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THE FARMER'S ADVOCATE & HOME MAGAZINE

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THE FARMER'S ADVOCATE,
360 Richmond Street,
LONDON, ONT., CANADA.

Vol. VI. Dominion Shorthorn Herd Book.

We are indebted to Mr. Henry Wade for the sixth volume of the Dominion Shorthorn Herd Book, in which a continuation of the history of Shorthorn cattle imported into Canada from Great Britain is included. Some eighteen pages of interesting reading, in which the importations of 1881 are chiefly dealt with, there being 48 bulls and 115 cows imported during that year. In this volume the bulls range from Nos. 8,183 to 11,100; the cows, from 13,495 to 16,400.

Vol. XIII. Clydesdale Stud Book.

Through the courtesy of Mr. Arch. Macneillage, we have received the thirteenth volume of the Clydesdale Stud Book of the United Kingdom. This volume contains the pedigrees of mares numbering from 9,331 to 10,339; stallions from 8,417 to 9,103; illustrations of the stallion Sir Everard (5353), winner of the first prize at the Glasgow Stallion Show, 1890, and Scottish Marchioness, first prize brood mare at the Highland Agricultural Society's Show at Dundee, and also at the Glasgow Summer Show, as well as champion female Clydesdale at Kilmarnock and Maryhill, 1890.

Melons require potash, a good deal of it on sandy soil. It should have been applied before harrowing the ground.

Editorial.

Cast Your Eye Upon the Address Label of Your Paper.

Any of our subscribers can tell if their paper is paid in advance or not, as well as we can in this office, by looking at the label upon first page of cover. If you find your paper is not paid for '91, be good enough to remit at once. Be sure and remit either by post-office order or registered letter. We cannot be held responsible for money sent unregistered, as many of our subscribers are well aware that losses have occurred through the dishonest practices of clerks in the post office department. See adjoining column how remittances should be sent in.

The Number of Judges Required.

In another column will be found an article by Mr. John Jackson, who has had many years' experience as an exhibitor, in which he gives his ideas upon the above question. He reiterates the remark that "the picked-up committee of three must go." This is pretty near the feeling of those who have watched this question closely for years. At the swine breeders' meeting held in Toronto this subject was thoroughly discussed and carried by at least a two-thirds vote in favor of one expert judge. The only exception taken was the fear that an expert could not be found. We contend that if a man is capable of acting in this capacity with two others, he should be quite as able to act alone. There would then be a chance of a man showing how consistent he is in his judgment, and that however he differed from others in judgment on certain animals that in the judging ring he always placed a certain value on certain well-developed points. Under the present system men never know what are the required qualities that they should aim to produce. One thing is certain, that we hear far more dissatisfaction over the work of three judges than where one alone is employed. It is only too often the case that a judge gets the blame for what his colleagues have in reality done against his opinion; therefore there are few men qualified to act as judge and desirous of doing honest work that would not rather act alone. The work can be done with more dispatch, and if asked why a certain award was given the judge can tell the reason and thus satisfy any reasonable exhibitor. Breeders have too much at stake to allow men of no reputation or perhaps twenty years behind the times to decide on stock they have no capacity to pass sentence upon.

Cool spring water should stand in the sun awhile before being applied to tender plants in a hot bed.

Artificial Manures.

Among the different experiments that have been conducted by specialists in this line, much light has been thrown upon what has hitherto been obscure and difficult to those without experience in their use. The best soil analysis is obtained from the testimony of the plants themselves as they grow, and by the yield of the different crops, be they grain, grass, roots or green crop. Now that there is a government analysis by which the farmers can depend on getting the proper articles, a moderate use of the various commercial fertilizers will do much towards assisting the growth of the different crops. We should, therefore, advise farmers to make tests, that they may judge for themselves the properties of some of the different fertilizers offered. Of one thing we are certain, that a very large share of the farming lands throughout the country have lost their fertility by the continual cropping practised, and the lessening yield of latter years is to be credited to this source. In order to obtain farm-yard manure, crops must be grown to feed on the farm, and it is here that the special fertilizers will be of benefit. All root and forage crops should be forced along from the start, and an artificial manure that will stimulate the growth of these, not only adds to the crop growing but to the after fertility of the farm. Now, for instance, turnips are a crop that if they do not grow quickly at first are exposed to the attack of the fly, which may easily ruin the crop. On the other hand, if a quick growth is obtained at first, no trouble is experienced afterwards; while however rich the soil may be, if the tender plant cannot get a foothold it cannot take up the plant-food, however abundant in the soil.

The continual drain on the farm, through the sale of the crops grown, must be provided for by some articles purchased containing the ingredients carried away in the grain and other products sold. This can be done by different means; that of purchasing grain, cake to feed, and thus increase the supply of farm-yard manure. The other plan is by purchasing commercial fertilizers which are made up of four very necessary elements to plant growth, viz., nitrogen in some form, phosphates, potash and lime; and it is the judicious application of these which will give the best results.

It is, therefore, by testing the different brands of fertilizers containing the above elements that information will be gained whether those put up in commercial form are not cheap at the price at which they are furnished.

For gooseberry mildew, apply one ounce of sulphide of potash dissolved in two gallons of water. Spray every ten days until the fruit is half grown.

Prof. Wm. Saunders.

Prof. Wm. Saunders, the Director of the Experimental Farms of the Dominion of Canada, was born in Crediton, Devonshire, England, in 1836, and came to Canada with his family in 1848, when they settled in London, Ontario. Subsequently he became a chemist, and conducted a successful business from 1855 to 1886, chiefly in the manufacturing line, paying special attention to the more scientific aspects of his calling. He assisted in the organization of the Ontario College of Pharmacy in 1871; was for many years a member of the council of that college; was made one of the examiners, and served two years as president. He joined the American Pharmaceutical Association in 1860, and was subsequently honored with many offices in that important body, and served as president in 1873. Several of his papers written for this association were republished in English journals, and translated and published in Germany. In 1882 he was appointed by the Government of Canada, public analyst for the western division of the Province of Ontario, in which capacity he rendered satisfactory service for four years. On the organization of the Medical Faculty of the Western University of London, Ont., in 1882, Mr. Saunders was appointed to the chair of Materia Medica, and on his retirement in 1886 to accept his present position, he was made an Emeritus Professor by the Faculty.

To gain the open-air exercise made necessary by close application to professional work, he became one of the early students of Canadian Botany and Entomology. In 1863 he published, in the Canadian Journal of Toronto, a list of the plants found growing in that part of Western Ontario in which he resided—the first catalogue published of the flora of that district. In 1863 he aided in the formation of the Entomological Society of Ontario, and afterwards was editor of the Canadian Entomologist for thirteen years, during which time he contributed many useful articles to its pages. In the early reports of the society there are many practical papers from his pen; he was elected president in 1883, and re-elected from year to year until 1886.

In 1869 he was appointed a director of the Fruit Growers' Association of Ontario, and in 1882 was made president of that body—an office held until 1886. For ten or eleven years, beginning with 1863, he carried on farming near London; and, in addition to ordinary agricultural work, planted a large collection of fruit trees and vines, covering sixty acres, which afforded the opportunity of ascertaining which varieties were most suitable to the climate of this part of Ontario, and also gave facilities for the observation of those insect pests which affect the different sorts of fruit. In 1883 he published a volume on "Insects Injurious to Fruits", profusely illustrated, printed by Lippincott & Co., of Philadelphia, a work which is now in its second edition, and is a useful guide to the fruit growers of America. He is also a successful hybridist, and has originated many promising varieties of fruits and cereals.

When the Royal Society of Canada was organized in 1881 by the Marquis of Lorne, Mr.

Saunders was selected as one of the original twenty Fellows which formed the Biological Section of that national scientific body, and in the volumes of its transactions several contributions of his will be found. At the last meeting he was elected president of this section. He has also long been a Fellow of the American Association for the Advancement of Science, in which he has held important offices. He has also been an active member of the American Forestry Association ever since its organization.

When the government of Ontario, in 1880, appointed a special commission to enquire into the condition of agriculture in that province, Mr. Saunders was appointed one of the thirteen selected for this work, and under his direction the information on fruit growing, forestry, insectivorous birds, insects, and bee keeping was collected and published. In 1885 he was requested to undertake the preparation and arrangement of the fruit display of Canada at the Indian and Colonial Exhibition, when the problem was



PROF. WM. SAUNDERS.

presented of so preserving the leading fruits of the country of the growth of 1885 that they could be presentable for exhibition purposes during the following summer. A satisfactory display was prepared, and as soon as the collection was arranged he returned to Canada, and, with the help of the leading fruit growers of the Dominion, got together and forwarded an exhibit of several thousand plates of fine fresh fruit, which was quite a revelation to the visiting public as to the resources and climate of Canada.

In 1885 he was requested by the Hon. John Carling, Minister of Agriculture for the Dominion, to visit the Experimental Stations of the United States and to make enquiries regarding experimental work in agriculture in Europe and America. The information gained was embodied in a report presented early in the following year, which also contained an outline of proposed experimental work in Canada. Following this, an Act was introduced by the Minister of Agriculture, and concurred in by both sides of the House of Commons, which provided for the

establishment of five Experimental Farms for the Dominion of Canada—a central farm to serve the purposes of Ontario and Quebec, and four branch farms, one in the Maritime Provinces, one in the Province of Manitoba, a third in the Northwest Territories, and a fourth in British Columbia. In October, 1886, Prof. Saunders was appointed as director of this important work. A site was chosen for the Central Experimental Farm adjacent to the capital, and after a careful survey of the country, during which the area from Halifax, N. S., to Victoria, B. C., was twice traversed, every promising locality inspected, and the climatic conditions and agricultural needs of the several provinces studied, sites were recommended and subsequently chosen by the government. A suitable farm for experimental work in the Maritime Provinces was found at Nappan, Nova Scotia, near the boundary of New Brunswick; one for Manitoba at Brandon; a farm for the Northwest Territories at Indian Head, and one for British Columbia at Agassiz. The work has since made rapid progress, and all the farms are now in active operation under efficient superintendents.

Mr. Saunders has also been honored in Great Britain. He has been elected a Fellow of the Linnean Society, of the Chemical Society, of the Royal Microscopical Society, and of the Entomological Society of London. The training he has had has given him a practical knowledge of many subjects, covering a wide field bearing on agriculture and horticulture in Canada, while his knowledge of chemistry, botany, forestry and entomology has further qualified him for the work he has in hand. The results already achieved in introducing new and promising varieties of seed grain into all parts of the Dominion, the experiments with cattle, and the manufacture of dairy products, also with pigs and poultry, the testing of fruits of all sorts, especially those adapted to the colder parts of the country, the originating of new kinds of cereals and fruits, and the distribution of young forest trees and forest tree seeds to the settlers on the western plains are producing a most favorable impression on the farmers of the Dominion. The mass of valuable information being given to the farming community by Prof. Saunders and his able staff of associates in the annual reports and bulletins which have been issued under authority of the Minister of Agriculture since the work began, has furnished further evidence of the wisdom shown in originating these institutions for the benefit of agriculture in this country, and in the choice of the officers intrusted with their management.

Make up hills of fresh soil for the early tomato plants, and take the plant out of the bed with a block of earth adhering 5x5 inches square and 2½ inches deep.

More fact than poetry is contained in the following extract from a letter of Mr. R. W. Phipps, of Toronto: "Let me here state as an axiom what long actual observation has taught me: Countries are settled by the letters written by settlers. All assisted passages, all emigration agencies, lectures, and pamphlets only ultimately empty your own pocket and fill your rival's territory, if it be the best for settlers." Look, for instance, at the hundreds of settlers who are flocking into Canadian territory from Dakota.

Stock.**Canadian Horse Records.**

BY A CLYDESDALE BREEDER.

The Chicago Review has been kicking up considerable dust in showing up our Dominion horse registers, and with a good show for damaging this trade for Canadian breeders across the line. The largest class of our Canadian breeders and importers are as whole-souled and enterprising men as can be found in any country. And when we combine this with the fact that they have a knowledge of their business, and have united with this square dealing, we find they have succeeded in winning a trade that has been very remunerative. Just as it is in any other production or manufactured article, in which a high degree of success has been attained, there are unprincipled parties lying in wait to palm off a spurious imitation, and rob those that have borne the heat and burden of the day in the work of establishing the reputation which Canadian stock has gained. In the trade with draught horses, this has been notorious. A few years since, breeding stock, bred in draught lines, was in such demand that anything was saleable, and our neighbors across the lines, who are always open for a deal, were wont to visit Ontario and take over everything in horse shape that had the slightest pretensions to draught type. Like the coin of the realm that has the true ring, horses that were properly bred and good individuals were of too high a standard of value for these scalpers to deal in, so they had to have recourse to other records, such as the Goderich Draught Horse Stud Book.

Here the matter did not stop, for a great many American friends are not gifted with too much practical judgment, and have therefore demanded records for all breeds of farm and stock animals, whereas our farmers in a quite conservative way have produced animals that filled the bill to the utmost, except in the line of breeding. The Canadian Draught Horse Book, which admits horses of mixed Shire and Clydesdale blood, which, outside the allowance of the mixture of these two breeds, is as select as any. The difficulty is that the Agriculture and Arts Association, through the Secretary, Mr. Henry Wade, is doing all the work, which has made it difficult for men without much knowledge of breeding to distinguish which of the stud books the certificate represents. It has been all right on the score of economy to have the recording for the different breeds of horses conducted in one office, but when the same signature is attached to all certificates it is sure to be conflicting, and lead to mistakes, as well as misrepresentations, and consequently have a bad effect on the standard of all our stud and herd books.

A pure-bred stock record is like the status of a bank, the public require every reliance in it or it is worthless, and is sure to lead to disaster for those having any connection with it, should confidence be lost. When the standing of any institution is questioned, there are plenty standing by delighted to add fuel to the flames, and the only safeguard against attack is to have every record upon a proper basis. The Clydesdale Stud Book of Canada has the highest standard of any published. The Dominion Shorthorn Herd Book is higher than the English or American. Both of these are well patronized, and are

in the most flourishing state possible. And to have reflections cast from small side issues, like the Canadian Draught Book and the Office Record, is most vexing to those who have a large amount invested in stock recorded in our two standard books. That this matter will have a certain amount of effect on all none can doubt, and the sooner an effort is made to shake clear of these second-rate concerns, the better it will be for our whole breeding interest.

While on this subject we have our doubts about centering the records of each and all of the breeds in one office. A thoroughly competent registrar for any one breed, or line of breeding, requires to be well posted in details. Therefore, when we find a man qualified by a knowledge of every line of breeding in horses, cattle, sheep and swine, more brains will be required than falls to the lot of an ordinary mortal.

At all events, it is in the interest of each separate breeding interest to stamp out from our midst anything that offends. A little leaven leaveneth the whole lump. A large share of American breeders would gladly stop all intercourse between this country and the United States, especially just now that heavy horses are not in such demand, and many importers and breeders overstocked; and the next thing that will happen, our certificates will not be recognized at the lines, which will put a stop to a most advantageous trade, as the duty would be charged on many of our best bred horses.

System in Horse Breeding.

The manner in which much of the breeding is carried on throughout the country is why so few sections have made a success of any particular line. A few years ago some few localities in Ontario confined their operations almost exclusively to the breeding of draught horses, and did not dabble much in any other line. Consequently they succeeded in producing horses that were in demand from all over this continent, and a proportionately rich harvest was reaped through the high prices they obtained for their stock, as buyers knew just where to find what they wanted. It is system alone in breeding any sort of stock that will give success—the proper mating in order to accomplish certain results. If draught mares with size and substance are on the farm, don't breed them to roadster stallions in hopes of producing a driver nor *vice versa*. And again, the haphazard, go-as-you-please method of crossing from one sort to another never attained anything. The improvers of every breed of farm stock have kept a model in their mind's-eye, and never faltered until they originated the characteristics they intended to produce, and not only acquired a reputation that was of immense benefit to themselves, but also handed down to posterity an incalculable advantage to those following them.

Horses are for utility or pleasure, and in the latter case large profits are to be obtained. As our cities and towns grow more wealthy there will be an increasingly large class of buyers whose first object will be to possess horses that will make a display on the street. Everyone sees them, and the gay equipage will ever be found indicating the luxurious home. Horses of gay carriage and handsome appearance will be found indicative of ambitious proprietors who are anxious to bring themselves and their wealth prominently before the public, and are conscious that where one pair of eyes may happen to see the costly residence hundreds will see

the highly appointed carriage with its high-stepping pair. Breeders, however, must recollect that more skill is required to produce the style and quality that is in demand which brings the large prices for horses that are for luxury and pleasure. Just as it is in manufactures or any other production of art that requires the skill which few attain, it is the very scarcity of the product that enhances the value. The casual observer cannot help reflecting, when observing the numberless good mares that are to be seen in our market towns every day, that are just what is required if properly mated. Yet it is not unlikely but these fine, well-formed mares will be bred to a useless stallion whose best point is a well burnished coat, or his best breeding is in the imagination of his loquacious groom. Farmers should remember that a bad cross put in cannot possibly be removed, and it is well to stand and consider before a rash step is taken in breeding a well-bred, handsome mare. Wherever size and beauty of form are combined in any of the light-legged horses a good thoroughbred cross can hardly be wrong, both for the produce or to assist after breeding, should the produce be a filly; and wherever there is quality without sufficient size the best coach horses obtainable are without doubt what will at once increase the size and add beauty to the form. The breeder should, however, be cautious how he mates a mare that has not plenty of quality with a horse of this breeding, unless he is of the most refined type. Carriage horses of to-day are not required the size that were in use some few years ago, but good manners are always at a premium. Then again, we have numbers of mares of trotting blood and good form that would be much improved by a dash of hackney breeding. This would give them the action that is necessary if long prices are to be looked for. Horses for street display are more likely to be produced by this breeding where the mares are of good size and are of good breeding. Gentlemen's drivers are usually produced from roadster sires where beauty of form, soundness, and utility have not been sacrificed for speed. Breeding for speed among trotting bred horses has produced innumerable weeds useless for any purpose, and the exceedingly small chance of breeding a horse that will pay as a racehorse is more uncertain than drawing a winning ticket at a lottery, where mares of the most approved strains of blood are in use. Then what results can be hoped for when mares of a low grade of breeding and destitute of quality are mated this way? The fact is that fashion has much to do with the breeding of trotters, and even horses with good performances, a little out of certain lines of breeding, are not in the same demand as formerly, if anything can be judged by recent sales of trotters in New York. The danger in horse breeding is, as in many other pursuits, that whatever happens to be in demand all flock and run in that direction, and mares are crossed with horses totally unsuited; disappointment follows, and a given breed condemned. It is those who go quietly on in one line that achieve success, and a good horse is always saleable, whether he be draught, carriage, saddle, or roadster, but none of these can be produced by the haphazard methods generally adopted. Whatever line of breeding is followed, see that the stallion is recorded in the stud book of the breed he is a representative of. Every horse that is fit for a stallion should show a certificate number, and without this you may put him down for a scrub, and not unlikely his owner for a fraud.

The Holstein-Friesian Cow.

BY WM. WAGNER, OSSOWO, MAN.

The farmers of Manitoba and the Northwest, I think, have pretty well come to the conclusion that to follow purely grain raising does not pay as well as mixed farming, and in some instances to allow the dairy interest to predominate. Leaving grain raising aside for a moment and looking at the dairy business of a farm, there are two essential necessities for a dairy farmer:—

1. Knowledge.
2. The cow.

I say knowledge first, since without it the product of the best cow will be a failure. Now, how are we to get this knowledge? To afford the opportunity of gaining such knowledge, the Dominion Government will establish, under the able superintendency of the Dominion Dairy Commissioner, Mr. Robertson, in each province, a dairy school free to all who wish to learn how to make the best product out of milk, and how to market this product to the best advantage. After a man gets this knowledge, let him go into business and buy cows. He may use such knowledge by establishing a home dairy, or he may join a factory or a creamery. An educated dairyman is a good patron.

2. The "cow" is the chief machine for a dairyman; and to have a proper and paying machine is his object. He must, as Mr. William Warfield very rightly observes, clearly understand that there can be no accurate aim unless the work aimed at is fully seen and kept clearly in view.

In my opinion the cow to be chosen by a Manitoba dairyman must come from a race (or breed) which is of renowned free milkers; easily acclimatized, and which has a record of early maturity. I truly believe these are essential points which a dairyman of Manitoba and the Northwest should always keep clearly in view.

There is a country, three parts of it surrounded by the German ocean, bleak in its appearance, and subject to the storms from the north, where every piece of good pasture has to be taken from the sea and fought for; farther inland the ground rises, some of it is good agricultural land, and some sandy, giving only scanty food for sheep and cattle. They drive their cows out in the middle of May and have to stable them about the middle of October. The grain which they grow is wheat, rye, oats, barley, sometimes corn, but with limited success. The name of that country is East Friesland, the home of the black and white cattle, known amongst us as the Holstein-Friesian. There is no particle of blood of the Holstein in the Friesian. The Holstein, or, properly speaking, the "Angler", is at least one-third smaller, and brown in color, and also a good milker.

I have before me a book, the "Rindvieh Schlaege Ostfrieslands" (horned-cattle race of East Friesland), by Professor Dr. A. Wegner, director of the Agricultural College at Norden, from which I will give a few extracts, proving my assertion that the black and white cattle of East Friesland are the best adapted to dairy purposes for this greater western part of Canada:—

1. These cattle are easily acclimatized.
2. They are good milkers, which they have proved here already.
3. They mature early.

I will give here extracts of the produces of

milk, and, at the same time, the amount of feed:—

In a herd of 15 cows the average was 22 pounds of milk per day for 237 days. During the summer they were pastured on the gulse land (dry upperland). Their winter feed consisted of 11½ pounds marsh hay; 10 pounds straw; 15 pounds of roots; ½ pound bran; ½ pound rye, and ½ pound oil cake, all ground. You will see there is no over-feeding to get the 6,006 pounds of milk for the season of 237 days. One of these cows gave 9,080 pounds, and they used 31 pounds milk for one pound butter (cream raised in flat dishes).

In 1886 I gave a prize of \$50 to the Woodlands Agricultural Society for the best kept register of milking. I found that Miss Proctor, of Woodland, had the most scientific work done, and, during the five summer months, by a splendid pasture, and from their excellent herd of Short-horns, they used 30½ pounds of milk to one pound of butter, who never came up to anything to the average of the Friesian cattle in the flow of milk. At the Experimental Station of Hildesheim the butter fat was in summer 3.33 per cent., and, during the winter 3.39 per cent. They used, to one pound of butter, 13½ to 15½ liters milk (about 27 to 31 pounds), and during the winter 14½ liters (or about 28 pounds) milk.

Mr. A. B. Wallis, at Dybeck, Sweden, says his herd of 150 Friesian cows averaged 6,000 pounds of milk, and a few good milkers 10,000 pounds, and more. The average weight of the cows of this herd is 1,200 pounds.

I think that I have shown to you a good milking quality on a common feeding, and I will try to prove to you the early maturity.

According to Dr. Wegner the small farmers have their heifers calving at the end of the second year, sometimes sooner. From the register kept by Count Wedd Gordens of his herd of forty cows, it appears that the average calving time is two years and three and a-half months. One of them calved when one year, four months and twenty-two days old, and although she was kept in the herd for several years never became a good milker. It is impossible to give a true statement of oxen and steers as to weight, since the most of these kind are killed when two years old, either for the home market or export, but we have found in his book the weight of bulls.

Baron Rhedin, of Rhedin, bought in 1878, two bulls one-year-old weighing 800 pounds each, and in 1879 two with respectively 800 and 1,000 pounds; in 1880 two bulls one-year-old, one 800, and the other 1,400 pounds.

Mr. Oscar Andrae, at Billingshausen, near Dassel, gives the weight of his Eastfriesian bull, Osiris, as follows:—One week old, 100 lbs.; 10 weeks, 200 lbs.; 19 weeks, 300 lbs.; 25 weeks, 405 lbs.; 30 weeks, 500 lbs.; 36 weeks, 595 lbs.; 43 weeks, 700 lbs.; 49 weeks, 800 lbs.; 55 weeks, 900 lbs.; 62 weeks 1,007 lbs., and at 2 years, 8 months, 1,726 lbs.

As to butchers' meat we find that an ordinary cow fattening on pasture gives an average of from 450 to 600 lbs. of butchers' meat, and from 60 to 100 lbs. of tallow. The difference between live weight and butchers' meat, clean, is 55 per cent.; not counting tallow, head, hide, etc.

Calves ranging from one week old eighty-one pounds, to eight weeks old 175 pounds, averaging from 57 to 64.5 per cent. of butchers' meat, net.

They have in East Friesland a herd book, but the peculiarity of that association is that not every animal whose parents are inserted in the herd book will also find a place with them. No. When a person makes application of entry, the inspector of the district is sent out there to see if the applicant has all the peculiarities belonging to the East Friesians well developed. Not a bad idea. We could learn something of these people yet.

I am myself no breeder of pure-bred cattle, although I have always had a registered sire. Lately I have used a Friesian bull from my neighbor, Mr. Everest, of Ridgemere Farm, and I am highly pleased with the offsprings. They are mostly all after the sire.

When writing this it was only my intention to draw the attention of your readers to this particular breed of cattle of which I have read in American and Canadian papers, that they give more milk than the Jersey, Ayrshire, etc., but not so much butter fat, which may be true or not. Now, a dairy man does not want only butter or cheese, but also to raise calves.

You know skim-milk is skim-milk all over the world, and when feeding a calf with skim-milk, which is better for the calf—one quart or two quarts? If you do not know it, ask the calf.

Clydesdales—Our Scottish Letter.

April has been a busy month amongst Clydesdale breeders. The chief events have been the Seaham Harbour, Keir, Kilmarnock and Hartwood sales; and the shows at Stranraer, Kilmarnock, Maryhill, Colinsburg and Ayr. The general results of all these have been satisfactory, and, on the whole, there is every cause for congratulation that matters Clydesdale are in so comforting a condition.

Some of the more notable prices realized at the sales may be commented upon. Gladys, a four-year-old mare, by Castlereagh, drew £210 at the Seaham sale. Rowan, a five years old, by the same sire, drew £336. She was apparently popular in the north of England, and was placed fifth in the brood mare class at Ayr. Aunt Bessie 8676, of the same age, and by the same sire, made £204 15s. The three-year-old filly, Molly, by Ardnacraig, drew £168. The Seaham Harbour stud is identified with the name of the great horse Castlereagh, and it is interesting to look at the prices made by his produce at the sale. Three brood mares made an average price of £250 5s. each. One three-year-old filly made £94 10s. One three-year-old stallion made £273, and two two-year-old fillies made £70 17s. 6d. each.

At the Keir sale the stock realized very good prices, and the sale was undoubtedly a success. Ten brood mares made an average of £79 16s. each, the highest price being £108 3s. for the thirteen-year-old daughter of Darnley named Darling of Easterhouse 5946, and the lowest £53 11s. for the seventeen-year-old mare Keir Kate IV. (558). Three three-year-old fillies made the splendid average of £152 5s. each. Four two-year-old fillies made £91 17s. 6d. each. Five yearling fillies drew £43 1s. each. The grand, big, well-colored four-year-old stallion Brooklyn 6547, drew no less than £735, at which price he became the property of Mr. Gilmour, of Monttrave.

It was at the Duke of Portland's sale, however, that the highest prices were secured, and the best average obtained. Eighteen females of all ages made an average price of £126 18s. 8d. each. The nine-year-old mare Rosewater 5702 drew £128 2s. The eight-year-old Princess Alice 6626 made £210, Loyalty 6627, of the same age and yield, made £297 3s. She is by Lord

Erskine. Alvira 8919, also of the same age, but also yeld, made £72 9s. Dagmar 8980, seven years old, made £315. Myrtle 7733, made £176 8s. Elaine 7752, a blemished, made £73 10s. The four year-old mare Princess, a daughter of Princess Alice, made £159 12s. Collennan, a four-year-old, by Prince of Wales, drew £189. A two-year-old filly, by Macaulay, out of Loyalty, drew £105, and another of the same age, by St. Blaise, out of Princess Alice, made £107 2s.

At the Hartwood sale the well-known four-year-old mare Sweetbriar, by Macgregor, made £420, at which price she became the property of Mr. David Mitchell, of Millfield. There are many of the progeny of Macgregor in Canada, and it will, therefore, be of some interest to mention that at these sales six brood mares, got by this famous sire, the youngest four and the oldest eight, were publicly sold, and realized an average price of £211 4s. 6d., perhaps the best figure ever reached for a like number of the same progeny of any draught stallion in the world. These mares were Princess Alice, Alvira, Dagmar, Myrtle, Elaine and Sweetbriar.

At Kilmarnock Show there was a most interesting exhibition of all classes of stock, and the blood of the celebrated Darnley showed itself to be well-nigh invincible. An exciting contest took place between two of his sons, Flashwood and Eastfield Stamp, and his grandson Prince of Kyle for a £25 cup, and after a keen contest between the old horse Flashwood, own brother to Macgregor, and the handsome and gay young horse Prince of Kyle, own brother to Prince of Albion, victory was declared for the former. He is altogether perhaps the grandest draught horse at present living in Great Britain. In the competitions for prizes for groups of five yearlings got by one sire, Macgregor, for the sixth year in succession, was first, a new sire, Prince Gallant 6176, was second, and Prince Lawrence third. Prince Lawrence was first for the group of five two-year-olds, and Lord Ailsa second. Both a Kilmarnock and Ayr Mr. George Alston's grand mare Vanora, by Darnley, was first in the brood mare class, and her first foal, a yearling colt, by Prince of Kyle, was second at Kilmarnock, and third at Ayr. He is a horse of very great promise. Mr. David Mitchell's roan mare, Sunray, was second brood mare both at Kilmarnock, and Maryhill. She is beginning to show traces of age and wear. Lord Polwarth was third at Kilmarnock with a fine young mare Comfort, four years old, which was first both at Edinburgh and Kirkcudbright when a yearling. His Lordship is founding and building up a very fine stud at Mertown, so long famed for breeding Border Leicester sheep.

Mr. Sinclair Scott's famous stud is showing well at the exhibitions. His fine brood mare, Scottish Marchioness, one of the most handsome mares we have, was first at Kilmarnock and third at Ayr. His Scottish Rose was first as yeld mare, and his, up to date, invincible Scottish Snowdrop, three years old, was also first in her class at both shows. Mr. John Watson, of Earnock, one of our great Lanarkshire coalmasters, is this season showing three noble two-year-old fillies. For these he was respectively first and second both at Kilmarnock and Ayr,

with Lady Louisa, a very grand big roan, by Prince of Wales, out of a Darnley mare, and a richly colored filly with splendid action, got by Prince Gallant, and second at Maryhill with a perfect beauty, bred on the same lines as Lady Louisa. This last was bred at Earnock, and is, perhaps, the best one of the three. Her dam, Rosie of Earnock, and Lady Louisa were both bred by Mr. Robert Cochrane, Portencallie, Stranraer.

The first yearling filly at Kilmarnock was Balmedie Enchantress. The first at Maryhill was a very promising youngster by Excelsior, which got first at Stranraer and third at Kilmarnock (and is now owned by Mr. D. Mitchell), and the first at Ayr, Lillie Langtry, was bred and owned by the Earl of Galloway, K. T., and was got by the celebrated Flashwood. She is a grand one and will take some thrashing. All three it is worth noting are by sons of Darnley.

There was only an average show of three-year-old stallions at Kilmarnock, but the display of the same class at Ayr was uncommonly good. Mr. Peter Crawford's Williamwood, by St. Gatieu, a horse which Mr. Beith took to Canada, was first. Mr. Taylor's Rosedale, by the Macle-

draught horse. The colt that beat him at Ayr was also first at the Stranraer Show. He is owned by Mr. James A. Wallace, Claycrop, Kinkinner, and was got by Gregor Macgregor, out of a Darnley mare. He is a colt of much substance, with good feet and legs, and a splendid top.

At Colinsburgh, in Fifeshire, the representatives of the famous Montrave Stud were successful in taking many prizes, but as the best of them will be seen at Glasgow next week nothing more need be said about them now.

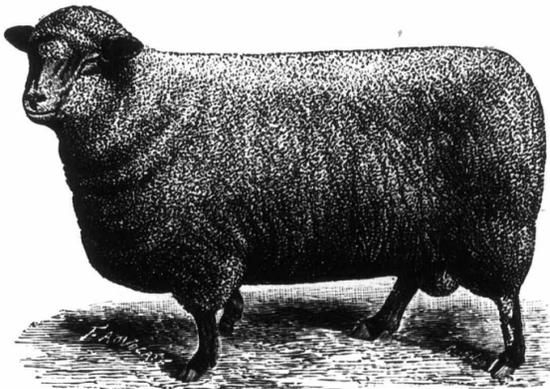
SCOTLAND YET.

Mr. David H. Dale's Southdowns.

A trifle over three miles south from London the above proprietor has been breeding Southdown sheep in a quiet way for a number of years. The farm is a rich, deep loam, unexcelled for the growth of grain or grass, the land being easily worked, and yet retentive enough not to leach, and, therefore, calculated to hold all the manure that is applied. On this land cattle or sheep feed fast, as it produces that good, thick bottom grass without which sheep will not thrive. Last season Mr. Dale made two importations of Southdowns. The first in June, which he selected himself, was composed of the ram lamb which won second prize at the Royal Show held at Plymouth, and bred by Mr. Wm. Toop, Chichester. From Mr. J. J. Coleman's celebrated flock he selected a beautiful lot of shearling ewes, which for size and quality are very difficult to excel. They are also of the choicest breeding, and are sired by Penfolds No. 14, which was got by the winner at the Bath and West of England show in 1885. A number of the dams of these ewes are sired by Kilburn, first prize at the Royal Show at Kilburn as a two-year-old. Mr. Coleman's flock has been among the most successful in prize-winning of late years. Last season he won the championship for ram, 1st for aged ram, and 1st for pen of shearling ewes at the Royal Show. A selection

of choice shearling ewes from the well-known flock of Mr. George Jonas, which are chiefly the get of rams from the Webb and Sands flocks. Mr. Jonas' flock has been drawn upon to supply rams to head prominent flocks throughout the United Kingdom. Included in the first importation were a remarkably nice lot from the flock of Mr. Garrett Taylor. The second importation was all from the celebrated Brabraham flock of Mr. H. Webb, whose sheep are not surpassed in character and size by those of any flock in England. These were selected by Mr. Dale's orders to be purchased at the dispersion sale held last summer, which afforded a good chance for an extra choice. The shearling ram selected to be placed at the head of the flock is a grand specimen of the breed. He is of great length, with well let down quarters, good back and loin, and exceptionally good form and quality. To him a majority of the ewes were bred, and the excellent quality of the lambs is a proof of the wisdom of the choice of this ram. The ewes chosen at this sale to accompany the above ram were of the grand type for which the Brabraham flock is noted.

Carbolized plaster, is land plaster—gypsum—mixed with carbolic acid. Use one pint of the crude acid to a bushel of plaster. Mix well together and put it through a fine sieve. Dust on the cabbage plant beds early in the morning to make the cabbage flea jump.



A SOUTHDOWN.
[Taken from an English drawing.]

lan, was second, and Mr. William Montgomery's Patrician, by Prince of Wales, was third. Another son of Prince of Wales named Prince Romeo, owned by Mr. William Hood, was fourth. All four were choice animals. Mr. James Kilpatrick was first in the two-year-old class both at Kilmarnock and Ayr with a horse of great style and substance, the Royal Prince, also by Prince of Wales. This is a horse that is likely to take a lot of consideration before he can be beaten. The second horse at Kilmarnock was the Prince of Albion colt Rosemount, owned by the Messrs. McAlister; and the second at Ayr, the Messrs. Wilsons' level, good horse, Royal Stuart, by Lord Blackburn, a son of Macgregor. Mr. James Johnston's big colt William the Conqueror, that was first at Maryhill, has greatly improved since the Glasgow Stallion Show, and Mr. Walter S. Park's Gallant Poteath that was second there and third at Ayr is a horse with first rate forelegs and forefeet, and got by Top Gallant. The sensation of the season so far is the colt bred by Mr. Park, and got by Prince Gallant, out of the dam of Lord Erskine. He was first at Kilmarnock and Maryhill, and second at Ayr, and has been sold for £1,300 cash. He is a most handsome, sweet horse of great style, and up to all the size that anyone wants in a

The Massey-Harris Amalgamation.

Knowing that the amalgamation of the two extensive implement manufactories of A. Harris, Son & Co. (limited), of Brantford, and the Massey Manufacturing Co., of Toronto, had awakened a great deal of interest amongst our readers, we took the trouble to call upon the principals in order to satisfy ourselves as to the reasons for the amalgamation, as well as the probable results as far as the farming community is concerned. The wedlock of two such gigantic interests could hardly fail to raise comment, favorable and unfavorable, and in some quarters much political capital has been sought to be made out of it. The facts are that a new company, composed mainly of the present members of the Massey and Harris firms, has been formed to take over the entire business and equipment of the two factories, not only in Canada, but the world over. This has been brought about for the benefit of all parties concerned, and chiefly for the good of the implement trade generally. The system of selling implements through local agencies on commission seems to have brought upon the trade many evils that could not be remedied while these two great firms were antagonistic to each other. Many attempts had been made, only to fail; and when we consider that each firm has upwards of three hundred local agents in Ontario alone, canvassing every township and every concession, besides about forty general agents, it is easy to understand some of the difficulties that have surrounded the business. In many cases farmers who could ill afford to buy expensive machines, or whose farms were not ready for them, have been overinduced by the agents, and have given orders from which they would afterwards gladly have been released. It is not for the good of the community that this should be so, nor that the purchase of expensive implements should be made too easy by the extended credits that are in vogue.

No trader in the country gets paid so promptly for his wares as the farmer; virtually he sells everything for cash, and except under special circumstances he should not want extended time to pay for anything he has to buy. But we are credibly informed by those engaged in the business that many sales are made on three yearly payments, and sometimes even longer than this. Such a system cannot prove otherwise than pernicious alike to seller and buyer. To the seller, because he cannot afford to sell on such extended credit; to the buyer, because if time were not given he would often not be persuaded to purchase at all.

If this and much more that is now wrong and which they promise to make right through the consolidation of their businesses can be remedied by Messrs. Massey & Harris, the new company will prove a great boon to the entire community. These gentlemen seem very much in earnest in the matter, and disclaim any intention of gobbling up or crowding out other firms. The new company assures us that they intend to ameliorate and lessen some at least of the glaring irregularities in the trade.

The new company expect that they will, no doubt, be able to effect great savings in management, production and distribution of their goods, and it would only be fair that the customers should get some of the benefit of this. There is an apparent need for one strong firm in the manufacture of mowers, reapers,

rakes and self-binders. The new company state that they are starting the concern with abundant capital, not only for the prosecution of a vigorous and widening home trade, but also for an energetic extension of their foreign business, which is already of large proportions. Both firms are engaged extensively in this branch of the business, and by manufacturing both lines of implements, as at present, the new concern expects to make the name of Canada a household word in every grain-growing country in the world.

Cattle Improvement.

[Read by Geo. H. Healey before Virden Farmers' Club, Tuesday, March 24th.]

The work of improving our cattle, and the best means of attaining that end is of great import. The improvement of the land, to a large extent, must go hand in hand with the improvement of the stock. It is only by keeping the very best that we can hope or expect to obtain, financially speaking, satisfactory results. Improvement in the methods of grain-growing and other branches of farming is important indeed, but I think less so than improvement in stock raising, as the former may be brought to a state of great perfection so far as methods are concerned, and yet the final end be the impoverishment of the soil. But improvement in stock keeping will result in a gain to the pocket as well as an increase in the fertility. Who in his senses, can have failed to see the need for improvement in the lean, bony body of the scrub which refuses to take on flesh? We see it in the huge heads of the pigs that plough up the farm yard free of charge, and in almost every flock of poultry. It is the great concern of agricultural writers in Great Britain, where the choicest of the choice are found, that improvement is not more universal. I have, during my short career as a farmer, been told in a sneering way that when I have farmed as long as they I will probably know something about it. True, I have already found out that what they have been all their lives learning was practiced a score or more years ago elsewhere. It is, I think, this repugnance to what they call "book larnin'" that retards a more energetic advance among so many in our live stock industry. Everything they cannot comprehend they set down as "bosh", whereas in reality the more scientific, generally more truthful, are naturally a little more technical. There is no doubt that in the conflict between brains and muscle for supremacy, brains will most assuredly win. Now, with a view to improvement of our stock, it is not for a moment to be supposed that the use of a pure-bred sire will fill the bill. We must make our animal grow from the first to do this. We must understand how to feed intelligently. It is not necessary in this paper to go into the question of feeding, but it must be distinctly understood that this is essential to success. By breeding only good animals we get better returns in every way. It has been demonstrated scores of times that well-bred cattle are able to lay on far more flesh with the same amount of feed than a scrub can. Take the well-bred beast with his sleek skin, fine and yielding to the touch, and the quiet kind eye, all indicating a good, easy feeder; he will lie still when you go up to his stall to speak to him. Contrast him with the razor-backed beast that is continually poking round every minute of its life looking for something to eat, never satisfied, never at rest, coat always rough, skin as tight as a drum; even when well fed it will not weigh at three

years with a well-bred beast at two. How is it such a state of things exists? Some say, "I am too poor to buy a pure-bred bull." If you are poor you have all the more need of improving your herds, and increasing your returns. If you are rich you will add to your wealth by the same methods. Others again are too penurious to pay for the service of a good bull. The writer of this paper was on one occasion told by a farmer (heaven save the mark!) that he was an impostor, because he had the effrontery to fix the price of his pure-bred sires a little above the one usually charged for the average animated scare-crow in general use. It seems strange that those who are loudest in their denunciation of pure-bred sires are the first to try and steal his services. From my own observation I think we can hope but for little improvement from the present generation; so many are quite content to go on in the old line, the desirable qualifications being their ability to live on a meal of wheat straw for breakfast and fresh air for supper. Some men are prone to measure the worth of the breed by its capability to stand this starving process, and because scrubs can better endure a living death than any other class of cattle, then scrubs are just the breed. It is not for a moment to be supposed that I class all under the above head. I have particularly noticed that those farmers who to my knowledge are most anxious to improve their stock are to be found at our farmers' meetings, desirous, like myself, to listen to the advice and benefit by the experience of others, mutually assisting in trying to place the profession of agriculture in Dennis in the front rank.

As to what breed of bulls to use, depends, I think, principally on the predilection of the operator. Volumes have been, and might still be, written on the qualifications of the various breeds of cattle; but much as we might desire to use a particular breed, we may have to stifle those desires through the absence of any specimens of its class. Under such circumstances we must fall back on the breed or breeds, individuals of which are to be found in our respective districts. Durham or Shorthorn bulls, I think, are in use everywhere. They possess wonderful ability to maintain and stamp their characteristics by reproduction. The very fact of Durhams being three different colors, viz., red, white and roan, shows that the color standard has been sacrificed in order to obtain a perfect animal. This was one great aid in breeders' favor in improving this breed. Had they bred solely to a color standard they would likely never have attained the perfection they now have. Roan, however, is the favorite color in England, red in the U. S., while all three are found in Canada.

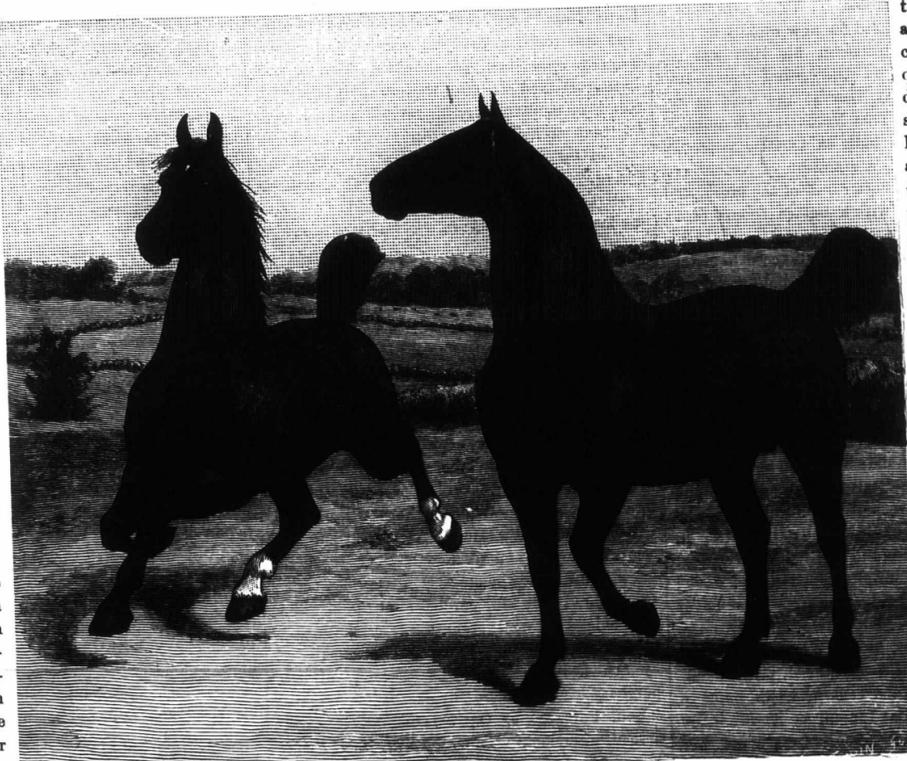
Another breed I cannot pass without notice is the Aberdeen-Angus; they are simply "beef from the heel." They are a hardy race of cattle, fine to the touch, and grand feeders. To my mind there is no doubt that these two breeds will ultimately become the backbone of the cattle raiser. From repeated trials the cross either way between Durhams and Angus simply "beats creation," from the ease with which they lay on flesh, and their ability to adapt themselves to the production of milk in the hands of judicious managers.

[TO BE CONTINUED.]

The farmer who is to day without a garden—a well stocked fruit and vegetable garden—is indeed behind the times, and lacking in appreciation of both his own and his family's best interests.

French Coachers.

Our illustration for this issue represents the popular French Coacher, which has gained many friends, especially throughout the West, where numbers have been brought in of late years. Mr. W. L. Ellwood, for whom the accompanying engraving was made from specimens of his stud, has been identified with this popular breed since its first inception, and by the numerous importations brought in through this medium the great west is indebted for many grand specimens of the breed. Canadians have purchased Percherons freely in the past, but only a few French Coachers have found their way on to Canadian soil, and there are numbers of our horsemen that have never yet seen a good specimen of this sort. The French Coacher has all the essentials for popularity. He has sufficient size to cross with smaller mares, handsome conformation, attractive action, and quality in a remarkably high degree. It is now a pretty well-established fact that this horse is proving a grand success when mated with mares of trotting blood, and long prices have been paid for half-breds, as they are just the sort that are in demand for carriage purposes, the youngsters of this class displaying much the same action as the pure-bred French Coacher, which more nearly approaches the English Hackney in type than the Cleveland or Yorkshire Coacher.



FRENCH COACHERS, THE PROPERTY OF W. L. ELLWOOD, DEKALB, ILL.

Improved Yorkshires Again.

BY WILLIAM DAVIES.

We have felt sure that from the number of Yorkshire boars that have been circulated through the country their mark would be seen in a very pronounced manner on the fat hog market this spring and summer. Our prognosis is correct, and we are greatly pleased to find a good share of half-bred Yorkshires among those we are taking in at our packing house. Last week we took in a whole carload, numbering 150, everyone of them white, and having the characteristics we have described as desirable in the bacon curers' pig. They weigh about 170 pounds each, they were moderate in bone, had neat heads, were a good length, and when hung up by the heels showed a carcass full of flesh, with about an inch of fat from head to tail. We are greatly pleased with the above, as it justifies the recommendation to farmers to cross their sows with the Improved Large Yorkshire

boars. To show our faith by our works, we have bought from a breeder a number of young Yorkshires, which we are offering to farmers at very low prices.

We have seen a recommendation in the press to farmers to rush their hogs to market, as lower prices are expected. We do not look for any material advance on present figures, though this season will vary from former if prices are not higher in July and August than now. But while we have pen in hand we would urge farmers to have them ready before 1st September, as we look for a sharp decline about that time.

Chatty Letter from the States.

Mr. Richard Trewen, in the May number of the Fortnightly Review, has an interesting article on the transatlantic cattle trade. He takes the ground that American store cattle should be admitted free to England, in order to give British farmers cheaper stores. His argu-

Chicago hog receipts for the year so far show a million increase, though for two or three months there were about as many 100 to 140-lb. pigs as hogs. Prices now are about 25 to 70 cents higher than a year ago.

Sheep sold very high awhile ago. The 115 to 172 lb. shorn western-fed sheep sold at \$5.70 to \$5.90, and woolled westerns \$6.00 to \$6.30. Lately these prices have been reduced fully fifty cents per 100 pounds.

Late advices from foreign markets indicate a better outlet for American and Canadian live stock. The export movement is vastly smaller than a year ago, but then it was simply erroneous and resulted in glutting the British markets as they had never been glutted before. For instance, the exports for the week ended May 9th from this continent were 6,263 cattle

and 19,495 quarters of beef, against 16,118 cattle and 25,187 quarters of beef during the corresponding week last year. Prices a year ago broke to nine cents per pound for cattle, estimated dead weight, while lately fourteen cents was paid. The cattle exporters are much more conservative than last year, and are not doing business simply to enrich the ship owners. Exporters have lately been paying \$5.50 to \$6.20 for steers, and \$4.00 to \$4.50 for fat bulls and stags. Export cattle in Chicago are costing \$1.00 per 100 pounds more than a year ago.

Freight rates are about \$10.00 per head less, and as prices abroad are better, there is some margin for shippers, though it is not large enough to excite them.

Canada has just secured an important concession from France. The French Government has been for some time refusing to admit hams and bacon to France, because goods from the United States of this class were prohibited. Sir Charles Tupper, the Canadian High Commissioner, made a friendly protest to the French Government, pointing out that the Canadian herds are absolutely free from disease. As proof of his contention, Sir Charles submitted to the authorities at Paris samples of Canadian hog products which the experts declared to be absolutely free from taint, and superior to the United States goods of similar grade. As a result, the French authorities have decided to admit Canadian hog products, and some consignments have been already admitted. Similar steps are now being taken to induce other European countries which include Canadian hog products in the prohibition against American goods, to grant similar concessions to Canadian pork.—[Chicago Farmer's Review.]

ment that a few years of American free stores would put British farmers in position where they could be entirely independent of American cattle, is likely to be regarded by Mr. Chaplin's followers as a case of special pleading. Cattle buyers and slaughterers have resisted the advancing tendency in prices with considerable success. Among the most effective methods employed were the wholesale purchase through agents of cattle on the southwestern ranges, and the contracting of distillery and stable-fed cattle before they reached the great market centers to be competed for by the general trade. There is no surer sign of an advancing tendency in prices than the appearance of market buyers at the sheds or pastures of the producers. Cattle marketing this year will be nothing like as heavy as last year. The first half of May at Chicago shows a loss of over 50,000 cattle from the same time last year, and the first four and a-half months show over 100,000 decrease.

Canadian Studs, Herds and Flocks.**BROCKHOLME STOCK FARM.**

The property of Mr. R. S. Stevenson is prettily situated half a mile from the village of Ancaster. Here Mr. Stevenson, whose name is well known to Holstein breeders, has been quietly engaged during the last few years in getting together a choice collection of the black and whites. Commencing in 1866, by the purchase of a bull and three imported heifers from the herd of B. B. Lord & Son, Sinclairville, N. Y., Mr. Stevenson determined, before investing too heavily, to give the breed a thorough test for a few years, the result being that he made up his mind that they were the cattle best suited to the needs of the general farmer. Having come to this decision he acted on it with characteristic promptness, by paying a visit to the celebrated herd of Smith, Powell & Lamb, Syracuse, N. Y., in search of a highly bred bull to head his now rapidly increasing herd. The outcome of his visit was the purchase, in 1889, of the grand young bull Netherland Romulus, now at the head of the Brockholme herd. That Netherland Romulus is one of the best bred bulls in Ontario is proved by the fact that he is a grandson of Netherland Prince, the greatest butter bull of the breed, and also of Albino 2nd, with a butter record of 25 lbs. 13½ oz. in one week, while his dam Fatinitza 2nd (171), is in the Advanced Registry. Weighing 2,100 pounds, he has both milk and beef points strongly developed, while his deep yellow skin is indicative of the butter producing qualities that are inherent in his family. Among the females, we were particularly taken with Mr. Stevenson's latest purchases, viz., three beautiful cows imported by T. G. Yeomans & Son, of Wallworth, N. Y. These cows, which were added to the Brockholme herd last summer, are all in the Advanced Registry, having made the following records respectively:—Ideal (8691), Adv. Reg. (36), 14 lbs. 1½ oz. unsalted butter in 7 days, as a two-year-old; Patsy (970), Adv. Reg. (28), 19 lbs. ½ oz. unsalted butter in 7 days; Modest Girl (10134), Adv. Reg. (453), has never been tested for butter, but was admitted to the registry on her milk test. While among the cows from B. B. Lord & Son's herd, Mr. Stevenson pointed out Johanna Tensen, a half sister to Smith Bros.' Cornelia Tensen, as having made 72 pounds of milk a day on grass alone, her dam, Catherine Tensen, a daughter of the celebrated Neptune Jr., having a record of 60 pounds as a three-year-old. While looking through the young stock we were very much struck with the uniform excellence of the calves got by Netherland Romulus, all being apparently cast in the same mould; and we were told that this was noticeable, not only among his produce from pure-bred cows, but also among those out of grade dams. In addition to the calves referred to of his own breeding, Mr. Stevenson has now on hand a very promising pair of bull calves 7 to 10 months old, sired by Aaggie 3rd's Prince Adv. Reg. No. 46 (a bull lately sold for the sum of \$1,000), and out of Modest Girl and Ideal respectively. In addition to the Holsteins at Brockholme, the foundation of a herd of Imp. Large Yorkshires has lately been laid by the purchase of a choice pair of sows. One of these was, at the time of our visit, suckling a very fine litter from the imported boar Holywell Wonder II., while the other, an imported sow, is also in pig to an imported boar.

WALMER LODGE.

Mr. A. D. Roberts, whose card will be found in our advertising columns, has been breeding Berkshires for the past three years, and to-day appears to be more firmly convinced than ever that among hogs the Berkshire is "the breed that beats the record." Among Mr. Roberts' latest purchases is the extra choice sow Fairview Lass, bred by Geo. Green, Fairview, Ont., and winner of 1st prize at both the Industrial Fair, Toronto, and the Grand Central Fair, Hamilton. Sired by Rising Star (imp.) (1307), and out of Lady Bell (imp.) (1270), Fairview Lass is a very smooth, even sow, and to judge by the litter of lusty youngsters that she was suckling at the time of our visit, should prove a very valuable brood sow. The stock boar in use at present at Walmer Lodge is Sir Allin (1272), bred by W. W. Scott, Moorefield, Ontario, and sired by Louis Napoleon (715); and here we have a pig that does credit to both his breeder and owner, lengthy from ham to shoulder, with a well sprung rib, and standing well on short legs, with plenty of bone to carry his carcass, and a beautiful coat of hair. Sir Allin struck us as being one of the best Berkshires we have seen this spring. Already a winner at local shows, we predict that should his owner enter the arena of the larger shows Sir Allin will be heard of again.

WOODLAWN FARM.

Most of our readers who are interested in Shorthorn cattle are familiar with the name of Mr. Wm. Templer, proprietor of the Woodlawn herd. Owing to the fact that his herd was very much reduced in size by his sale a couple of years ago, Mr. Templer has not of late been as much before the public as formerly, but that he is still an enthusiastic lover of the red, white and roan, we had ample proof during our stay at Woodlawn, and we venture to prophesy that before long the Woodlawn Shorthorns will be doing battle in the show ring. At present the herd comprises a bull and six females. Of these the latest addition to the stock is a very neat dark red heifer, Pansy 3rd, purchased at the late Bow Park sale, sired by Ingram, a son of the famous prize-winner Ingram's Chief, and out of Pansy, by 5th Earl of Goodness, while the bull is a purchase from the herd of Messrs. Jas. Graham & Son, Port Perry, Ont. Invader is a thick-fleshed, useful looking animal, his sire being Prince Victor 5th, bred at Bow Park, and a son of the famous 4th Duke of Clarence, and his dam, Kate Henry, bred by the well-known Kentucky breeder, Leslie Coombs.

CASTLE HILL FARM

lies about three miles south of Ancaster village, and here we find one of the oldest established herds of Improved Large Yorkshire pigs in Canada, the proprietors, Messrs. Jas. Field & Son, having made their first purchases five years ago from the first importation made by Dr. J. Y. Ormsby, of Springfield-on-the-Credit. Since then they have been gradually adding to their stock which now consists of five brood sows and three stock boars, two of the latter being imported, viz., Holywell Wonder II. (3), a very strong boned hog, with a capital coat of hair, imported from Sanders Spencer's herd, and sired by Britannia Wonder (301), a famous prize-winner of Lord Ellesmere's. Holywell Wonder II. has been a prize-winner at the Industrial Fair, Toronto, since imported. The other imported boar, Mr. Field's latest purchase, is a

smooth, even pig, with good hams, imported from the herd of C. E. Duckering by Messrs. Bunbury & Jackson, and sired by Donovan. Among the sows we noticed, particularly, Mischief (178), a fine, lengthy sow, purchased from the late firm of Ormsby & Chapman, and out of imported Marjorei, by the Spencer boar Holywell Giant XV. This is a very lengthy, breedy looking sow, and to judge by her stock is a grand breeder, the third boar in use at Castle Hill being out of her and by Holywell Wonder II., and a very promising pig he is, lengthy and deep, with a nice coat of hair, good bone, and a beautiful head. He is a credit to his breeder, and in our opinion will be in time a very hard pig to beat. Another useful sow, although not quite so lengthy as we would like, is Fanny, by the Squire (2), a full brother to the champion boar Pat, and out of Jeannette (5) by the famous prize-winner Holywell Victor (imp.) (1) (517). Among the young stock we noticed a few neat, smooth sows got by Imp. Holywell Wonder II., and now about ten months old. These we were told were for sale, and would be bred if desired by the purchaser to the imported Duckering boar. Altogether Messrs. Field's herd is well worthy of notice, and we would recommend intending purchasers to pay it a visit.

JERSEYVILLE STOCK FARM.

Half a mile from Jerseyville, eight miles from Ancaster, and nine from Brantford, on the road between the two last named places, is the stock farm of Mr. A. M. Vansicle, one of the pioneer trotting horse men of Ancaster township. At present Mr. Vansicle's stud consists of some four or five choicely bred standard mares, headed by Mambrino Rattler, *alias* Crown Prince (12447), sired by Mambrino Patchen, and out of a dam by Telegraph, sire of the dam of Rarus 2.13½, 2nd dam by Prince Richard, thoroughbred. Mambrino Rattler can justly claim the bluest of blood in his pedigree, and its value will be better understood when we mention that five of the performers in 2.20 and better, sired by the great Geo. Wilkes, are out of mares by Mambrino Patchen. A beautiful glossy black, 16 hands high, Mambrino Rattler shows very strongly the Morgan and thoroughbred blood he receives on his dam's side, having the clean cut head and neck and gamy appearance so characteristic of the breed, while his short cannons, broad, flat hocks, and wonderfully heavy muscles show him to be a horse of great substance. Owing to the bad state of the roads we did not see him in harness, but Mr. Vansicle tells us that he is a very fine mover, and although never handled for speed himself, his colts are extra promising, one of them, Bellflower, having trotted in 2.25 on the Woodbine track. In order to encourage the use of well-bred sires, this horse stands at the very low fee of \$15, and thus an opportunity is offered, not met with every day, of obtaining Mambrino Patchen blood at a nominal cost. Passing on to the mares Mr. Vansicle next showed us Lydia, a beautiful bay mare, bred at Harrodsburg, Ky., and got by Shelby Chief, a son of Alexander's Abdallah, and out of a dam by Alexander's Edwin Forest. Unfortunately this mare has proved not in foal this year, but in an adjoining box we found a fine yearling colt from her, and got by Dillard Wilkes, a son of Red Wilkes, whose service fee last year was \$500. Among the other trotting bred matrons is the standard mare Minnie Scott, out of Lydia,

by Winfield Scott, and now stinted to Mambrino Rattler, and Tony Maid, by Mambrino Rattler and out of Lydia. This is a very breedy, racy looking mare, now four years old and heavy in foal to Superior, to whose cover she last year dropped a fine black filly. A full brother to this mare is the bay stallion Red Bird, now rising five years old, a rangy, upstanding fellow, with a capital set of legs. Although never trained, this horse shows a wonderfully good gait, and Mr. Vansicle expects him to make a record of 2.30 or better before long. To show how much the Mambrino Patchen blood is valued by our neighbors across the line, we might mention that a full brother to Red Bird, Sensation, owned by Messrs. J. A. & H. F. Stenabaugh, of Jerseyville, has made two seasons in Michigan at \$20 service fee. His services, however, we are glad to hear, will this year be at the disposal of Canadian breeders. Mr. Vansicle's advertisement will be found in our columns, and parties having mares suitable to breed to road horses should write him for his stallion circular, as we can guarantee them the best of treatment at Mr. Vansicle's hands.

TWO WELL-BRED SIRE.

Three miles from Ancaster village is the town of Dundas, and here we found another ardent admirer of trotting bred horses in the person of Mr. Willoughby Cowper, one of the leading citizens of this thriving little town. Mr. Cowper places with us this month his advertisement of trotting stallions, and a glance at their pedigrees will show them to be royally bred. Leotard (7742), being by Walsingham, a son of Geo. Wilkes, and out of Ladoga, by Mambrino Patchen, a full sister to Mambrino Ring, 2nd dam by Edwin Forest. Leotard stands 15.2½ hands high, and weighs 1,050 pounds, being in every sense a big little horse, beautifully proportioned, with a marvellous wealth of muscle, and a finished appearance all over that instantly takes the eye. Issachar (5145), by Princeps, sire of Trinket 2.14, and out of Agnes, by Mambrino Star, dam of Star Wilkes, the sire of three in the 2.30 list, is a rich dark bay horse, standing 16½ hands high, showing tremendous size and muscular development combined. When we consider that Princeps has six performers in the 20 list, and twenty-four in the 30, it will be seen that Issachar is a horse of exceptionally fine breeding. Mr. Cowper will be glad to send his stallion circular to all who desire it.

W. G. PETTIT'S SHROPSHIRE.

Commencing with the purchase of some ewes from the flock of Mr. R. J. Phin, of Hespeler, Mr. Pettit, who is well known to our readers as a Shorthorn breeder, determined last year to increase his flock by the addition of some of the best Shropshires to be obtained in Canada, and with this view he purchased from R. Miller, of Brougham, the ram lamb that won first last fall at Toronto, and also a choice pair of ewe lambs. This ram lamb, imported from the well-known flock of Mr. Wm. Thomas, and a prize-winner at several leading English shows, was used last fall with the gratifying result that seven ewes had produced and raised at the time of our visit twelve lambs, and a nice, even, well-woolled lot of lambs they were. The two ewe lambs selected by Mr. Miller from the noted Bradburne flock have done uncommonly well, having grown into a pair of shearlings that are hard to beat, one of them being, we think, the best woolled shearling

we have ever seen. The shearing ewes of Mr. Pettit's own breeding are also a very useful lot of ewes, and when bred to such a ram as now heads the flock should produce a crop of lambs that will do their breeder credit. Besides the shearing ewes, Mr. Pettit has a few nice rams, and some very choice ram lambs for sale, as will be seen by his advertisement in another column.

MR. BROWN'S VICTORIAS.

One of the first breeders of these famous American white hogs in Canada is Mr. Charles Brown, of Drumquin P. O., in the county Halton. Mr. Brown's herd is at present headed by the boar Victor, winner of second in a very large class open to Chester Whites and other large white breeds at Toronto last fall. Victor is a very large, strong-boned hog with capital hams. That he is a good stock getter we had ample proof in the litter we saw by him and out of one of Mr. Brown's registered sows. Although there are not many breeders of these pigs in Canada, they are very popular in the U. S., where they originated, and it is claimed for them that they are very early maturing and easily kept. Certainly the litter we refer to looked as if they were capital thrivers.

Besides pure-bred hogs, Mr. Brown keeps a large stock of bees, and has every year a number of hives for sale, while in his stable we saw what we did not hesitate to pronounce the prettiest trio of grade Jerseys in the county, two of them of Mr. Brown's own breeding. Mr. Brown's card advertising young pigs for sale will be found in our columns, and we would advise any of our readers who intend trying these pigs to give him a call.

Judges and Judging at Our Fairs.

BY J. JACKSON.

Among the many difficulties which fair managers and exhibitors have to contend with, the question of judges and judging is ever first. Each year yields its crop of errors and complaints. That the present system of judging is susceptible of great improvement is quite among the possibilities, not that we ever expect to attain perfection or to silence the "chronic kicker," but we do think that errors in awards at our shows might and should be reduced to a minimum. Now the question is, How can this be done? With my experience of over twenty-five years exhibiting at large and small shows, I am fully convinced that to improve our present system we must get out of the old ruts,—we must let go the line we have held so long. We must make the position of judge a responsible position, an honorable one, and, if possible, a remunerative one. His reputation must be at stake, and if he dishonors his position let him stand without a cloak to hide himself under. The picked-up committee of three must go, they have outlived their usefulness. If three distinct breeds of animals were competing in the same class there might be some excuse for having each breed represented on the committee, but not otherwise. How often have we seen men accepting the position on a committee of three when they themselves knew they were incapable, and would not on any account have accepted were they to take the responsibility of making the awards. They accept, expecting the other two are qualified, and all they expect to do is to endorse their decisions. It sometimes happens that there are three of a kind, and when they go in the ring and find a superior lot of animals before them they seem amazed at their excellence, feel quite out of their latitude, but may think they can't go wrong as they are all so good, while an experienced man would have

no difficulty in pointing out the finer points and placing the awards as they should be. These are the kind of judges (for it is only the ignorant) that are well qualified to favor a friend in the ring.

Too much care cannot be exercised in the selection of judges. Good ones are *jewels* that are not scattered over the land in profusion; indeed, they are so scarce that we should be content with one for a class.

Broken-down breeders should be avoided. The fact that a man may have had good animals by paying high prices for them, and perhaps won a number of prizes with them, if he has failed to make a success of breeding them, and on that account got left and gone out of the business, is ample proof that he is not qualified to judge for others. Sometimes a man is selected out of respect as a friend, merely to pay him a compliment; this is doing him a great injustice, exposing him to the ridicule of the public. A man may hide his good judgment, but his ignorance he cannot hide. Let a man go in a ring to judge a class of sheep, and before he has made his first award the experienced eye has detected whether he is a judge or not. Some have a sort of mania for butchers as judges. This is a great mistake; they are not what is wanted to judge breeding stock. The fully ripe animal will, in most cases, take their eye, and be preferred to a much superior one for the purposes of the breeder,—it may be all very well in a fat-stock show. Again, if there was no difficulty in securing three good men to act, does it not seem a wanton waste of material to see three able-bodied men deciding between two samples of grain, roots, fruit, or as the case may be, when one could do it equally as well in one-half the time.

At the largest shows in England, including the Royal, the general practice there is a committee of two, this is better than three; two competent men will usually agree, and if they don't, they must show their colors and call in a third man to decide between them, which seldom occurs. The next improvement on this is the one judge; he must be a man of experience, one who has been a success in some particular line, honest in purpose, full of self-confidence, one that will not be influenced by remarks from outsiders; there are just such men, and they value their reputation, and when placed in such a position they feel and know that the whole responsibility rests on them alone, and will be more careful in the discharge of their duties. The one man is more sure to put in his appearance when he has accepted the appointment, and, as a matter of economy, one has the advantage. Nearly all the large shows in the Western States have adopted the single judge, which has given general satisfaction. It would be hard to induce them to again return to the old committee of three. There is no reason why an observing man, although only a breeder of one class of cattle, may not be able to judge a number of breeds, or that another may not be competent to pass on several breeds of sheep and give general satisfaction. I have seen one man judge all the mutton breeds of sheep at a large show, and when he was done the exhibitors all seemed happy. This is not always so when the awards are made by a committee of three. With the system we now adopt of naming men we have confidence in to act as judges, I think it would be well to give the single judge a trial on the sheep, for once at least.

A Great Cattle Country.

"The recent arrival of two beef buyers from the south, one in the interest of the railway company and the other in that of a leading meat firm of Calgary, looking for fat cattle, marks an important point in the agricultural development of the Edmonton district. It is not so very many years since the beef cattle required for consumption in this region were driven from Kamloops, B. C., across the mountains by way of the Jasper pass, or from Sun river, Montana, or at a later date from Winnipeg, and quite recently from Calgary. Cattle have increased in the Edmonton district to such an extent that for the past two or three years none have been imported. There are now enough cattle here to admit of the export of a considerable surplus, and they are in good marketable condition for butchering purposes. The only question between buyers and sellers is that of price, and the difference in views, if any, is not great. That there would ever be a demand for Edmonton cattle in the ranch country of Southern Alberta and British Columbia, was never thought of five or ten years ago. In those days the attempt to raise cattle where they required to be wintered, in competition with a region in which they rustled all winter, was looked upon as ridiculous, and no doubt delayed the development of the cattle industry in the north for a long time. Experience has proved, however, that what is easiest is not always most profitable, and in recent years people in the north have been going more and more into cattle with increased faith and profit each year. The only possible drawback to the unlimited development of the industry was the possible lack of an outside market. This possibility is now seen not to exist. The domestic system under which the cattle are raised in this district admits of the production of superior animals, much more easily handled, driven, or broken to use, than the wild rangeland of the south, and, therefore, worth proportionately more per head; but the chief point of advantage is that the Edmonton stock raiser can just as easily as not have all his beef cattle in condition to fill the yearly demand for fat spring beef, which cannot be filled from the ranges, unless in exceptional cases or under exceptional circumstances. No matter how many thousands or millions of cattle may run on the southern or British Columbian ranges, the local supply of beef for two, three or four months late in winter and early in spring must come from some place where cattle have the full benefit of a healthy haystack during the storms and cold of January and February. In the Edmonton district hay is more abundant than in any other section of the Northwest; this district is the nearest hay region to the range country, and, therefore, it will have the double advantage in supplying the southern and western spring beef market as soon as its surplus of cattle is sufficiently large to ensure the necessary quantity being secured here. Instead of the market being likely to be overstocked, the greater the stock the more certain the market, for the more dependence will be placed upon it by a wider and wider circle of customers. The cattle raising industry is the one for which this region is pre-eminently suited, and the one whose produce is most certain of a ready and unlimited cash market. While the bunch grass ranges of British Columbia may be eaten out, and the Buffalo grass ranges of Southern Alberta may be

overstocked, with its deep black soil and moderately moist climate, the luxuriant vegetation of the Edmonton district of Northern Alberta will only increase its production of cattle with increase of settlement and population and cultivation."

The above, from the Edmonton Bulletin, is, so far as can be learned, a true description of the existing state of affairs, and with the advent of the railway, matters should even improve. Edmonton is without doubt a grand district for producing beef.

The Dairy.

The Net Return for Milk.

The net return per 100 lbs. of milk supplied the factory or creamery is a point that every dairy farmer should know. He should insist that full information relating thereto be furnished at the annual meeting. He should also set about ascertaining the cost of producing milk, which is especially important in the development of winter dairying. As a Canada correspondent of Hoard's Dairyman lately pointed out, he (the patron) will then be much more likely to insist that the factory and his herd are both "run right," in order to lengthen as much as possible his line of profit. Putting the six months' summer keep of the average Ontario cow on pasture at \$12.60, as ex-Governor Hoard calculated at the Woodstock dairy convention, her 2,700 lbs. of milk at say 70c. per 100 net, would return her owner \$6.30 profit. If he let her run idle all winter, that narrow profit margin would soon turn into loss. In various Western Ontario cheese factories the net returns to patrons varies as much as from 64 to 75c. Dairying must be brought down to a business basis, and the sooner the better.

A Question Box Opened.

At a New York State Farmer's Institute, Mr. John Gould, of Ohio, an experienced dairyman known to many Canadians through his writings and attendance at the Ontario Creameries' Association, presided over the question box. The principal queries, with Mr. Gould's replies, were as follows:—

"What salt would you use for butter?"

Any salt that will all dissolve and leave no sediment or scum on the top of the brine.

"Are the butter fats of all cows alike?"

Substantially so, if the same foods are given. Some breeds yield a harder butter.

"Which are the most profitable for a farmer—thoroughbred or grade cows?"

That is a question of capital and profit. With the average dairyman, I believe if the cows are graded for a purpose he will make the most money.

"Should cows be kept closely confined in stables?"

That depends. If you are going to keep cows in damp basements, you had better keep them on a hill. Would keep them in warm, dry stables which are light, with a pipe of running water in front of them. It will not injure cows to confine them—not in stanchions—125 days in winter. Tie cow with a Dutch halter, so she can lie down and go to sleep as she does in the pasture. Water in my barn stands at about 50°.

[Mr. Youmans gave at this point his experience and the results of keeping cows and watering them in the stables in winter, and said he was largely in favor of the method. He believed that cows given cold water in the stable should be kept there and not turned out in the yard.]

"Does it hurt the grain of butter to warm the cream?"

How can it, when the normal temperature of milk is 98°?

"Would you color butter?"

Yes; if the market demands it. If customers wanted green color, I would put it in.

"What do you recommend for a butter worker?"

Don't recommend any; but if you must have it, get one with a smooth roller. We want to press out the butter not chop it out.

"What kind of a churn is the best?"

Some sort of a revolving or swing churn. Concussion does it. Have the cream thin enough to give it a fluid motion.

"Can you salt butter in a churn?"

My preference is brine salting. If you cannot do that, draw off the water, then guess on an ounce of salt to the pound, which evenly distribute with a paddle or fork, and then churn it into form.

"Will diluting milk help the cream to rise and bring any more butter?"

As a rule it will. Water of 65° in summer, in winter 95°. Milk cannot stand 125° of heat without liquefying the butter fat.

"If you put water in the buttermilk will it not spoil it?"

No. Let that first drawn from the churn stand two hours in the can, and the water will substantially all come to the top and can be poured off.

"What do you consider the proper amount of water to be left in a pound of butter?"

Approximately, 12 per cent. There should be 85 per cent. of fat; the other 3 per cent. will be salt and a trace of casein, etc.

"What amount of unchurned fats in 100 lbs. of cream is admissible?"

Half a pound of butter in 100 of cream is about as near as we can skim it—the average dairyman and creamery man leave in two pounds. I believe it would be better to churn our cream a little sweeter.

"Should the milk from fresh and stripper cows be mixed for butter-making?"

The inference is that it should not be. The longer the cow has been in milk, the longer time is required to churn the cream. If you are to mix such cream, dilute the oldest milk with warm water, then mix the resulting creams.

"Would you advise young farmers, just beginning, to buy high-priced machinery and blooded stock?"

Don't buy everything you see; wait and experiment. Educate yourself up to the point. Don't buy a machine of every agent who comes along. You have got to grow into any business.

With regard to salt, we would add that it should be fine and velvety to the touch. Mr. Gould's point that cows should be "graded to a purpose" is important. A farmer should decide exactly what line of dairying he can profitably follow, then breed and feed accordingly. Whether cows can remain tied all winter without some ultimate injury to themselves or their progeny is doubtful. They must be considered as breeders as well as milk producers. We have seen them in spring so stiff and awkward that it took some time to regain their old gait. We can scarcely endorse that idea that it is just as good for them to take all their year's exercise in summer, though it is just possible they may be so educated. Time will tell. Mr. Gould should not have told his audience to "guess at" the ounce of salt to the pound of butter. There is too much haphazard guessing in the dairy business already. His advice that young dairy farmers should not recklessly run after novelties is sound. As Davy Crockett used to say, "Be sure you're right, then go ahead."

At the Cornell University Experiment Station last year, by removing the tassels as soon as they appeared four times in the season from alternate rows of corn, 50 per cent. more ears, and 50 per cent. more weight of merchantable corn were obtained from the rows so treated, without any great diminution in the weight of stalks. This is an experiment that any farmer might try for himself.

Dairy Observations.

Director Collier, of the New York State Experiment Station at Geneva, declares that the saving of one cent per day on the keep of each cow in the state would amount annually to over \$6,000,000. It will pay to study the little details.

If dairymen would devote the same energy to keeping the so-called "animal odors" out of milk that they do in trying to remove them afterwards they would be money ahead.

In plain English, "animal odor" means stable filth, or impurity of some sort. The term is a misnomer. Better drop it. Given a healthy cow pure food, pure water and pure air to breathe, how much of that vile "animal odor" will the cow put in her milk?

We have no faith in plans for improving bad butter and bad cheese after they are made. Make both right on the start. Keep the imperfections out. Under favoring conditions, the germs of taint multiply with frightful rapidity. Badness in dairy products may be "doctored up" for a time, but it will soon break out in a worse form to the permanent injury of the producer and all concerned.

Large quantities of Ontario April and early May cheese sold at 10½ cents, some lots going, we are informed, at 10½, thus verifying the prediction in the May issue of the ADVOCATE, as far as the opening of the season's business was concerned.

Three essentials required by the herd of the cheese factory patron:—(1) Abundant pasturage and supplemental fodders for droughts; (2) abundant pure water; (3) salt every day.

In a test at the Guelph Agricultural College, by Prof. Robertson, it was shown that a herd of cows gave 14½ per cent. less milk on an average without salting than with salt.

Since normal milk contains about 87 per cent. of water, no dairyman need trouble to supplement the effort of the cow in that direction. She has put in quite sufficient.

With a favorable season, Canada should this season pass the \$10,000,000 line in cheese exports.

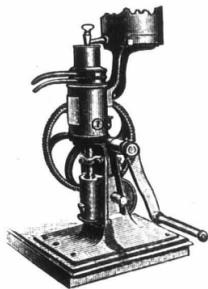
If your dairy has not paid during the past season, do not give it up in despair, but sit down and study out the reason why. Then make a fresh start.

Next to milking and caring for the milk, the most particular job on a dairy farm is bringing up the cows. In most cases it will pay to superannuate the dog and small boy. A cow does not need as much exercise as a trotting horse.

If any of our creamery or cheese factory readers have tried a plan of paying for milk on the basis of its value, as tested by the Babcock or other devices, we would like to hear the result of their experience. Send us the details of the plan. The subject is exciting interest in the dairy world, and the facts are called for.

The Hand Separator.

For private buttermakers, or those who sell cream, one of the most useful implements perfected within a recent date is the hand separator, specially adapted for dairy farmers whose herds number from 15 to 25 cows. It obviates the necessity for creamers, or tanks, deep-setting cans, much of the labor of washing, and the storing and handling of ice for summer use unless a constant supply of pure, cold water is available. As our readers are well aware the centrifugal separator takes the cream direct from the warm milk, leaving the skim-milk warm and sweet for feeding calves or pigs, or to be sold in case of a demand for that product in cities and towns. The rapid motion of the bowl which revolves some 4,000 or 5,000 times per minute, has the effect of whirling to the outside all particles of dirt or other impurities, thus leaving the cream in extra good condition. It also will do the creaming more exhaustively than can be done by the gravity (shallow pans or deep setting) process, or as the creamery men say, it will skim the milk "down to the very bones." That, however, does not improve it or make it more acceptable to the young calves, but the loss, it is claimed, can be more economically made up by substituting for the butter fat artificial foods



HAND SEPARATOR.

such as oil cake meal. It is estimated that the separator, properly run, will take out from 10 to 25 per cent. more cream than is ordinarily done in the gravity process. It is probably quite within the mark to put the loss in butter at half a pound on every 100 pounds of milk as between ordinary creaming and the work of the separator. This is a needless waste which if stopped would go far toward paying for the more efficient, though at the outset more expensive, implement in a short time, estimating butter at say 25 cents per pound. For creaming milk on a large scale of course power separators are necessary. Of the hand separators, at least two kinds have been introduced in Canada—the De Laval, an American made machine, and the "Victoria," a British machine, which is very highly spoken of. The above cut, for the use of which we are indebted to J. S. Pearce & Co., London, will afford our readers an idea of the De Laval hand separator.

We have tested the above machine and found it work very satisfactorily, size No. 2 separating as much as 270 pounds of milk in an hour. One of these has been in use by Mr. George Greaves, a dairy farmer in Oxford county, for several months, and he would under no consideration think of reverting to the old method of raising cream in cans. He manufactures butter for private customers and furnishes others with cream. Owing to its small size (it weighs about

150 pounds) this machine is commonly called a "Baby Separator." Its utility was fully demonstrated at the Wisconsin Experiment Station last winter, being found simple in construction, easy to adjust and operate, and doing perfect work. There seems to be no question but that it is well adapted to the needs of dairy farmers such as we have indicated above.

The Dairy Commissioner's Report.

We have before us the first annual report of the Dominion Dairy Commissioner, Prof. Jas. W. Robertson, and his assistant, Mr. J. C. Chapais. It is a well-printed and well-indexed volume of 184 pages, issued as an appendix to the report of the Dominion Minister of Agriculture. The creation of the office of Dairy Commissioner was one result of the formation of the Dominion Dairymen's Association at Ottawa on April 9th, 1889, an organization largely the outcome of an agitation begun in a series of public letters by Mr. W. H. Lynch, of Danville, Quebec, whose work, "Scientific Dairy Practice," gave him a wide and honorable reputation. In order to give more practical efficiency to his work, Prof. Robertson was also designated "Agriculturist" at the Central Experimental Farm, where he has to do with the conduct of experiments in dairying, live stock, husbandry, and in growing and handling foods best suited for the dairy farmer. An equally important aspect of the Commissioner's work is to watch over and develop the commercial aspect of the industry at home and abroad, in order that the best markets be secured for butter and cheese, and our reputation preserved. This report is a complete historical record of what has been done up to date, with recommendations for the future. An account, full of practical observations, is given of the Commissioner's visits to the Maritime Provinces, Manitoba, the Northwest, British Columbia and other sections, together with the more important addresses delivered, and copies of the principal bulletins issued from his office. In discussing the necessity for travelling inspectors and instructors, mention is made of the fact that the dairymen of Ontario were the first to engage the services of a travelling instructor in the person of the late lamented Prof. L. B. Arnold. Dairymen in other countries now our keen competitors are employing trained and skilled travelling instructors, some of whom have gone from our own Dominion to the strongholds of dairying in Great Britain in order to improve the quality of the products. It therefore behooves Canada to keep pace in this important matter. A uniform system of instruction for makers and patrons is, without doubt, one of the very best means to attain excellence and uniformity, whether in cheese or butter.

An important chapter is that entitled "Standards for Milk, and Legislation in Reference to Adulteration." In the opinion of the Commissioner the legitimate and commendable objects of a legal standard seem to be two:—(1) To prevent fraud by the adulteration of the liquid as given by the cows; (2) To guarantee to the unsuspecting consumer that he is receiving in the liquid which he purchases under the name of milk, a commodity at least up to a certain recognized standard of strength. The legislation dealing with supplying milk to factories for use in the manufacture of the more concentrated products, butter and cheese, should likewise have

a two-fold object, but since the nature of the latter transactions in milk is slightly different, the application of the standard cannot be quite the same as in the case of milk for towns or cities. In the latter case every transaction is a sale outright as between a milk dealer and his customer. Accordingly, where an individual offers for sale direct to householders milk which falls below the standard of quality prescribed by law, it would be held to be unmerchantable as ordinary standard milk, whether it owed its weakness to having been watered or skimmed "by a man or a cow." While Professor Robertson admits that it would be unfair to punish a man by law for keeping cows that yield poor milk, he contends that it is quite fair and even essential that a man should be prohibited from selling milk that is not of good average quality. On this point he adds:—

"The law should certainly first provide for the punishment of dishonest practices by adulteration, dilution, or removal of fat by skimming or withholding the 'strippings,' and it also should make it illegal to offer for sale without a specific description any milk that is below a standard of quality such as has been recommended by the chief analyst of the Dominion. (12.00 total solids and 3.50 fat.)"

Edgar B. Kentrick, Analyst, of Winnipeg, in a bulletin lately issued from the Inland Revenue Department, states that it is open to question whether milk samples from different parts of Canada should all be judged by one standard.

Furthermore, owing to the variability, especially of the fat percentage in milk, sometimes from causes not under the control of the dairyman, his milk might fall below the standard, which, if arbitrarily enforced, would certainly be doing injustice.

In the case of factories, owing to the natural difference in the quality of milk from different herds, or arising from different feeding and care, it seems needful that some basis should be established and applied, says the Commissioner, providing for the equitable payment for such milk according to its real value for manufacturing purposes. A value which does not wholly consist in the per cent. of solids arises from the peculiar flavor and the conditions as to quality, which also result from the treatment and feed of the cow.

After quoting the Dominion and Ontario Milk Acts, the Commissioner suggests that one or two men be designated for the Dominion, to see that these provisions are enforced.

In creameries run on the cream gathering plan, the oil-test churn seems to provide for the equitable distribution of proceeds according to the true butter-making qualities of the cream. Where the whole milk is received (as in separator factories) the Babcock apparatus, or Fjord's Controllor, will enable the factory managers to value each quantity aright. The comparative value for cheesemaking of milk containing different percentages of fat has not been yet authoritatively settled. Investigations are to be undertaken this summer along this line under the Commissioner's direction to settle that question for the guidance of cheesemakers.

In order to guard the reputation of Canadian cheese from injury by the "filled cheese abomination," which has gone to Great Britain, and that, too, through our ports, without any mark to distinguish from cheese of Canadian manufacture, the Commissioner recommends the use of a brand and registered number, such as this:—

CANADIAN
FULL CREAM CHEESE.

FACTORY No.

Such a brand would not only be on the box but upon the cheese itself.

The finest English and Scotch cheddars are still sold wholesale in many instances for four

cents per pound more than Canadian cheese, though the latter is found on the counters of the best provision shops doing duty as the highest priced English or Scotch produce. As it is hoped to place the export butter trade on a better footing ere long, from the very outset a distinctive Canadian package with such a brand as this should be used:—

CANADIAN
CREAMERY BUTTER.

FACTORY No.

There is no question that Canadian dairying can be profitably developed far beyond its present limits, and that a general awakening on the subject is now in progress is equally certain. We commend this valuable and suggestive report to the careful consideration of our readers. Some of its points will bear thorough discussion, so that in the end the best practice and the wisest counsels will prevail.

In the year 1889-90 the butter exports from Canada amounted to but \$331,958, while the value of cheese exports was nearly \$9,000,000. In 1889 Great Britain imported over \$50,000,000 worth of butter, and over \$22,000,000 worth of cheese. Canada furnished Britain with 41 per cent. of the cheese, and less than one half of one per cent. of the butter which she imports from outside countries. Rivalry for that trade is becoming keener, so that three things must be closely studied:—(1) Lowering the cost of production; (2) Producing the very best quality of products; (3) Guarding with jealous care our reputation for such when won.

Milk Testing—A Word of Caution.

The four inspectors under the Western Ontario Dairymen's Association, and many others as well, will this season use the Babcock Test, and its findings may possibly be made the basis of prosecution in cases of alleged adulteration. Now, while its accuracy when rightly used has been amply demonstrated, yet errors may be made, and they will invariably be against the patron, for the reason that while it cannot whirl out more fat than the milk contains, it may disclose less when carelessly manipulated. With the old lactoscope test for fat, it was a matter of eyesight, and the patron might readily be credited with richer milk than it actually was. In a case reported to the FARMER'S ADVOCATE, a sample of skim-milk was tested with a Babcock, and the person making the test found not a trace of fat, yet the same milk allowed to stand twelve hours in an open pan threw up quite a coating of cream, showing that the fat was there. The directions as to the use of hot water, etc., which accompany these machines should be closely followed. Prof. F. W. Woll, assistant chemist to Dr. Babcock, discoverer of the process (it is not patented), in Wisconsin University, calls attention to several points needing attention. In the first place the sulphuric acid must have a specific gravity above 1.82, that is, it must contain 90 per cent. pure acid. The vessel in which the acid is kept must be kept closed so as to prevent the acid taking up moisture and weakening it. No more acid should be poured out than is needed for the test immediately to be made. Then, the acid should never be added the milk until the test can be completed at once. Take a sample of each patron's milk as it comes to the factory, and if the test can be proceeded with at once, add the acid, mix, whirl and run through the other operations. If other work is crowding at the same time, the test bottles with the samples of

milk may be left, if necessary, even for a couple of days, and the test may be then made. The fat present in the quantity of milk taken will not change until the milk begins to mould. It does not matter if the milk thickens and sours in the test bottles if it is only shaken thoroughly before the acid is added. Prof. Woll adds that it is essential that no more heat is applied than is created by the action of the sulphuric acid on the milk. If the tubes were allowed to cool off before whirling and filling up with hot water they will have to be heated up again later on. Some of the casein would then be precipitated and rise into and directly below the column of fat, making impossible exact readings.

A Misnomer.

An article in our May issue on butter making, credited to John Ferguson, of Camlachie, was in reality written by Mr. Joseph Yuill, of Carleton Place. Several other errors have also crept in, and several changes are required. In the words in parenthesis, which read, "do not add hot water to do this," the words "do not" should be struck out, which completely changes the sense. And in the finishing process the following changes would make it more correctly read as follows:—1st. When the particles of butter are the size of clover seed, add half a pail of cold water, and then churn until the particles of butter are the size of flax seed. It should then be washed with water in which half a pound of salt to each pailful of water is dissolved. For winter dairying, the water should be at 50° Far. 2nd. Lift the butter into a tub with a wooden ladle, and let it remain for eight hours; cut it through the centre with a butter ladle, if there are any white specks in the butter it will require more working. The white specks are caused by the particles of butter being too large when the butter-milk is drawn off.

Accurate Knowledge in Dairying.

In no department of agriculture is accurate knowledge more necessary than in dairying. The lack of it is the fruitful cause of mismanagement and waste. When men take the trouble to inform themselves thoroughly about their business, they are not likely to stop there, but will, in most cases, set about the work of reform. For lack of accurate knowledge, as to which are the unprofitable cows in a given herd, the profits of the whole may be swept away.

Moral.—Weigh the milk of each cow and test it for butter fat. Not knowing the direct advantage arising from regular salting of his cows, the dairyman may be getting from ten to fifteen per cent. less milk of poorer keeping quality.

Lack of accurate knowledge may cause a farmer to feed his cows a ration costing twenty cents per day, when equally good results could be obtained from one costing but twelve or fifteen cents. Lack of knowledge will start a farmer boring auger holes through his stable floor in order to get rid of the liquid, thereby wasting the most valuable part of the manure. Lack of knowledge will place milk in a filthy cellar, or in the kitchen pantry, where it will absorb a hundred and one odors that will ultimately reduce the value of the butter from twenty-five or thirty cents per pound to ten or fifteen, or send it to the soap-grease tank. For want of accurate knowledge in creaming milk, a half a pound, if not more, of butter from every one hundred pounds of milk may be lost to the dairyman. For want of a little accurate knowledge, which a thermometer is ever ready to give, the butter will come too soon in a soft greasy mass, or it will be "hours in coming," and be inferior stuff when it does. For lack of

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accurate knowledge, a great deal of butter fat will go where it is not wanted—in the butter-milk. Without the knowledge that a cheap pair of scales would give, the butter is ruined by excessive salting, or is too insipid to suit the customer, and away goes five or ten cents off the price. Lack of knowledge, in selecting salt will put a coarse, unclean article into butter, otherwise good, but which now no one will want at any price. Lack of knowledge in selecting a churn will weary the life out of a woman working a heavy dash up and down, or destroy the texture and quality of the butter. Lack of knowledge will leave in too much "caseous matter," to the detriment of the keeping qualities of butter. Lack of knowing how to put up a convenient, attractive package, will depreciate the price of dairy products and injure the reputation of the producer. Lack of knowledge that milk for cheese-making should be properly aired and cooled, may cause a patron to send in a can of milk that will taint a whole vat, injure the day's make of cheese, and involve all concerned in loss.

These are but a few instances selected at random from many; but the moral of it all is that the dairyman must get accurate knowledge by observation, study, reading the best books and periodicals in relation to his business, and then apply that knowledge intelligently, otherwise he will discover ere long that ignorance will impose upon him a terrible penalty of loss.

Veterinary.

Diseases of Pigs.

BY J. Y. ORMSBY, V. S.
DIFFICULT PARTURITION.

Although, as a general thing, sows experience but very little trouble in bringing forth their young, still we do occasionally find cases in which they require assistance, and in such cases, as with all other animals, prompt attention is necessary, or a fatal termination is likely to result. Among the large breeds, as a general thing, we find that difficult parturition is brought about by one of the young pigs becoming turned crossways in the womb, and in such cases all that is necessary is to oil the arm and hand well, and introducing it into the parts, seize hold of the pig and draw it out, taking care to draw forward at the same time that the sow strains. Among the smaller breeds, such as Suffolks, in addition to the above cause, we find also that trouble may result with young sows owing to the smallness of the parts, and also from the extreme fatness of the animal. In these cases much greater difficulty will be found in bringing about the desired result, as it is impossible to introduce the hand. The only method that I have found successful is the use of what are known as bitch forceps; by means of these the pig can in most cases be seized and removed. Should there be much bleeding or the parts be torn, it is well to syringe the vagina and womb with a weak carbolic lotion 1 to 40, and if the sow be weak, I would advise giving a dose of whiskey; while it is hardly necessary to say that the pen should be kept perfectly clean and plenty of dry, warm bedding supplied.

INFLAMMATION OF THE UDDER, OR MAMMITIS, is not at all uncommon among sows, more especially among those large breeds that usually produce large litters and are good sucklers, and when it has once occurred it is extremely likely to

return. The first symptoms usually noticed is a swollen condition of the udder, which in a very short time becomes hard and hot, as well as painful when touched or handled, while the sow refuses to pay any attention to her little pigs. If not attended to the formation of abscesses will occur, and in some cases gangrene may result. The best treatment I have found is to bathe the udder three or four times a day for half an hour at a time with water as hot as the hand can bear comfortably, and then rub in well an ointment composed as follows:—Extract of belladonna, 1½ oz.; mercurial ointment, 1 oz.; camphor ointment, 4 oz.; soft soap, 8 oz. It will also be as well to strip as much milk as possible from the teats. Should abscesses form they will need to be lanced, but in such cases it will be well to call in a professional veterinary surgeon. Besides this external treatment a dose of castor oil may be given, and the sow should be kept on a cooling laxative diet, and well housed and bedded. When a sow has been once troubled with "mammitis" she should be fed very lightly for some time previous to her next farrowing.

Diseases of the Horse.

From Hon. J. M. Rusk, U. S. Secretary of Agriculture, we have received a copy of a special report, entitled "Diseases of the Horse", prepared under direction of Dr. D. E. Salmon, Chief of the Bureau of Animal Industry. The authors are: Drs. Michener, Law, Harbaugh, Trumbower, Lisantard, Holcombe, Huidekoper and Dickson, who rank among the most eminent members of the veterinary profession in the Republic. That the work is one of great magnitude and importance is indicated by the table of contents, which includes the following:—Methods of administering medicines, diseases of the digestive organs, urinary organs, respiratory organs, generative organs, nervous system, heart and blood vessels, the eye, lameness, fetlock, ankle and foot, skin, wounds and their treatment, general diseases, and shoeing. In outline the general idea was to provide a work that could be distributed among farmers as a safe and scientific guide in the treatment of such disorders, though not intended to supersede the services of the veterinarian in all the more serious cases. The publication of similar volumes, relating to other domestic animals, is contemplated, and when the series is completed it will certainly prove a valuable addition to the library of any farmer or stock breeder. That a farmer should acquaint himself with the nature and treatment of animal diseases is obvious, because in many instances prompt measures may save the life of a valuable animal before the services of a professional veterinary can be secured. While the subjects have been treated in language more or less popular, its intrinsic scientific value has not been lost sight of. It is a volume of over 550 pages, substantially bound, well printed, and handsomely illustrated with some 35 full page plates, which greatly enhance its practical value.

In every city may be found hundreds of poor men who hardly know where the next meal is to come from for themselves or their families. In every agricultural community there are openings for good, steady men who are willing to work for reasonable wages. How much better it would be for these men and their families if they would leave the city and go to those places, thus doing good to themselves, their families, their employers, and last, but not least, the city.

The Farm.

Artificial Drainage.

BY EDW. READER, ALVINSTON, ONT.

The first care of the farmer, that on which the success of his future crops almost entirely depends, is the removal of unnecessary supplies of water, whether arising from the tenacity of the surface retaining too much, or from springs arising to the exterior. The soil as left by the Creator, in its natural state, is unfit, to a great extent, for the production of cultivated plants. Still it abounds with fertility, as we find vegetation growing naturally in every state of soil and climate. So in order to bring the soil into a proper condition for vegetable production we have to resort to artificial means, and this is most effectively brought about by underdraining. The benefits received from a perfect system of drainage are numerous. In the first place the air is purified by the removal of water, and surface matter left beforehand to lie stagnant in ponds and marshes, to be heated up by the rays of the sun until it assumed a state of fermentation, from which would arise foul gases, destructive to man and beast; to the first causing fevers and so on, to the latter murrain, which is now almost entirely unknown in portions of the country where the surface matter is removed by drainage. And again, it prevents to a great extent the heaving out of grain in the winter and spring months, by leaving the land in a more solid and compact form, so that the frost and heat of the sun has not the same effect upon it. It improves the mechanical texture of the soil, rendering it more mellow and porous, when in its previous state it would be hard and baked, so that no plant could attain a vigorous growth. It causes a more equal distribution of nutritive matter received from fertilizers in the form of nitrogen with phosphoric acid and potash, which are the main elements of the cultivated plant life. It admits fresh quantities of water from summer showers to penetrate into the soil, which are more or less imbued with the fertilizing gases of the atmosphere, to be deposited among the absorbent parts of the soils traversed by roots, giving renewed life and vigor to the same. It warms the subsoil by removing the overabundant supply of underwater, leaving the surface dry and mellow. Underdraining cannot produce drought, as some suppose. It has the very opposite effect, causing the land to form more into seams and crevices, so that the rains are retained in the soil, instead of running off the surface into creeks and gullies, or lying on the surface to be absorbed by the air, and leaving a crust so hard that no plant can attain a thrifty appearance. It improves the value and appearance of our farms, by bringing into a state of cultivation such unsightly places as were beforehand an eyesore, and from which the farmer receives no benefit whatever, except the production of wild grasses and worthless weeds which will spread a considerable distance into the cultivated portions of the farm. The profits from draining such portions of our farms as these will be fully equal to the expense of labor and tile, in the abundant yield of one season's crops. When land is properly drained it enables the farmer to get upon it much earlier in the spring, and this is a saving of time, labor, and seed. Much of the seed sown in the spring season is destroyed by various causes, and more is destroyed by water,

and this destruction is avoided by proper drainage. It further assists in pulverizing and cleaning the soils, as well as quickening the action of manures. It also increases the nutritive value of wheat and other grains, by assisting to prevent rust, which is always found to exist to a great extent on undrained soil. It improves the general health of the district, renders the water pure for animals to drink, and altogether effects improvements which cannot be overestimated. The value of drainage to a farm depends greatly upon the capability of the soil and its marketable value. Good soils that are wet repay expenditure of drainage more rapidly than moderate or poor soils in a similar condition, while on the other hand some soils are naturally open and porous, and the effects of artificial drainage are seen more quickly than in lands with a hard subsoil through which the water cannot penetrate in a short space of time. A consideration of great importance should be mentioned here: that in commencing to drain, every step taken should be considered as a foundation of more thorough drainage at some future time. Every tile laid should be at a depth and of a capacity that is not only sufficient to carry the oversupply of water from the land near by, but the water that must come through this outlet from more distant points at some future time. The first thing then to consider is the outlet, and this is of such importance that too much pains cannot be taken, in order to get a proper one to the drain above. What I mean by a proper outlet is a free exit for the water from at least a six inch drain. It is as important as a good foundation is to a building; success depends upon it. It is, therefore, the most economical in the end to commence with the above-named outlet, even if it should cost considerable time, money, and trouble.

[TO BE CONTINUED.]

Virden, Man., and Vicinity.

On the line of the C. P. R., 180 miles to the west of Winnipeg, is an interesting town. It is compactly built, and its buildings have a solidly come-to-stay sort of a look about them. There is nothing here of the nature of a boom, but a steady everyday progress. The pull-together feeling which evidently animates the people has doubtless made the town what it is, and as long as this spirit predominates will continue to aid in its future progress. From its chief, *i. e.*, agricultural standpoint, there is much of stirring interest. It numbers amongst its townspeople a good number of those who may be safely trusted to look well to its interests in this direction. A large number of horses have been brought recently to this point and sold, or are selling, at good prices. For good cattle there is a good demand. The potato crop, as elsewhere throughout the province, was abundant. Mr. Fraser shipped some four carloads from this place, some of which were sent as far south as Columbus, Ohio.

The Egyptian Mummy peas grown last year some eighteen miles to the northwest of the town by Mr. H. C. Massey, were an excellent crop. Mr. Massey spoke of them as the best paying item of the farm.

The native rye grass is being very successfully grown by Mr. K. McIvor, who would recommend that attention be given to its extensive cultivation. The town is surrounded by an excellent mixed farming district.

To the south and southwest is the well-known district of the Pipestone Creek. The farmers there are having their attention drawn to sheep rearing as an industry. For this the Pipestone district appears to be very suitable. The late Mr. Chrisp, of Kola, a gentleman so highly esteemed by all who knew him, and whose presence and help will be much missed throughout the whole neighborhood in which he lived, was eminently successful in this work.

Mr. James Milliken, of Reston, has at the present time some eighty sheep and lambs. Mr. Milliken takes a deep interest in everything pertaining to the industry of sheep rearing, and will undoubtedly be very successful in this department of farm enterprise.

Mr. J. W. Lund, of Lippentott, has recently purchased a good Holstein bull. Mr. Lund's neighbors will highly appreciate this investment. Others through this section of country are working steadily in a forward direction, and it is to be hoped that the farming interests of this attractive district will continue to advance.

Whitewood and Vicinity, Assa., N. W. T.

Whitewood, a town on the C. P. R., 249 miles west from Winnipeg, established in 1883, has now a population in town and vicinity of about 300 inhabitants. A number of new buildings, stores, and residences are in contemplation, and there is much of special interest at this time attaching to the surrounding country. Messrs. Howard Bros., recently from England, have purchased two and three-quarter sections of land about six miles to the north of the town, and purpose establishing a cheese factory either in the town or on their own land. These gentlemen had practical training and experience in this work previous to coming to this country, and this enterprise will likely be of a most successful character. The Whitewood Agricultural Society has recently purchased from the town site trustees ten acres of land to the north of the railway and immediately west of the town site, and intend erecting during this summer an agricultural hall, 26x80, two stories high. The building is to be completed by October, in time for the fall show. The Agricultural Society is in a most flourishing condition, its last balance sheet showing a balance on hand of \$469.65, and no liabilities. The membership numbers at present 97, with a good prospect of a substantial increase. This society, in conjunction with the Grenfell Agricultural Society, is desirous of arranging with other like societies along this line of railway, from Moosomin at least, and westward, that no two shows be held on the same date, as suggested by the *ADVOCATE*, thus giving to all who may desire to do so an opportunity of attending a number of these meetings. Some four delegates from Brown County, S. D., are about to visit this neighborhood with a view of inspecting and reporting to their neighbors the advantages offered by this country as a desirable location for settlement, with a good prospect of success. They will be heartily welcomed, and every opportunity given of seeing these advantages for themselves.

Well to the north and northeast of this town is a pretty park-like stretch of country, with attractive houses and farm buildings. This section of country, well-watered and well-timbered, seems specially adapted for mixed farming.

Stock may be raised here with the almost certainty of bringing good profits to the raiser.

There are a number of good ranches through this district. The Spring Lake Ranch—cattle and horses—to the northeast, in the Qu'Appelle valley, owned by Messrs. McKenzie, Wolf and de Rotz; and further to the west, along the valley, Mr. H. C. Warren owns a ranch of well-bred or pedigreed horses; while yet still further to the west along this same valley, Messrs. Bird Bros. have a good number of horses, and some 300 sheep.

The farmers throughout this province are taking steps to establish farmers' institutes for the furtherance of their own and their country's interests. The first regular meeting of the Whitewood Farmers' Institute was held Saturday afternoon, May 23rd, when officers were appointed, and the work of the society generally got well under way.

The factory in the Pipestone Valley, some ten miles to the south of the town, owned by the Bellevue French Coffee Manufacturing Company, was recently burnt down, but steps are being taken to re-erect at once in the same district, though not on the same site, but at Richelieu, a new factory large enough to carry on an extensive business of this kind. Up to the present time the chicory grown in this neighborhood has been dried by Vicomte A. de Seyssel and Mr. E. Jannet, and these gentlemen are adding another drier, with three other furnaces, to their plant, so as to be able to carry on this part of the work much more extensively than hitherto. The company purpose also establishing driers in other parts of the Territories and Manitoba wherever a number of farmers together are willing to raise a sufficient quantity of chicory to make a venture of this kind practicable. This industry is likely to be a growing one, and farmers undertaking this work will find it very profitable. From one acre well cultivated \$100 worth of chicory can easily be grown. There is an unlimited demand in our eastern provinces and in the United States for all manufactured here. Driers are about to be put up at Oak Lake, Man., or in its vicinity. About 200 acres of chicory will be grown in that neighborhood this year. In Belgium and Holland last year some 175,000,000 of pounds were grown. Baron Van Brabant is the first to establish this new industry on this continent. Vicomte A. de Seyssel and Mr. E. Jannet are about to open a factory at Sothonod for the manufacture of Gruyere Cheese. For this there is already an eastern market open for all manufactured. A French company contemplate establishing in this neighborhood a beet sugar factory to be in operation in the fall of 1892. About half a million dollars will be expended on this enterprise. This amount is already provided for. Last year the growing of the beet root was put to the test here with eminently satisfactory results. The Pipestone district is particularly well adapted for sheep rearing. The Richelieu Sheep Ranching Co., some nine miles south of the town, own some 3,000 sheep. Messrs. Dermody and Lyons, of Montgomery, and Messrs. Cummings and Warner Bros., south of The Pipestone, are also working in this direction.

Mr. P. H. Currie and Vicomte de Langle are owners of horse ranches in this neighborhood.

It will be interesting to our readers to know that in this town and neighborhood thirteen different languages are spoken—a cosmopolitan association of peoples certainly, but all making common cause of the advancement of their adopted country.

A Model Farm System.

In driving through the country, the dilapidated state of the fences on the majority of farms is an eyesore that mars the appearance of many an otherwise beautiful prospect. Farm fencing is indeed one of those necessities that is yearly becoming more costly to replace, not only on account of the scarcity of timber, but also from the amount of room that in too many cases is worse than wasted.

On reading the articles on this subject by the different writers in last month's issue of the FARMER'S ADVOCATE, it would appear to us the essayists have not gone deep enough into the subject, and only discussed plans whereby a solution of a portion of the problem might be solved.

The difficulty in arranging the question of labor prevents numbers of our stockmen and dairymen from practising the soiling system more thoroughly; yet there are few that do not find it necessary to grow more or less green feed to help bridge over a dry spell or help out a too heavily stocked pasture, and are, therefore, compelled to have recourse to soiling to a certain extent. Our dry summers, the difficulty of keeping up permanent pastures, the expense attending repairing and building fences, the harboring of weeds, and above all, the quantity of land required to carry a given amount of stock, all bespeak that a more certain and profitable system is required. The plan pursued throughout Ontario of fencing each field is one of the direct causes why farm work is never done—it is a constant source of annoyance, a bill of expense, and is most unsatisfactory in results.

When cattle are well fed in winter, and a number are kept, there are dry seasons when the best planned pasture arrangements are totally wrecked by the hot, dry weather in which grass dries up and cattle are at a standstill, or worse; and that this is the case three years out of five, every stockman that relies on arable land for pasture is fully aware. Where there are large tracts of land only adapted to pasturage the case is somewhat different, although in this pasture land requires skilful management, in order to make it pay interest on capital account.

Again, we have in our mind's eye farms innumerable that the cost of equipping them with anything like the proper complement of fences would entail an expense that would stagger the most sanguine proprietor, were he to sit down and count the cost before embarking in the outlay. It is certainly, under present circumstances, the most expensive part of the farm equipment that is required to be met in the majority of cases.

Those that we are accustomed to hear speak on the subject of cattle feeding are wont to dwell strongly upon the provision required for winter feeding which to our mind is not nearly as difficult to arrange as the summer food supply. The writers upon cattle husbandry are on the same track, plenty to say about how to provide for the unprofitable long winter, but few suggestions how the summer food supply is to be provided. With the conditions as before stated, the necessities of the case will be better met by half-way measures, that is by a system of pasture with a certain amount of green feed supplied to assist it, which would save the stabling of the cattle, and the consequent labor involved in keeping stables clean, furnishing bedding and

the after hauling of the manure. By a partial soiling system the feeding is done on the field near where the feed is grown. Early spring and later on in summer and through the fall are the seasons in which pastures are not sufficient to support the stock of the farm. The easiest crops to grow for soiling purposes are rye, rye and wheat, clover, oats and vetches, corn and rape. By providing a succession of these it is wonderful the amount of stock that can be fed from a moderately small piece of land. Therefore the next point that is brought to view is how to manage the fences. The whole question is solved in a manner of working on a farm with which we are acquainted, and the systematic manner in which everything is carried on is in direct contrast to the majority of methods practised, where a want of anything like system is too apparent. The farm spoken of contains one hundred and thirty acres, but is just as applicable to one of greater or less extent. This farm is 260 rods long facing a road, and is 80 rods wide. The land is all in crop cultivation except ten acres in garden, orchard, and a few paddocks around the barn, which are situated near this road and about half way down the lot, this ten acres being forty rods square.

The following design, covering two years, shows the farm and the manner of working it. At the dotted lines between the fields there are no fences, the heavy lines each side the pasture representing the only inside fences:—

1891.	1892.
1. CORN.	1. WHEAT.
2. WHEAT.	2. CLOVER.
3. CLOVER.	3. PASTURE.
HOUSE AND BARN.	HOUSE AND BARN.
4. PASTURE.	4. GREEN CROP FOR SOILING.
5. GREEN CROP FOR SOILING.	5. OATS.
6. OATS.	6. CORN.

A six-course shift or rotation, covering six years, in which the farm is laid out in six divisions, is worked as follows:—In the stock department dairying is practised, but any other line of mixed farming where cattle are the principal stock would answer as well. Early maturing varieties of corn are grown, which crop is heavily manured and placed in the silo in time to clear the ground for fall wheat. Fall wheat is seeded to red clover, alsike and dutch timothy sown in the fall. Pasture follows the hay crop, and is the only division fenced. The fencing used is movable, and in the rotation one side is moved each year, as shown in the design.

[TO BE CONTINUED.]

Farm Fences.

BY SAM. SUDDABY, BURNT RIVER.

Under our present system a man who grows any crops is forced to be at the expense of fencing it from his neighbor's cattle. Now, let us look at the subject from a rational standpoint. The growing crops would never move from the ground on which they are growing if there were no fence; and what benefit will he ever derive from his neighbor's cattle? The man for whose benefit or convenience anything is done ought to be at the expense of doing it. Is not this good logic? If it is, then our laws with regard to fencing are sadly at fault. I can conceive of no arguments in favor of the present system in the older or thickly settled parts of the country; but in the newer or more thinly populated part of the province, where there is a great deal of waste land, the argument is that a great many cattle can be kept and allowed to run on said unoccupied land in summer, and it would be unfair to deprive the people of the privilege of so allowing cattle to run on land that would be otherwise useless. Well, in reply, why compel a poor man who chooses to settle on some fertile spot and pay taxes for it—why, I say, compel him to build fences at a great expense for the benefit of his more wealthy neighbor who is reaping the benefit of, perhaps, three or four times the amount of land, and not even paying taxes for it? Let the untillable land be given to anyone who wants to make use of it as a cattle ranch, on the conditions that he either fence it or herd his cattle, or in some way prevent them from doing damage to the property of his neighbor, and failing to so prevent them he should be responsible for such damages. I hope this subject will not be allowed to rest till the laws are made more equitable on the subject than they now are.

The Labor Problem.

Through the whole country, from the Atlantic to the Pacific, the farmer who operates on a larger scale than his own family, is confronted by the difficulty of obtaining sufficient and efficient help either temporarily or permanently. To me it seems to be a necessary evil as long as grain growing remains the staple, and in too many districts the only industry of the country. There are two sides to this question, the employers and the employes. The farmer on the one hand, though he may be able to promise comparatively high wages for say six months, still generally expects to do without any help during the remainder of the year. Again, he has often to take whoever offers, whether good, bad, or indifferent, and in too many instances is a clear loser by the incompetence, ignorance, or laziness of his men, and if through some cause his crop should fail, wholly or in part, he then has to pay his hired men out of the proceeds of his grain, while he himself performs that marvellous feat of "living on his losses." As a neighbor of mine once remarked to his helper on paying him off after the season's operations, "Good-bye, Tom, you've got the money, and I've had the pleasure of your company." On the employe's side, it may be urged that the farm laborer, though getting good wages, works hard and long, and very often puts up with indifferent fare and poor accommodation. To ensure a regular supply of competent, steady men to help us work our farms, we must be prepared to offer them steady employment the year round at decent wages. This can only be done through a system of mixed farming, by which we distribute our work more equally

over the whole year, instead of of concentrating it all into five or six months. A farmer with a little live stock has something to fall back on if his grain crop fails, his hired man has something else to depend on to bring in the money that will pay his wages, and both have employment during the time when the plough and binder are idle. A system of assisted emigration has brought into our provinces many boys and men, chiefly from the older countries of Europe, who usually hire at low wages to farmers, and being utterly ignorant of farming and all pertaining to it, and generally slow, lazy and dense, cause considerable loss and annoyance to their employers, and keep better men from getting places they could fill with credit. If the philanthropists are determined to assist the poor of all countries to emigrate, in pity let them assist the rural population who know at least the rudiments of agriculture, and can be of some use in a country like Canada.

Patrons of Industry.

BY A PATRON.

As you invite reports from Patrons of Industry, I herewith send a few items regarding this county (Halton). About the beginning of this year the first association was organized by an organizer commissioned by the Supreme Association. A few of our leading farmers were deeply interested in the order, and accompanied the organizer from place to place until seven or eight associations were organized. About this time the first meeting of the Grand Association was held, at which resolutions were passed severing connection with the United States. The Dominion elections came on, and these with other causes necessitated a standstill in organizing. New organizers were recommended by the county association, and after some delay, caused by changes in the constitution and by laws, and the preparing of the same, commissions were received and the work of organizing is again going on. The present membership is nearly or quite 500, and we hope by the end of the present quarter to double or triple the membership. The objects of the order are such (if properly presented) as to deeply interest every farmer and laborer. The meetings of the different associations have on the whole been well attended. Different matters of interest to the members have been discussed, and as we grow in experience, and become better acquainted with the aims and objects of the order, will be still more interesting. I will now give a few of the planks in our platform, not included in your editorial on "The Patrons of Industry:" Maintenance of British connection; a tariff for revenue purposes only; reciprocal trade on fair and equitable terms with the United States; economy in the expenditure of the revenue of the country; the election of all county officials, and the fixing of the salaries by the county councils; no more government grants to railways; no more gerrymandering electoral districts to conform to county boundaries; fewer legislators and county councillors; the amendment of the British North American Act to enable the Dominion Government to cease paying subsidies to the different provinces, and to abolish the Senate; a uniform franchise for all elections; voters' lists to be prepared by the municipalities; the simplification of our laws; a general reduction in the expenses of government; legislation to secure a more equitable monetary system; prompt and effective legislation to prevent trusts, combines, and rings from extracting from farmers and other consumers more than the true value of their respective products.

Richmond Pea Harvester.

The pea crop, which has been one of our staple grains, has been neglected to a large extent through the difficulty in harvesting. Before the binder and self-rake reaping machines were in general use it was thought no great hardship to pull peas with the scythe, and in those days a large acreage was grown; but after the quick harvesting of the other grains by labor-saving machinery of the present day, the work of returning to hand-harvesting the pea crop is, to the average farmer, hardly endurable, hence the very small quantity of this crop grown of late years. There is no disputing the fact that as a crop peas are amongst the most valuable for feeding purposes. Canadian sheep owe much of their reputation to this crop, for which purpose the straw, as well as the grain, is particularly valuable. The high name that Canadian pork has attained in the London market is also to be ascribed to the same source, while there is no grain anything equal to it for cattle feeding, a small quantity of peas being required in every well-ordered feed ration, for either beef or milk. Several pea harvesters that are thoroughly reliable are now doing good service. By the use of these the labor is reduced to a minimum, and keep pace along side the mode of handling other crops.

The Richmond Pea Harvester, manufactured at Blyth, Ont., comes well recommended. It is attached to the ordinary mower, and is cheap, and, we understand, is thoroughly effective. Those who are contemplating purchasing a pea harvester should send for one of the circulars containing a large number of testimonials.

Common Mistakes.

BY J. M. REED.

This is a subject that I have for some time contemplated to say a little about. The remarks shall be from an agricultural standpoint and upon kindred subjects, and one of the first that I will mention is ploughing, and also the preparing of the land when the ground is not in the proper condition. Such a system of farming is very injurious to the land, as it leaves it in a hard condition, and this detracts much from the succeeding crop, and makes the future tillage difficult, and soon robs the ground of its fertility. If this labor is done when the ground is wet, bad results are sure to follow.

One quite common mistake is the sowing of wheat on the same land year after year, which ends in disaster when practised continuously, and that system is adhered to rather too much in this county (Kent).

A very common error is the lack of interest taken in a root crop, whereas there is no crop puts the ground in such fine condition for a succeeding crop, besides its healthfulness as a stock ration. It is thought by some that it involves too much labor, which is a mistaken idea.

In speaking in regard to the oat crop, there is as little interest generally as in those referred to, as it is thought any land will do for oats; still there are exceptions to that.

There is considerable indifference manifested in regard to one of the most important crops (corn), considering its feeding and forage value. I believe there is much to be learned, judging from the results as seen in the lack of interest manifested in the culture, for clean culture is not the rule, as in many instances it would be a hard matter to tell which was the crop, corn or weeds. I am glad there are many exceptions to this management; still many do not manifest that interest in clean cultivation that they should.

I was quite edified in reading the prize essay on corn culture, and concur in most of the remarks laid down. Still, I could not quite agree with the writer, in recommending such shallow ploughing. I prefer fall ploughing, and thorough culture before planting. It is my opinion that fall is the proper time to do such work, and the weather very much assists such work, as the frost of winter puts the land in the best possible condition. Another mistake is the too shallow cultivating of corn while growing.

One of the greatest mistakes is the allowing the so-called Canada thistle to go to seed, and many allow that pest to grow from year to year, and make no effort to keep it in check. A great many allow them to grow in their pastures, and as a result the seed is scattered all over. There ought to be some more stringent laws enacted, as some of those laws in force are a dead letter. I believe each farmer should be compelled to prevent, as far as possible, thistles from going to seed, because if allowed to go to seed they pollute the country through the seed being scattered far and wide, and this is very annoying to the tidy farmer, and in a measure his efforts are frustrated through the negligence of others. I believe it is the duty of such a journal as the FARMER'S ADVOCATE to call the attention of the farmers, and also our law makers, to the importance of more rigid measures for their destruction. The last error I will name is in regard to the care of farm machinery. How much indifference is manifested here, many leaving their costly implements and machinery in the field where last used, or at least out of doors. We know how soon they become useless, and they are short-lived at best. I have tried to be plain in regard to such important matters, and may at some future time say something in regard to the live stock branch of business, as many gross errors are practised in that line of industry.

Drainage and Drainage Laws.

[Read before the Dominion Grange in London, Feb. 1891, by R. Wilkie, Esq.]

Drainage and Drainage Law is a very large and important one to nearly all classes, and is deserving of more consideration than is generally given to it, as both health and prosperity are often affected by it.

But it is in relation to farmers and farming that we more especially propose to consider it at this time. Some farms require but little or no artificial drainage, nature having made about all the provisions required for this purpose. But in much the greater number of cases she has not been so generous, but has left it to man with many difficulties to contend with.

The quantity of water which falls in snow and rain may vary in localities and seasons in this province, but upon an average it amounts to a depth of about thirty-six inches annually.

This immense body of water is removed from the surface of the land in three different ways, namely, by flowing over the surface until it reaches the larger streams and lakes; by evaporation, and by percolation or filtering into the earth.

Accelerating the surface flow is generally the first method employed by man to remove the excess of waters from the face of the land by removing the obstacles in its way, and deepening and constructing channels for its more speedy passage away.

In some places this may be done without much trouble. But in the large level tracts of country in some cases the water has to be carried many miles before reaching an outlet sufficiently large to receive it without flooding the adjoining lands. These drains receive and convey the water from thousands of acres, and are of great size, being in places forty or fifty feet wide at the top, and ten or twelve feet deep.

If nothing but the expense prevented it no farmer single-handed could afford to undertake such a work, and it would be next to impossible to get the large number interested to agree upon the amount which each should contribute towards its construction.

But here the law provides a remedy, and under its provisions large tracts of the most fertile land in Ontario have been, as it were, raised up out of the water, or what is tantamount to it, the water has been lowered around them, and means provided for its escape.

And now the heaviest crops are grown upon lands which fifty years ago lay for nine months of the year beneath the surface of stagnant waters, teeming with insects and reptiles.

Such results should not be lightly overlooked, but due weight should be given to them in considering the question we are coming to, namely, Drainage Laws.

It is with a good deal of diffidence that I approach this part of the subject. It is one upon which municipal men of great experience, as well as the best legal authorities, often find themselves mistaken.

The Municipal Act, Chapter 184, last Revised Statutes of Ontario, Section 569, and following Sections; Chapter 36, R. S. O., Respecting the Expenditure of Public Money for Drainage, called the Ontario Drainage Act; Chapter 37, R. S. O., an Act Respecting Municipal Debentures issued for Drainage Works; Chapter 38, Respecting Tile, Stone and Timber Drainage; Chapter 230, R. S. O., Respecting Ditches and Watercourses, including their several amendments, are all the statutory enactments that I know of respecting drainage in Ontario.

The Ditches and Watercourses Act, Chap. 230, is a law more adapted to cases where small streams or watercourses require opening up or deepening, and where, as is often the case, the land owner below will not do his share of the work to enable his neighbor above to get drainage.

Where the owners of lands along such drains or watercourses cannot agree respecting the opening up or deepening thereof, any owner can notify all the other owners, in writing, the notice to name a day (giving not less than twelve clear days' notice), an hour, and place of meeting, which shall be convenient to the watercourse. If all the parties can agree on their respective portions of the work, the agreement must be reduced to writing, signed by all the parties and filed with the clerk of the municipality within four days from the signing thereof, and this instrument is binding upon all those who have signed it to fulfill the conditions therein.

But in case all cannot agree or will not sign an agreement, then any owner may file with the clerk of the municipality a requisition naming the owners and the lands and requesting that the municipal engineer be sent on, and thereafter the proceedings are in his hands.

Within not less than six nor more than twelve days from the filing of the requisition the engineer must examine the premises, and if requested, or if he thinks proper he can examine witnesses on oaths, and if he finds the ditch or drain necessary he must within thirty days make his award, setting forth the position and course of the drain and the portion of the work to be done by each person. This award is an official document and may be used in evidence in any legal proceedings. Any one dissatisfied with the award can appeal to the County Judge, who has power on an appeal to affirm, amend or set aside the award and to award the costs as he thinks proper. The award as amended or confirmed shall be enforced as the award of the engineer. And unless the costs as awarded are forthwith paid the municipality pays them and charges them against the lands. And in case any of the parties neglect or refuse to perform the part of the work assigned them within the time specified in the award, the engineer may proceed to let it to other persons, and the expense of the work and costs will become a charge against the land.

No drain can be constructed under this Act unless it be carried to a proper outlet, so that no lands shall be flooded by or through its construction, unless by consent of the owner given in writing.

Proceedings cannot be taken under this Act if the proposed work should have to pass through the lands of more than five owners, unless the consent of a majority of those interested be obtained in writing, or unless the Council of the Municipality shall pass a resolution approving of the scheme, after those interested have had an opportunity to be heard by the Council upon notice to that end.

Such are the principal points of the Ditches and Watercourses Act, leaving out the greater part of the details.

Chapter 38, Revised Statutes of Ontario, is an Act to enable municipalities to borrow from the Government money to be loaned to farmers who are desirous of underdraining their farms.

This Act originated in Dominion Grange on the 17th of March, 1878. Bros. George Shirley, William Auld and William Cole were appointed a committee to consider and report upon this matter, and they reported in favor of petitioning the Ontario Parliament to set apart a fund to be loaned to farmers for the purposes of underdraining at such rate and upon such conditions as it thought proper. Subsequently a petition to that effect was laid before the Government, and an Act was passed during that session.

The conditions were that a municipality might borrow any sum not less than \$2,000 nor more than \$10,000, to loan to farmers for the purpose of the draining, upon debentures of one hundred dollars each, to be a charge against the lands of the borrower and to be paid back in twenty annual payments of eight dollars each for every hundred dollars borrowed. This payment of eight dollars annually for each hundred borrowed to extinguish the debt at the expiration of twenty years.

But in case the borrower wish to pay it off in a shorter time provisions were made for it in the Act. The drains had to be approved by an inspector appointed by the municipal council for that purpose. There was a limit fixed beyond which the borrower could not go.

This Act was afterwards extended to stone or wooden drains, and the rate of payment reduced in 1887 from eight dollars per annum to seven dollars and sixty cents.

Chapter 37, R. S. O., called "The Municipal Drainage Act," is an Act to enable municipalities to borrow money from the Government of Ontario for the construction of drains under the provisions of the Municipal Act. It authorizes the Lieutenant-Governor to invest any sum not exceeding \$350,000 in Municipal Drainage Debentures.

[TO BE CONTINUED.]

Garden and Orchard.

Preservation of Fruit Trees.

Through a large portion of Canada failure was the only word applicable to our fruit crop. The trees were full of blossom, and the early prospects for fruit in abundance was most encouraging. Drenching rains followed, and the blossoms withered and fell, and the leaves of apple and pear trees began to blight. Extremely dry weather followed in some localities, and the blight on the foliage increased, many orchards being threatened with total destruction.

Although it is conceded that the cold, wet weather is responsible for the failure in setting, attributed to non-fertilizing, in many cases the apples had set and were the size of small peas when they began to die. They then withered, turned brown and fell, varying in amount according to different dates of blooming in the varieties. At the same time the leaves began to appear blighted, and have a shriveled appearance. The opinion of most orchardists is that there is an intimate connection between the failure to

they may appear as large, irregular blotches, by the running together of several of the spots first formed. They are for the most part confined to the upper side of the leaf, which often becomes much distorted through the unequal development of the two surfaces. The color of the older spots is nearly black and their surface somewhat velvety. The growth of the young shoots is often seriously checked through the direct action of the fungus upon them, and when the foliage of the tree is much affected its nutrition must be seriously impaired. The trees rendered less liable to withstand the severe cold of the winter season, and is rendered more likely to injury from early and late frosts. Cool damp weather is especially favorable to the development of this disease, and it is during such seasons that it spreads with great rapidity. Last season was a characteristic one in this respect, so that whether the coming summer be dry or wet it may be expected that with the crop of seed (spores) now on hand we must be prepared to fight the disease, as it will surely be more or less prevalent. The appearance of the scab on the apple is too well known to need a minute description. Just as soon as the leaves begin to form in the spring they are attacked by the disease, and what is true of the leaves is also true of the fruit, spots being sometimes noticeable on the latter when little larger than peas. This emphasizes the statement that early treatment is a prime essential towards successful results.

REMEDIES.

"During the last two years experiments have been in progress under guidance of the Division of Mycology, Department of Agriculture, at Washington, the Experiment Stations of Wisconsin and Michigan. Trials were made at these places with certain chemical preparations, applied in the form of a spray—in the same manner that paris green is used to check the ravages of the codlin moth. Beneficial results were obtained by the use of several compounds, but that known as 'ammoniacal solution of copper carbonate' has in nearly every instance given the most encouraging returns."

In a series of experiments conducted under the supervision of Mr. Craig, the following prescription gave the best result:—

TREATED.	
Copper carbonate	3 oz.
Water	22 gals.

RESULT.	
First quality	50
Second "	25
Third "	25

UNTREATED.	
First quality	24
Second "	26
Third "	50

"The time occupied in making each application, covering seventy trees, was about three and a half hours with one man and boy and a horse. The beginning of the work was unavoidably delayed until 14th June when the fruit was well formed, and in many cases had begun to show signs of the disease. There is no doubt had the treatment been commenced two or three weeks earlier the results would have been more favorable.

The following combined fungicide and insecticide is recommended for trial:—

Carbonate of copper	1½ oz.
Ammonia	1½ pints.
Water	25 gals.
Paris green	1½ oz.

(Pints and gallons here are wine measure.)



FRUIT-TREE SPRAYER.

fruit, the death of the young fruit, and the blighted appearance of the leaves, and that the blight is caused by the apple-scab fungus. This apple-scab fungus, which caused the blight on the leaves, also causes the scab on the fruit itself, the wet weather during last season affording the condition for its development. There is a vast difference in the susceptibility of varieties of apples. The Fameuse and Spitzenburg are often entirely ruined, while others, such as Duchess of Oldenburg and Northern Spy, are only slightly affected.

Bulletin No. 10 from the Experimental Farm, Ottawa, by Prof. John Craig, Horticulturist, treats on this subject as follows:—

"The apple-scab is caused by a minute parasitic fungus, a low form of plant life, which, by living on the leaf and fruit of the apple, prevents assimilation in the former and the development of the latter. It is not so generally known that the same fungus attacks both the leaves and the fruit. Prof. Scribner says: 'On the leaves the first manifestations of the presence of the parasite are the appearance here and there over the surface, of smoky olive green spots, rounded in outline. The older spots range from one-eighth to one-half an inch in diameter, or

"The carbonate of copper should be dissolved in the ammonia, mixed with water, and the paris green then added, care being taken to stir in well, and keep it from settling to the bottom. The paris green can be omitted after the second application in mixtures, as two sprayings of paris green is generally considered a sufficient remedy for the codlin moth.

WHEN TO SPRAY.

"The importance of early treatment cannot be too strongly urged, as after the disease has gained foothold and is working within the tissues, remedies which can only be applied externally are of very little use. The first application should be made *before the blossoms open*; the second soon after they have fallen, the third and fourth following in periods of about ten days or two weeks apart. If the season is cool and wet, a fifth application will be necessary, but if moderately dry, four applications, if begun in good time, will in all probability be sufficiently effective.

HOW TO APPLY THE FUNGICIDE.

"1. For orchard work use some form of a barrel pump.

"2. Use nozzles which will distribute the liquid in a fine misty spray.

"3. The trees do not need to be drenched, but must be completely moistened with the mixture."

Some Pear Enemies.

BY T. G. H. PATTISON, GRIMSBY.

The culture of the pear, both for pleasure and profit, even when carried on in localities where the climatic conditions are favorable, is much hampered by the enemies which lie in wait for it on every side.

I. THE BLIGHT.—By far the most formidable of these we pear growers have to contend with is the blight, and, alas! as yet no remedy has been discovered for this fell disease, which makes its appearance frequently just as the trees are attaining bearing age. The writer well remembers a few years ago beholding a beautiful pear orchard of 2,000 trees of the Bartlett and Clapp's Favorite varieties. They had just attained full bearing age, were planted in nice straight rows, and were well cultivated and properly pruned. The sight of this orchard at the time of ripening was enough to make an anchorite's mouth water. The writer admired the orchard and envied the owner. A year afterwards he again had occasion to visit the same orchard, but a very different scene met his eye from that of the year before. Out of the 2,000 trees 1,800 were totally blackened by blight, and had to be destroyed. So far as the writer is aware there are no varieties totally blight-proof, but he has never seen a case of it on the common native preserving pear. These trees grow to great age and bear a crop every year; they are fine cooking pears, but of not much value for eating. The writer has several of them top grafted to choice varieties, they make very hardy stock, and so far no case of blight has occurred in the trees thus treated. Dwarf trees which agents often represent as blight proof are not so in reality. The writer has seen dwarf orchards almost completely destroyed by this disease. The variety least subject to it on dwarf stock is the Duchesse Angouleme—in his opinion the best of all the dwarf varieties. But although no absolute remedy is known still there are measures of

prevention, which can, and should be taken by every grower. Firstly, trees planted on heavy soil are much less subject to blight than those set on a light soil; secondly, after attaining bearing age trees kept in permanent sod are less subject to it than those kept under clean cultivation; thirdly, excessive stimulation by manuring is inadvisable, especially the application of horse and those manures which contain much nitrogen; fourthly, if the blight should make its appearance the parts affected, whether branches or main stem, should be cut off six or eight inches below the disease and burned at once. This, if properly done, will often checkmate the enemy; fifthly, a different system of pruning should be adopted from that usually practiced of shaping the trees up in a conical or pyramidal form. Plenty of low shooting branches should be encouraged to grow, so that if the upper part of the tree is attacked by blight, as is generally the case, and has to be cut out, there is plenty of wood below from which to create the tree anew. A prominent grower in this neighborhood has adopted this plan for some years past with great success. The writer would suggest the following as a good mode of treatment for a pear orchard: Clean cultivation till bearing age, then lay down in permanent sod, keeping up the fertility by light top-dressing yearly of wood ashes and superphosphate of lime, every second year adding to this a little nitrate of soda or sulphate of ammonia. One word of warning. The following is a pretty certain recipe for blight: Given an orchard laid down in sod for some years, and perhaps a little neglected, then let that orchard be ploughed up and freely manured, the result in nine cases out of ten will be blight either in the same or the following year. The writer has known several instances of this. Judicious thinning of the fruit is also a help to prevention, for the reason that too large a crop of fruit will tend to weaken the tree, and thus render it more liable to succumb to any blight spores which may be floating in the air.

II. THE CURCULIO.—This insect, though it does not utterly destroy the crop as in the case of plums, yet renders it of poor quality, gnarled and misshapen fruit being mainly due to its ravages. The remedy is to spray the trees shortly after the blossom has set with a mixture of Paris green and water in the proportion of 3½ ounces of the former to 40 gallons of the latter. This application may be repeated in about a week's time.

III. THE TENT CATERPILLAR.—Some seasons this insect is very troublesome, and will soon destroy the foliage if not checked in time. The best way to extirpate them is to go over the trees in winter and destroy the eggs generally deposited at the ends of the young branches. These are covered with a glutinous substance easily noticeable when the trees are bare of foliage. If, however, the caterpillars are allowed to form their nest, they should be pulled out by hand and burned as soon as observed in either spring or summer.

IV. THE BARK LOUSE.—If the bark of the trees be kept smooth this insect cannot obtain a foothold, consequently an excellent remedy for it is to apply to bark of the tree with a paint brush about the month of June a wash in proportion of one-half pound of washing soda to 8 quarts of water, adding to this mixture plenty of soft soap. If the bark of the trees be rough they should be previously scraped with a blunt hoe.

If these hints be thoroughly and systematically acted upon pear growers may hope to stay the ravages of their worst enemies.

Farmers' Picnic.

The Grange, the Farmers' Institute and Farmers' Clubs of Middlesex and Elgin, have united for the purpose of holding their annual picnic for this year at Port Stanley, on Thursday, June 11th. A good time, socially and intellectually, may be expected.

Query and Answer.

A subscriber from Brampton asks how to get quit of wild vetches. Answer.—Constant cutting while the field is in root crop or fallow is the only remedy. They are a bad weed and spread rapidly. The seed, like that of wild mustard (charlock), is full of oil, and will lie for years and will germinate when conditions are favorable.

Poultry.

Lice on Hens and Chicks.

The months of June and July are to the young chicks a very critical period. More chicks die from the effects of lice than all other causes combined. And this is the season in which their ravages are greatest, and while attention is necessary to shelter from both the excessive hot sun and the rain, it is of much greater importance to give attention to this enemy. When the chicks are six or seven days old catch the mother hen an hour or so before sundown, and with a sponge or cloth that has been dipped in coal oil, and then squeezed as dry as it can conveniently be done, with the hand rub against the feathers, all over the lower part of the body and on the breast. Care must be taken to squeeze the cloth nearly dry, as if that is not done there is danger of the chicks getting the oil in their eyes and losing their eyesight thereby. As the oil is of a highly inflammatory nature it also affects the skin of the hen injuriously when used too plentifully. As soon as the chicks go under the hen the odor of the oil causes the lice to leave or die, probably the latter, but it matters little which. Don't come to the conclusion that your chicks are not infested with lice, for there was never a chick hatched by a hen that had not when from a week to a month old, somewhere between one and a thousand lice on them. The most troublesome and dangerous of these is the large gray louse that buries its head and a portion of its body in the back of the head of the chick. It is not at all uncommon to see two or three dozen of these on the pate of a drooping chick. It is not judicious to use coal oil on the chicks, as it is almost as injurious to them as to the lice. In fact it should be made an absolute rule in the poultry yard not to apply coal oil to the flesh of fowls in any form except on "scaly legs." Should chicks at eight or ten weeks old appear dull and stand moping about with wings drooping and appearance dejected, it may be safely assumed that they have a host of large gray lice boring into the back of their heads, and unless attention is given death speedily ensues. This louse must not be in any way confounded with the common hen louse found on the hens in winter, and which runs rapidly when the feathers are parted, as the former presents to view simply an enlarged posterior, the head being, as previously stated, buried in the chick. In the case of chicks that have left the hen a small amount of blue ointment may be applied, or a little sulphur and lard by raising up the feathers well down on the back of the head and working it down on to the skin beneath. Care should be taken not to daub too much of either of these substances about the head, as evil results sometimes follow such an application.

Family Circle.

Only.

Only a word all softly spoken;
But it soothed the sense of pain
In a heart of anguish bruised and broken!
Was that gentle whisper vain?

Only a glance of kindness given
To one slighted and spurned of men;
But it seemed to the soul a glimpse of heaven!
Was that look of trifle, then?

Only a smiling recognition
To a lad at his lowly task;
But it stirred his breast with a high ambition.
Was it slight, that act, I ask?

Only a word, a glance, a greeting,
Only—but say not so;
Full of what appeareth frail or fleeting,
Hath a power we little know.

—Philip Burroughs Strong.

UNCLE INGOT.

"If ever you or yours get five pounds out of me, madam, before I die, I promise you, you shall have five thousand; and I am a man of my word." So spoke Mr. Ingot Beardmore, drysalter and common-councilman of the city of London, to Dorothea Elizabeth, his widowed sister-in-law, who had applied to him for pecuniary succor about three months after the death of his younger brother Isaac, her husband. There were harshness and stubborn determination enough in his reply, but there was no niggard cruelty. Mrs. Isaac wanted money, it is true, but only in the sense which we all want it. She was only poor in comparison with the great wealth of this relative by marriage. Her income was large enough for any ordinary—Mr. Ingot said "legitimate"—purpose, but not sufficient for sending her boy to Eton, and finishing him off at the universities, as it was the maternal wish to do. Mr. Ingot hated such genteel intentions; Christ's Hospital had been a fashionable enough school for him, and he had "finished off" as a clerk at forty pounds a year in that very respectable house of which he was now the senior partner. With the results of that education, as exemplified in himself, he was perfectly satisfied, and if his nephews only turned out half as well, their mother, he thought, might think herself uncommonly lucky. Her family had given themselves airs upon the occasion of her marrying Isaac—"allying herself with commerce," some of them called it—and Ingot had never forgiven them. He gloried in his own profession, although government had never seen fit to ennoble any member of it, and perhaps all the more upon that account; for he was one of those Radicals who are not "snobs" at heart, but rather aristocrats. He honestly believed that noblemen and gentlemen were the lower orders, and those who toiled and strove the upper crust of the human pie. When he was told that the former classes often toiled and strove in their own way as much as the others, he made a gesture of contempt, and "blew" like an exasperated whale. It was a vulgar sort of a retort, of course, but so eminently expressive, that his opponent rarely pursued the subject.

He rather liked his sister-in-law, in spite of her good birth, and would have, doubtless, largely assisted her had she consented to bring up her children according to his views, but since she preferred to take her own way, he withdrew himself more and more from her society, until they saw nothing at all of one another. He had no intention of leaving his money away from his brother's children; he had much too strong a sense of duty for that; and as for marriage, that was an idea that never entered into his hard old head. He had not made a fool of himself by falling in love in middle age, as Isaac had done (in youth, he had not time for such follies), and it was not likely that at sixty-five he should commit any such imprudence. So his nephews and nieces felt confident of being provided for in the future. In the present, however, as time went on, and the education of both girls and boys grew more expensive, Mrs. Isaac's income became greatly straightened. Her own family very much applauded the expensive way in which she was bringing up her children, and especially her independence of spirit with relation to her tradesman brother-in-law, but they never assisted her with a penny. The young gentleman at Cambridge was therefore kept on very short allowance, and the young ladies, whose beauty was something remarkable, affected white muslin, and wore no meretricious jewellery. Their pin-money was very limited, poor things, and they made their own clothes at home by help of a sewing-machine. If Uncle Ingot could have seen them thus diligently employed, his heart would perhaps have softened toward them, but, as I have said, they now never got that chance. Julia, the elder, had been but six years old when he last called at their highly-rented but diminutive habitation in Mayfair, and now she was eighteen, and had never seen him since. Although she had of course grown out of the old man's recollection, she remembered his figure-head, as she wickedly called his rigid features, uncommonly well; and indeed nobody who had ever seen it was likely to forget it. His countenance was not so much human as ligneous; and his profile, Nephew Jack had actually seen upon a certain nobbly tree in the lime-walk of Clare Hall at

Cambridge—much more like than any silhouette ever cut out of black paper. They had laughed at the old gentleman in early days, and snapped their fingers at his churlishness but it had become no laughing matter now.

That remark of Uncle Ingot's, "If ever you or yours gets five pounds out of me, madam, before I die, I promise you, you shall have five thousand; and I am a man of my word," had become a very serious sentence, condemning all the family to, if not Poverty, at least very urgent Want. What it meant of course was, that he was resolutely determined to give them nothing. In vain the young ladies worked for Uncle Ingot slippers and book-markers for his birthday, and sent to him their best wishes at Christmas in tinsel's highly-scented envelopes; in vain Jack sent him a pound of the most excellent snuff that Bacon's emporium could furnish, at the beginning of every term. He always wrote back a civil letter of thanks, in a clear and clerical hand, but there was never any inclosure. When Mrs. Isaac asked him to dinner, he declined in a caustic manner—avowing that he did not feel himself comfortable at the aristocratic tables of the West End—and sent her a pine-apple for the desert, of his own growing. He had really no ill-feeling toward his relatives, although he kept himself so estranged from them; but I think this sort of conduct tickled the old gentleman's grim sense of humor. If he could have found some legitimate excuse for "making it up" with his sister-in-law, within the first year or two of their falling out, perhaps he would have been glad to do so; but time had now so widened the breach that it was not to be easily repaired. What he had satirically written when he declined her invitation, had grown to be true; he rarely went into society, and almost never into the company of ladies, the elder portion of whom he considered frivolous and vexatious, and the younger positively dangerous. He had a few old-bachelor friends, however, with whom he kept up a cordial intercourse, and spent with them various festivals of the year as regularly as they came round.

On the 31st of December, for instance, he never omitted to go down to Reading, and "see the old year out, and the new year in," in the company of Tom Whaffles, with whom he had worn yellow stockings in these school-days that had passed away more than half a century ago. Tom and Isaac had been even greater cronies as boys than Tom and Ingot, but the latter did not like Tom the less upon that account; secretly, I think, he esteemed him the more highly as a link between himself and that luckless family whose very existence he yet chose to ignore. Mr. Whaffles had intimate relations with them still; they came down to stay with him whenever his sister paid him a visit, and could act as their hostess; but this never happened in the last week of the year. Tom was never to speak of them to his old friend—that was not only tacitly understood, but had even been laid down in writing, as the basis of their intimacy. On the 31st of December last, Mr. Ingot Beardmore found himself, as usual, at the Paddington station, looking for an empty compartment for his own company had got to be very pleasing to him. Having attained his object, and rolled himself up in the corner of the carriage in several great coats, with his feet upon a hot tin and his hands clothed in thick mittens, and looking altogether like a polar bear who liked to make himself comfortable—when everything was arranged, I say, to the old gentleman's complete satisfaction, who should invade his privacy, just as the train was about to start, and the whistle had sounded, but one of the most bewitching young ladies you ever set eyes on!

"Madam, this carriage is engaged," growled he, pointing to the umbrella, carpet-bag, and books, which he had distributed upon all the seats, in order to give it that appearance.

"Only engaged to me!" I think, sir," replied the charmer flippantly. "Happy carriage! I wish I was. Isn't that pretty?"

Mr. Beardmore had never had anything half so shocking said to him in all his life, and if the train had not been already set in motion, he would have called upon the guard for help, and left the carriage forthwith. As it was, he could only look at this shameless young person with an expression of the severest reprobation. At the same time, his heart sank within him at the reflection, that the train was not to stop till it reached his destination—Reading. What indignities might he not have to suffer before he could obtain protection! She was a modest-looking young lady, too, very simply dressed, and her voice was particularly sweet and prepossessing, notwithstanding the very dreadful remarks in which she had indulged. Perhaps she was out of her mind—and at this idea Mr. Ingot Beardmore broke out, notwithstanding the low temperature, into a very profuse perspiration.

"Now, what will you give me for a kiss, you old—you old polar bear?" asked the fair stranger playfully as the train flew by Ealing.

"Nothing, madam, nothing; I am astonished at you," answered Mr. Beardmore, looking anxiously round the carriage in the desperate hope of finding one of those newly-patented inventions for affording communication with the guard.

"Well, then, I'll take one, and leave it to your honor," continued the young lady with a peal of silver laughter; and with that she lightly rose, and before the old gentleman could free himself from his wraps, or ward her off with his muffetees, she had imprinted a kiss upon his horny cheek. Mr. Beardmore's breath was so utterly taken away by this assault, that he remained speechless, but his countenance was probably more full of expression than it had ever been in his life. "I am not mad," laughed she in reply to it; "although I have

taken a fancy to such a wonderful old creature. Now, come, if I kiss you again, what will you give me?"

"I shall give you in charge to the police, madam, the instant that I arrive at Reading."

"Give me in charge! What for, you curious piece of antiquity?"

"For an assault, madam; yes, for an assault. Don't you know that you have no right to kiss people without their consent in this manner?"

Here the young lady laughed so violently that the tears came into her eyes. "Do you suppose, you poor old doting creature, that anybody will ever believe such a story as that? Do you ever use such a thing as a looking-glass, you poor dear? Are you aware how very unprepossessing your appearance is, even when you don't frown, as you are doing now in a manner that is enough to frighten one? You have, of course, a perfect right to your own opinion, but if you suppose the police will agree with you, you will find yourself much mistaken. The idea of anybody wanting to kiss you will reasonably enough appear to them preposterous."

"What is it you require of me, you wicked creature?" cried the old bachelor in an agony of shame and rage.

"I want payment for my kiss. To a gentleman at your time of life, who scarcely could expect to be so favored, surely it is worth—what shall I say?—five pounds.—What not so much? Well, then, here's another for your other cheek." Like a flash of lightning, she suited the action to her words. "There, then, five pounds for the two, and I won't take a shilling less. You will have to give it to the poor's-box at the police station, if not to me. For I intend, in case you are obstinate, to complain of your disgraceful conduct to the guard at the first opportunity. I shall give you into custody, as sure as you are alive. You will be put upon your oath, you know, and all you will dare to say will be that I kissed you, and not you me. What 'roars of laughter' there will be in court, and how funny it will all look in the papers!" Here the young lady began to laugh again, as though she had already read it there. Mr. Beardmore's grim sense of humor was, as usual, accompanied by a keen dislike of appearing ridiculous. True, he hated to be imposed upon; still, of the two evils, was it not better to pay five pounds than to be made the laughing-stock of his bachelor friends, who are not the sort of people to commiserate one in a misfortune of this kind?

In short, Mr. Ingot Beardmore paid the money. Mr. Thomas Whaffles found his guest that evening anything but talkative. There was a select party of the male sex invited to meet him, by whom the rich old drysalter was accustomed to be regarded as an oracle; but on this occasion he had nothing to say; the consciousness of having been "done" oppressed him. His lips were tightly sealed; his cheeks were glowing from the audacious insult that had been put upon them; his fingers clutched the pocket-book in which there was a five-pound note less than there ought to be. But when his host and himself were left alone that night, "seeing the old year out, and the new year in," his heart began to thaw under the genial influences of friendship and gin-punch, and he told his late adventure to Tom Whaffles, not without some enjoyment of his own mischance.

"I could really almost forgive the jade," said he, "for having taken me in so cleverly. I dare say, however, she makes quite a profession of it; and that half a score of old gentlemen have been coerced before now in ransoming their good name as I did. And yet she was as modest and ladylike looking a girl as ever you saw."

"Was she anything like this?" inquired Mr. Whaffles, producing a photograph. "Why, that's the very girl!" exclaimed the guest. "Ha! ha! Tom; so you, too, have been one of her victims, have you? Well, now, this is most extraordinary."

"Not at all, my dear fellow. I know her very well; and her sister, and her mother, and her brother too. I can introduce you to her if you like. There's not the least harm in her; bless you, she only kissed you for a bit of fun."

"A bit of fun!" cried Mr. Beardmore. "Why, she got a five-pound note out of me!"

"But she does not mean to keep it, I am very sure. Would you like to see her again? Come, 'Yes' or 'No?'"

"If she will give me back my money, 'Yes.'"

"Very well," returned the host; "mind, you asked for her yourself;" and he rang the bell pretty sharply twice.

"Here she is: it's your niece, Miss Julia. Her mother and sister are now staying under this very roof."

"Yes, uncle," said the young lady demurely. "Here is your five-pound note: please to give me that five thousand which you promised mamma if ever she or hers got five pounds out of you; for you are a man of your word, I know. But what would be better still would be, to let me kiss you once more, in the character of your dutiful niece; and let us all love you as we want to do. It was an audacious stratagem, I admit, but I think you will forgive me—come."

"There go the church-bells!" cried Tom Whaffles. "It is the new year, and a fitting time to forget old enemies. Give your uncle a kiss, child."

Uncle Ingot made no resistance this time, but avowed himself fairly conquered; and between ourselves, although he made no "favorites" among his newly-reconciled relatives, but treated them with equal readiness, I think he always liked Niece Julia best, who had been the cause of healing a quarrel which no one perhaps had regretted more at heart than Uncle Ingot himself.

Minnie May's Dep't.

Wanted, A Girl.

Wanted—a girl, not a butterfly gay;
Gentle and sweet, in a womanly way.
No beautiful picture, languid and fair,
That always seemed labelled, "Please handle with care";
But one in whose heart is hidden true worth,
And faithfully follows its mission on earth.
Hopeful and earnest in helping and giving,
Finds plenty to do in the life she is living,
Fulfilling its duties with sweet content,
Whether adverse or pleasant, just as they're sent;
In the garb of a queen or in homespun arrayed,
Whatever her station—is needed that maid.

MY DEAR NIECES:—

While every other subject has been touched upon in these letters nothing has been said about weddings, and my girls may be wanting some hints, for "June, the month of roses," is a favorite one for brides, and for the prettiest of brides, for all nature helps by her profusion of flowers. My first advice must be: Do not get too many clothes. A few sets of underclothing are enough, with what you have already. Underclothing becomes discolored beyond redemption when not used, and you cannot keep more than four or five suits in constant wear, besides it adds much to the discomfort of a family to see the bride elect sew, sew, sew for months before the wedding. Better make up just enough and take the rest to your own home where you can finish it at your leisure, for you will have plenty of it in the first months of married life. What you do provide should be of the best—as good as your means will allow, and do not be beguiled into trimming them with anything cheap. Home-made crocheted or knitted edges will "wear forever," as the saying goes. The same with dresses also. Get nothing cheap. Better a first-class cashmere than a flimsy silk. Have them made well and fashionably, and they will give you satisfaction until they are worn out. Too many dresses cannot be worn, and it is better to buy when you want a new one than alter the one you have. They never will alter to your satisfaction; besides both material and color become old-fashioned as well. White veils and very light colored bonnets are no longer the style for brides, and the avoidance of them shows solid good sense, in that it renders the wearer less conspicuous. If your wedding is to be a home one ample opportunity will be afforded you of showing your taste in the decoration of your home, and refreshment table, and woods and fields can be levied upon for their contributions to make your wedding bright. Your home can be converted into a bower of beauty. Yards upon yards of Linnaea vine, which grows in every woods, can be festooned from pictures, curtains, and lamps; and mantel pieces can be converted into "things of beauty" by banking moss upon them, filling the moss with wild flowers, and looping festoons of Linnaea vine from the edge. Your refreshment table may consist of all that is tempting and wholesome, but by some dexterous touches it too can be converted into a bower of beauty. For a centre piece take several bunches of ferns, roots and all, bury them in moss in a large round dish, and bank the dish with lovely moss on the outside as well; stick fern leaves thickly through the moss, or blossoms, if you have them. On the white table cloth lay fern leaves wherever the cloth is not covered by dishes; then fill all your vases, small and great, with what blossoms you have—daisies, grasses, buttercups, blossoms of fruit trees—and in the

spaces left the vases can be set. The result will surprise you, for your table will look like a banquet. Sisters and brothers can contribute their share in making this the bright and happy day it should be for their sister they have loved so well.

MINNIE MAY.

Minnie May offers a prize of \$2.00 for the best essay on "Punctuality." Communications to be in our office by the 15th July.

Some Tested Recipes.

If there is any hominy left from breakfast put it in a pudding dish, and pour over enough of milk to cover it; sweeten with brown sugar and a little nutmeg grated over; add three well-beaten eggs, and bake in a quick oven, only until the custard sets.

MUFFINS.

One pint of milk, warm, melt and pour into it one quarter pound of butter and three well-beaten eggs. Stir in enough sifted flour to make a thick batter, and set to rise over night after dissolving and beating into it one half cake compressed yeast. In the morning grease twelve muffin rings, dip the mixture into them in equal parts. Let rise and bake in a moderate oven.

SODA SCONE.

One quart of flour into which rub smooth one quarter pound of butter; one tablespoon of sugar; a little salt, and one teaspoon of soda, and half one cream of tartar; make a hole in the centre, and stir in enough buttermilk to make a stiff dough. Mould quickly into two balls, put them on a baking pan, and flatten with the hand about an inch thick. Bake in a moderate oven.

PUDDING SAUCE.

Put into a small sauce pan, half a pint of water; when boiling stir in one teaspoonful of corn starch, which has been rubbed smooth in a little cold water; let the sauce boil one minute, take from the fire, and stir in one tablespoon of butter, and two tablespoons of white sugar; served very hot. A great variety of sauces may be made from this basis; wine may be added, or brandy, vanilla extract, or a lemon cut into slices and stirred in. Brown sugar is best to use if for fruit pudding.

TENDER FOWLS.

Boil one pair of fowls until tender; let them cool; cut them in nice joints; pull off all the skin and fat; put them back into the liquid they were boiled in; after skimming it simmer gently for ten minutes; add half a cup of cream with a teaspoon of corn starch rubbed in, some salt and pepper, and some chopped parsley. Serve hot.

COLD POTATOES.

Mash fine enough cold potatoes; add two eggs; a tablespoon of butter, melted; some salt or celery flavoring; add two tablespoons of milk; make them in the form of a mound upon a baking pan, and bake brown.

Carry the radiance of your soul in your face; let the world have the benefit of it.

Dish-water is a most uninviting subject to write about, but, like everything else, has its uses and abuses. Never give it to animals to drink. There is no nourishment in it, and there is almost always soap which makes it injurious. Do not waste it either, all vegetables will live and thrive on it, if poured about their roots after sundown. Shade trees like it also.

Our Library Table.

The Housekeeper, Minneapolis, published semi-monthly, \$1.00 per annum, is up to the mark as a useful authority upon all matters domestic. Fiction, fashion, and fancy work are given of first-class quality, besides directions, too numerous to mention, for everything that concerns the housekeeper.

The Ladies' Home Journal, published in Philadelphia, contains the usual attractions and numbers of extra ones. The chapter upon "Brides and their Belongings" is very useful and practical.

Our Homes, for April, published at Brockville, Ont., \$2.00, amongst other things has designs and drawings, ground plan, and plan of elevation for two cottages, with cost of building, plumbing, etc., besides two pretty stories, fashions, recipes, etc.

Home Fascinator, Montreal, is bright and practical as ever, with stories, useful reading, recipes, and other things too numerous to mention.

The Housewife, published in New York, 50c., is full of hints upon subjects that interest mothers and girls. No housekeeper should be without it.

The Fashions.

When sunny summer comes the pretty shoulder capes that looked so dressy and felt so snug when spring winds blew, are now discarded, and the stylish basque shows an infinite amount of taste and skill in their trimming and make. Summer goods never have been prettier, and the flowers are marvels of beauty and truth. Heliotrope, natural as life, with its tiny green leaves, decorates a black net bonnet, and narcissus, with their waxen white flowers, are wreathed around a chapeau of gold net. A bunch of golden buttercups, tied with a strand of grass, look as if they had been placed upon the black lace bonnet as they were picked from the field, and a pure white tulle bonnet looks fragrant with a sheaf of pink and white rosebuds. Parasols of all shades are to be seen, but the very long handled ones are not in favor, being awkward and heavy. The general effect of the costumes seen seems to be coolness, and the chollies of all shades are just the material for summer dresses for growing girls.

A Summer Scene.

[Original in the FARMER'S ADVOCATE.]

"Not Katrine, in her mirror blue,
Gives back the shaggy banks more true.
So wondrous wild the whole might seem
The scenery of some fairy dream."—Scott.

What Canadian has not at some time looked on such a scene as our picture represents? The waves as they come to shore rippling at our feet. The wind in the tree tops, where the leaves rustle, and sing their song through the long summer hours. The giant trunks bow in majesty to the reflecting waters. The rocks which bar the river like huge stepping stones, tossed there, how and when? Food for thought for the learned, calm for the aching heart, for "Nature," Bryant writes, "glides into his darker musings with a mild and healing sympathy that steals away their sharpness ere he is aware."

Those waters themselves; how many thoughts spring up as we approach them! Dreams of days now gone, when we in company (we meet no more) held the rudder string, and the oar dropped diamonds at every stroke as borne over the waters. Rough and rocking at times, then

quiet and gentle, stretched as a sea of glass, and reflecting the blue above. Then we gathered water lilies—even now their perfume comes wafted on memory's zephyrs. We explored the islets, startled the white sea birds, climbed the banks on the opposite shore, and, fancy free, dreamed only of beauty and joy and love. With Byron we could feel:—

"There is a pleasure in the pathless woods,
There is a rapture on the lonely shore,
There is a society where none intrudes,
By the deep sea—and music in its roar."

Often have we seen enacted in reality Longfellow's beautiful picture:—

"Softly the evening came. The sun from the western horizon
Like a magician extended his golden wand o'er the landscape:
Twinkling vapors arose; and sky and water and forest
Seemed all on fire at the touch, and melted and mingled together.
Hanging between two skies, a cloud with edges of silver,
Floated the boat, with its dripping oars, on the motionless water."

And just such scenes, if we take the trouble to find them, does our Canada afford. How beautiful the Creator has made this world for man! They who leave this Dominion to find beautiful scenery in Alps or Andes, by Corno Lake or in Yosemite Valley find it there, but until they have explored they know not what beauties they leave behind.

Where the travelled travellers, and the society people go is not always where the beauty is. They go where the railways take them, or where the boats ply, to see what some money maker has written up and advertised for his own interests.

As the lover of flowers, who spares no pains on their production, is to him who simply likes to look at them, so the true lover of Nature will spare no time or pains he can afford to find that which delights his soul. The miner digs for his gold, the explorer journeys far through exposure and peril, the hunter goes to the far north to find his favorite game, but the lover of Nature may find around him, just where he is, much to admire, much to soothe, much to elevate his thoughts above the commonplace of common things. He may find

"Tongues in trees, sermons in stones,
Books in the running brooks,"

and, best of all "good in everything."

K. R. McQ.

We must not be dogmatic. The more I see of life the more I see that we cannot lay down rigid dogmas for everybody.—[Sir W. Thompson.

"I have this evening been preaching to a congregation of idiots," said a conceited young parson. "Then was that the reason you always called them 'beloved brethren?'" asked a strong-minded young woman.

PRIZE ESSAY.

Children's Literature.

BY JESSIE J. LAMBERT, JOCELYN P. O., ST. JOSEPH'S ISLAND, ALGOMA.

"Souls are built as temples are.—
Here a carving rich and quaint,
There the image of a saint;
Here a deep-hued pane to tell
Sacred truth or miracle.
Every little helps the much,
Every careful, careless touch
Adds a charm or leaves a scar.

"Souls are built as temples are.—
Based on truth's eternal law.
Sure and steadfast, without flaw.
Through the sunshine, through the snow,
Up and on the building goes.
Every fair thing finds its place,
Every hard thing lends a grace,
Every hand may make or mar."

The Catholic priest who said, "Give me the child for his first seven years, and I care not who has him for the rest," had not been a careless observer of the powers of early training. In youth, everything with which we are surround-

choice, as in the moral questions, being left to ourselves. The adult mind, if properly trained, takes the wheat, leaving the chaff and noxious weeds; but the inexperienced mind of the child, if left to itself, devours everything which comes within its reach, good or bad. I have heard of a mother who was cramming her children's minds with most precious nonsense. On being asked if she meant that they should be weak, ill-judging and romantic men and women, she said, "No; but children do not understand sensible books." She was glad to get them to read at all, and would give them better books when they were older. "Be not deceived; whatsoever a man soweth that shall he reap." Admit that the girl who is taught vanity will not be vain when she becomes a Christian woman, and the youth who is encouraged to read such trash will not be dissatisfied when he becomes a Christian man. It is by fire the gold is purified. Sorrow after sorrow comes, draught after draught

of misery is drained, and the heart has sometimes to be bruised beneath the wreck of everything it has loved and delighted in before earth and self can be crushed out of it. Why should mothers be so unjust to their children planting thistles, because after years of labor they may be rooted out. It is a passion with most of our young people to read, and the passion can be a great blessing if only guided aright. "Would you stop the flowing river thinking it would cease to flow? Onward it must flow forever. Better teach it where to go." If we would have our children and associates read



A SUMMER SCENE.

ed leaves an impress, and, in after years, at will we bring forth those impressions as thoughts that have been stored up somewhere in the living mechanism. The minds of the young have been compared to the prepared plate of the photographer—ready to seize and hold every impression. The home training which the children of intelligent parents receive is a large, and, I may say, the best part of their early education. A block of marble may be chiseled into the semblance of the human form with exquisite skill, but it still remains marble, and is cold and lifeless. So with each of us, we need to have that which is immortal within us kindled into life. "Then infant reason grows apace, and calls for the kind hand of an assiduous care. Delightful task to rear the tender thought, to teach the young idea how to shoot." The present means of gaining knowledge are much better adapted to the mental capacity of children than those of fifty years ago. There are multitudes of books and papers written expressly for the young by the best minds of the age. The world is full of books, both good and bad, the

the good and reject the bad, we should do something to awaken an interest in, and endeavor to create a taste for, a more refined and instructive course of reading. In my opinion there is no better way to reach them than to put into their hands good as well as interesting books and magazines, giving a few explanations so as to cause them to take an interest in the subject. We cannot expect young people to appreciate a thing they know comparatively little about. Human nature is prone to wander in forbidden paths, and unless parents or friends make some effort to lead the young into the right paths they are responsible. 'Tis education forms the common mind. Just as the twig is bent the tree's inclined. A knowledge of the standard poetry of the day has a refining influence on the minds. There are several books of selections for the young, from Scott and Burns, Shakespeare and Mrs. Browning, Tennyson and Jean Ingelow, Longfellow and Whittier, Wordsworth and Mrs. Hemans, and many other beautiful singers. Most of the poetry read in youth remains in the memory.

"Long, long be my heart with such memories filled,
Like the vase in which roses have once been
distilled:
You may break, you may shatter the vase if you
will,
But the scent of the roses will hang round it
still."

Then what can be made more interesting
than history—wherever we turn we are met
by records of the past; there is no nation, how-
ever fallen, but has a tradition of a time; there
is no people, however glorious, but can look
back to a day of small things. I have read that
the methods of teaching history is as old as
Joshua, where he says, "When your children ask
their father in time to come, saying what mean
ye by these stones? Then ye shall answer them
that the waters of Jordan were cut off be-
fore the Ark of the Covenant of the Lord." We
are here commanded to draw our children's
attention to things at our own door, and every
boy and girl is born with a love for their country,
and wants to read all they can about it.

"Breathes there the man with soul so dead,
Who never to himself hath said,
This is my own, my native land?"

To animate and exalt the hearts of the young, to
instill noble principles, and to establish resolution
there is nothing like a good example. In looking
over the publications one can scarce feel satisfied
with many which are offered, the leading features
in them being "slangy," telling of boyish self-
will and desperate adventures instigated more by
foolhardiness than any high motive. A work
very much recommended is entitled "Noble
Deeds of the Great and Brave." The descrip-
tions are by a great variety of the most admired
classic writers, and the examples are classed as
grand achievements, heroic sacrifices, valiant
exploits, knightly virtues, patriotism, integrity,
devotion to duty, fidelity to home and kindred.
No youth can read those accounts of what others
have done without his heart rising and burning
to imitate such grand examples of pure, un-
selfish good, and without a strong desire to
learn more of the history of the persons named
in preference to reading imaginary stories. If
mothers would train their children to read good
books, to love and cultivate fruit and flowers, to
admire the beauties of nature, that "the fear of
the Lord is the beginning of wisdom," that
"every good gift, and every perfect gift is from
above." If upon this foundation is based a
broad, thorough education the edifice erected
will be one useful, durable and beautiful.

"Life's years may then be spent,
As if their years were gold;
Each one will seem as only lent,
God's purpose to unfold."

"When death shall open the gate
Through which life's journey led:
Be closed, but leave that influence here
Which speaketh yet though dead."

Cork if sunk twenty feet in the ocean will not
rise on account of the pressure of the water.

To be content is not to be satisfied. No one
ought to be satisfied with the imperfect.

Miss Emma Steiner, the only woman operatic
conductor in America, has read, composed, and ex-
ecuted music of a high order ever since she was a
child. She travels with operatic companies as
conductor, and is now engaged in the completion
of two operettas of her own composing.

A comparatively new work, engaged in by
women, is that of lady factotums. For instance,
if a lady is delicate and unfit for domestic cares,
the lady factotum goes to the house, finds out
the condition of things, superintends the serv-
ants, does the marketing, the shopping, answers
the notes, delivers messages, and takes the place
of an elder daughter—all, of course, for a fair
remuneration.

The Torn Leaf.

A witching charm pervades the things beyond our
eager grasp.
We'd throw away the prizes won for those we can-
not clasp:
All day we wait for sunset and all night we watch
for dawn:
The best part of life's story is the leaf that's torn
and gone.

The past is shadowed with regret, the future has
its doubt,
And every rose that we would pluck with thorns is
hedged about.
The dream, the song, the hope, the prayer, the
things we loved were on
The page for which we all despair, the leaf that's
torn and gone.
—Chicago Post.

Essay Writing.

BY I. A. W.

The subject in essay writing may be compared
to the point or wire around which the myriad
atoms of a saturated solution cluster and crystal-
lize. It is the grouping of thoughts around one
subject which distinguishes the essay.

That great authority in the art of cooking,
Mrs. Meg Dods, lays down one fundamental prin-
ciple in the preparation of hare soup: "First
catch your hare." A well defined subject is
quite as indispensable in essay writing as an
actual hare in the making of that savory soup.

And listen to the wise words of the brilliant
Jean Paul Richter: "Never write upon any sub-
ject until you have first read yourself full upon
it, and never read upon any subject till you have
first thought yourself hungry upon it."

So even when the subject is chosen the writing
does not forthwith commence, but rather the
thinking upon it, and the reading about it. This
may be regarded as the collecting of material for
the essay. The youthful essayist scans the wide
circle of literature, and every addition to his
knowledge only whets his hunger for more.
Subjects which at first seem barren and uninter-
esting become positively attractive and engros-
sing as we study them. To the student of almost
any theme new beauties unfold themselves as it
is disencumbered from the obscuring ignorance
which surrounds it. Let it not, however, be
thought that essay writing begins and ends with
the collecting of the material. Thought will
now be required to arrange the information in a
systematic manner, and to present it in an agree-
able form, and for this the essayist must rely upon
himself. He must insist upon this—that he him-
self must write the essay. Dates, events, facts
cannot of course be conjured up by a writer, they
must be collected, even copied. But they must
be presented with the essayist's own thoughts to
explain or illustrate them. Therefore, while the
information is gathered from all quarters, while
hands grope around for books, and eyes look
abroad for knowledge, let the brains also be
exercised. It may be necessary to cut down, to
rearrange, and to rewrite whole passages of an
essay. Beginners are always slow to prune or
cast away any thought or expression which may
have cost labor. They forget that brevity is no
sign of thoughtlessness. Much consideration is
needed to compress the details of any subject
into small compass. Essences are more difficult
to prepare, and, consequently, more valuable
than weak solutions. Essay writing deservedly
holds a chief place as an aid and stimulus to
self-improvement. It develops and strengthens
the abilities. It exercises the judgment, and
thereby tends to correct erroneous opinions. It
arranges and condenses information. Many who
think themselves fully equipped upon certain
subjects have their confidence rudely shaken
when they begin to write upon them.

Considerations such as these should surely
commend to the young particularly the practice
of essay writing. Theirs is the period of life
when these benefits may be most surely gathered.
When later age comes, with its hurry and pres-
sure of business, which, though it may leave op-
portunities of maintaining and exercising knowl-
edge gained in former years, still forbids those
studies necessary to the formation of mental at-
tainments which ought to have been sought in
youth.

Great advantages may be derived from an ac-
quaintance with the essays of those who have
made the English language a classic tongue.
These should be studied, not alone for informa-
tion, but also with the view of observing the
details of composition, and noting how the com-
pact and finely-knitted skeleton of fact has been
clothed with the twin graces of choice diction
and playful fancy. What a grand triumphal
procession of genius and talent do these essayists
form. Addison and Steel, Goldsmith and John-
son—they may be said to have created the essay.
Next in the march of intellect we observe Leigh
Hunt and Charles Lamb. But time would fail
were we to remark on even the chiefs of those
mental giants who have left an inheritance of
intellectual wealth to every reader of the English
language! What a privilege to enjoy the com-
pany of the great minds of the past and present;
and to enjoy it to profit by it. The poorest and
most obscure student may lay these writers' works
upon his desk, and draw from them their deep-
est thoughts; or he may, in his chair at the fire-
side, spend a golden evening with the leaders of
every age. Company such as that, study such
as that, and fellowship such as that will prove
the best aids and incentives to essay writing.

Misused Words.

The richness of the English language consits
in the number and variety of its synonyms.
These synonyms have a shade of difference, but
their resemblance of meaning is sufficient to
make them liable to be confounded together.
The habit of discriminating the shades of mean-
ing will guard against this liability. The
following eight words, which are frequently
misused by interchanging one for the other,
furnish examples of this ever-present liability.

Between for among.—The word "between" is
properly used only when its object consists of
two items. "Among" should be used if the
object includes more than two items. "Be-
tween" is a corruption of "by twain," or "by
two." A father divides his property between
his two sons. Another divides his estate among
his five children.

"Constant" means occurring all the time with-
out intermission. "Frequent" means occurring
often. We frequently hear "constant" used to
denote events which occur quite often, but at
considerable intervals of time.

Custom for habit.—A person forms a habit.
A community or a people have a custom. It is
a habit with most persons to confound these two
words. Indeed, this habit has almost become
the custom in some communities.

Depot for station.—The place where the train
stops to take in passengers is a station, whether
there be a building there or not. The depot
(depository) is a strong building for the tempo-
rary storage of goods in the care of the railroad
company for delivery or for transportation. (It
may be at a station or it may not.)

Old Saws in Rhyme.

Actions speak louder than words ever do;
You can't eat your cake, and hold on to it too.
When the cat is away, then the little mice play;
Where there is a will there is always a way.
One's deep in the mud as the other in mire;
Don't jump from the frying pan into the fire.
There's no use crying o'er milk that is spilt;
No accuser is needed by conscience of guilt.
There must be some fire wherever is smoke;
The pitcher goes off to the well till it's broke.
By rogues falling out honest men get their due;
Whoever it fits, he must put on the shoe.
All work and no play will make Jack a dull boy;
A thing of much beauty is ever a joy.
A half-loaf is better than no bread at all;
And pride always goeth before a sad fall.
Fast bind and fast find, have two strings to your bow
Contentment is better than riches, we know.
The devil finds work for hands idle to do;
A miss is as good as a mile is to you.
You speak of the devil, he's sure to appear;
You can't make a silk purse from out of sow's ear.
A man by his company always is known;
Who lives in a glass house should not throw a stone.
When the blind leads the blind both will fall in the
ditch;
It's better born lucky than being born rich.
Little pitchers have big ears; burnt child dreads
the fire.
Though speaking the truth, no one credits a liar.
Speech may be silver, but silence is gold;
There's never a fool like the fool who is old.
—H. C. Dodge, in *Detroit Free Press*.

Common Ailments.

HOME TREATMENT FOR MANY OF THEM.

A handful of flour bound on a severe cut will often stop the bleeding.
For cankered throat, sore mouth, etc., use borax and honey; drink sage or slippery elm tea.
Cool the blood by drinking cold water in which a little pure cream of tartar has been dissolved.
Any one who has been scalded by steam should be taken to a warm room, and the parts drenched by cold water.
Lime water is good for chilblains. Use it both strong and hot. A saturated solution of alum in water, used hot, is often very efficacious.
For simple hoarseness, take a fresh egg, beat it and thicken with pulverized sugar. Eat freely of it, and the hoarseness will soon be greatly relieved.
Any one can add strength and weight to his body by rubbing well with olive oil after a warm bath. Oil baths are particularly beneficial to delicate children.
Those who suffer from a sensitive skin, subject to frequent irritation and roughness, should never wash in hard water. Boiled water will often prove a benefit to delicate complexions.
Equal parts of cream tartar and saltpetre make an excellent remedy for rheumatism. Take one-half teaspoonful of the mixture and divide it into three doses. Take one of these doses three times a day.
When the ankle has been severely sprained, immerse it immediately in hot water, keeping it there for fifteen or twenty minutes. After it has been taken out of the water, keep it bandaged with cloths wrung out of hot water.
The white of an egg, and a little water and sugar, is good for children who are troubled with an irritable stomach. It is very healing and will prove an excellent remedy for diarrhoea, as well as a simple preventive for bowel disorders.

If vaseline or butter be applied to the skin immediately after a blow of any kind, there will be no discoloration. But to be effectual it must be used directly after the accident. The bruised feeling may be relieved by witch hazel.

As an antidote for a consumptive tendency, cream acts like a charm; to be used instead of codliver oil. Also aged people, invalids, and those who have feeble digestion, or suffer from dullness, as well as growing children, will be greatly benefited by taking sweet cream in liberal quantities.—[Good Housekeeping.

When on the Bridal Trip.

BY MABLE OSBORNE.

A bride's first lesson to learn on the bridal trip is to respect the extreme sensitiveness of her husband, who doesn't want people to know he has just been married; consequently she will be wise if, after her first journey, she assumes a gown that has seen wear; if she will forget to look around in a startled manner whenever her husband is gone from her side, as it is not likely that he is either going to be lost or stolen.

The next thing for her to learn is that no matter how fond she may be of her husband, she should reserve all manifestations of this for their own apartment, and that holding his hand, kissing him before people, or putting her head on his shoulder, really and truly become indecent when done in public. A man can show a woman every attention possible, and a woman can make him understand her love for him without their laying themselves open to be made a jest and by-word for their travelling companions.

The next thing for her to learn is, when she is at a hotel, not to grow confidential with the chambermaid, not to give her a piece of her wedding-cake and tell her all about the marriage ceremony, and tell her how she looked. You think this is never done? Ask at some large hotel.

The next thing for her to learn, is to like to eat what her husband likes. She may have some decided tastes, but if she is a wise woman she will leave the ordering of dinner to him and he, being a gentleman, will find out some of her particular likes.

The next thing for her to learn, is to address her husband as "Mr. Brown" before people; she can call him "Darling Harry" when they are quite alone, and only then.

The next thing for her to learn, is not to giggle or look surprised when she gets a letter from her mother addressed to her in her married name. Men are particularly sensitive creatures about some things, and they are rather given to think a woman don't want a name when she acts in this way.

The next thing for her to learn, and the most important of all, is that her bridal trip is only the preface to her married life, and that in it, while she may read some suggestions, she has only the book open to her when she gets home after the honeymoon.—[Ladies' Home Journal.

To smile sweetly in society upon one whom our consciences condemn, to grasp the hand of one from whom all our best instincts recoil, to extend a cordial welcome to one whose integrity we cannot trust—what is this but to give the sanction of our friendship to evil-doing? It is true that, while we hate the sin, we may love the sinner; but this is a love which would show him the gulf which is yawning for him, not cover it up with the cloak of a smooth urbanity.

Grandmother's Days.

In our grandmothers' days, when a cabin rude,
Unfinished, and bare, held the little all
Of the pair who were building the household fire,
The light of it falling on window and wall,
Was there less of happiness then than now?
In our grandmothers' days, when the kettle swung
On the sooty crane in the chimney wide,
And the spitted fowl, that sputtered and sung,
Swung gently from side to side,
Was there less of happiness then than now?
In our grandmothers' days, when the broad stone
hearth
Was the trusting place of the lovers dear,
And the high-backed settle reflected the glow
Of the firelight on faces suggestively near,
Was there less of happiness then than now?
In our grandmothers' days, when the children
came,
And the humble home was filled with glee,
As, clothed in their garb of homespun, they roamed
And frolicked like birds and butterflies free,
Was there less of happiness then than now?
In our grandmothers' days, when the cradle stood
In sound of the burring, whirring wheel,
And the baby crooned and clapped his hands
At each click of the swiftly revolving reel,
Was there less of happiness then than now?
In our grandmothers' days, when trouble came
And sometimes even the wolf, to the door,
The home was their castle and love lent it grace,
And if oftentimes the battle of life was full sore,
Was there less of happiness then than now?
—Mrs. M. W. Backer.

To Cure Dyspepsia.

The first relief came from the use of a kind of home-made hop beer, the recipe of which I will give exactly: Two ounces of hops, two ounces of sarsaparilla, about one-third ounce of saffron (used only for flavor, and can be left out if desired). Having the hops in bulk loose, instead of getting them at the drug store, use one pint. Put the herbs in the largest kettle the house affords, and add three gallons of cold water. Let it stew all day, adding water as it cooks down, to keep the original amount, till the strength is entirely out of the herbs. Then strain, and add three cupfuls of sugar (brown is the best), and two yeast cakes dissolved in warm water. Of course the mixture must be also lukewarm when the yeast is added. The soft yeast is better—add one cupful. Now stand the kettle in a warm place till the mixture ferments, which will be in about two or three days, and when it has fermented, which will be shown by bubbles on the surface, bottle it, and put in a cold place for use. Dose, one-half cupful about fifteen minutes before each meal, and between meals if wished.

This simple remedy, as I have said, was the beginning of the cure of an obstinate dyspepsia case, and it seems reasonable, as lupuline, the bitter principle extracted from hops, is given in gastric fever, a most severe form of stomach trouble. This recipe is also used as spring tonic, and hops are very valuable for nervousness and sleeplessness.

The second part of the cure consisted in always drinking something hot at meals, not before them, as the hot-water people advocate. In this case it was principally hot milk, which is one of the best things for the stomach at any time. Americans are known to be a dyspeptic people, and they are said to be the only people who drink ice water at meals. It should be forbidden by law! People found out sometime ago that ice water was injurious, and the reaction was to drink nothing, which seems to be now not only useless but unpleasant; whereas, if something hot is taken, the stomach is toned and the work of digestion is helped.

The third part of the cure is to eat, at all times, very slowly. And that is all. To recapitulate: Before meals, the beer. At meals, hot milk or other hot drinks. Slow eating.—[Good Housekeeping.

Uncle Tom's Department.**MY DEAR NIECES AND NEPHEWS:—**

As we look around us in June we cannot but think this is the queen of months. Crowned with roses, flowers at her feet sparkling with diamond dew in the morning sunshine, sky of azure over head, scent-laden breezes—like its own sweet flowers, these long, perfect June days remind us of Eden.

This is the girls' month, for is not June derived from the goddess Juno, who was worshiped as the Queen of Heaven, and was supposed to watch over every woman through life? On their birthdays they used to offer her sacrifices. The month of June was also the marriage month, that event being the most important period in a woman's life. The old days and the old worshippers have gone—gone with the years, but our June roses come still, and our sleeping senses are roused to behold her beauty, though we see beyond the ancient goddess to the Creator of the beauty in frond, fern and flower.

But I must remember I am writing to a whole family of nieces and nephews, not to Bessie, who is making her last summer dresses long, or to George, who is just thinking how he'll ever overcome the difficulty of beginning to shave. They are almost grown up, and like to read of these strange worshippers of other days, but what do Alice or Isa care, who are just learning kindergarten songs, and at the lesson about "The Two Little Kittens"? Or poor little Jack, who is so "a'fraid" of the gander that he dare not take the least little look at the yellow goslings without some one to shield him from his enemy? Uncle Tom can feel for him, for once running away in terror from a cross old gander, he fell, and the evil bird that was seeking to devour him stood right on him and bit with might and main. The feeling of those moments lingers still, but not in the way the poets write of beautiful memories. It was worse than when, some years later, a dog took a piece out of him. Since then neither dogs or ganders have been great friends of his. There are some good dogs though which would not bite children, and which have done very brave things, which make us respect them; but a gander, as far as my experience goes, is both a bully and a coward. But that isn't confined to ganders, and I trust little Jack and all the Jacks and Jessies—boys and girls—will shun what they dislike in him. Then they will obey the Golden Rule:—

"Do unto others as you would
Have others do to you."

Some of my little nieces and nephews are just starting to school. What a strange, new, busy world it is there! Some have been going for years, and I have been wondering how many can tell me why they go. To learn to read and write, I hear one say. Is that all? What is reading and writing going to do for you? What is ahead of that? What object have you in view? Yes, larger, niece and nephew, what are you working for? Is it because you have to do so? Is it because you love to do so? Why, what's your object?

Did you ever hear of the western farmer who made more money to buy more land, to raise more corn, to feed more hogs, to make more money to buy more land, and so on? What a tread-mill life that would be!

I trust that the object my young readers set before them is above either hogs or money, and

that they will aim high and hit the mark, as good marksmen will.

But the clock strikes, and the time has come to quit for
UNCLE TOM.

P.S.—Some of my nieces forget to send the answers with their puzzles and then wonder why their puzzles are not published. Answers must accompany all puzzles, and write on one side of the paper only.
UNCLE TOM.

FIRST PRIZE STORY.**An Adventure With A Wolf—A True Story.**

BY WILLIE GILROY, MOUNT FOREST, ONT.

In the earlier days of our province, before the country was completely opened up, great numbers of wild animals roamed through the forests, and even as late as 1865 lumbermen were exposed sometimes to great dangers, as the following narrative will serve to show:—

In the fall of the year 1864, Jacob M——, a young man of the township of Wolford, in Grenville county, set out, as he had done previous winters, to work in a lumber camp. There he was engaged as cook, and in that position he was required to do all domestic work as well, and spend the rest of his time in the bush with his companions. As this was the case, he would have to return alone to the shanty in order to prepare the meals.

One fine January afternoon the lumbermen were all hard at work, Jacob among the number, when a far distant howling was heard which seemed to be coming nearer all the time. They all well knew what this meant, and with the exception of one or two who stopped to remark to their neighbors that the wolves were near, no particular notice was taken of the noise. But Jacob was by no means in such a mood; he trembled and felt heartsick as he heard the sounds, for he felt that in less than an hour he must set out alone for the shanty, to get supper for the lumbermen. The time passed rapidly, far too rapidly to suit Jacob, and the dreaded moment came at which he was to set out. This he was loath to do, and feeling somewhat nervous he requested that one of his companions go with him. But they took no notice of his request, and only laughed at his fears. Jacob, nevertheless, undaunted, like his Biblical predecessor of the same name, determined to set out alone, and, shouldering his axe, he left the place. Never had he felt more alone and forsaken than when the sound of the voices and the noise of the chopping died away. At every sound his heart beat faster, and even the rustling of the leaves and the sound made as his foot broke the crusty snow, seemed to strike terror to him. At last, when he was near home and was beginning to feel safe, he was surprised and terrified to see a large wolf suddenly make his appearance from behind a tree. Poor Jacob! what was he to do? But for his presence of mind he would not have lived to tell the story. At a short distance from him was a tree which had fallen into the crotch made by the branches of another, and making his way to this place, with the wolf in hot pursuit, he climbed up and awaited the coming of the wolf. He had not a moment to wait, for the wolf speedily reached the tree and proceeded to climb after him. Only those who have been placed in a position similar to his can realize his feelings

at that moment. But he knew that it was to be life or death, and having nothing but an axe he swung it in the air and, aiming well, sent a murderous stroke on the head of the wolf. Such a shock did the blow give Jacob that the axe dropped from his hand, and it was with difficulty that he kept his balance. But, happily, righting himself, he had the pleasure of sitting there and seeing his enemy breathe his last. Fearing a second encounter with another wolf, he jumped down and picking up his axe made his way home as fast as he could. There he arrived safe and sound, and as the lumbermen gathered to their meal he told of his narrow escape, showing them that going through a bush alone with wolves so near was something to be afraid of. Jacob M—— still lives, and although far advanced in years he has never forgotten his thrilling adventure and narrow escape while working in the lumber camp.

SECOND PRIZE STORY.**A Sojourn in Muskoka.**

BY MISS LOUISE PICKRING, CORNWALL, ONT.

In the year 187— my mother's uncle came from Canada to visit us. At that time we were living in the county of Durham, in the north of England, where my father was postmaster, in a town of sixteen thousand inhabitants.

Uncle had visited us twice before, but this time he had come with the intention of getting us to come to America. Father's health was not very good, caused, no doubt, by being too closely confined to the office. Uncle thought that the change of climate would be beneficial to us all, so a few months after we were ready to sail. It is not necessary to dwell on that parting, nor to describe in detail that never-to-be-forgotten trip across the blue deep. We sailed in the fall, and so encountered the equinoctial gales; although we were thirteen days on the foaming billows we were sea-sick for a couple of days only, but I must hasten with my story.

Father had bought a farm in Muskoka, and paid a deposit on it before we left home, so that when we landed in this country, after paying a short visit to uncle, we proceeded to our farm. Mother had another uncle living in Muskoka, only two miles from our home (that was to be), so that we were not totally alone in a strange land.

To attempt to describe our feelings on arriving in Muskoka, that land of rocks and trees, would be impossible. To anyone who has lived in Ontario all his life, Muskoka is a dreary enough place, but to people who have never before seen a bush, it is simply dreadful, and as bad as being buried alive.

In a couple of weeks we were established in our house (made of logs) containing three rooms, two down-stairs and one up-stairs, which, through courtesy, we will call the bed-room. Father bought some furniture and stoves in Bracebridge, and as we had plenty of wood we were in no danger of freezing. Mother was inconsolable; never being used "to rough it," she grew more determined to leave. Father wanted to stay until spring and try farming for a year, but mother would not hear of it, and no wonder. We were a mile and a-half from our nearest neighbor, and so seldom did we see anyone, except uncle's folks, that we were pleased to see a dog.

After we had been about a month in our new

abode, father left us, and set out, as we thought, for England. He had only been away about a week when we received a terrible fright. An Indian and a squaw, who were returning from a day's hunt, called in for something to eat. We could not understand a word they said, and as they looked so queer they frightened us terribly. My sisters ran screaming out of the house. We were in a dilemma now, but my cousin happened to come in, and as he knew them we were soon reassured. Truly the squaw was a frightful looking object. She had a deer on her back. There was a white cloth fastened to the forelegs of the deer, and this was fastened round her head. It was something new to us to see an Indian, but to see a woman with a white cloth smeared with blood round her forehead, a deer on her back, and her black hair hanging down, it was terrible. Her liege lord stalked by her side, carrying his rifle and smoking. After mother had fed them they went away, but they told my cousin that mother was good, and that they would pay her sometime.

About two weeks after the Indian brought us the hind-quarter of a fine young deer. We were amazed at his generosity, but we need not have troubled ourselves on that score. Mother thanked him for it, and he hung it in a bit of a shed for us, so that it might freeze. The next morning, however, when mother went to get us some for breakfast, it was gone. We thought it might have been dragged off by some dogs, but there was not a trace of it to be found. Of course the Indian took it away again, but uncle warned us not to mention it, as they were so treacherous.

One clear, cold moonlight night mother was awakened by hearing someone go round the house. It was one of those clear, frosty nights when the least noise is distinctly heard. Mother

aroused my sister and myself, and then she went to the window to see if she could see anyone, but there was no one in sight; still we could hear them walking all round. We did not know what to do. Wild stories of the way Indians scalped their victims came to our minds, and what else could they want with a defenceless woman and four children but to murder them. If they had wanted to steal they would have gone to the root-house, for we had bought a quantity of potatoes and pork the day before, and of course it was in the root-house. Whoever it was had no intention of doing that. Clatter, clatter came the noise again. "What shall I do," said mother; but thinking it best to appear brave, she seized an old rifle which was standing in one corner, threw open the window and stood with the rifle in her hands. Another moment passed; still the noise; then another. The suspense was unendurable, and then, oh!

goodness! what should come round the house but a large white dog! That was all; but the strain had been terrible, and it was some time before mother recovered.

We did not stay alone one night after that, and no telegram was more welcome than the one which came from father (who, by the way, never left Toronto), telling us to prepare to go to Toronto. Three days later we left Muskoka, fully satisfied with our sojourn of three months.

A Merry Warbler.

Who does not recognize our old friend the green linnet in this warbler, who is sending his praises straight up to the bright blue sky with all his might.



A MERRY WARBLER.

"Joy tunes his note, joy animates his being," as the bough of the snowball tree bends beneath his slender weight, while all around breaths of life and brightness. The success of his song does not depend upon the plaudits of an audience, for it is going just where he intends it should. The pipe from whence issues the sound in the throat of a linnet is no larger than a fine sewing needle, and the wonder is where so much sound can come from so small an aperture.

"The grey birds, with nice selection, cull soft thistle-down, grey moss and scattered wool. Far from each prying eye the nest prepare. Formed of warm moss and lined with softest hair. Week after week, regardless of her food. The incubent linnet warms her future brood. Each spotted egg with ivory bill she turns. Day after day with fond impatience turns. Hears the young prisoner chirping in his cell. And breaks in hemispheres the fragile shell."

These pretty birds can be seen in every orchard, or where fruit trees abound, and the

bough of an apple tree is the favorite spot for their nest. They make pretty pets, if caged when young, but the male bird only sings, his little mate is not musical.

Cigarettes and Boys.

The cigarette is, to use the language of our forefathers, a crafty "invention of the devil." As its name implies, it is a little cigar, and, being little, it brings smoking down to the capacity of many boys who would not have the stomach for a cigar. Even some exceptionally silly girls have been known to taste this form of forbidden fruit.

Anything which makes vice, or that which tends to vice, either cheap or easy, is calamitous to our easily tempted race, and the cigarette does render it easier for young people to overcome the disgust which is naturally excited by the taste and odor of poison.

The law in some states, which forbids the sale of tobacco to minors, ought to be better enforced, and the law should be supplemented by appeals from parent and teacher to the good sense and better feeling of boys themselves.

Every grown person who passes a boy in the street smoking might kindly express his sorrow and pain at the spectacle. We have known good to be done in that way. Boys themselves can effect much in dissuading their companions, and teachers should occasionally seize an opportunity to explain to their pupils why this practice should be avoided. Let them dwell upon the wastefulness of it, and the slavery to which it subjects many of its votaries.

The papers not long since contained a terrible description of the celebrated opium den in Shanghai, where fifteen hundred persons inhale at one time the fumes of the poisonous drug, to the swift deterioration of soul and body. There is a

general belief that opium smoking affords a peculiar and keen delight.

The writer who describes this den, says that very few persons derive pleasure from it. People in general, he remarks, "smoke to satisfy the craving begotten of previous indulgence."

It is very much so with smokers of tobacco. They smoke because they have to. Some one asked Sir Isaac Newton why he did not smoke. His brief answer contains the weightiest argument against the practice: "I would not make to myself any new necessity."—[American Exchange.

All our dignity lies in our thoughts.

If you would hit the mark, you must aim a little above it; every arrow that flies feels the attraction of the earth.

Puzzles.

1—ANAGRAM.

At puzzling we must be in earnest
If we hope a prize to gain,
For 'tis an adage old and true,
"With pleasure there's always pain;"
But if honestly you endeavor
You'll sometimes make a "hit."
I have worked a long time at puzzling,
And I tire me not of it.

ADA ARMAND.

2—CHARADE.

"Once more I breathe freely, for TOTAL is o'er,
That terrible bane of my life,
From garret to cellar, from ceiling to floor,
From earliest daylight till night."
'Tis thus I exclaim, and all eyes on me turn,
As if I from my senses had passed.
Hend low, and the secret I'll whisper to you,
"You see we've been just FIRST the LAST."

ADA ARMAND.

3—NUMERICAL ENIGMA.

My 30, 2, 3, 14, 18, is dress.
My 9, 10, 19, 19, 17, 22, 16, is a kind of net.
My 24, 25, 7, 12, 13, 1, 28, 32, is a noisy speech.
My 27, 34, 6, 15, 11, is brightness.
My 4, 29, 20, 31, 33, is around.
My whole is a true saying.

HENRY REEVE.

4—NUMERICAL.

Arrange in order letters 1, 2, 3, 4, 5, 6,
If a companion you would fix.
By setting in a row 1, 3, 2
You bring a forest tree into view.
If you go exploring in my 6, 4, 5
You may find a bear all alive.
I'm sure you'll agree that 6, 3, 5, 4
Is to take a meal and nothing more.

HENRY REEVE.

5—ILLUSTRATED REBUS.



6—SCRIPTURE ACROSTIC.

The husband of Naomi.
A profane king of Juddah.
The father of Abram.
Something the Israelites found grievous.
One from whom St. Paul sent greetings to Timothy.
A prophetess mentioned in one of the books of Kings.
One who died for sacrifice.
A Jew who had seven sons.
The initial letters of these words give the name of one raised to life by St. Paul.

T. PLANT.

Answers to May Puzzles.

- 1—Enigmas, diamonds, decapitation, anagram, charade.
- 2—One day at a time, 'tis the whole of life; All sorrow, all joy, are measured therein; The bound of our purpose, our noblest strife, The only countersign sure to win.
- 3—"True friendship's laws are by this rule expressed: Welcome the coming, speed the parting guest."
- 4—Crow, owl, wren, lark, hawk.
- 5—Clove love, cash ash, steam team, Alice lice-ice, pink-ink, heel-eel, pants ants.

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

J. L. Devitt, Lucy A. Nicholson, Mattie D. Woodworth, Henry Reeve, Jane Leggat, Kate Wood, Ida M. Jewell, Ada Armand, Jessie Ellis, Elinor Moore, Esie Mason, Emma Skelley, George Hunter, Fred G. Harris.

A mahogany tree lately cut in Honduras, Central America, made three logs which sold in Europe for \$11,000.

An Artist in Harmonies.—"Dear Mr. Hicks," she wrote, "I am very sorry that what you ask I cannot grant. I cannot become your wife. Yours sincerely, Ethel Barrows." Then she added: "P. S. On second thoughts, dear George, I think I will marry you. Do come up to-night and see your own true Ethel."

What is a Gentleman?

What is a gentleman? Is it a thing Decked with a scarfpin, a chain and a ring, Dressed in a suit of immaculate style, Sporting an eyeglass, a lip and a smile; Talking of races and concerts and balls, Evening assemblies and afternoon calls, Stuning himself "at home" and bazaars, Whistling mazourkas and smoking cigars?

What is a gentleman? Say, is it one Boasting of conquests and deeds he has done? One who unblushingly glories to speak Things which should call up a flush to his cheek? One who, while railing at actions unjust, Robs some young heart of its pureness and trust! Scorns to steal money, or jewels or wealth, Thinks it no harm to take honor by stealth?

What is a gentleman? Is it not one Knowing instinctively what he should shun, Speaking no word that could injure or pain, Spreading no scandal and deepening no stain One who knows how to put each at his ease, Striving successfully always to please— One who can tell, by a glance at your cheek When to be silent and when he should speak?

What is a gentleman? Is it not one Honestly eating the bread he has won, Walking in uprightness, fearing his God, Leaving no stain on the path he has trod; Caring not whether his coat may be old, Prizing sincerity far above gold? Recking not whether his hands may be hard— Stretching it boldly to grasp its reward!

What is a gentleman? Say, is it birth Makes a man noble or adds to his worth? Is there a family tree to be had Shady enough to conceal what is bad? Seek out the man who has God for his guide, Nothing to tremble at, nothing to hide, Be he a noble or be he in trade, He is a gentleman Nature has made.

A Moot Question Solved.—"Marriage a failure? I should say not!" remarked an Oregon farmer. "Why, there's my Lucindy gets up in the mornin' at four o'clock, milks six cows, gets breakfast, starts four children to skewl, looks after the other three, feeds the hens, likewise the hogs, likewise some motherless lambs, skims twenty pans o' milk, churns the butter, washes the clothes, gets dinner, et cetera, et cetera. Think I could hire anybody to do it for what she gits? Not much! Marriage, sir, is a success, sir; a great success!"

NEW ADVERTISEMENTS.

- Threshing Machines and Horse Powers—John Larmonth & Co.
- Two-Horse Threshing Machine—Matthew Moody & Sons.
- Ensilage Cutters—Matthew Moody & Sons.
- Potato Digger—Alex. Wilkin.
- Wind-mills and Pumps—Ontario Pump Co.
- Improved Large Yorkshires—Wm. Goodger & Son.
- Shorthorns—M. G. Ireland.
- Chester White Swine—E. D. George.
- A Good Penman Wanted—A. W. Kinney.
- Oils—Samuel Rogers & Co.
- Victoria Hogs—Charles Brown.
- Guernsey Bull for Sale—Wm. Davis.
- Holstein-Friesians—S. O. Barnes.
- Auction Sale—Frederick Wm. Stone.
- Wind-mill for Sale—Charles Hutchinson.
- Pea Harvesters—John Richmond & Son.
- Hay Tedder—Wilson Manufacturing Co.
- Ont. School of Elocution and Oratory—A. C. Hunter, B. E.
- Gold Fox—J. D. O'Neil, V. S.

GOLD FOX.

This thoroughbred stallion and race-horse will serve a limited number of mares for the season of 1891. He is fashionably bred, large size, good bone, admirable joints, very stylish and handsome, and his colts are most promising.



TERMS: \$12 for the season; return privilege free next year if not in foal. For further particulars see illustration and article in May issue. Address, J. D. O'NEIL, V. S., Prop., 306 a-O LONDON, ONT.

ADIES, SEND HALF-A-DOLLAR FOR YARN KEEL—Handicraft Made—Catalogues Free. J. J. HAZELTON, Guelph, Ont. 300-y-O

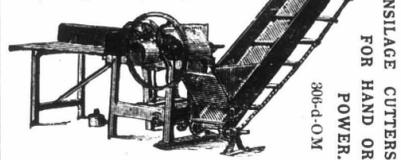
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Carriers adapted to any angle or place. Strong and Large Capacity.



PURE-BRED REGISTERED HOLSTEIN-FRIESIANS All imported or bred from imported stock. "Sir Mac," of the famous Aargle tribe, heads the herd. HUGH MCCAUGHERTY & SON, 297-y-OM Walnut Hill Farm, STREETSVILLE, ONT.

JERSEY -:- BULL FOR SALE.

RASSELAS A. J. C. C. 24805.



Dam Imported Thaley 14269, whose sire, Guy Fawkes—F-251—H.C. is full of the blood of the celebrated Coomassie. Guy Fawkes is the sire of a long list of performers, including Island Star (butter record, 21 lbs. 3 ozs. per week) and Thaley, the dam of Rasselas (butter record, 16 lbs. 5 ozs. per week). His sire is Romeo of St. Lambert's 2nd 17562, who is 34% per cent. Victor Hugo, 25 per cent. Stoke Pogis, 96% per cent. Mary Ann St. Lambert.

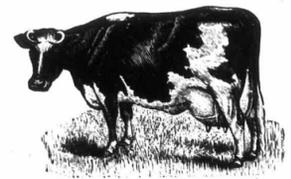
Rasselas is a grand individual, and closely resembles his prize-winning sire.

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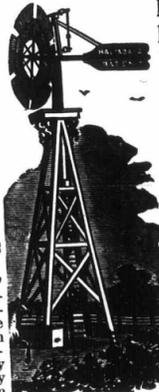
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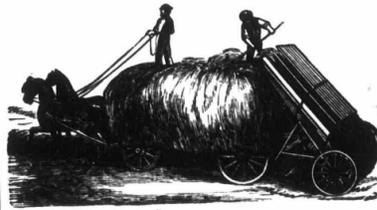
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Prof. Shaw, of the Ontario Agricultural College, says:-

"That with a small boy and a horse, his Tedder would do the work of ten men turning by hand."

After the Tedder has gone over the new mown grass, it leaves it in such a position as to catch every passing breeze to aid in drying it.

Hay cured by the sun is bleached, and is little, if any, better than over ripe hay.

Hay cured by a Tedder (from its fresh green color) will sell from \$1.00 to \$1.50 more than that which is left to cure in the sun, and is worth to the farmer that much more for feeding purposes.

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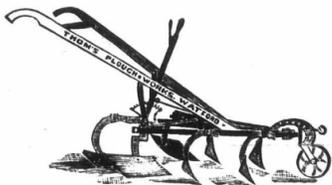


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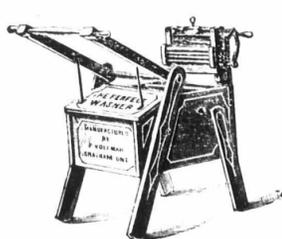
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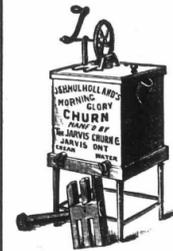
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In Eastern Ontario.—In the counties of Lanark, Carleton, Prescott, and Russell, besides many lots scattered through the older sections of the province.

These lots are, generally speaking, within a short distance of a railway, and are easily accessible by good travelled roads from a market town. Many of the farms have from fifteen to twenty-five acres of clearing fenced ready for cultivation.

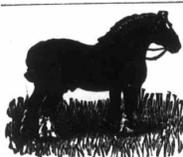
The Climate of Western Ontario.—The winters being comparatively mild and short, and the summers correspondingly long, is specially adapted to the successful cultivation of corn, grapes, peaches and all kinds of fruit, for which this section is rapidly becoming noted.

To actual settlers the most liberal terms of payment are offered, only a small payment being required down, the balance payable in seven or ten years, with interest chargeable as a rental at the rate of 4 per cent. per annum.

Full particulars, with complete lists of vacant lands, and prices of any lots selected by applicants, will be furnished on application to the

COMMISSIONERS OF THE CANADA COMPANY,
TORONTO, - - ONTARIO. 301-f-O
Offices, 204 King St. East.

STOCK FOR SALE.



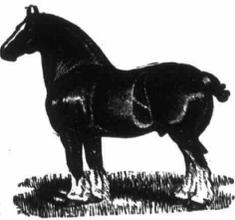
CLYDESDALES & Shetland Ponies.
A. K. TEGART,
Importer and Breeder,
offers for sale choice stallions and mares of the above breeds. Address
Tottenham, Ont.
298-y-OM



CLYDESDALES For Sale.
First Prize-winning Stallions, the get of Darnley (222) and Lork Erskine (1744).
JAS. HENDERSON,
302-y-OM BELTON, ONT.

S. C. JOHNSTON,
—Letters and telegrams—
Manilla, Ont.,
(60 miles from Toronto, on the Midland), importer of REGISTERED

CLYDESDALES.
The fifth annual importation consists of the get of the famous sires Lord Erskine, Top Gallant, Sir Michael S. Kelmorie. Stock all selected by myself, and for sale at the lowest living profits. 301-y-OM

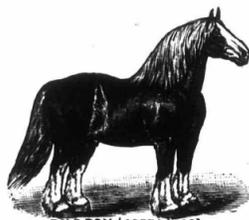


Clydesdales, Shropshires and Berkshires.

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

D. & O. SORBY, GUELPH, ONT.,

Breeders and Importers of FASHIONABLY BRED CLYDESDALES

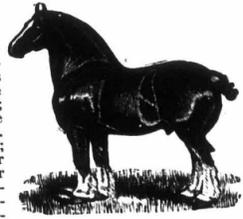


is at the head of our stud.
277-y

ROBT. NESS, WOODS FARM,

—IMPORTER AND BREEDER OF—
Clydesdales, Shires, Coachers, Shetlands, and Ayrshire Cattle.

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



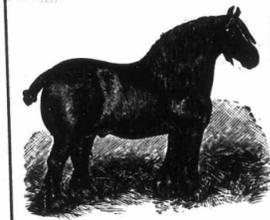
IMPORTED & CANADIAN-BRED CLYDESDALES.

BEATTIE & TORRANCE, Summerhill Farm, Markham, Ont., importers of and dealers in Imp. Clydesdale Stallions and Mares, of the choicest strains; also Reg. Canadian-breds always for sale. 304-y-OM



ROSEDALE FARM
HIGHFIELD P. O.,
MALTON, - ONTARIO.
Jas. Cardhouse & Son
Importers & Breeders of Shire and Clyde Horses and Shorthorn Cattle.
First-class stock at rock-bottom prices. Write or call. 298-y-OM

PRIZE-WINNING Clydesdale Horses & Mares
FOR SALE CHEAP. TERMS LIBERAL.



We have on hand and for sale a superior lot of imported and home-bred Clydesdale Stallions and Mares. Several of them were prize-winners at the leading shows in Scotland and Canada. Also a few choice SHETLANDS. Prices to suit the times.

Address—**Jeffrey Bros., Whitby, Ont.**
304-y-OM



Imported and Canadian bred **CLYDESDALES.**

We challenge competition for quality and smoothness in our horses. Imported Stallions and Mares of the most desirable strains. We have been most successful in the show rings with mares, colts and fillies of our breeding. Stock for sale at reasonable prices.

PROUSE & WILLIAMSON,
297-y-OM Ingersoll, Ont.

Prize-Winning Clydesdales FOR SALE.



We have on hand a large number of imported and Home-bred Stallions and Mares which we offer at reasonable prices and easy terms. Visitors always welcome. Catalogue on application.

DUNDAS & GRANDY,
303-y-0 SPRINGVILLE P. O.,
Cavanville Station, C. P. R.

ELGIN STOCK FARM



We are one of the largest breeders in the Dominion of **CLYDESDALES**
And have for sale a lot of imported and home-bred Clydesdales—male and female.

Durham and Ayrshire Cattle, Berkshire and Chester White Pigs, Shropshire and Cotswold Sheep.

A. & J. BELL,
303-f-OM Athelstan, P. Q.

- ENGLISH SHIRE HORSES. -

J. G. WARDLOWE, Fairview Farm, Downsview, Ont., breeder of and dealer in Registered Shire Stallions and Mares; also some choice Canadian-bred Draughts on hand. 304-y

ENGLISH PEDIGREE LIVE STOCK.

SHIRES, CLYDESDALES, SHORTHORNS, HEREFORDS, JERSEYS, AYRSHIRES, KERRIES, SHROPSHIRE, OXFORDS, HAMPSHIRE AND SOUTHDOWNS, DORSETS, LEICESTERS, LINCOLNS, AND COTSWOLDS, BERKSHIRES AND YORKSHIRES.

Choice registered stock of the best strains and highest merit for sale at moderate prices. Foreign buyers assisted in purchase and shipment at one per cent. Stock purchased and shipped under experienced herdsman for two-and-a-half per cent. Bankers, Lloyd's Bank, Shrewsbury. Special low freights. Highest references from foreign breeders. All commissions personally executed. 1027 Shropshire sheep alone, exported to America in 1890, besides horses, cattle, pigs, and sheep of other breeds, to that and other countries. All importers should apply to—

E. GOODWIN PREECE,
Exporter and Live Stock Agent,
296-j-OM SHREWSBURY, ENG.

KENTUCKY STANDARD-BRED STALLIONS!

LEOTARD 7842,
By Walsingham (sire of Latitude 2,193), son of George Wilkes; dam Ladoza (sister to Mambrino King), by Mambrino Patchen. Service Fee, \$39.00, with return privilege.

ISSACHAR 5145,
By Princeps; sire of Trinket 2,14. Greenlander 2,154, etc.; dam Agnes (dam of Star Wilker, sire of four in 2,30 list). Service Fee, \$20.00, with return privilege.

Stallion Circular will be mailed on application, containing tabulated pedigree and full description.
ADDRESS—
305-b-0 **W. COWPER, Dundas, Ont.**

STANDARD-BRED TROTTERS

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

BOW PARK HERD

—OF—

PURE-BRED SHORTHORNS.

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

ADDRESS—
JOHN HOPE, Manager,
303-y Bow Park, Brantford, Ont.

ARTHUR JOHNSTON,

Greenwood, Ont.,



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

EXCELLENT CLYDESDALES OF BOTH SEX FOR SALE.

New Catalogue for 1891 now ready for delivery. Send for one; they are sent free.
My motto: "No business no harm."
Greenwood P. O. and Telegraph Office, Claremont Station on C. P. R., or Pickering Station on the G. T. R. Parties met at either station on shortest notice. Come and see them. 290-tr

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



NEIDPATH STOCK FARM.

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



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

JOHN MILLER & SONS
 Bringham, Ont.
 Extensive breeders and importers of Clydesdales, Shorthorns and Shropshires. Business established in 1848. We always have on hand and for sale a large number of imported, and home-bred animals. A visit, or correspondence solicited.
 306-y

SHORTHORN BULLS

HOME-BRED AND IMPORTED

Shropshire Sheep.
 The imported 2-year-old Aberdeen Hero
 And a choice lot of young bulls of our own breeding. Some No. 1 imported Ewes & Lambs FOR SALE.
SHORE BROS.,
 WHITE OAK, ONT.
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SIMMONS & QUIRIE
 IVAN, ONT.

Shorthorns, Berkshires.
 Representatives of the Scotch families are MINA'S & STRATHALLAN'S. The sires in use are the Sweepstakes Silver Medal Bull SIR CHRISTOPHER and RED KNIGHT, winner of 1st prize at Toronto and London in 1888; also, prize-winning Berkshires.
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SHORTHORNS

—AND—
COTSWOLDS
 FOR SALE.

My Shorthorns are well bred, good colors, and have been fine milkers for generations. I have over 100 females and a large number of bulls, from which buyers may select. Prices to suit the times. Satisfaction guaranteed. Correspondence promptly answered. Visitors welcome.



JAMES GRAHAM,
 290-y-OM PORT PERRY, ONT.

"SHORTHORNS ARE LOOKING UP,"

But times are hard, and money still scarce. I will sell a few well-bred bulls and heifers of Bates blood, and an aged bull at hard-pan prices. Write me, or come and see them.
M. G. Ireland,
 Meadow Lawn Farm, COPETOWN, ONT. 306-y-OM

Shorthorns, Yorkshires and Berkshires.

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

LAKEHURST JERSEY STOCK FARM,
 Oakville, Ontario.

T. E. BRAMELD, Proprietor, offers for sale, at very reasonable figures, choice A. J. C. C. Jerseys from his prize-winning herd; also a few extra good high-grade Cows and Heifers, and registered Improved Large Yorkshire Pigs. Write for prices.
 P. O., Station and Telegrams, Oakville, on G.T.R.
 302-f-OM

Riverside Farm.

PURE-BRED A. J. C. C. JERSEYS
 —AND—
ESSEX PIGS.

Prince of Oaklawn (Imp.) 12851, heads the herd. Young stock for sale. Also a few choice unregistered and high grade cows.
 Farm one mile from Streetsville Junction. J. H. SCARLETT, Streetsville, Ont. 297-y-OM

Jerseys for Sale.

Some of the finest heifers and calves I ever bred, and at lower prices than I ever offered before. Registered, and express paid by me to any reasonable point. Herd headed by the famous pure St. Lambert bull, Canada's Sir George, prize winner every time shown, son of Allie of St. Lambert, 2634 lbs. butter in one week; Massena's son, pure St. Lambert sire, dam the great Massena, one of the wonders of the Jersey world, estimated to have made 902 lbs. 2 oz. butter in one year and eleven days—actually yielded 9,099 lbs. milk in one year and eleven days; Signal of Belvedere, inbred Signal, dam the celebrated prize cow, Miss Sata-nella, 20 lbs. 6 oz. butter in one week, on second calf only.

MRS. E. M. JONES,

303-y-OM Brockville, Ont., Canada.

Prize-Winning Ayrshires for Sale



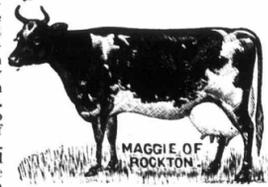
Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors welcome. Address

THOMAS GUY,

290-y-OM Sydenham Farm, Oshawa, Ont.

PRIZE-WINNING AYRSHIRES FOR SALE.

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



JAS. McCORMICK,
 309-y-OM Rockton, Ont.

Imported and Canadian-Bred



AYRSHIRES AND CLYDESDALES FOR SALE.

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

THOS. BROWN,

298-y-OM Petite Cote, P. Q., near Montreal.

PARK HILL HERD OF AYRSHIRES.

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

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

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

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

W. M. & J. C. SMITH,

298-y-OM Fairfield Plains P. O., Ont.

HOLSTEINS, CLYDESDALES AND CARRIAGE HORSES.
 I have one of the oldest herds of Holsteins in Canada, founded on the best blood in America; also registered Clydesdales and Carriage horses.
 297-y-OM **WM. SHUNK, Sherwood, Ont.**

CHOICE HOLSTEINS FOR SALE.

I have a few very nice pure-bred registered Holsteins, bulls and heifers, for sale at very reasonable figures. Write or come and see me. Also one or two high grades.—JNO. A. LINE, Sherwood, Ont., Richmond Hill Station. 304-f-OM

Holstein Friesians

are the most remarkable families and greatest performers. Stock of all ages for sale at the lowest possible prices. Railway Stations—Tavistock and Hamburg, on G. T.R. Post Office—Cassel, Ont.
H. & W. F. BOLLERT.
 306-y-OM

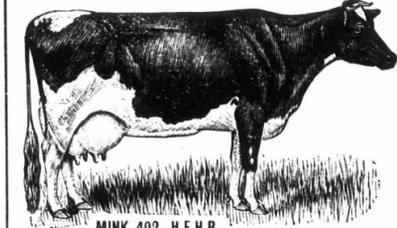
BROCKHOLME STOCK FARM.

Holstein-Friesian Cattle.

ADVANCED REGISTRY STOCK.
 Netherland Romulus, a grandson of Netherland Prince and Albino the second, heads the herd. Young stock for sale.
R. S. STEVENSON, Proprietor,
 295-y-OM ANCASTER P. O., ONT.

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. 291-y-OM

HOLSTEIN-FRIESIAN
STOCK FOR SALE AT REASON-
ABLE PRICES.



All my stock I have carefully chosen for their extra fine breeding and large milk records, and are all registered in Holstein-Friesian Herd Book. A visit, or correspondence solicited.

R. HOWES CRUMP, Masonville,
near London, Ontario, Canada.
300-y-OM

HOLSTEIN BULLS
FOR SALE.

Two nicely marked Yearling Bulls of the best milking strains.

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

Holstein-Friesians



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

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

PURE-BRED REGISTERED HOLSTEIN CATTLE.

The sweepstakes herd at the Toronto Industrial Fair, where my stock bull Woodbine Prince (6712) also took the first prize and sweepstakes silver medal. I keep no cattle that are not of the highest standard.

A. KENNEDY,
Woodbine Farm, Ayr, Ont.
298-y-OM



HOLSTEIN-FRIESIANS
THE CHOICEST HERD IN CANADA.

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

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306-y-OM

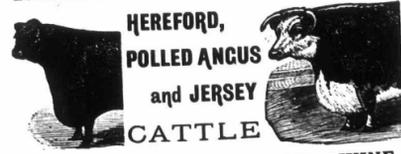
FOR SALE.

A very Superior Registered **GUERNSEY BULL**, three years old. A good chance for a dairyman to grade up his herd. WM. DAVIES, Kine Croft Farm, Markham.
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DAWES & CO., LACHINE, P. Q.

—Importers and Breeders of—

THOROUGHbred & SHIRE HORSES



HEREFORD,
POLLED ANGUS
and **JERSEY**
CATTLE

BERKSHIRE AND YORKSHIRE SWINE.

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

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ABERDEEN, ANGUS, HEREFORD,

—AND—
A. J. C. C. JERSEY CATTLE.

Choice Young Bulls and Heifers of the above breeds for sale at moderate prices at all times. A few fine, young Hereford Bulls, by Cassio, at low prices if taken at once.

M. H. COCHRANE,
HILLHURST P. O., Compton Co., Q.
298-y

FOR GOOD HEREFORD CATTLE

—WRITE TO—

F. A. FLEMING

Address, **WESTON P. O., ONT.,**
Or 15 Toronto-St., Toronto, Ont.
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PURE-BRED : REGISTERED : SHROPSHIRE!

I can sell six dandy Shearling Rams and some choice Ram Lambs, bred direct from imp. stock, at prices to suit the times. Come and see them.

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

SHROPSHIRE



I have on hand a splendid lot of

IMPORTED EWES

from the best English flocks, and are now being bred to a first prize imported ram.

S. C. MILLSON,
GLANWORTH, ONT.
295-y-OM

SHROPSHIRE! SHROPSHIRE!

Having reduced my flock by recent sales,

I am now in England

BUYING

for the

Fall Trade.

I hope to secure a lot equal to my former importations as regards character and size.

W. S. HAWKSHAW,
GLANWORTH, ONT. 291-1f-OM

SHROPSHIRE -:- SHEEP.



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

F. BACH & SON,
Onbury, Shropshire, ENGLAND.
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SHROPSHIRE

—AND—

Improved Yorkshire Pigs.



A choice lot, imported by ourselves. Sheep from the flocks of H. J. Sheldon, F. Bach, R. Mansell, J. Thonger.

Yorkshire pigs from last year's prize winners.

W. MEDCRAFT & SON
SPARTA P. O.
and Telegraph Station
297-y-OM



SHROPSHIRE SHEEP

DAVID BUTTAR,

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

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



PRIZE-WINNING SHORTHORNS

—AND—

Shropshire Sheep

Now ready for shipment. Imported and Canadian Bred Rams, Ram and Ewe Lambs, the get of the choicest imported sires. Good heads, good carcass

and good fleece. None better in the Dominion. Write for prices. Address—

289-1f JOHN DRYDEN, Brooklin, Ont.

SOUTHDOWNS!

My sheep are imported from the flocks of Henry Webb, Geo. Jonas, J. J. Coleman and W. Toop. Will now sell a few ewes from the above in lamb to imported rams, also a few ewe lambs of my own breeding.



DAVID H. DALE,
Glendale, Ont.
296-y-OM

TAZEWELL & HECTOR,

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

DORSET HORN SHEEP

MY SPECIALTY.

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

THOMAS CHICK,

Stratton, Dorchester, Dorset, England.
295-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 WICHTMAN, DRUGGIST, OWEN SOUND, ONT.
Sole Agent for the Dominion. 303-y-OM

Pedigreed -:- Improved -:- Large -:- Yorkshires.

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

ADDRESS:- G. S. CHAPMAN, The Grange Farm, 304-y-OM Springfield-on-the-Credit, Ont.

Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.



Entire breeding stock of Yorkshires are imported: specially selected from stock of F. Walker-Jones and Sanders Spencer, Eng. Registered sows and boars supplied not akin. Shipped to order and guaranteed to be as described. J. E. BRETHOUR, Burford, Brant Co., Ont. 300-y-OM

THE PIONEER HERD

IMPROVED LARGE YORKSHIRES

The oldest herd of pedigree pigs of this famous breed in America. Orders now booked for Spring Pigs. None but choice pigs shipped, and satisfaction guaranteed. ADDRESS:-

J. Y. ORMSBY, V. S., Grange Cottage, 304-y-OM Springfield-on-the-Credit, Ontario.



Improved Large Yorkshires.

We have animals of all ages for sale, of good breeding and excellent quality.

SMITH BROS., Credit Valley Stock Farm, CHURCHVILLE, - ONT. 301-tf-OM

YORKSHIRES ONLY!

MESSRS. BUNBURY & JACKSON, Oakville, Ont., have for sale choice young Boars and Yelts of the Improved Large Yorkshire breed, bred from stock imported from the best herds in England. Orders booked now for spring pigs. P.O., Telegrams and Station, Oakville, on G. T. R. 302-y-OM

IMPROVED - YORKSHIRE - PIGS

OF THE BEST QUALITY CAN BE OBTAINED AT MODERATE PRICES, FROM

C. E. DUCKERING,

THE CLIFF, Kirkton, Lindsay, England,

the oldest and most successful herd in the country, having gained since 1856 nearly 3000 prizes. All pigs supplied either entered or eligible for entry in the herd book. 300-y-OM

THE-GLEN-STOCK-FARM

SCOTCH SHORTHORNS,



SHIRE HORSES, Improved Large (White) Yorkshire Pigs.

Our pigs are specially selected from the prize-winning herds of Sanders Spencer, Ashforth, Charnock and F. Walker-Jones, who won upwards of \$10,000 in prizes in three years. Orders now booked for young registered pigs. Shorthorns and Shire horses for sale.

GREEN BROS., INNERKIP, Oxford Co., Ont. 292-v-OM

The undersigned being desirous to improve Canadian hogs, have purchased a number of

IMPROVED LARGE YORKSHIRES,

and will sell them at very low prices.

WM. DAVIES & CO., 306-a-OM Porkpackers, Toronto.

Improved Large White Yorkshires, Pedigreed.



We have lately added to our herd, which are from the strains of Sanders Spencer, Charnock, and F. Walker-Jones, England. Young stock on hand at all times for sale. Apply to Wm. Goodger & Son, 306-y-OM WOODSTOCK, ONT.

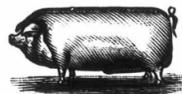
J. F. QUIN, V. S., BRAMPTON, ONT. Ridding horses successfully operated upon; write for particulars. 275-y

IMPROVED -:- LARGE -:- YORKSHIRES!

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

R. H. HARDING,

Mapleview Farm, THORNDALE, ONT.,



Importer and Breeder of Ohio Improved Chester White Swine. First-class registered stock for sale in pairs not akin. Also a few fine young Sows, bred to an imp. boar, for sale. Satisfaction guaranteed. Prices within the reach of all. 301-i-OM

E. D. GEORGE

PUTNAM - - ONT.,

Importer and Breeder of Ohio Improved Chester White Swine



6 Boars, 4 to 6 months' old, fit to head any herd. Pairs not akin. Chesters a specialty. Prices right. 305-y

CHOICE PURE-BRED BERKSHIRES

A few grand pigs of both sexes, just weaned, from a first-prize sow. A. D. ROBERTS, Walmer Lodge, ANCASTER, ONT. 305-y-OM

IMPROVED BERKSHIRES.

Imported and home-bred; from the best strains



-YOUNG STOCK FOR SALE-

at Right Prices. Apply to Richard Delbridge, 290-y-O WINCHELSEA, ONT

S. COXWORTH, CLAREMONT, ONT.,

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

BERKSHIRES

-AND- COTSWOLDS. J. G. SNELL & BRO. EDMONTON P. O.,

Brampton and Edmonton Railroad Stations.

Now is the time to secure young pigs from choice imported sows, and got by the renowned imported boars "Enterprise [1378]" and "Perry Lad [1378]" "Enterprise" won first prize at the two leading fairs in Ontario last year. He weighed just after landing from England 850 pounds. His pigs are coming fine, and are particularly well marked. We have for sale a grand lot of Yearling Cotswold Rams and Ewes which are well worthy the attention of those in want of such. Will be pleased to have visitors come and see our stock. Write for prices. 298-y-OM

CONDIMENT



For HORSES, CATTLE, SHEEP, PIGS, DOGS and POULTRY.

A delicious combination of Tonic, Stimulant, Nutritious and Fattening Food, which Purifies the Blood, prevents and cures Disease. One trial will prove its usefulness and economy. Send for testimonials, prices, &c., &c. 298-y-OM

POLAND CHINAS

All pure-bred and registered. From the very best strains in America. First come first served. Write for prices. I mean business. 298-y-OM W. S. HARRIS, Homer, Michigan, U.S.

PURE-BRED REGISTERED VICTORIA HOGS.

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

EXCELSIOR HERD

40 HEAD PURE-BRED IMPORTED AND PEDIGREED

Poland-China Hogs

Champions and favorites in the U.S. Most pork for food consumed. Docile, mature quick, always fat even on grass. Coming hog of Canada. They must predominate on merits. Best hog in the world for profit. 200 head for sale this season. G. M. ANDERSON, Tynside P. O., Ont.

A. FRANK & SONS, The Grange P. O.,

Ont., Cheltenham Station, C. P. and G. T. Railways. The Centennial - Sweepstakes herd of

SUFFOLK PIGS, being the oldest, largest, and most successful prize winners in America. The boar I-am-First, at the head of this herd, is 17 months old and weighs 440 lbs.

Shorthorn Cattle of the Cruickshank blood. Young bulls for sale, got by Baron Camperdown = 1218 =, imp., (47389) and Baron of the Grange = 10954 =. 306-b-OM

PURE-BRED TAMWORTH HOGS AND CLYDESDALES

JOHN BELL, Clydesdale Farm, L'AMAROUX P. O., ONT.,

offers for sale young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them; it will pay you. Orders now booked for spring pigs. Some A1 Clydesdale Stallions kept for service. Imported and home-bred Colts and Fillies for sale. 304-v-OM

JOHN SMITH,

Live Stock Auctioneer, Brampton, Ont. Sales conducted in all parts of Canada and the United States. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Brampton, Ont.; M. H. Cochrane, Compton, P. Quebec; T. C. Patteson, Eastwood, Ont. 297-y-O

Ontario Veterinary College

Temperance Street, Toronto.

The most successful Veterinary Institution in America. All experienced Teachers. Session begins Oct. 21st. Apply to the principal, PROF. SMITH, V. S., Edin. TORONTO, CANADA. 273-v

Advertisement for 'THE DOLLAR' KNITTING MACHINE, featuring an illustration of the machine and text: 'KEEP YOUR EYE AND HAND ON THIS'.

THE ONLY PERFECT FENCE.

Advertisement for WOVEN WIRE FENCING, featuring an illustration of a man working with wire and text: 'BEST STEEL WIRE GALVANIZED. MCMULLEN'S Twisted Wire Rope Selvage.'

All widths and sizes. Sold by all dealers in this line. Freight prepaid. Information free. Write The ONTARIO WIRE FENCING CO., Picton, Ontario, or to our Wholesale Agents, The B. Greening Wire Co., Jas. Cooper, Hamilton. Carvell Bros., Charlottetown, P.E.I. No rigid twists. Wire galvanised before weaving. Perfectly adjusted for extremes of cold and heat. A complete barrier against all animals. No trouble to erect. 305-d-OM



BAIN WAGON CO.'S
FARM TRUCK

THIS cut represents the most convenient Wagon ever put on a farm, because it is suitable for all kinds of work, and always ready, no changes being necessary.

THIS WAGON was invented and first introduced in Michigan, U. S., and is now very extensively used by leading farmers in the United States.

AND EVERY WAGON made and sold by us in Canada is giving entire satisfaction. For further particulars and prices
Address, BAIN WAGON CO., Woodstock, Ont.

24,600 CHATHAM MILLS NOW IN USE!



- 2,000 MILLS SOLD IN 1886
- 2,300 MILLS SOLD IN 1887
- 2,500 MILLS SOLD IN 1888
- 3,600 MILLS SOLD IN 1889
- 4,000 MILLS SOLD IN 1890

More than have been sold by any 10 factories in Canada put together.

Over 4,000 Bagging Attachments now in use.

Bagging Attachment is run with a chain belt that cannot slip. The elevator cups are also attached to endless chain belt that cannot slip nor clog.

The Mill is fitted with screens and riddles to clean and separate all kinds of grain and seed, and is sold with or without a bagger.

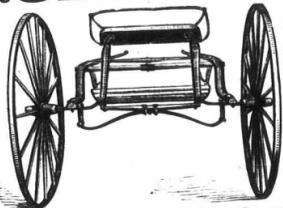
SATISFACTION GUARANTEED.

MANSON CAMPBELL, CHATHAM, ONT. 305-c-OM

WE LEAD. LET THOSE WHO CAN, FOLLOW.

\$16 ROAD CARTS.

Everybody wonders how we can make them for the money. We offer to every person sending us \$16 a good, strong Road Cart, equal to any \$35 cart ever yet put on the market. We use none but the very best material and workmanship. We guarantee that. We do not want agents, we prefer to sell direct to the public. The following is the specification of the



Best Steel C. B. Axles; Round Edge Steel Tires, Flat Steel Springs, all Braces and Seat Railings of Heavy Round Iron; Sarven Wheels of good material; Point Hub Bands; Sword Whiffletrees; Double Bent Shafts; best 1 1/4 x 1 1/4 Seat Risers; seat for two; Cross Bars and Foot Slats of very best stuff; Whip-Holder; Hold Backs, etc., all complete to hitch to. Finished in Wine Color or Natural Wood, and varnished as desired. Great attention is given

CHEAPEST AND BEST CART IN CANADA:

to the material, especially the Wheels and Woodwork used in the construction of these now famous carts. The style of the cart is without a doubt the very best pattern ever produced. It is absolutely without the customary horse motion that is so common with the great majority of road carts.

PRICE.—Only \$16 F. O. B., Hamilton, Ontario. We pay no freight and allow no cash discount. Our terms are spot cash with the order. Send money by registered letter or post-office order. We ship promptly.

In Quantities of Half-dozen or more, we quote Special Price on Application.

HARNESSES.—Send for catalogue, giving full description of our \$10, \$13 and \$15 single harness. They are remarkably good value.

SCALES.—To any person sending us \$5 in a registered letter, we will ship one of our 240 lb. Union Scales, or for only \$12.90 one of our 1,000 lb. Farmers' Platform Scales on wheels. These goods are first-class quality and low in price. Send for catalogue.

TERMS.—Our terms are cash with the order. We ship no goods without being first paid for them. We sell too cheap to run any risk whatever of payment. Send for Catalogue, and mention this paper.

S. MILLS & CO.,

Wholesale and Retail Hardware Merchants and Manufacturers,
94 JOHN STREET SOUTH, HAMILTON, ONTARIO. 305-a-OM

Send us \$2 for the best tree sprinkler made.

STOCK GOSSIP.

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

Mr. M. G. Ireland, whose advertisement appears in this issue, offers some Shorthorn bulls and heifers for sale. The price that these cattle are offered at is reported quite reasonable. This herd is situated quite convenient to the Copetown station, on the G. T. R.

R. R. McNutt, writes us as follows:—"I have been taking the FARMER'S ADVOCATE for over two years now, and I think it is the best farmer help published in Canada to-day. I have come out west, and I feel I cannot do without it. You will find enclosed two dollars to pay my subscription for the past and present year. Please change my address from Lower Stewiacke, Colchester county, N. S., to Red Deer, North Alberta, N. W. T."

In a communication from Mrs. E. M. Jones, Brockville, Ont., the following is included:—"In Silver Baron 27051, just sold to G. N. Proctor, of Pittsburg, Mass., I send out as handsome a bull (of his age) as ever left our yard. Experts have pronounced him absolutely faultless, and I think he will make a sensation in Massachusetts. He is a son of my famous prize bull Canada's John Bull, who is from Canada John Bull and Allie of St. Lambert, 269 1/2 lbs. butter a week, 57 lbs. milk a day. As the dam of this young bull made over 17 1/2 lbs. butter a week on her second calf, it will be seen how rich his pedigree is. He is not fifteen months old, but it will take something grand to beat him. With him Mr. Proctor takes two magnificent daughters of Rioter's Pride, Lotus of St. Lambert, and Martha of St. Lambert, 16 and 17 months old, both pure St. Lamberts, both bred to Canada's Sir George, and both heifers of superb breeding and quality.

There arrived in Winnipeg a few days ago from Newmarket, Eng., some of the best English Thoroughbred horses that have ever been imported to this country. They are the property of Mr. Jas. Jenkinson. The first, Regalis, a dark chestnut stallion, is a very superior horse. He stands 15.3 hands high, and is five years old. He won the Biennial Stakes at Ascot. His sire was Springfield, dam Wood Anemone, by King of the Forest out of Crocus by Thormanby. Springfield was sired by St. Albans. The second, a bay stallion, St. Emanuel, three years old, standing 16 hands high, is sired by Victor Emanuel, out of St. Mary by Cathedral, out of Duphrosyne by the Miner. Victor Emanuel is by Albert Victor, out of Time Test. The third is a bay stallion, Leon, two years old, is sired by Paradox, out of Lioness by Uncas, out of Flower of the Forest by Hanger. Paradox is by Sterling, out of Causistry Leon, stands 14.3 hands high, and was the property of Lord Londonderry.

Mr. S. Coxworth, Claremont, Ont., writes as follows:—"My herd of Berkshires are in fine condition this spring, and the demand for good ones has been very good. I have a large stock of different ages—a fine lot of young ones just fit to ship; also some choice sows, farrowed Oct. 13th, 1890, from imported sow and imported boar. Will make good ones for showing under one year. My herd at present numbers nearly fifty. I have recently made the following sales, and I am pleased to state that purchasers have reported entire satisfaction in every case where I have shipped to order: Wallace Tifts, Welland, boar; Jonas Proctor, Glencaron, boar; J. McBain, Chesley; sow in farrow; Thomas Heney, Millbrook, boar; Alex. Polson, Stonwall, Man., one boar; Jas. Leask, Taunton, boar; R. H. & Son, Walkerton, sow; Luther Pilkey, Claremont, boar; S. C. Brown, Whitby, boar; David Russell, Brouham, two sows; Henry Hoover, North Bruce, sow; William Stewart, Wyebridge, boar; W. W. Meek, Maxwell, boar; Jas. Todd, Atha, sow in farrow; Thos. H. Tape, Highgate, sow."

Alex. Hume, Burnbrae, sends the following list of sales made since 1st March, 1891:—Pure-bred Ayrshires—Three-year-old cow Little Dandy, and heifer calf to Thos. Stillman, Seymour West; bull calf to W. Morton, Melra, Ont.; bull calf to G. C. Kyle, Picton, Ont.; heifer calf to E. Graham, Elm-Que.; bull calf to Jos. B. Williston, Bay ud Vin, N. B. Then grade stock—Three heifer calves and one bull to Wm. Melklejohn, Rawdon, Ont.; three heifer calves to S. D. Silis, Rawdon, Ont.; bull calf to Jno. Melklejohn, Rawdon, Ont.; bull calf to David McComb, Rawdon, Ont.; bull calf to J. Robertson, Morrisburg, Ont.; boar to E. Graham, Elm-Que.; pair (boar and sow) to E. E. Stephens, Campbellford, Ont.; three pairs to E. J. Darroch, Minnedosa, Man. Our herd has wintered well, and we are sending 590 lbs. milk to the factory per day from 18 cows, at time of writing, 13th May; cows still in stable, and 6 of these gave the following amounts of milk since dates of calving:—One from March 9th to date, 13th May, 2,380 lbs.; one from March 23rd to date, 13th May, 1,800 lbs.; one from March 30th to date, 13th May, 1,562 lbs.; one from April 20th to date, 13th May, 948 lbs.; one from April 20th to date, 13th May, 908 lbs.; one from April 24th to date, 13th May, 722 lbs. Although nothing to boast of, still we think it above the average, not being forced, and in the stable. In regard to Mr. Stewart's letter, we thought we made it quite plain to your readers that it was the prize for "herd of dairy cows" that we captured, and as the prize Mr. Stewart refers to was not for "herd of dairy cows", but simply "herd of cows", the difference all dairymen well know. Consequently this does not invalidate our statement, and further we had no reference to other than the past year, as in 1889 we entered no herd for competition,

STOCK GOSSIP.

Mr. F. W. Stone, Guelph, has sold to Mr. D. Graham, Glencoe, two promising yearling Hereford bulls for shipment to a ranch in the N. W. T.

Mr. Wm. Davies, Kine Croft Farm, Markham, has a very select herd of Guernsey cattle, and as good a herd of Improved Yorkshires as have been imported. In his advertisement for this month see what he has for sale.

We are informed by Mr. H. J. Hill, the Manager of the Industrial Exposition, that their prize lists are now ready for distribution, and will be sent on application. Those desiring such should send a post card to the Manager, Toronto.

Mr. W. A. Lovatt, of Renforth, is an admirer of Shorthorn cattle. His herd at present comprises some six head of females specially selected for their dairy qualities, and all registered in the D. S. H. H. B., among them a very fine cow from the herd of Senator M. H. Cochrane, Compton, P. Q.

Mr. Geo. Kelly, of Ancaster, has laid the foundation of a nice herd of Shorthorns, his latest purchase being a bull from Messrs. J. & B. Watt, of Salem, a son of the imported bull Baron Campdown. Besides his Shorthorns Mr. Kelly keeps some choice Berkshires, mostly of Snell's stock.

Mr. G. M. Anderson, breeder and importer of Poland China swine, Tyneside, reports a good many sales. He is shipping pigs to New Brunswick, Lower Bedford, Quebec, Cobourg, Goderich, Aylmer, Amherstburg, Bond Head, Ballantrae, Uxbridge, and has made some good sales in his own neighborhood. His herd of forty sows came through the winter in good shape. Pigs have come strong and well proportioned.

The veteran importer and breeder, Mr. F. W. Stone, of Guelph, Ont., announces a sale of 150 head of Shorthorn and Hereford cattle, and also a number of well-bred agricultural horses. The sale has been brought about through Mr. Stone having sold 450 acres of his farm, and the sale is therefore an urgent necessity. Now that beef cattle have made such a decided advance, and the whole of this continent has been shortening up on improved cattle of all descriptions, farmers and others interested should attend, as there will doubtless be many bargains in a sale of this extent.

Mr. Arthur Johnston, of Greenwood, in writing this office reports Shorthorn matters slowly, steadily, but surely on the mend. "Enquiries are abundant, offers are frequent, and sales are sometimes made at moderate prices. The only trouble now is that the prices offered will not pay to produce really good ones, though the cheaper sorts ought to pay tolerably well just now. Stock came well out of the winter, but most of us have been terribly short of feed, and the lateness of the grass has caused some flesh to be lost between feeds. I have still a number of extra good young bulls for sale fit for immediate service."

Wm. Goodger & Son, of Woodstock, write:—"We find the enquiry for Large Improved Yorkshires brisk, and the demand increasing. We report sales since first of March as follows: Boar to R. H. Smitherin, Cairngorm; boar and three sows to Joseph Laurence, Clearwater, Man.; sow to Milton Shoulls, Manitoba; two sows to Joshua G. Lytle, Dorking, Ont. We shipped three pigs bred from Large Improved Yorkshire boar and Berkshire sow that weighed 250 lbs. each at eight months; also a sow (thoroughbred) that weighed 233 lbs. at seven months, and she was never forced one day by over-feeding, as we could easily have made her 300 at the same age, with extra feeding."

E. D. George, Putnam, Ont., writes:—"The demand for O. I. Chesters continues strong. They meet with public favor wherever introduced. Note the following sales: D. Agnew, Rockwood, pair; G. Taylor, Beeton, pair; J. Loughhead, Markdale, pair; H. McDonald, Alexandria, boar; P. Scott, Norwood, boar; N. P. Ford, Oromocto, boar; N. S. Jeffries, Sussex, N. B., pair; D. McDonald, Pine River, sow; J. Oughton, Crystal City, Man., pair sows; J. McBain, Chesley, pair; J. B. Dionne, Mathew, P. Q., boar and two sows; H. McLeod, Dugald, Man., pair; S. Schell, Gormley, boar; C. Birch, Canning, boar; H. Schueringer, Preston, boar; B. Graham, Blackstock, pair."

NOTICES.

The first and only School of Expression ever established in Canada, has recently been organized with Prof. F. J. Brown, Meddallist of the National of Philadelphia, President, and A. C. Mounteer, B. E., Honor Graduate, Secretary. Both of these gentlemen come highly recommended. They hold their summer session this year at Grimsby Park, Ont. Fall term begins in Toronto, Oct. 5, 1891. See advertisement in another column.

Woodstock, Ont.

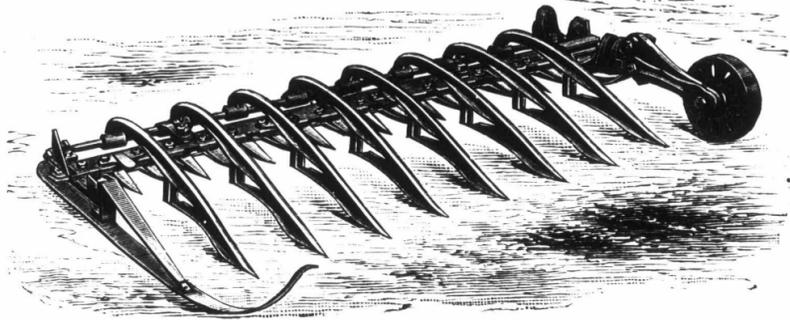
The Lawrence-Williams Co.—Gentlemen: This is to certify that I have used your Gombault's Caustic Balsam, and I find it, without exception, the best bister that I have ever used, and would recommend any persons using bisters to try it, as it is first-class. I am using it now on several of my horses.

Yours truly, JOHN FORBES.

PICKERING, Dec. 3, 1889.
MR. MANSON CAMPBELL:
Dear Sir, The tanning mill and bagger that I bought from your agent, D. Urquhart, especially the bagger, has proved more than satisfactory, and I believe it to be the best mill sold in Ontario county at the present time. I have cleaned and bagged all kinds of grain, and it has done first-class work. I would recommend them to every person who wants a mill or bagger.

Yours, etc., JOSEPH BRAND.

THE GENUINE TOLTON PEA HARVESTER
SIMPLE, SUBSTANTIAL, LIGHT, STRONG AND DURABLE.

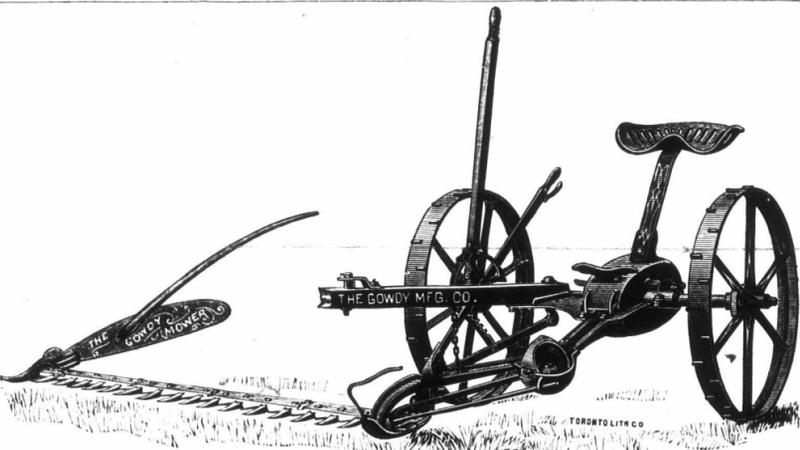


THE MONARCH OF THE PEA FIELD.

Thousands of them now in use in Ontario, in the hands of the leading farmers, who endorse it as being highly satisfactory. This Pea Harvester pays, and is one of the greatest labor-saving machines in use—harvesting from eight to ten acres per day in the most complete manner. It is endorsed by all first-class farmers who have this Harvester to be as useful in the pea field as the mower is in the hay field. It can be attached to any mowbar, and has the only Vertically Acting Lifter, having a practically successful movement to suit the unevenness of the land, of which we are the Sole Manufacturers and Patentees.

Send for circular with prices and instructions. Order early and secure one.

TOLTON BROS., Guelph, Ont.



Our "GUELPH" MOWER has all the qualities desirable in a perfect Hay Maker. Constructed on the best principles; well made, and finished to suit the most fastidious. It has given entire satisfaction wherever introduced. We also manufacture

TURNIP SEED SOWERS, ROOT SCUFFLERS, PLOWS OF ALL KINDS, ETC.

THE GOWDY MFG. CO.,

Send for prices. 306-a-0 Guelph, Ontario.

SECTIONAL VIEW OF WHITE SELF-CONTAINED RETURN TUBE BOILER,
SHOWING DRY PIPE.



This style of boiler is used with all our threshing engines, enabling our customers to produce abundant steam with long, rough, cheap wood. We utilize water space surrounding and at back end of fire box in connection with our improved internal straw burner.

Manufactured only by GEORGE WHITE & SONS, London, Ont.

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. 303-y-OM

Imported Clydesdale Stallions and Mares for Sale.

Highest Prize Winners in the Leading Shows of Scotland and Canada,

AND THE GET OF FAMOUS SIRES

Such as Lord Erskine, Darnley, Old Times, McCammon, Prince Lawrence, Lord Hopton, Bold Magee, Sir Wyndham, Good Hope and Fireaway.

Prices Reasonable. Catalogues Furnished on Application.



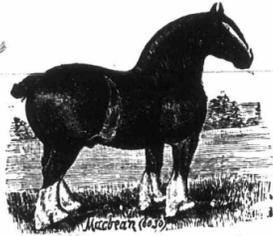
ST. GATIEN, 3388

ROBT. BEITH & CO.
BOWMANVILLE, ONT.

Bowmanville is on the line of the G. T. R., 40 miles east of Toronto and 294 west of Montreal. 289-y

IMPORTED AND REGISTERED
CLYDESDALE AND HACKNEY
STALLIONS AND MARES

CONSTANTLY ON HAND, AND FOR SALE AT REASONABLE PRICES



McCormick (403)

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
CLAREMONT ONT.

Twenty-five miles east of Toronto, on the C. P. R. 305-OM

SHROPSHIRE SHEEP

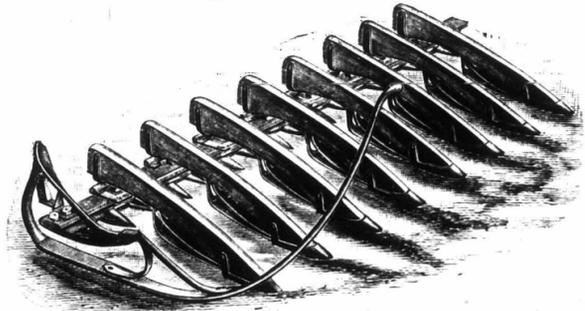
—AND—
COLLIE DOGS.



A choice lot of Ewes bred by Mr. David Buttar, Couper, Angus, Scotland; two Shear Ewes, imported last season, and their produce. Also Collie Dogs just imported. 296-y-O.M

W. H. BEATTIE, Wilton Grove, Ont.

**RICHMOND'S
PEA HARVESTER**
PATENTED 1889.



Can be attached to any ordinary Mowing Machine, and will work on any ground over which a Mower can work. Will cut all around the field. Will work well in Green Peas. Is the simplest and cheapest device for cutting Peas ever invented, and very easily attached or detached.

All communications must be addressed to
JOHN RICHMOND & SON.

Byth, Ont. 36-O

FOR SALE

Thirty good Missouri and Illinois Farms near St. Louis. Enclose stamp for descriptions.

Thos. Betts,

305 b-OM 525 Chestnut, St. LOUIS, MO.

Graduated Prices. Recently Furnished.

LELAND HOUSE,

W. D. DOUGLAS & CO., Proprietors.

The Finest Hotel in the Northwest.

Corner City Hall Square, Main & Albert Streets,
CITY HALL SQUARE,

WINNIPEG, MAN.

297-y-OM

DEREDICK'S HAY PRESSES.

Made of steel, lighter, stronger, cheaper, more Power, ever-lasting and competition distanced.



Address for circulars and location of Storehouses and Agents
P. K. DEDERICK & CO.,
Dederick's Works, Albany, N. Y., or Montreal, P. Q.

Dr. A. Wilford Hall's Health Pamphlet.

Health without medicine. This is no fraud, but a practical thing which, in use, is giving health to hundreds of thousands. "Microcosm" extra sent free, giving particulars.

C. C. POMEROY, General Agent,

304-y-OM 496 King st., W., Toronto.



Baby Hand Separators,
Curtis' Oil Test Churns,
Babcock Milk Testers,
Lactoscopes,
Butter Workers,
Butter Printers,
Butter Color.

TESTIMONIAL.

Ingersoll, Mar. 19, 1891.

John S. Pearce & Co.
Dear Sir, I received the Baby No. 2 Separator Wednesday evening. Mr. Drummond set it up the next morning, and separated about 100 pounds of milk, and he thinks the machine an extra good one, even better than the one he used in the Scottish Dairy School. He thinks it turns easier. I have tried it twice myself since, and find no trouble in working it, and think it just about perfection. I would not think of running my little creamery now without it, as I am fully satisfied we will save enough this summer in time and extra cream to pay for it. I will test it for another week and then call and pay for it, probably next Saturday.

Yours truly, GEO. GRAVES.

A FULL LINE DAIRY SUPPLIES.

Send for catalogue. ADDRESS:

JOHN S. PEARCE, LONDON, ONT.

Canadian Agents for Cornish, Curtis and Greene, Ft. Atkinson. 365-a-OM

MEN WANTED Positions permanent Experience unnecessary. Boarding. Salary from start. Brown Bros. Nurserymen, Toronto, Ont. 296-2-0

THE NEW No. 3 BRANTFORD

— OPEN BINDER —

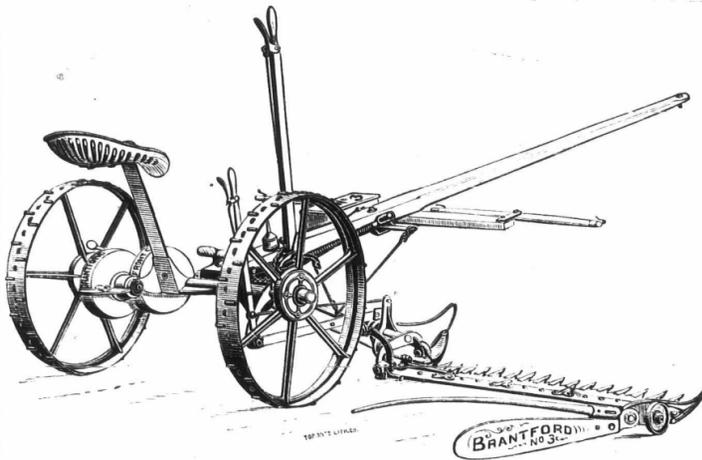
ELEVATOR CAN BE CLOSED WHEN DESIRED.



THE MOST MODERN BINDER OF THE AGE.



If you want the newest and best Binder on the market, be sure and carefully examine "The New Brantford." It leads the world in improvements.



THE NEW No. 3 BRANTFORD MOWER.



The New Brantford Mowers are made either front-cut or rear-cut, and are fitted either with 2 1/2 or 3-inch Sections, as preferred. Width of cut from 4 ft. 6 in. to 5 ft. 6 in.



— MANUFACTURED ONLY BY —

A. HARRIS, SON & CO.

BRANTFORD, (LIMITED), CANADA.

EUROPEAN HOUSE: 41 Fox Street, Liverpool, England.