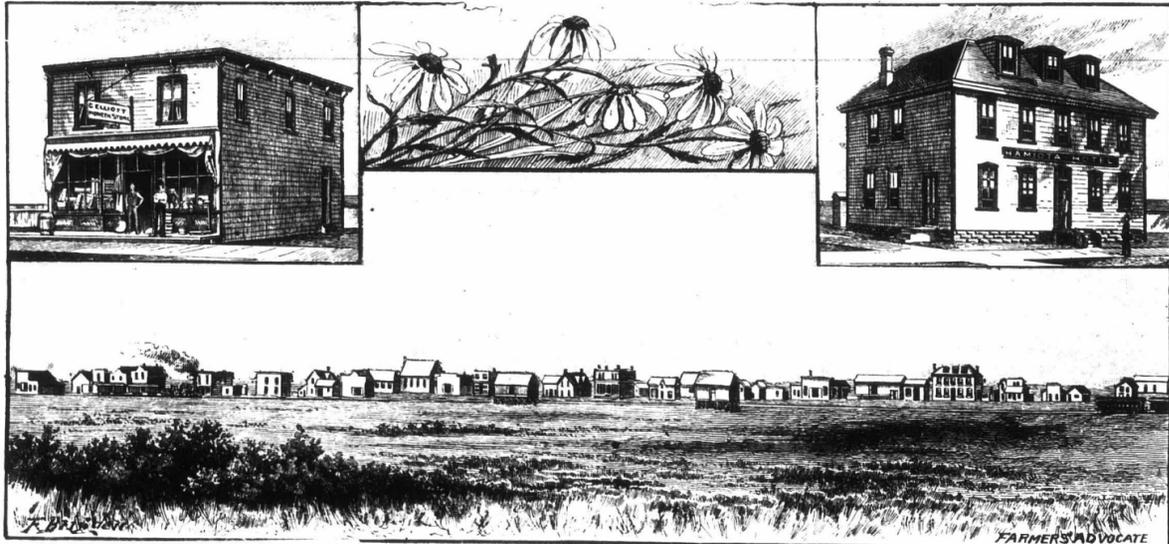
Jos. McLean carries on a general blacksmith business, where the farmers can get their agricultural implements repaired in a workmanlike manner. He does horse shoeing, and has also in connection carriages and farm wagons, with which to supply his customers.

placing their orders with Mr. Murray will be well pleased.

One of the finest buildings yet erected is the Hamiota House, built and occupied by Mr. Robert Kelly, who is a successful farmer of the vicinity, and whose sons are still engaged in agricultural pursuits. This nicely furnished place would be an acquisition to a town of much greater pretensions, and certainly exhibits enterprise of commendable type in the person investing so largely to provide such comfortable and commodious accommodation for the travelling public. Mr. Kelly may well feel proud of his hotel, and the attention paid to the comfort of his guests is characteristic of the proprietor, and in keeping with the complete way in which he does what he undertakes.

In addition to the establishments above mentioned there are at present two bakers, two butchers, two livery stables, harness shop, hardware store and tinmiths, drug store, millinery shop, barber shop, and others, while farm implements may be had at the warerooms of Dinsmore & Shoebottom, or the showrooms of the Massey-Harris Mfg. Co., who have erected commodious buildings and placed a complete supply of implements in stock.

Dr. Lawson looks after the health of the residents. The growth of Hamiota has been continuous and now presents an aspect, after the short space of a few months since its beginning, certainly remarkable. The Presbyterian church, recently completed, is a well built and creditable structure, and with the Orange Hall, adds much to the place. The Methodists are soon to erect a church. We do not wonder at Hamiota's rapid growth, when we consider the excellence of the surrounding country. The municipality is represented by men who are desirous of aiding improvement, and the reeve, Mr. W. J. Cowan, after five or six years as councillor, has filled the responsible position he



VIEW OF THE TOWN OF HAMIOTA, MANITOBA.

Prices here for land have not gone up as they have along the lines of the older railways; immigration has not begun to flow into this choice district. Now is the time to secure land, before the inevitable rush that is sure to set in before long. With splendid crops all around, with an enterprising class of settlers, and with all the favorable conditions that go to make a thriving agricultural town, Hamiota is sure to grow and make the leading town of the Great Northwest Central Railway district. The council of the municipality are showing themselves fully abreast of the times; they have passed a by-law granting a bonus of \$5,000 to any responsible parties who will build a mill at Hamiota; they have also made considerable grants for grading streets, etc. Tenders are called for building a public school at a cost of \$1,500. The people are aware of the advantages of their new town, and therefore cheerfully put their shoulder to the wheel and help push it along. "Go West and grow up with the country, young man." Hamiota is the farthest point west on the Great Northwest Central Railway, a good point for you to strike for. There is no reason why Hamiota, situated as it is in the heart of a first-class agricultural country, should not in time become one of the most thriving and prosperous towns of the province. Good farms can be bought at from \$3 to \$5 per acre for unimproved, and from \$10 to \$15 per acre for improved farms. Town lots are for sale at 25 cents.

At M. Turfiff's real estate office may be learned anything intending settlers desire to know regarding the lands for sale in the vicinity, as well as the many advantages available in connection with the different branches of agriculture. Mr. Turfiff's thorough acquaintance with what has been done by the residents in this locality within a few years, will enable him to give useful hints and directions based upon facts, which cannot be too highly appreciated by incoming settlers.

Mr. John McRae, general blacksmith, has also erected the Pioneer House, a fine boarding house, which is roomy and well appointed, the excellent management, neatness, accommodation, and the bill of fare being such as to ensure the return of guests who once become acquainted with this homelike place.

Messrs. Richardson & Co. have erected a neat shop, where are kept pianos, organs and sewing machines as well as a stock of furniture. The firm also do both house and sign painting with neatness and despatch, and are prepared to give estimates for jobs of this kind, and guarantee their work to give satisfaction.

Mr. J. Pangman is the proprietor of the Pangman House, which has the honor of being the first hotel in the place. The completion and final equipment of this house in first-class style is the work in hand, and no doubt it will soon be one of the best. Visitors will find the host and hostess friendly and obliging, striving no pains in making everybody comfortable.

Conveniently near is the livery, feed and sale stable of Mr. Robert Murray, which is well equipped with good horses and rigs, and from which all the requisites of driving or commercial purposes will be supplied. The attention to business and the charges reasonable, and parties

now occupies for four years, which denotes the satisfaction of the people with his services. There are few places as young that can boast of a newspaper. Under the management of Mr. E. A. Young the "Hustler" makes its weekly appearance to the satisfaction of the community, giving the local and general news of the day. In short, it may be said that hustling is the order of the day, not only in Hamiota, but in the surrounding country.

During the past year the **ADVOCATE** has steadily and surely grown in public favor. Our subscription list is larger than ever before, and is constantly increasing. We ask each old subscriber to send us at least one new name. We will give the remainder of this year and all of 1893 to all new prepaid subscribers. Agents are instructed to take subscriptions on these terms. Advertise in the **Farmer's Advocate** and **Home Magazine**, London and Winnipeg. Circulation three times larger than any other agricultural paper in Canada. Send for sample copy and terms.

Family Circle.

Thinning of the Thatch.

Oh, the autumn leaves are falling, and the days are closing in,
And the breeze is growing chilly, and my hair is getting thin;
I've a comfortable income and my age is thirty-three;
But my thatch is thinning quickly—yes, as quickly as can be!

I was once a merry urchin—curly-headed I was called—
And I laughed at good old people when I saw them growing bald;
But it's not a proper subject to be likely joked about,
For it's dreadful to discover that your roof is wearing out!

I remember asking uncle—in my innocent surprise—
How he liked his head made use of as a skating-rink—by flies;
But although their dread intrusion I shall manfully resist,
I'm afraid they'll soon have got another rink on their list.

When invited to a party I'm invariably late,
For I waste the time in efforts to conceal my peeping pate—
Though I coax my hair across it—though I brush away for weeks,
Yet I can't prevent it parting and dividing into streaks!

I have tried a hair restorer, and I've rubbed my head with rum,
But the thatch keeps getting thinner and the new hair doesn't come—
So I gaze into the mirror with a gloomy, vacant stare,
For the circle's getting wider of that open space up there!

People tell me that my spirits I must not allow to fall,
And that coming generations won't have any hair at all.
Well, they'll never know an anguish that can adequately match
With the pangs of watching day by day the thinning of your thatch!

The Angel of Elbow Bend.

BY MRS. HARRIET A. CHUTE.

All God's angels come to us disguised;
Sorrow and sickness, poverty and death,
One after another lift their frowning masks,
And we behold the seraph's face beneath.

You want to know who that lovely girl in the gray dress is? Well, her name is Olive North, but we call her the angel of Elbow Bend. We used to be a mean, uncharitable set, us women of the Bend, and I'm not saying that I was a whit better than the rest; but I do think there has been a change for the better since sweet Olive North came among us. It was a new place and times hard, and we couldn't afford all the necessities of life, much less its luxuries, and hard work and privation made us bitter and ill-tempered. When I tell you that only two families in all the neighborhood were able to take a paper, and books were as scarce as "hen's teeth" among us, you may reckon that intelligence and refinement were at a low ebb; but, la! it would not have been safe for any one to have told a Bander that he or she was not as good or as smart as the next one, and if there was one thing that we disliked more than our own hardships and privations it was the person who had not suffered in like kind and measure.

When Judge North came among us with his old maid sister and motherless daughter, it did not take us long to see that they were different from the rest of us, and different in a way that we resented. If they had been poorer or more ignorant than ourselves, we could have welcomed them with open arms, but Miss North, though not in the least haughty, was dignified and intellectual looking, and Olive—well, she was prettier, smarter and sweeter than any other girl in the place, and we couldn't help seeing it, and hated her accordingly.

If the Judge's folks had been extravagant in dress or haughty in manners, or anything of the kind, there would have been some excuse for our feelings toward them, but they were plain and simple and tried to be friendly, and that seemed to make us dislike them the more.

I remember the first time I saw Olive come into church. She wore a simple white linen lawn without a bit of ornament except a bit of hemstitching she had done herself, and her black straw hat had only a purple lining and bunch of violets; but dress and hat were fine of their kind, and I couldn't help seeing the contrast between her and Rosy Watts, who had been considered, till then, the prettiest girl in the neighborhood. Rosy's dress was white, too, but it had a thick stripe and a thin one and yards of lace and ribbon, cheap, of course, but, altogether making her dress cost more than Olive's. Then her hat was a perfect posy garden of flowers mixed with gay ribbons, and her bangs curled so tight you might think it the reason her nose turned up.

I'd always thought Rosy pretty till then, but now,

somehow, I began to feel what she lacked, what all of us lacked, and I pitied Rosy and—yes, I hated Olive. I had had some advantages in my young days, when I was growing up, but I felt now that I had lost ground and had slipped to a lower level than such as she, and I don't know whether I hated her because it was so, or because she caused me to realize it; but any way, good Christian though I was, I hated her.

We were very religious, us Benders; we went to church on Sunday, gossiped on week days, and thought we'd fulfilled the law and the gospel.

As I said, the Bend was a new place, we were all poor, and had not yet been able to have a school. Our children were growing up in ignorance, a fact we loudly deplored among ourselves; so when sweet Olive North proposed to teach us a three months' term free of charge, you'd think we'd have jumped at the chance, but we didn't.

"The stuck up thing! I s'pose she thinks she'll be a missionary to us heathens," said Mrs. Iveds. "My young-uns may live an' die in ignorance 'fore I'll send 'em to a charity school kept by her," said Mrs. Godsey.

It would take too long to tell all the hateful things we did say, but at last some of us began to come to our senses, myself for one, not that I was a bit better than the rest, but I'd want Dan'l and Sary, my boy and girl, to be learning something; so, at last, we concluded that we reckoned that we could stand it if she could, and sent her word she might begin.

If Olive could have heard all the ugly things we said she might have quit in despair, seeing she did not get even thanks for her work, but she kept on, and the children were getting to like her in spite of all they heard said against her, and none of us older ones, even yet, were friendly with the Norths. Some of us had neighbored a little with them, but we took pains to let them know that we thought ourselves as good as they, and made ourselves very foolish and disagreeable.

About that time, word got out that Olive was taking a fiddle to the schoolhouse and playing while the children made motions to it. What a storm it raised!

"Only to think that she's learnin' the precious innocents to dance, when we thought 'em a studyin' of their books," said Mrs. Ivens, with a tremor in her voice.

"I allus knowed som'thin' would come out. Such ain't to be trusted, a-lookin' as if butter wouldn't melt in their mouths," said Mrs. Hatch.

When we sifted the thing it came out that it wasn't a fiddle that Olive had in school, but something that looked like one.

Mine said she thumped it with her fingers, and like Ivens said she clawed it like a cat; but, any way, it was something and something had to be done, so we made it up that, without saying any thing to anybody, we'd meet and go in a squad to the door of the schoolhouse—it was a little old deserted country storehouse that Olive and her pa had fixed up at their own expense—we'd go in a squad to the door, just after the children had been called in, having waited somewhere near, and just when Olive got into the midst of her demoralizing performance we'd rush in and ask if that was the way to keep school. There was a little sort of porch room in front, and we all tipped into that there, no one wanted to be the first to break in, though we could hear the music going, a clear, sweet young voice leading some childish song, the little ones joining in, while they all kept a sort of time with their hands and bodies. That much I saw through a crack in the door before Mrs. Ivens nearly mashed my foot, crowding me over to take my place.

Two or three of the stoutest got their eyes to the cracks, and the rest had to be content with hearing; but every word came plain as truth to where we were standing. I'll say here that no prima donna ever had a sweeter voice than Olive's, and when they had a sweeter voice called it—the struck up I think that's what they called it—the young ones joining in, and she playing the accompaniment on the guitar, for we learned later that that was the name of the instrument that had created such an excitement, and to my dying day I don't expect to hear anything sound sweeter.

"Jest listen at Tad's!" whispered Mrs. Hatch. "I'd no idea the little feller could sing so! I'll have to tell his pap."

Before the hymn was finished I felt my eyes getting moist, and I saw several others getting the same way. We forgot all about the object of our visit, and only thought of listening to the music; and once Melindy Peters nearly spoiled everything by joining in, but Lucy Ivens saw her opening her mouth and checked her under the chin.

When the hymn was finished, what was our surprise to hear the same sweet voice leading in prayer, and you might not believe it, but a more beautiful prayer I never heard. Parson Oldsberry himself couldn't beat it. She prayed for the children and for their parents, and that she might have wisdom and patience to do her duty, and, above all, that she might yet win a little love from the mothers of her dear pupils. I saw a big tear roll down and drop off the end of Emerine Hooker's nose, then she stretched a hand to one on each side of her and said, "Sisters, let's kneel," and the next moment we all got down.

I don't know what any one would have thought to have seen us all kneeling there in that little anteroom, sobbing silently while the young voice inside went on praying for us all, not knowing that for once we were getting the benefit of her prayer in a way that was likely to have a speedy and tell-

ing effect. At last the prayer ended, and the bell called the children to their books and us to a sense of the situation.

"Let's go," whispered Mrs. Godsey, and as silently as we had come, as silently we stole away. Not a word was said till we had got out of sight and hearing of the schoolhouse, then Mrs. Ivens, she said to me, "Mrs. Yates, I guess we can trust that girl with our young ones."

"Trust her!" said Mrs. Hatch. "she's an angel, the latch of whose shoestring we're not worthy to untie."

Julia Ann always gets things a little snarled when she quotes Scriptures, but she means well.

After this we'd all have been glad to be friendly with the Norths, but when folks have been for months showing their hateful side it comes awkward to rightabout face without some apparent excuse. We could not go and say we've been a lot of fools, but we've overheard that that's opened our eyes and our hearts, and we want you to forgive us and let us make much of you. No, we did not have the courage for that, so each one had to think of little break ways for herself. As for me, I concluded I'd take Miss North a jar of my cherries, being some of our first crop, and about the first in the neighborhood. I found Miss North knitting on a little red woolen mitten. She seemed pleased to see me and glad of the cherries, then said she, "I hope you'll excuse me for going on with my knitting, as I am very anxious to finish this pair this evening."

"That will be a little small for Olive, won't it?" I asked.

"O dear," said she, "it's not for Olive, it's for little Tim Skiver. Olive says he comes crying with cold every morning, but he is so fond of school that he won't give it up."

This was the woman we'd accused of being proud and stuck up, spending her time knitting mittens for a little dirty faced chap, so he could come to school where her niece could teach him for nothing. If they were stuck up they were trying to raise the lowest to their level, instead of trying to pull down those that seemed a bit higher, as some of us had been so anxious to do. I tell you, I went out of that house feeling my littleness as I never had before, resolving to be more like them I'd picked so many flaws in.

Not long after that the scarlet fever broke out, and we no longer wanted an excuse to make much of Olive and her aunt, for angels could not be kinder than they were. They went everywhere and helped every one, and what we'd done without them I don't know. It was wonderful how the little ones clung to Olive. Not a mother among us could get them to take the medicine as she could, and often her singing would quiet them when nothing else would. Many a darling owed its life to her as much to the doctor. There were only three deaths in all, one of them poor little Tim Skiver. He died with his red mittens on, and we buried him in them. Those were terrible times, and but for our Olive I don't know what the Bend would almost give her life for her.

That was all a year ago. We have a new schoolhouse now, and Olive is paid for teaching in it. We are not able to pay her much, but refused to let her do it longer for nothing, for the Norths are not rich, more than some of the rest of us. Olive and Miss North have given us older ones some useful hints, too, in regard to cutting and fitting and the choice of colors and of something of grace and beauty in dress. We have an organ in our church, too, not a grand pipe one, but Olive can get music out of it, and my Sary has learned to pick the guitar, and we have that, too, so if you'll be at church in the morning I'll promise you some as good music as you'll meet with in a two-days' journey.—(Good Housekeeping.)

A Question of Color.

BY NELLIE L. TINKHAM.

"Dear me!" said Mrs. Strawberry Jam,
A-growing very red,
What a most unfortunate creature I am;
I can scarce hold up my head,
To think that I should live to see
An insult offered like this to me!
That I shall be placed on the very same shelf
(O dear! I hardly know myself)
By the side of that odious Blackberry Jam—
That vulgar, common Blackberry Jam!"

She fumed and fretted hour by hour,
Growling less and less contented,
Till her temper became so thoroughly sour
That she at last fermented.
While Mr. Blackberry Jam kept still,
And let her have her say—
Kept a quiet heart, as blackberries will,
And grew sweeter every day.

One morn there stopped at Dame Smither's fence
The parson to say that he might,
By the kind permission of Providence,
Take tea with her that night.
And the good old lady, blessing her lot,
Hastened to open her strawberry pot.
"O, what a horrible mess! Dear dear!
Not a berry fit to eat is here.
After all," putting it down with a slam,
"Nothing will keep like good Blackberry Jam,
Honest, reliable Blackberry Jam."

Mrs. Strawberry J. went into the pail;
O my, what a dire disgrace!
And the pig ate her up, with a twitch of his tail
And a troubled expression of face,
While Blackberry J. in a lovely glass dish,
Sat along with bread and honey,
And thought, while happy as heart could wish,
"Well, things turn out very funny!"

Minnie May's Dep't.

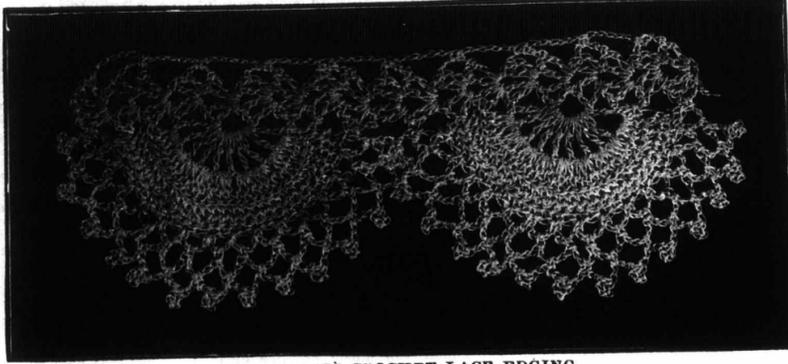
MY DEAR NIECES:—

In every newspaper we take up we read of discoveries for restoring the color of the hair, others for the removal of wrinkles, another is guaranteed to restore the bloom of youth to the complexion, and hundreds claim to cure any or all the ills human flesh is heir to. Wrinkles are caused by the fatty tissue under the skin drying up, just as the liquid which nourishes the eye-balls and joints diminishes and causes failing sight and stiff joints. Anything rubbed on the skin to cure wrinkles only makes matters worse, and causes the skin to become dry and hard. These traces of advancing years will come, my dear nieces, and we can do nothing to avert them. More can be done to prolong youth by taking care of our health. Pain and suffering make the hideous wrinkles come faster than we think, and a sick or delicate woman never can be a pretty one. Neither can a soundly healthy one be ugly. Take every precaution to keep well, and count no trouble wasted nor time lost in preserving your health. A dyed head of hair is an abomination, the wrinkles stand out in relief, and the yellow tint of the complexion is much intensified. When hair fades gray the complexion fades with it, and adds a softening and beautifying effect, and gives us just the opportunity for dressing in a picturesque manner. Folds of soft muslin and lace can then take the place of stiff linen collars, and it is wonderful what an effectual garnish this simple muslin is to the plainest dress. No, my dear nieces, let the wrinkles come when they will, they should find you ready to accept your inevitable lot; they will not disfigure you, if heart and mind have ripened and matured as they should have done. Before they come, observe every precaution to keep well and strong. Consult a physician when you are sick, and a properly qualified and skillful dentist to attend to your teeth, for this is one of the most frequent causes of indigestion, and teeth should be replaced as soon as extracted. Never get wet, or if you have the misfortune to be caught in a shower, change every damp garment as soon as possible; do not fret nor worry over incurable things, try and keep a cheerful mind; do not overeat—more people are killed from the results of overeating than die from starvation; take plenty of exercise in the open air, and look upon soap and hot water as your best beautifiers. Keep in touch with the world; never drop anything unless you take something else up; and keep your sympathies alive, live amongst the people—not apart from them, and rest assured the wrinkles which you so much dreaded and the lovely soft gray hair will be the finishing touches to a perfectly moulded woman, who has grown old gracefully. MINNIE MAY.

P. S.—Our prize offer for crochet patterns has been largely responded to, there being a great number of very nice ones both in design and workmanship, and it was difficult to decide upon the prettiest and most useful. Many beautiful ones were too wide for general use, and then, perhaps, a beautiful pattern would be so badly described that no one could make any sense out of it. Some of them were exceedingly pretty and novel, and all without exception were neat and clean. I, too, feel like an old lady, who, when looking them over, said "she wished she were rich, so that she could give each one a prize." If any care to have their patterns back, just send a three cent stamp and I will return them. This month I will offer a prize of \$2 for the prettiest tatted collar, with description for making all samples to be in our office by the 15th inst. Tatting is now becoming fashionable, and it will be well to devote a little time to it. Those who have the collar returned please inclose stamp. The prize collar to be our property.

First Prize Crochet Lace Edging.WON BY MARY ETTA HOUSER,
CAMPDEN, ONT.

1st Row—4 ch, 1 tc, 1 ch, 1 tc in ring, 2 ch, 1 tc, 1 ch, 1 tc in same place; turn.
2nd Row—4 ch, 1 tc, 1 ch, 1 tc, over 2 ch, 2 ch, 1 tc, 1 ch, 1 tc in same place; turn.
3rd, 4th and 5th Rows—Same as 2nd.
6th Row—Same as 5th; 10 ltc, separated by 1 ch, over.
4th ch of 5th Row—Fasten with a dc in 4 ch of 3rd row; turn.
7th Row—1 ch, 3 tc, over 1 ch between each ltc, 1 tc, 1 ch, 1 tc, over 2 ch, 2 ch, 1 tc, 1 ch, 1 tc in same place; turn.
8th Row—4 ch, 1 tc, 1 ch, 1 tc, over 2 ch, 2 ch, 1 tc, 1 ch, 1 tc, in same place; dc in each st of tc, putting the hook in the back loop of the st; turn.
9th Row—dc in each dc of last row, taking the back of the st.
10th Row—Same as 9th row; fasten to 4 ch with a dc; turn.
11th Row—(4 ch sc between 2nd and 3rd dc) repeat 13 times more, missing 2 dc each time; turn.
12th Row—(5 ch dc over 4 ch) repeat 13 times more; turn.



FIRST PRIZE CROCHET LACE EDGING.

13th Row—(6 ch fasten back in 4th st of ch with a dc, 2 ch dc in 5 ch of 12th row) repeat to the end of the row of scollop, then 1 tc, 1 ch, 1 tc in 2 ch, 2 ch, 1 tc, 1 ch, 1 tc in same place.
Repeat from first row.

In beginning the 15th row of 2nd scollop fasten to 13th row of 1st scollop by 2 ch dc in P at the end of row, 2 ch dc in 5 ch of 2nd scollop, 2 ch dc 2nd P, 2 ch dc in 5th ch, finishing the row with picots.

For the edge 5 ch dc in 4 ch; repeat the length of pattern.

Marriage Superstitions.

In the middle ages it was firmly believed that there were lucky and unlucky days for a wedding. He who married on Wednesday ran the risk of being deceived by his wife, while he who married on Friday would die a poor man. The month of May is considered a very unlucky month, but no reason has ever been given for it; but hundred of marriages can be quoted that have not turned out happily, because of being married in May.

Sunday is a lucky day, Friday is not.

If a wedding party meet a funeral, the sex of the corpse decides whether the wife or husband shall die first.

An old fashion of securing the happiness of the bride was to cause her to pass out of her home over naked swords, the weapons placed on the floor in the form of a St. Andrew's cross.

It is considered unlucky to be married on a wet day; and to insure a large family, in the province of Aragon, the bride upon entering her home must break an egg by kicking it.

The Meaning of Blunders.

Some people have an unfortunate propensity to brood over what they call the "mistakes" of their lives. It arises from a false estimate of human judgment and an overstrained idea of the responsibility of their actions.

A conscientious woman of middle age wrote to a friend, "I am glad to be spared a longer life, that I may spend it in repenting my past mistakes." To spend one's time in lamenting past mistakes seems the worst mistake of all. Life is short at the longest. There is little time to dream of doing, less to mourn over what has been done. To act, to act quickly, to act up to our best instincts and highest aspirations, is all we can do. It is all that is expected. After that our responsibility ceases, and the final result belongs only to God.

The good woman above quoted had always acted according to her best judgment. But, being human judgment, it was fallible. Being human, she could not foresee the full consequence of her actions, but could only do as seemed right at the time. Now if she was called upon to act to-day, what better could she do than that? Then why regret that she so acted before?

Examining into this matter of blunders a little further, and particularly in tracing the course of the "mistakes—well meant," in our own lives, when we look back upon them with the cooler understanding of later years, we are constrained to confess that the "mistake" must have been intended to be there, as well as the correct action, because the plan of our development has included both. Continuing to study clearly and

deeply, we must acknowledge that the mistakes and errors, nay, the very sins, when forsaken and forgiven, have helped the soul upward; that all have worked together to accomplish the result sought; that they must have been put there and meant so to be; and so that our "blunders" were not blunders at all, but although we sowed and watered often amiss, there was always some increase given which achieved the good we aimed at but failed to reach.

And deepest of all we see that the divine love, which saw the end from the beginning, bore, with a tender compassion, to look upon our struggles, our weeping, our disheartened sighs. Ah, infinitely greater it is, but like to the love we bear our own children, which is so deep and true that we endure to treat them harshly, and with seeming cruelty behold their tears, knowing surely that one day they will comprehend all the kindness!

Fashion Notes.

The prevalence of fancifully shaped waists explains the unusual absence of top garments this season.

Lace is still used on all cotton dress goods, but only on the bodice. All the skirts are made with a narrow flounce of the goods.

Hussar jackets with or without long hanging sleeves, and with or without close or long sleeves beneath the wide ones, are frequently worn on the street to partly conceal fancy dress waists. The collar of the Hussar jacket is made to stand up or turn over prettily; and the garment is therefore liked for driving.

The close skirt, demi-trained for the house or for visiting, and of walking length for shopping, church-going, and the promenade, may have an ornamental edge, if desired. Those who are preparing autumnal dresses may choose this style of dress with the assurance that it will be a leading one for a long time to come. The newest skirt is known as the "cornet skirt," and is the most attractive skirt designed. The bodice of gowns cannot be too picturesque, nor can the sleeves be too ample; but skirts cannot be too simply fashioned.

Life on the Landscape.

The picture tells the story. The child of four years has wandered away from the little house on the hill, has climbed through the rails of the snake fence and has gone away down to the stream to watch the fish and dabble her hands in the cool water, or watch it run over the pebbles and listen to its music—sweeter to more ears than hers, than are Italian trills and meaningless freaks of the now so-called music. She has stepped over the stones, and, tired of the stream, has wandered on on the other side, picking the grasses or flowers which suit her childish fancy.

Sometimes she tries to catch a butterfly, then talking to herself, laughing as only children can, and doing just what the wild little nature likes, and is happy, very happy. However, she is not in Eden, and her happiness calls a halt as she remembers she must go back again; mamma will be wondering where she is, and perhaps her baby brother has awaked and needs her to play with him. The earnest face grows anxious over these thoughts, and she turns to retrace her way to the stream. She has no fear in the woods, she knows the way, and the great trees swaying back and forth seem like guardian giants over her. The leaves move, and to her they seem to whisper and kiss each other. They are her friends whom she knows better than other playmates, and, in her innocence, they are indeed "God's temples." The bees flit from flower to flower, and the birds sing above her as she approaches the stream, where she expects to step from stone to stone and soon be on the other side.

But there sits a man, a stranger, right in her path, and the wee body is in trouble. The tears come and the chubby arm is covering her face—what part the sunbonnet does not hide. The calico pinafore does duty to wipe her tears, and so in the artist's picture there is life on the landscape. A few swift strokes and the sketch is taken, then kind words and kind hands draw the little one over the water and comforted she goes on her way home, little dreaming that, with covered eyes, she stands in the picture to-day.

To be aimless is to be lifeless.

A nice, cheap, country seat—a stump.

If one would be a hero, let him be patient.

There are 14,623 miles of operated railway in Canada.

People who work for the devil never have any vacation.

Sympathy is a word that should be written in letters of gold.

The surest way to lose your health is to be always drinking other people's.

Cultivate habits of observation, enquiry, comparison and steady perseverance.

Our success and progress in all matters depend far less on the number of advantages we possess than on the manner in which we employ them.

Tea at the Farm House.

Tea at the farm house! A real old-fashioned country tea! How hungry one feels at the mere mention, and what lively remembrances still exist of a farm house tea—cold chickens, pickles, jam, and such cake and bread and butter. But this was a company tea, not the slovenly repast the tired farmer sits down to after his work is done, seven days in the week. When the labors of the day are done how restful to gather around the table and discuss such an appetizing repast as has been described. Methinks I hear you exclaim, "We have enough to do to give the family plain food without wasting time on dainties." My dear, tired, over-worked mother, wife, maid-of-all-work, and nurse, cook, and house-maid, let me tell you how you can save labor by working ahead. Dinner for all hands at noon is, and always will be, the heaviest and heartiest meal of the day; but while you are cooking dinner you can cook tea also; it will take a little more time to prepare it, but it will not have to be done in the evening. Cook enough

sweet, large slices of buttered toast are always enjoyed. The tea should be as hot as it can be. A glass of cool milk is preferred by many. Your own pickles and sauces are always handy; and nice tea biscuits lose none of their flavor by being heated again; they can be cooked in the forenoon. A mould of cornstarch, served with jelly or cream, looks and tastes nice. And what is more delicious than an apple charlotte, the recipe for which has been given, and it uses up the pieces of bread, too. To you, my dear sister, these few hints are given from the experience of one who has been through it herself, and tried to improve that supper to something more than a mere feed. Tea can be made both delicious and dainty, if we set about it.

To cook a tough chicken for tea, pick, singe, and draw, cover with water only, let boil until the bones will come out; take it up, put into a flat basin, reduce the stock to half a pint, add pepper and salt, cloves and a scrape of nutmeg; dissolve half a box of gelatine, stir in, pour over the fowl, serve next day.

One Thing and Another.

A bullet travels 750 feet per second.

Unflinching labor conquers everything.

Education is nothing more than the formation of habits.

He who fears to undertake is already defeated.

Life is passed in desiring what one has not, and regretting what one has no longer.

When a young lady gives herself away she actually loses her self-possession.

"I know I am a perfect bear in my manners," said a fine young farmer to his sweetheart. "No, indeed, you are not, John; you

have never hugged me yet. You are more sheep than bear."

"Teach not your parent's mother to extract the embryo juices of an egg by suction. That good old lady can the feat enact. Quite irrespective of your kind instruction."

Why is an egg underdone like an egg overdone? Because both are hardly done.

"Do you know," said a rather fast youth, "that I intend to marry and settle down." "I don't know whether it would not be better," remarked his friend, "for you to remain single and settle up."

When a man leaves our side and goes to the other side, he is a traitor, and we always felt there was something wrong about him. But, when a man leaves the other side and comes over to us, then he is a man of great moral courage and we always felt that he had sterling stuff in him.

"Time is money!" Of course it is, else how could you spend an evening.

"I cannot help but rejoice at your downfall," said the young grass to the spring rain.



LIFE ON THE LANDSCAPE.

potatoes and vegetables for twice, set away until wanted. When your fire is made up to boil the kettle, set on your pan, slice potatoes in with a little milk, pepper and salt, stir until hot, add a little chopped parsley. What cold meat is left from dinner slice thin, add a few green leaves as a border to the dish. Serve your bread on a white cloth, instead of on the bare plate. Do not serve pies, they are a sinful waste of material. Serve the fruit in a glass dish, with sugar separate; but if your family must have pies, make them with biscuit crust, and serve cold with cream. While your bread is baking, a pan of cake can be mixed, and when the bread is done, sift in the flour and baking powder, mix well and bake it on a doubled paper, which will prevent it turning. Hard boiled eggs make a nice dish for tea; boil, cool, take off the shells and serve cold on lettuce leaves.

All cold vegetables can be served as salad for tea, by cutting in thin slices and mixing with a little salad dressing. Many recipes have been given for its making in the columns of this paper. Cold boiled rice, shaped in small cups, turned out and served with custard, fresh fruit, or only cream and sugar, are nice and wholesome. Taking it for granted that the bread is always

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES:—

Your visit to me for this summer is over, and although you have hardly got home, and scarcely into school work again, here comes a letter. I know some of you young mischiefs, who took my slippers off my feet, and hid my spectacles when I was taking my after-dinner nap one hot day in July, are just thinking, "Well, Uncle Tom must like to write letters when he's written so quickly; seems to me he had time enough those weeks we were there to have got talked out; but he didn't seem to say so much as he writes." Right you are, my boy; I can write better; but when you remember all the questions you asked, and how many branch tracks we ran off on when I did try to talk, you need not wonder I am writing now, when I can go straight ahead without being drawn up by a question from an unlooked-for point. Besides, it's a new month, and new thoughts come with the changing seasons to me as well as to you. Last year when you were here some of you were made quite happy by having a ball and a whip-top; this year you wanted a bat, and your hearts were gladdened by a flat-bottomed boat on the pond. When you get to be an old man, if your life should be spared to that, you will care more for a warm seat by the stove, and a newspaper every day. The old rhyme goes:—

"The cat keeps house and loves the fire.
At eighty we the same desire."

So, my children, I am glad to see your tastes changing; it shows me you are growing, and as the body claims physical exercise and food, so does the mind. Do not starve it. Some good people, who would be ashamed to starve their pig or dog or cat, will starve their children's minds, making them dwarfs, by giving them no good thoughts or new books, magazines, or anything else to grow on. They trust the school teacher and their school books to do it for them. That's all very well as far as it goes, but it doesn't go far enough; boys want a "Boys' Own Paper", and girls want a "Girls' Own", to get information and learn some of the wonderful and interesting things this world holds for them. Some of you do not give your parents a chance to know what you would like so much to have, and you go on doing without it. Now, this is a good season to remedy that evil. Most of you get prizes on something at one or more of the fall fairs, or if you do not, you have been helping to get your parents' produce ready, and I know you will have a good supply of pocket money on hand. Now, instead of wasting it in some way in which you do not care to account for, why not pay a visit to a bookseller and have your source of thought and comfort for the long evenings which are coming on? Your tastes are so varied I must not advise any book or books, but get the best you can on the subject you are interested in.

Some say if you have just one book beside your Bible, let it be Shakespeare. I do not—for boys and girls. After thirty years of age I would advise each of you to read it, but not before, as almost all of you have read extracts from him. From these you may have noticed how much he puts in one sentence. In "Hamlet" you have a whole history in itself, of a common soldier's life, summed up in one sentence: "The night is bitter cold, and I am very tired." However, all of you cannot understand all he says now, and a better choice will be to buy books you do understand, and which teach you and interest you. Gather up a few of this kind; start your library, and some day your mind will grow so that you will be able to grasp what is now all dark and senseless to you.

A story is told of a gentleman who kept a supply of acorns in his pocket, and when he saw a space in his grounds he put one in to grow. I should like to have good thoughts in your minds, planted and growing, of much interest now, and of great promise for the years to come.

UNCLE TOM.

P. S.—It has been suggested to me by one of my very brightest young nieces that we establish a "Poet's Corner". I have no doubt that many of my nephews and nieces are fond of good poems, and some, perhaps, have a poor chance of seeing a variety, and I think we could derive much instructive enjoyment by having a few short and select poems published each month. My plan is this: Let as many as wish send in one or two of their favorite poems each month, giving, whenever possible, the name and anything they may know about the author, being careful not to select poems too long, for our space is limited to one page only; and I will offer three prizes, when space will allow us to publish three; 1st prize, \$1; 2nd, 50c., and 3rd, 25c. These prizes are to be given for the choicest selections correctly and neatly copied. Write on one side of the paper only, and number each page at the left hand corner. The first contributions for the "Poet's Corner" to be in our office by the 10th October, and will appear in the November issue. All children of our subscribers are entitled to compete.

What wonderful work some of our puzzlers are getting in now. Those in competition for the prizes at the end of the year may be glad that Ada Armand and Fairbrother are not competitors. Let me have some good ones for October now, and let all work well till the end of the year.

PRIZE STORY.

How Science Beat Strength.

BY HARRY ALBRO WOODWORTH, PARSONSBORO, N. S.
(Based on Illustration in July number of the ADVOCATE.)

Bruin, the blustering, bragging beast,
Once tried to rule the monkeys.
He told them he was king of beasts,
While they were slaves and flunkies.

The monkeys, though, had Darwin read,
And knew they were connections
Of man; so to the monster's scheme
They raised some strong objections.

One day, within the shady wood,
Some tired lords of creation
A hammock swung.

It seemed just right
For summer hibernation.

At least, so Bruin thought, and so
He quickly ate—Oh, dear me!
He had in truth, a kindly meal,
Then growled, "Would that thing bear me,

If I an after-dinner nap
Should take in the new fangled—?"
A moment later, Bruin bold,
"Twixt earth and heaven dangled.

Then he sang a little song,
That egotistic fellow!
He sang this song in bearish glee,
And voice that wasn't mellow:—

THE BEAR'S SONG OF SELF-CONGRATULATION.
"Oh, who would swing like the stupid apes?
For they swing by their tails!
But here I swing like Greece's king,
Or like the Prince of Wales!"

His bearship slept without a thought
That there was trouble Bruin,
Little he thought that peaceful scene
Would be a scene of ruin!

For two small monkeys up a tree
Above the braggart haughty,
Thought they would lay his bearship low,
(Now, weren't those monkeys—naughty?)

So one sly monkey cut the string
That held the boastful sleeper;
And down he came, as swift as Don
Or rapid rushing Dnieper!

The bear thought he was "lord above,"
But when that rope was rented,
Far quicker than primeval man
He from that ape descended.

His hat was crushed, his pants were soiled,
And torn his morning paper;
(Now weren't those monkeys monkey-like
To cut up such a caper?)

And as the self-styled king of beasts
Began to growl and grumble,
The ape remarked unto his mate,
"Pride goes before a tumble!"

And then the apes a song began,
(It had the song translated
By that Yank who with monkeys talk,
But who by bears is hated):—

THE MONKEY'S SONG OF TRIUMPH.

"Who was it called us servants, slaves,
And said that he should work us?
The bear that gave us this combined
Menagerie and circus!"

"Oh, ne'er again, brave Bruin, place
In self such firm reliance;
Strength may be good, but never yet
Has it outwitted Science!"

HAW!"

Puzzles.

1—DIAMOND.

1—A letter. 2—To proclaim. 3—The chick-pea plant. 4—With two fine threads. 5—Having two heads or origins, as a muscle. 6—To fix the boundaries. 7—The relation or proportion of one thing, such as a quantity to another. 8—An animal. 9—A letter.

2—ANAGRAM.

I stole away from school one day.
I really truant played.

It vexed my father when he found
Me such a naughty maid;

For I had gone to London,
And he knew no one there

Thinking I was with strangers
Caused him so much to care.

Said I, "My Uncle Tom does live
In that fine western town,"

And at this explanation
Father's ire went quickly down.

ADA ARMAND.

3—CHARADE.

Friend Charlie, I know you've guessed it,
The answer to my riddle;

And TOTAL mean to make us work,
Or else play second fiddle.

Perhaps you've just been cheating us
Before our very face,

And now you mean to show us
You're going to win the race.

But Day shines LAST and you will need
To watch all that you do,

Lest she gets first, and you may find
That you are worsted too.

The lily is a lovely flower,
FIRST in this puzzle race;

I would be glad to see that she
Is given an honored place.

ADA ARMAND.

4—CHARADE.

To "Free Man".

"Most dear," Ha! Ha!! "respectful sir,"
And how should I your love so stir?
Am I a king that you should bow,
To call on me the first, I vow.

You've tried to FIRST my hand and heart,
As friends we meet and hope to part;
But that's so "freely make advance,"
LAST other fellow may have the chance.

In "wedlock's bands" to join with you,
My heart does not incline. Quite true,
'Tis leap year, but to you I'll say
My answer is a simple nay.

My love on you I can't bestow,
Because another has it, Oh!
My hand must therefore, let it pass,
Go to this other TOTAL lass.

If I were you I'd make a mash,
And then sell out my love for cash.
\$5.00 is a lot of money
To realize for a "man", how funny.

You call yourself a maiden (aunt);
Your "fond request" I cannot grant.
As "Free Man" is your name, I will
Let you remain a "Free Man" still.

FAIR BROTHER.

5—RIDDLE.

I am always behind everybody;
Never in view;
Yet what may be funny,
I am always before you.

CHARLIE EDWARDS.

6—CHARADE.

I sent my LAST to mill one day
With a horse and cart.

He sold them both, and ran away.
It almost broke my heart.

With the money that they brought,
He ran away to FIRST.

Of all the boys parents ever had,
Mine ranks among the worst.

I often wonder will he come back.
Perhaps he may some day;

But many a COMPLETE has gone by
Since my LAST ran away.

CHARLIE EDWARDS.

7—ANAGRAM.

"Come blow flos"

Look this over well
And see who can tell

The name of a bell.

CHARLES S. EDWARDS.

Answers to August Puzzles.

- 1—Defer not till to-morrow to be wise;
To-morrow's sun for thee may never rise.
- 2—
A
D
O
A D A M I T E
O M E N E D
I N A N E
T E N A N T
E D F E N T A L
T A
L
- 3—Still, till, ill.
4—Pick-wick.
5—The letter O
6—Handsome.
7—Intent.

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

Charlie S. Edwards, Jessie Cumberland, Addison and Oliver Snider, James Hicks, George W. Blyth, Mary Marshall, Geo. Rogers, Maria Moore, F. G. Milling, Horace Buxton, T. L. Simpson.

Descriptive Particulars of the Tercentenary of Trinity College, Dublin, Ireland.

BY A PARTICIPATOR IN A GREAT NUMBER OF THE EVENTS.

I hope to be able to bring my pen under complete subjection to my impressions as to this last week's doings in dear, dirty Dublin. I do want my brothers and sisters in the sister country to feel that one friend at least has been culling particulars for them, and them alone. Sweet lavender I shall call them, out of many gorgeous bouquets, bouquets of wonderful events which have almost overpowered us by their perfume. I took minute notes of each event as it occurred, and I now intend enlarging on them just a little, and only in accordance with the actual facts.

On Sunday, the 3rd of July, I was struck with the immense congregations pouring out of the different churches, at different hours. I myself was at the College Chapel service, the music being most beautiful on this occasion, appropriately chosen to suit the needs of the incoming week—I mean, of course, the words which were set to the music, expressly composed for this week's daily services, by Sir Robert Stewart, Bart., Musical Doctor. Hundreds of the old students of the University were present, many of them having come home from different parts of the world to join in the Tercentenary pleasures. I shall not attempt to describe sensations, merely narrate facts as facts, so will my dear old friends in Canada, who may have been with me in our dear old college in years gone by, and dear new friends who may only know it by name, come to Ireland in spirit, and I shall bring them through the last six days as I go myself.

On Monday we had a splendid game of cricket in the College park between our own eleven and eleven Cambridge men. Our men held their own strongly and quietly for a long time, but towards the evening we could see plainly that our Cambridge friends had been merely waiting to see the style of our play, which, when they did see it, was not up to their mark. We never will beat English cricketers as a rule—here and there it has been possible, but the rule is, England for cricket, cricket for English. I am a good man myself at the match, but was nowhere when opposed to even the third best of Cambridge. There was a delicious show of roses at Lady Iveagh's that day (this is a lady's expression, but I think I could hit off no better, so use it.) A great number of celebrities were there, most gracious and agreeable. The representative from Canada, I believe, was present. I am sorry to say I did not see him, as I should have liked to say in this letter I had had the honor of an introduction. Truthfully I had not this honor, but I was able to be of use to him on the following day—it is just possible he may remember how; but I do not care to push any one to the front, so shall continue and tell you of Wednesday, the fifth. There seemed not to be an available inch of spare room in the principal streets that day, or in any of the windows in streets through which the grand procession was to pass. I was in Grafton street, in a window which Mr. Switzer had given up to ladies and

one or two other friends, of which I was one. It is an immense plate glass window—one huge sheet. It was a lovely morning, and when the procession, which had started from the College at eleven o'clock, had gone to St. Patrick's Cathedral by a different route, was returning by Stephen's Green and Grafton street about one o'clock, we had a gorgeous view, and were well repaid for waiting, as we did, quite an hour and a-half. The brightness of the day set off the magnificence of the robes—Easterns, Chinese, Ambassadors, Doctors of every degree under the sun, gold, crimson, pink, silver, blue, cream, rose, violet, lavender, two and two, cocked hats, caps, hoods, ermine hats—all together, many of them bearing wands and maces, about every twenty being separated by a herald bearing a magnificent banner. It was too lovely for anything, as I heard a lady near me say. One band preceded the procession, and another followed. You may judge how imposing it was, in length as in all else, when I tell you that the sound of this band had quite died away before I heard the second coming on. When they had all passed, some twenty minutes elapsed before the crowd which were following allowed us to go home comfortably, which we wanted to do as soon as possible, having to consume luncheon before going to the garden party in the Provost's grounds. One could only procure a ticket for this through the kindness of a Don, so I considered myself fortunate in receiving a special invitation. I have never before been a guest at such a brilliant reception. The band of the Royal Irish Constabulary received us at the outer court, inside the Coldstreams delighted us piece after piece. There was a concert in the grounds, and some of the ladies' voices sounded like extra editions of the birds in trees above our heads. Are there some Irish in Canada who recognize this expression, "extra edition"?—we know it pretty well in Dublin. There were two huge tents, with refreshments in every disguise. One may imagine the vastness of the grounds and crowd by my telling that I missed one of my party for exactly an hour and twenty minutes. At the end of that time, by both our watches, we met, and we had been searching for each other, not trying to keep apart. At last we heard "God Save the Queen" played by the Coldstreams, and the crowd began to thin out—a process which took quite an hour to do. Then in the evening! Such a concert! and we heard for the second time the lovely Tercentenary Ode, composed by Sir Robert Stewart. The ladies' dresses fail me to describe. The effect, though, on the whole was lovely. We have such pretty girls in Dublin, and in such round numbers, too.

I think I have done Tuesday, so now let me tell you of the third day's cricket between the two Universities—it was going on on Tuesday, but as I am not Green, a lineal descendant of Boyle Roach's bird (much less itself), I could not go in for it and the garden party at once. However, on Wednesday I went to see the presentation of addresses at the Leinster Hall and hear the answers, many of them good enough for history. It was another grand sight—the procession going to it; traffic was stopped, and the robes shone in their beauty. After the meeting they all separated and returned to their different quarters as they chose. Talking of quarters, how can we ever express our gratitude to the Dublin people for the hospitable open doors which presented themselves to us? I never could, so I shall not mind talking of it, but "play away with the thinking instead!" There was another splendid entertainment given by Provost and Mrs. Salmon that evening.

On Thursday, I must not forget to tell you of the giving of a Trinity degree to Mr. Irving, the celebrated tragedian—he is Doctor Irving now—and his appearance at the garden party with Lady Iveagh was a signal for a special demonstration. He has been Lord Iveagh's guest, who with the world-famed Guernsey's liberality has entertained him, with very many others, during the week, at his splendid mansion in St. Stephen's Green. Lady Iveagh threw open her lovely grounds again that afternoon for another "Rose Party." I never saw any flowers so beautiful in all my rather experienced life. She herself is so winning and handsome, too—a fit accompanist for her roses.

On Friday, at 11 o'clock, a number of addresses to the students were delivered by foreign professors, the Provost presided, and all were in their academic costumes. They afterwards attended a garden party at Dundrum, at which I was not able to be present, so I am sorry I can say nothing about it. In the evening there was a dramatic entertainment at the Gaiety Theatre, at which I was present, and with what cheers Dr. Irving was greeted, three times three, and again three times three—no one who did not hear them could imagine we old College men can cheer, you know. And now I shall bring my manuscript to a close, hoping that it may be appreciated by the Editor of the FARMER'S ADVOCATE, and that he will publish it for the pleasure of the many Irishmen who are far away from us—my "particular man" in particular, who would have much liked to be at home for this one week, I am quite certain, although he never wrote me so.

Yours faithfully,

S. STUDDERT KENNEDY,
3 Glenart Avenue, Blackrock,
County Dublin, Ireland.

Doffing the Hat.

All Jewish congregations worship with their heads covered; so do the Quakers, although St. Paul's injunctions on the matter are clearly condemnatory of the practice. The Puritans of the Commonwealth would seem to have kept their hats on, whether preaching or being preached to, since Pepys notes hearing a simple clergyman exclaiming against men wearing their hats in the church; and a year afterward (1662) writes: "To the French Church in the Savoy, and where they have the Common Prayer-Book read in French, and which I never saw before, the minister to preach with hat off, I suppose in further conformity with our Church." William III. rather scandalized his church-going subjects by following Dutch custom, and keeping his head covered in church, and when it did please him to doff his ponderous hat during his service he invariably donned it as the preacher mounted the pulpit stairs. When Bossuet, at the age of fourteen, treated the gay fellows of the Hotel de Rambouillet to a midnight sermon, Voltaire sat it out with his hat on, but, uncovering when the boy preacher finished, bowing low before him, saying, "Sir, I never heard a man preach at once so early and so late." As a token of respect, uncovering the head is one of the oldest courtesies. Lamenting the decay of respect to age, Clarendon tells us that in his young days he never kept his hat on his head before his elders except at dinner. A curious exception, that, to modern notions of politeness, but it was the custom to sit covered at meals down to the beginning of the eighteenth century. Sir John Finnett, deputy-master of the ceremonies at the court of King James I., was much puzzled as to whether the Prince of Wales should be covered or no at dinner in the presence of the sovereign, when a foreign ambassador was one of the guests; since the latter, who was the representative of a king, was not expected to veil his bonnet. Giving James a hint of his difficulty, his majesty disposed of it when the time came by uncovering his head for a little while, an example all present were bound to follow. And then putting on his hat again, requested the prince and the ambassador to do likewise. "Hats need not be raised here," so it is said runs a notice in one of Nuremberg's streets. "Hats must be raised here" should have been inscribed on the Kremlin gateway, where a government officer used to stand to compel passers-by to remove their hats, because under that gate the retreating army of Napoleon withdrew from Moscow. Whether the regulation is in force at this day is more than we know.

A Race Week's Sensation.

BY S. STUDDERT KENNEDY, BLACKROCK COUNTY,
DUBLIN.

Dedicated to "Fred."

Please, dear Canadian readers, come back with me to Ireland—to my Irish home in the very sweetest part of the "Old Country"—Antrim, to wit. I am very proud of hailing from the North. Antrim's beauties and principles are too well known everywhere to require comments from insignificant me; only come with me there in spirit at least, and I shall bring you round my beautiful coast road, from Poetstewart through Cushendall to my home—midway between that picturesque village and Glenarm. Our place lies under a mountain, the lodge of which is at one side of the broad, well-cared coast road, the sea breaking against the limestone wall at the other. It is called Drumssole—our name Leyturn. I have spent a busy day; hosts of visitors are coming to us this afternoon—for two events, our eldest girl's marriage and our local races. Ada intends leaving us the last race day, to settle in a warm nest of her own, in Somersetshire, where her fiance, Captain Lancelot, of the Buffs, holds his head very high amongst the county magnates. Our boy Fred, too, is leaving us the same day to join his regiment at Colchester. They coaxed their father to keep open house this last week at home. So now see us, standing on the broad steps waiting to welcome our guests. They all seem to have met and come together; carriage after carriage comes up the drive, and we can make one "caed mille failthe" suffice for all. It has been a pleasant arrangement.

Have any of my Canadian readers been round the Antrim Coast before leaving "home"? They will recognize these places and will remember the exceeding beauty of them—Cushendall and the quaint old seat (in its neighborhood) of Lord O'Neill. Then they will come on through Cushendall to Garren Tower, where this exquisite mansion appears from the coast road to be built on the top of a huge rock. One has to look up and up again before one can catch sight of its tower and welcoming flag. When its noble and hospitable master is at home (the Marquis of Londonderry) the flag, night and day, is flying. Then they must pass Drumssole and wind through lovely Carnlough into Glenarm, where the Earl of Antrim lives. His castle and grounds are so lovely I could not attempt to describe them; besides, it is not there my tale is centred. I shall have to go back some miles and begin anew, when our guests have come indoors, we ladies to rest and cosy round the afternoon tea-table, while the men have a look, marshalled by Tom (my husband), round the stables, where our two racers are being well looked after—one of them, a splendid little thing—Ada's very own—which Captain Lancelot has promised to bring in No. 1 in the Lady's Hurdle, and the other, Tom's thoroughbred, which he also proposes to ride himself. When they had finished their rounds they all came in, and are not the least bit shy when asking for cup after cup of tea and buttered crumpets. Then the men go for a game of billiards, while Tom brings me down to the pantries to look over and count a plate chest which had come that morning from the bank, where he always kept it. We had most valuable plate, and only kept in the house what was required for every day use.

This large chest had been sent in care of a trusted servant of West's, Grafton street, who had sent with it a quantity of silver (Tom's wedding gift to Ada), crested and arranged in a smaller chest, enough for their requirements, inside which my present to my dear child lay, carefully packed in its small case. It was a lovely diamond ring, an heirloom in my family, always given by mother to eldest daughter on her marriage from time immemorial, and always placed on that daughter's finger after her marriage by her mother. We had quite a superstition on the subject of this ceremony, and it was never omitted. We had sent it to West's to be tightened—I had fancied that some of the silver setting was loose, hence its being in the plate chest. When we had counted every piece, Tom gave all into our trusted old butler's charge, and I brought up my ring to the morning room, and remembered distinctly afterwards laying it on the mantelpiece. When we had gone to our rooms that night, I asked Tom to go back for it, but in the "happy-go-lucky" way we Irish have, he said No; it would be "all right." I minded him, and found that it was "all wrong" instead.

The following morning about 6 a.m., a maid, who had been told off to see after early tea for the bedrooms, wandered in passing thro' the hall to see its lamp glimmering, a light in the dining-room, and one window open. She thought her master had been down to have an early look at the horses, so went on with her tray. On coming down, empty-handed, she went into the dining-room, and looking round, saw the sideboard dismantled, trays, goblets, everything gone. In a moment she realized the open window, gave one piercing scream, and fainted. The screams were heard by her master and the servants down stairs, who were just going out; all rushed towards the sound, saw the lamp burning, open window, maid, silver gone, all in a moment—I fear they forgot the poor girl—went down stairs, found pantries cleared also, every atom of the valuable plate gone, chest broken open and emptied—Ada's beautiful wedding present sharing the fate of the rest. Then—Oh! horrors of horrors!—a cry from the stables. I really cannot describe the horrible scene there—enough to say, our beautiful racers were both of them dead. Tom says that a great wave of thanksgiving passed through him at that moment, when he thought of me and all the children being safe. When the first bewilderment passed away, servants, master and guests scoured the entire place and country; large private rewards were offered for any information, government offered same, and the heads of the Royal Irish Constabulary also, with no results—none whatever. I need hardly say the races that day were not a success, every one heard of our losses, and we had such a number of sympathizing friends who came to us instead of going to the course, that if inquiries could have soothed us, we should not have felt so utterly depressed as we did. We did so wonder who our enemies were. One could imagine a robbery, but why should they have taken the poor dumb animals' lives? "An enemy hath done this!" was our refrain. Oh, it was too horrible! The races were not a success that day, the horses seemed to sympathize with the fate of their fellows. One thing we gained, however,—we found out the genuine friendship of all our neighbors for us. Countless friends came forward with offers of help, and were in earnest, too. But I am tiring my far-away friends; I must pull myself together, and continue my tale.

Our child's wedding took place on the appointed day, and was as pleasant as, under the circumstances, we could make it; but she left without her ring or her father's present. Captain Lancelot would not hear of the latter being replaced, and in such a decided way carried the point that I augur well for Ada's happiness. They left for the Highlands, and Fred for his regiment; the children who have had no business to appear in my story resumed their studies, while Tom and I settled down more Darby and

Joan like than ever, and wished to remain so; but another tangled skein presented itself, and, as I was fated to be the unraveller—and it took some time to do so in—I shall rest a little, and not take up my pen to tell you about it until to-morrow.

PART II.

The first thread I unravelled brings us to the week before Easter in this year (1892). Two years have passed since the stirring events I have told you of. My grandson, "Fred the Second," is playing in my writing room just now. They have all come over, from Somerset to spend Easter with us, and are with us still. But, as I said, the week before Easter day—on Wednesday—a telegram arrived from Larne to my husband, asking him to send me to the sender of it, who was ill in an hotel there, and wished to see me on important business. Tom abhors anonymous communications, so was most unwilling that I should accede to the request, but in the end consented, coming with me. We wished to go quietly, so took up the mail car which daily passes the gate, drove to Larne, some 12 miles, and went to the hotel from which the telegram was dated. I had some tea, and then asked if there was a delicate person stopping there. The waiter said, "Yes," a French lady—a Madame L'Estrange." Tom told him to enquire if this lady wished to see Mrs. Leyturn; he returned shortly to say, "Yes, in a few minutes, but the Madame had had a faintish attack since her breakfast; would be obliged by the lady waiting for a little,"—which I did, more puzzled than ever. But, as I waited, a curious feeling passed over me—a French lady wishing to see me; could it possibly be my old maid, Josephine, who had left me in such an unaccountable manner a year or more before.

At the moment almost that this occurred to me the waiter came back to say the madame was waiting to receive me. I followed, leaving Tom beating a tattoo on the window sash. I was shown into a darkish bedroom with a fire, beside which, in an arm chair, lay my old maid, a French girl, whom I had not much cared for, but whose appearance shocked me. She was evidently in the last stage of decline, and I felt at once that some strange revelation was going to take place. She almost gasped for breath as I came towards her, and pointed to a bottle of Sal Volatili. I poured her out some, which she took and seemed to recover herself a little, but was only strong enough to whisper that I was to take a box from her feet. She raised a rug which was on her knees, and I saw the box. I took it up and brought it to a table. She motioned me to open it; when doing so I recognised it, and seemed to myself hardly strong enough to do so, I was so shocked and amazed. I seemed to have no room for pleasure, for there lay my ring and all the plate, as it came from West's—not one article even misplaced, Ada's wedding gifts intact. I could not speak, the wretched girl could not either, and I at once recognized the brave effort she had made. I stooped down and kissed her, tears rolling down her cheeks. She motioned me to go, and handed me a small roll of papers, the contents of which I shall tell you presently. I rolled a shawl I had had on my arm round the box, again gave a forgiving kiss to the dying girl, and struggled down stairs to my husband, who was still tattooing on the window. How one remembers little things like these afterwards. I begged him to come home without questioning; I feared that if I told him then what had occurred, he, being a hot-tempered man, might possibly have had the poor girl arrested; so I told him nothing. He knew that a wonderful thing had happened, but is such a kindly man, trusted me and ordered a car, which, when it came round, we mounted, he bringing out the rug and its contents himself, until we arrived at home. I could not bring myself to explain, and he, dear fellow, was so patient. The children and their governess met us on the avenue, so excited as to our having gone off without telling them. When I had had a long rest before dinner I sent for Tom, asked him to lock the door, open the parcel, and read aloud the contents of the packet which I gave him, and which I now shall give my readers, word for word.

(TO BE CONTINUED.)

—OUR—
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FOR 1893

According to our usual custom at this time of the year, we have decided to give the remainder of this year AND ALL OF 1893 to all new prepaid subscribers. Agents are instructed to take subscriptions on these terms.

DURING THE PAST YEAR THE ADVOCATE HAS STEADILY AND SURELY GROWN IN PUBLIC FAVOR

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Older animals of any description on equally favorable terms. All stock sent out by us will be registered in their respective records, and be of good quality. We guarantee satisfaction in all respects. We want good, honest agents in every county in Canada, and will give permanent employment and good wages to suitable persons. Our regular agents are earning from \$600 to \$1,200 and expenses per annum.

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In implements we can give the best possible value. For 40 new prepaid subscribers we will ship a celebrated Campbell Fanning Mill and Bagger or one of the Monarch Fanning Mills and Baggers. These are two of the best Mills made in America. The sieves and screws are numerous and complete, the bagging attachments perfect. They are by far the lightest running mills manufactured.

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To those desiring Windmills, either steel or wooden wheels or derricks, we can offer special inducements. We have made arrangements with the best manufacturers, and can supply the Improved Halliday Windmill, manufactured by J. F. Walmsley, Woodstock, or the well-known Mill made by The Wortman & Ward Manufacturing Co. of London, or a Mill manufactured by the Toronto Pump Company. Terms and outfit furnished on application.

In sending subscribers for subscription prizes, send in your names and cash weekly. In all the larger prizes we will give from three to six months in which to send us the required amount of cash and names. When you commence to canvass, let us know for what prize you are working. As soon as any reliable canvasser sends us one-half the number of names required to win the prize for which he or she is working, we will ship the prize if desired, and allow the canvasser a suitable time in which to send us the number of names specified, but we must be furnished with suitable evidence that such parties are reliable.

Sheep.

[A sketch of the English breeds bred in Canada, by J. B. Spencer.]

SOUTHDOWNS

being formerly natives of the chalky, dry hills of the south part of England, they have secured, and still retain, a hardiness which seems to place them above all other good breeds. They have the ability of changing short, scanty grass into the finest quality of mutton. Being rather underized, they are looked on by a great many people as being insignificant; but as they are so plump and on such short legs their weights are very deceiving; and being very hardy and active, more of them can be kept on a given amount of land than most other breeds. Their wool, as is generally known, is superior to that obtained from any other downs in fineness, and having an average amount of yell, which is governed to a considerable degree by the climate. They are more prolific than most other breeds, coming next, perhaps, to the Horned Dorset in this respect. The lambs yield good weights at an early age. Perhaps our next younger variety is the

SHROPSHIRE

which has become so popular throughout Canada and the United States. It is needless to say very much about them, as the fact of their becoming so popular should satisfy the public that they are the best tried sheep of the present day. Their points of excellence are much the same as the Southdown, but are of a larger size, having a broad, compact, well-formed body on medium to short legs, well woolled, sometimes to the toes and well down the face; the bellies are well covered, as well as the scrotum of the male. They are very prolific flocks, often yielding 175% of lambs, that mature early. The wool is a little coarser than Southdown, and considerably more per fleece, being quite strong in fibre. It makes an excellent general purpose wool. Their constitution is good, as is indicated by their form of body and depth of chest. They cannot be surpassed as a crossing breed, as they give both size and quality to their offspring from common ewes. These qualities when brought together make a first-class animal. The

HORNED DORSETS

are attracting considerable attention just now, of which they are proving themselves to be quite worthy. Although they belong to quite an ancient breed, it is only quite recently they have been brought into Canada, the first importation being made in 1886 by Mr. E. Stanford, of Markham, Ontario. They have a semi-mountain character, which well adapts them to grassy slopes, plains and hills of moderate elevation, but do well on any land that produces vegetation. They are of medium size and height, having a very hardy constitution, which easily adapts them to changes of climate. They are the most prolific breed yet known, as they often yield lambs twice a year, very seldom having less than two and often three at one birth. They have proved themselves to be excellent nurses. Some of the December lambs on the Ontario Experimental Farm weighed 94 pounds at 102 days old. This characteristic at that season of the year will give them a very prominent place in Canada before long, as the city buyers will always give very extravagant prices for such luxuries throughout the winter months. Their wool is next to the Southdown in fineness, but much stronger, is very well adapted to combing purposes, and weighs from six to eight pounds per fleece unwashed. Their quality of mutton is choice, being much like Southdown. The

HAMPSHIRE

is a breed of which we hear very little, notwithstanding the fact that they have some excellent qualities. They were originated early in the present century, being at first a cross between Southdown and old horned white faced sheep of Hampshire and Wiltshire. They are now quite a popular breed in England as well as in the eastern and southern states, but comparatively little known in Canada. They are of a good size and grand weights, but not so smooth in appearance as the Southdown and Shropshire. They are very hardy, and do well on dry, poor hills. They possess the properties of fecundity and early maturity in a marked degree, usually yielding even above 175% of lambs, which attain

List of Principal Fairs to be Held in Canada, 1892.

ASSOCIATION.	PLACE OF FAIR.	DATES.	SECRETARY.
Midland Central Fair.....	Kingston.....	Sept. 1st to 9th.....	John P. Oram.
Industrial Exposition.....	Toronto.....	5th to 17th.....	H. J. Hill.
Great Eastern Exhibition.....	Sherbrooke, Que.....	5th to 9th.....	H. R. Fraser.
Prince Edward County Fair.....	Pictou.....	7th and 8th.....	T. Bog.
Western Fair.....	London.....	15th to 24th.....	Thos. A. Browne.
Montreal Exposition Co.....	Montreal, Que.....	15th to 23rd.....	S. C. Stevenson.
Lincoln Union Exhibition.....	St. Catharines.....	19th to 21st.....	Albert Pay.
Wellesley and North East Hope Exhibition.....	Wellesley.....	20th and 21st.....	Geo. Bellinger.
South Renfrew Exhibition.....	Renfrew.....	20th and 21st.....	Robt. McLaren.
Central Exhibition.....	Guelph.....	20th to 22nd.....	Wm. Laidlaw.
Ontario and Durham Exhibition Assoc'n.....	Whitby.....	20th to 22nd.....	W. R. Howse.
South Lanark Fair.....	Perth.....	20th to 22nd.....	J. G. Campbell.
North Simcoe Fair.....	Stayner.....	21st to 23rd.....	Chas. C. Jackaway.
Centre Bruce Exhibition.....	Paisley.....	22nd and 23rd.....	S. Ballachey.
Central Canada Exhibition.....	Ottawa.....	22nd to Oct. 1st.....	E. McMahon.
Malahide & Yarmouth Agricultural Society.....	Aylmer.....	26th to 28th.....	J. B. Ogilvie.
South Oxford Union Exhibition.....	Tilsonburg.....	27th and 28th.....	Alex. McFarlane.
South Grey Exhibition.....	Durham.....	27th and 28th.....	Arch. McKenzie.
Mornington Agricultural Society.....	Milverton.....	27th and 28th.....	W. G. Campbell.
County Peel Agricultural Society.....	Brampton.....	27th and 28th.....	Henry Roberts.
Northwestern.....	Goderich.....	27th to 29th.....	Jas. Mitchell.
Northern Exhibition.....	Walkerton.....	27th to 30th.....	Jacob Segmiller.
Southern Fair.....	Brantford.....	27th to 29th.....	R. M. Willson.
Central Exhibition.....	Peterboro.....	27th to 29th.....	Wm. Collins.
North Lanark Fair.....	Almonte.....	27th to 29th.....	W. P. McRyen.
Great Northern Exhibition.....	Collingwood.....	27th to 30th.....	J. W. Archer.
North Riding of Oxford.....	Woodstock.....	28th and 29th.....	W. P. McClure.
North Perth Exhibition.....	Stratford.....	29th and 30th.....	John Brown.
Haldimand County Fair.....	Cayuga.....	Oct 4th and 5th.....	J. W. Sheppard.
West Durham and Darlington Union.....	Bowmanville.....	4th and 5th.....	R. Windatt.
North Brant Agricultural Society.....	Paris.....	4th and 5th.....	Jas. O'Neill.
East Riding of York Agricultural Society.....	Markham.....	5th to 7th.....	Jas. J. Barker.
Central Wellington.....	Elora.....	6th and 7th.....	James Malr.
North Renfrew Agricultural Society.....	Beachburg.....	6th and 7th.....	John Brown.
South Norwich Exhibition.....	Otterville.....	7th and 8th.....	Alex. McFarlane.
Howard Branch Agricultural Society.....	Ridgetown.....	11th to 13th.....	D. Cechrane.
Norfolk Union Fair.....	Simcoe.....	17th to 19th.....	J. Thos. Murphy.
West York & Vaughan Agricultural Society.....	Woodbridge.....	18th and 19th.....	Thos. F. Wallace.

to good weights very early on account of the great amount of milk given by the dam. The wool is of medium length and compares very favorably with Shropshires, but less in quantity. The mutton also of the Hampshire, both in quantity and quality, compares well with the Shropshire. The

OXFORD

is a comparatively new breed, having originated perhaps as far back as 1835, but was not recognized as a pure breed until 1862. They are descended from a cross between the Cotswold ram and Hampshire or Southdown ewes. They are quite numerous in parts of England, and are becoming to some extent popular in the United States and Canada. They are the largest of the down breeds, which enables them to scale heavier weights. They clip a large fleece of useful wool, somewhat coarser than any of the other downs, but sometimes having a sprinkling of dark or black, which is an objection, as the manufacturers claim that the white and the black wool do not take the dyes alike. They are a fairly hardy sheep, but do not thrive so well on high, poor land as the smaller breeds. They are about equal to the other downs in producing lambs. Our newest but not least imported breed is the

SUFFOLK

They are the result of a cross between Southdowns and Norfolk Blacks of a century ago, but have been improved to some extent by the use of Hampshire rams. They are now largely bred in Suffolk and Norfolk, where they have competed very favorably with the other downs. The only importation to Canada of importance was made by the Ontario Agricultural College in 1891, consisting of a ram and five ewes. Judging from their appearance, I would say they will soon find their way up among the best breeds in Canada, as they are large, medium in bone, and very active for such a large sheep. The wool is of more than medium length, rather less dense, but a little finer than the Shropshire Downs. They mature early when well nourished, and are said to be a very prolific breed. They seem to be easy feeders, hardy and active, and less liable to disease than some other breeds. It is claimed that their mutton is of a high order, with very little waste in the carcass, which abounds in lean meat.

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- Central Exhibition.
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- Western Fair.
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- For Sale—W. J. Webb.
- Herefords—H. D. Smith.
- Auction Sale—J. C. Stockwell.
- Berkshires—S. Coxworth.
- C. P. R. Excursions.
- Yorkshires—J. M. Hurley.
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321-a-om

AUCTION SALE.

30 SHORTHORN CATTLE

COWS, HEIFERS, AND BULL CALVES.
ALL REGISTERED IN D. H. BOOK.

Also Berkshire Pigs & H. Dorset Sheep

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1 o'clock p.m., at DANVILLE, on G. T. R., Farm 20 rods from Station.

331-a-om **J. C. STOCKWELL.**

MAPLEVILLE STOCK FARM offered for SALE

This finely situated farm, comprising 540 acres, one mile from the thriving town of Gladstone, on the M. & N. W. Railway, is offered for sale.

IMPROVEMENTS: Good frame 9-roomed lath and plastered house, nearly new; good painted frame barn, 30x60, with accommodation for 32 horses, and good hay loft; two good cow stables, to hold 25 head; large covered shed, to hold 125 cattle; two painted frame graneries, to store 10,000 bushels; milk house, two good wells and cisterns.

400 acres of cultivated land, all in good condition with 75 acres of summerfallow and breaking. The whole place is fenced in, in 80 acre lots, three wires and oak posts. 108 head of cattle and 40 horses were wintered on the farm last winter. Plenty of hay within easy access. Bush lot of 25 acres will be given in. First-class stock and implements, including McCormick, Frost and Wood Binders, "Monitor" Press Drills, and all other machinery can be bought cheaply from the owner if required. The celebrated Clydesdale stallion, Campsie Lad (imp.) [344] (4277), sire Old Times (579), dam Rosie (4301), and other well bred stock will be sold cheap. Four and grist mill to be built in the town.

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Improved: Halladay: Wind-Mill.

In placing our Mill before the public we would call special attention to our Improved Self-Oiling Boxes. These boxes are provided with a reservoir which holds enough oil for three months and which is automatically supplied when mill is running. We have also an improved way of regulating our mills, which is proving very satisfactory, especially in rainy, freezing weather, as it completely covers all the movable parts. Write for catalogue, and read it carefully before you buy and you will want our mill. Live agents wanted.

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34 North James St., Hamilton, and 5 College Street, Toronto. Sole agents for Prof. North's Earphone for the incurable deaf. A large assortment of artificial eyes on hand. 284-y

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I WILL OFFER
For Sale, at Auction,
—ON—

Wednesday, November 23rd

—AT—

RIDEAU FARM

—A NUMBER OF—

YOUNG, PURE-BRED HOLSTEIN CATTLE

—AND SOME—

STANDARD-BRED COLTS AND FILLIES.

Farm is 5 minutes' walk from outer Grand Trunk station. Write for catalogue after Oct. 1st.

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MESSRS. JAS. GARDHOUSE & SONS.,

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Have on hand and for sale at low figures, Draught Colts and Fillies, both from imported and Canadian bred mares, and mostly sired by their sweepstakes horse "King of the Castle." These are all good ones, and will make very heavy mares and horses. Also Shorthorns and Leicesters of the choicest strains of blood. Write for prices or come and see us. Station and Telegrams: MALTON on G. T. R. 313-y-OM

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Yorkshire Coachers, French Coachers, Clydesdales, Clydesdale Mares, Shetlands, and Ayrshire Cattle.

The stock has taken more prizes than all importers and breeders combined in the province. I am prepared to sell at prices to suit the times. Give me a call. Canada Atlantic Ry and G. T. R. on the farm. **ROBERT NESS,** Woodside Farm, Howick P.O., P.Q. 315-y-OM

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Fordham (287) 28, by Denmark (177); **Maxwell (1443) 76,** by Prince Alfred (1326), and **Damenfort (3833) 77,** by Danegelt (174). **MARES** by Matchless of Londesborough (1517), Danegelt (174), Wildfire (1224), Fordham (287), etc. Young stock for sale. Twelve fine Yearling Shropshire Rams, registered, and Aberdeen-Angus Bulls fit for service, for sale at moderate prices. For catalogues address **M. H. COCHRANE,** Hillhurst Station, F. Que. 310-y-om

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Three Shorthorn bulls (one year old), a number of cows and heifers, also Leicester and Southdown sheep, and about 40 young Berkshires. Correspondence invited. 311-y-om **E. JEFFS & SON,** Bondhead, Ont.

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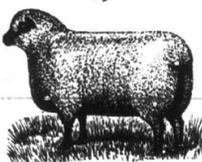
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Scotch-Bred Heifers, Imported Shropshire Rams, Imported Ewes, Home-Bred Rams, Home-Bred Ewes, **FOR SALE,**

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A FEW YOUNG BULLS FIT FOR SERVICE also FOR SALE New Catalogues for 1892 now ready. Send for one; they are mailed free.

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The Imported Kinellar Bull Tofthills, and cows of similar breeding.

Young Stock from the above For Sale.

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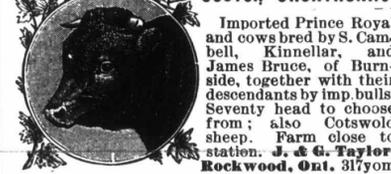
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Improved Large Yorkshires

at prices to suit the times.

SEVERAL choice spring litters to select from; also a few sows fit for service.

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ABERDEEN HERO,

Their sire. Also some nice

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Choice young stock of the above strains for sale at reasonable prices.

IMPORTED CLYDESDALES.

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Herefords, Leicesters, Imp. Yorkshires and Poland-Chinas.

Send in your orders now for Ram Lambs for fall delivery. Three really good Yorkshires Boars and one Sow, 7 months old, registered pedigrees, \$15 each if taken soon. **DAN, REED, The Spruces,** Glanford P. O., Ont. 318-y-om

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My herd won both the 1st and 2nd herd prizes at Toronto, Montreal and Ottawa, 1891, in competition with the largest herds in Canada. An unequalled record. Over forty head of the choicest breeding. Write me for prices, and mention this paper, if you want a bull of the grandest beef breed on earth. **F. A. FLEMING, The Park,** Weston, Ont., or 51 Wellington street, Toronto. 319-f-om

Estate of Robert Hay,

Breeder and Importer of

choice Aberdeen-Angus

Polled Cattle, also

Shropshire Sheep from

the best blood of England, Ireland & Scotland



We have now much pleasure in telling our patrons that we have never been in better shape to meet their demands. We have not shown for three years, and all our stock have been on grass from May to December, and on swede turnips and rye hay from December to May. We can supply farmers with bulls to breed the best class of steers, besides settling once and for all the vexed dehorning question. Our strong point in the past has been the breeding and feeding of **SHOW ANIMALS.** We are breeding them **NOW,** and can turn out herds fit to stand against the world at Chicago next year. Our prices will be found most reasonable, and we shall gladly welcome farmers and stockmen, whether on business or pleasure. Send postal card for private Sale List and give us a call before investing.

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Kinnone Park Stock Farm, 317-f-om New Lowell, Ont. **MANAGER.**

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I offer FOR SALE a few **Highly Bred Jerseys**, registered in the A. J. C. C.
Young Cows in milk, due to calve in February.
Fine Heifers, due to calve in November.
Bull Calves, 6 months' old, of extra breeding.
 Also a **Fresh, Young, Handsome Cow**, unregistered—cheap.
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ST. LAMBERT JERSEYS.

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

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

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

Signal of Belvedere—Miss Satanela (Signal cow), 20 lbs. 6 oz. butter a week, on 2nd calf. Believed to be the three greatest living bulls. Silver cup at the Kellogg Combination Sale; Silver Tea Set (Farmer's Advocate) for milk test; over 20 medals, gold, silver and bronze; over 300 prizes in money, also numerous diplomas, commendations and special prizes.

Special Offering Now.
 3 Sons of Canada's Sir George, (pure St. Lamberts).
 2 Sons of Massena's Son, from tested cows.
 Registered and express paid to any reasonable distance.—**MRS. E. M. JONES**, Brockville, Ont., Canada. 313-y-OM

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Herd headed by Carlo of Glen Duart (1'087), the champion bull of 1891, and Pussy's John Bull (21260), a son of Canada John Bull.
 Stud headed by Arkian (10331), a son of the world-renowned Guy Wilkes, 2.15 1/4.

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

Messrs. A. McCallum & Son, Importers & Breeders of Registered **AYRSHIRE CATTLE.**
SPRUCE HILL FARM, Danville, P. Q. Three yearling bulls for sale at reasonable figures. 320-y-om

Prize-Winning Ayrshires for Sale



Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors well-come. Address
THOMAS GUY,
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MAPLECLIFF STOCK FARM

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

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

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

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

DOMINION PRIZE HERD OF AYRSHIRES

This herd has taken all the first prizes wherever shown in Quebec and Ontario since 1887 to 1891. From imported stock. Young stock for sale at liberal prices.

JAMES DRUMMOND & SONS, 315-y-OM PETITE COTE, MONTREAL, P. Q.

PRIZE-WINNING AYRSHIRES FOR SALE.

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

JAS. McCORMICK & SON, 311-y-OM Rookton, Ont.

HOLSTEIN-FRIESIANS

Still the Choicest and Leading Herd in Canada. Will again exhibit at Toronto. Parties wishing choice stock should meet us there to see our stock and get our prices. Stock of highest excellence & most noted families of the breed. Prices right. Railway Station, Petersburg on G. T. R.; New Dundee P. O., Waterloo Co., Ont. Send for catalogue. **A. C. HALLMAN & CO.** 317-y-OM

HOLSTEINS & YORKSHIRES.

None but the best are kept at **BROCKHOLME FARM,** - Ancaster, Ont. **R. S. STEVENSON,** Proprietor.

Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry; Yorkshires all recorded. 319-y-om

MALE GROVE STOCK FARM.

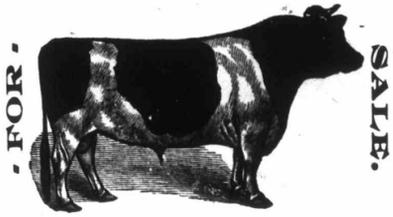
Holstein-Friesians of the greatest individual excellence. The breeding for butter quality a specialty Colanthus Abbekerk, the richest butter and milk bred bull in Canada, now at head of herd. Always something for sale at living prices. Write for description and prices. **H. BOLLERT,** Cassel, Ont. 318-y-om

HOLSTEINS at WALNUT HILL FARM

Messrs. H. McCaugherly & Son, Streetsville, Ont., offer for sale, at low figures, choice young Bulls and Heifers of the best dairy strains. Write for prices, or, better still, come and see us. Visitors welcome. No trouble to show stock. Streetsville Station 1/2 mile. 318-y-om

ONLY-HOLSTEINS-ONLY

We are making a specialty of breeding Holsteins of the following strains—Aagies, Baringtons and Mercedes. Our last importation comprised nineteen head from one of the leading herds in the United States. Our herd now numbers close to 30 head. Young bulls and heifers for sale. Prices right and terms reasonable. **E. M. S. & C. S. MOTT,** The Gore Farm, Box 95, Norwich, Ont. 318-y-om



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

REGISTERED HOLSTEIN BULLS AND HEIFERS.

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

HOLSTEINS FOR SALE

Lansdowne Farm, - Winona, Ont.
 To avoid inbreeding we offer for sale our two-year-old prize-winning bull "Slepkje's Mink's Mercedes Baron." A grand individual and a rare stock getter. Also a nice bull calf and a few extra good heifers; all registered and from tested dams. No culls. Write for prices, or meet us at Toronto Fair. **J. C. McNIVEN & SON.** 320-f-om

Holstein-Friesians

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

THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS. **SMITH BROS., Credit Valley Stock Farm, CHURCHVILLE, PEEL COUNTY, ONT.,** (24 miles west of Toronto).



This is the place to get stock of best quality at reasonable prices. We have seventy-five head, including prize-takers; best strains, cows and heifers, with large milk and butter records; young bulls of superior quality. Send for catalogue. 316-y-OM

HOLSTEIN-FRIESIAN CATTLE.

My stock is selected from the leading herds. Choice young stock for sale. Before you buy elsewhere, write me for quotations. **W. McCLURE,** Mint Creek Farm, NORVAL, ONT. 310-y-OM On main line G. T. R.

HOLSTEIN-FRIESIANS

The Choicest Herd in Canada. A few rich-bred bulls left, fit for service for 1892, sired by our silver medal bull, and out of cows with large records. Will sell at a bargain in order to make room for young stock. Other stock of all ages and highest excellence for sale. Write at once for prices. Railway station, Petersburg on G. T. R.; New Dundee P. O., Waterloo Co., Ont. 318-y-om **A. C. HALLMAN & CO.**

HEREFORD CATTLE & CHESTER WHITE HOGS.

The undersigned offers for sale three grand bulls and a few heifers of the above breed. Also pigs of both sexes. Prices dead right—**JOS. CATENA,** CAMLACHIE, ONT., 14 miles from Sarnia. 313-y-OM

CHOICE REGISTERED SOUTH-DOWNS.

Messrs. A. Telfer & Sons, Springfield Farm, Paris, Ont., have been breeding Southdowns for thirty years. A fresh importation just arrived. Stock for sale. 316-y-OM

LINCOLN SHEEP.



LAMBS AND SHEARLINGS of both sexes always for sale. Our last importation was made direct from the flock of Hy. Dudding, Esq., of Great Grimsby, and comprises the pick of a flock numbering 1700 head. If you want a ram or a few ewes send along your orders. J. T. GIBSON, Denfield, Ont. W. WALKER, Ilderton, Ont. on London, Huron and Bruce Ry.

319 y-om

SHROPSHIRE, CLYDESDALES and Polled-Angus Cattle.

Two imp. stallions, one yearling bull and eighty choice Shropshire rams and ewes of all ages. Prices reasonable. Write quick. All registered. JAS. McFARLANE & SON, Clinton, Ont. G. T. R. Station 1/2 mile. 319-y-om

SHROPSHIRE FOR SALE!

Fifty head of Ewes and Lambs of the very best breeding quality. One fine two-shear Ram, bred by John Campbell. Write for particulars.

Isaac Johnston, Ravenna P. O., Ont. 319-c-om

1881—SHROPSHIRE—1881.

My flock is one of the oldest in Canada, my first importation being made in 1881. My present stock of ewes were imported direct from the flocks of Bradburne Bros. and H. Parker. Write for prices.

JAS. COOPER, KIPPEE, ONT. 319-y-om

THE GLEN STOCK FARM.

Clydesdales, Shropshires and Berkshires.—Choice young registered stock for sale. Telegraph office, Innerkip, Farm, 3/4 miles from Innerkip Station on C.P.R. and 6 miles from Woodstock G. T. R. WHITESIDE BROS., Innerkip, Oxford Co., Ont. 316-y-om

SHROPSHIRE!

I AM now ready to take orders for the coming summer, and after weaning. My flock consists of 170 imp. ewes and lambs; a few shearling rams, with a fresh importation to arrive shortly. If you want size and quality I can supply you. Visitors welcomed.



W. S. HAWKSHAW, GLANWORTH P. O. 315-tf-OM (7 miles south of London.)

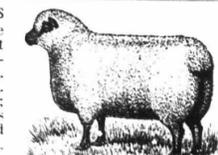
MAPLE SHADE SHROPSHIRE HAVE—Continental Notoriety.

ORDERS WILL NOW BE TAKEN FOR CHOICE LAMBS

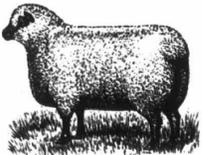
Of both sexes. Over one hundred to select from. Address, JOHN DRYDEN, BROOKLIN, ONT. 314-y-OM

SHROPSHIRE & SHORTHORN

For sale at reasonable prices. A choice lot of ram lambs & yearlings sired by my imp. Thomas ram from imp. and home-bred ewes; also five young bulls from 6 to 18 months old. W. S. PETTIT, Freeport, Ont., G. T. R. 318-y-om



SHORTHORNS and SHROPSHIRE.



I offer for sale at right prices, a very choice lot of imported ewes and rams; also Scotch Short-horns from the very best strain in Scotland. Write, or come and see them. W. B. COCKBURN, ABERFOYLE, ONT., Corwhin, C. P. R., 7 miles east of Guelph. 310-j-om

AT EASTWOOD.

60 PURE-BRED SHROPSHIRE RAMS FOR SALE.

T. C. PATERSON, Postmaster, TORONTO. 321-a-om

SHROPSHIRE AND YORKSHIRE.

Imported and Home-bred EWES, LAMBS

—AND— SHEARLING EWES of best quality and lowest prices.

ALSO YOUNG YORKSHIRE PIGS. Come and see me before buying elsewhere.

T. H. MEDCRAFT, Sparta P. O., Ont. 321-y-OM Eight miles south-east of St. Thomas.

FOR SALE, ELM PARK SHROPSHIRE

Number eighty head of imported and home-bred. Very choice lambs at low prices; also a few very fine Jersey heifers.

W. D. REESOR, Markham, Ont. 320-c-om

Gotswold Sheep.

The gold medal flock; established in 1854. All bred straight from imported stock. Young stock for sale. Three imported rams in use. Berkshires. Herd established in 1865. Imported and bred from imp. stock. Sows in far row

and young stock for sale at all times. Spring Pigs now ready to ship. We ship to order, guarantee satisfaction. Come and see, or write. Heifers and Calves; registered; pure-bred unregistered, and high grades, bred from rich butter stock. 315-y-om

J. C. SNELL, EDMONTON, ONT.

Co tswold Sheep!

Wm. Thompson, Mt. Pleasant Farm, Uxbridge, Ont., Importer and Breeder, takes pleasure in intimating to the public that he is importing a large number of show sheep, which are expected to arrive early in August. Call and inspect personally. Visitors always welcome, and met at Uxbridge Station, Mid. Div. G. T. R. 315-y-om

DORSET HORNED SHEEP.

T. W. HECTOR, IMPORTER AND BREEDER. The oldest and largest flock of Dorset in Canada. First Prize Toronto and Montreal Exhibitions, 1891, for flock. Sheep of all ages for sale, ewes and rams not akin T. W. HECTOR. The Cottage, Springfield-on-the-Credit P. O., Ont. Stations, Springfield and Cookville on the C. P. R. Port Credit on G. T. R. 314-y-OM



MCGILLIVRAY & TAZEWELL, Jerseydale Farm, Uxbridge, Ont., Midland Division G. T. R., importer and breeder of DORSET HORN SHEEP.

314-y-OM

EUROPEAN ADVERTISEMENTS.

SHROPSHIRE SHEEP

DAVID BUTTAR, Corston, Couper-Angus, N.B., Scotland Has taken all the principal prizes in Scotland for several years. His sheep are of the purest blood, and carefully bred; every sheep eligible for registration. Pedigrees and prices on application. 314-y-OM

BEAM : HOUSE : SHROPSHIRE.

WM. THOMAS offers for sale RAMS AND EWES

from his famous flock, which has sent so many winners to the leading shows. Address—

WM. THOMAS, Beam House Farm, Montford Bridge, Salop, 316-y-om England, 7 miles from Shrewsbury.

Astwood Hill Shropshires,

the most famous flock in England. We led in the show ring at the Royal and the Bath and West of England in 1891.

I. & S. BRADBURN, Astwood Hill, Red-ditch, Eng. 316-y-om

ALCESTER PARK SHROPSHIRE.

It will pay Canadian buyers to visit the above flock, which is founded on the best strains in England. Rams and Ewes always for sale. ALSO IMPROVED YORKSHIRE PIGS.

H. PARKER, The Park Farm, Alcester, Warwickshire, Eng. 316-y-om

SHROPSHIRE, SHORTHORN and Yorkshires.

My Shropshire flock is founded on the best blood in England. My Shorthorns are of the deepest milking strains. American and Canadian visitors always welcome. Young Stock always for sale at reasonable figures.

GEO. THOMPSON, Wroxall, Warwick, England. Station and Telegraph:—Hatton. Trains met by appointment. 316-y-om

SHROPSHIRE SHEEP

The Loughcrew flock has been very successful in England and Ireland wherever exhibited. It consists of 300 breeding ewes of the most fashionable appearance & blood, Eavens, Beach, Barrs, Coxon and Mansell. The Annual Sale 31st of August.

Apply to J. DIXON, Loughcrew, Oldcastle, Co. Meath, Ireland. 319-y-OM

DORSET HORN SHEEP!

CULVERWELL BROS., Durleigh Farm, Bridgewater, Somerset, Eng. Breeders and Exporters of Improved Dorset Horn Sheep. Sheep and wool from this flock have won many first prizes at all the leading shows in England and Canada. Flock registered in English record. For price, etc., in Canada and U.S.A., apply to— 315-y-OM

JOHN TAZEWELL, Uxbridge, Ont., G.T.R.



W. G. EDWARDS & CO

IMPORTERS AND BREEDERS.



Pine Grove Stock Farm
ROCKLAND, ONT.
SCOTCH SHORTHORNS.

The imported Cruickshank bull **GRANDEUR** is at the head of this herd of Imported and Home-bred Cows and Heifers of the most approved Scotch families.

ALEX. NORRIE, Manager.

ELMHURST
STOCK & DAIRY FARM
CLARENCE, ONT.
Shorthorns, Shropshires and Berkshires

Our flock is from the choicest English flocks, headed by the ram sent out by Mr. Thos. Dyke, also milking Shorthorns with imported bull **PIONEER** at the head of the herd.

HENRY SMITH, Manager.

Laurentian Stock
AND
Dairy Farm.
North Nation Mills, P. Q.

Ayrshires, Jerseys and Berkshires.

Imported **EMPEROR** at the head of a grand lot of Imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires.

GEORGE CARSON, Manager. 316-y-OM

GLENHYRST.
50 acres, bordering on the City of Brantford.
JAMES MAXWELL, SUPT.
Shropshire Sheep.
Shetland Ponies.
Apples—(in quantity)—Plums.
Registered Stock, all ages, for sale.

JOSEPH STRATFORD, PROP.,

OAKWOOD FARM.
100 acres, bordering on the City of Brantford.
GEORGE WALTER, SUPT.
Have on the farm a modern wooden Silo. Capacity 250 tons.
Dorset-Horned Sheep. Jerseys, A.J.C.C. Holsteins (Royal Aagle family). Advance Register. Chester White Pigs.

Three grand modernized stock farms under one management.

[300-y-OM]

CEDARS FARM.
175 acres, eleven miles from City of Brantford.
ROBERT WALKER, SUPT.
Oxford-down Sheep.
Shorthorn Cattle.
Medium Yorkshire Pigs.

BRANTFORD P. O., CANADA.

NOTICES.

THE WALMSLEY WINDMILL.

The fall exhibitions are attended by visitors for both pleasure and profit. Many are on the lookout for improved machinery, for better performance of the work of the farm. Manufacturers are well aware of the advantage thus afforded for showing their goods. Among the implements and machines that are becoming more necessary for labor saving is the windmill pump. Mr. J. F. Walmsley, Woodstock, Ont., intends to make an exhibit of their mill at the coming Western Fair. Those wanting anything in their line should not fail to examine this machine.

COCKSHUTT FLOW CO.

In this issue of the *ADVOCATE* this company are advertising a new two-furrow gang plow, which they claim has special merit. The special points claimed are:—

- 1st. The ease with which it is regulated to plow any depth from three to eight inches.
 - 2nd. It covers its furrow on account of its extra long boards.
 - 3rd. Its axles are made of steel, with adjustable wheel arbors.
 - 4th. It is strongly built and very light draft. We would recommend every farmer to see it before purchasing elsewhere.
- The Cockshutt Company will have a full line of their riding and walking plows at the Toronto, London, Ottawa, Sherbrooke and Montreal Fairs, where you can see their goods and examine them for yourselves.



— IMPORTED AND REGISTERED —
CLYDESDALE AND HACKNEY
STALLIONS AND MARES

CONSTANTLY ON HAND, AND FOR SALE AT REASONABLE PRICES

Our last importations comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (673). Also a few choice **SHETLAND PONIES**. Correspondence solicited, and visitors always welcome.

GRAHAM BROTHERS

Twenty-five miles east of Toronto, on the C. P. R. 314-y-OM CLAREMONT ONT.

LINCOLN -- SHEEP



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

WHITE -- YORKSHIRE -- PIGS

Address—
HENRY DUDDING,
Elby Grove, Gt. Grimsby,
Lincolnshire, Eng.
319-y-OM

BLAIRTUMMOCK -- CLYDESDALES

Prof. McCall invites inspection of his Stud of Clydesdales, by American and Canadian buyers. Among the many good ones bred at Blairtummock may be mentioned Col. Holloway's renowned Cedric, acknowledged the greatest breeding horse in America. Address—

PROF. MCCALL,
The Veterinary College,
GLASGOW, SCOTLAND.
317-y-om

CLYDESDALES AND AYRSHIRES

Walter Park, Halton, Bishopton, Scotland, the breeder of the world-renowned "Lord Erskine," has always for sale a choice lot of Clydesdale Colts and Fillies; also pure-bred Ayrshires of the best milking strains. Visitors welcome. 317-y-om

HACKNEYS!

Duncan Jenkins, The Cross, Govan, Scotland, offers for sale Stallions and Fillies, the get of such sires as Danegelt, Anconens, Sir Gibbie, etc.; all registered, and of the very choicest quality. All American and Canadian buyers should visit this stud. 317-y-om

THE HOME OF SPRINGHILL DARNLEY.

Clydesdale dealers when in Scotland should not fail to visit Messrs. R. & J. Findlay's Stud, Breeders and owners, amongst others, of the famous H. A. S. winner, Chrystal 5387. Address—Springhill, Baillieston, Glasgow. 317-y-om

THE HOME OF SIR EVERARD!

Wm. Taylor, Park Mains, Paisley, Scotland, calls the attention of American and Canadian buyers to the fact that his stud of Clydesdales and Hackneys is one of the best in Scotland. Inspection solicited. No trouble to show horses. 317-y-om

W. G. BUTCHER,

The Chestnuts, Needingworth, Hunts, England offers for sale a grand selection of **HACKNEY AND SHIRE-BRED COLTS AND FILLIES** of the choicest breeding, and good individually. All registered. Visitors welcome. Station: St. Ives, Hunts. 317-y-om

CLYDESDALES AND AYRSHIRES.

Parties visiting Scotland to purchase the above should call on the undersigned, who always has a choice selection bred from the best strains of blood. **ROBT. WILSON,** Manswraes, Bridge o' Weir, Renfrewshire, Scotland. 317-y-om

2250 SHROPSHIRE

Including most of the greatest winners, also Horses, Ponies, Cattle, Pigs and Sheep
Of other breeds, exported during 1891, by

E. GOODWIN PREECE,
Live Stock Exporter, - SHREWSBURY, ENG.

Who has personal knowledge of the best flocks, herds and studs, experience in shipping, and the privilege of selecting the choicest specimens of any breed, either for exhibition or breeding. American buyers supplied at lowest rates, and those visiting England conducted round the best stocks, so as to compare merits and prices before buying, and assisted in buying and shipping. **FREE OF CHARGE.** All necessary documents furnished. Highest references. Information free. All importers should communicate. 318-y-om

TO STOCKMEN AND BREEDERS.

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

For the destruction of Ticks, Lice, Mange, and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.

Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.

The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS.

BROOKLIN, ONT., Sept. 4th, 1890.

DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.

Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, ONT.
Sole Agent for the Dominion. 315-y-OM

REGISTERED DUROC JERSEYS.

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

REGISTERED BERKSHIRES FOR SALE!

Young Boars and Sows from two to eight months old. Also booking orders for spring pigs. Satisfaction guaranteed. **E. E. MARTIN,** Nithside Farm, Paris Station, Canning P.O., Ont. 309-y-OM

FOR SALE
COTSWOLDS
—AND—
BERKSHIRES.
We have for sale forty head of yearling Cotswold Rams; thirty head of yearling Cotswold Ewes, and a number of young Berkshire Sows, in farrow to imported boars. We are now getting young pigs, which will be ready to ship in April and May. Write us for prices.

J. G. SNELL & BRO.,
EDMONTON, - - ONTARIO.
Brampton and Edmonton Stations. 310-y-OM

S. COXWORTH,
CLAREMONT, ONT.
Breeder and Importer of Improved Berkshires of the choicest strains. Two fine litters, two months old, from imported sows and by imp. boars, Royal Standard and Enterprise. See stock at Toronto. R. R. Station, Claremont C.P.R. 316-y-om

FIRST SWEEPSTAKES HERD
—OF—
IMPROVED YORKSHIRES
IN CANADA,

selected from the well-known herds of the Earl of Ellesmere, Prescott Union, and C. E. Duckering, England, by James Main, who is considered one of the best judges of pigs in America; also one imported sow and several other Canadian bred sows and boars of the well-known herds of Saunders Spencer and F. Walker-Jones, England.

Registered Sows and Boars mated not akin.

JOSEPH FEATHERSTONE,
P. O. and Telegraph. PINE GROVE FARM, STREETSVILLE. 321-om

THE MARKHAM HERD, Locust Hill, Ont.
(Farm one mile from Locust Hill St., C. P. R.) Registered Improved Large Yorkshire, Berkshire and Suffolk Pigs. Stock selected from the best herds in Canada. Am booking orders for Autumn Pigs.—LEVI PIKE, Locust Hill, Ont. 320-y-OM

LARGE
IMPROVED YORKSHIRES!
The undersigned has for sale a number of pigs of the above breed, ranging from six weeks old upwards; bred from imported stock. Can supply pairs not related. Prices reasonable. Apply to **Wm. Goodger & Son,** 318-y-OM WOODSTOCK, ONT.

Improved Large (White) Yorkshire Pigs and Sooty Shorthorns. Sweepstakes herd of Yorkshires wherever shown in 1891. The largest herd in Canada. Breeding stock selected from the most noted English breeders. All stock registered. Shipped to order and guaranteed to be as described. **J. E. BRETHOUR, Burford, Brant Co., Ont.** 314-y-OM

J. M. HURLEY & SON, Offers for sale pedigree Improved Large Yorkshire Pigs of both sexes. Herd founded in 1887. Our aim is to make our pigs advertise us. Kingston Road Stock Farm, 321-y-om Belleville, - Ont.

FARMERS, READ THIS!

We will pay extra for fat pigs bred from Tamworth and Improved Yorkshire boars, as they are worth more money to us. We have imported a large stock of these pigs, and have on hand a choice selection of imported and home-bred boars and sows. Write us for prices, which are as low as they can be made, this being a business entirely of a secondary consideration with us, our first object being to supply the trade with an A1 article in bacon, and we are satisfied that these are the breeds that pay both the feeder and the packer. Send in your orders quick and get a good in pig sow, or a boar to use on grade sows.

JAS. L. GRANT & CO., Rogersville, Ont. 320-y-om

FOR SALE
A choice lot of young Berkshire pigs, from two to three months old, from imp. and prize-winning stock; also a few choice boars fit for service. I have also some Yorkshire pigs fit for show purposes, boars and sows from six weeks to six months old. Prices reasonable. Address **H. J. DAVIS, Breeder of Berkshires, Yorkshires and Shorthorns, box 290, Woodstock.** 318-y-OM

IMPROVED PEDIGREED LARGE YORKSHIRES!
A few very choice young boars, between 3 and 4 months old, at \$10 each.—**J. H. S. BARBOUR, KING P. O., Ont.** 318-y-om

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

The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 317-y

Registered Poland-Chinas - Canadian Black Bess Herd. Stock strictly of the Corwin, King, Butler and Black Bess blood. Choice stock of all ages for sale at reasonable prices. Imported Nominæ at head of herd, assisted by Imported Boars Condit, Luck and Moorish King. Farm two miles south of G. T. R., C. P. R. and E. & H. R. stations. Correspondence and inspection of herd solicited. Reduced rates on shipment by express.—**J. J. PAYNE, Chatham, Ont.** 314-y-OM

PURE-BRED TAMWORTH HOGS AND CLYDESDALES
JOHN BELL,
Clydesdale Farm, Amber P.O., Ontario.
Young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them, it will pay you. I have several pair unrelated. Some A1 Clydesdale Stallions kept for service. Imported and home-bred Colts and Fillies. 317-y-om

Hazelton Fruit and Poultry Farm.
—HEADQUARTERS FOR—
PLYMOUTH ROCKS
(Canada's Best).
A few hundred grand chicks for fall trade. SHOW BIRDS. Sure to win at the fall shows. Correspondence solicited. Catalogue free. **C. W. ECKARDT, Ridgeville, Ontario.** 311-y-o

EGGS! EGGS!
For hatching from prize stock. White Plymouth Rocks, English Rouen Ducks, English imported Aylesbury Ducks, Mammoth Pekin Ducks. Warranted fresh and newly laid. Address—
H. H. WALLACE, 316-f-om Woodstock, Ont.

The High Speed Family Knitter
Will knit a stocking heel and toe in ten minutes. Will knit everything required in the household from homespun or factory. Coarse or fine yarns. The most practical knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. Satisfaction guaranteed or no pay. Agents wanted. For particulars and sample work, address, **Cardon & Gearhart, Dundas, Ont., Canada.** Please mention name of paper. 321-y-om

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BENCH SHOW OF DOGS.
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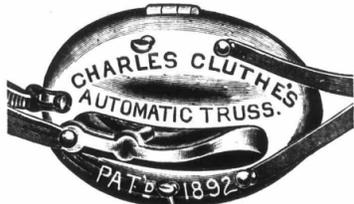
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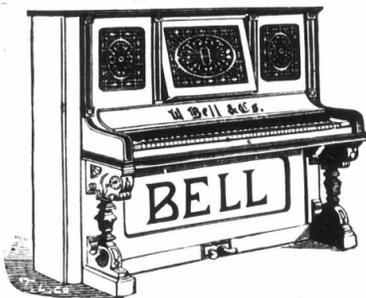
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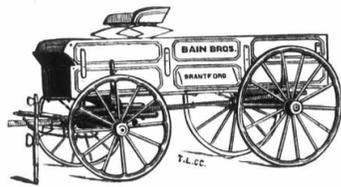
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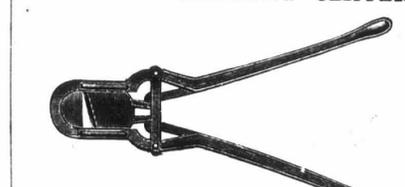


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STOCK GOSSIP.

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

John Livingstone, Harriston, writes:—"In the last number of the *ADVOCATE* I notice an account of Mr. R. Wilson, of Manswraes, Scotland, known as a stock breeder in the several branches. The Clydesdale you mention, The McKinnon, by Lord Erskine and out of a sister of the Glasgow premium three-year-old of 1842—this colt was purchased from Mr. Wilson by P. Lavin, of the firm of Collison & Lavin, Harriston, Ont., where he now is doing good service. The McKinnon is one of the finest Clydesdales in this part, and I have no doubt will give a good account of himself."

Mr. David H. Dale, Glendale, informs us of the arrival of a shearing Southdown ram from the Streetly Hall flock of Mr. Henry Webb. As many of our readers are aware, Mr. Henry Webb's celebrated flock of Southdowns was dispersed early in 1890, as he intended relinquishing breeding for the present. However, he shortly after selected a lot of ewes at the sale of Mr. F. Barchard, Horsted Place, Sussex, and from one of these bred the ram that Mr. Dale has just secured. This selection was made with the view of crossing him upon the descendants of the excellent lot of ewes that Mr. Dale imported two years ago, part of which were purchased at Mr. Webb's sale.

Mr. S. Coxworth, Claremont, Ont., under date of Aug. 12, writes:—"Since I last wrote you the demand for Berkshires has been good. I must say that the *FARMER'S ADVOCATE* is the best medium for advertising I have ever tried. I have shipped a number of animals to Quebec and some to Manitoba, and am pleased to state that in every case the purchasers have been pleased with the stock sent them. The outlook for the fall trade both in Berkshires and Cotswolds is very promising. I recently sold my imp. ram, Commodore, to Oscar Sherling, of Houlton, Maine, U. S. I intend exhibiting my herd of Berkshires at Toronto and the other leading shows this fall, and would be pleased to meet old customers as well as new ones."

VOLUME VI.

We have received at this office the sixth volume of the Clydesdale Stud Book of Canada, for which we are indebted to Mr. Henry Wade, the Secretary. This volume contains the pedigrees of 681 animals, of which 256 are stallions and 291 mares, the numbers of the former running from [1531] to [1789] inclusive, while the mares run from [1481] to [1751]. An appendix is added, containing the pedigrees of sires and dams of imported horses recorded in the volume. Three illustrations are given, the first of which is imp. Grey Clyde, which horse may be said to be the progenitor of the breed in Canada, the portrait of Queen's Own, the sweepstakes stallion at the late Toronto Spring Stallion Show, owned by Graham Bros., Claremont, and Bessie Bell, the sweepstakes mare of the two last seasons, owned by Robert Davies, Todmorden.

One of our staff recently inspected the Shropshire sheep and Yorkshire swine, the property of Mr. T. H. Medcraft, Sparta, Ont., and found them in fine, thrifty condition. Sheldon's Pride 26415 is at the head of the flock. The ewes, 36 in number, are a good lot, well-wooled, of good quality and size. The crop of lambs this year numbers 35; they also are large and thrifty, and of good quality. The breeding stock is all imported, and was selected from the best English flocks, chiefly from those of Mansel's, Bach's, Thonger's and Sheldon's. Two of the stock rams were bred by Sheldon, one by Gibson. The Improved Large Yorkshires kept here are also of very high quality. The breeding stock in this class is also imported, the stock boar being winner of first honors at the English royal; the sows are of equal merit, as are the young pigs, a number of which are now ready for sale. Mr. Medcraft has had a life-long experience as a breeder of sheep and swine. Until recently he has been associated with his father in business, but early this year he purchased the farm and stock, and has since been conducting the business on his own account.

Mr. John Jackson, Abingdon, Ont., writes from S. Quebec, Aug. 15, as follows:—"I am now able to inform you that after a long delay and a lot of trouble in England, owing to fear of foot and mouth disease, have landed 91 sheep, all in best of condition, comprising Oxfords, Shropshires, Dorset-horns and Southdowns, among which are a pen of first-prize ewes for Mr. Campbell (Shropshires); the first-prize pen of Dorset ewes at the Royal for McGillivray & Tazewell, and very good ones they are; a nice bunch of Shrops for Mr. Hawkshaw; a Southdown ram for Mr. Dale; four very superior Oxford lambs for Mr. Peter Arkell. In Southdowns for myself are included a shearing ram second prize at Bath and West; also one that was reserved for use in England, which I only secured at a long price. In ewes have those that won second at Royal Counties Show, by odds the best show of Southdowns in England. The first prize ewes at the same show were held at 50 guineas each, therefore remained on that side of the water; have two ram lambs the choice of Mr. Lucas' pen at the Royal, also two from Mr. Ellis' pen that will take some beating; have a ewe lamb from the Duke of Northumberland—her equal I have not seen on either side of the water; have a pair of ewe lambs, first prize at Cambridge Show; have a shearing ram, ram lamb, shearing ewe and ewe lamb out of Mr. Ellis' pen of five sheep that won champion prize of 20 guineas for best family of Southdowns at Royal Counties Show. Mr. Jackson will exhibit a draft of his noted flock at Toronto and other leading shows."

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Near Stonewall.—S e ¼ and s ¼ n e ¼ 24, 14, 1, east s e ¼ and e ¼ s w ¼ 5, 14, 2, east. Rosser.—N w ¼ and w ¼ n e ¼ 20: s e ¼ and e ¼ s w ¼ 14; all in 12, 1, east; s w ¼ and s ¼ n w ¼ 10, 12, 1, west. Terms—10 per cent. cash, balance in five annual instalments, with interest at 7 per cent. per annum. 314-y om

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PRESIDENT.

Guelph, June, 92.

319-c-om

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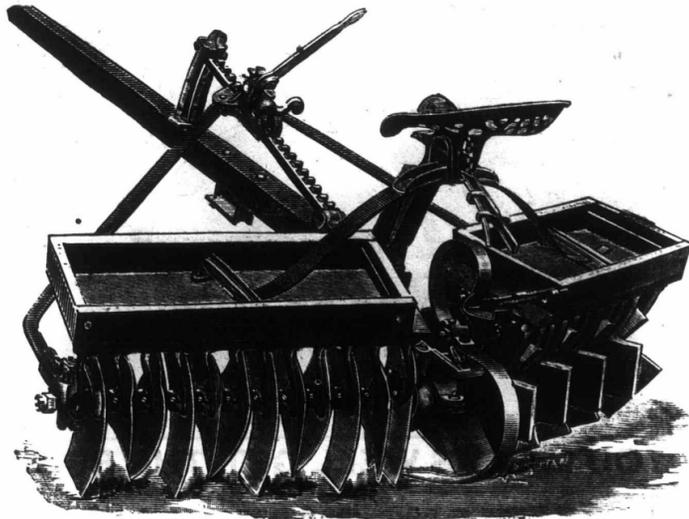
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J. W. WESTERVELT,

PRINCIPAL.

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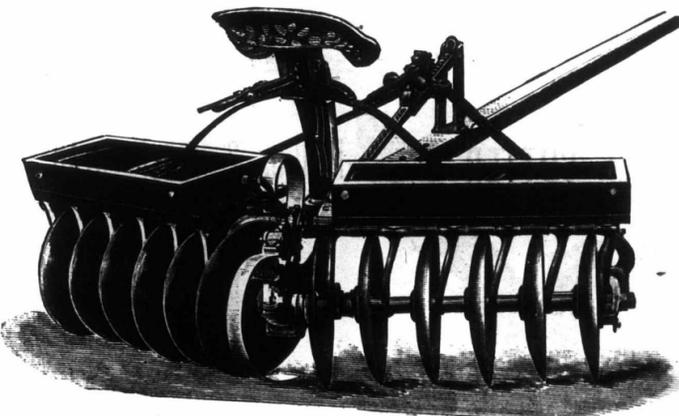


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 Pulverizing clay lumps; for pulverizing plowed sod; for making seed bed on fall plowing; for making seed bed for fall wheat seeding on pea, bean and corn ground; for cultivating summer fallow; for light plowing and working up stubble ground to sprout foul seeds, and for covering broadcast fall wheat seed. Furnished with or without seeder. It will work in any kind of land. It cuts the ground every two inches, and distributes it, leaving a smooth level surface. No harrow or cultivator ever made can equal it.

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COMPANION TO THE



CELEBRATED SPADE HARROW.

DRADER'S PATENT SOLID DISC HARROW

Having the adjustable draught, the equalizing seat spring, the pivoted-wearing boxes, the draught direct from each end of the axle, and the adjustable spring tooth; in every way the same as the Spade Harrow, except that it has Discs instead of Spades. In sand or very loose land some will prefer the Disc to the Spade. We say with confidence that we offer you the best Disc Harrow ever made, and as a cultivator and harrow the Spade is its only superior.

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Peck's I X L Wind-Mill, Hay Forks, Grain Slings, Grain Grinders, The "Daisy" Barrel Churn, and Iron Pumps of all Descriptions.

STOCK GOSSIP.

Messrs. Isidlaw & Jackson, Wilton Grove, Ont., have sold 36 head of Cotswold sheep to American customers during the month of August. They have also bought a yearling ram bred by Bagnell, a winner at the English Royal this year. They now have a flock of Cotswolds numbering over 100 head. All are registered.

Under date of August 20th, Messrs. Walker & Gibson write:—"Flock of Lincolns are doing well. The imported shearing rams are grand; their fleeces are heavy. The lambs are altogether the best lot we have ever had; have sold quite a number lately to the U. S. for both breeding and show purposes. We will exhibit at the leading fairs in Canada this fall.

Mr. Wm. Thompson, of Mount Pleasant, has just sent us word that his flock of imported Cotswold sheep have arrived home in fine condition. They are all prize-winners at the Royal Show in England. His flock of home bred lambs and shearlings are all doing well, of which he has a fine lot. Sheep of both sexes for sale. Parties who contemplate buying would find it to their advantage to give him a call. Specimens of this flock will be shown at Toronto Fair by the exhibitor.

Wm Oliver, Avonbank, Ont., has arrived home from England, and has brought with him 11 Lincoln sheep—4 yearling ewes, 1 yearling ram, 1 ram lamb, 2 two-year-old ewes, and 3 ewe lambs, all fitted show sheep of superior quality. Mr. Oliver went to England with a view of purchasing the best without restriction as to price. We understand that he paid \$420 for a shearing ram, \$100 for a ram lamb, while the lot cost on an average of \$100 per head. They will be shown at Toronto and London shows by the importer.

The American Hereford Cattle Breeders' Association offers the following special prizes to be awarded to Hereford cattle at the World's Columbian Exposition at Chicago, Ill., in 1893, subject to the following conditions:—Breeding cattle to be recorded in the American Hereford Record.

BREEDING CATTLE.

Best bull, 3 years and over, 1st \$30, 2nd \$50, 3rd \$35, 4th \$25. Best bull, 2 years and under 3, 1st \$30, 2nd \$50, 3rd \$35, 4th \$25. Best bull, 1 year and under 2, 1st \$30, 2nd \$50, 3rd \$35, 4th \$20. Best bull calf, under 1 year, 1st \$30, 2nd \$50, 3rd \$35, 4th \$20. Best cow, 4 years and over, 1st \$30, 2nd \$50, 3rd \$35, 4th \$25. Best cow, 3 years and under 4, 1st \$30, 2nd \$50, 3rd \$35, 4th \$25. Best cow, 2 years and under 3, 1st \$30, 2nd \$50, 3rd \$35, 4th \$25. Best heifer, 1 year and under 2, 1st \$30, 2nd \$50, 3rd \$35, 4th \$20. Best heifer calf, under 1 year, 1st \$30, 2nd \$50, 3rd \$35, 4th \$20. Sweepstakes, male, 1st \$125. Sweepstakes, female, 1st \$125. Best herd, consisting of 1 bull 2 years old or over, 1 cow 4 years old or over, 1 cow 3 years old and under 4, 1 heifer 2 years old and under 3, 1 heifer 1 year old and under 2, and heifer calf under 1 year old, 1st \$300, 2nd \$200, 3rd \$100, 4th \$50. Best young herd, consisting of 1 bull and 4 heifers, all under 2 years of age, bred by exhibitor, 1st \$300, 2nd \$200, 3rd \$100, 4th \$50. Best 4 animals of either sex, under 4 years of age, the get of one sire, 1st \$200, 2nd \$150, 3rd \$100, 4th \$50. Best cow and 2 of her produce, 1st \$120, 2nd \$80, 3rd \$40, 4th \$20.

Late Sheep Importations.

It was generally conceded that lighter importations in all lines of fine stock would be the rule for 1892, and thus far not much has come out. However, we are glad to chronicle the arrival of a splendid lot of sheep selected by Mr. Robert Miller, Brougham, many of which will doubtless be retained in the "Thistle Ha" flock. Included in this importation is a beautiful lot of

COTSWOLDS,

which already have been sent on to Mr. Wm. Thompson, Mount Pleasant Farm, Uxbridge, and which will doubtless be heard from during the coming exhibitions, and which, if accounts be true, will make it exceedingly warm for exhibitors of the breed. The

SHROPSHIRE,

of which a large lot have been selected, have come directly to "Thistle Ha," and will there await the orders of Messrs. Miller's numerous customers. Besides a large number of store ewes, there is a lot of beautiful show sheep, from such leading flocks as the following:—

A splendidly formed two-shear ram bred by Arthur Bradburn, and with him are some shearing rams, several of which will be seen in the coming show rings. The shearing ewes are from the flocks of Messrs. T. & S. Bradburn, Astwood Hill, Redditch, and Arthur Bradburn, and in quality have not been surpassed by any previous importation we remember seeing. Such character and form and fleeces will be difficult to approach. Several ram lambs we noticed were equally good in all their points, until it was exceedingly difficult to judge which we admired most.

The yearling bulls of last winter's importation have grown well since we last saw them, the oldest of which is Duke Lavender, a dark red, and brother to the Lavender bull that came second in the aged class at the Royal Show at Warwick this season. A really good, thick, smooth, red bull is Sittyton Stamp; he is a Secret sired by Leonidas, and is royally bred in all his top crosses. The smallest of the three imported bulls is Royal Gloucester, a smooth, showy red. He should not be long seeking a place at the head of some crack herd, and yet if showy honors are what buyers are wanting, intending purchasers should not pass by Grandmaster, which is not a tittle behind the imported bulls in breeding. He is sired by Vice-Consul, and his dam is imported Duchess of Gloucester 35. By analyzing the blood lines of sire and dam, both of which were bred at Sittyton, nothing more orthodox can be found.

STOCK GOSSIP.

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

Mr. James Hunter, Alma, Ont., has recently shipped a carload of Shropshires to Dakota, U. S. He reports his Shorthorns to be doing well, and says he has a fine lot of young bulls and heifers on hand.

Mr. Donald De Courcey, Bornholm P. O., Ont., will exhibit a very choice herd of his noted Chester White swine at the Toronto Industrial and Montreal Exhibitions. He invites farmers to inspect his exhibit, which promises to be one of the best he has ever made. Mr. De Courcey's herd is one of the finest on the continent.

Just as we go to press we are in receipt of a notice of the arrival in quarantine of W. S. Hawkshaw's annual importation of Shropshire sheep, the particulars of which will appear in our next issue. By what we learn they are of the same high character that has distinguished his former importations. He states that the demand for choice Shropshire ewes is greater than ever. Mr. H. writes: "By advertising in your widely spread paper I have just concluded a sale of all this year's lambs."

Hon. M. H. Cochrane, Hillhurst Station, writes:— We intend making an exhibit of Hackneys, Aberdeen-Angus cattle and Shropshires at Sherbrooke, Toronto and Montreal. The following is a list of registered Hackney foals dropped at Hillhurst the past season:—

May 6, Imp. Nancy (4160) 255, b. c. by Wildfire (1224); May 10, Consequence (3610) 91, ch. f. by Young Nobleman (2328); May 21, Imp. Princess Dagmar (4590) 256, b. c. by Cannyman (2882); May 23, Gavotte (3845) 95, ch. f. by Young Nobleman (2328); May 31, Imp. Countess (70) 90, ch. f. by Fordham (287); also a number of capital foals by Fordham from half-bred, thoroughbred and light draught mares and ponies of Welsh descent. The Hackney cross is very popular in this district.

PICOLA WINS THE QUEEN'S PLATE.—The justly celebrated race horse Picolo, owned by Mr. P. D. Rowe, of Brandon, achieved fresh honors at the Winnipeg races in Prairie Park, on June 30th, by winning the Queen's Plate, seven horses in all running. He reduced the time he made at the Industrial Exhibition last year (one mile in 1.48) to 1.46, doing the mile and a-quarter dash in 2.15. He comes of the choicest blood lines in England, and the last performance still further stamps him as one of the best race horses in America to-day. A portrait of Picolo appeared in the December, 1891, issue of the FARMER'S ADVOCATE, in which his pedigree was also given. He was by Petrarch, out of Lady Grace. Since the above triumph on the Manitoba turf this thoroughly game horse won the great race for three-year-olds and upwards at the St. Paul meeting, and did it easily, without apparent effort—a mile and twenty yards in 1.44. This further enhanced his reputation, and brought his owner, Mr. Rowe, a handsome offer for the horse by a leading American breeder of thoroughbreds.

Mr. J. C. Snell, Edmonton, Ont., writes that the demand for Cotswold sheep, both for the States and the provinces is steadily increasing; sales have recently been active and satisfactory. Cotswold rams are in great demand for crossing on Merino and grade ewes on the ranches in the western territories. The consignments of rams sent by Mr. Snell to Colorado and Montana have given great satisfaction, their lambs having come strong and vigorous. One buyer writes that though the weather during the lambing season was unusually cold and wet the lambs by Cotswold rams came through with a loss of not more than ten per cent., while over fifty per cent. of the Merino lambs succumbed. Among the recent sales from the flock at Edmonton are:—7 rams to Geo. Harding & Son, Waukesha, Wis.; 2 imp. ewes to W. W. Wilson, Muncie, Ind.; a pair to T. C. Phelps, Greensboro, Ind.; 6 head to A. J. Winterrowd, Flat Rock, Ind.; 5 to Wm. Young, Creemore, Ont.; 4 to S. H. Anderson, Oxford, Ind.; 3 to L. Reed, Burton, Ohio; and single rams to D. M. Roseberry, Lovett, Ind.; W. P. King, Red Hill, Ga.; and J. E. Shutz, Headville, Va. Mr. Snell has also sold since last report Berkshire pigs to James Boden, St. Anne's, P. O., P. Scott, Norwood, E. Owen, Chatsworth, Hugh Bailey, Madoc, and J. H. Reed, Girard, Ohio.

Mr. James I. Davidson, Balsam P. O., had a visit in May from Robert Bruce, Esq., Elm Grove, Darlington, England, which resulted in the purchase of Mina 2nd, and her red roan bull calf Ontario Lad. They were both shipped 30th July, along with the bull from the Hon. John Dryden, and a heifer from Col. W. A. Harris, Linwood, Kan., all bought by Mr. Bruce. No one knew their breeding better, and there are few as good judges in any country; he is often a judge at the leading shows in Britain. Ontario Lad was got by imported Hospodar (51409), whose dam was Golden Lady, by the Champion of England (17526)—few bulls living so closely connected to that noted sire. Ontario Lad's dam, Mina 2nd, was got by Royal Bampton (45533), grand sire Breadalbane (28473), great grand sire Dipting (17681)—bulls all bred by A. Cruickshank, Prof. Shaw, of Agricultural College, Guelph, bought Ontario Lad's full brother.

Mr. Kellogg, Rich Hill, Mo., his full sister. I think Hospodar is as good a bull and as good a sire as I ever imported. Although eight years old he is as lively as ever, and a good many of his get are good sires. Good sires, viz.: Robbins & Sons, W. C. Edwards, Rockland, Ont.; and others. I have also imported several good females which

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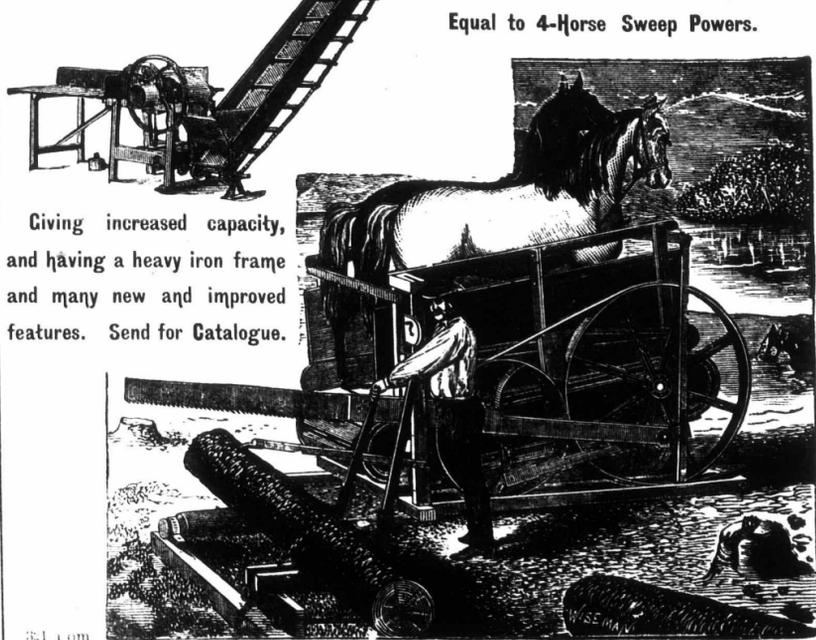
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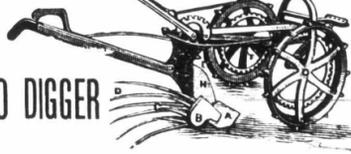
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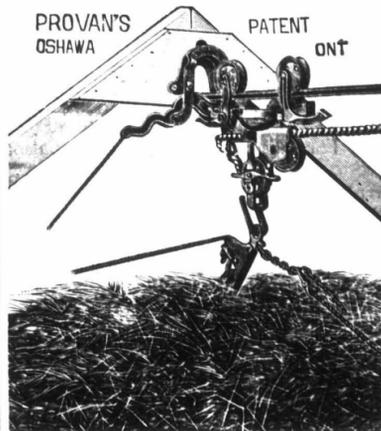
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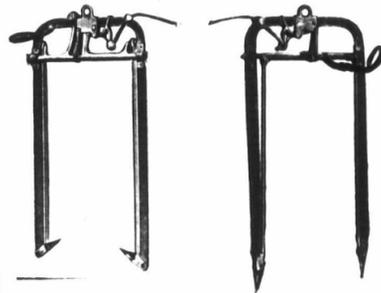
Many farmers who had other kinds have taken them down and bought mine after seeing it work.

My Machine Handles Sheaves as well as Hay and Peas. It is the Simplest and Best Stacker Manufactured.

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We guarantee every machine sold by us to do first class work, and to unload one ton of hay in from three to five minutes, when properly handled and put up, and if it fails to do so, will be taken back and money refunded.



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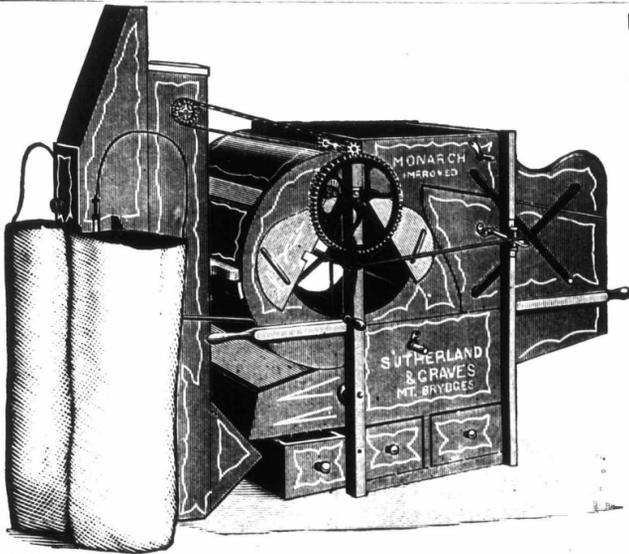
It has been for years a part of our business to send our machine on trial to fair-minded responsible farmers living at remote distances, such machine to be put up by them and used until their harvesting is half done, when they are required to decide whether they will keep the apparatus or return it; if the latter, we will pay return freight charges.

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n 1/2 n w 1/4	28,	3,	5,	2 00	All	33,	14,	21,	5 00
n 1/2	3,	2,	5,	2 00	All	3,	7,	22,	10 00
n e 1/4	19,	13,	3,	4 00	n e 1/4	13,	6,	22,	10 00
s 1/2 s e 1/4	30,	13,	3,	4 00	n 1/2	23,	6,	22,	10 00
n w 1/4	22,	8,	2,	10 00	s 1/2	33,	6,	22,	10 00
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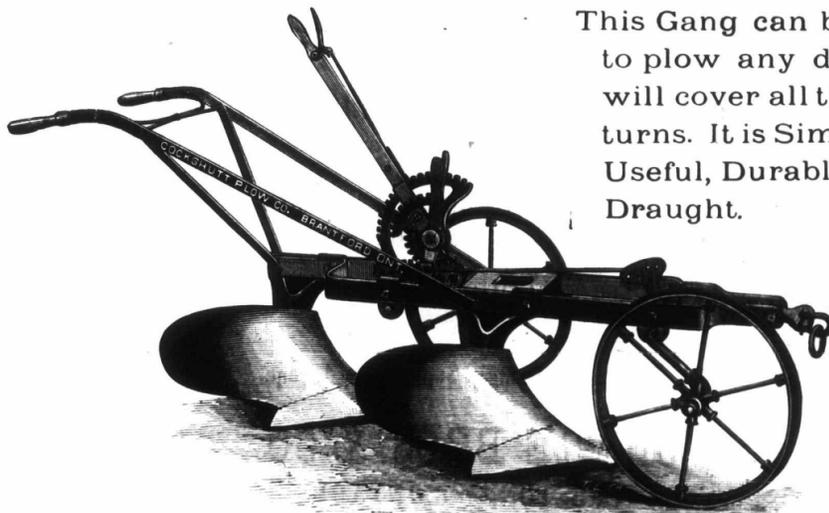
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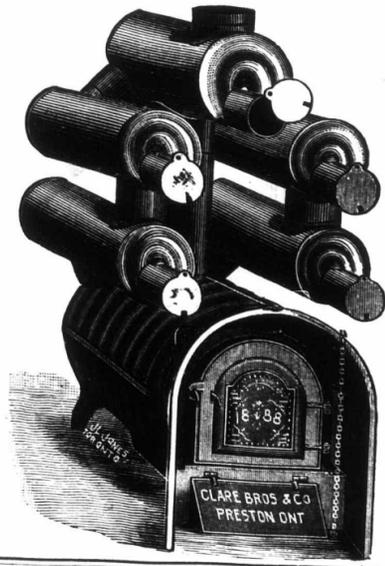
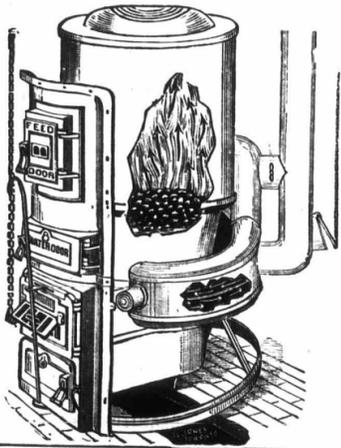
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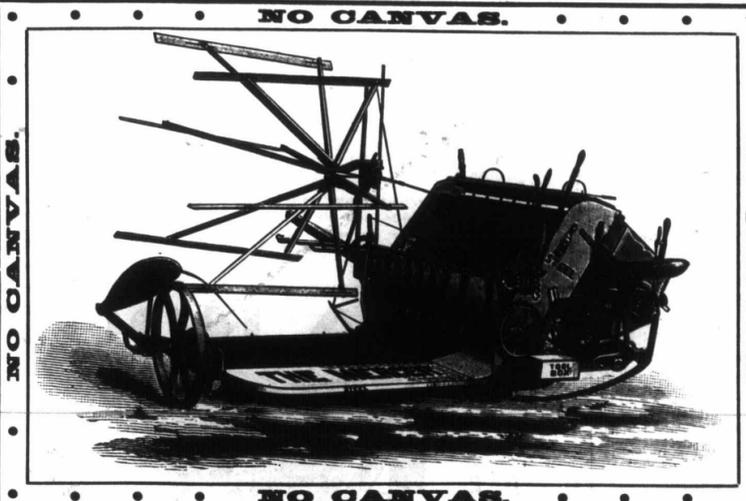
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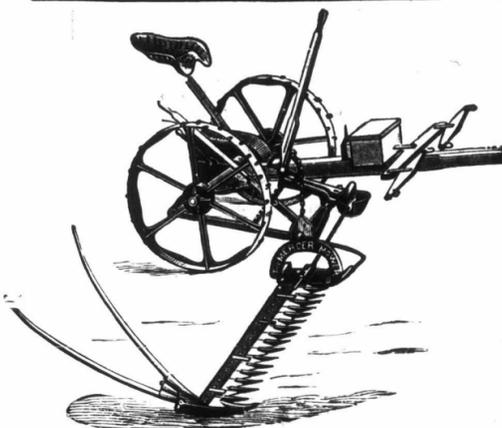
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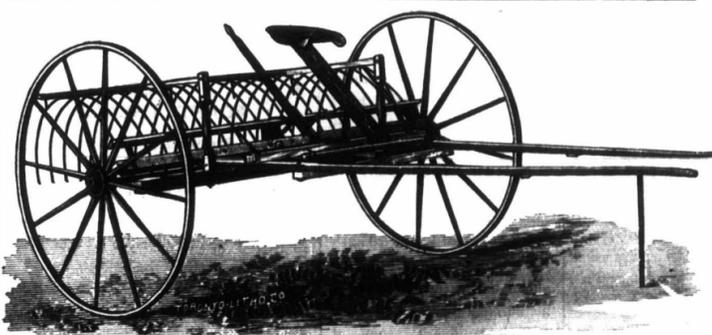
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THE "MERCER MOWER."

The sweetest cutting machine made. All the latest improvements. Built either with 2¼ or 3-inch sections.

- MERCER MOWERS, BINDERS, RAKES. -



THE "PERFECTION TIGER RAKE."

HIGH WHEELS. SUREST AND EASIEST TO DUMP AND CLEAR ITSELF OF ITS LOAD. FARMERS, DON'T BE DELUDED INTO BUYING CHEAP FRICTION RAKES.

We make a Specialty of the above Implements, and extra care is thereby given in the construction of the same. Farmers purchasing any of the above Implements may rest assured they are buying the best that can be produced.

MERCER COMPANY, LIMITED.

TERMS, CASH! WAGONS, TRUCKS & DEMOCRATS

By that we mean **CASH WITH THE ORDER.** On these strict terms our mail order department has assumed the proportions of a young giant. Thousands of buyers in all parts of Canada testify that our prices are right. We want no more proof than that. If you are not a customer of ours already you are not doing yourself justice. At once send us your name and address, and we will mail you our free price list. Here is part of it: 240-pound union scales only \$5 each; 500-pound platform scales on wheels only \$10 each; 1000-pound scales, \$12.00; 2000-pound scales, \$22.

HARNESSES.—For only \$15 we offer full nickel-mounted single harness that is equal in every respect to \$25 harness in ordinary harness shops. This is what Mr. H. H. Jones, of Port Alma P. O., Kent Co., Ont., has to say, unsolicited, about a \$15 set of harness he purchased of us: "The harness is faithfully worth \$10 more. I shall not forget to recommend them whenever I get a chance." For an even \$20 we will sell you as fine a set of single driving harness as can be made; it is genuine, rubber mounted (guaranteed). Then \$23 buys a farm team harness (without breeching). Horse collars for working we sell at \$1.50 each.

The best riding road cart in Canada is only \$16. A \$16 cart and \$15 harness, if purchased at one time, for an even \$30, and satisfaction guaranteed. Farm whiffletrees (ironed off) 50c. each. Threshers will find these prices about right.

RUBBER DRIVE BELTS.

100 ft. 6 in. 4 ply Extra Star Belt	\$25 00
100 " 6 " 4 " " " (endless)	27 00
110 " 6 " 4 " " " (endless)	28 00
120 " 6 " 4 " " " (endless)	30 00
120 " 6 " 4 " " " (endless)	30 00
150 " 6 " 4 " " " (endless)	40 00
110 " 5 " 4 " " " (endless)	27 00
120 " 5 " 4 " " " (endless)	30 00
110 " 6 " 4 extra heavy Star Belt (endless)	36 00
110 ft. 6 in. 4 Forsythe seamless endless belt	43 00

We supply samples by mail of any of these drive belts free on application. The above belts we carry constantly in stock. Our terms are cash with the order in all cases. Send money by post-office order or registered letter, and do not fail to get in your application for our free fall price list, which will be distributed about September 1st. Address,

STANLEY MILLS & CO.,
WHOLESALE HARDWARE MERCHANTS,
HAMILTON, 319-y-om ONT.

\$500 A YEAR FOR 20 YEARS.

FOR
23
CENTS
A
WEEK.

The plans of insurance operated by the Manufacturers' Life are universally admitted to be not only the most popular but also the most liberal and comprehensive now offered to the public. For a premium not very much larger than is charged for a \$5,000 policy, where the entire insurance is to be paid in one sum down, this Company will give a policy of \$10,000, payable in twenty annual instalments of \$500 each. That's the instalment plan. By insuring on the ten-twenty plan a man may carry \$1,000 for the insignificant sum of twenty three cents a week!

No other company in the world can give cheaper insurance than this.

THE MANUFACTURERS' LIFE INSURANCE CO.,
COR. YONGE & COLBORNE STS., TORONTO.
C. C. SCOTT, Strathroy, Ontario,
District Manager of the Manufacturers' Life and Accident Co.

307-3y-OM

The BAIN WAGON has no Superior, and Few Equals.



Only the Best Materials Used in the Construction of Goods Made by Us.

We import the genuine **STUDEBAKER TRUSS SKELIN**, acknowledged to be the best in use. Not a breakage in the thousands we have used. Write for Catalogue and Price List, or see Agents.

BAIN WAGON COMPANY,
315- WOODSTOCK, ONTARIO

MICA ROOFING

USE
Mica Roofing
On all your Buildings.
It is Cheaper than Shingles.
Water Proof and Fire Proof.

MICA ROOFING FOR STEEP OR FLAT ROOFS

USE
Mica Paint
To Repair Leaky Roofs.
Shingle, Iron or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of 108 square feet each, 36 feet long by 3 feet wide, and costs 24c. per square foot, thus affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing about 75c. per square cheaper than shingles. Special terms to dealers who buy our Mica Roofing to sell again. Orders and correspondence answered promptly.

HAMILTON MICA ROOFING CO.

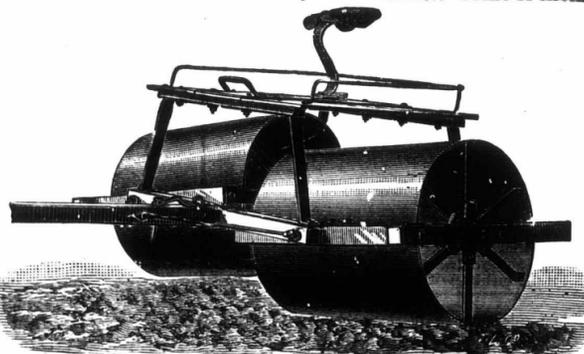
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Office—124 James Street North, HAMILTON, ONT.

THE DALE PIVOTED LAND ROLLER

(Patented.)
A STEEL ROLLER, THE DRUMS OF WHICH OSCILLATE ON PIVOTS AND ADAPT THEMSELVES TO THE UNEVENNESS OF THE GROUND.

Its points of advantage are too many to enumerate. Some of them are:



The bearings are the only wearing parts and are guaranteed to last from Ten to Fifteen Years, and can be replaced at a nominal cost.

It rolls all the ground, no matter how rough. There is no axle shaft, no strain, and consequently no wear. It is easily rolled between the drums.

THE DEMAND IS STEADILY INCREASING. IT IS UNANIMOUSLY RECOMMENDED BY THOSE FARMERS WHO HAVE USED IT. Orders are now being booked for the fall trade. Description and price furnished on application to.

T. T. COLEMAN, SOLE MANUFACTURER SEAFORTH.

320-y-OM