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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE *

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ESTABLISHED 1866.

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VOL. XXXVI.

LONDON, ONT., AND WINNIPEG, MAN., AUGUST 1, 1901.

No. 531

EDITORIAL.

Shall We Sow Fall Wheat?

The question whether it is wise for farmers in the sections of the country in which winter wheat has formerly been successfully grown to continue to sow it, in the face of the invasion of the Hessian fly, which in many districts has this year been so very destructive, is a problem which calls for serious consideration at the present time. While it is true that with the market prices at present and for some years past prevailing there has been little if any profit in this crop, and, owing to the constant widening of the world's wheat field, little prospect of improvement in price in the future, yet we are by no means disposed to take a pessimistic view of the situation or to seek to discourage farmers from growing, to a limited extent, this the most pleasant of all farm crops to handle. The preparation of the land for the crop and the seed-sowing comes in at a time when the work interferes little with other operations on the farm, and the same may be said of the harvesting. It is certainly the best of all grain crops in the average of seasons with which to secure a catch of clover and grass seeds, and hence takes a convenient and useful place in a rotation having in view the maintenance of the fertility of the farm. It is a crop that has successfully run the gauntlet of many insect and other enemies in its past history, including its latest foe, the Hessian fly, which has come and gone in former years, returning recently to the attack with renewed vigor, but which, we are confident, can, by intelligent management, be out-generated and vanquished from the field. Scientists who have studied the life-history of the fly assure us that its eggs are laid in the latter half of August and the first three weeks of September, and this fact suggests the most feasible means of checking and cheating the pest, which is to delay the seeding until the female flies have laid their eggs elsewhere and have perished from the effects of frost or reached the limit of life. The objection to late seeding in dry autumns is that the plants in average seasons fail to secure sufficient strength and vigor to withstand the severe frosts of winter, but we submit that it is worth considering whether, if the preparation of the land were commenced early and frequent surface cultivation given it, especially after any showers of rain that may fall, sufficient moisture may not be retained and the mechanical condition of the soil made such that the germination of the seed and the growth of the plant may be hastened, though later started, and thus rendered quite as strong at the approach of winter as under the former practice of sowing earlier in a drier and less-prepared seed-bed. Early sowing, when the fall months prove moist and warm, is often fatal to the wheat crop, the growth of top being so great that it rots under the winter covering of snow and proves a failure, and the richer the land and the more perfect the preparation, the more likely is failure from this cause to be experienced. If, as seems highly probable, the secret of success in evading the attack of the fly lies in the management of the soil and the time of seeding, it would seem the part of wisdom to endeavor to find the happy medium, the dividing line 'twixt failure and fortune, and to follow that line. This, together with the sowing of clean, plump and well-selected seed of a variety that has been tested and proven suitable to the soil and climatic conditions of the section, should make the cultivation of the crop a fairly safe venture where it has at any time succeeded. It has been suggested that by sowing narrow strips on each side of the field, about the first of September, and plowing these down after the flies have laid their eggs and before the later sowing has advanced far enough to

be attacked, a large percentage of the larvæ may be destroyed. This expedient may be well worth trying, as it is not expensive or unreasonable. If one were giving advice, it would doubtless be safe to admonish the sowing of less land than usual to wheat, sowing somewhat later than has been the rule, and only on good land in a well-prepared condition, that is well pulverized and compacted. To sow early or on unfit and ill-prepared ground, is to court probable failure and disappointment through the loss of the seed and the labor expended, while furnishing food for the perpetuation of the insect pest.

Farmers Should Raise More Hogs.

We hear of little or no surprise, nor should we, that good horses are becoming scarce and dear. The "Farmer's Advocate" and others who read the signs of the times aright, endeavored to awaken horse-breeders years ago to the wisdom of keeping their good brood mares raising foals as fast as possible, and those who did so are now reaping a rich reward. The same may be said of the hog-breeders, both in Canada and the United States, where there exists a real shortage of hogs in spite of the fact that for over a year the prices paid by the packing-houses for live hogs have been well above the danger line of no profit. It is more than fifteen months since the prices paid in Toronto, the main Canadian market, reached \$6.00 per cwt. for bacon hogs, and for only a few weeks during last fall and early winter did the price go below that figure, falling to \$1.75 for one or two days in November, but going again to \$5.75 almost immediately. Since the beginning of 1901 the price has gone steadily forward, with only slight and temporary retractions, until the present high price of over \$7.00 per cwt. was reached. There is considerable difference of opinion as to the real cause of the increasing price, some attributing it to a united determination of the older-established packing-houses to tire out the farmers' co-operative companies; while others say the packers can make some money at these prices and need hogs badly to keep their curing-houses engaged. The packers themselves claim that the prices are much higher than the British markets will warrant, which makes it appear that there is some ground for the tiring-out theory. At any rate, there is a shortage of hogs, and the price is good both here and in the States, so we may rest assured that it will pay to put more sows into the breeding pens until enough hogs are being produced to keep the packing-houses running full time with a fair supply continuously. At present, in spite of the increasing prices for over a year, many of the houses are running away below their capacity, which renders their curing relatively expensive. In the Chicago market, the great meat center of the U. S. republic, only for a short time in January, 1900, was the price for the best qualities below \$5 per cwt. alive, during the whole year, while since January, 1901, the figures have ranged from \$5.40 to \$6.50 per cwt., so that it would seem that the demand for pork products is increasing at a relatively greater rate than the supply. It is true that disease has had a telling effect upon many American and some Canadian herds, and perhaps a shortage of coarse grains may have reduced the number of hogs raised, but in this country, with judicious treatment and the knowledge our farmers have of the value of roots and other cheap wholesome foods, along with dairy by-products, there is very little

occasion to hesitate in keeping a half dozen or more sows at work producing litters to go off every month or two throughout the year. Judicious care of the in-pig sows, especially in the winter season as spring approaches, is an important factor, and no doubt a lack of this, causing heavy losses of litters last spring, is to a considerable extent responsible for the shortage of store hogs now existing throughout the country.

While prices are high, from a keen, indiscriminating demand, there is, unfortunately, little probability of hog-raisers paying the careful attention they should to the best type of sows and boars to use for the good of the Canadian trade, but it so happens that the best bacon types are also most prolific and healthy, so that this part of the industry will tend to look after itself fairly well. The American type—short and thick—is becoming a shy breeder and less vigorous than they were several years ago. When the sows of any thick breed are stretched out by selection and careful feeding, coupled with plenty of exercise, they answer fairly well for bacon production, so that it is not really necessary for those who have been in the habit of breeding the fat-backed breeds to put them entirely away, but while the price is high for commercial hogs of all classes, it is a good time to select and discard with a free hand, in preparation for a more discriminating state of the trade. To those who have not bred hogs and have no established prejudices we would point out that the packers (and they are the fellows we have to depend on) have least fault to find with Tamworths and Yorkshires and little to say against the lengthy type of Berkshires, but even these should all be selected for best results. Mr. E. D. Tillson, who raises several hundred hogs of best quality a year, keeps almost entirely pure-bred Yorkshires, while Mr. David Lawrence, an extensive bacon-hog producer, pins his faith to the Tamworth sow and Berkshire boar. Both these men rear large litters, usually two each year for every sow, and get top prices for their pigs at seven or eight months old. They, however, take the wise precaution, which is also cheap, to keep the sows in rather thin but vigorous condition by liberal exercise and coarse fodder.

In selecting a brood sow, it is well to take some pains to select from the progeny of a producer of large litters of right type. From seven to ten weeks old is a good time to make the choice, and it is not always the largest at that age that turns out best as a breeder. See that she is lengthy, rather smooth over the shoulder, possesses a dozen teats, and looks out well for number one at feeding time. Keep her growing along well, with plenty of outdoor life, green feed and some grain, to build up a hardy constitution. In our judgment, she should not in any case be bred before she is eight months old, so as to produce her first litter at one year old, and many successful hog-raisers prefer their sows to retain their virginity until ten months have been reached. After being bred, the same cheap feeding and liberal exercise may be administered, the aim being to promote growth without fattening, as fat sows usually have small litters and are more liable to accidents with their young.

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13. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions how to improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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Canada at the Glasgow Exhibition.

EXTRACTS FROM THE SCOTTISH FARMER AND OTHER GLASGOW PAPERS.

The impression made upon Old Country visitors to the great agricultural and industrial exhibition by the display placed there of products of the Dominion is well exemplified in the following:

"Canada is our premier colony, and it makes a display in this exhibition of which the mother country may well be proud. The account of the Dominion, embodied in the official catalogue, makes a useful introduction to a survey of the contents of the Canadian house. If young, active fellows, who are without encumbrances, and desire to strike out for themselves, do not, after reading this, embark on an early steamer for the Dominion, the attractions of Scottish agriculture must be still strong. The rapid growth of the Dominion as an agricultural realm is seen in the fact that the area under wheat in 1900 was double what it was in 1890. Canada offers exceptional facilities to the farmer, and her unclaimed homesteads are open to all who desire to make for themselves a home and an honest living. The enterprise of the Dominion is magnificently illustrated in the house devoted to her exhibits, and it is a remarkable tribute to the engineering skill of the new colony that with but a dozen large factories making agricultural implements she sends across the ocean such a display of these as is to be seen in 'Canada.'"

Prominent among these exhibits is the great central trophy devised and erected under the supervision of Mr. Hay, and out of sight the finest thing at Kelvingrove. This trophy shows samples of all kinds of Canadian farm cereal produce, contributed by 250 farmers in different parts of the Dominion, and illustrating the truth that while she extends northwards so as to merit the title "Our Lady of the Snows," she has a sunny clime and vast expanses of fruitful fields, whereon are grown an abundance of food for the millions of man and beast. As an artistic design this trophy is not more remarkable than as a visible representation of the splendid wealth of our greatest colony.

The exhibits which show the natural products of the Dominion, as prepared for the British market,

are the most unique and suggestive parts of the display. Cold storage is to be a big factor in the future competition, and the fruit of season 1900, shown on the tables, as well as the fruits and vegetables preserved in antiseptic solutions, declare plainly that Canada is being piloted by men who know their business, and that while the motherland may well be proud of her daughter, she may well fear her enterprise and envy her success.

In these days of Imperial ideas, when on all sides efforts are being made to draw the various portions of the Empire closer together, one of the most interesting problems is how trade between the colonies and the mother country can be increased. The question is often asked, "Can Great Britain, if necessary, supply Great Britain with sufficient supplies of food so as to render her present dependence on other countries unnecessary?" Whether this is or is not the case will probably be amply proven some day, when international complications will again place the Empire on its metal, and another practical test be given to the links in its chain. Meanwhile, however, one fact remains patent, and that is that the United Kingdom could at the present time be drawing more on the colonies for her food supply than is at present the case. For a practical example of this it is only necessary to go into any grocery store in the United Kingdom and inspect the varied food products imported from foreign lands, nearly all of which might be supplied by people living under our own flag in other parts of the Empire. Therefore, any efforts made to change this unsatisfactory state of affairs, and to explain to British importers what the resources of Greater Britain in this line really are, cannot but be productive of immense benefit, and as such is the case, the special efforts being made in this line at the Glasgow Exhibition are worthy of more than passing notice.

Of all the colonies represented at Glasgow, Canada ranks first, not only as regards population and political importance, but also as to the extent and variety of her exhibits, and it is pleasing to note that the Dominion Government is making a special effort to show the capability of Canada to meet the demands of the British consumer. Of course, the fact that Canada has for years back been supplying the British market with steadily increasing quantities of farm produce is fairly well known; still, one has only to visit the Canadian Food Products section in the Industrial Hall to realize how this trade could be increased, and to study the system of cold storage arranged for by the Ottawa Government, to feel satisfied that it will be increased.

That Canada can produce large quantities of food products for export is, of course, an established fact, and the continually increasing value of farm products exported (last year amounting to no less than \$57,810,532) is ample evidence that they only need to become better known to secure an even larger consumption in the United Kingdom. Transportation facilities, however, cannot but play the most important part in continuing the good start already made, and the Dominion Government is not only doing an immense service to Canada by advertising her products at Glasgow, but is also largely solving the problem of transportation of perishable articles, by aiding to establish a chain of cold storage between all the principal shipping points in Canada and the centers of population in Great Britain. In fact, the recently large increases in Canadian exports can be safely attributed to the fact that exportable food products can be kept in cold storage in all large towns in the Dominion, shipped in refrigerated cars on any of the Canadian railways, and carried across the Atlantic by the Donaldson, Allan, Dominion or Elder-Dempster lines in cold storage, and be placed in refrigerating chambers on their arrival in Liverpool, Manchester, Glasgow, London, or any of the chief British ports.

At the Glasgow Exhibition, merchants of all kinds are having a first-class opportunity of studying what Canada can produce, and the benefit already derived by exhibiting firms is very gratifying. One alone (The Wm. Davies Co., Ltd., of Toronto) find that their business in hams and bacon has more than trebled in Scotland since the opening of the Exhibition, while their sales in England are increasing by leaps and bounds. Over 200 retailers in Scotland are now selling all the Canadian-cured meats they can get, and Mr. J. D. Stewart, the well-known Ontario commercial traveller and superintendent of food products at the Exhibition, reports that the exhibit is leading to an immense increase of trade in almost all lines, and especially in flour, eggs, bacon and canned meats; in fact, that the benefits of advertising Canada in Glasgow are already being felt, and that the efforts of the Canadian Commissioner, Mr. W. D. Scott, to have Canada well represented are meeting with well-merited success.

Dairying properly carried on is an exceedingly profitable business when a man can succeed at it with poor to ordinary cows, allowed to roam over poor pastures, with no supplementary food, unprotected from flies that torment them constantly; who also allows the small milk yield of his herd to be made into cheese by a cheap maker in a poor old factory with a curing-room in which the temperature is governed by the condition of the atmosphere outside. Still, this seems to be the case, else there people wouldn't stay at it. What a fortune some favorably-situated people are missing by sheer laziness and improvidence!

STOCK.

Prof. Koch, of Berlin, Creates a Profound Sensation.

"The alarmist crusade against cattle is not needed for the benefit of the animals themselves, and has no justification in so far as human beings are concerned."—FARMER'S ADVOCATE, March 1st, 1901.

From the standpoint of humanity, the most important gathering of the year was the British Congress last week for the Prevention of Tuberculosis, in St. James' Hall, London, England, at which were convened many of the world's most eminent pathologists and physicians. The hall was thronged with scientists and medical experts, Lord Lister presiding. Interest naturally centered in the address of Prof. Robt. Koch, of Berlin, the great German bacteriologist, who was introduced by Lord Lister with a simplicity becoming to each as a man of science, and welcomed with British heartiness. His address occupied about eighty minutes, and was followed with intense attention. It was delivered in English, with marked German accent and grave deliberation. Tall, full habited, with high forehead, large spectacles and stooping shoulders, he was the embodiment of German scholarship and thoroughness in investigation. Prof. Koch's main theme was the best method of fighting tuberculous plague, cholera, hydrophobia, and especially leprosy, which he described as caused by a parasite closely resembling the tubercle bacillus. He pronounced hereditary consumption to be extremely rare, and considered the sputum of a consumptive patient the chief source of infection. The natural preventive measures were the removal of the patients from small, overcrowded dwellings, to established special hospitals for them, compulsory notification to health authorities of cases of tubercular disease, systematic disinfection of sick rooms, and the founding of sanitariums where cures could be effected. He gave an account of recent experiments in Berlin, which served to prove the

TREMENDOUSLY SIGNIFICANT ANNOUNCEMENT which he then made, and which has been received with a feeling of relief throughout the civilized world. He stated that his experiments had satisfied him that human tuberculosis and bovine tuberculosis were radically different diseases, and that he had amply demonstrated that *cattle could not be infected with human tuberculosis*. The counter proposition, that *human beings were not liable to infection from bovine tuberculosis*, was harder to prove, the Doctor said, owing to the difficulty of experimenting upon human subjects, but he was satisfied such was the case.

In a subsequent interview with a correspondent of the New York Herald, Dr. Koch also said: "I have reached the conclusion that the very general fear of contact with tuberculous flesh or fluids is an unnecessary and unfounded fear. I have arrived at my discovery through what I consider practical and indisputable tests. They lead me to believe that human and bovine tuberculosis are of a totally different species. Proceeding on that premise, I am now prepared to show that the far-reaching precautions as to infected cattle may once for all be abandoned."

The experiments upon which the conclusions were reached covered two years, and were conducted along with Prof. Schultz, of the Berlin Veterinary College. During these experiments, he told the Congress, a number of young cattle which had stood the tuberculin test, and might, therefore, be regarded as free from tuberculosis, were infected in various ways with pure cultures of tubercle bacilli taken from cases of human tuberculosis. Some of them got tubercular sputum of consumptive patients direct. In some cases tubercle bacilli or sputum were injected under the skin, in others into the peritoneal cavity, in others in the jugular vein. Six animals were fed with tubercular sputum almost daily for seven or eight months. Four repeatedly inhaled great quantities of bacilli which were distributed in water and spattered with it in the form of spray. None of these cattle, and there were nineteen of them, showed any symptoms of the disease, and they gained considerable in weight.

From six to eight months after the beginning of the experiments they were killed, and in their internal organs not a trace of tuberculosis was found.

The result was utterly different, however, when the same experiment was made on cattle free from tuberculosis with tubercle bacilli that came from the lungs of animals suffering from bovine tuberculosis. After the incubation period of about a week, the severest tubercular disorders of the internal

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organs broke out in all the infected animals. After death, extensive tubercular infiltrations were found at the place where injections had been made, and in neighboring lymphatic glands, and also far advanced alterations of the internal organs, especially the lungs and spleen. The difference between human and bovine tuberculosis appeared not less strikingly in similar experiments with asses, sheep and goats, into whose vascular systems the two kinds of tubercle bacilli were injected. These experiments were not the only ones that have led to this result.

Incidentally he pointed out that cases of primary tuberculosis of the intestines were extremely rare, though it was well known that milk and butter consumed in great cities contained large quantities of the bacilli of bovine tuberculosis in living conditions. He also quoted the old experiments of Chauveau, Gunther, Harms, Ballinger and others, showing that human tuberculosis differed from bovine.

DAYLIGHT AT LAST!

It is fitting that the opening year of the 20th century should be signalized by the vindication of the cow from the dark and sinister imputation that, through ignorance or by design, has rested upon her. Directly or indirectly, it has been insinuated that human consumption, which in Canada alone is credited with one-fifth the deaths, or 8,000 annually, was largely due to germs conveyed through milk or meat. This view was directly disputed by Prof. Wm. Osler in his celebrated review of the medical progress of the 19th century, quoted in the FARMER'S ADVOCATE for Feb. 15th last, who singularly and significantly foreshadowed the present Koch deliverance. It is also in accordance with the eternal fitness of things that the discovery above stated and its announcement should be made by Dr. Koch, the discoverer of the tubercle bacilli in 1882. In the course of his investigations in 1890-91, he prepared, from gradually-attenuated cultures of the tubercle bacilli, a fluid called tuberculin, designed to be administered as a hypodermic injection as a cure for consumption, but which by 1894 had been discredited as a remedy. It was subsequently found that when hypodermically injected under certain conditions into animals having tubercles, however minute and innocuous, a reaction was set up, causing the animals' temperature to rise. Designing pseudo-scientists were not long in seeing rich possibilities of exploiting tuberculin as a test for cattle, though now known to be a failure. In several European countries, Canada and the United States it was officially inaugurated, in the latter reaching the climax of a crusade of slaughter in several States. Against this senseless folly cattle-owners rebelled, but once the system secured a foothold faddists were enabled to hamper with intolerably vexatious restrictions the movements of breeding cattle, doing immense damage to the industry. We put it mildly in saying that a more useless, injurious, costly and gigantic humbug than the tuberculin-test crusade was never imposed upon a deserving industry and a long-suffering community. Mr. Henry Chaplin, a former chairman of the British Government Board of Agriculture, presiding at another session of the Tuberculosis Congress, said, had the theories of officials been correct regarding tuberculous cattle it was a wonder that anybody was left alive in England. He blurted out the truth, however, that while the Government had been zealous in enforcing regulations against foreign cattle and meat, it had not been equally vigorous at home.

Many thoughtful physicians have long doubted the theory which Dr. Koch has now shattered. No one in his senses could believe that the 8,000 persons dying yearly from consumption in Canada contracted the disease from meat or milk of our cattle. And yet, upon this fiction the tuberculin-test system had its strength, leading the Dominion Minister of Agriculture to fear that its non-enforcement would lead an indignant people to sweep the Government from power. For its perpetuation there is now no excuse. The attitude of the FARMER'S ADVOCATE throughout this lengthy struggle was taken in accordance with what we conceived to be common

sense and the known facts of science and experience. It is, therefore, with no small degree of satisfaction that we record the deliberate conclusions of the world's foremost investigator, reached after years of patient enquiry, again vindicating, as time has done in other important matters where we found it necessary to take a decided stand, the soundness of our position. The announcement has created a profound sensation throughout the civilized world, putting the treatment of human consumption upon rational and specific grounds, while the stockman can uninterruptedly pursue by every intelligent means in his power, as was always in his interest to do, a policy for the perpetuation of healthy and profitable animals.

Our Scottish Letter.

The Canadian representatives who are with us are not allowing the grass to grow under their feet, and Mr. Fisher and his colleagues, to us staid, old-fashioned people, seem to be making records in travelling. Fortunately, trains hereabout do travel at a speed which even a go-ahead American cannot despise, and a man who means to get over the ground can do so if he only is determined enough. Many interests are engaging the attention of your representatives, and it would take an encyclopedic pen to chronicle all their doings. At the Cardiff meeting of the Royal a week ago, Mr. Fisher could be seen in earnest conference with mayors, alder-

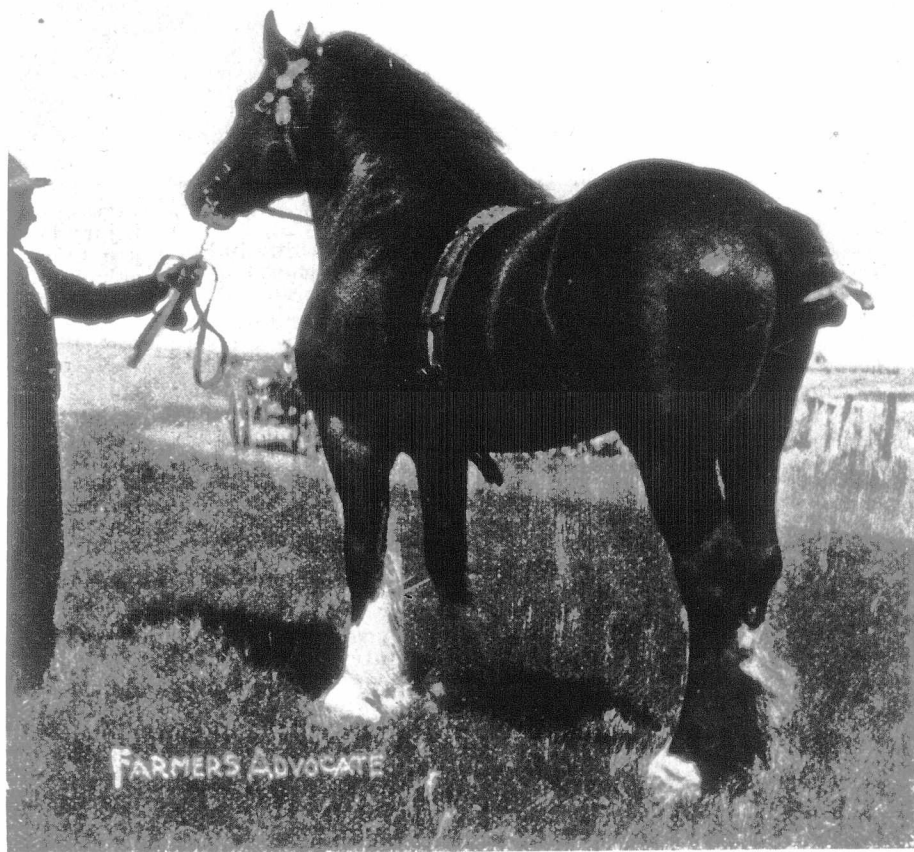
men, and Ayrshire breeders, like all others, have gone to an extreme, and making this tight vessel, with its almost unfailing concomitant—the corky, short teat—the be-all and end-all of their favorites, have often overlooked frame and substance, and the animal which occasionally leads in the show-yard sometimes appears a veritable “weed” to the non-fancier. Judges are usually fanciers; they have the show kind themselves, and have therefore neither interest nor desire to overlook the points most in favor in the ring. This is perfectly intelligible on their part, and yet it is an abuse against which the press and public opinion must maintain a consistent protest. The fact that, apart from show animals, so large a number of high-class dairy cows can be found in the Ayrshire breed, is proof that the protest of the public and the press is not unavailing.

The Royal Show at Cardiff was an interesting event, and proved highly successful. The Society paid its previous visit to Cardiff in 1872, and possibly there is no town in England and Wales which has undergone so great a transformation in the intervening period. The South Wales coal fields have been developed, and the Bute docks built by the superior, the Marquis of Bute, who has handed them over to the Dock Trust. This has led to the doubling, or it may be the tripling, of the population during the past twenty years; and at present Cardiff has the greatest registered tonnage of any port in the United Kingdom. It is not an industrial, but a seaport town, and consequently not manufacturing but commerce predominates. The country around is romantic enough, and the various places of resort on the Bristol channel are thronged day by day by visitors from Cardiff. The miners have certain fixed holidays every week, and this ensured an enormous gate. The show was favored with superb weather, and the ladies turned out in their thousands, and in the gayest attire. It is long since the Royal had as animated a show-yard, and, from the spectacular standpoint, as successful an exhibition.

So far as the display of stock was concerned, Cardiff would take second place. The breeds of cattle which made a creditable entry in respect of numbers and merit were the Shorthorn, the Aberdeen-Angus and the Galloway. Herefords, although near their native heath, were not above an average, and Devons were pretty but not too numerous. Jerseys were in evidence in large numbers, and no doubt they have their uses, but commercially a limited number of them would suffice. The great show was undoubtedly in the Shorthorn department. Numbers and quality were alike high, and the victory of His Majesty the King was very popular. His Majesty has two great bulls in Royal Duke and Pride of Collynie. The former was bred at Windsor by the late Queen, and has never known defeat. He is a great, wealthily-fleshed animal of the Scottish type, with the flesh built on him to perfection. He is a bit narrow in front, and indeed rather disappointing in the brisket; but his championship was not challenged. Pride of Collynie was bred by Mr. Duthie, and was brought out by an Aberdeen-shire tenant-farmer, Mr. James Durno, Jackstown, Rothie-Norman, who bought him at one of Mr. Duthie's autumn sales. He is a great bull, with a lot more style than many of the Aberdeen Shorthorns possess. He was second at the Highland last year, and was then bought for the Sandringham herd by Mr. Beck. Had he been put in front of Royal Duke no one would have been displeased and no wrong would have been done. Mr. Deane-Willis had the female championship with a three-year-old white heifer in milk, a beauty of the first rank, and one of the best Shorthorns seen for many a long day. Mr. Robert Wilson, Kilquhanity, Dalbeattie, showed a number of first-class Galloways, mainly of Tarbreoch breeding, and Mr. Robert Graham, Kirkconnel, Ringford, Castle Douglas, also showed good stock of the same kind. Mr. Thomas Smith, Powrie, Dundee, had the champion Aberdeen-Angus, a magnificent cow with a white udder. Her like is hard to find. Mr. J. J. Cridlau, Maiseinore, Gloucester, had the best bull, a magnificent, level two-year-old, named Elate. Ayrshires were shown by Mr. Andrew Mitchell, Barcheskie, Kirkcudbright. He swept the decks.

A Branding Mixture for Sheep.

Tar by itself is of very little use for branding sheep, because the marks made by it soon disappear if continually exposed to the sun. When prepared with a certain proportion of pitch, however, it can be made much more lasting. The proportions in which the pitch and the tar should be mixed for this purpose are about a pound of the former to a gallon of the latter. The best method of preparing this branding mixture is to heat the tar to boiling point and then add the pitch, allowing the vessel to remain on the fire until the pitch has melted and become thoroughly incorporated with the tar.



WALDO [8067].

Noted Clydesdale stallion. Owned by John Clark, Jr., Crowfoot, Alta.

men, presidents and secretaries of sundry boards, and other eminent persons. Mr. Hodson was endeavoring to convince the writer that it would be for his advantage to visit Canada (which doubtless is true), and Mr. Green was intent on arguing the new rules of the American Shorthorn Society with leading lights of the British Shorthorn Society. All this shows energy and enterprise. The other members of the staff were examining stock and making an uncommonly good use of their time.

Amongst other discoveries made by your men, it is gratifying to know that they have discovered heaps of Ayrshires which give milk, have capacious vessels, workable teats, large frames and sound constitutions. This is well, and corroborates the opinion held by many in this country, that they who form their judgment about Ayrshires on what is seen in a show-yard may make a mistake. In the show-yard type good points are exaggerated so that the balance of parts is disturbed, and instead of an all-round animal, we have one that excels in a particular point, but not in all. The whole question of the effect of this on the breed as a whole will stand some thinking—and the argument is not wholly against the show-yard.

In all domestic animals there are certain points which more than others are needful for the practical use of man. In the Ayrshire cow, a tight vessel well gripped up behind and well carried forward in front is needful, because the vessel is apt, in time, to become shapeless and trail very near the dirt—a condition not at all conducive to clean milking or the purity and wholesomeness of the product. But in the anxiety to get a point which is difficult of

Jews Eat Only Kosher Meat.

BY D. E. SMITH.

From the earliest periods of the world's human existence, students of history have been enabled to glean some accounts of the customs and manners of the various ancient races. None, however, are more interesting and instructive, and more conducive to the dissemination of morality and religion, than those that come to us from the Jews. A high standard of morality for the period in which they lived, and strong religious convictions, together with a strict enforcement of their laws, tended to accentuate their individuality and make them a peculiar people. They laid great stress on the observance of certain religious rites and had many wise laws to guide them in the ordinary customs and habits of life. One of these of special interest to stockmen is the manner of slaughtering animals according to the ancient Israelitish law.

In the consumption of food the Jews were restricted to what they call the use of Kosher meat. When an animal is slaughtered according to the Israelitish law, and has no flaws or injuries in the lung tissue or in the lining of the stomach, then the fore quarters of that carcass are available for food and that part is called Kosher meat.

In visiting the Union Stock Yards, and the several packing plants in Chicago, one of the sights that attract the attention of strangers is the slaughtering of animals according to this ancient Israelitish law. At Swift & Co.'s beef house, any one may see the butcher, who is not only a strong man, but also versed in ancient lore, use the blade that causes the death of the animal. The knife must be of the required length, sharpness and smoothness. The butcher, who receives permission from the rabbi, runs his fingers critically over the gleaming blade, and if satisfactory, uses it; but if not, another is obtained that will meet all the requirements of the law. The butcher must be a believer and keep the Jewish Sabbath, and the knife must not tremble in his hand when he is performing his work. If this or any other rule is not complied with, then the seal of Kosher meat cannot lawfully be affixed to that carcass. There is written on the fore quarters, in Hebrew characters, the date of killing and that the carcass was inspected and approved of. An animal that has been killed more than 72 hours cannot be used for Kosher meat unless it is washed again and meets with the approval of the rabbi. They do not allow an animal to be knocked down, as is common among Gentiles, but death must be caused by cutting the throat and allowing the animal free opportunity to bleed. When the animal is opened up, the butcher carefully examines him on the inside to see that his lungs and stomach are perfectly sound and conform to the rules of the Jewish law. The butcher receives a license to perform certain duties according to their laws, and since there are so many cattle to kill, three are employed to perform the work. One cuts the throats, one examines the inner structure of the animals, and one puts the Hebrew characters on the fore quarters. Some carcasses are rejected by the Jews, but these are used by the Gentiles, as they are perfectly healthy and sound, but in some minor detail do not conform to the requirements of the Israelitish law. The fifth rib is the dividing line between the sanctioned and unsanctioned portions. The porterhouse steaks, the tenderloin and all the parts of the hind quarters that are so highly prized by all other class of people are not used at all by the orthodox Jew. The Jew is also forbidden to use the blood of an animal, as they believe that the blood is the life and spirit, and by using it they partake of these qualities and properties and transmit them to their children.

Sheep and calves are slaughtered in the same manner and the same parts used. They also Kosher chickens, ducks and geese, but do not eat turkeys at all. The veins in the different kinds of animals are removed from the meat before they can use it for food, as all semblance of blood must be taken away. These laws are only obeyed and carried out by the orthodox Jew, but there are many Jews here in Chicago who pay no attention to them at all.

In large cities and great business centers the Jew becomes an important factor in the meat trade, and therefore his beliefs are conformed to, and the result is a lucrative business in Kosher meat.

Experiments carried out in connection with the Agricultural College of Ontario have gone to show that where pigs have plenty of exercise and a mixed diet, or where the animals receive a reasonable allowance of grain foods in their rations until they are over 100 lbs. in live weight, they can be fed to a large extent on Indian corn without material injury to the quality of the bacon produced by them. Where they are closely confined from the time of birth, or where other grain foods are not used during the first three or four months of their age, however, the use of Indian corn in considerable quantity in finishing them off for the market is not to be commended.

Kicking Against the Wind.

To the Editor FARMER'S ADVOCATE:

I am asked to make some comments, from a breeder's point of view, on your article, "The Tuberculin Crusade," in issue of July 1st. That is my excuse—and not a desire to rush into print—for the comments I am about to make. You ask, "What is to be done with this useless testing system?" and seem to overlook the fact that you had already suggested a remedy when you pointed out that these testing officials' occupation would be gone if they did not find reacting cattle. Reverse the conditions, and pay these officials in proportion to the number of healthy cattle they find, and you will change the results, and instead of pensioning them off as you suggest, make them the most active agents in proving our cattle are healthy. It was said in olden times that the wise men came from the East, and it is not unlikely they may have some left there. I believe the practice there is to pay physicians for the time their patients are in good health, and to shut off their pay during illness, which exactly fits in with your opinion of the present system of tuberculin testing, and with my suggestion of a remedy for its evils. Another point you notice is the tendency to make this test compulsory on all cattle-owners. Not very long since I was discussing this testing business with a very prominent vet., and he said: "You might just as well kick against the north wind as against it, for the time is very near when the testing of all cattle will be made compulsory." The farmers of Canada have stood a good deal from this class of people, but it is hard to believe they will stand such an imposition as that. I don't think this man could have chosen a better expression than "kicking against the wind," for you might just as well argue with the wind as with one of those tuberculin cranks. They have everything at their fingertips that can possibly be distorted into proof of their contention, from the highest scientist to the poor man whose innocent baby has been murdered by tuberculous milk, while the man who dares to quote facts and experience to disprove it is either a fool or a liar. For instance, in this discussion I ventured to quote the Hon. Mr. Dryden's public utterance on the subject, and he (the vet.) replied: "I probably know Mr. Dryden a good deal better than you do, and, let me tell you, he is a very much overrated man; there is nothing in him and never was." I then quoted Mr. Edwards at the Ottawa conference, and to this he replied: "I know Edwards very well, a very good fellow in his way, but he knows nothing at all on this subject; he is a lumberman, and his paper should never have been published, for it is not true." One of these men is a fool, and the other is a liar, because they will not endorse this fad. If they would they would be pushed into the front rank of witnesses, and quoted on all occasions as men of unusual intelligence and experience. I then called his attention to the fact that while the vets. were nearly (I except those who have a practice and are attending to it) unanimously in favor of having all cattle tested by qualified vets., they contradicted each other point blank on important points regarding it, and his answer was: "I am very sorry to say that very few of the vets. of this country have any real knowledge of the principles of veterinary science or pathology." Truly it was kicking against the wind to argue with him. The fact seems to be, there is so much science required these days to run a small business there is not enough of the pure thing to go around, and it has to be supplemented by a lot of shoddy science.

There is, however, one good feature about this tuberculin business: There used to be a class of diseases with very ugly names, but they (the names) have disappeared and become tuberculosis, thereby shifting the results of youthful errors on to some old cow. But while these sickly sentimentalists and shoddy scientists are weeping over the poor innocent babes murdered by the blood-thirsty cattle-breeders, harder-headed men, who still believe in their Bibles, are saying: "It is the sins of the parents being visited on their children." One of the best, perhaps the very best, cattlemen in the Province tells me he has been in the habit of taking the temperatures of his cattle, and that it is no unusual thing to find a greater rise in their temperatures without any injection than would be necessary to condemn them as diseased. One of these testing vets. told me that on one occasion a whole stable full of cattle that he was preparing for the test showed a greater rise in their temperatures without any injection than would have been necessary to condemn them, and that he stopped the test to look for the cause, and found it in a change in the temperature outside, which other vets. say has no effect on the temperature of the animals. But let us allow these men all they claim for this test, and conduct one according to their own formula, and see where we are at. We find the normal temperature and make the injection. If the temperature rises more than a couple of degrees it is proof of disease; if it falls, as it is said to do sometimes, it is equally good proof of disease; while if it remains normal, it is an even chance whether the animal is healthy or so badly diseased it will not respond. There are now two courses open: either to kill the animal to find out whether it is healthy, or to look for the *unmistakable signs* that they say are always to be found in a badly diseased animal or (which amounts to the same thing) one they want to condemn. So, after having exhausted their science and the owner's purse, they pitch their test to the dogs and fall back on the un-

mistakable signs, where they should have commenced, and to which no one would object.

And this is science; and these are the men a leading U. S. journal calls "unbaked scientists"; and they want us to accept this jumble of contradictions and distorted evidence, that would not be received in any court, as conclusive proof, and say we are fools for not doing so. A prominent vet. is reported to have said in public in the City of Winnipeg, during the breeders' meeting held there last winter, "that this test was being conducted in the interests of the breeders, and if they were not a lot of d—d fools they would not object to it," and I have never heard a breeder object to that statement, for they all recognized that this man is just as good an authority on that subject as he is on tuberculosis. But it is their generosity in taking so much trouble on our behalf that fetches us; we think we are no slouches ourselves in the matter of generosity. We will not be outdone by any vet. or combination of vets. These men will never be safe from tuberculosis until they get to heaven, and I beg to assure them, on behalf of the cattle breeders, that whatever we can do to facilitate their getting there quickly will be done most cheerfully.

Westbourne, Man.

WALTER LYNCH.

The Tuberculin Crusade.

Permit me to proffer you my sincere congratulations upon the decided stand you have taken in your issue of July 1st in regard to that imposition and humbug fastened upon the cattle producers and breeders of our fair Dominion, namely, the use of tuberculin as the test for tuberculosis. I most heartily agree with your editorial, and observation and experience tells me you are correct. When this tuberculin test first came forward, the farmers and breeders, not being in a position to know positively concerning its merits as a test or whether it was injurious or not, gracefully submitted to the opinion of our official and learned veterinary surgeons. But in some years of a fair trial it has been found and proven not only unreliable, but in many instances injurious to the animal. This is the general verdict all over the country, and I think the opinion of intelligent and observing men is entitled to respect. It is now high time the farmers and breeders raised a decided objection to such a great injury being thrust upon them, and, moreover, they are being taxed to pay for it. It is a regulation calculated to cripple one of our greatest national industries, and the blow is dealt by the very department of the Government to which we should look for the furthering and fostering of the farmers' interests. We want the best cattle in the world in this country; we wish to import them, to produce them, and to export them, but here we are almost prohibited from engaging in one of the nation's greatest industries by regulations that are unwise and wrong. The poorer farmer is prohibited from having and producing the best and most paying cattle, because, having only one or two pure-breds, he cannot afford to take the risk of having them "pumped full of poison," as one says, when he gets no guarantee whatever from the Government against any injury that might result. Thus, he cannot afford to take any chances and submit to the farce. On this account the best cattle are mostly in the hands of a few wealthy men, but should also be in the hands of the average farmer, and it is the Government's duty to aid him in getting improved stock, instead of discouraging him.

Again, he is debarred by the useless length of the quarantine—namely, 90 days—required. Why is 90 days' useless expense imposed upon the importer who wishes to improve his cattle and those of the country? Is the period of incubation of any contagious disease 90 days? I am sure it is less than one-third of that time. Does anyone think that if any imported animal has an infectious disease it will not show itself in less than 30 days? If an animal developed a contagious disease after 30 days in quarantine, I would be strongly suspicious of the character of the quarantine. The poor man, probably, can afford only to import one or two good animals, and when he hires a man and buys feed for 90 days' quarantine, the two cost him so much he is practically prohibited, and instead breeds and fills the country full of scrubs.

The officials who perform this test must have intelligence enough to have observed that it is not reliable. Why, then, do they persist in using it as the test? Have they no other knowledge of diagnosis? Does the medical man diagnose tuberculosis in the human being by a tuberculin test and that only? No. He uses his eyes, ears and brains to make a diagnosis. If he relied upon single tests, and as unreliable as the tuberculin test, he would soon lose his reputation and get the medical profession into disrepute. He would be infinitely more times wrong than right in his reacting patients, and many of them would live to three score and ten to prove it. If these officials insisting on and promoting this test must be paid, we prefer to pay them to do nothing, rather than pay them to injure our cattle and our industries. I sincerely hope the cattle-breeders and farmers, in their own interest and that of the country, will take hold of these things and ask that these wrongs be promptly made right. In unity there is strength.

In conclusion, I may say I am surprised that in the face of all that has been said and done by the farmers and breeders of Canada to have these wrongs remedied, the Government still stands by and permits a few officials to hamper one of the country's greatest industries.

Wentworth Co., Ont.

JOHN I. FLATT.

The Royal Show.

BY OUR SPECIAL CORRESPONDENT.

The last Royal Show which I had the pleasure of attending was the one held at Norwich in 1886. It was, therefore, a matter of great satisfaction to me that I found an opportunity of taking in this year's show, which was located at Cardiff, in South Wales, and lasted from June 26th to July 1st.

This is the last year, but one, in which "The Royal" will be a migratory show. Like the old

beauty, but was rather too long for its breadth. It was a tedious walk of a mile or more from end to end, and as the turnstiles were all at one end and the live stock all at the other, many a visitor wished that there was an electric railway or some other conveyances to carry passengers from end to end. Such an enterprise would have reaped a good harvest; but, alas! all such were prohibited.

In drawing a comparison between this year's show and the Toronto Industrial, the advantage would, in several respects, rest with the latter, because, as I have said above, Cardiff is not central enough, and, therefore, cannot be taken as an average. For instance, at York last year the total entries of horses, cattle and sheep were 1,907, as against 1,575 this year; this year's entries, too, containing 148 swine. I will, however, give the comparison as I found it.

HORSES.

The show of horses was very disappointing on the whole, and there will be a very much better display at the Yorkshire Show, which commences July 31st. In spite of this, however, the only classes in which Toronto would be superior were those for hunters, harness horses and Clydesdales. There might be more Cleveland Bays there, but they would not have the style or quality of those shown here. The weakness of numbers in the classes at the Royal is partly due to the severe veterinary examination held on each animal before showing. The hunter classes were but poorly

filled, and only a few of the animals were of any merit. There was no class for Thoroughbreds, but the four winners of the King's premiums for South Wales and portions of England were present.

Hackneys.—Hackneys were not so good as usual. The winner in the class for stallions 15.1 and upwards, foaled in 1898, was Sir W. Gilbey's Bonny Danegelt, a good mover, who won at the London Hackney Show last March. He also won the sweepstakes for stallions. Fitz Rose, shown by F. Wrench, Dublin, a horse of good conformation and a first-prize winner at London and the Shropshire and West Midland this year, was placed above Sir Walter Gilbey's Merry Denmark, a nice mover, in the 2-year-old class. Harry Livesey's Orange Blossom, bought for 1,000 guineas, won 1st and the championship for mares with foal at foot, 15 hands and upwards. There were some nice mares shown, one of the best goers being F. J. Batchelor's Wild Agnes, winner in the class for mare or gelding to carry 15 stone and upwards. There were a few good Cleveland Bays present, the principal exhibitors being F. H. Stricker, Jno. Lett, and Jas. Finch.

There was a very poor show of harness horses. This is due in part to a rule of the society which prohibits entering horses in more than one class. Ponies were out in fair numbers. The classes for polo ponies were well filled. Among the Welsh ponies was a handsome gray stallion, Starlight, shown by H. M. Lloyd, which has won frequently at previous Royals and elsewhere. Some of the Welsh Pony mares were somewhat bigger than the type calls for.

Shires and Clydes.—The Shire class was a pretty good one, and, of course, far beyond anything ever seen in Canada. Among the exhibitors were His

Majesty the King, Lord Rothschild, the Duke of Westminster, Lord Llangattock, Sir Walter Gilbey, Fred. Crisp, P. A. Muntz, Lord Egerton, W. & J. Thompson and other well-known breeders. Special mention must be made of Messrs. Thompson's Desford Combination, a good-bodied horse, which won in the 3-year-old class, and also the championship for stallions; the Duke of Westminster's Phenomenon, the reserve champion for the same, a good thick horse; F. Crisp's Southgate Charm, a grand mare with foal at foot, who won first in her class and the champion medal for females; while the Earl of Egerton's Lockinge Athena, first for 2-year-old fillies and reserve champion, is a big, powerful mare that should breed good stock. Lord Llangattock's Hendre Birthright, a promising mare, with great feather, headed the yearling filly section.

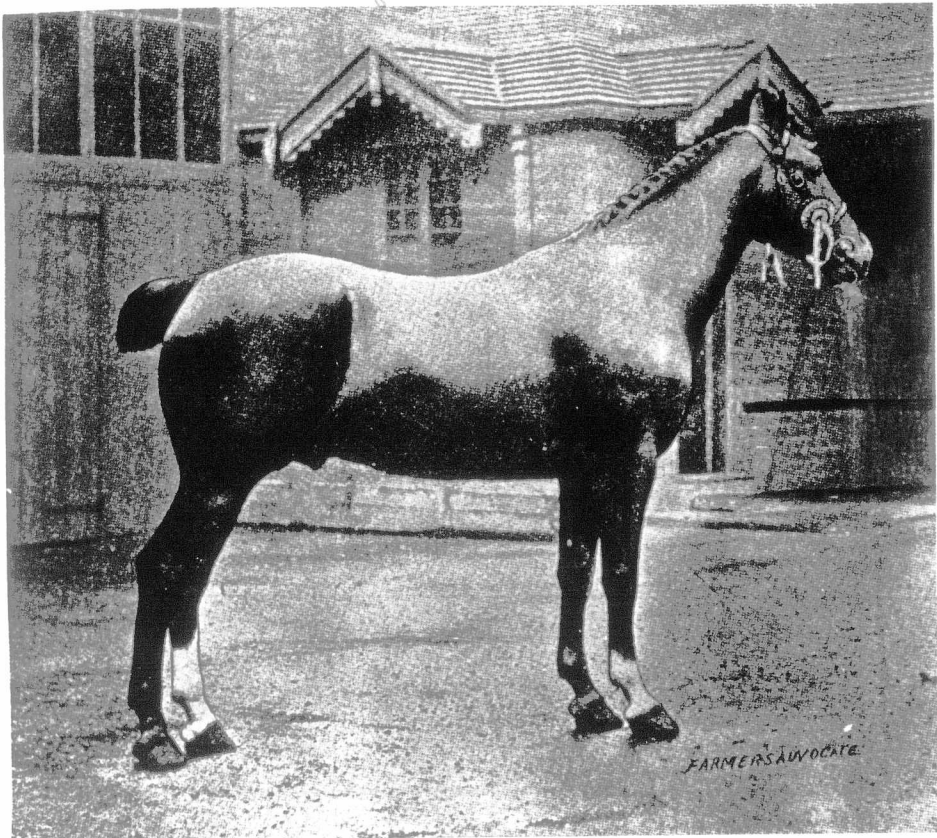
Clydesdales were not numerous, and were, with some exceptions, not of great merit. Among those showing were Seaham Harbor Stud, who won two firsts for stallion and mare; Herbert Webster, who had a good-bodied 3-year-old stallion on short legs; Lord Arthur Cecil, who secured two seconds; and T. Smith, who won first with a blocky 3-year-old filly.

Nineteen Suffolk Punches were entered, and there were very nice animals among them. E. A. Cook, A. H. E. Wood, Sir W. C. Quilter and A. J. Smith were the biggest exhibitors.

CATTLE.

Shorthorns.—There was a class offered, for the first time, for Lincolnshire Red Shorthorns, as opposed to animals entered in Coates' Herdbook. There were eighteen entries of these red cattle, and 104 of the red, white and roans. Among the Lincolnshire Reds were some nice cattle, but the general tendency of the breed is to greater coarseness than in the Shorthorn. This is being remedied by the use of red bulls recorded in the Coates' Herdbook. The females of this breed have a reputation for milk, and, judging from the udders of some of them, justly so. It must be remembered, however, that also among the old-established Shorthorns in Great Britain are to be found many excellent milkers. R. & C. Chatterton were the most prominent exhibitors of Lincolnshire Reds.

Coming to the red, white and roans, the classes of bulls, with, perhaps, the exception of the youngest one, were better than those that have been exhibited at Toronto of late years. As regards the females, there did not seem to be a great difference, taken all through. The judges were Robt. Bruce, Dublin, and F. Punched, agent of the late Duke of Bective. There were ten bulls drawn up in the older class. Of these, first and second places fell to Royal Duke and Pride of Collynie, both from the Royal Farms, Windsor. They are two capital bulls, and occupied the same positions in their class last year. Royal Duke did not look so well as he did in 1900, when his appearance was hard to beat; but both bulls were in quite good enough condition. Royal Duke once more won the championship, while his



BONNY DANEGELT 6990.

Winner of first and champion prizes as best Hackney stallion at the Royal Show, Cardiff, 1901. PROPERTY OF SIR WALTER GILBEY.

"Ontario Provincial," it has not found the practice of moving from place to place every year a paying one, so, after the Carlisle meeting in 1902, the show will settle down in a permanent location at Ealing, a short distance from the great metropolis of London, where the society has purchased a hundred-acre site.

There has been a distinct advance in the exhibits in most classes since the Norwich Show. It is certainly not in point of numbers—because both stock and implements show a decided falling off in that respect—but the general quality has greatly improved. I noticed this especially in the Shorthorn class. When I was last over, Scotch Shorthorns were not popular in England, but now the principal winners are either descended from Scotch blood or are of a similar type. A comparison, however, between the Cardiff Show and a Royal held at a more central point is hardly fair, taking numbers into consideration, because Cardiff is somewhat too far from many of the principal breeders, and the railway rates, though lower than formerly, are still very high, and, consequently, deter many from going to a show held at any great distance. Then, too, the principal shows do not follow one another closely, as our Canadian ones do, and so there is not the same inducement for exhibitors to follow a circuit without returning home between whiles.

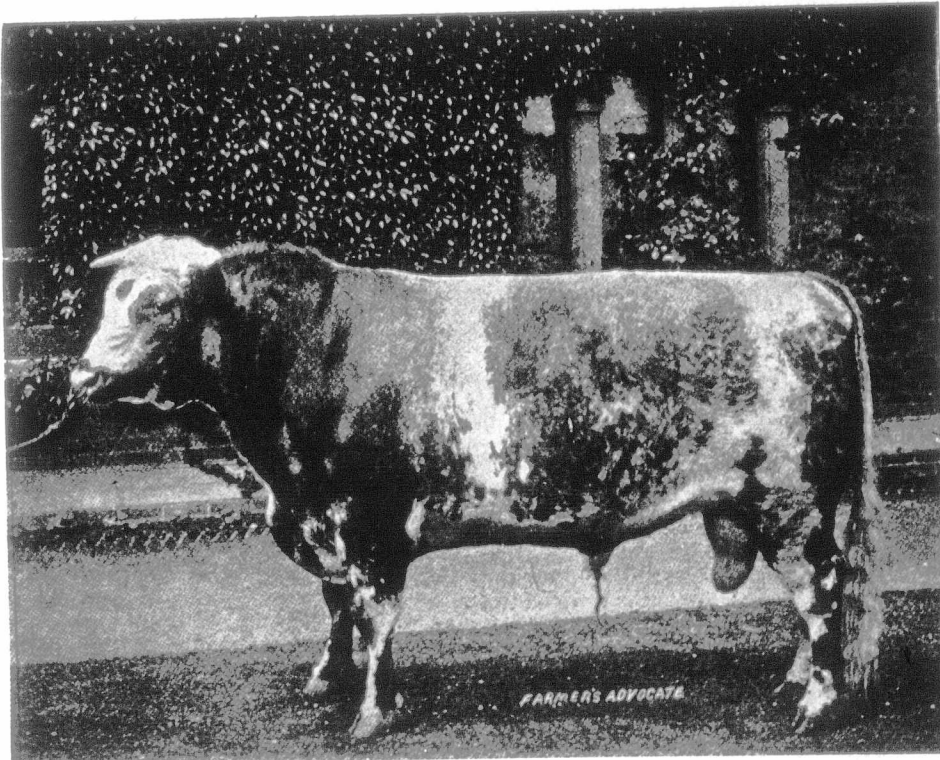
There are several good features about the Royal which might be copied with advantage at the Toronto Industrial and other of our exhibitions. One is the judging of the different breeds of cattle in rings which, while quite large enough for the purpose, are yet of such a small size, as compared with the one at Toronto, used for the cattle judging, that the onlookers can easily get a good view of the animals while the judges are selecting the winners. Then, there was no delay between the sections. As fast as one filed out, another entered the ring.

All the live stock was judged on the first day, and early next morning it was possible to procure on the grounds an authentic book of 48 pages, giving the winners in every class. This was issued by the society, and revised every day as awards in other departments came in.

A notable feature was the interest taken by the ladies in the stock. The judging was watched by many members of the fair sex, and large numbers visited the sheds every day. As regards catering, I got the best and best-served lunch I ever got on a show ground for 50 cents.

The attendance, up to the time of writing, has far exceeded the average of the last seven years, and has only been exceeded by that of the great record year at Manchester in 1897. Should the weather be favorable, a total attendance of 100,000 people is probable, and this without any side shows or outside attractions.

The site occupied by the show at Cardiff was very suitable in many ways, especially in point of



ROYAL DUKE (75509).

First prize and champion Shorthorn bull at the Royal Show at Cardiff, 1901. Bred by Her late Majesty Queen Victoria.

THE PROPERTY OF HIS MAJESTY KING EDWARD VII.

companion, Pride of Collynie, a Duthie-bred bull, was reserve. Third place fell to another good one, Inspector, the champion bull at Dublin last spring, and at the Bath and West last month. Among other bulls in this class were Deane Willis' Regulator, a very short-legged, deep bull, a favorite with many for a higher place than sixth, and C. Morgan-Richardson's Major General, a bull of great substance and very strong in the back. Regulator was afterwards bought for 1,000 guineas. Wm.

Bell's Baron Abbotsford, a well-covered animal, with plainish horns, carried off the red ribbon in the 2-year-old class, with Philo L. Mills' Brilliant Star, a bull of good style, a good second. Geo. Harrison's Silver Bell, an animal of good quality, but inclined to dip, headed the young bull class. H. Dudding's Victor was placed second. Aged cows were, with the exception of Capt. Dancombe's Warrior Queen, only fair. The champion female was found in Deane Willis' White Heather, a beautiful 3-year-old, in milk. All the 4-year-olds were good. Among the 2-year-olds, H. Dudding's Floradora and W. J. Hooker's Wild Duchess 20th were the two best. The former is grand on the shoulders and has lots of quality. The other was good, barring a little unevenness at the tail. There was no outstanding winner in the young class. First

there were 72 Jerseys and 35 Guernseys entered. I have often seen better shows of Jerseys in Canada. Most of the prizewinners of any merit were bred in the Channel Islands, but, as is well known, English breeders and owners of these breeds have a knack of spoiling the milking qualities and constitutions of their little pets by too much kindness. The Duke of Marlborough, Mrs. McIntosh, Mrs. Barron, Lady de Rothschild, and Earl Cadogan were the owners of the first-prize animals among the Jerseys; while in Guernseys, red ribbons went to E. A. Hambro and Wm. Montefiore.

Kerries and Dexter-Kerries.—There was a fair representation of Kerries and a good one of Dexters. The former are splendid little cows for milk, while the latter, a smaller breed, as well as being milkers, incline to beef—in fact, they look something like miniature Shortorns.

In the class for dairy cows there were only six entries, five of which were Shortorns or cross-bred Shortorns, and only one a Jersey. The first-prize winner, Beauty, a splendid cow, shown by W. Aking, Liverpool, had a grand udder.

SWINE.

The show of pigs was very far below the standard of a Toronto show, and the total entries only numbered 148—less than we have sometimes had in one single class. Prizes were offered for Large Whites, Middle Whites and Small Whites, Berkshires, Tamworths, and Large Blacks.

Yorkshires.—Of the white pigs, the Large Whites are the same as our Yorkshires. There were 31 entries of these, and of these several would not have been looked at in Toronto. Sir Gilbert

Greenall won first and the championship for best boar or sow with Walton Laddie, a pig of great substance. D. R. Daybell won first for pen of three boars with some nice pigs, and also won second and third for breeding sow with a pair that were first and second at the Bath and West of England. Sir Gilbert Greenall won first with a deep sow, but inclined to be rather short. Daybell again won for pen of three sows farrowed in 1901, with some of the nicest pigs on the ground. This pen was also first at the Bath and West of England. Philo L. Mills was second for pen of sows and third for aged boar. Sanders Spencer won two seconds and a third.

Berkshires.—There has evidently not been the same effort made here to breed Berkshires with greater length as in Canada, and nearly all the Berkshires shown were of the short order and thick. Edney Hayter, R. W. Hudson and N. Benjafield were the leading exhibitors. The former won the champion prize with his first-prize boar in the senior section.

Tamworths.—Though not numerous, Tamworths were good in quality. R. Ibbotson won all the red ribbons but one, and also the championship, with Knowle Red Mane 2nd, a two-year-old sow of a very nice type. D. W. Philip, Birmingham, and H. C. Stephens, Salisbury, showed good pigs and won prizes.

The class for large blacks was not only badly filled, but the pigs are of a sort that is no good for bacon. They originated in Cornwall and have drooping ears like Poland-Chinas.

MISCELLANEOUS.

The show of poultry was fair, the number of entries being 701.

The dairy department was not up to the mark on the whole. There were competitions in butter-making each day, open to different counties, which were fairly well filled.

I have never before seen such a display of implements as there was at this show. Although fewer in number than in 1900, they made a magnificent exhibit that has never been equalled on our side of the water.

Carter, Webb and other seedsmen had most tasteful arrangements of seed grain, flowers and vegetables. The Canadian Government also had a stall with specimens of grains, minerals, woods and fruits, all of which were arranged to show to the best advantage.

Among the Canadian firms represented in the implement sheds were the Massey-Harris Co. and Noxon & Co.

"As I understand it," said Cumso, "oleomargarine is made of beef fat." "You are undoubtedly right," replied Cawker. "I should think that the manufacturers would make it of goat fat." "Why?" "Because the goat is a natural butter."—(Detroit Free Press.)

The Canadian Horse in War Time!

In view of the fact that Lt.-Col. Dent, the British Army Remount Officer, is in the Canadian West purchasing large numbers of horses, interesting reading regarding the suitability of the Canadian horse for war purposes is afforded by the supplementary report, for which we are indebted to Lt.-Col. T. D. B. Evans, late commanding C. M. R. This report deals with the service of the Canadian contingents in South Africa, and contains the testimony of several noted officers regarding the wearing abilities of the Canadian horse and the Canadian wagon.

Lt.-Col. Lessard says: "The Canadian horses were good ones, and did very well, considering all the hardships they had to undergo and the heavy weights they had to carry." The same officer also states that the wagons were superior to the Im-



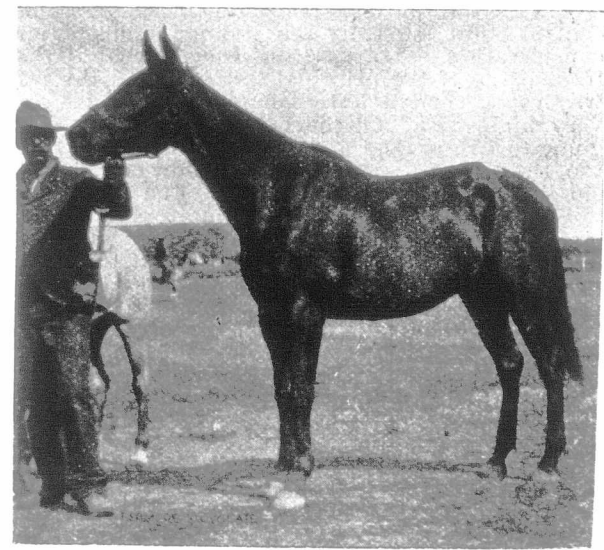
THE PROPERTY OF KING EDWARD VII.

perial ones. Under the paragraph headed "Canadian Horses," Lt.-Col. Evans says: "If the horses of the battalion had been given a fighting chance they would have made a splendid record, but the exigencies of the situation did not give them an opportunity to recuperate after the long voyage, and in poor condition they faced the expedition through the Karoo country desert—the severest work of the campaign. Notwithstanding these drawbacks and the continual shortage of forage and water, nearly fifty per cent. reached Pretoria. Had the horses been given a month's rest at Cape Town, I am convinced that 75 per cent. at least would have been with the battalion at the end of its service. The Canadian wagons brought by the battalion were most satisfactory."

Lt.-Col. Drury states that "the older horses seemed to do the best, and that those purchased for the campaign stood shipboard better than the horses from the permanent force. I am thoroughly convinced that breast collars for horses are superior to neck collars for campaign purposes."

Another officer states that the horses rapidly recovered from their ocean trip.

"D" Battery horses were evidently good ones, as we find that out of 137 started with, 68 were turned over at the expiration of the battery's term



A GOOD TYPE.

of service, at an average of £21 (\$100). The veterinarian examining them commented on their fine constitutions and on the fact that in spite of the hard marching their limbs were as clean as whips, and in only one or two instances was their wind affected. Some of the British batteries during the same term of service were re-horsed completely two or three times. The Canadian wagons again received praise, being sold to the British Government at £10 apiece. These vehicles stood the campaign splendidly, and were practically as good as when they entered the field. For economy in draft, and general suitability, they were equal to or superior to any in the British army, so testifies Major Hurdman. Major Ogilvie reports that after nine months' service they were able to turn in 44 Canadian horses at £28 apiece (nearly \$140). A further statement by the same officer is to the effect that from his South



THE EXPERTS AT WORK.

went to P. Stratton's Calico Belle, a smooth heifer, and second to the Royal Farms for Ruby.

Herefords.—Herefords were simply grand, as might be expected when the show was held so near the county of that name. There is still room for improvement, however, in the backs of many of this breed. There are too many dips and too much unevenness in even some of the winners. The 4-year-old bull, Britisher, a bull of wonderful substance, very good in his quarters, hams, loins, and of great girth, carried the championship honors for E. Farr. Jno. Tudge's 2-year-old Albany was reserve champion. It is quite impossible in a short space to mention all the good ones present, but Richard Green won first for a fine 3-year-old heifer, and R. D. Cleasby had the championship female in Dainty 10th, the first-prize cow; A. E. Hughes, Leominster, a tenant farmer, who bred the championship bull, also won first for a young bull. Mr. Hughes believes in quality, not quantity, and his herd, though small, is always a place where winners will be found. This is a pointer for those who believe in having a big herd, quite irrespective of quality and similarity of type.

Devons were present in fair numbers and were brought out in first-class shape. There were several Sussex, some of which were of considerable merit, and there were a few specimens of that old breed, the Longhorn, which possess no merit, except for the antiquarian.

Welsh cattle are not well known in Canada, and their somewhat lengthy horns are not likely to make them favorites, but, in spite of this, the black cattle of South Wales possess good merits as milkers. There was a very fair exhibit of this breed.

Among the Red Polled cattle of Norfolk were some very nice things, including the champion bull, Redvers, shown by Lord Amherst, and the champion cow, Dormouse, owned by J. E. Platt. The latter had a very nice-shaped udder. This breed generally does well at the pail, and the cows lay on flesh easily when farrow.

Aberdeen-Angus.—There were not many Scotch breeders down with their cattle, but, in spite of this, this breed was well represented, and were a little stronger than we generally see at Toronto. J. J. Cridlaw, Gloucester; T. H. Bainbridge, Northumberland, and T. Smith, Dundee, won the principal prizes.

Galloways.—Galloways were weaker than in Toronto, but the winners were of good type and quality. Robt. Wilson, Dalbeattie; Robt. Graham, Castle Douglas, and Wm. Barbor, New Galloway, had all animals of merit present and won the leading prizes.

There were three Highland cattle, all sent by one English exhibitor, and one of the attractions of the show to visitors was the comical little calf in a pen with its mother.

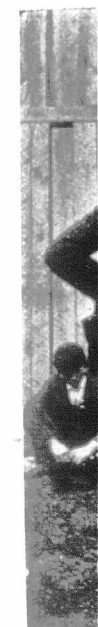
Ayrshires.—The show of Ayrshires was simply a disgrace to the breed. A. Mitchell, Barcheskie, furnished all but one of the six animals forward.

Jerseys and Guernseys. Neither of these breeds were well represented in point of merit, although

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African experience the Canadian horse was superior to the English, American, Australian and Argentine production.

The Improvement of the Golden Hoofed.

The sheep industry in the West is declining, looking at the matter from one standpoint, viz., the desire of so many owning sheep to sell out and go into cattle. As is the case when extremes in dealing happen, sheep are going up steadily in value, and hold out very good prospects to the person who will stay with them. In this connection it is interesting to note the satisfactory work being done under the efficient management of Mr. D. H. Andrews, of the Canadian Northwest Land and Ranch Co., with headquarters at



GOING INTO ACTION—COL. DENT AND MAJOR ORMSBY-GORE, BUYING ARMY HORSES AT CALGARY.

Crane Lake. When the gentleman in question took hold, five or six times the number of sheep were kept, and the profits were nil. Under the new management, the flock was reduced to 1,000 ewes, inbreeding done away with, and rams of good mutton form used, with the result that the weight of the yearling wethers has been raised from 90 lbs. to 137 lbs. apiece. The original stock were Merino grades from Idaho. A cross of the Oxford was used, followed with several crosses of Shropshire blood, with results as mentioned. The sheep are only fed a portion of the winter, a hundred tons of hay sufficing for the band. An absolute necessity to success with sheep is, however, a good shepherd.

A Dangerous Menace.

To the Editor FARMER'S ADVOCATE:

My opinion is that the tuberculin test is at its best an unmitigated nuisance, and a dangerous menace to all cattle interests. As a diagnostic tuberculin may be of some use, but its value for that purpose is now as much disputed as the use of the serum for a consumption cure was years ago. It is too open to abuse from ignorance, error or fraud to be reliable. I do not believe that the great authorities agree or can prove that tuberculosis in man and beast is identical—any more than anthrax and blackleg, till recently believed the same. I see no particular objection to the Government testing their own cattle, or, for that matter, their own veterinarians, and quarantining both lots. They will none of them be missed. That the Government has any serious intention of resurrecting a tuberculin crusade—an idea long killed by all the agricultural press of England, U. S., and Canada, and as dead as Queen Anne—would indicate that some more discredited politicians are willing to risk their health *pro bono publico* (freely translated—for what they can bone from the public).

Middlechurch, Man.

W. S. LISTER.

The Tuberculin Test.

A DAIRYMAN'S DECLARATION.

To the Editor FARMER'S ADVOCATE:

I am glad that you have so vigorously taken up the matter of the tuberculin test, as I believe it to be nothing but a humbug and an imposition upon the breeders of Canada, and the sooner steps are taken for the abolition of it altogether the better. Better that the Government pension those promoting it, or isolate them until they are fully tested and no danger of a reaction taking place. We might better not sell to the Americans at all than to have our herds discredited by being subjected to such an imposition. What is Mr. Fisher doing that he doesn't abolish it altogether? I am sure there is hardly a breeder of any importance in the country that will not back him up in doing so, and fight the thing to the bitter end. As conducted it is misleading to the people of the country, and an abominable outrage upon our herds and the breeders in general.

WM. STEWART, JR.

Northumberland Co., Ont.

The Remount Officer at Calgary

Pursuant to the arrangements made by Lieut.-Col. H. F. Dent, the horse-breeders of the districts surrounding Calgary brought in a large number of horses, and submitted them to his examination. The local arrangements were in charge of Capt. Inglis and J. A. Turner, of the Horse Breeders' Association, whose arduous labors helped to facilitate matters very much. The horses submitted were of a character that suited the Colonel's wants, and, as a consequence, in the two days he procured 130 head, at the price of \$80 for infantry mounts and \$100 for cavalry and artillery. At the beginning, the proceedings were nearly queered by the peculiar methods of one horse-breeder in trying tactics so ably described by David Harum, and whose conduct, on detection, was most reprehensible. Later on, however, the quality improved, and, as a result, a free movement in horseflesh resulted, and the coin of His Majesty was transferred to the ranchers' pockets. The prices paid were about \$20 a head higher than the same class of horses had hitherto fetched. Some of the added money, however, would go in the outlay for the necessary halters, which were very strong and new, and also for shoeing; all had to be shod in front. A large number of the horses were not brought out in as good a shape as they probably will be later on in the season, and in a number of cases were hardly as well broken as they might have been. The buying was conducted on the exhibition grounds. The horses were first brought before the purchasing officer and tried with measuring stick; then were looked over by the remount officer and his veterinary officer, Dr. Bowhill. If satisfactory, the horse was trotted under the saddle, and if all right, accepted, after seeing that saddle galls or sitfasts were absent. A description of the animal was written down and a number pasted on it later. It was conducted to the branding spot, where a number was branded on the off fore foot, and the crow's foot (broad arrow) placed on the near thigh. As was to be expected, the horses didn't all stand quiet for the branding. Bays, browns and chestnuts were the prevalent colors, an occasional black and iron gray also being taken, and also some duns, which are lucidly described by some of the wide-breeched, leather-legged riders of the ranches as "custahd-pie color." The horses all had pretty good feet and limbs, their wind being beyond reproach, as is only to be expected in this country of grass and no clover. Those most approved were of the deep-chested type, with good breadbaskets. The tucked-up flank fellow was always turned down, and the "take him away" pronounced his doom. The rejects on the score of unsoundness were not many, several being refused on account of lack of years. A horse had to show all its permanent teeth or it would not be taken. The breeding of the horses is of all kinds. The greater number showed Thoroughbred blood, others Hackney and Standard-bred blood, some even Clyde, the artillery horses especially, and others were of entirely unknown breeding. It is, however, forced upon one that there is a crying need for first-class stallions on the range and a change in the method of handling the colts, which, instead of having to rustle their first winter, should be kept up, well fed, and halter-broken. In conversation with some of the ranchers, one gleans the fact that their opinions are similar to those advanced by the writer.

How to Raise Good Litters.

After the pigs are farrowed we give the sow nothing for twelve hours. Then begin with water and bran, gradually increasing the feed for a week, when, if the sow has done well, she should be on full feed. What I mean by full feed is not all the sow can eat, but enough feed to produce all the milk the pigs can take without injury. Sows differ in their characteristics, and to feed them intelligently the feeder should be acquainted with these characteristics. Many pigs receive a backset early in life, that they never fully recover from, because of the careless way their dams were fed.

Just as soon as the pigs manifest a disposition to eat, we let them into a place where the sow cannot follow, and give them some fresh skim milk with a little shorts added. As soon as they have learned to eat, we feed them quite liberally shorts and barley chop mixed and fed dry, with plenty of water to drink in a separate trough. When the pigs are two months old I shut the sows up in another building, and feed them nothing but dry grain and water for a week. By this method there is generally no trouble with their udders, and it also allows the pigs to keep their own pens and all the outdoor exercise they have a mind to take. We then feed wheat and barley, ground fine, with a little flaxseed meal added, and soaked from one feed to another. Care must be taken to regulate the grain feed to suit the wants of the pigs. When the pasture is plentiful they will need less, and *vice versa*, but when the pastures are over-succulent, as they are sometimes in wet seasons, an increase in the relative

quantities of meal fed will be found an advantage. The meal and grain are fed in the pens morning and evening, but not at noon, and when pigs cannot be let out on pasture, they should get a portion of green food every day, selecting, of course, from what may be in season. When it is not convenient to feed them green food twice a day, it may be given as the noon meal.

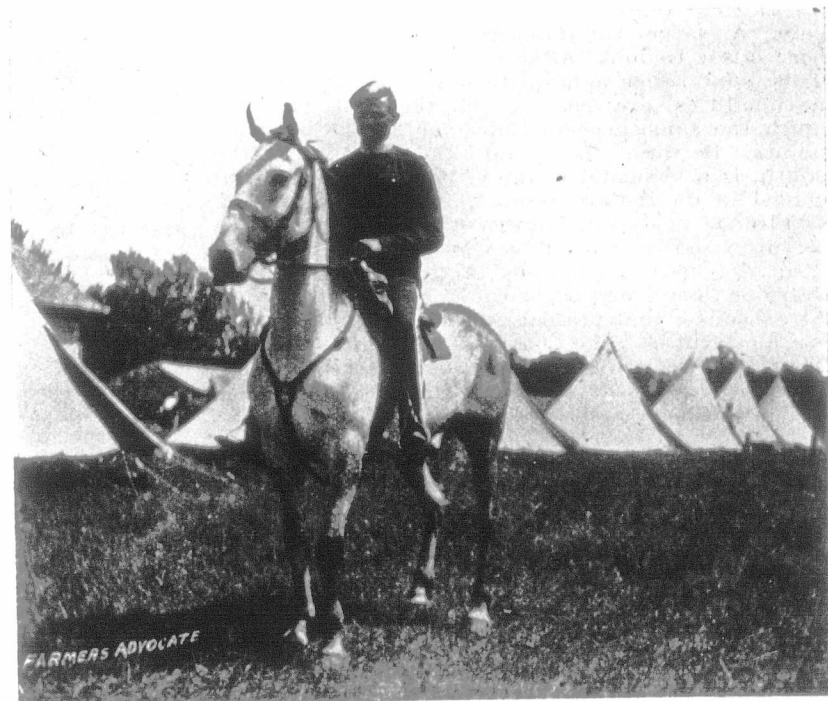
By having good stock to start with, not keeping too many together, using good grain, common sense in caring for them, and feeding liberally, as above indicated, it is no trouble to make young hogs weigh from 175 to 200 pounds at six or seven months of age.

W. L. TRANN.

Crystal City.

The Cowboy and the Range.

However entrancing to the tenderfoot the profession of cowboy may seem, it takes some time before the raw recruit becomes the matured expert. Few of them withstand the vicissitudes of the weather beyond the age of forty, the stiffening of the joints with rheumatism, due to exposure, causing them to quit the saddle for the small farm or ranch. The remuneration is not big, running about \$35 a month and board, the employee furnishing his own saddle and bedding, the employer the horse. The gradual fencing of the ranching country is tending to abolish the long drives of olden days. In those times a greenhorn could lose big money for his employer, especially if driving a beef herd to a shipping point, sudden movements or poor generalship tending to unsettle a drove of cattle quickly, with the consequence that they would be uneasy and ready to stampede at a moment's notice. Let such happen and a few hours' run would melt off beef enough to mean a difference of hundreds of dollars in a short time in a herd. Should cattle be inclined to go the wrong direction, the expert cowboy never rides up to the leaders to turn them off; if he did so a stampede or a turning back into the herd of those leading would result, with great confusion. Instead, he rides out at right angles some distance, and then gradually works forward until the leaders see him, when they immediately bear off in the direction required, grazing as they go. Many of the ranchers on the plains to-day started life as cowboys, investing their wages in a few head from time to time, and then let them out to a friend, until after a few years they had sufficient cattle to render them independent enough to become ranchers themselves. Great Britain has furnished a large number, some of whom had considerable money, which they generally lost, owing to inexperience, a result that gave rise to the ranchman's adage "that a greenhorn had to lose his money before he could make it!" The gradual disappearance of the cowboy can be looked for as the country settles up. More people are coming into the West, consequently more fencing and small ranches, until ranching becomes a level everyday business and less of a speculation. In the past, and at present with



A GOOD SORT—ONE OF THE PORTAGE LA PRAIRIE TROOP.

many, even ranching is a speculation on the weather and the amount of feed on the range. If a mild winter and plenty of feed is there, the profits are big; if the reverse, the losses are heavy. The tendency is more and more to cultivate some land and grow feed for the cattle, horses and sheep through the winter; and this, although meaning greater expense, will ensure the profits being regular.

Good Mixture for Flies on Cows.

W. F. Stephen, Trout River, Que., writes: "I have found the following mixture very good to protect the cows from the horn fly: One quart tanner's oil, one pint West's Fluid, half a gallon of coal oil. To be sprayed on every 24 hours, or every 12 hours if flies are very bad. One man with a hand sprayer will go over about 18 to 20 cows in 10 minutes."

Northern Alberta for Stock Raisers.

A trip up the Calgary and Edmonton road to the northern terminus at Strathcona, is a revelation to the Easterner of the possibilities of that country. Although under the temporary disadvantage of a series of heavy rainfalls, the depth of rich black, almost inexhaustible soil, the bluffs and streams, the rich grasses, etc., show conclusively that as a stock country this territory is hard to equal. The cattle are all in good condition, and are a speaking testimony to the nutritive properties of the grasses. With a cool climate and moist soil, one is not surprised to learn of Edmonton oats winning at Paris. Dotted along the line are numerous little villages, each claiming superiority for its district. In the Olds district, the land appears freer of brush than further north, and is eminently adapted for stock-raising, little attempt being made to grow grain. From the railroad can be seen fine houses, evidences of the district's wealth. At Innisfail, further north, the land takes on a different appearance: more bluffly and suited to mixed farming. At this point is a large Government creamery, at which the patron's cream is made up into butter at a cost of four to five cents a pound. The contributors are paid every month ten cents a pound on their butter, the balance coming at the end of the season, when the cost of manufacturing is deducted. The benefit to the farmers and small towns can be imagined by the monthly distribution of cash.

Midway from Calgary to Edmonton is the thriving town of Red Deer, surrounded by a typical stock-raising and dairying country. A Government creamery and a sawmill indicate the leading industries of the district.

At Lacombe the character of the country changes markedly, being flatter, although east of the town a few miles is a beautiful country on a gentle slope. As referred to in the Gossip columns, Lacombe is the great center of the pure-bred herds of cattle. Oats is the principal grain marketed, for which provision is being made in the erection of a fine elevator. The land varies from a sandy loam to a black loam. The settlement here is mainly Canadians. At Ponoka, about twenty miles north, Americans have gone in in large numbers. Some large-sized timber is floated down to the sawmill there. This is also a mixed-farming country. The town is situated on a rise of ground, the soil seeming to be somewhat sandy. Wetaskiwin is another creamery point and oat-raising center, two elevators being erected here. A large Government creamery is located here also, to look after the dairying interests. This spot seems a favorite with settlers, and all nationalities are rushing in, the soil being of much the same general character as the previous points. Between this point and Ponoka, to the south, is a beautiful country, part of which is included in an Indian reserve, the station being Hobbema. Leduc is another thriving town, with elevator and other facilities for business. Frenchmen are quite numerous in this neighborhood, dairying here again being the mainstay. At Strathcona, the present terminus of the line, large elevators and oatmeal mills are located. The country around is very fine, the soil being very deep and rich. The country close around is well settled up, and one hears of big crop yields, 100 bushels to the acre of oats being a common yield. A drive of three miles, necessitating the crossing of the iron bridge over the Saskatchewan, brings one to the old town of Edmonton, modern in its appointments, electric light, telephones and schools. Here a person can see the gold dredge at work, and the Hull-Gallagher packing houses. The soil here is of the same tenacious character as that south of the river, and is as productive, as is demonstrated at the fairs held here. In the vicinity are noted districts such as Horse Hills, Spruce Grove, Clover Bar, and Lac du Bice. The settlement extends for miles north of the town. Judging from appearances, a person would say that for farms close to the railroad, dairying will pay, owing to the proximity of the creameries, while back from the road ranching can be carried on. Some of the towns have very flat sites, and unless great care is taken with regard to the night soil, the wells and stagnant pools will receive a sad baptism of typhoid, an experience some Manitoba towns with similar sites have gone through years ago. In a country where land is so plentiful and cheap, it is hard to understand why townspeople will crowd so close together, and thus prove a menace to their own health, besides making the insurance rates so high. Such close quarters cannot be made attractive in the way of lawns, gardens and trees. Children galore are to be seen all along the line, and the main agricultural structure of nearly all the villages is the modern schoolhouse. Education is the great force, after all!

Americans Gradually Following Our Lead.

Prof. C. S. Plumb, Indiana Agricultural Experiment Station, in reply to an editorial in the *Chicago Live Stock World* on the feeding and breeding of hogs, says:

"Without intending to be particularly radical on the question, as one interested in the production of American pork, I believe that our farmers must do something further than to adhere to the particular type of fat pig which is now being produced by them. If our people do not believe that the bacon pig can be profitably handled, I believe that other men may also realize that many of our people are getting far more unsatisfactory returns than they should have from our typical market pigs.

"It is not simply a question of how much gain an individual pig will make in a given length of time to make a profit, but the matter of reproduction and the future development of our swine interests have everything to do with the future development of our pork trade.

"The man who has a sow that produces a litter of six, other things being equal, is at a disadvantage when compared with the man who handles a breed of pigs that will farrow litters of ten or twelve.

"I think observing handlers of Poland-China swine, for example, must realize that this breed is deteriorating to a greater extent than it should. It has been fed on corn and bred within such fat-production lines that its capacity to reproduce, and the character of its bone, is, as I believe, considerably injured over what the breed was fifteen years ago. This is not simply an opinion of my own, for I have heard many Poland-China breeders express the same thing.

"Again, there is such a thing as a pig maturing too quickly and forming more of the dumpling style of hog than an animal capable of strong, full growth. At the Indiana Experiment Station, where we keep some of the very best of American breeds of pigs, purchased from the best known breeders in this country, I have had very good opportunity to see something of this form of development which, in my eyes, is defective. Some of our breeds should have a greater capacity to continue growth and expand, and have a large size for breeding animals.

"The extreme type of the bacon pig is not likely to meet with favor in the United States, and I am not prepared to say that it would be the most profitable type of pig that our farmers should handle. I do believe, however, that the better type of Large English Yorkshires or the leaner type of Berkshires will commend themselves from the breeder's standpoint to farmers who will give them a fair and impartial trial. Our American pigs as a rule lack bone. The leaner type of pig inclines materially to better bone, will produce altogether larger and better litters than the fatter pigs, and have greater activity and, I believe, constitution than the heavier, fat-producing sort. It is not so much a question as to whether we shall produce a bacon pig or not, but it is an important question as to whether we shall produce a class of pigs that will have constitution, bone, and great reproduction capacity, and yet that will produce a type of meat that is in demand the world over.

"Exclusive corn-feeding will do much to injure any breed, but if our swine-breeders will study the subject of breeding, combined with the influence of feeding, I feel sure that they will not be satisfied with the swine question as it stands to-day.

"There is a first-class opportunity for the improvement of our pigs, as I have already indicated, and the bacon type of hog can play a perfectly legitimate part in this improvement."

Horse Breeding in Alberta.

THE RAWLINSON RANCH.

Nestling in a cluster of hills, down whose sides trickle little rills which become young torrents after a summer's rain, within sight of the snow-capped peaks of the Rockies, lies the ranch of the Rawlinson Bros. In days of old, probably before count was made of time, the River Bow rolled over this land, and in its variable way scooped out the hollows and left the hills. Hill and hollow, it is all coated with that benediction of nature—grass—whose nutritive qualities do so much to aid in the growth of the well-shaped bodies, flinty feet and cordy tendons of the equine tenants of this ranch. Doubtless the ozone-laden atmosphere does its work so that the wind of the Western horse is irreproachable and unrivalled anywhere. To discourse on things mundane is our theme, and to the student of horse-breeding we would commend a visit to the Burmooor stud farm, some twelve miles distant from Calgary. This large property, surrounded by and divided into fields by what is termed the A fence, carries some 250 head of horses and quite a few sheep. The proprietors are breeders of Hackneys of the useful type, and, while themselves conversant with the pedigrees and performances of noted sires, are not led away by a craze for blood, but aim at the target of utility. To the farmer who so often objects to the massive draft horse as the farm worker, and who desires a horse that can draw a fair load and go a fair pace, and yet who is in doubt as to how to breed the desired type, we can say, unhesitatingly, the Rawlinson brothers have solved the problem. By the aid of upstanding, strong sires, with the quality that wears, grading carefully up, strong, useful horses are got, with plenty

of action, the right conformation, and weights ranging from 1,100 to 1,350 lbs. Such a horse, the granddaughter of a French-Canadian pony, was shown the writer, a conclusive proof that by a careful selection of sires and persistency along right lines, the grading up of horses is just as satisfactory as the grading up of cattle or sheep. The brood mares number sixty, and are bred in June or July, the stallions being turned into the corrals with the mares for a few hours once every three or four days. In order to provide sustenance for the stock during the winter, 100 acres is put in crop, oats being the cereal grown, which is cut so as to make oat hay. Two crops are taken, and then the land is summer-fallowed. The largest yields are thus obtained, taking sometimes 5 lbs. of twine to the acre to tie the crop. The owners prefer oat hay to hard feed, such as oats and native hay, as by its use in the fall the colts are gently scoured out and thus rid of any worms which they may have been infested with. Colts are all halter-broken and fed the first winter, a course of instruction which they never forget, and are, therefore, more readily handled when mature. One leaves regretfully when the time comes to return to town, as the hospitality tendered by the Rawlinsons is hearty, and one's store of horse lore is much enhanced by the visit.

FARM.

The Farm Well.

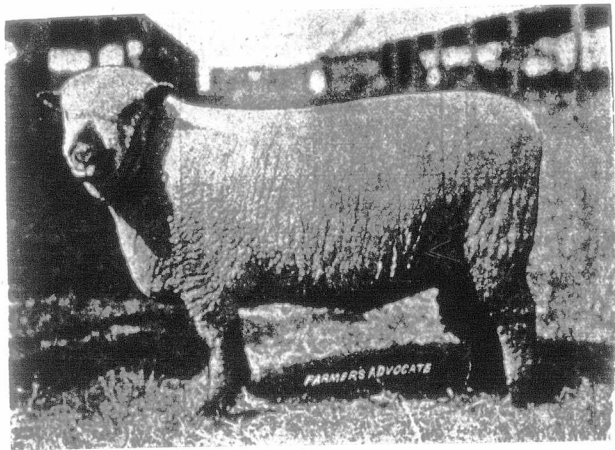
How often we hear that a certain farm is an extra good stock farm, either because of running water or an inexhaustible well. In many places the location of the buildings depends on the location of the water supply. There are certain essential features of a good well: (1) Ample capacity to supply pure, clear, cold water; (2) a location which renders it not likely to be contaminated by seepage from surface impurities; (3) a casing or curbing which is verminproof at the top, and, if possible, waterproof in its upper ten or twenty feet. The capacity of a well should, if possible, be much greater than the probable demands which will be put upon it; it should not be possible to pump the well dry with an ordinary pump.

With the ordinary domestic pump about thirty strokes are made per minute, enabling one to fill a pail of twenty to twenty-four pounds; at this rate about seven and a half gallons would be pumped every three minutes. A good well should be able to keep this rate up for several hours. As the domestic animals require for every 1,000 pounds weight about a cubic foot (7.5 gallons) a day, the stock-carrying capacity of a farm can be gauged to some extent by the water supply. Generally speaking, the greater the depth the greater the capacity of the well, provided the water-bearing strata has been touched. From experiments made, an increase in the diameter of a well has little effect on its capacity, therefore in most wells little is gained by making them larger in diameter than would be necessary to allow space for the pump. As before mentioned, an important feature of every well, where the water is intended for domestic or stock use, is a sufficient depth to prevent the quick-entrance of water from the surface, and to maintain a constant low temperature. The depth should usually exceed twenty feet (for reasons which we shall state later), and even when water is found nearer the surface than this, it is better, if the water-bearing strata will permit, to go thirty feet, and place the pump so as to draw from the bottom where the water is the coolest and freshest. Before ground water becomes fit to drink it needs to go through a depth of soil, practically filtering, and time to bring about changes in it by which it becomes free of organic matter. In the analyses of well waters its fitness for potable purposes depends mainly on the absence of organic matter. The temperature of well water becomes of considerable importance on those farms where well water is used for the deep-setting milk or cream cans. The geologists and soil physicists tell us that the zone of the lowest ground temperature is generally from twenty to seventy feet below the surface, and between these depths the coldest waters are procured. Above twenty feet the waters will be colder in winter and warmer in summer, while below the extreme depth (seventy feet) the water generally becomes warmer from the internal heat of the earth.

The well curbing is of importance, because if properly put in and of good material vermin will be totally excluded. An authority on such matters recommends a six-inch lap-weld steam pipe; if galvanized, all the better. A curbing of cement tile (somewhat similar to what is recommended for road culverts by Ontario Road Commissioner Campbell), or glazed sewer tile, with the joints set in cement, ranks next in utility to the metal (steel) piping. If the well is to be curbed with brick or stone, the upper ten feet should be laid in cement and plastered on the back to keep out the surface water and vermin. At the top of the well the curbing should be carried up fifteen or eighteen inches above the surrounding surface, the earth being graded up to it so as to secure perfect and quick removal of the surface water.

Edmonton's Summer Fair.

The first attempt at a successful up-to-date summer fair made by the people of the noted district of Edmonton, the first week of July, was, unfortunately, partially balked by the elements, in the form of heavy rains, with the resulting washouts. The Fair Association has procured 45 acres of land in the valley of the Saskatchewan, and equipped it splendidly; in fact, for its size a finer fair ground does not exist in the whole Northwest. Situated on a gentle slope from the river, with abundance of natural grove, which has been underbrushed, a fine race



SHROPSHIRE SHEARLING RAM.

Winner of first prize at Bath and West of England Show, 1901. PROPERTY OF MR. R. P. COOPER, BERKHAMSTEAD.

track has been constructed, with a commodious grand stand; a two-storied agricultural hall has also been built, for vegetables, dairy exhibit, etc., and, although a setback resulted this year, the resources of this famous district and the energy of the directors will eventually make the Edmonton fair one of the big shows of Western Canada. The stock of the district is, considering its newness, of a high-class character.

Although this was a backward season, a good showing of vegetables was made, that veteran gardener, D. Ross, being to the fore. Thos. Speers, Oak Lodge, Man., judged the cattle, and S. R. English the horses, the Government judges, Messrs. Jas. Bray and J. B. Jickling, being detained by the washouts on the road. Shorthorns were exhibited by D. B. Wilson, Edmonton; J. A. McPherson, Spruce Grove, and H. H. Crawford, Strathcona. Jas. Tough and J. McKernan showed grades. Representatives of the dairy breeds of cattle were shown by Mrs. W. F. Cameron and J. H. Dowling. In sheep, J. S. Wilson, L'Amoureux; Jno. Kennedy, Edmonton, and J. Gainer were the exhibitors. The swine exhibit was probably the best part of the live stock. Berkshires were exhibited by T. Swift, Clover Bar; Jas. Tough, Edmonton; H. H. Crawford, Strathcona; Jno. McPherson, Spruce Grove. Yorkshires by H. Bell, D. Brox, and Jas. McKernan, Edmonton. Tamworths were shown by W. Vogel, Strathcona; Jno. McPherson and R. Weir. Some fine individuals deserve especial mention, notably the Tamworths of W. Vogel, J. McPherson and R. Weir; the Yorkshire sow of Jas. McKernan, the Berkshire boars of Jas. Tough and E. T. Swift, the boar of the latter being bred by H. H. Crawford, whose original stock was bought from Snell Bros., Snelgrove, Ont. Poultry of good quality was shown by the Tanthorpe Poultry Farm (E. Swift, proprietor). Clover Bar, who won on turkeys (Bronze), Pekin ducks, Toulouse geese, and Barred Rocks; and also by C. de W. McDonald, whose Light Brahmas, Langshans, Buff Rocks, Dorkings and C. I. Games swept the board. The agricultural hall contained a few exhibits of weeds, among which were noticed hare's-ear mustard, stinkweed, shepherd's-purse, wild oats, Canada thistle, and ball mustard. The grain show, although not large, was of fine quality, the wheat, oats and barley being very heavy. T. Daly, Clover Bar, and E. Dean, Edmonton, showed some fine Red and White Fife wheat. W. Keith, Clover Bar, had some white oats which showed what the district is capable of. Some very plump barley, a little dark in color, was shown (6-rowed) by J. McPherson and J. Tough; 2-rowed by H. H. Crawford. Some grain in the green sheaf was exhibited, the barley, oats and wheat being about 2 to 3 feet long. A sheaf of last year's oats, 6 feet long, and sheaves of Brome grass, 4 feet long, were also shown. In the vegetable line, large new potatoes, turnips and radish were seen, as also rhubarb two feet long. The dairy exhibit, ladies' fancywork, domestic manufactures,

and exhibits of some of the merchants helped fill the fine two-storied, 75 by 30 agricultural hall.

In dairy butter, first prizes were won by Mrs. Trimble, Edmonton; Jas. McKernan, Mrs. C. McPherson, Edmonton, with articles of fine quality. J. Tough showed some good cheese. Travelers all praise the butter and milk of the northern country, which is undoubtedly especially fitted for dairying, the great growth of grass, cool nights and plenty of water being favorable to the production of high-class milk and butter. A large number of Americans were visitors to the fair, many of whom were prospecting for land. An Iowa farmer states the Edmonton country to be the best stock-raising district he ever saw, stating that the cattle of this district were in as good condition as cattle corn-fed for three months in Iowa. At the present time, the visitor to Edmonton leaves the railroad at Strathcona and drives to Edmonton, crossing the fine iron bridge over the Saskatchewan, in whose waters the gold dredges may be seen at work. It will be only a few months ere direct railway communication will be made between the twin cities which are the St. Paul and Minneapolis of the Canadian West. On the streets of these towns may be seen the native and the half-breed, the Frenchman and the Galician, in addition to which the Anglo-Saxon race is represented by people from Eastern Canada, Great Britain, and the United States. Anent the Galicians, the prediction is made by an implement man of the town that they will soon be loaning money.

With the Institute Workers.

The opening meetings of the summer series of Farmers' Institutes, which began on July 2nd, were not generally largely attended. The weather conditions were unfavorable, roads bad, summer-fallow and other urgent work pressing on the farms, and in some districts the celebration of Dominion Day exhausted the interest and enthusiasm, and we fear also that in some cases local secretaries had been remiss in their duties and failed to properly advertise the meetings.

The meeting held at Carman on July 2nd, at which the speakers were Miss Maddock, of the Ontario Institute staff, and Provincial Veterinarian S. J. Thompson, was not largely attended. Good meetings were, however, held on the following days at Miami and Morden.

Miss Maddock is a clear, pleasing speaker, and her easy manner gives assurance that she knows what she is talking about. At Carman she took for her subject, Bacteriology. In Ontario, she said, there was a great awakening, not only among the farmers, but among the farmers' wives, and women's Institutes are being organized in a great many districts. The reason for this revival of interest was that the Institute workers were now making a science of the work, and the agriculturists realized that science, instead of being a word to be afraid of, simply means a thorough knowledge of our work. When we

hence the necessity of cleanliness, hot water, fresh air and sunshine. In the home, from cellar to bedroom, cleanliness and fresh air are the essentials of good health and good living. Miss Maddock enlarged upon the importance of these principles in the dairy, the house cellar, the bedrooms, giving good advice on the care of the sick, indicated briefly some of the salient points in connection with domestic economy as applied to the farm, and, in response to enquiries, spoke on the care of the cream separator, and went more fully into some details of home-dairy management.

Dr. Thompson spoke on contagious diseases of animals, selecting a few of the most common. He described the symptoms of blackleg, and pointed out the importance of burning the carcasses of all animals dying from this disease. He strongly recommended vaccination as a preventive, and stated that the Dominion Government now supplied the vaccine at cost.

Lump-jaw is not a contagious disease, but is conveyed into the system by the fungus, being icked up with grass, etc., where it may have been deposited from the discharge of an affected animal. Once in the mouth, the fungus may find lodgment in a decayed tooth or a sore, and then the disease rapidly develops. Taken in time, it is easily eradicated by the use of iodide or potassium. Fleming's Lump Jaw Cure may also be useful in early stages. It is unlawful to sell diseased animals, and bad cases should be killed and destroyed.

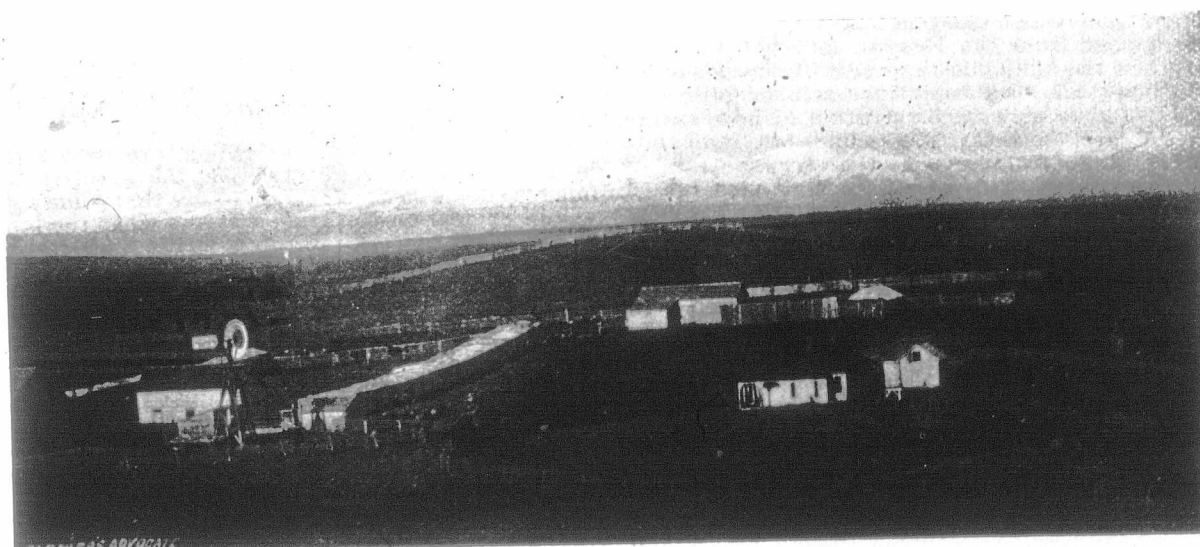
Swamp fever is very like typhoid in the human subject. Medicine is of little or no use without nursing. Give quinine in one-dram doses; plenty of milk to drink. Whiskey is also useful as a stimulant. The limbs should be well hand-rubbed and bandaged, and, above all, give plenty of fresh air and gentle exercise. Keep up the strength of the patient—don't physic or bleed. The Doctor said swamp fever was caused by feeding swamp hay and using swamp water. In those districts of the country where horses are fed on cultivated hay and straw, they are never troubled with this fever.

Glanders was also fully described, so that it might be detected in the early stages. Mange, lice, ticks, etc., were also discussed, and the free use of any of the well-known washes recommended, and the importance of repeating the application three or four times to insure killing all the eggs and leaving the animal clean.

The advisability of isolating any suspicious case of disease in any of the domestic animals was dwelt upon, and the necessity for cleanliness and fresh air in stables was emphasized.

Good Prospects at Indian Head Experimental Farm.

Superintendent Mackay, of the Indian Head Experimental Farm, in a letter to this office, under date of July 2nd, states:—"In regard to experiments on Experimental Farm, it is rather early to say much about them. Except corn, all tests, whether in grain, roots, trees, etc., are doing well. Fall plowing is beating all past records, while grain on Brome sod is extra fine. We have fine Brome hay and extra fine Western rye grass.



RAWLINSON BROS.' RANCH NEAR CALGARY, ALBERTA.

A Costly Farce.

The men who are interested in exploiting the tuberculin test have not, so far as we know, cited the case of an importation of cattle near the end of last year, all of which passed the test in Great Britain, but through the importation of the official veterinarians were allowed by the owner to be loaded with tuberculin in quarantine, about one-third of them being condemned and, under the law, the owner prohibited from selling them for breeding or other purposes, the same animals being again tested by a qualified and official veterinarian a few months after and not one showing the least reaction. It may have been fun for the vets., but it was to the importer an expensive farce, costing him in the neighborhood of \$200 extra, we are told.

realize the forces of nature with which we have to deal, our work, instead of being mere drudgery, becomes interesting. Bacteriology is a science closely related to agriculture, and directly affects many branches of farm work. Bacteria belong to the vegetable kingdom. They are very insignificant in size, but have wonderful powers of development in numbers. Some are beneficial, some are harmful; they are everywhere, in the air, in water, and in milk, and to understand something of the conditions in which they develop is of great benefit in carrying on one's work. In dairying, for instance, warmth, moisture and impurities favor germ development,

Weather Conditions Which Affect the Appearance of the Hessian Fly.

BY PROF. JAMES FLETCHER, OTTAWA.

The appearance of the fall brood of adults of the Hessian fly is somewhat subject to variations in regard to date. Cool, damp weather during the breeding seasons is supposed to be favorable to the development of these insects, but comparatively little is known on this continent that is applicable to field conditions.

Dr. W. Paspelow, Agricultural Institute, Moscow, Russia, in his examination on this pest as it affects the wheat crop in Russia, observed that the emerging of the summer generation, which began in June, stopped very quickly, and the insects remained in the puparium or flax-seed stage during a hot, dry period which lasted some weeks in July and August.

In his treatise on the subject, he says: "Such retardation in the course of development of the Hessian fly was due to the high temperature and the great drought of the past summer, whereof one could easily be convinced by placing puparia in a moist space in glasses in damp sand, which were placed in moist and shady places in the park. In such cases perfect flies developed from puparia brought in from the fields in two weeks. Puparia left in the fields remained in the puparium stage an unusually long time, until, under the influence of rain, they transformed first to true pupae and after that finally to adult flies."

It would thus appear that if this pest is to be avoided in Western Ontario by deferring the sowing of fall wheat, the prevailing weather conditions at about the normal time when the fall brood of flies appear must be taken into consideration. For instance, if during the last week in August a locality is favored with an appreciable precipitation of rain, associated with moderately cool weather, the flies would be at work depositing their eggs during the early part of September, and it might be considered quite safe to sow wheat on or after the tenth; whereas, if hot, dry weather is prolonged until the eighth or tenth of September, followed by rain and a lower temperature, wheat sown before the twentieth would, in all probability, be seriously affected with the fly.

Prof. Webster, of the Ohio Experiment Station, states that from seven years' observation and experimentation at the farm, wheat sown immediately after the twentieth is usually safe from attack of the Hessian fly. He also observed that the fall brood of flies begin to emerge nearly or quite a month earlier in the northern districts than in the southern parts of the State.

In the extreme northerly districts, the spring brood does not appear until the latter part of May and in June. Such is the case in Manitoba, where under average weather conditions only one brood per year appears, the flies being carried over winter in the puparium stage of the spring or early summer brood. However, it is quite reasonable to expect that a second or fall brood will appear as far north in Ontario as fall wheat is grown.

The result of Prof. Webster's examinations of this pest in 1899 and 1900 fully bears out the idea that fall wheat may be sown in any locality a week or ten days after the fall brood have emerged and commenced laying their eggs, with little danger from the Hessian fly; but that the date when the adult flies appear largely on meteorological conditions is also quite evident. We have here an illustration of how nature protects such insects. The same hot and dry weather that will prevent the germination of seed and the growth of plants will also retard the development of the Hessian fly during a long period of time.

In conclusion, Prof. Webster says: "Of course, in these investigations many dissimilar conditions and influences have been encountered. In some instances, wheat sown very early, under the influence of local showers, sprung up and made a good growth, escaping the fly because these, on account of it being still too early, had not appeared, and that sown later proved to be more attractive on account of being less tough, thus, as it were, drawing off the Hessian flies from the early-sown fields when depositing their eggs. Then, too, there would be a decided difference between wheat sown on stubble ground where the previous crop had been injured by the fly. The resistant qualities known to belong to some varieties of wheat, and the attraction which others seem to have, the protracted warm weather of the autumn of 1899 (which extended well along to December), have all increased the difficulties of carrying out these investigations."

Mr. W. A. MacKinnon, of the Commissioners' Branch, Department of Agriculture, Ottawa, has recently been touring the chief fruit growing and shipping centers of Western Ontario, including London, Woodstock, Ingersoll, and the Lake Huron and Georgian Bay district, in connection with the enforcement of the Fruit Marks Act, which was passed last session, with a view to prevent the fraudulent marking and packing of Canadian fruit, both for local and foreign markets.

Agriculture in the Rural Schools.

In Manitoba, the attempt to teach agriculture in the rural schools has been anything but a success, for reasons which it is not necessary to mention at this time. The Illinois people have tackled the question, and have decided to call upon the school teachers to help stem the tide of emigration of farmer boys to the cities. In some parts of the State it is said that the attendance has fallen off at the country schools in a startling manner, almost threatening their extinction. With the idea of lessening the outgo, an effort will be made to raise the standards of such schools. To provide a practical course of instruction, of real value to boys on farms, the pupils in the rural schools will be asked to answer such questions as the following:

What kind of cattle, horses and sheep are kept in your township? Where, on horses, does a spavin grow? What does knee-sprung mean? What farm, garden and orchard plants will produce only from seeds? Tell what is a day's work at the following: Plowing, cultivating corn, cutting wheat with binders, shocking corn, threshing? How much grain was marketed last year, and how much fed, on your farm? What did the family use, and what was it worth at market price? Describe all the uses of cattle, hogs and sheep, and tell which is the most useful to man, and why? What fruits and vegetables are grown in glass houses for market?

When the boys on the farms run their eyes down such a list of questions, how many can answer every one of them? In case of failure does it appear to be true that the farm is a dull and uninteresting place? If farmers' sons are unable to reply to the questions correctly, what about the city boys, who have an idea that farm life is slow and country people lacking in means of development and progress?

Besides these questions, the schoolboys of the rural districts of Illinois will be asked to set out strawberry plants and observe their growth, and make a collection of leaves from the trees of the neighborhood. They will be asked to write a complete description of some breed of live stock; make a close study of an ear of corn; cut a lemon cross-wise and make drawings of all its parts; plat and



AT THE CALGARY STOCK-YARDS.

write a history of the farm; draw a ground plan of the barn; tell what the farm yields; make a collection of all the seeds and grain grown in the vicinity; examine carefully and identify all the weeds; watch for the first buds and birds, and keep a record of the appearance of each; plant, in pots, lemon and orange seeds, coffee and various nuts, and see if they will grow.

All this course of investigation is to be divided into months, so as not to give the scholars too much to do at once. It is safe to say that some eyes will be opened on the Illinois farms when the boys and girls get to work. Reading, writing, geography and arithmetic will not fall into a slumberous condition with this lively course alongside to quicken the mind.

This will give a practical test as to whether faults in the system of education are responsible for the exodus of the boys from the farms. It would be a fine plan for the farm lads, and the city lads as well, in other States, to try this system of questions on themselves to see how much they really know about important things which are sometimes passed over carelessly.

Calgary Stock Yards.

The cattle industry is the life of the Western country, and according as the arteries of the bovine traffic are pulsating with the movement of the cloven hoof, so in a sense is the prosperity of the rancher gauged. The pulse of this great industry can be felt only at some big collecting point, such as at the Calgary stock yards and the abattoir and cold-storage plant of P. Burns. This establishment is right up to date in its appointments, good slaughtering and hanging rooms, gangways and cold-storage plant all going to make up the working tools of one of Western Canada's cattle barons. The run of the fat cattle of the plains generally starts about July or August, this year being a little late owing to the wet season and the consequent slow-fattening properties of the grass. In conversation with some of the ranchers, it was elicited that the Manitoba stocker was much preferred over his Ontario brother, the losses with the latter being rather heavy.

Home Remedy for Pneumonia.

In response to the request for some simple, reliable home remedy which families might use in such cases of pneumonia as, unfortunately, caused the death of Mr. Donald Alexander and his son David, referred to in the FARMER'S ADVOCATE of June 1st issue, I take pleasure in assuring you of a safe, sure and speedy remedy for such, which I have used for over forty years, in numerous cases, and have yet to record the first failure. Before doing so, however, I must say a few words as to the primary cause of pneumonia and pleurisy, namely, neglect to avoid cold, chilling drafts, and especially when the mind is depressed (as was doubtless the condition of poor Mr. Alexander's mind over the death of his son), or by permitting the mind to be absorbed over some complex mental pursuit whilst sitting or standing in a cold, damp atmosphere. Let me illustrate: A few years ago a bright young lawyer (about 28 years of age) in this city, whose youthful eagerness led him to devote a whole Sunday alone in his office looking up authorities bearing upon an abstruse case he was engaged in, and though the day was very cold, he neglected to have the office heated, and, as a result, that evening he was laid up with a decided attack of pneumonia, from which he died on the following Tuesday. The chilling atmosphere round his body caused the blood throughout the extremities to flow towards the lungs, which became gorged and seemed to defy all the usual remedies of three eminent physicians, who faithfully attended him from Sunday evening until his death. The case I especially wish to describe (as illustrative of how the trouble may be speedily subdued) was that of a married lady, aged about 50 years, who was seriously attacked with pneumonia, coupled with chronic asthma. We were hurriedly called to her case about 4 p. m., when we found her frantically gasping, as if about to choke at any moment. We had a large boiler of water heated to boiling point, into which we mixed about half a pound of mustard; then wrung out two small woolen blankets from the hot water—after carefully spreading a large sheet of rubber-cloth on the bed-cover; over which we laid the doubled steaming hot blanket, and the patient (stripped) over all, quickly wrapping up the whole body from the chin to over the feet with hot blanket and rubber-sheet; giving her a glass of cold water to drink. A second application with the other heated blanket settled the whole difficulty, the patient being out of all danger and breathing freely by 6:30 same evening, when we left. Before leaving, however, we instructed the husband to keep up the temperature of the bedroom to 75 or 80 degrees during the night. Fearing the neglect of this necessary precaution, we called again at six on the following morning, to find the lady sitting up in bed praying that we might live for a hundred years to administer so potent and prompt a remedy. The lady speedily regained her usual strength, and resumed her domestic duties within three days after the treatment.

The above may be called "an old woman's remedy." If so, may God bless the dear old woman—she surely was divinely inspired. In conclusion, I would strongly recommend the possession of a sheet of rubber-cloth by every family (about 2½ yards long by 1½ yards wide) as a safeguard in case of a sudden attack of pneumonia or pleurisy. Such a sheet costs but very little when compared with its real value in times of need.

You will readily perceive that the simple philosophy of said treatment must equally apply to the cure of pneumonia and pleurisy in horses and other valuable live stock if promptly and properly applied. As heat attracts heat, hence the lungs and brain, being warm, soft and pulpy, and very full of blood vessels, offer no resistance to a pressure of blood from the extremities during a chill such as we have described. Reverse the condition by the "old woman's remedy," and avoid tardy druggings.

San Francisco Co., Cal. DR. J. McLEAN.

The Dangers of Tuberculin.

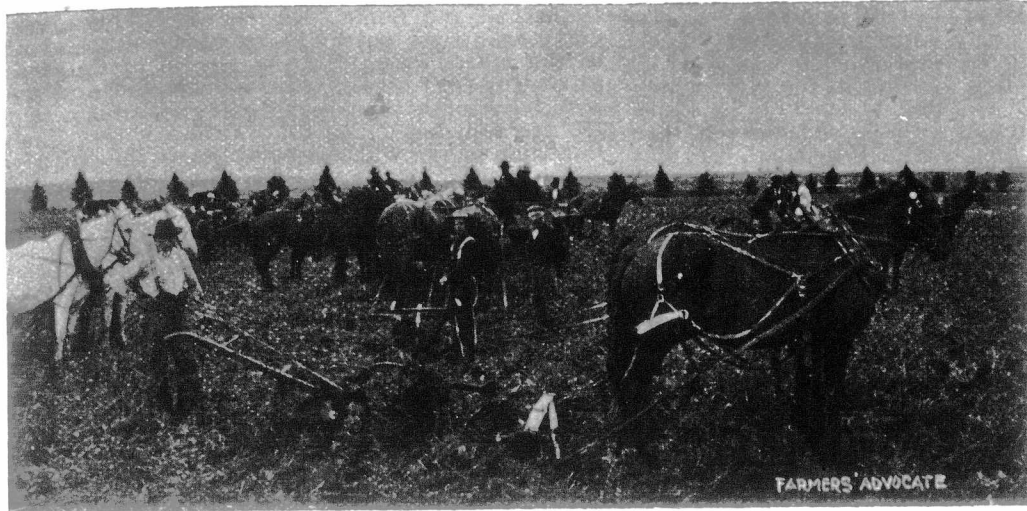
Prof. Nocard, of France, has been frequently quoted in support of the tuberculin-test fad, but we find from Pearmain and Moor's late work on bacteriology, published in England, a translation of his treatise on animal tuberculosis, in which he declares that it is only "within certain limits" that he regards the use of tuberculin as "a fairly certain indication of disease in cattle." In view of the fact that a change in the weather or some other variation in the animal's condition will cause as great a rise in temperature (two degrees) as condemns them under the test, we are surprised that Nocard would lend even his qualified support to the theory. But he immediately adds this significant warning: "Its use is a diagnostic of the disease in man is dangerous owing to the possibility that it may start the mischief afresh in a portion of the lung that was healing." Even though the Koch revelations stamp human and bovine tuberculosis as two different diseases, still, in the light of the foregoing warning and the serious consequences so frequently noted in cases of pregnant animals injected with the lymph, there is little doubt but that prudent stockmen will not run the risks of further trifling with such a substance.

Plowing Matches.

OAK LAKE, JUNE.

Men's 14-inch walking plows (open to all)—1, Wm. Croy, Brandon, 83; 2, Jas. Sutherland, Beresford, 82; 3, Wm. Turner, Carroll, 81.

Men's 14-inch walking plows (open only to those never before 1st-prize winners)—1, E. Allen, 76; 2, Wm. Guild, Kenmay, 74; 3, W. A. Crowley, 63.



JAMES SUTHERLAND, BERESFORD.
Champion plowman of Manitoba, 1901.

Men's 16-inch walking plows (open to all)—1, Thomas Hill, Brandon, 74; 2, John Stott, Brandon, 70.

Sweepstakes.—Best-plowed land—1, Jas. Sutherland. Best crown and finish—Bain Elder. Best plow team—1, John Stott.

KILLARNEY, JUNE 26.

Men's 12- or 14-inch walking plows—J. W. Jackson, 76; Alex. Waldie, 73; Wm. Turner, 72; F. Collinge, 71; W. J. Waldie, 71.

Men's 16-inch walking plows—Robert Ringland, 64.

Gangs, 12- and 14-inch—Jas. Ross, 74; Bert Paul, 71; Walt. Way, 64. Sulkies—Jas. McKenzie, 74; Wm. Davidson, 70; F. Finkbinder, 66.

Boys under 16—F. Cunningham, 70; Jas. Waldie, 66; Wm. Wray, 65.

CARTWRIGHT, JUNE 28.

Men's walking plows—J. W. Jackson, Holmfield, 88; Wm. Turner, Carroll, 81; W. J. Waldie, Cartwright, 81.

Sulky plows—John A. McKenzie, Cartwright, 82; John Hildred, Cartwright, 74; John Weir, Cartwright, 57.

Gang plows—W. Ellison, Cartwright, 86; Jos. Jackson, Holmfield, 78; Jas. Ross, Wawanesa, 73.

Boys' walking plows—J. D. Waldie, Cartwright, 77; Forrest Cunningham, Cartwright, 69; H. Cuthbertson, Cartwright, 52.

Special for best finish—A. M. Waldie, Cartwright.

BRADWARDINE, JUNE 26.

Free-for-all (14-inch walking plow), four entries—J. Sutherland, Beresford; T. Hill, Brandon; Ed. Allen.

Second class (14-inch walking plow), seven entries—W. Guild, Kenmay; Gilree.

16-inch walking plow (one entry)—J. Stott, Brandon.

Boys' class (14-inch), two entries—Earl Tomlinson, Oak Lake; Leslie Wisner, Oak Lake.

Gang plows, four entries—Goodwin; R. S. Joynt, Brierwood; S. Gray; Allan Ross.

Sulky plow, two entries—J. B. Thompson, Hamiota; Fred Houck, Hamiota.

VIRDEN, JULY 3.

Judges: Kenneth McIvor, Jas. Lothian, John Buck, John Irwin, Peter Leask and John Gibson.

Boys under 18 years of age—Lister Wisner, Oak Lake, 78; Earl Tomlinson, Oak Lake, 75; John Holt, Alexander, 74.

Men's 14-inch walking plow—W. Guild, Kenmay, 91; J. Sutherland, Beresford, 92; J. Stott, Brandon, 86; J. Goodwin, Oak Lake, 84.

Men's 16-inch walking plow—W. Turner, Carroll, 76; F. W. Chapple, Virden, 74; David Evans, Pipestone, 74; Donald Forsyth, Virden, 70.

Gang plows—J. Goodwin, Woodworth, 87; W. Reid, Wallace, 83; W. Dryden, Woodworth, 80.

Sulkies—A. Reid, Virden, 80; W. Bechee, Virden, 76; W. Gardner, Wallace, 68.

Best-groomed team, boys—John Holt, Alexander.

Best-managed team—David Evans, Pipestone.

Sweepstakes (man or boy, resident of Wallace, making the highest number of points with any plow)—W. Reid (gang plow), 83.

Testing the Soil.

Frequently investigating farmers desire to know what constituents necessary for crop growth abound in their soil, and also what are lacking in order that only the needed elements may be applied in order to secure a full yield. To this end the chemist is asked to assist by making a chemical examination of a sample of the soil, but this method

gives a very imperfect knowledge of what the farmer wishes to know, because of the impossibility of securing a representative sample of the field or farm. Another difficulty in the way of securing helpful information by this means comes from the fact that the chemical analysis shows up all the constituents, whether they are available for nourishing plants or not, and in many

cases considerable of what is indicated as plant food is in an unavailable form, and, therefore, may as well be wanting so far as present needs are concerned.

A circular by Professor Middleton, of the Durham College of Science, Agricultural Department, gives a particularly striking illustration of the needs of certain soils in relation to the elements of fertility. On each of six farms no manure was used on one plot, a complete manure containing nitrogen, phosphoric acid and potash on another,

Nothing could more clearly show the need of making similar trials on every farm, to ascertain what manurial constituent it chiefly lacks.

The above is on a line that has been followed by Mr. C. A. Zavitz, Director of the Ontario Experimental Union, in connection with the tests of varieties, methods of cultivation and fertilizers on the farms of the Union members throughout the country. Each year Mr. Zavitz includes in fertilizers sent out nitrate of soda, superphosphate, muriate of potash, and a mixture of the three, with directions for applying them to the same crops on plots side by side. As a rule the mixed fertilizer gives best results in crop returns, but there is frequently a wide difference in the returns between the plots manured with separate fertilizers, thus indicating the needs of the soil for particular forms of plant food, and when once this information is secured, it can be used advantageously whenever commercial fertilizers are applied.

The Crop Conditions of the West.

the crop conditions throughout the wheat-growing sections of the West could not well be better. The seed went in in good time into soil that was fairly moist, and although the month of May was exceedingly dry, there was ample moisture in the soil to prevent any setback to the growing crop. In fact, in many localities, had the growth been more advanced when the June rains came the crops would have become far too rank. As it is, there is promise of a big crop of straw, and taking the whole country into consideration, never in the history of the West were the prospects brighter for a record-breaking crop of wheat. At this writing the weather is perfect, and with a continuance of bright, sunny, clear, windy weather, the straw will stiffen and the filling and ripening will not be too long delayed. Wheat is almost universally the best crop this year, oats being more uneven in germination and more patchy in stand. This crop suffered badly in many localities from the cutworm grub, and doubtless some of the failure is attributed to sowing heated or damaged seed. Speaking of seed oats, there was quite a furor over the low percentage of germination of some Western oats last spring, but farmers who sowed both Western (Alberta) and home-grown seed, tell us that the former, although much slower in germinating,

was by July 1st a much better stand. On this point we shall be glad to hear from those who have experience with the Alberta oats. The rains will help the oat crops greatly, and the yield may yet be large. Barley is mostly grown for feed and used as a cleaning crop, sown late on the dirtiest land, and should serve this year both objects well.

The much-talked-of spelt is, so far as we have seen, not doing very well. Perhaps this is too favorable a season for it.

The wet fall of 1900 encouraged the growth of weeds on the summer-fallows, and many of these, such as stinkweed, shepherd's-purse, peppergrass, fleabane, bluebur, etc., that are annuals, with the faculty of adapting themselves to stand the winter when conditions favor, have made vigorous growth on fallows that were not plowed or cultivated late in the fall or early this spring before sowing.

In the Dauphin and Swan River districts, as well as in Northern Alberta, there has been an excess of moisture, but these newer sections are wonderfully recuperative, and we expect the harvest results will show most satisfactorily.

Live stock, both in field and ranch, have had a very favorable season, and the dairy industry has been doubled over last year.

But there is many a slip 'twixt cup and lip, and the interesting question is, "What shall the harvest be?"



WM. GUILD, KENMAY.

Second-prize plowman, Provincial Champion Plowing Match, 1901.

dressings from which one or another of these three essentials was in turn withheld on three other plots, and 12 tons of farmyard manure on the sixth plot. The greatest crop of swedes with manure of any kind was 9½ tons per acre, and on one farm the yield was almost inconceivably small—one-thirtieth of a ton. On this farm the farmyard manure raises the production to 14½ tons per acre, and the complete artificial manure (1 cwt. of nitrate of soda, ½ cwt. of sulphate of ammonia, 7 cwt. of superphosphate, and 4 cwt. of kaint) to 16½ tons. This farm was chiefly in need of phosphoric acid, as proved by the fact that the plot dressed with nitrogenous manures and potash (in kaint), without superphosphate, produced only 1 cwt. of swedes per acre. When nitrogen was withheld from the mixture, the yield was 10½ tons, and where potash was omitted it was 12½ tons. It is clear in this case that the farmyard manure did not contain sufficient available phosphoric acid to satisfy the need of this particular land; but on two other farms it produced the maximum crop, and on a third it tied the complete artificial manure. Considering the artificial manures alone, the withholding of phosphates from the mixture caused the greatest decrease on two farms, the omission of nitrogen on two others, and that of potash on the third couple of farms.



J. CHISHOLM, PORTAGE LA PRAIRIE.

Third-prize plowman, Provincial Champion Plowing Match, 1901.

Temperature of Cows at Pan-American.

Our Buffalo correspondent reports in his letter the taking of the temperature (by the official veterinarians) of the cows in the Pan-American dairy test, and that some of the cows showed a temperature of 106 degrees and one as high as 100½ degrees. If these cows had a dose of tuberculin injected into them they would have been condemned as tuberculous as sure as fate.

The Highland Society's Show.

This is the close of one of the most eventful weeks in the Scottish agricultural year. The Highland Society's Show has just been held at Inverness, the Highland capital, and an unusually good show it has been in almost every department. The display of Shorthorn, Aberdeen-Angus and Highland cattle has been superb, and the Clydesdale horse section has been well filled with weighty, big horses. The presence of quite a number of Canadian and American visitors gave zest to the proceedings. The weather has been magnificent, and as the site of the show is one of the most picturesque in Scotland, all parties—exhibitors, promoters, and visitors—have been delighted. The Shorthorn section was a very large one, and was championed by the first-prize two-year-old bull, Choice Goods 76350, a thick, level-fleshed, well-colored roan. He was bred by Mr. James Durno, Jackstown, Rothie-Norman, Aberdeenshire, and got by Remus 73402, from one of the Geraldines, by First Choice 58950. This bull won with general good-will, and has been purchased at a long price by your countryman, Mr. W. D. Flatt, Hamilton, along with four grand heifers from Lord Lovat's herd, which were also in the prize list at this show, and one of them, Beaufort Pride 3rd, the first two-year-old heifer, was champion-female. This beautiful roan is 2½ years old, and was got by the stock bull, Royal Star 71502, out of the Proud Duke 59713 cow, Beaufort Pride. Few herds in Scotland have made a greater name for themselves than that of Lord Lovat. Under the skillful management of the late Mr. Lawson it was held in high repute, and it has lost nothing since coming under the control and management of his son and successor. Mr. Flatt has been doing a big thing in Shorthorns since he arrived in this country. He has bought a considerable number of high-class animals from the agents of His Majesty the King, who has two uncommonly fine herds, one at Windsor and the other at Sandringham. Mr. George Harrison, Gainford Hall, Darlington, than whom there is no better judge of Shorthorns and no pluckier exhibitor, was first in the aged class at Inverness, with the splendid bull, Inspector 72715, which this year has been champion at Dublin and first at many shows in England. He is a wonderfully good bull in front, but is deficient behind, having second thighs not unlike those usually seen in Aberdeen-Angus cattle. Following this bull in his class came a really good bull named Golden Star 76790, owned by Mr. John Wilson, Pirriessmill, Huntly, who has one of the best herds in the north. This bull was bred by Mr. Marr at Uppermill, and was got by the Bapton Manor bull, Golden Ray 67132, out of Missie 148th, a female of perhaps the best family at Uppermill. She was got by Dauntless 54155, one of the best breeding bulls of the Sittytton cult. Mr. Merson's success with Choice Goods, which was rather a dark horse, upset a number of forecasts based on the "form" of certain two-year-old bulls at the Royal and other shows. Following him came another north-country exhibit: a roan, named Margrave, from the herd of the late Mr. Goodbrand, Culnaba, Nigg Station. This bull is owned by Mr. Robert Macfarlane, Tomich, Invergordon, a young and enterprising farmer in Easter Ross. A noted Southern winner, Mr. Bell's Baron Abbotsford, a grand roan, spoiled by a defective, plain head, was put third. This bull has a great body, but, after all, a breeding bull must have a good head. A Duthie-bred bull followed. In the yearling class it was again demonstrated that Scotland can produce something better than the best produced in England. The winner was a very fine roan bull, named Royal Archer, bred and owned by Sir John Gilmour, Bart., and got by his splendid breeding bull, Brave Archer 70018, which was bred at Collynie. Brave Archer was a marvellously-fleshed bull, perhaps a little short and not perfect in his hind quarters, but there was a deal of character about him, and he bred first-class stock in Fife. He was sold to an American buyer at a long price, but judging by what is now seen in the show-yards, they have had the best of the deal. Mr. George Harrison was second with Silver Bell, the highest-priced bull calf at the Tillycairn sale last year. He was bred by Mr. Duthie, and was first at the Royal. Mr. Bell's Baron's Pride, own brother to his Baron Abbotsford, was third. Their dam was a Collynie cow.

As already indicated, the champion female amongst the Shorthorns was Lord Lovat's two-year-old, and her neighbor from the same herd stood second to her. The cows were only a fair class. It is not a bad sign of a breed when the younger females are better than the old. It proves two things, viz., that the best breeding cows are not being forced for showing and that the breed is improving. The best yearling heifer was shown by her breeder, Mr. Alex. Robertson, Haugh of Balle-

chin, Ballinbrig, a gentleman who owns a very superior Shorthorn herd in Perthshire. This heifer is named Lovely Tulip, and is a good roan, got by a very fine bull named Newton Stone 75120, bred by Mr. A. M. Gordon, the Chairman of Directors of the Highland Society this year, and owner of one of the best herds in Scotland. Many a champion has been bred at Newton. The great Mario, the first of the Northern Shorthorns which fairly broke down Southern prejudice, was one of these, and perhaps no single bull ever did as much as he in so short a time to vindicate the Sittytton cult from the charge of being merely underbred heifers. Mario was far from being faultless, but he was a great, fleshy fellow, although wanting in the style which so commends itself to those trained in the Bates school. One of the best herds in the North is that of Mr. J. Douglas Fletcher, of Rosehaugh. It was not strongly represented at the show, but took a share of the honors. Considerable success has attended an experiment made by Mr. Fletcher in crossing Bates cows with a Cruickshank bull. Good business, that, and the present is a good opportunity for buying Rosehaugh stock, the farm being overcrowded.

Aberdeen-Angus cattle have rarely been shown in such numbers as were forward at Inverness, and the judging rings were overcrowded. The judges occasionally came to a deadlock, and an umpire was needed. This did not seriously affect the final result, although in the case of the yearling bulls there was a strong disposition to criticise the final award adversely. The breed championship went to Mr. James Whyte, Hayston, Glamis, the bull, Jipsej Baron 13532, an animal with a history. He is over 5 years old, and as a calf in the spring of 1897 he topped the Perth sale, making 200 guineas to the Marquis of Huntly. He was never shown by His Lordship quite in bloom, but at his dispersion sale the bull came into the possession of Mr. James Whyte, and last year he stood second at the Highland and was champion at the Angus County Show on a miraculously wet day in August. This year he has been brought out in magnificent form, and Mr. Whyte has great credit by his victory. Jipsej Baron was bred by Mr. William Whyte, Spott, Kirriemuir, the father of his present owner, and belongs to quite a noted family in the black polled breed. There is great length and wealth of substance about him, and it takes an unusually good bull to get in front of him. Two noted breeding bulls followed Jipsej Baron in his class. These are Jim of Morlich 13531 and Delamere 13305. Both bulls are of the same age as the champion, and Jim of Morlich was bred by Mr. George Cran, Morlich, Towie, who always takes a high place with his stock at the spring bull sales. His stock have great bodies, but there is something not quite right about the formation of their heads. Two of these bulls were first and second in the yearling class at this show, and the defective head is noticeable in both cases. Still, Mr. Cran did a big thing by breeding three such winners at this show. Delamere is now at the head of the world-famed Ballindalloch herd. He was bred by Mr. Patrick Chalmers, of Aldbar, Brechin, and was purchased at the Perth bull sale, where he stood next to Jipsej Baron, at a high figure by a tenant-farmer, Mr. A. McLaren, Auchnaguie, Ballinbrig, Perthshire. His success in the show-yard was notable enough, but it pales before his success as a sire. He simply lifted Auchnaguie, from being a commonplace herd, into the very front rank, and at this show his sons were first and second in the two-year-old class, and third, fourth and commended in the bull stirk class, while his daughters were also making their influence felt. The female championship of this breed went to the Earl of Rosebery, K.G., Dalmeny, for his fine cow, Effie of Dalmeny 25983, which led her class, second to her being the Royal breed champion, Mr. Thomas Smith's Pride of Powrie 9th 26008. One of the finest animals of the breed shown was the first-prize two-year-old heifer, Bonnet 29275, owned by her breeder, the Earl of Strathmore, and got by one of the best bulls of the breed at this day, Fairy King 11662. This is a great, lengthy bull, with much depth, and his sort is rather hard to find.

The Galloway breed was not strongly represented in point of numbers, but the quality was first-class. The breed championship went to Mr. Andrew Montgomery, of Netherhall, Castle Douglas, for the yearling heifer, Graceful 3rd of Garliestown 16675, a sensational animal at the dispersion of the herd owned by the late Earl of Galloway, K. T. Mr. Montgomery is as keen a supporter of the Galloway as he is of the Clydesdale, and he maintains that as a breed the Galloway can hold its own against the world.

In the Highland capital a great show of Highland cattle was to be looked for, and those who went north with this expectation were not disappointed. The champion of the breed was the fine old bull, Laoch 1260, now owned by Mr. J. R. Campbell, Shenniss, Sutherlandshire, and never defeated since he was first seen in the Perth show-yard in 1896. He has won the supreme honors of the Highland show-yard three times, and once of the Royal, viz., at York in 1900.

Ayrshires were far from home at the northern capital. They were championed, as last year, by Mr. William Howie's magnificent cow, White Rose of Burnhouse 12052, a very fine specimen of the breed; but more remarkable still, and what gave this show a kind of unique interest, they were judged by Sergeant Adam Montgomerie, who has been through some of the toughest passages in the South African war with the Ayrshire Yeomanry, and has returned without a scratch. Sergeant Montgomerie is not unknown in Canada, and his many friends will be

pleased to hear that he returns unscathed from his dangerous experiences.

CLYDESDALES

have seldom been better represented at the Highland than on the present occasion. But there are strange whirligigs in the show game. At the Inverness show in 1883 all the first prizes for stallions went to Mr. David Riddell, Blackhall, Paisley; this year he has not a single entry. The male championship went on this occasion to Messrs. A. & W. Montgomery, Netherhall and Banks, Kirkcudbright, for a very fine yearling colt got by Baron's Pride 9122 and out of the mare, Rose 13328, by Prince of Galloway 8919. This colt was first at Kilmarnock and Ayr and champion both places. He is one of the best of his age seen for a long time, although very likely Canadian buyers will take exception to the excessive whiteness of his face. As an illustration of the immense influence of Baron's Pride on the Clydesdale breed at present, it may be mentioned that both the first-prize two-year-old and the first-prize three-year-old colts, as well as the first three-year-old, two-year-old and yearling fillies, were all got by him. In fact, he was, to put it briefly, sire of the champion male Clydesdale, the third, fifth and sixth aged horses, the first and second three-year-old horses, the first, third, fifth and sixth two-year-old horses, and the first, third, fourth and seventh yearling colts; also the second, fourth and fifth brood mares, the fifth yearling mare, the first, second and fifth three-year-old fillies, all the seven prizewinning two-year-old fillies, and the first, second, third and fifth yearling fillies. The most interesting class was that of aged stallions, where a tie took place between Mr. Kilpatrick's Royal Carrick 10270 and the Messrs. Montgomery's Moncreiffe Marquis 9953, a pair of powerful big horses, which the breed has plenty need of. It was decided in favor of Moncreiffe Marquis, which thus came to his kingdom at last, Royal Carrick being second. The champion female Clydesdale for the third time was Mr. Herbert Webster's noted mare, Lady Lothian 13319. This award carries with it the first of the Third Cawdor Cup, which Mr. Webster has now won four times.

Much more might be written about this great show, but anything further might not interest Canadian readers. Mr. Hodson and his friends were at the show, and return home on 25th July by the Parisian. "SCOTLAND YET."

The Wastefulness of the Summer-fallow.

Though at one time very common in various parts of England, the practice of fallowing land—that is, keeping it clear of a crop for a year, and repeatedly working it throughout the season—has never been carried on to any extent on this side of the channel. The plan has been more than once tried in this country, but never, so far as we can ascertain, with any very encouraging results. Even in England fallowing has of late years fallen into disuse, and this is not to be wondered at if the researches of scientists into the value of the operation are to be regarded as of much account. These researches go to show that the greatest losses on land in the matter of nitrogen occur during the summer months, the heat at that season rendering the nitrogen highly soluble, and thus making it very liable to get washed out by any rains which fall. In land fallowed without a crop and repeatedly worked, as the fallowed land usually is, the loss of nitrogen would necessarily be very considerable. Some of the leading transatlantic scientists now strongly disapprove of the practice of summer-fallowing, and contend that such treatment is more exhausting to the land than judicious cropping.—*Farmers' Gazette.*

The Flying Boring Bug.

To the Editor FARMER'S ADVOCATE:

SIR,—In reply to your enquiry regarding the Flying Boring Bug, I would say: Fortunately, this terrible demon of the air is but a figment of the imagination of some reporter temporarily dazed or demented by the severe heat of the first week in July. On making enquiries at the Entomological Department of Cornell University as to the existence of such an insect, I was informed that no such creature, such as was described in some of the papers of Eastern New York, has been seen by any reliable person. It may be that the *Seventeen-Year Locust* is referred to, but this insect is not timed to appear this year in that portion of the State where it is said to be operating. I am of the opinion that the *Flying Boring Bug* must be classed with that mythical bug which punctured bicycle tubes.

W. LOCHHEAD, Professor.

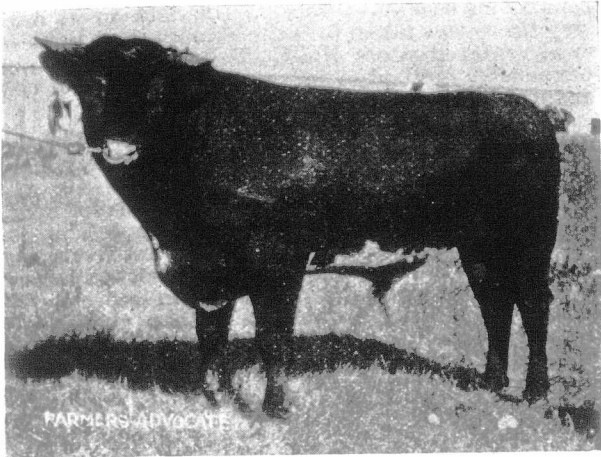
Entomological Dept., O. A. C., Guelph.

Referring to the scarcity of competent harvest laborers and the superabundance of idle men in most of the cities, an American contemporary remarks: If free transportation to the farms were offered the cities' idle men, with the distinct understanding that they would have to toil when they got there, a minority would accept the offer gladly. The majority would refuse to go, having a much greater liking for the idle than for the strenuous life. Hard work under a summer sun, with no beer in sight, has no attractions for the urban hobo. He does not care to cultivate close relations with corn and wheat until they have been changed into whisky and bread. When thus changed he would rather beg for them than work for them.

Calgary's Summer Fair.

The Inter-Western Pacific Exhibition of 1901, at Calgary, marks another milestone in the march of progress in the history of the Association. The advertising, the work of the directors, the natural advantages of location, and the recent horse-purchasing visit of Lt.-Col. Dent, all aided in making the 1901 fair a great success. The weather of the previous week and the strike of railway linemen, unfortunately, prevented the Lacombe coterie of breeders from appearing on the scene, which, of course, lessened the numbers and competition in some of the classes.

While the stock exhibit of the fair was a success, it could be made still greater if the revision of the prize list was looked more carefully after. It seems strange that a show with the standing of the Inter-



TROUT CREEK HERO =28132=.
Sweepstakes Shorthorn bull, Calgary Fair, 1901.
PROPERTY OF JOHN RAMSEY, PRIDDIS, ALTA.

Western should omit prizes for foals from the prize list. The general-purpose class might better be renamed and termed an agricultural class, and the old classification according to weights of the heavy draft team re-established. There are other things in the list needing revision, but we refrain. As was quite natural, a large amount of interest centered in class II.—army horses, and here occurred bangles which are discouraging, to say the least, to the person who believes in the educational features of shows. Stallions calculated to get army remounts were called for, and the most flagrant piece of injustice perpetrated on an exhibitor it has ever been our misfortune to see. The favorite horse, in the judge's (Col. Dent) opinion, for the purpose was suspected of being wrong in his wind, which the owner stated was due to a cold. Then followed an attempt at vetting the horse in the showing before two or three hundred people—a proceeding which cannot be too severely criticised. The awards were made, and owing to the failure to call for pedigrees in the stallion class, an unpedigreed horse, by a Thoroughbred, out of a native mare, got second place. What the type of the get of this stallion will be goodness only knows! The breeding of remounts is not the most desirable work for our Western horsemen, as, judging from the specimens we have seen at the sales and at this fair, they are, at the best, misfits, resulting from attempts to breed good carriage or other kinds of horses. The tracing of the breeding of most of them is as enlivening and educating as a Chinese puzzle; in fact, an inquiry into the breeding of some of the sires of these army remounts netted the information that they were just "horse." On the other hand, we find that of the winners in the artillery class one was the result of the Thoroughbred and Cleveland cross, another the get of a Hackney. In the cavalry class two of the winners were by Thoroughbreds, one being from a coach mare. In the mounted infantry two were got by Hackney stallions, out of mares with Thoroughbred blood, the other being by a Standard-bred horse, out of a Hackney-bred mare. The money offered in the army classes was very good; in fact, a first prize would nearly net the winner the value of his animal. Some of this money could be used to better advantage in other classes. As it was, while a stallion calculated to get army remounts could only win \$25, one of his get could win \$50. In the heavy drafts the three-year-old stallions had to compete against all ages—three years and over—with what result any judge can imagine. Fortunately, Judge Jickling found an avenue of escape and availed himself of it.

HEAVY DRAFT HORSES.

In the draft classes, especially the stallions, the Western men put up a good enough show; far, in fact, better than we have sometimes seen at Winnipeg. In the stallions the competition was keen, such noted old sires as Balgroggan Hero, Culyean and Brooklin Boy being much in evidence and surprising bloom, considering their years. As illustrating the benefit one man can accomplish, we may mention that five of the Clydesdale stallions shown were imported by Jno. A. Turner, Millarville. In view of such it is hard to see the necessity for Government interference in the way of bringing in live stock. The aged stallion competition resulted in R. G. Robinson's grand old sire, Balgroggan Hero, brought out very fat, being placed first, his underpinning being in good shape;

Brooklin Boy, owned by Wm. Moodie, being second. This horse has a reputation as a sire which is not dimmed at all by being placed second in such a class. Culyean, a slashing big active horse of Robinson's, was placed third. The special for 3-year-olds brought out a string of good ones, Activity, Turner's entry, a thick, active brown horse with good limbs and feet, coming first. The others were a lot of good ones. A horse that might have been placed higher than he was, and that without injustice to anybody, is Prince Grandeur. In 2-year-old stallions, a flashy, black colt with lots of quality and well-set hind limbs brought the red ticket to J. A. Turner; W. H. Belson, Calgary, getting the blue with a roan-colored, fair-topped colt; Sullivan getting into 3rd position. In year-olds, Shattuck and Turner had entries, being placed in the order named. The brood mare class, while not big in numbers, was right in quality, Turner's Princess Patricia being an outstanding winner. As her record is well known, we refrain from saying much about her, only that the eastern men will need to hustle to beat her at Winnipeg. Bryce Wright showed the second and third prize winners, mother and daughter, a pair of very useful mares of the right type, the one by Old Balgroggan Hero. The heavy draft teams were three in number, two of which were very raw. If the Moodie team is a fair specimen of Alberta horse-breeding, that Province has a gold mine in draft-horse breeding, as, while only partially broken, it was easy to see their fitness for heavy draft work. An offer of \$200 was made for one of the team right on the ground. Bryce Wright had some very good entries in these classes, and is evidently conversant with what is needed in the line of horse-breeding. The draft sweepstakes competitions were very good, Turner winning with Activity in the stallions, and with the get of Balgroggan Hero in the progeny class, and again with Princess Patricia for best mare. The brood-mare progeny prize was won by Bryce Wright with that grand old brood mare, Crystal, and her daughters, Solitaire and Sapphire. In the general-purpose classes the entries were fairly numerous, and represented, as usual, different types. Carriage horses were not numerous, the aged stallions being a mediocre lot, the winner in low condition. The Bow River Ranch entry, Palladino, was easily the best shown in this class; being a 3-year-old, he was alone, but had there been a sweepstakes he would have won easily. In the team, O. Critchley won with a pair of upstanding bays, T. W. Inge getting second with a pair of rangy blacks. On singles, Wm. Paislow got the red. Thoroughbreds were represented by a few entries, the aged Eagle Plume of Capt. Inglis being an easy first; Rumpus, that active black of R. S. Fulton's, coming second. Parslow showed a good entire colt in this class. Hackneys brought out four in the aged class, in which Robin Adair had no trouble in beating his sons. This old horse is a grand good one, with size, quality and breeding ability. R. S. Robinson had a good 2-year-old forward to represent his interest in heavy-harness getters. Roadsters were represented by the different types so well-known by judges of this class of horses. Bob Kirk was placed at the head of his class, Sutherland's entry being a strong competitor. In the other sections several good colts of Bob Kirk's were shown and won. A big, upstanding year-old

son and McNaughton's entries taking 1st, 2nd and 3rd. Wright and Linton had two of the prizes for cow and calf. In Herefords, McKeague and Wright showed a well-put-up bull, straight in his lines and with a well-covered loin, which got first place; Sparrow and Shouldice, Gleichen, taking the blue ticket. The females were not of extraordinary merit. Laycock showed a Holstein bull. The Jersey and Guernsey classes contained a few entries made by J. A. Munro, Calgary, who won the herd prize. In grades, the exhibits were of good quality, Wright and Linton, Sparrow and Shouldice and Riley & Son winning out in beef grades. Dairy grades contained some good cows, shown by Laycock, Caxton and others.

Sheep and pigs were not numerous, Berkshires being shown by H. McInnis and G. Landymon, Midnapore, the latter the winner of the boar sweepstakes with a good specimen of the breed. In Yorkshires there were several entries, McDonald Bros. winning first with a pig of Brethour's breeding. Mrs. Shaw had forward a boar bred by Bray, a worthy second prize, the Wolley Dod entry being a little short. J. A. Turner had several Shropshires in the sheep pens, of good mutton form, and while not as heavily woolled on the head as the typical specimen, it was elicited from the owner that the ranchers preferred less wool on face, thus preventing the gathering of ice and snow around the eyes, which would blind the sheep in the flock; a strong-backed ram lamb and a ewe with good mutton form were noticed. Jos. Hunter had forward several Leicesters.

The poultry exhibit contained representative Wyandottes, White and Barred Rocks, C. Indian Games.

The grain exhibit was very good, Shields, of Okotoks, and McPherson having some heavy barley in the classes. Riley & Sons won the collection prizes.

In dairy products there was a good exhibit, entries from the Government creameries being forward. In dairy butter, McRogers, Calgary; H. Bur, Okotoks; T. Laycock, Calgary, were winners. In the creamery competition, M. Masher, Wetaskiwin, and Jos. Dangerfield, Olds, were winners.

The bread exhibit and other domestic manufactures was good, if not as numerous as in some fairs. The \$15 prize for bread was won by Mrs. Geo. Brydon, F. Kidd and R. J. Shields also being placed. The girls' competition, under 15, brought a first prize to Miss McKeague, Gladys; second to Lucy Brydon, and a third to E. T. McRae.

The agricultural hall also contained a fine exhibit from the McDonald Manual Training School and the Hudson's Bay Co. The provision of an unloading chute for pigs and sheep, and a judging ring for boars, where they could not fight, but could be moved around, would much facilitate matters, both for exhibitors and the judges. The ring in which the horses are shown would be better enlarged—lengthened, in fact, and made oblong—and if a row or two of bleachers were erected, the onlookers would enjoy the live-stock judging greatly. Also the employment of call boys, so as to get the stock out promptly. The arrangement in the list should be followed throughout. Many of the exhibitors can afford to more thoroughly train their stock, and bring them in minus splints



ALBERTA-BRED CLYDESDALES—CRYSTAL [2033] AND PROGENY.

PROPERTY OF BRYCE WRIGHT, AI RANCH, DE WINTON, ALTA.

CATTLE.

In a ranching country one expects to find plenty of cattle. The show of bovines, for various reasons, while fair, was not of outstanding merit. Many were so wild that the judge could not get his hands on them, without which judgment of breeding stock is somewhat incomplete. The reds, whites and roans were in the majority, the herds of Jno. Ramsay, Samson, and McNaughton, Wright and Linton, J. McPherson and Jno. Shaw competing for the honors. Jno. Ramsay won out in aged bulls with the good red-roan Trout Creek Hero, a smooth-topped, good-ended bull, which also won the sweepstakes. In aged cows, Samson and McNaughton had a blocky, red, good-backed cow which took first place, a red-roan of Wright and Linton's taking the blue. The yearling heifers were a good class, nearly all red, McPherson's and Sam-

and other things of that ilk, to which most judges are not partial. With these minor details looked after, Calgary Fair will before very long be included in the show itinerary of the crack breeders, which it well deserves to be, and will be found ranking well up with the big Eastern fairs.

It requires a large amount of common sense to make a farmer, and everybody knows this except those who lack it. This class can't learn any more than they now know. They do not care to read and study. Studying is something that is foreign to their very nature. They have no use for a farm paper, and some of them have no use for a farm. At any rate, they do not know the proper use of a farm.—Homestead.

DAIRY.

Ontario Cheese.

At a meeting held at Brantford July 19, of the committee appointed to provide a suitable exhibit of Ontario butter and cheese at the Pan-American, in competition with all America, the Secretary submitted a report which he had received from the Superintendent of the dairy division of the Pan-American of the judging of the cheese. The showing is a remarkable one. Not only does Ontario sweep the board with its export cheese, being the only classes in which it exhibited, but the entries are all of such high excellence of quality that each and every one of the fifty-seven exhibits has been awarded a premium. The committee has decided to make an exhibit of August cheese at the September competition.

The following were the exhibitors: Export white cheese—G. E. Goodhand, Milverton, 96.5 per cent.; W. F. Gerow, Napanee, 98.25; Alexander McGregor, Russell, 96.50; Robert Johnston, Bright, 96.50; Dairy Department, O. A. C., Guelph, 98; J. S. Isard, Paisley, 97.25; A. E. Millson, Lakelet, 96.50; Thos. Grieve, Wyandotte, 96; Fred. Grothier, Escott, 97.25; John E. Stanton, Cotswood, 97; Jos. Cramer, Glenvale, 97; J. W. Clarridge, Glenhuron, 98; J. A. McIntyre, Palmerston, 96.5; Mary Morrison, Newry, 97; Frank A. White, Mitchellville, 96; E. N. Hart, Milverton, 98.25; N. S. McLaughlin, Henfryn, 97; R. R. Cranston, Lawrence Station, 96.50; Robert Smith, Monkton, 98.50; W. H. Vont, Jasper, 96.75; W. R. Kaiser, Lansdowne, 97; J. M. Smith, Long Lake, 96; Thos. McDonald, Morrisburg, 97.25; J. H. Davidson, Hammond, 97; James R. Burgess, Bluevale, 94; W. P. Stacey, Fullarton, 97; W. A. Bothwell, Hickox, 94.5; James S. Morrison, Woodstock, 96.5. Export colored cheese—Frank Travis, Courtland, 98; E. G. Marshall, Guysboro', 94; I. M. Smith, Long Lake, 97.25; J. S. Johnson, Banner, 98.5; E. E. Kennedy, Welland, 97.5; Andrew Clancy, Rockwood, 98.75; J. D. Bird, Bridgen, 97.75; S. P. Brown, Birnam, 98; B. Dinwoodie, Lyons, 98.75; F. E. Kline, Lakeview, 98.75; John Francis, Courtland, 98.50; Geo. A. Boyes, Putnam, 97.50; Connolly Bros., Thamesford, 97.75; Warren Feely, Cannamore, 98; D. M. Wilson, Rockspring, 97.75; W. R. Kaiser, Lansdowne, 96; Stewart R. Payne, Warsaw, 96; M. Morrison, Harriston, 96.5; J. S. Isard, Paisley, 95.5; T. McConnell, Springhill, 96.25; James Craighead, Havelock, 96.25; Fred. Grothier, Escott, 98.5; Frank A. White, Mitchellville, 97.25; John Connolly, Malcolm, Bruce, 98.25; Jas. R. Burgess, Bluevale, 97.25; J. W. Clarridge, Glenhuron, 97.5. Flat white—Dairy Department, O. A. C., Guelph, 98.75.

Latest from the Pan-American Dairy.

After my last letter we had a few pleasant days with cool nights, and the cows gained rapidly in their milk flow, the Holsteins and Ayrshires especially, and there was a good prospect of them regaining some of their lost ground during the previous hot spell. We were doomed to disappointment, however, for the cool spell was of short duration and was followed by hotter weather on the 16th, 17th and 18th than we had previously, and the cows suffered accordingly. The milk diminished more rapidly than at any previous time, but the weekly composite test showed little or no variation in the fat content, while the other solids dropped slightly.

It was a valuable lesson in cowology to note the effect of the heat on the cows. They were on their feet the greater part of the day, and there was but little chewing of the cud. The temperature of the Ayrshires was taken by the attending vets., and two of them showed a temperature of 106°, while the third stood at 106½°. One would naturally expect abnormal thirst during such heat, but, on the contrary, much less water was consumed than when the weather was cool.

Milking three times per day is still continued, but there will likely be a change to two milkings per day at the beginning of August. A Babcock test is being made of each milking from one of the breeds this week, and another breed will be selected for next week, which will make an interesting table for those to peruse who have but little idea of the variation of the fat content in milk.

The clover which is now fed is past its best, as it has become woody in the fiber and the cows do not relish it, but it gives color to the butter, and the butter has a more pronounced flavor than it had previous to the clover feeding.

The butter is all churned in the "Daisy" style of churns, and the churning temperature varies with the different breeds.

The work here shows that the cream from the Jerseys, Polled Jerseys and the French-Canadians can be churned 4 to 6° higher than that from the other breeds and still have as firm a butter. There are three prizes to be awarded at the close of the test, viz.: One for estimated butter by the Babcock test, one for the actual butter churned, and one for the total solids in the milk, valued at 9c. per pound. The results so far published have been all based on the Babcock test, which is looked upon as more reliable and satisfactory than the churn test in this case, as only one-seventh of the milk is separated and churned and the week's yield is estimated from the amount of butter churned from one day's milk. An accident may happen to a portion of the milk on separating day, a cow may be sick or in heat, or it might be an excessively hot day, and any such contingency would give inaccurate results when computing the whole week from that day's butter.

The total solids are based on the Babcock test for fat, which is taken from the weekly composite sample, and the lactometer readings for the solids not fat, which readings are taken every day.

In the race for the latter prize, the Holsteins have a good lead, with the Ayrshires 2nd, Shorthorns 3rd, Brown Swiss 4th, Guernseys 5th, Red Polls 6th, Jerseys 7th, and French-Canadians 8th.

J. STONEHOUSE.

REPORT OF THE MODEL DAIRY AT THE PAN-AMERICAN EXPOSITION, GIVING TOTALS OF EACH HERD COMPLETE FROM THE COMMENCEMENT OF THE TEST, MAY 1ST, UP TO AND INCLUDING THE WEEK ENDING JULY 18TH.

BREED.	Milk.	Amt. of Butter	Value at 25c.	Total cost of	Profit.
	lbs.	lbs.	per lb.	Feed.	
Shorthorns.....	15785.9	616.65	\$154.16	\$69.78	\$84.36
Holsteins.....	18505.6	670.19	167.50	67.34	100.16
Ayrshires.....	1654.2	87.32	171.91	63.63	108.28
Jerseys.....	12967.7	602.63	165.88	61.37	104.51
Guernseys.....	13716.9	638.39	174.80	62.86	111.94
Brown Swiss.....	14380.1	648.80	162.18	64.22	97.96
Red Polls.....	14855.5	516.99	129.17	49.57	79.60
Polled Jerseys.....	11240.2	429.60	107.52	58.31	49.21
Dutch Belted.....	1220.6	57.33	134.42	55.25	79.17

PAN-AMERICAN DAIRY TEST FOR THE WEEK ENDING JULY 16, 1901.

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Shorthorns.....	226.0	10.10	\$ 2.53	\$1.25	\$1.28
Princess of Thule.....	230.7	8.68	2.17	1.24	.93
Daisy D.....	206.7	11.23	2.82	1.35	1.47
Miss Molly 24558.....	225.2	10.51	2.63	1.25	1.38
Queen Bess 21786.....	260.5	10.57	2.64	1.25	1.39
Rose 3rd 113205.....	260.5	10.57	2.64	1.25	1.39
Total.....	1219.1	51.15	12.79	6.24	6.55

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Holsteins.....	308.2	11.24	2.81	1.24	1.57
Meg.....	297.1	11.18	2.80	1.24	1.56
Tidy.....	301.0	11.33	2.83	1.18	1.65
Inka Mercedes.....	297.2	11.18	2.80	1.18	1.62
Hulda.....	308.2	12.32	3.08	1.24	1.84
Beauty.....	308.2	12.32	3.08	1.24	1.84
Total.....	1511.7	57.25	14.32	6.08	8.24

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Ayrshires.....	247.4	10.47	2.62	.97	1.65
Kirsty Wallace.....	268.5	10.58	2.65	.87	1.78
Lady Flora.....	272.8	11.55	2.89	.95	1.94
Betsy 1st.....	246.1	11.23	2.81	.94	1.87
Alice 2nd.....	248.1	11.90	2.75	.95	1.80
Pearl of Woodside.....	246.1	11.90	2.75	.95	1.80
Total.....	1273.6	54.83	13.72	4.68	9.04

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Jerseys.....	217.9	11.79	2.95	1.11	1.84
Gipsy.....	194.9	12.84	3.21	1.05	2.16
Primrose.....	224.9	12.17	3.04	1.03	2.01
Queen May.....	221.9	10.44	2.61	1.04	1.57
Rexina.....	232.4	10.93	2.73	1.12	1.61
Mossy.....	232.4	10.93	2.73	1.12	1.61
Total.....	1092.0	58.17	14.54	5.35	9.19

REPORT OF THE MODEL DAIRY AT THE PAN-AMERICAN EXPOSITION, GIVING TOTALS OF EACH HERD COMPLETE FROM THE COMMENCEMENT OF THE TEST, MAY 1ST, UP TO AND INCLUDING THE WEEK ENDING JULY 23RD, '01.

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Guernseys.....	14745.3	753.31	\$188.40	\$67.74	\$120.67
Ayrshires.....	17631.6	736.48	184.21	68.58	115.63
Jerseys.....	14093.7	717.06	179.26	66.45	112.81
Holsteins.....	19794.7	722.04	180.55	72.90	107.65
Red Polls.....	15418.3	696.52	174.12	68.51	105.61
Brown Swiss.....	16598.5	681.63	170.39	74.55	95.84
Shorthorns.....	16839.3	663.65	165.92	75.57	90.35
Polled Jerseys.....	10662.7	560.76	140.12	53.09	87.03
French Canadian.....	13255.7	581.70	145.51	59.04	86.37
Dutch Belted.....	12214.9	469.07	107.40	62.93	44.47

Cream Ripening in Hot Weather.

Churning and the quality of the butter are influenced to a great extent by the ripeness of the cream. In very warm weather in summer a difficulty is often experienced in preventing cream from ripening too rapidly. Where only a small quantity of milk is being dealt with, and where churning takes place only twice a week, it may often be found advisable to hold over the cream a few days before being churned, and when cream is being thus kept over, it is often very difficult in very warm weather to keep it from becoming overripe ere the quantity required for a churning has been gathered. In cases of this kind, a check may be given to the ripening of the cream by the addition of a little salt. Immersing the cream in cold water, and thus lowering its temperature, is, of course, the most natural method to pursue in cases of this kind, but it very often happens that it is not convenient to employ cold water for this purpose, and in such cases the addition of a pinch of salt to the cream may be employed with advantage.

Notes on Sub-earth Duct, and Heated Cheese.

The great weakness of the sub-earth duct as a means of cooling curing rooms is the difficulty of getting the cool air from the duct into the curing room when the air is calm outside.

This season, we have adopted two means of improving the draft into the room, both of which are satisfactory. Our curing room is divided into three compartments, each of which is connected with the duct. Two of the rooms have the outlet for warm air in one ventilator, which is connected with the rooms in the attic. On the ventilator from these two rooms we placed

A REVERSE COWL

—i.e., the mouth of the cowl has the vane so attached that instead of facing towards the wind, it faces from the wind. With this cowl on the ventilator from rooms two and three, all the cold air at ordinary times was taken into these rooms and little or no air entered room No. 1. This is a simple and inexpensive method of increasing the draft of cool air into the curing room.

PIPE CONNECTIONS WITH SMOKESTACK.

To bring the cool air into No. 1 room, we have recently connected a 14-inch galvanized iron pipe with the smokestack from the boiler. This pipe opens into the curing room near the ceiling at the side farthest from where the duct enters the room, and enters the smoke pipe going to the brick chimney. As our smoke pipe and curing room are close together, we did not require more than about eight feet of pipe with two elbows to make the connection. When the connection was made, the draft at once increased from the duct; and, at the time of writing, we have a constant stream of cool air, where formerly there was little when the air was stationary outside. Where it is convenient to connect a pipe from the curing room with the smokestack or chimney, there is no doubt but that it is an effectual way to overcome the chief weakness of the sub-earth duct.

I may add that we tried a patent ventilator last year to increase the draft, but it was a failure; so we removed it this spring.

PROTECT THE DUCT FROM FROST.

While it may seem somewhat out of place to be writing about frost in July, let me say that I have recently examined the ends of the tile in our duct, made of six rows of ordinary drain tile, six inches in diameter, placed six feet in the ground, and I find at the intake end that several of the tiles are split, evidently with the action of the frost. This fall we purpose filling the intake curb with pea straw or some other frost protection to prevent the cold air entering the tile during the winter. We think this will be a saving of the tile, and also add to the usefulness of the duct.

PROTECT THE CHEESE FROM HEAT.

The recent drop of nearly one cent per pound in the price of cheese has been attributed to the heat affecting the quality. What folly it seems for manufacturers of cheese to waste valuable products in this way. Let us see how this figures out in two counties of Ontario—one east and one west.

The county of Leeds has about 85 cheese factories in operation, which made an average of at least six cheese per day for the last two weeks. A loss of one cent per pound means a loss of about \$4.20 per factory. The 85 factories would lose \$357 per day, and in two weeks the loss in this one county would amount to over \$4,000.

Oxford county has about 44 factories, averaging ten cheese per day. This means a loss of \$7 per day for each factory—\$308 for the 44, and about \$3,700 for the county in two weeks. This is nearly \$8,000 for the two counties in two weeks. Does it pay to allow cheese to become heated?

H. H. DEAN.

Ontario Agricultural College.

When Does Colostrum Become Normal Milk?

A question continually asked by people owning cows is cited below:

How long should the milk produced by freshly-calved cows be kept by itself before being added to that of the other cows in the herd? As a rule, such milk is regarded as fit for consumption on the third day after the cow has calved, and in nine cases out of ten this rule will be found to work satisfactorily, though in exceptional cases the milk has been found to retain considerable quantities of the albumen which constitutes the colostrum until four or five days have elapsed after calving. Cases of the latter kind are, however, exceptional. After the sixth milking, the milk usually becomes sufficiently normal in its composition as to warrant its addition to the produce of the other cows kept in the herd.

The cows in the Pan-American dairy making the best record in each breed for the week ending July 23rd were the following: Guernsey.—Mary Marshall, 260.7 lbs. milk, testing 5.2 butter-fat, 12.82 lbs. estimated butter; cost of food, \$1.08; profit, \$2.13. Jerseys.—Queen May of Greenwood, 213.1 lbs. milk, test 4.6; butter, 11.55 lbs.; cost, \$1.00; profit, \$1.88. Primrose Park's Prude, 185 lbs. milk, test 5.4; butter, 11.62 lbs.; cost, \$1.04; profit, \$1.87. Holstein.—Meg, 280 lbs. milk, test 3.4; butter, 11.20 lbs.; cost, \$1.11; profit, \$1.09. Ayrshire.—Betsy, 236.2 lbs. milk, test 3.8; butter, 10.56 lbs.; cost, 99c; profit, \$1.65. Shorthorn.—Miss Molly, 240.5 lbs. milk, test 3.7; butter, 10.75 lbs.; cost, \$1.21; profit, \$1.48.

The Dominion Creameries.

At various points throughout the Northwest Territories the Dominion Government have creameries working under the supervision of experts. A recent visit along the Calgary and Edmonton line found plants working at Calgary, Innisfail, Red Deer, Leduc, and other points. The article turned out has been good, and, as a consequence, the contributing farmers have netted good prices for their butter. The placing of the manufactured product on the market has engaged the attention of Prof. Robertson, and, as a consequence, an up-to-date cold-storage plant has been installed, in charge of Supt. C.A. Marker. The ammonia process is used to keep the temperature of the stor-



CALGARY COLD STORAGE.

age rooms below the freezing mark. At the time of our visit, the storage thermometers registered 24 degrees Fahrenheit, 8 degrees below freezing. Butter is shipped to this plant from all the other creameries, from Churchbridge on the east to Innisfail and others on the C. & E. line in the west. It is the intention of the Department to go into the egg business. The hen fruit will be collected in boxes attached to the cream wagons. By this means it is hoped to be able to place a reliable article on the B. C. markets. The farmers contributing cream have netted 17 to 18 cents a pound for their butter, 10 cents of which is paid monthly, the balance at the end of the season.

Skim Milk Calves in the Feed Lot.

Feeders find that the average skim-milk calf does not make profitable gains in the feed lot and will not buy him. Farmers find that the difference in price between an ordinary skim-milk calf and one that has run with the cow is frequently greater than the profits made from milking, and they drop dairy work.

The Kansas Experiment Station during the past winter fattened 130 head of calves for baby beef. These were divided into nine lots—one lot of ten had been raised by hand with skim milk, and another lot of ten had run with their dams in small pastures until weaning. Both lots were put in fattening yards at weaning and were fed for seven months on alfalfa hay and corn. The results are as follows:

	Average gain per head. Pounds.	Feed for 100 pounds gain.	
		Corn.	Alfalfa.
Calves raised with dam	435	475	472
Skim-milk calves	440	439	436

Corn cost 40 cents a bushel and alfalfa hay \$8 a ton, making the cost of each 100 pounds gain \$5.28 for calves raised with their dams and \$4.88 for the skim-milk calves. The calves when fattened were shipped to Kansas City, the steers in each lot bringing \$5.40 per hundred and the heifers \$5.15. The packers paid the same for the fattened skim-milk calves that they did for the others. In this trial, the skim-milk calves made the greater gain, gains at the least cost, and made the most profit.

We attribute the good showing made by the skim-milk calves to the fact that at weaning time they were already on grain feed, they did not worry at loss of their dams as did the other calves, and they were perfectly tame.

The skim-milk calves were fed until weaning on sterilized skim milk with a grain ration composed of equal parts of corn and Kafir-corn, with all the alfalfa hay they would eat. They were fed in this way twenty-two weeks and made an average daily gain of one and a half pounds per calf. The feed to raise these calves to weaning cost \$5.27 per head. As the results show, they were in good condition for feeding when weaned and the experiment shows strongly the good feeding qualities of the skim-milk calf and the profits that can be made from it when the calf is properly handled from birth to weaning and then pushed for baby beef.

The College herd of scrub cows, bought without regard to their value for the dairy, produced in a year, at creamery prices, milk worth \$37.75 per cow. The skim-milk calves which were fattened in this experiment were of mixed breeding and were selected without regard to their value

for the production of baby beef. They brought an average of \$40 each when marketed at about a year old. This shows a gross income in a year from a scrub cow and a scrub calf of \$77.75, when both cow and calf are pushed, the cow's milk sold, and the calf raised on skim milk.

The best cow in the scrub herd produced milk in a year worth, at creamery prices, \$60.88. The best calf in the skim-milk lot brought \$47. This shows that a good scrub cow with a good calf could be made to bring over \$100 gross income in a year. With large grade Shorthorn or Hereford cows of the dairy type crossed with a short-legged, thick-meated, blocky bull, the returns from both cow and calf would undoubtedly be much greater, making the combination of dairying and baby beef very profitable.

H. M. COTTRELL.

Exp. Station, Manhattan, Kan., July 16, '01.

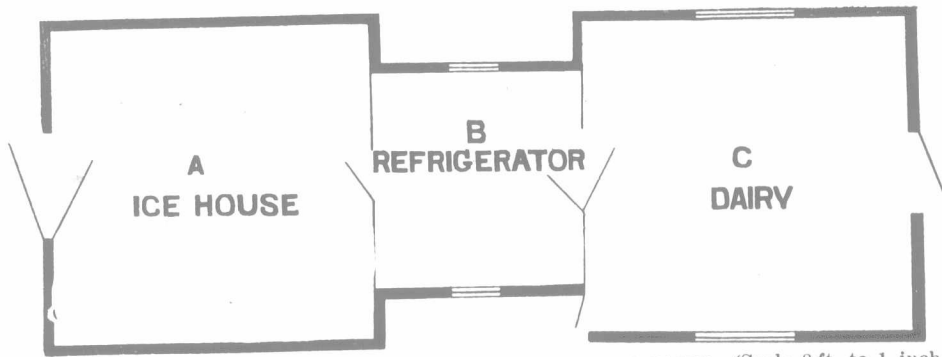
Ice House and Dairy Combined.

I would like to have your opinion of the plan of building an ice house and a dairy together; that is, divide the building and use one end for a dairy and the other for storing ice. Would it make a satisfactory dairy? What size would you advise for a dairy of ten cows?

W. B. FOLLERTON.

Cumberland Co., N. S.

In reply to your reader's question, would say that I consider the plan of building an ice house, refrigerator and dairy together quite feasible. One should have more definite data than given in the question before giving a definite plan. One should know whether separator is used or not, whether butter is to be held or shipped out weekly, etc. On general grounds, however, I would recommend the Hanrahan system, as outlined in a pamphlet sent out by the Ontario Government, with dairy of proper size added to the refrigerator compartment. I enclose a sketch of ground plan:



GROUND-FLOOR PLAN OF COMBINED COLD-STORAGE AND FARM DAIRY. (Scale 8 ft. to 1 inch.) Suitable for 25 to 50 cows.

A—12 x 12 ft. and 18 ft. high. To be built according to plans and B—8 x 8 ft. and 10 ft. high. (Specifications for cold-storage buildings, as published by the Ontario Dept. of Agriculture, except that the inside of refrigerator shall be lined with spruce and not with pine.) C—12 x 12 ft. and 12 to 18 ft. high. If built of wood, to be properly insulated with paper, matched lumber and air-spaces. If made 18 ft. high, the upper part may be used as a store room. Ceiling of dairy should be 12 ft. high in any case.

H. H. DEAN, Professor.

Dairy Dept., O. A. C., Guelph.

Advantages of Thorough Stripping.

It may not be generally known that the first season's milking of a heifer is as important in the making of her future as is the method followed in the breaking-in of a colt. Wrong methods or careless work invariably result in financial loss in either case.

Many promising dairy cows are spoiled as milkers owing to the treatment which they receive after producing their first calves. As is well known, the time which a cow goes dry before dropping her calf is largely a matter of habit, and though the natural tendency of most cows is to dry off after being five or six months in milk, it is well known that the length of the period of lactation may be very considerably increased by careful treatment of the cow, and by so handling them as to encourage the prolonged production of milk. Much may be done in this direction by seeing that the milkers thoroughly drain or "strip" the udders of the animals at each milking. There is no more effective method of running a cow dry than that of leaving a portion of the milk behind in the udder at each milking. Thorough stripping is beneficial in two ways. Not only is the milk obtained from such stripping materially richer in quality than that obtained from the cow in the early stages of the operation, but the tendency of thorough stripping is to encourage the animal to continue producing milk for a longer period than she otherwise would.

The advanced dairyman is very careful to endeavor to prolong the first season's milking as long as possible, even milking ten, twelve or more

months before allowing the young cow to dry up. Once the habit is thus formed, subsequent milking periods will be comparatively easy to keep to the required length.

Why Butter Goes Rancid.

Nothing is so obnoxious to the palate of a person used to good butter as to find that the article placed upon the table is rancid. The causes for such rancidity, as will be seen, lie almost entirely with the maker, because one of the prime essentials to the production of good butter is the thorough removal of the buttermilk when the churning process has been completed and before the butter is made up. The reason why this complete removal of the buttermilk is of so much consequence is because it contains a large percentage of the casein present in the cream or whole milk from which the butter is churned, and if this casein is not completely abstracted before the butter is made up, the keeping quality of the article will be very considerably injured. It is owing to the lack of care in completely removing buttermilk, and thus ridding the butter of as much of the casein present as possible, that so much butter becomes rancid within a short time after manufacture. The rancidity of butter in these cases is due to the development or growth of a germ or microbe which finds the food necessary for its maintenance in the casein which is present in such badly-washed butter. The germs which cause this rancidity cannot live upon or develop in pure butter-fat, and hence it is that the more thoroughly butter is washed and the more effectively the casein is removed the less liable will the butter be to go strong, and the better will it keep.

To prevent such an unfortunate condition as rancidity, churning should be stopped when the butter is in granules, and the buttermilk drawn off; the use of the lever worker in the home dairy will materially aid in getting properly rid of the buttermilk.

Supplement the Cow Pasture.

When pastures begin to wane the condition for extra support proclaims itself by signs which all observing men can note for their own guidance. Under such a condition of affairs it is not wise to allow things to drift and take their course. For revenue and the good of the dairy herd in general it is best to give some supplementary

feed. This will keep the cows in good heart, maintain their condition and keep up their flow of milk, all of which is sound business policy. Those who make a specialty of dairying may possibly, in most instances, not stand in need of this advice, but there are many who have not yet gone quite into special dairying, and who have not as yet made provision in advance for such contingencies. For the benefit of those who have not made such prepa-



DORSET HORN RAM LAMBS.

First prize and championship for best exhibit in the Dorset classes at the Royal Counties Show at Weymouth, 1901.

ration we advise them to get out of the old style of trusting entirely to pastures when they get short in the latter end of summer and during the fall. By giving aid to their dairy cows an unnatural shrinkage meets with timely prevention. This is sound practice in the development of dairy cows, as well as sound business policy, and is one of the peculiar traits of management which cannot be ignored with impunity.

Carefully-conducted observations have gone to show that dairy cows when in full milk consume fully 50 per cent. more water than cows of the same size and weight when dry.

POULTRY.

Poor Black Chick.

Out of the barn one morning
 Old Whitey came strutting down:
 No common, inferior hen was she,
 But a Dorking of great renown.

And after her came ten chickens,
 Running with all their might;
 Nine had their mother's complexion fair,
 But one was as black as night.

Old Whitey looked over her shoulder
 And clucked to each little pet,
 But suddenly angrily stretched her neck
 And flew at the small brunette.

And all day long she pecked at the chicken,
 Whenever she saw it was near;
 And Dinah, the cook, at her kitchen door,
 Heard its pitiful peeps of fear.

"I'm blessed if that stuck-up Dorkin'
 Don't hate you for bein' black;
 But one culled pulsed feeder for anoder—
 We'll pay yer old mudder back."

So laughing, good-natured Dinah
 Quick lifted the little wight,
 And shaking the dredge-box carefully o'er him—
 Lo! presently-black was white.

Then away ran the floury chicken,
 Looking like all the rest,
 And silly old Whitey contentedly clucked
 As he nestled beneath her breast.

Dinah nodded and laughed at the mother:
 "Yer fooled, honey, sure, but den
 When folks ebry day take appearance fer trut,
 Why shouldn't a foolish ole hen?" F. W.

Pinfeathers.

Scratch, scratch, scratch,
 Among the plants and dirt;
 If my good man don't build a yard
 Those chickens will get hurt.

Keep the fowls comfortable in this hot weather. Shade, cleanliness and pure water are an essential trio to successful summer poultry-keeping. Shade is wanted only during hot weather, but cleanliness and clear water are needed at all times. Where yards have free run they will find shade, but when yarded it must be provided for them. Tall-growing weeds make the best shade. If you allow golden-rod to grow in one end of the yard, it will make a splendid shade; the fowls will not eat it, and they prefer its shade to that of trees or bushes. Sunflowers, protected by wire netting till they grow three feet high, make a grateful shade and produce good hen feed too. Plum is one of the best trees to plant in the yards, and bring in an added revenue from the fruit.

The water must be kept cool and pure. Fowls do not relish warm or filthy water any more than their keepers. The water dish should be kept in a shady place and refilled frequently. Meat must be fed carefully in warm weather, and not at all if spoiled. Skimmed milk is much relished, and makes a splendid food. Be careful of the mixed foods, and take pains that they do not sour. Do not permit over-feeding, thus making your fowls sluggish, but feed them regularly with a proper amount of food. It is the hen that is active and constantly scratching and searching that lays the greatest number of eggs.

The first night that a hen shows her desire to sit, by remaining on the nest after her mates have gone to roost, I remove her and shut her up and keep her there two nights and one day without food. By that time she is so hungry that when let out she immediately goes hunting for food, and forgets all about the family she thought she wanted.

The poultry-keeper who feeds his chicks so they are never starved or overfed is the one who has the best success. Exercise and just enough feed make little chicks thrive. I find it cheaper to sell the cockerels as soon as they are large enough to fry. If kept until fall they will be larger, but the price will be less.

Scaly legs can be cured by rubbing the shanks of the fowls with lard. Wait till after hatching time to do this.

When handling hens be careful not to hurt them, and before long they will not object to handling. Remember that a wild flock is rarely a very profitable one.

A good many chicks are killed by kindness. They are just like human beings in some respects. For instance, they will eat much more than is good for them if they can get it.

It does not pay to half do anything. It pays just as well to have a roomy, comfortable poultry house as to have a good barn, and does not cost half as much money.

Keep little ducks out of the rain until the feathers begin to come out. A duck will drown in a rain rather quicker than a chicken will.

Turkeys can not be made to do well unless they have a liberal range to forage over.

A good way to save poultry manure is to save it in barrels. It is valuable enough to be given good care. For gardens and flower beds it has no superior.

Guinea fowl are good to watch, good to lay, and good to eat the premises. They scare away hawks by their clatter, and will keep themselves about eight months of the year.

A pullet, that ought to cost no more than 25 cents, will pay her board bill and make a dollar a year profit, but you cannot increase the number of chickens indefinitely unless you insure them the right kind of board and lodging.

Talk erbout yo' livin' high,
 What's the matter wid chicken pie?
 Good thick crust, good deep pan,
 Good fat hen—I tell you man,
 Chickens got ter roos' purty high,
 When I don't hab my chicken pie."

Hens stop laying when they begin to sit, so that persistent sitting is directly opposed to excellent laying qualities. I do not think the hen has yet been found that would lay eggs and hatch chickens at the same time. Many farmers think that poultry is too small an item on which to bestow any care, but a progressive farmer gives due attention to the small as well as the large things, and poultry, when well cared for, is by no means as small a source of income as would appear at first sight. It is one of the most profitable branches of farming that there is for the money and labor involved. But poultry must have attention, and always pays according to the amount wisely given.

As egg production in winter is one of the most important factors of profit, the hens should have every facility given them. The moulting season is very trying to them, and during this they demand extra attention. Early moulting should not only be favored, but the season made as short as possible, for hens late in moulting are not likely to lay early in winter, when eggs are high. The fall and winter fatter should contain considerable green vegetable matter. A variety of food is also necessary to their welfare. Another thing of importance is, do not let the fowls roost in trees or in the wagon shed, with only a little corn shelled to them morning and night, and then condemn them because they do not lay. Provide them with dry, warm quarters during the cooler months of autumn.

FARMER'S WIFE.

GARDEN AND ORCHARD.

Cultivation and Cover Crops for Orchards.

All well-kept fruit orchards, whether apple, pear, peach, plum or cherry, will have been frequently cultivated during the spring and summer up till well into July. This is necessary to keep the land clean, loose and moist, so that the fruit may develop and the tree produce some growth as well. By the middle of July the growth of new wood should cease, which it does when cultivation of the soil is discontinued, in order to allow the new wood to ripen. Unless the wood has ripened before winter sets in it will be frozen back, to the injury of the tree. As a rule, when trees are producing heavy crops of fruit, the growth of new wood is correspondingly limited and vice versa, so that this being an off year for apples the trees will have grown to a more than usual extent. The cultivation throughout the season will have prepared a considerable quantity of plant food in the soil, which the tree ceases to need, since growth has to a great extent stopped. Now, if the soil is left bare and exposed to the elements during the remainder of the season, much of the dissolved plant food will be lost by leaching with every heavy rain. This brings us to the question of saving the plant food, which can be accomplished to a great extent by what is called a "cover crop," the particular purpose of which is to secure a mulch and improve the physical condition of the land between the regular crops or the normal seasons of growth. Bailey says, in *The Principles of Fruit Growing*: "A sowed crop in the orchard may be valuable in two ways—by affording a cover to the land and by improving the soil when it is plowed in. As a cover it may keep down weeds and protect the land from injurious effects of frost. As a green manure it may add fibre to the soil and thus augment its power of holding fertility and moisture, and it may add directly to the fertility of the land. This late crop catches and holds the leaching nitrates which the tree-roots utilize earlier in the season." A cover crop has a remarkable effect in preventing hard soils from cementing together, and it also renders the soil spongelike in holding rain- and snow-water, allowing them to soak away into the soil gradually. This addition of fibre, or humus, which if not plowed till serves as a protection from frost, and thus admits of earlier spring tillage. The time to sow a cover crop is as soon as possible after summer tillage ceases—the middle of July is not too early and the first of September is not too late.

What to sow admits of as wide consideration as does the time to sow. Clover has no superior in this regard, but the difficulty and uncertainty of getting a stand of it late in the season takes from its suitability under average circumstances. The facts are there is no one cover crop which is best for all purposes and all conditions. It is true that much of our land, if allowed to lie idle, will soon provide its own cover with weeds, but these cannot be relied on and are likely to become a serious nuisance, so that it is best to substitute some other plant for the weeds. There are two great classes of plants that may be selected from for this purpose, those that gather nitrogen from the air, and those which take only such nitrogen as the soil possesses in available form. For the purpose of cover and protection, the latter class provides many luxuriant growers. A rotation of cover crops, however, will be found best, because an excess of nitrogen in the soil will cause too vigorous growth late in the season. Among the generally useful nitrogen gatherers may be mentioned red clover, crimson clover, peas, and vetches or tares. Although any of them are good where they grow well, the last-named, sown

one peck to the acre, is, perhaps, most likely to be generally popular, as it is easily grown, makes a dense mat of cover and turns under easily in spring. Among the non-leguminous crops suitable may be mentioned rye, Indian corn, buckwheat, rape, millet, or even oats, wheat or barley, although these latter are less well adapted to the purposes than the former mentioned crops. The main point is to sow some sort of cover crop, the selection of which will be not far wrong if the matter is well considered by the farmer and what appears best is used. Such crops as corn, vetches, rape, and other tender plants, while they are useful as orchard covers, pass the winter in the dead state, whereas clover, either red or crimson, is almost sure to start up again in spring, which is of very great advantage. If clover is sown, about six quarts to the acre will produce a good covering in a moist soil.

The Old Strawberry Bed.

When we have picked the fruit from a strawberry bed we seem to feel that we are through with it for this year, and then go away and leave it entirely to itself during the remainder of the season. To say the least, such a course seems selfish, and it is indeed unprofitable, because even a strawberry bed will not do its best without attention. It is well soon after the berry season is over to mow off the tops as close as possible and then apply well-rotted manure and wood ashes. This should be applied when the ground is damp after a good rain. After mowing, it is well to destroy the stalks and diseased portions of the plants. Before applying the manure, the patch should be thoroughly cleaned of all weeds by cultivation close up to the plants. By fall the plants will have made a fine, fresh, vigorous growth, which should be covered with straw after the ground freezes.

Blackberry and Raspberry Beds.

The blackberry and raspberry rust is the most serious of pests to growers of bush fruits. It shows itself in spring, dwarfing the cane and ruining the foliage. When such an infected plant is cut to the ground, the new shoots springing from the stock will also become rusted like the first growth of the year. It goes without any argument that all such rusted plants need to be dug up and destroyed root and branch, and the earlier this is done the less likelihood there will be of the infection spreading by means of the spores. The burn heap is one of the best adjuncts of a well-equipped establishment. It excels greatly the rubbish pile. Ashes may be blown about by the winds, and no serious inoculations follow from them.—(American Gardening.)

ENTOMOLOGY.

An Eminent Entomologist Gone.

One of the most noted women in Great Britain and most eminent natural scientists anywhere has passed away with the death of Miss Eleanor A. Ormerod, the well-known entomologist, which occurred at St. Albans, Hertford, July 19th, at an advanced age. She was the daughter of George Ormerod, an extensive land-owner in Gloucestershire and Lancashire. From her early childhood she was interested in the study of insects, which study she pursued through life until she became one of the best authorities on the subject in England. Her study and observation of destructive insect pests to farm crops and to animals resulted in a great saving to farmers and fruit-growers, whose crops she had saved many times from insect ravages. She made special study, among other insects, of the ox warble-fly, and published bulletins pertaining to its life-history and practical preventive remedies, summaries of which have been published in the "Farmer's Advocate" from time to time. In 1878 she was elected a fellow of the Royal Meteorological Society—the first woman so admitted; in 1892, was elected consulting entomologist of the Royal Society of England; for some time was examiner in agricultural entomology for the University of Edinburgh, receiving from that institution last year the first degree of doctor of laws that it ever conferred upon a woman. In 1872 she received a gold medal and two silver medals at the Russian International Exhibition; in 1899, a silver medal from the Societe Nationale d'Acclimation de France. Among her published works are "A Manual of Injurious Insects," "Guide to Methods of Insect Life," "Text-book of Agricultural Entomology," "Observations on Injurious Insects of South Africa," and "Flies Commonly Injurious to Live Stock."

Honey Crop Better than Last Year.

The white-honey crop is at an end. Clover and basswood yielded fairly well, the crop being better than last year, but not equal to that of '98. Owing to drought, the buckwheat in regions where it is grown is just nicely through the ground, so the crop from it will probably be late. Middlesex Co., Ont. MORLEY PETTIT.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the Farmer's Advocate are answered in this department free.
 2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest or which appear to be asked out of mere curiosity.
 3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.
 4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

SERIOUS LOSS OF CATTLE.

We are having a serious time with our cattle in this locality. Sixteen have died inside of the last two weeks, within a radius of three miles, one man losing six. They are taken very suddenly. The first symptoms are falling away in their milk. For instance, I lost a 2-year-old heifer (calved 13th May). Was all right, apparently, in the morning, only did not give quite so much milk as usual. When the cows were brought home at night she could hardly walk, would stop and tremble all over, breathed very heavily, and was dead in about an hour afterwards. Seemed to suffer terribly, water running from the eyes and mouth. Some of the others did not die so suddenly. My cows are pasturing along a fine stream of running water. W. I. R. Stormont Co., Ont.

Ans.—From symptoms given, I am of the opinion that the cattle died from anthrax. This opinion is strengthened by the fact that they were grazing along the banks of a stream. It is probable the stream overflows its banks in the spring, and thereby the pasture lands become inundated. When conditions of this kind are followed by a dry or comparatively dry and hot summer, it is not uncommon for cattle that graze on the land to suffer and die from anthrax. The sudden deaths reported favor this idea. It is seldom an animal will live four or five days after showing symptoms of disease. In many cases no premonitory symptoms are noticed—the animal is found dead. I have noticed in most cases of death from this cause that soon after death bloating takes place, and there is generally an escape of froth or foam tinged with blood from the mouth and nostrils. The skinning of the animal may not reveal anything abnormal, although in many cases there will be noticed an apparently bruised portion between the skin and other tissues in the region of the shoulders. It requires a post-mortem examination, and sometimes a microscopic examination, to determine the disease. The blood will be of a darker color than normal, resembling tar, also slightly resembling tar in consistency. In cases of splenic apoplexy (the form more usually seen) the spleen will be more or less enlarged, sometimes enormously, darker in color than normal, and disintegrated. If held up and its capsule cut, the contents can be easily pressed out, and in some cases will escape spontaneously. In other cases the spleen is not visibly altered, but the blood will have the appearance described. It is very dangerous to skin the animal, and great care must be exercised in holding post-mortems or working around the carcass in any way. If a person have any sores on his hands or should cut himself while skinning or cutting the animal, there is very great danger of inoculation with the virus of the disease. I would advise the removal of the cattle to high-land pasture. If any more die a veterinarian should be sent for to hold a post-mortem, and if necessary some of the splenic pulp should be sent to a bacteriologist for examination. The animals should not be skinned, as it is not only dangerous to the operator, but unlawful to offer the skin for sale. The carcasses should all be burned, as this is the only effectual method of destroying the virus. When buried, the virus retains its vitality, works its way to the surface, lodges on the grass and is eaten by the animals grazing over the grave the next year, or probably the next, when the disease will again make its appearance. There is no cure for this disease, hence our method of treatment must be preventive. J. H. REED, V. S.

[NOTE.—The outbreak referred to above proved to be anthrax, and is now under the care of the Government Veterinary Inspector.—Ed. F. A.]

WARTS ON CATTLE—SHEEP LOSE WOOL.

1. Some of my cattle have warts, some large and others small. What treatment should they have?
 2. Some of my sheep began to lose their wool last winter in streaks along the sides. They had neither ticks nor lice, and their skin was as blue as indigo. What was the cause of the trouble?
 NORVAL HALL.
 Perth Co., Ont.

Ans.—1: The cause of warts on cattle is a predisposition to epithelial growths. The remedy is to remove with a knife or pair of shears all that have constricted bases, and dress the raw surface thus formed with a little butter of antimony, applied with a feather. Those that are flat can be removed by dressing with the above once daily, occasionally picking off the corroded surface until the growth has disappeared. In many cases warts disappear spontaneously. It is claimed that repeated applications of castor oil will remove warts. I have never tried it, but it is worth a trial.
 2. The loss of wool on your sheep was due either to digestive derangement or want of proper food. It may have been due to disease of the liver, and if so, very little, if anything, can be done. If due to debility, good feeding and comfortable quarters will prevent its recurrence. Dipping with McDougal's or Little's dips is good for the skin. J. H. REED, V. S.

SORES AND TUMOR ON SHEATH.

1. An aged white horse has had sores in sheath for a few years. I wash him out quite often. Lately he has got a great deal worse, a large raw lump appearing at the opening of his sheath, that bleeds considerably and smells very bad. What can be done for him?
 2. Mare, seven years old, appears in good health, but urine very thick and milky.
 WATERLOO CO., ONT. FARMER.

Ans.—The proper treatment for your horse would be to cast him and dissect the large raw lump or tumor mentioned carefully out. It is doubtful if it can be removed in any other way. It will require a veterinarian to operate. If you do not care to go to the expense of an operation, you might try dressing the raw surfaces once daily with a caustic, as a pencil of the nitrate of silver, or butter of antimony applied with a feather. After the diseased tissue (raw flesh) has been removed, keep clean and dress three times daily with carbolic acid 1 part and water 40 parts. But a surgical operation will be the most satisfactory.

2. A dessertspoonful of nitrate of potash once daily, in damp food, for three or four doses, will correct the urinary trouble in your mare.
 J. H. REED, V. S.

GROWTH ON COW'S EYE.

I have a cow that has a growth over the inside cover of the left eye; appeared about two months ago. It does not pain the cow much, but at times she scratches it. There is also a yellowish, watery discharge from it. Is it dangerous, and can it be cured?
 COW PUNCHER.

Ans.—The growth should be carefully removed by an operation, and a few drops of the following put into the eye three times daily until inflammation ceases: Fluid extract of bella donna, 10 drops; distilled water, 1 oz. There is a danger of the cow losing the sight of the eye, and it is possible the other eye may become diseased through sympathy unless the growth be removed. In operating, great care must be exercised in order not to wound the eyeball. It would be better to get a veterinarian to operate, and he will also give you the required lotion for after treatment.
 J. H. REED, V. S.

GROWTH ON COW'S EYE—CURED LUMP JAW.

1. Have a milk cow with a growth in the lower corner of the right eye. A few weeks ago when first noticed, it was a narrow, flat growth, of a pink pearl color, about one inch long and a half-inch wide. Since, however, it has grown to quite a size and seems to be full length of the eye. It appears to be working out of the eye in a rough shape. The cow is perfectly healthy. What can I do for it?
 2. Will a cow that has had lump jaw, and been completely cured with Fleming's cure, be all right for beef?
 READER.

Ans.—1. See reply to "Cow Puncher," elsewhere in this issue.
 2. An animal that is cured is no longer diseased, and, therefore, wholesome for food. It would be well to retain the animal for some weeks after the sore has healed, to make sure that a cure has actually occurred. If the enlargement continues to reduce in size until only a flat scar remains, then there can be no risk in using the animal for beef.

PECULIAR SKIN DISEASE IN COW.

I have a black-and-white cow, about nine years old. About two years ago the white hair all came out and the black hair was apparently all right. The skin gets chapped and cracked. I greased it, but nothing would seemingly do it any good. At one time I attributed it to the horn-fly, which was so bad. But every spring it appears, as at first. What would you think was the cause, or what remedy could be used to prevent it?
 GEO. HORNING.
 Lanark Co., Ont.

Ans.—I cannot account for the white spots on your cow becoming diseased and the black escaping. I have never seen a case, but remember once receiving an inquiry about a similar case. I would recommend the application of the following to the affected parts: Vaseline, 4 ounces; carbolic acid, 30 drops. Mix well, and rub a little well into the skin once daily.
 J. H. REED, V. S.

Miscellaneous.

SHEEP TO COWS AT PASTURE.

When sheep are at pasture, how many sheep equal a cow? I have thirteen sheep and nine lambs, with the ewes. How much should I pay per month?
 ADAM OLIVER.
 Waterloo Co., Ont.

Ans.—It is estimated that eight sheep are equal to one cow at pasture, at which rate the thirteen ewes and nine lambs would about equal two cows, or perhaps a little more as the season advanced. A fair price for cow pasture is \$2 per month, which would place the sheep pasture at about \$1 per month.

REED CANARY GRASS.

I have mailed you a sample of a kind of grass which has been growing on one spot on my farm for a long time. It has not spread much, and the ground on which it grows is damp. It is considerably earlier than timothy, being ripe about the time timothy is in blossom. Please state what kind of grass it is, and if it would be profitable as a cattle feed?
 WALTER B. FULLERTON.
 Cumberland Co., N. S.

Ans.—The grass submitted by Nova Scotia subscriber is the reed canary grass (*Phalaris arundinacea*). Its natural habitat is low grounds along streams or ponds, or some marshy, rich location. The specimen to hand is an unusually large one, being nearly six feet high. Ordinarily this grass does not often exceed four feet, from which I conclude that the "damp spot" on the farm from which the specimen was obtained is very rich on account of much decomposed vegetable matter, which has gradually accumulated in a depressed area, probably originally a pond. Reed canary grass is a perennial, and has prominent broad, flat leaves. The seeds or grains are smooth, and provided with fine branched hairs. On account of the rigid nature of the stem, it is very doubtful if it would furnish fodder which would be relished by cattle, although very few experiments have been tried to determine this point. "Subscriber" himself ought to be able to furnish this information, as few persons have the opportunity to determine this point so easily. It is possible that with smaller stems, the plant might become quite palatable as well as nutritious. A variety of this plant, with variegated striped leaves, is cultivated in many gardens as ribbon grass.
 W. LOCHHEAD, Professor.
 Biological Dept., O. A. C., Guelph.

SQUASH BUG.

I would be pleased if you could tell us what to do to destroy a big brown bug that destroys the squash and pumpkin and cucumber vines? It is like a berry bug, but a little longer. We have used Paris green and bug finish, but they have proved to be useless, as the bugs have killed most all our vines.
 THOMAS ROGERS.
 Lambton Co., Ont.

Ans.—The squash bug is a very difficult insect to combat; in fact, it seems to be able to resist almost all methods used to destroy it or protect plants from its ravages. Good success has, however, been secured by applying liberal quantities of refuse tobacco powder obtained from cigar factories. A shovelful thrown upon the hills has been found largely to prevent damage. The application should be repeated occasionally when wind and rain have removed the powder from the plants. Probably the most successful method is that of protecting the plants by some form of gauze netting, and thus mechanically shut the insects out. Pieces of wire or barrel hoops can be stuck in the earth at the sides of the hill, the netting of cheese cloth or other similar fabric being drawn tightly over and the edges covered with earth. We would be very glad to hear from readers of the "Farmer's Advocate" of successful methods of dealing with this troublesome pest.

HOW TO TREAT MOSQUITOES.

We have been tormented beyond measure for a couple of months past with mosquitoes, which have been worse than for many years. I would be glad if some means of combating these were suggested through the "Farmer's Advocate."
 NEW SUBSCRIBER.

Ans.—It is the female mosquito that does the buzzing and biting, and lays eggs in bunches of from 200 to 400 on the surface of any fairly still pool of water. These will hatch, under favorable conditions, in about 16 hours, and an entire generation is completed in about 10 days. Mosquito netting, the smoke of smudge, and other expedients give partial relief, but the systematic experience of the City of Winchester, Virginia, demonstrated that the best of all wholesale remedies is kerosene oil applied to the breeding pools. About an ounce (½ cupful), writes Mayor Barton, of that place, to each 15 square feet of water will effectually destroy all the larvae and pupae in the pool. The adult female will leave pools so treated, or if she alights, will die, and her eggs will perish with her. The application need not be made more than once a month. If simply poured on, the oil will reach all parts of the pool.

COWL FOR BARN VENTILATION.

I am putting in my stable the system of ventilation given by Prof. Reynolds in the June 15th number of the "Farmer's Advocate." Can you kindly tell me where I can get the galvanized iron cowl properly made to fit on top of the 17-inch wooden box?
 W. E. STREATHFIELD.
 Muskoka District, Ont.

Ans.—Regarding ventilating cowl, I beg to say that ours was made by a local tinsmith, A. Rumford, Guelph. I should think that any tinsmith could devise something to answer the purpose.
 G. E. DAY.
 O. A. C., Guelph, Ont.

MARKETS.

FARM GOSSIP.

Perth Co., Ont.

Locally we are having a rather dry season. Heavy showers have been passing north and south, and in one case a wind-storm in the central portion of the county upset a few barns, demolished several windmills and destroyed much of the standing crop. With us the spring and root crops are suffering considerably for want of rain. Barley and oats are very short and ripening rapidly, and peas, which were mostly sown late to avoid the beetle, are also very short in the straw for the blossoming period. Owing to the rush season and lack of farm help, some of the hay crop—which was a heavy one—is still standing in cock, although all the wheat is cut and much of it housed. The latter is exceptionally heavy in the straw, but rather shrunken in the head, while perhaps about one-third is destroyed by the Hessian fly. Mangels are fair and turnips are making a poor showing. The Colorado beetle has been getting in some fine work. I think I never saw it so destructive. We have been experimenting a little with different methods of killing the pest with Paris green and as a result we think there is no better way, all things considered, than to mix with gypsum and apply with sifter when dew is on the leaves. I see from crop reports that the yield of raspberries over the Province is regarded as small. Local pickers say we never had so bountiful a crop, and if rain comes the returns will be almost doubled. Apples are almost a failure, but may perhaps turn out a quarter crop. The honey crop is fair to good.

We have this last week noticed a "musty" flavor on the water from several wells in the neighborhood, and yet the owners are certain the water is not "low" in the wells, and it is as certainly not soaking in from the surface, as we have not had rain enough for ten days to penetrate the soil more than one inch. Can this "musty" flavor be the forerunner of the plague of typhoid fever which visits us every fall, and what can be the cause of it? Our highways have been undergoing a substantial improvement by the use of the grader drawn by a traction engine. The council was on the point of buying a second grader, when, at the suggestion of someone, it was found that steam propulsion would result in so much more and better work that the idea of further investment was abandoned for the other method. The outfit comprises the engine, grader, three men, and a horse and light wagon for drawing water, and is said to cost the township ten dollars a day. The work is done at the time of year when the roadbed is soft. The leading roads to the town are being graded and then crowned with crushed stone about the size of a hen's egg, on which is placed a thin layer of very finely-ground stone.

Following are the local market quotations in St. Mary's:—Wheat, 60c. to 61c.; barley, 35c. to 40c.; oats, 28c.; peas, 60c. to 64c.; potatoes, per bag, 35c. to 50c.; hay, per ton, \$7 to \$8; chop, \$17 to \$20; flour, per cwt. (roller), \$1.85 to \$2; Manitoba flour, \$2.25 to \$2.50; butter, 14c. to 15c.; eggs, 9c. to 10c.; chickens, per lb., 5c. to 6c.; ducks, 6c. to 7c.; geese, 4c. to 5c.; turkeys, 8c. to 10c.; live hogs, \$7.10; bran, \$14; shorts, \$16. J. H. B. South Perth, July 22.

Prince Edward Island.

At this writing we are in the middle of haying, with fine weather for the work. The crop will be above an average, and if the good weather continues a week more, will be all saved in good condition. Grain crops are doing well, and will be ahead of the average of recent years. Harvest will be two weeks earlier than last year. Potatoes are looking fine, but bugs are very plentiful. The root crop never looked better, and fodder corn is making a fine growth, and as the season is warm, will likely mature better this year than usual. Cherries are exceedingly scarce here this year, and apples are a rather short crop. The strawberry season is now over, and has been a very successful one. The milk supply has been falling off since the middle of July, extreme heat and horn-flies, along with drying up of pastures, being the chief causes. The make of cheese has been large so far.

Prices: Fat cattle are scarce, and anything good in the beef line sells for 5 cents per pound alive. Horses are in great demand and are being picked up by buyers from the other Provinces at figures ranging from \$75 to \$150. Cheese sold for 8 cents for first half of July. Most of the Island cheese is going to market as soon as fit to handle.

Alexander McNeil, of Ontario, has been over the Island with our Commissioner of Agriculture, organizing Farmers' Institutes. A good many successful meetings have been held and Institutes organized that may be expected to do good work in future.

We are to have a Maritime fat-stock show this year, in December. The place of holding it is not decided on yet, but will be either in New Brunswick or Nova Scotia. It is to be conducted on the same lines as the great Guelph show, and will be a great education to our Maritime farmers.

There will be only one large Maritime show this year—the Nova Scotia Provincial—but there will be a large number of country fairs in both New Brunswick and Nova Scotia. W. S.

Simcoe County, Ont.

The weather for the last few weeks has been very dry, consequently the hay, which was a heavy crop, has been well saved. Oats and peas are suffering for want of rain. Barley and wheat were cut early, and hay ripened before people had time to cut it. Roots look well, but weeds are very troublesome this year. Corn promises an abundant crop. There are not many silos in this vicinity, but most of the farmers grow an acre or two for early winter feeding. The Collingwood Co. buy nearly all the hogs, and were giving Toronto prices in May, but now they are paying \$7 per cwt. Not many cattle have been shipped lately, but grass cattle are getting ready now. Farm help is not as scarce as last year, and wages are about the same. The highest paid in this neighborhood is \$50 for two months. Farmers are putting stonework under their barns, but there is a great scarcity of mechanics to do the work, some having to leave the work till after harvest. R. H. P.

Huntingdon Co., Quebec.

The hay crop is an abundant one here, and has been secured in fine condition, the weather being fine and dry. The drought has shortened up the pastures somewhat, which has lessened the quantity of milk sent to the factories. The heavy rains of May and June gave abundance of pasturage, consequently a heavy flow of milk for those months.

Owing to the abundance of alsike clover, a fine large honey crop has been secured. The cold, wet spring was somewhat against the beekeeper, but he will be compensated by the heavy honey flow.

Grain and ensilage corn promise well on high and well-drained soils, but on low, poorly drained lands the crop will be light. W. S.

Stormont Co., Ont.

Haying is about completed in this section. The crop and the weather for harvesting it were record breakers. Only two loads of mine getting the least bit of rain. Some of the early grains were ripening too fast during the dry, hot weather during haying, but we have had lovely rain the last three days. Some of the late grains are short in straw, and corn is not so good or so much planted on account of the continual wet weather during the last half of May and first of June.

Cows are keeping up in their milk very well, but the flies are beginning to put their work in.

There has been an outbreak of anthrax in one concession of Township of Osnabrock, but the Government is making an effort to stamp it out.

The apple crop is short compared with last year. McD.

A Big Cattle Trust.

A cable despatch from London, Eng., alleges that the Standard Oil capitalists will control the world's cattle trade within ten years. Such was the assertion made by a prominent American promoter who lately accepted the presidency of one of the subsidiary corporations formed by the Standard Oil Company for this purpose. This authority states that the Rockefeller, after a critical survey of the American industrial situation, came to the conclusion that cattle is the most promising investment for the future that the country holds. Their statistical experts report that the visible supply of herds suitable for food uses is one million head less than a decade ago, and there is a tendency to still greater shrinkage. Already Messrs. John D., William and Frank Rockefeller own extensive ranches in Texas, while Representative Joe Sibley, of Pennsylvania, also interested in the Standard Oil Company, operates large establishments in Florida. The plan involves ultimate community of interest such as characterized the formation of the Steel Trust and the recent railway pools. Standard interests will foster the growth of breeding farms and ranches in all parts of the country, and when the propitious moment arrives will consolidate them by huge capitalization. Eventually the great packing plants of Chicago, Omaha, Kansas City and Milwaukee will be invited to pool their issues.

A New Cordage Company.

With a capital of \$400,000, the Canadian Cordage Co. is applying to the town of Peterboro, Ont., for a free site for a factory. The site asked for is to accommodate one building 300 by 90 feet, and another 200 by 50 feet, and to have a capacity of five tons of binder twine and three tons of cordage and rope per day, which is expected to be doubled inside of two years. The directorate of the Company is composed largely of local business men and well-to-do farmers about Peterboro. Although the stock is distributed throughout Ontario, Manitoba, the Northwest Territories and British Columbia, Advisory Boards have been formed at many different points where blocks of stock have been sold. Peterboro is looked upon as a particularly suitable locality for such an industry, on account of the advantage it has in the way of cheap water power. The citizens of Peterboro will be asked to vote on a by-law granting a free site, on Aug. 13th.

Toronto Markets.

Two weeks ago the market was brisk for export cattle. Dealers had space to fill, and export cattle met ready sale. Today, trade is dull; export cattle not wanted. Ocean steamship space scarce. Dealers did not care to purchase for keeping over. The receipts of 100 loads of cattle swamped the market, and were shipped back into the country as feeders. The butchers were offered freely, and only the best quality sold. Sheep and lambs easier. Hogs lower, at \$7.25. The total run of cattle for Thursday and Friday was 100 loads—1,700 cattle on Thursday and 64 loads on Friday; hogs, 1,200. This is the largest week's run in the history of the market—nearly 300 loads of cattle, about 280 carloads of stock all told, cattle, sheep and hogs, came in to-day.

Export Cattle.—There was no enquiry for export cattle. Only the very choicest met any sale. The results of the day's business was disappointing to salesmen. Best choice export cattle sold at from \$4.75 to \$5.20 for top price. Messrs. Gordon & Ironsides have six carloads of very choice export cattle resting and feeding previous to export. Messrs. Brown & Snell shipped five carloads of best export cattle. Mr. Gould bought two loads of exporters, 1,270 lbs. average, at \$1.50 per cwt; also six loads from Mr. McMillan, M. P., of Huron, in first-class condition, the pick of the market. Mr. O'Leary sold 40 exporters, 1,270 lbs. average, at \$5 per cwt.

Butchers' Cattle.—Choice, smooth butchers' cattle scarce. Prices were firm on all choice stock, at from \$4.40 to \$4.75 for picked loads. There were very few outside buyers on the market. Prices showed a wide range, and a few sold down to \$3.10 per cwt. Mr. S. Levack bought 28 butchers' cattle at from \$4.10 to \$4.25 per cwt; average weight, 1,650 lbs. Two butchers' cattle, average 775 lbs., sold at \$3.50 per cwt. Mr. Dulmage, of Harrison, sold one load of choice butchers' cattle at \$4. These cattle are reported to have lost freight and expenses.

Bulls.—The supply limited, and choice export bulls met ready sale at from \$3.75 to \$4.25 per cwt. Light export bulls sold at \$3.60 to \$3.75 per cwt.

Feeders.—A good demand for choice short-keep feeders. Very few on offer, and sold at \$4.75 per cwt. To-day a few were picked up to finish, from the excessive supply of export cattle, from 1,100 lbs. to 1,200 lbs. weight.

Stockers.—Outside markets show demand poor. Prices a shade lower, at \$3 to \$3.25 per cwt. Offerings light and prices unsteady for the inferior sorts. Mixed culls, \$2.50 per cwt.

Sheep.—There is no demand for export. Prices easier (6c. to 10c. lower), at \$3.40 to \$3.60. Bucks, \$2.50 to \$3 per cwt. Mr. Wesley Dunn bought 250 sheep at \$3.60 per cwt.

Lambs in good demand, and choice quality sold readily at \$4 per cwt. Spring lambs sold at from \$2.50 to \$1.50 per head. Mr. W. Dunn bought 275 lambs at \$4 per head.

Calves in better supply. Those of choice quality sold readily at from \$4 to \$6.50 per head. Two very choice veal calves sold at \$8 each.

Milk Cows.—The demand for fresh-calved milk cows is keen. Springers sold at from \$37 to \$42 per head. Twelve on offer.

Hogs.—Reports from packing houses indicate lower markets in the next two weeks. Northern and Midland hogs are not delivered on this market, but are consigned direct to the packing houses. Six thousand per week were delivered. On this market the run is very light, a decline of 25c. per cwt. About 500 on offer, and sold at \$7.25 per cwt. Drivers are again cautioned not to feed and water hogs before market, as they are culler 50c. per cwt. To reach top price, the hogs must weigh not less than 160 lbs. and not above 200 lbs. live weight. They must also be the long, lean bacon sorts. Price for thick, fat and light, \$6.75 per cwt. A few stores wanted. Unculled car lots of hogs sold at \$7 per cwt. Sows, \$3.50; stores, \$1.50; stags, \$2. This market is very unsettled, or, as one drover said, "spotty," meaning that on some days good prices prevailed, the next a decline all round.

Dressed Hogs.—Very few on offer, and prices steady, at \$9.25 to \$9.75 per cwt. Mr. William Harris is making a tour through the Maritime Provinces in the interests of the Abattoir Co.

Table with 3 columns: Commodity, Extreme comparative prices to-day, Same date last year. Rows include Export cattle, Butchers' cattle, Bulls, Feeders, Stockers, Sheep, Hogs, Milk cows, and Lambs.

Wheat.—The market active and the price advanced 2 cents. Now quoted at 68c. per bushel; red quoted at 67c. per bushel, and goose wheat at 62c. per bushel.

Oats.—A feature of the to-day's market was the advance of 2c. in oats, due to the increased strength of outside markets. Quoted at 38c. to 39c. per bushel.

Hay.—About 15 loads of hay delivered. Old, 50c. lower, at \$12.50 per ton; new hay at \$8 to \$9 per ton; baled, in car lots, \$9.50 to \$10 per ton.

Straw.—Scarce, and sold at \$10 per ton; baled, in car lots, \$14.75 to \$5 per ton.

Butter.—Dairy rolls are scarce. Pasture running short is the reason given. Creamery is firm, at 20c. to 21c. for prints and pounds. Best gilt edge dairy rolls are quoted at 16c. to 18c. per pound.

Cheese.—The price of cheese is about established for the season. Dealers report that 9c. per lb. is about the average expected. Some arrived on this market a shade over this price. Choice July-make steers are reported low.

Hides.—No 1 green, per lb., 8c.; No. 1 green steers, 8c.;

cured, 9c.; calfskins, 9c.; sheepskins, each, 90c.; pelts, 25c.; lambskins, 30c.; wool, fleece, 14c.; wool, unwashed, 8c.

Fresh Meats.—There is still a very considerable amount of fresh beef passing through this market for North Bay and points west. Beef, fore quarters, per cwt., \$1.50; hind quarters, per cwt., \$1.50. Mutton, carcasses, per lb., 6½c. Veal, carcass, per cwt., \$7.50. July 26, 1901.

Toronto Horse Market.

Trade was brisk at Grand's Horse Repository last week. Two carloads of Northwest ponies were sold, average quality, about 14.1 in height, on fairly good legs, and most of them quiet to handle. They were from the Calgary district, consigned by the Hudson's Bay Company. They were not in as good condition as the two previous consignments, and brought from \$17 to \$45 for top price.

In speaking with one of the herders, he mentioned that at present there were large numbers of animals smuggled across the frontier free of duty, whilst all Canadian horses had to pay an ad valorem duty of 20%. All of the ponies are branded on the near thigh with a circle with a figure in the center. This was to indicate to which post or range they belonged.

Good strong general-purpose horses sold at \$100 to \$125. Ordinary fair drivers sold at from \$125 to \$150. Good carriage horses, pairs, were sold for export at from \$150 to \$250, but this class of animal must be sound, of good quality, and show some breeding. There is good enquiry for pairs of heavy draft horses 16.3 hands high, having exceptional quality, and quite sound. July 29, 1901.

Montreal Markets.

Montreal, July 29.—There were about 750 head of butchers' cattle, 200 calves and 400 sheep and lambs offered for sale at the East End Abattoir to-day. The butchers were present in large numbers, but trade was slow and prices decidedly lower all around, pretty good beasts being nearly 1c. per lb. lower than on last week's market. Pretty good stock sold at from 3½c. to nearly 4½c. per lb., and the common dry cows and thrifty young stock brought from 2½c. to 3½c., while the leaner beasts sold at about 2½c. per lb. Calves sold at from \$2 to \$10 each.

Sheep.—Shippers paid 3½c. per lb. for good large sheep, and the butchers paid from 3c. to 3½c. per lb. for the others. Lambs sold at from \$2.50 to \$4.25 each.

Hogs.—Fat hogs are lower in price and sold at from 6½c. to a little over 7c. per lb.

Buffalo Markets.

East Buffalo, July 29.—Cattle.—Receipts, 200 cars; best steers, \$5.65 to \$5.75; good to choice export, \$5.50 to \$6; do, shipping, \$5.40 to \$5.50; medium to fair do., \$5.25 to \$5.40; cows, common to choice extra, \$3.50 to \$4.90; canners and bolognas, \$2 to \$2.25; mixed butchers' lots, \$4.15 to \$4.50; export bulls, \$4.15 to \$4.25; veals steady, \$5 to \$6.50.

Hogs.—Receipts, 86 cars, \$5 and 15c. to 25c. lower; fair to good choice Yorkers, \$5.80 to \$5.95; medium, heavy and mixed packers, \$5.90 to \$6; choice heavy, \$5.95 to \$6; pigs, good to choice, \$5.90 to \$6; roughs, \$5.25 to \$5.40.

Sheep and lambs.—Receipts, 40 cars; dull; spring lambs, choice to fancy, \$5.70 to \$6; do, fair to good, \$5 to \$5.65; common to good culls, \$3.25 to \$4.75; handy wethers, \$4.40 to \$4.50; yearling lambs, choice to extra, \$4.10 to \$4.60; fair to good, \$3.90 to \$4.25; culls and common, \$3.50 to \$4.

Chicago Market.

Chicago, July 29.—Cattle.—Receipts, 21,000; good to prime steers, \$5.35 to \$6.20; poor to medium, \$4.25 to \$5.40; stockers and feeders, \$2.40 to \$4.35; cows, \$2.75 to \$4.60; heifers, \$2.25 to \$4.75; canners, \$1.25 to \$2.25; bulls, \$2.65 to \$4.35; calves, \$2.50 to \$5.25; Texas steers, \$3 to \$3.50.

Hogs.—Receipts, 56,000; mixed and butchers', \$5.25 to \$5.75; good to choice, heavy, \$5.50 to \$5.87½; rough heavy, \$5.25 to \$5.45; light, \$5.45 to \$5.60; bulk of sales, \$5.45 to \$5.60.

Sheep.—Receipts, 19,000; fair to choice, \$3.50 to \$3.75; western sheep, \$3.25 to \$4; yearlings, \$4 to \$4.35; native lambs, \$3 to \$5.40; western lambs, \$1.60 to \$5.40.

British Markets.

London, July 29.—United States cattle, 6½d; Canadians, 6½d; Canadian sheep, 6½d to 6½d.

Liverpool, July 29.—Canadian cattle, 6½d. Cattle fair; sheep good.

SHOWS AND SHOWING.

Toronto Industrial Exposition.

In connection with the sugar-beet experiments being conducted at various points in Ontario Province, under the supervision of Prof. A. E. Shuttleworth, there is to be a model beet-sugar plot at the Toronto Industrial, together with all the necessary implements used in the cultivation of the sugar beet. The beet plot is divided into three sections. One third was planted in May, and at the exhibition season the beets in this portion will be shown in full growth. Another third will be just past the thinning stage, and on the remaining third the beets will be younger and standing thickly together in rows, and a demonstration will be made as to how the beet should be thinned out to yield the best returns in saccharine matter. Either Prof. Shuttleworth or some of his assistants will be in attendance at the plot to answer questions and demonstrate the use of the implements. Prof. Shuttleworth, who has given the question thorough study, both in Ontario, Michigan, and in Germany, has full confidence in the beet business for Canadian farmers, so that farmers attending the Toronto Fair would do well to take advantage of this valuable object lesson.

Arrangements have been made whereby cattle intended for exhibition at the Pan-American the week following the Toronto Industrial, can first be shown at Toronto without extra cost, the Dominion Government having consented to pay the transportation to and from Toronto.

Entries for live stock, dairy products, ladies' work, fine arts, honey, and all classes of manufactures, close on Saturday next, August 3; for grain, field roots and horticultural products they close on Saturday, Aug. 10; for poultry on Wednesday, Aug. 14; and for dogs on Saturday, Aug. 17. In each and every instance they should be sent accompanied by the fees. Full particulars can be had in the prize list, which Mr. Hill will furnish on application to him at 82 King St. East, Toronto.

Kamloops Provincial Industrial Exposition.

The handsomely-gotten-up prize list just received of the Kamloops, B. C. Provincial Industrial Exposition, to be held in the City of Kamloops, Sept. 25 to 27, is a revelation to Easterners of the progress in agriculture and arts of the Pacific Province, the prizes being liberal and varied in all classes of live stock and agricultural and dairy products, while the special prizes donated by citizens are of the most generous character, and the whole exceedingly creditable to the promoters of the show.

Regarding Horse Show at Pan-American.

To the Editor FARMER'S ADVOCATE:

DEAR SIR, The proposed horse show at the Pan-American Exposition, along the lines of the Madison Square Garden Horse Show and the Toronto Horse Show, has been abandoned, consequently there will be no horse exhibit at Buffalo other than the exhibition classes as provided for in the premium list as sent out. E. B. ELDERKIN, Canadian Supt. of Live Stock.



A Seasonable Subject.

Clarissy Ann is back again, you see, farmers' wives and daughters, and this time she is coming "right at you" to give you a good scolding. And for what, pray? Why, for the simple reason that you (take notice, she says "you," not "we," this time, for "she" has long ago found out the secret of it)—that you, then, or so many of you, have quite neglected the learning of a useful little art—"so sound and so simple 'tis worth while to know," as the nursery rhyme hath it—the art of preparing salads.

In the first place, farmer women, above all, have or ought to have always on hand the very ingredients necessary to the making of these dainty and attractive dishes. In the second, the preparation of them is exceedingly easy and speedy, and what farmer woman is there who does not rejoice and hold up her hands in thanksgiving at the discovery of something really nice that can be quickly prepared. No one knows better than she how much every minute counts, and how hard it is to get time to spend over those elegant trifles whose concocting is but a pleasant recreation to the city dame with plenty of time on her hands. In the third place, salads are among the most economical of foods. Besides being nutritious themselves, from the standpoint of a "relish," they also act as a stimulant to the taking of other foods; from that of the saving of odds and ends, they are simply invaluable, as almost all scraps of vegetables and fruits may be used up in them to form dishes at once tasty and attractive in appearance.

Having thus, then, laid down the whys and wherefores of the subject, and having, as she hopes, caused you to feel that you can live no longer without salads, Clarissy Ann would like to emphasize a few general rules that apply to all these preparations alike. (1) All vegetables or fruits must be washed daintily clean, and freed from all "rusty" or unattractive shreds of leaves, etc. (2) All ingredients must be thoroughly chilled before using. Vegetables, if raw, should be "stiffened" in cold water; if cooked, they should be cooled on ice, or in a vessel set in cold water in a cool place. (3) In the making of all salads, it is absolutely necessary to know how to make a really good dressing.

Of these (dressings) there are a great many kinds. Some people like those made with olive oil, but so far as Clarissy Ann is concerned, she detests the stuff, so can tell you nothing at all about those. The following, however, is a very good way of making a dressing that is at once simple and convenient, and suited to the palates of those who do not care for the olive-oil preparations. It is very quickly made, and is nice for all ordinary occasions.

Set a granite pan on the stove with half a cup of vinegar (diluted, if very strong) in it. While this is heating, beat together one egg, nearly half a teaspoon of mustard, the same of salt, a dash of pepper, a tablespoon or two, as preferred, of sugar. When the vinegar boils, drop in a piece of butter half the size of an egg, and stir in the mixture slowly until the whole is of the consistency of soft custard. Take off, and when cold beat in two tablespoonfuls of cream—sweet, or thick and sour, whichever is handiest, for both are good—and your dressing is ready. You will find that you can make it in about six minutes if the stove is hot, and when made, it will keep, in a cool place, several days.

Now then, have you a few boiled beans, green or white, left after dinner? If so, when tea time comes, pile them up neatly in a mound on a pretty dish, mixing first with the dressing. Garnish with a few bits of hard-boiled egg or slices of lemon, and serve with cold ham, potted meat, cold fish, etc., etc., as preferred. These, with some fruit, will form the staple of a tasty enough meal for a hot summer day, and you can afford very well to rest a bit, and let the men go without those pies and cakes which require so much fire and fussing.

Another very attractive salad is made of beets. Boil and peel them, and cut in thick slices in vinegar. When you have time, take these pieces out, chop them fine, and set away to get very cold. When ready to serve, place on small, individual salad dishes a few crisp lettuce leaves. In the middle of each dish, on the leaves, place a spoonful of the chopped crimson beet. Top it off with a small spoonful of the golden dressing, and the very look of it will tempt one to eat.

When the cabbage season is in, chop a crisp white head very fine and chill it; it must not be cooked. Then simply mix with the dressing and serve, adding a little more salt, if wished. Some prefer a little celery chopped with the cabbage.

But where can one stop? Verily, the varieties, or variations, rather, of salads might bear the name "legion." Almost every vegetable can be used up in them. Potatoes mashed; potatoes diced and mixed with chopped beet and a dash of onion; potatoes diced, mixed with boiled beans and some cold chopped meat; cucumbers sliced in salt water, drained, chopped, chilled, and mixed with dressing; celery, cabbage and beet mixed; all combinations are possible. To the wise a word is sufficient. Set your brain to work, and you will be surprised at the number of dishes you may create, and the economical way in which you can use up all sorts of odds and ends. Only be sure that the salad is served daintily. Let its appearance speak for it at the very beginning.

Clarissy Ann would like to give recipes for meat, fruit and fish salads, also one for a dressing that may be used for "grand" occasions, weddings, high teas and the like, but space will not permit, so she will say good-bye, with the promise, perhaps, of sending these again, sometime, if anyone would care to have them. With heaps of best wishes—

CLARISSY ANN.

At a children's party recently the hostess got up a game known as "The Menagerie," which is similar to "The Family Coach" and other devices for amusing children. The hostess went to each child in succession with the question—"And what will you be?" "I'll be a goat," said the first; "I'll be a lion," said the second; and so on until it came to the turn of a very little fat boy in a velvet suit, who was sitting in a corner looking very sad. "And what will you be, my little man?" "I'll be—I'll be—sick in a minute."

"The Presence of God."

We value much to have with us
A faithful, loving friend;
And one whose heart beats true to ours—
Such souls respond and blend.
But soon—too soon—the parting sigh
Once more records their value high.

True Christians here are not alone,
For, Moses like, they ask—
Oh, who shall us accompany
To do our mighty task?
"My presence shall go forth with thee,
I'll give you rest"—His gifts are free!

His blessed rest! His promise sure!
It rings thro' centuries;
It gives the courage, trust and strength
To loving, watchful eyes.
His guidance here is always best,
We learn to lean on Him for rest.

Not rest from work, but rest in work
That's pleasing still to Him;
But how can rest be thus obtained?
By faith that's never dim.
How safe His promise still to test,
"Come, weary one, I'll give you rest!"

"Do all His sons have blissful rest?
Not all do realize
A present God—a Father near—
But far beyond the skies!
Some struggle on and hope for rest,
But God with us we're doubly blest.

"Lead Thou me on" should be our prayer
As dawns each coming day;
His angels doubtless watched o'er night—
His pleasure do alway.
He walks with those who "keep in line,"
Like Moses, too, their faces shine.

'Tis heaven begun to know Thou'rt near,
To know we're not alone,
Assured Thy grace and matchless love
Have made us all Thine own!
Oh, let us never stray away,
But kindly lead us all the way.

Talk not of wealth, of place or power,
They all are vanity;
Earth's noblest men are men of God,
And these He sets on high.
"The poor in spirit," God approves,
And walks with him who humbly moves
These have communion much with Him,
Their lives no more are dull or dim.

All things are ours, for we are Christ's,
And He, Himself, is God's;
Our bridegroom is the King of Kings—
With kings true wealth accords.
What we shall be He wisely hides,
But this we know, His love abides.
We'll see the form, "once marred," but fair,
His likeness bear forever there.

Laurel, Ont. J. W. SHAW.

Audubon's Hymn in the American Forests.

I keep my haunts within the woodland solemn;
My chartered comrade is the stainless beam;
My bed is made beside some old oak's column;
My goblet is the stream.
Whole years are mine in this majestic dwelling
Where Nature yet frowns back the sounding mart;
What waves of life forevermore are swelling
Their rapture through my heart!

But not for these I wander o'er the mountains,
And not for these I dare the hurricane;
And not for these I quaff the virgin fountains—
A prince of hill and plain!
Oh! mighty meanings from the mountain hoary!
All natural objects o'er me solemn roll;
These give the longed-for prize and sacred glory
Unto my pilgrim soul.

Amid the beautiful, the strange, the holy places,
What joy is mine to measure all the spaces,
And find the "prints" of Him!
Yon long, long river, like an anthem pouring;
Yon thoughtful silence of the lonely mere;
Yon eagle, to the sun divinely soaring,
All, all have meanings here.

To find and read them is my joy and duty;
Then hail, ye boundless scenes! forevermore;
How well I drink and drink your perfect beauty
Upon the virgin shore!
Oh! give me welcome, every woodland solemn,
And long sweet plain and mountain-piling sod;
For I pass by each stately forest column
"To learn the thoughts of God."

Rain in Summer.

In the country, on every side;
Where far and wide,
Like a leopard's tawny and spotted hide,
Stretches the plain,
To the dry grass and the drier grain,
How welcome is the rain!

In the furrowed land
The toilsome and patient oxen stand;
Lifting the yoke-encumbered head,
With their dilated nostrils spread,
They silently inhale
The clover-scented gale,
And the vapors that arise
From the well-watered and smoking soil;
For this rest in the furrow after toil
Their large and lustrous eyes
Seem to thank the Lord
More than man's spoken word.

Near at hand,
From under the sheltering trees,
The farmer sees
His pastures and his fields of grain,
As they bend their tops
To the numberless beating drops
Of the incessant rain.
He counts it as no sin
That he sees therein
Only his own thrift and gain.

—From Longfellow's "Rain in Summer."

THE QUIET HOUR.

Be Content.

O heart of mine, we shouldn't
Worry so!
What we've missed of calm we couldn't
Have, you know!
What we've met of stormy pain,
And of sorrow's driving rain,
We can better meet again,
If it blow.

We have erred in that dark hour
We have known,
When the tears fell with the shower,
All alone—
Were not shine and shower bent
As the gracious Master meant?
Let us temper our content
With His own.

For we know, not every morrow
Can be sad;
So, forgetting all the sorrow
We have had,
Let us fold away our fears,
And put by our foolish tears,
And through all the coming years,
Just be glad.

—James Whitcomb Riley.

Worries.

What people call "worries" are very common. Often they come from mere trifles; but they are not the less "worries" for that. Little things sometimes vex and trouble us more than great things.

"I am so worried with the children," says one who is the mother of a large family; "I cannot get a quiet moment."

"Something happened to worry me this morning, and I have felt upset all day," says another. "One thing or another is always coming to worry me," complains a third, taking a more general view, and setting himself down as more tried with worries than other people.

But, after all, worries depend very much on how we take them. What puts one person out for a whole day will hardly disturb another for a moment; and a lot in life that seems to one full of trouble and vexation is found by another peaceful and happy.

"Ah! I know that very well," cries Mrs. Sharp; "but I can't take things so quietly. There is Mrs. Meek, next door; come what may, nothing ever seems to put her out; but I'm not one of that sort."

Well, Mrs. Sharp, is not that just what I said? Worries depend very much on the way we take them. You agree with me, you see. Mrs. Meek takes them one way, and you take them another. And you grant they do not trouble her so much as they do you. Is not her way the best?

"Yes; but I can't take things as she does. I'm not one of those quiet folk; and when worries come I must be worried."

Stop! not so fast. I am not so sure there is any must about it. Do you strive against being worried? When things turn out amiss, or the children are troublesome, or any one says something that vexes you, do you try not to be vexed, or worried, or put out? For that is what Mrs. Meek does.

Again, do you watch against worries? You know they are likely to come. Do you prepare your mind for them, that you may meet them aright, and get the better of them? I am mistaken if your neighbor, Mrs. Meek, does not do this too.

Once more: Do you pray? I know your neighbor does that. Every day she begins with prayer, and every day she ends with prayer; and if anything comes to try her in the course of the day, then she prays too, if it be but a word or two, or a thought, just the lifting up of her heart.

Depend upon it, Mrs. Sharp, it is chiefly trying, and watching, and praying, that make your neighbor so much less worried by things than you are. Perhaps she may be of a quieter disposition by nature; but she never would have been able to meet the troubles of life as she does without God's help, and that she gets by prayer. She strives, she watches, she prays, and God helps her.

Now, perhaps you do not pray. I fear you do not; for I think you would not be so much worried if you did. Prayer is a wonderful help against worries. Try this plan. Begin to pray. Pray to God about this very thing. Don't be ashamed; don't be afraid. Open your heart to God; tell Him all that worries you. Make Him your friend. He is such a friend!—so kind, so patient, so gentle!—always ready to listen and to help! Not a trouble can come but by His will. He can prevent troubles from coming at all, or soften them when they do come, or help you to bear them. He can do everything. Pray to Him regularly every day. And pray, besides, whenever you are tired. A spirit of prayer and a worried spirit can hardly be together.

I venture to say that if you thus take your neighbor's way, you and she will be more alike about worries; and I am sure you will be happier than you are.

Holiday Notes.

Mollie and Fan seem to be having a very good time in Old England, and are making the most of their opportunities, sharing their good things every now and again with the readers of the *ADVOCATE*. But they are not the only Canadians who are "gone a-gadding" from the cities and towns of our Dominion during this holiday season. I say advisedly from the cities and towns, for, judging by what one sees of the acres of golden grain being gathered in by the busy harvest workers as the cars rush by the farm homesteads of Ontario, summer is hardly a vacation time for the farmer or his family. Let us hope that they get their turn too when they assemble around the Christmas board or when they visit the larger centers, to the prosperity of which they so largely contribute.

I too am having my little outing. I write from Placidia, on the shore of one of our big lakes. Do not look on your map for Placidia. If you do you will not find it. Its real name does not suit it one bit, and I have made free to give it a more descriptive one. I had nearly decided upon calling my temporary quarters "Comatosa," but I think that that would, at this season of the year anyway, be putting it too strongly, and you might be tempted to come here under the impression that you could have in unlimited measure all the "dolce far niente" of life which your heart could desire, whereas, unless you filled your ears with cotton wool and had an inner self impervious to all sounds, into which you could retire at will, there would not be much "dolce far niente" at any summer hotel that I have ever visited on this side of the Atlantic, and certainly not at "Happy-Go-Lucky House," at which I am putting in, in spite of drawbacks, a very pleasant fortnight. The inhabitants keep all that kind of thing for themselves, and the Placidia of ten years ago is almost the Placidia of to-day, so slow are its people to realize or to avail themselves of the magnificent natural advantages afforded them by its situation and surroundings. True, ten years ago there may have existed one or two out of the eighteen or twenty cottages which are dotted along the shore, whilst the existence of even "Happy-Go-Lucky Hotel" is a sign of progress, but it, like the quiet little town itself, falls far short of its possibilities. Both landlord and landlady are the kindest and most obliging of people—if you ask for anything and they happen "to have it handy," you will get it, otherwise you go without. If you ask for an extra pillow or bed quilt, it will probably be whipped off from the bedroom which happens for the moment to be without a guest. If the salt or pepper pot, out of the extraordinary-looking cruet-stand in the middle of your especial table, be empty, that of your neighbor is borrowed from, whilst the quality of your table linen may leave something to be desired. Still, although these are lapses which could easily find a remedy, Placidia has its glorious lake, its bracing air and its unrivalled stretch of shore, to make one forget one's fastidiousness. It is not Nature which is asleep. Nature is wide-awake enough, and to those who love Nature for her own sake she offers an unstinted welcome and many delights. As I write, I hear the lapping of the waves and their gentle swish as they follow one another in quick succession upon the beach. Yesterday their mood was more self-assertive and boisterous, rolling in and out with a bluster which plainly said: "We will stand no nonsense from you city folks. When you want to bathe in us, you must choose our time, not your own—just as you would have to do if you were going to have a dip in the salt waves of the big Atlantic." To see the monstrous logs—huge giants of trees—embedded in the sand, one can gather somewhat of the mighty power of those waves when lashed into fury by the tempest, but to the summer visitor, to the little bare-legged toddlers who paddle in and out of them, spade and bucket in hand from early morn till sundown, the same waves murmur a gentle welcome, and hide no holes or sudden declivities which could endanger their lives or make a peril of their pleasures.

What might not a judicious and intelligent use of capital do for Placidia? Smaller places, with far fewer local advantages, are attracting summer visitors, whilst one rarely meets any but people from within an hour or so by rail who come here from year to year. The sleep of Rip Van Winkle seems to have fallen upon those in whose hands one can but suppose the matter rests. I wonder if the authorities or the land-owners or others concerned

are not going to bestir themselves now that the Manitoulin and North Shore Railway is in contemplation? What possibilities it would open up for Placidia! It might then be worth while for the steamboats to call for or leave passengers at reasonable hours, instead of at 4 or, at latest, 5 a. m., even those hours being most problematical. It might be worth while for the present railway to give more than one good train service a day, and to afford opportunities for shorter excursions to places of interest within reach of Placidia. It might be worth while to repair the ankle-wrenching holes in the really fine, substantial and very long pier, which are a menace to those who go a-fishing from its sides. As it now is, no vehicle could convey passengers or luggage to any steamer without disaster to its wheels or to the animal which draws it, and yet it might be made such an excellent pier and by its means the harbor be doubled—nay, quadrupled—in value. Standing at the proper angle, and as night closes in around Placidia, the bright eyes of no less than four lighthouses blink weirdly

Nature's Widespread Hall.

There are many pieces of great good fortune for some favored ones in this world. It is well to have been born rich or handsome, or to have the talents which command the prizes of life. But I claim it is a no less happy and supreme gift to have been born simply a "child of the universe," to have known in early childhood, brooks, mountains and sea, to have felt the companionship of the sky, and in listening to its thunder to have heard "deep calling unto deep." Ask some of our farmers' sons who are now filling our legislative halls, and entering some of the high walks of life, if their grand banquet halls, decorated with costly orchid and rare palms, and tables laden with every conceivable luxury, will make them forget the dear old cinnamon roses and rioting multiflora which grew wild about the old home, or the taste of the homemade bread and spring butter? And oh, how good the mushrooms did smell as they were frying on the pan! Or ask the traveller if the image of Mont Blanc or any other wonderful piece of French or Swiss scenery had the power to efface the memory of the basswood trees at the foot of the garden, with the indigo birds flitting in and out among the branches, and the bees hovering around, eager for a dip into the little delicate balls before they were yet out. Then the wild roses—how they crept up and pushed their pink faces through the fence, and, with the dew upon them, was there any perfume that could rival the wild-garage blossoms?

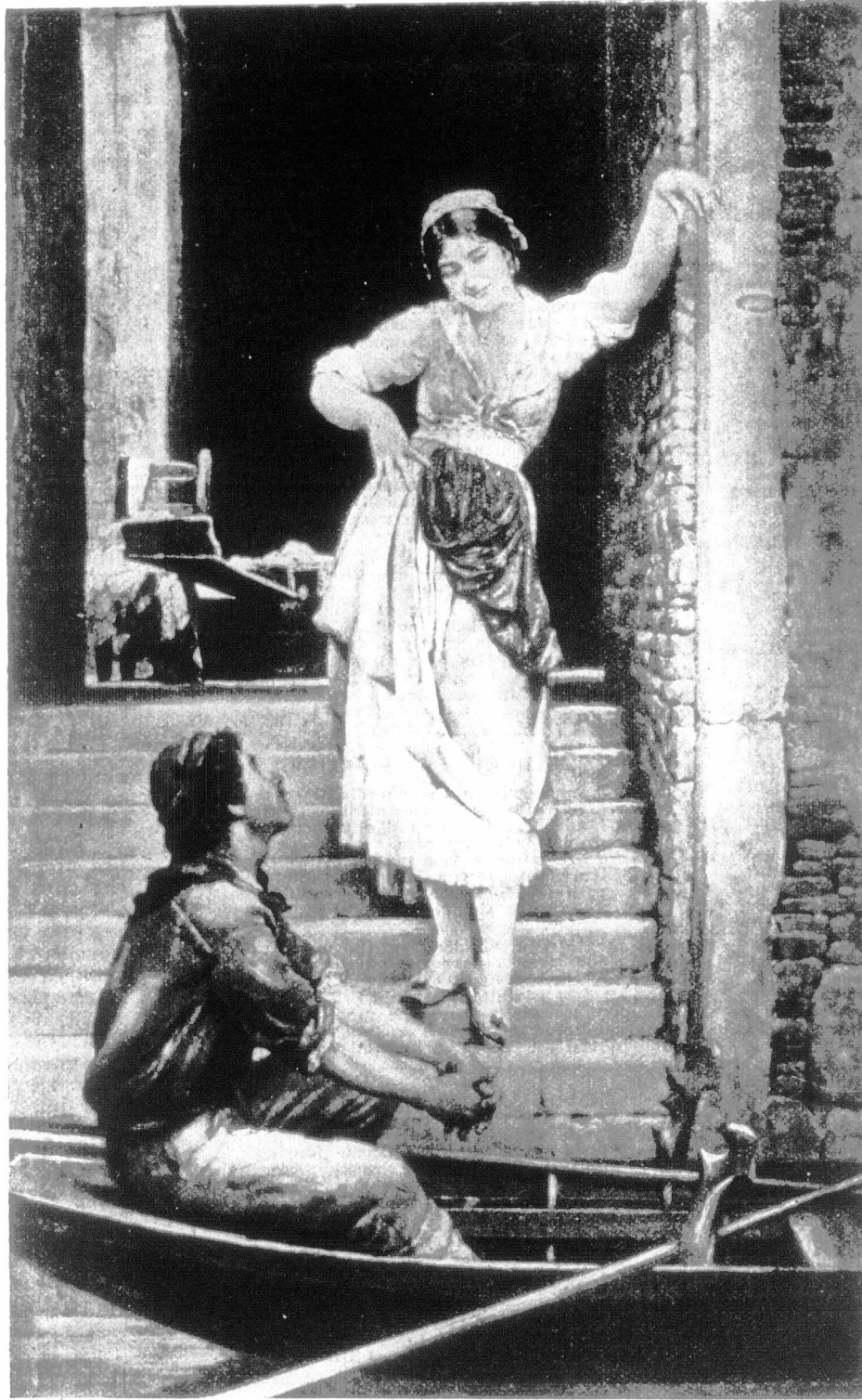
Ask the boy who has just taken his B. A. degree at the university, if he were not quite as proud the day his father let him drive the mower for the first time, or the day his pig won first prize at the village show, as he was the hour he gained the "sheepskin"? Thus visiting in fancy the meadows of his childhood—will he not often wonder if in such a spot the pastorals of Virgil might not have been written, but instead of the kids, there would appear perhaps a Shropshire lamb, and the voices of our catbird and robin instead of the oaten pipe and cithara. These will-o'-the-wisps of childhood are dear to those who have long left the farm. "There is sanctity in the past because of the chronicles it retains," but to us who are still living amidst the same scenes day by day, will there be no such pleasures chronicled in our calendar—nothing but worries, cares and hard work? Perhaps not yet, but when we are old and gray there will loom up before us veritable holy days which will stand apart from all others, after the manner of old saints, each in its niche with its separate aureole around its head, when the sky looked so blue and our hearts were young. Mrs. Child tells us that our hearts will never grow old if we take a lively interest in the pairing of birds, the reproduction of flowers, and the changing tints of the autumn leaves. Some very practical people will say: "What rubbish! We live in a common-sense age, not in the reign of the sylphs: our sceptre of rule is something more substantial than a sprig of flowers." To those who would crush the seed (sown in the heart of every child) of love of nature, I can only say they miss the little bit of heaven which comes into this busy old world through brooks, mountains and sea, flowers, trees, and all nature beautiful.

The next time I write I am going to tell you about a scene I intend making out of ferns, prairie grasses, etc., which I hope will materialize into something "stunning."

ONE OF THE GIRLS.

"An Offer."

Pedro pleads and Annetta listens, and by the pleased look upon her face it is evident that he is not pleading in vain. She has heard the faint splash of his oars as the little boat has floated quietly onwards to its accustomed moorings at the water-lapped entrance to her Venetian home. Annetta, at the first sound of her lover's voice, has dropped her work, and, without hesitation or coquetry, has responded to his greeting. The definite question Pedro asks Annetta has been too long hovering upon his lips for her not to be fully prepared for its import, and therefore it is safe to predict that her answer will certainly be, "Yes." Her smile says it, her very attitude says it, and in another moment, when Pedro has ended his story of the pretty little nest he has prepared for his bonnie mate, her lips will say it too. May they have a long and happy life together. H. A. B.



"AN OFFER."

or wink quizzically at the gazer, according to his mood or fancy, as he sits upon the upturned drift-wood which in fantastic shapes invites him to a good-night reverie before he turns in at "Happy-Go-Lucky House" for a night's repose, which he has probably ensured for himself by taking into his lungs the blessed oxygen of heaven's own bestowing, a free gift which happily does not require the intervention of either capitalist or corporation to provide. If it did, it appears to an outsider that the people of Placidia would have to wait for its share until every other place in the Dominion had been fully supplied. But let us prophesy a speedy awakening to the merits of this most delightful spot and a prosperous and happy future for its kindly and courteous inhabitants. H. A. B.

Teacher—When the wise men came to the king what did they say?
 Boy—They said: "O, King, live forever!"
 Teacher—Quite right; and what then?
 Boy—And immediately the king lived forever.
 Young Menial Student (to his sweetheart)—Do you know, Julia, that the human heart is equal to the lifting of 120 pounds every twenty-four hours?
 Julia (demurely)—Well, that's just my weight.

Travelling Notes.

My last mention was of Albani, and with Albani I will take up the thread of my story today. She, with Ben Davies, Andrew Black, and other noted soloists, accompanied by an orchestra numbering 500, with 3,000 singing in the chorus, delighted us with their rendering of Sir Arthur Sullivan's "Golden Legend," in the concert hall of that wonderful building, the Sydenham Crystal Palace. Fan and I literally thrilled with pride when we saw upon the 5,000 or more upturned faces how powerful to enthral were the full rich notes of our own sweet Canadian songstress, as she gave the most perfect interpretation of her part. Such music we had never heard before. It was the treat of a lifetime. And what can I say of that glass wonder, the Crystal Palace itself, with its grounds of 200 acres, its huge concert halls, and its other halls for exhibitions, all more or less of a refining and educative nature? We might almost call the Crystal Palace one of the intellectual lungs of London, for of the multitudes who pour into it daily, no one can be so dense as not to carry away with him some mental and moral, as well as merely physical, benefit. Here, again, order and method prevail, and the crowds are manageable crowds, in the main good-natured and self-respecting. Nearly all tastes are considered and catered for, no less than 100,000 people having attended a football match, played by noted players, one day soon after our arrival in England. The fireworks baffle description, and no one who has not seen the display at Sydenham can realize what marvels of beauty can be wrought by this scientific "playing with fire," whilst the grounds when festooned with thousands upon thousands of colored lights, become a veritable fairyland.

I wonder if all Canadian women who visit England's metropolis feel drawn as we do to its beautiful parks, each with a beauty of its own, a veritable oasis, not in a wilderness, but amidst overcrowded thoroughfares, providing a hush and quiet, with an almost startling suddenness, out of the noise and hubbub of the streets. Rest for the weary under the shade trees; beauty for the eye to dwell upon in the artistically laid-out flower beds; and if one wants a peep at fashionable London, at the "upper ten," as they drive in a bewildering maze of well-appointed carriages, from the four-in-hand, with its titled coachman, to the dainty park phaeton, with its well-matched pair of costly ponies, one can have that too, by paying a penny for one's chair and gazing until one is tired. Royalty drives by; we know it is coming by an almost imperceptible movement among the well-dressed people seated or walking around us; no rush or crowding, for it is a sight of daily occurrence. Women of rank, men of note, pass, as in a moving panorama, but it is sometimes not easy to recognize them, for it is not always those whose equipages are of the most elaborate who are the ones we most desire to see. Celebrities get tired of public recognition, and protect themselves by the simplicity of their environment when they take their drives or rides or walks abroad in Hyde Park or Kensington Gardens.

To get to that other spot so full of fascination for all lovers of good horses—the far-famed Rotten Row, with its softly-prepared roadway of a material which I suppose has given it its somewhat unsavory name—you pass preferably through the gateway at Hyde Park Corner, the nearest entrance to the Row, the Ladies' Mile, and the Serpentine. Opposite it is the equestrian statue to the Duke of Wellington, and near by, amongst several other princely residences, is Apsley House itself. But we have come not to see them only; we want to see the horsemen and horsewomen, as well as the dainty little girls on their toy ponies, their grooms leading them, often at a spirited gallop, by a firmly-held guiding rein. If you want to see priceless, well-groomed horses, with skins of satin and perfection of shape and training, go to Rotten Row, and if you want to see how horses can and should be ridden, if horse and rider are to show to the best advantage, again I say to you, go to Rotten Row, for, let me whisper it, no one, especially a lady, who is not well taught to ride, and who is not well mounted and well habited, would venture to appear either upon the Ladies' Mile or upon any other part of Rotten Row.

From quite another point of view, but one also of still greater interest, was a visit we paid to the General Post Office, over every department of which we were courteously shown, a veritable hive of industry, affording employment to 4,000 people, as well as 5,000 more in the workings of the telegraph in connection with the post office. Many of these employees are women. Indeed, in the post and telegraph offices of the United Kingdom now, no less than 33,918 women are employed, the experiment of throwing open to them such a means of bread-winning, which was begun in 1870, with the full approbation of Her late Gracious Majesty Queen Victoria, having proved a very great success. We were told that the first post office in which telegrams were entrusted to women was the West Strand office, and they eventually became so expert that they were employed

in signalling the Queen's speech, which was then viewed as an important test. Naturally, Fan and I, being women, were pleased to have such a record for our notebooks. Our last entries on post-office day were of the hospital where all broken packages are repaired before being sent further on their way, and of the expert whose powers of deciphering almost undecipherable caligraphies are almost wizardlike, for they come to him in all languages and with lines and dots instead of words, and often with errors which are miracles of stupidity. How he does it is his own secret, and probably the result of long experience, but he seldom fails to read the riddle. Adieu for the present.

MOLLIE.

Home Hints and Helps.

A teaspoonful of turpentine put into the tub in which bottles are soaking, will greatly aid in making them brilliantly white, and will be a great help when clothes have become very yellow for want of use.

If people would only remember that every pot, pan, or any utensil that has been used for cooking, should be washed immediately, while it is hot, what a lot of unnecessary labor and time would be saved.

An easy way to clean a white straw hat, that has become discolored, is to rub it over with half a lemon dipped in flour of sulphur, and then leave it to dry in a shaded place.

A tumbler of cold water (not iced) is an excellent thing before breakfast in the morning. It washes out the stomach, prepares the food, and tends to regulate the bowels.

A small bag of charcoal hung in impure water will purify it, and it is well to keep such a bag in the cistern; water filtered through charcoal may also be rendered perfectly pure.

A teaspoonful of vinegar boiling on the stove will counteract the smell of strong food; a teaspoonful of ground cloves on a few hot coals will produce the same result.—(Canadian Housekeeper.)

Window Boxes.

Window-boxes are oftener failures than successes. This happens in nine cases out of ten because they fail to get the amount of water they need. It should be borne in mind that a box of ordinary size contains a good deal of soil, and a pint or quart of water will not go far in moistening it. It should also be remembered that evaporation is always rapid, because of the exposure of the box on all sides to the action of the air and wind. This being the case, it will be readily understood, if the matter is given a little thought, that a large amount of water will be required daily to keep the soil moist all through. A painful will not be too much—in very hot, dry weather, not enough. Never get into the little-and-often habit. It is sure death to the plants. When water is given, let it be given liberally. Apply so much that some runs out at the ends and bottom of the box, if there are cracks and crevices there to allow it to run through. If a sufficient quantity of water is used, there is no reason why plants cannot be grown as successfully in window boxes as in pots.—(Canadian Housekeeper.)

Humorous.

Jones, having sent a stupid servant to do an errand, was greatly annoyed on finding that he had done exactly the opposite of what he had been ordered.

"Why you haven't common-sense," he remonstrated.

"But, sir—"

"Shut up! I should have remembered that you were an idiot. When I'm tempted to send a fool on an errand again, I'll not ask you—I'll go myself."—(Judge.)

A London bishop had gone down into the country to visit a charitable institution, into which poor lads had been drafted from the east end of London, and, in addressing them, he congratulated them on the delights of their new residence. The boys looked unaccountably gloomy and downcast, and the bishop kindly asked:

"Are you not comfortable? Have you any complaints to make?"

At last the leader raised his hand.

"The milk, my lord."

"Why, what on earth do you mean? The milk here is tenfold better than you ever had in London!"

"No, indeed, it ain't!" cried the boy. "In London they always buys our milk out of a nice clean shop, and here—why, here they squeeze it out of a beastly cow!"—(Tid-Bits.)

Professor (inspecting the apartments of the students)—It is dreadfully cold here! How do you manage to put up with it?

Student—Ah, professor, we have only to think of the exam, and we begin to perspire!

"How are you getting along in the Masonic lodge, Cumso?"

"O, I'm moving upward by degrees, Fangle."

Pat trotted down town to a jeweller's to buy a ring for his wife-to-be. After waiting until he could obtain the ear of the clerk, Pat whispered hoarsely, "Give me the best wedding ring you have in the shop." "Eighteen karats?" queried the clerk.

"No," snapped Pat, drawing back in an offended manner. "Ain't no onions, if it's any of your business."

Annie B. went to Hamilton to get her photo taken. On receiving the proof her friends advised her to go and sit over again, as it was not a good picture. She went back and told the photographer what was wanted, and was informed that to sit over again would cost her half a crown. She replied—"To save the half-crown I'll just stand."

The Poet's Song.

The rain had fallen, the poet arose,
He passed by the town and out of the street;
A light wind blew from the gates of the sun,
And waves of shadow went over the wheat;
And he sat him down in a lonely place,
And chanted a melody loud and sweet,
That made the wild swan pause in her cloud,
And the lark drop down at his feet.

The swallow stopt as he hunted the bee,
The snake slipped under a spray,
The wild hawk stood with the down on his beak,
And stared with his foot on the prey;
And the nightingale thought "I have sung many
songs,
But never a one so gay,
For he sings of what the world will be
When the years have died away."

—Tennyson.

Recipes to Remember.

(Canadian Housekeeper.)

WATER COOKING

One of the secrets of palatable food is knowing how to cook water. The secret is to put fresh filtered water into a clean kettle already warm, to let it boil quickly, and to use it the instant it is boiled. To let it steam and simmer means to have a combination of lime, iron and dregs in the kettle, and all the good water evaporated into air.

TO MAKE GINGER BEER.

Five pounds of white sugar, the juice and peel of three or four lemons, five ounces of bruised ginger, four and a half gallons of water. Boil the ginger in one gallon of water for half an hour with the peels of the lemons; then add the sugar and lemon juice, with the remainder of the water, at a boiling heat, and strain through a cloth. When cold add the quarter of the white of an egg beaten up with a small quantity of the liquid. Let the whole stand four days; then bottle. This will keep good many months.

HOMEMADE SODA WATER.

Boil together, five minutes, two pounds and a fourth of granulated sugar, one ounce and three-fourths of tartaric acid (powdered), one pint of water, and the juice of half a lemon. When nearly cold, beat into the syrup the white of three eggs, beaten until foamy, and half an ounce of flavoring extract (ginger is particularly good). Store in a fruit jar, closely covered. When ready for use put three tablespoonfuls into a glass, standing on a plate, and filled to three-fourths its height with cold or iced water; add one-fourth teaspoonful of soda; stir and drink while it effervesces.

CREAM SPONGE.

Three tablespoonfuls of gelatine, one pint of milk, the yolks of three eggs, three tablespoonfuls of sugar. Soak the gelatine in enough milk to dissolve it; heat the rest of the milk, and add the gelatine to it. Beat the yolks and sugar together and add to the gelatine. Flavor with vanilla. Take it off the stove, and add the whites, which have been previously beaten.

LEMON PIE.

One teacup powdered sugar, one tablespoon butter, one egg, one grated lemon (removing seeds and white skin), one teacup boiling water poured on one tablespoon cornstarch dissolved in cold water; cream the butter and sugar, and pour on them the hot cornstarch. When quite cold, add the lemon and beaten egg. Bake in an open shell. This makes one pie.

How to Arrange Flowers.

In arranging flowers, to get their best effect, certain rules should be followed, and perhaps the first among them is to avoid crowding the blossoms together. It is wiser never to tie the stems, as this often gives a stiffness to the arrangement. Use plenty of foliage. Put your flowers in very lightly. Use artistic glasses. Do not use more than two different kinds of flowers in one decoration. If large flowers are used, there should be only one variety for the room in which it appears, and by combining it with green, sometimes in masses, sometimes in single blooms, the result will be beautiful. Arrange your colors to form a bold contrast, or, better still, a soft harmony. The aim of the decorator should be to show off the flowers, not the vases that contain them; therefore the simple ones are more preferable to even the most elaborate. Glasses for dinner should be clear glass. There is no better shape than that like the lily, wide at the top and narrowing toward the base.—(Canadian Housekeeper.)

Pity the Horses.

On a very hot day keep a sponge, a towel or your handkerchief soaked with pure cold water on the top of your horse's head.

If your horse's back is sore use pure cold water on it freely every time the saddle is removed.

In hot weather tell your herdic or cab or carriage driver to drive slowly, especially up hills, and give him five or ten cents extra for doing it.

In hot weather be sure your check-rein is loose and your horse frequently watered.

In hot weather a mouthful of grass, or a piece of bread, or a cracker even, will help your horse wonderfully.—(Geo. T. Angell.)

How to Make Good Toast.

Toast, something that is usually rather slighted, has risen almost to the dignity of a specialty. Directions: The bread, cut thin and carefully trimmed, is laid in large bread pans, each slice singly, and a row standing around the edge, and then put in the oven to brown. It comes out a rich golden color and deliciously crisp.

THE CHILDREN'S CORNER.

"A Bold Defence."

This picture speaks for itself, doesn't it? What a fierce creature a hen is when her chickens are in danger. We all know that it is not safe to meddle with her very familiarly. She is too angry to notice that one of her babies is suffering from her own violence. Perhaps the cowardly doggie has already stolen one of her brood. In that case he deserves all he is getting. However, it is never dignified to lose one's temper, and I think the chickens would have been perfectly safe under their mother's wings, without all this display of anger, don't you? C. D.

Our Prize Competitions.

Prizes will be given for the best holiday letters sent in before the end of September. Any one under sixteen may compete, and the competitors will, if possible, be divided into classes according to age.

Describe your holiday adventures—real or imaginary—write your name, age and address on the back, and send to Cousin Dorothy, Box 92, New-castle, Ont.

The third and fourth class essays in our last competition will not be published, as our space is limited. COUSIN DOROTHY.

PRIZE ESSAY—CLASS II.

Interesting Stories of Animals.

Here is a story which many believe impossible—nevertheless it is true:

There once lived a country gentleman who owned a beautiful Newfoundland dog, named Ponto.

He was one day riding along with a friend, and was telling of Ponto and the feats he could perform. To prove that he was a smart dog, he marked a shilling and put it under a large stone, after showing him the coin. When they had gone about four miles, they sent Ponto back after it. The gentlemen rode home, and as Ponto did not appear, his master began to be uneasy, fearing some accident had befallen him.

Meanwhile, Ponto was scratching around and occasionally barking in his eagerness. Just then two gentlemen rode along. One of them, thinking that some animal had taken refuge under it, dismounted. Rolling over the stone, he found the shilling and put it in his pocket. Then mounting, he rode off, still wondering what the dog had been after. Ponto, faithful to his duty, followed them the last twenty miles of their journey. They stopped at a small inn. At night, Ponto saw them enter a small room on the lower floor. There was a large window, which was left open. Through this he jumped, seized the man's breeches and ran home.

His master heard a scratching at his door in the morning, and on opening it, in rushed Ponto with the breeches. On examination, he found not only the shilling, but a watch and purse. Not wishing to have his dog a thief and himself the receiver of stolen goods, he advertised the things. After awhile the owner turned up and matters were explained. The only way they could account for Ponto's not attacking the stranger was his generous nature.

There was once a young man who took up a lodging in Edinburgh. He was a poor man, and had for his only companion a little gray dog, named Bobbie. At the beginning of winter, Bobbie's master took sick and died in a few days. The neighbors came in and laid the young man in his coffin. On the day of the funeral they thought it very sad that he had no friends to mourn for him, but they did not see the faithful little dog follow his master to his grave. After the rest had gone, Bobbie lay down on his master's grave. When the keeper of the churchyard came around it was snowing. When he passed the new grave, he saw Bobbie lying on the grave. He took him home and gave him all he wanted to eat. In the morning, Bobbie followed the keeper to the grave, where he would lie all day, and then follow the keeper home at night. This was done for many days, but one night the keeper found him dead. Many rich ladies had heard of Bobbie, and had come to see him. One of these ladies, hearing of his death, erected a beautiful drinking-fountain. On the top of it was a bronze figure of Bobbie. Below him, in gilt letters, is his history. If any one is in Edinburgh and goes to Greyfriar's churchyard, he will see the monument of "Greyfriar's Bobbie."

My grandfather has a cat, named Jean, that is very clever at opening the door and letting herself in. She climbs upon the window sill, and, steadying herself with one foot, puts the other on the latch which opens the door. The only way they can keep her out is by locking it.

One of our neighbors had a cat that always slept between the dog's paws, and when they gave the dog away the cat died of grief.

Although the buffalo may look ferocious in aspect, he sometimes shows great affection for his kind. Three hunters were riding along one side of a river one day, when they saw two buffalo bulls on the other side. They rode across and shot one bull in the leg. The other one stayed by its side without flinching. The next time they shot it through the lungs, and the other one turned round and fought. Meanwhile the

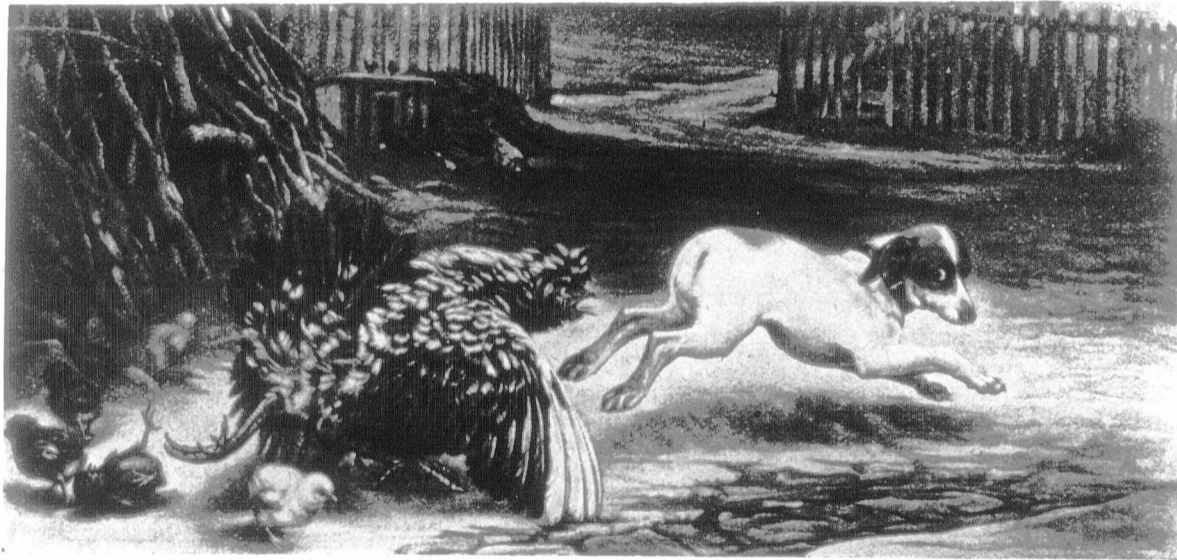
wounded one was going on. When it came to a bog, it fell headlong down the steep bank. Not till then did the brave buffalo seek safety by flight. As he vanished behind the wood, the hunters took off their hats and gave three parting cheers. ROY HARRIS (aged 13).

Ingle Nook Chats.

MY DEAR GUESTS,—

To-day I said to a girl friend who sat by me: "What shall I write about in the Chats? Do give me an inspiration!" "Write about friendship," she replied. But what can I say of a subject of which Goldsmith says, "Few have been more written upon and less understood."

Of course, I do not claim to be able to trace all its causes and effects, but, having tasted some of its sweets, I recommend all to cultivate this slow-growing plant. Attachments of this sort too hastily formed often have but a transient existence, although I have known cases where a chance conversation has awakened such congenial sentiments that a tie of friendship was then and there formed that time has but more fully cemented. The finding of a friend is perhaps more easy than the keeping when found. To secure the latter end one should be all one can to one's friend, but do not expect him to set you up on a pedestal and worship you. You have faults (if not, then you are not human), then make some allowance for the weaknesses of your fellow-mortals. Where real friendship exists, it seems to be pleasure enough to be in the presence of one's friend or to feel the touch of his hand without the use of the oft-times clumsy vehicle of words. Such friendship is rarely met with, and is not the outcome of a day or a month, but has grown with time. He is fortunate who possesses a friend who will cling through blackest adversity, and cheer him with words of encouragement.



"A BOLD DEFENCE."

ment when fate seems most unkind. If any of you are so blessed as to have such a treasure, take Shakespeare's advice and "Grapple him to thy soul with hooks of steel."

There! One just gets nicely launched when one awakens to the fact that there is no more than space in which to speak of

OUR COMPETITIONS.

The result of Contest XI. will no doubt be interesting to several onlookers as well as to the eighteen guests who contributed to it. Of these, three answered nineteen numbers correctly, but not one sent a complete list. Many of the answers, while not the same as those intended, were clever, and sometimes amusing. "A mean dog" had the greatest variety of answers, viz.: Curtis, Curran, Kerr, Foxe, Wolfe, Barker, and Hogg.

The original answers are:

- 1.—Taylor.
- 2.—Pope.
- 3.—Holmes.
- 4.—Hood.
- 5.—Southey.
- 6.—Shelley.
- 7.—Lowell.
- 8.—Akenside (ache inside).
- 9.—Harte.
- 10.—Goldsmith.
- 11.—Curtis (cur 'tis).
- 12.—Steele.
- 13.—Swift.
- 14.—Dickens.
- 15.—Holland.
- 16.—Burns.
- 17.—Bunyan.
- 18.—Longfellow.
- 19.—Nye.
- 20.—Inglow (ingle-low).

The best lists were sent by Miss Mary Gillies, Niagara, Ont.; Miss Edna Shaver, Ancaster, Ont., and Miss S. Elsie Richardson, Bethany, Ont. Other papers, all of which were good, were received from "Golden-rod," F. L. Sawyer, Mildred Healy, M. C. B., Mary Hunter, "Trifle," Anna M. Archibald, Nettie McCallum, Effie Thomson, Alvin W. Field, Ethel McCrear, Robt. B. Forsythe, H. S. Stayner, A. L. McDiarmid, Chester Malcolm, and Tillie B. Blair.

Contest XIII., the essay on "Country versus City Life," ought to bring out some excellent articles, and there is a whole month yet to do the work, as the contest is open until Sept. 5th. Being divided into classes, the little people have just as good a chance of winning a prize as the grown-ups. Come then, you little country blossoms, and speak for yourselves; do not be put to shame by your city cousins from the hothouse.

Address, as before, to

THE HOSTESS,

Ingle Nook Chats, Pakenham, Ont.

Our Library Table.

Lying upon our table is an admirable Canadian publication which the Editor of the Home Department can honestly recommend to its readers. It is called "The Canadian Housekeeper: a Woman's Magazine, devoted to Home Economics," and it treats of everything most helpful to women within and without the circle of their homes. The large list of contributors to its pages, comprising the names of some of the best known of our Canadian writers and most prominent men as well as women, is a guarantee of its merit and comprehensive usefulness, whilst its modest price (10 cents a copy or \$1 a year) brings it within reach of every housewife. Its page of "Home Hints and Helps" is alone worth the money.

Upon the subject of the need of practical training before a young wife enters upon the new responsibilities of her married life, the "Canadian Housekeeper" quotes the following remark of a butcher: "Fashionably-dressed women come in here every day who don't know lamb from mutton, or a hen from a rooster! No wonder men have dyspepsia! I find that men know more about the quality of foodstuffs than women do. Many of the latter don't even know the few simple tests that might help them to distinguish an old fowl from a young one; and about meat they're greener yet! A young woman came in here the other day and asked for two pounds of veal cutlets. I showed her the loin I proposed to chop the cutlets from, and she remarked, 'Yes, that's very nice, but isn't it rather thick to fry?'"

Her Grandmother's Way.

An experienced washer told me when I remarked upon her somewhat unusual manner of hanging clothes upon the-line, that it was her grandmother's way.

"Washing, in old times, was one of the fine arts," said my friend. "My grandmother always hung such garments as nightdresses and shirts by the shoulders. She used to say that if water leaves a mark by settling anywhere, it is better that it should be in the hem, where it is less noticeable.

"If it was a clear, sunny day, she left a good deal of water in her clothes when she wrung them the last time, thus giving the sun a chance to draw out the stains.

"People often leave their clothes out after they are dry, to whiten; whereas the sun gets in most of its good work while the clothes are wet. Repeated wetting is necessary if you wish the sun to assist in the whitening process.

"My grandmother also briskly shook each garment before she hung it out. 'Clothes well shaken while wet are half ironed,' she used to say. This was before the day of clothes-wringers, which leave those fine wrinkles so hard to smooth out after clothes are dry. She claimed that colored clothes fade less if washed in the water in which other clothes have previously been washed. My experience adds that if colored fabrics are given a good soaking in strong salt and water, in the proportion of about two cupfuls of salt to two-thirds of a pail of water, before putting them into suds, they seldom will fade. This, however, is one of the things about washing which my grandmother did not tell me, but which I have learned from my own personal experience."

The line full of snowy clothes before me was sufficient guarantee that this woman's way, if not her grandmother's, was worth patterning.

HELEN M. RICHARDSON.

Humorous.

A son of the Emerald Isle, being hard up, with only the modest sum of three halfpence on his person, wanted a shave badly. So going into a barber's shop, he planted down his coins, and told the man to shave him as far as the money went. The barber set to work, with a twinkle in his eye, and shaved one side of his face only, and told Pat that he was finished. Pat asked the reason why he did not finish the other side as well, and received the reply that as he had only paid half-price, therefore he only got a half shave. Pat went away, and shortly returned with a saw and cut the barber's pole outside the door in two. The barber, running out, angrily demanded the reason for his action. "Arrah, now," retorted Pat, "Shure, it's to let the people know you're only half a barber."

An American, who had never paid more than 25 cents (one shilling) in his own country to see an exhibition, went to the theatre to see "The Forty Thieves." The ticket-seller charged him two shillings. Passing the ticket back, he quietly remarked, "I guess you can keep it, mister; I don't want to see the other thirty-nine; and out he marched with true American dignity.

While on the march with General Macdonald's Highland Brigade one of the soldiers was grumbling at having no tobacco, when his officer remonstrated with him thus—"Why don't you leave off grumbling? You are not the only one without tobacco. I'm smoking tea." Highlander—"That's nothing, sir. In Aberdeen they smoke haddocks."

THE FARMER'S ADVOCATE. The Editor of the Home Department can honestly recommend to its readers. It is called "The Canadian Housekeeper: a Woman's Magazine, devoted to Home Economics," and it treats of everything most helpful to women within and without the circle of their homes. The large list of contributors to its pages, comprising the names of some of the best known of our Canadian writers and most prominent men as well as women, is a guarantee of its merit and comprehensive usefulness, whilst its modest price (10 cents a copy or \$1 a year) brings it within reach of every housewife. Its page of "Home Hints and Helps" is alone worth the money. Upon the subject of the need of practical training before a young wife enters upon the new responsibilities of her married life, the "Canadian Housekeeper" quotes the following remark of a butcher: "Fashionably-dressed women come in here every day who don't know lamb from mutton, or a hen from a rooster! No wonder men have dyspepsia! I find that men know more about the quality of foodstuffs than women do. Many of the latter don't even know the few simple tests that might help them to distinguish an old fowl from a young one; and about meat they're greener yet! A young woman came in here the other day and asked for two pounds of veal cutlets. I showed her the loin I proposed to chop the cutlets from, and she remarked, 'Yes, that's very nice, but isn't it rather thick to fry?'" Her Grandmother's Way. An experienced washer told me when I remarked upon her somewhat unusual manner of hanging clothes upon the-line, that it was her grandmother's way. "Washing, in old times, was one of the fine arts," said my friend. "My grandmother always hung such garments as nightdresses and shirts by the shoulders. She used to say that if water leaves a mark by settling anywhere, it is better that it should be in the hem, where it is less noticeable. "If it was a clear, sunny day, she left a good deal of water in her clothes when she wrung them the last time, thus giving the sun a chance to draw out the stains. "People often leave their clothes out after they are dry, to whiten; whereas the sun gets in most of its good work while the clothes are wet. Repeated wetting is necessary if you wish the sun to assist in the whitening process. "My grandmother also briskly shook each garment before she hung it out. 'Clothes well shaken while wet are half ironed,' she used to say. This was before the day of clothes-wringers, which leave those fine wrinkles so hard to smooth out after clothes are dry. She claimed that colored clothes fade less if washed in the water in which other clothes have previously been washed. My experience adds that if colored fabrics are given a good soaking in strong salt and water, in the proportion of about two cupfuls of salt to two-thirds of a pail of water, before putting them into suds, they seldom will fade. This, however, is one of the things about washing which my grandmother did not tell me, but which I have learned from my own personal experience." The line full of snowy clothes before me was sufficient guarantee that this woman's way, if not her grandmother's, was worth patterning. HELEN M. RICHARDSON. Humorous. A son of the Emerald Isle, being hard up, with only the modest sum of three halfpence on his person, wanted a shave badly. So going into a barber's shop, he planted down his coins, and told the man to shave him as far as the money went. The barber set to work, with a twinkle in his eye, and shaved one side of his face only, and told Pat that he was finished. Pat asked the reason why he did not finish the other side as well, and received the reply that as he had only paid half-price, therefore he only got a half shave. Pat went away, and shortly returned with a saw and cut the barber's pole outside the door in two. The barber, running out, angrily demanded the reason for his action. "Arrah, now," retorted Pat, "Shure, it's to let the people know you're only half a barber." An American, who had never paid more than 25 cents (one shilling) in his own country to see an exhibition, went to the theatre to see "The Forty Thieves." The ticket-seller charged him two shillings. Passing the ticket back, he quietly remarked, "I guess you can keep it, mister; I don't want to see the other thirty-nine; and out he marched with true American dignity. While on the march with General Macdonald's Highland Brigade one of the soldiers was grumbling at having no tobacco, when his officer remonstrated with him thus—"Why don't you leave off grumbling? You are not the only one without tobacco. I'm smoking tea." Highlander—"That's nothing, sir. In Aberdeen they smoke haddocks."

GOSSIP.

The English *Live Stock Journal* says: "A vigorously-written article, under the heading, 'The Tuberculin Crusade and the Cattle Breeders,' appears in the *FARMER'S ADVOCATE*, London, Ontario, dealing chiefly with the application of the tuberculin test to breeding cattle intended for exportation. The conclusion is that the original adoption of the test was a blunder, and the sensible and proper course for the Dominion Government, that first imposed the regulation, would be at once to remove it."

CRESCUS THE TROTTER CHAMPION.

At the Glenville track, Cleveland, where Mand S started the trotting world by going a mile in 2:08 3/4 to a high sulky, Crescus, the king of trotting stallions, went a mile, on July 26th, in 2:02 1/2, establishing a new record for trotters, and winning the title of champion trotter of the world. This title was held for some time by The Abbot, who, until the above date, held the record (2:03 1/4) for a mile, trotted at Terre Haute, Sept. 25, 1900.

JOS. FEATHERSTON & SON'S YORKSHIRE AND ESSEX SWINE.

Jos. Featherston & Son, of Pine Grove Stock Farm, at Streetsville, Ont., are among Canada's foremost breeders and importers of Yorkshire and Essex swine. Their best importation in 1900 consisted of 13 head of Yorkshires of both sexes, and contained some extra grand animals of that favorite bacon breed. There are at present on the farm some 75 head of Yorkshires and 60 head of Essex, and among them, as can easily be imagined, are a great many top-notchers in both breeds. The imported Yorkshire boar, Prince Monarch 5837, bred by T. Henson, Peterborough, Eng., is sired by Peterborough King, dam Peterborough Lady. He is an enormous, deep, lengthy, well-balanced hog, and a prizewinner. The animals are all in good condition. A number of both breeds are being put in trim for the fall shows, and we predict for the Messrs. Featherston their full share of red tickets. They report sales exceedingly active, and are continually shipping to all parts of Canada and United States. If experience and good judgment count for anything, this firm ranks high in the list of Canadian breeders and importers.

T. B. CARLAW & SON'S HOLSTEINS.

Thos. B. Carlaw & Son, of Warkworth, Ont., a few miles from Campbellford, on the Peterboro and Belleville branch of the G. T. R., are actively engaged in dairying, their large herd of pure-bred Holstein-Friesians being quite equal to the task of supplying them with an abundance of rich milk and cream. The Messrs. Carlaw have been engaged in the dairying business for 12 years, and having tried the various dairy breeds of cattle, have decided that the Holsteins have few equals and no superiors as rich milk producers in paying quantities. They have, therefore, established a large herd of pure-bred representative Holsteins of the most noted milk-producing families. Among their first dams was the imp. cow, Lovelia 9668, bred in North Holland. About the same time was also purchased the cow, Bebono 4761, sired by Quarantine Chief (Imp.) 2108, dam Hokkikong (Imp.) 5129. Another early dam was Margaret 4th's Seipke Mercedes Queen, sired by Seipke 3rd's Mink Mercedes Baron 464, dam Margaret 4th's 720, whose record was over 10,000 lbs. of milk and 410 lbs. of butter in a year. The present sire is Tritonia Prince 1744, sired by Hicme 2nd's Prince, dam Tryntje of Trytomia. He is a very symmetrically-built fellow, with a deep, massive body, and his stock are coming right. The young ones are showing the true milk-producing conformation. This herd has produced some enormously heavy milkers. The cow, Clara C, produced over 10,000 lbs. of milk in 8 months, showing a percentage of butter-fat of 3.03. Another one, Waldron Netherland Baroness, gave over 75 lbs. of milk a day on grass alone, and a number of others equally as good. Some particularly nice heifers are now in milk, showing great depth of quarter, with large udders, and should make their mark as producers. Messrs. Carlaw report sales as very good, having sold a number of both sexes during the year, for very satisfactory prices. Note their advertisement.

BONNYCASTLE & SON'S SHORTHORNS, COTSWOLDS, AND BERKSHIRES.

Annandale Stock Farm, Campbellford, Ont., is the well-appointed home of Messrs. F. Bonnycastle & Son, breeders of Scotch Shorthorns, Cotswold sheep, and Berkshire pigs. Mr. Bonnycastle has been engaged in breeding Shorthorns for 19 years, and being a firm believer in the superiority of Scotch-bred animals, has used nothing else as sires all these years—hence his herd are strongly Scotch-bred. The present stock bull is Prince George = 28973. He is sired by Prince = 2544, by Imp. Hopeful, dam Queen Ann = 3505. He is a straight Miss Ramsden bred bull, is a beautiful red, lengthy, deep, well-balanced, standing on short legs, and is proving a No. 1 sire. His calves are exceedingly even, and show the true characteristics of the up-to-date Shorthorn. The former sire was a Duchess of Gloster bred one sired by Imp. Tofthills. Among the earlier dams were a number of such noted families as Anchovy, a strain of Bates, and Cruickshank Cecillas, noted for their heavy-milking qualities, and these have been added to at intervals. In young things, Messrs. Bonnycastle have very few on hand, sales having been very active. About everything for sale, both in heifers and bulls, are gone, which, by the way, is the best testimony of the superior quality of the stock bred. In Cotswolds, something extra good can be seen. The flock was founded 24 years ago on Snell importations. The sires in use during all this time have been chosen from the standard of excellence regardless of cost, and have either been imported or from imported stock. A large number of prizewinners have been bred from this flock. Last fall Messrs. Bonnycastle swept the boards at all the local shows in Cotswolds. The young ones are an extra large, even, well-covered lot, and cannot fail to carry off their share of honors this fall. The Berkshires are a splendid lot of bacon-type animals. They were founded on Snell and Johnston importations, and have always been kept abreast of the times. The present stock boar was sired by the Toronto prizewinner, Colonel Grant, and is an ideal of the present-day type. A look over the young ones is convincing proof that no better stock boar could have been chosen.

NOTICES.

A SPLENDID RECORD.—There are thousands of Massey-Harris Light No. 4 Binders at present cutting the crops of the Canadian farms. Massey-Harris Company tell us their machines have again given the most excellent satisfaction.

It is a simple matter for foreign concerns doing a meagre business to speak of success, but the leading farmers from the Atlantic to the Pacific speak in the highest terms of Massey-Harris implements. It is not difficult to please a few, but it is a pleasure to be able to please a great many.—Advt.

TENTS.—There is more comfort in a tent than those who have not tried one would believe. It's a thing that would add pleasure to many households in a country where the temperature makes sleeping well-nigh impossible in many houses, especially up-stairs. Camping out has many charms, especially when associated with fishing or hunting. It is the business of Windsor Awning & Tent Co., Windsor, Ont., to make tents for all purposes. See their advertisement in this issue.

"Cures Heaves—Send for Booklet."

Lindsay, Ontario, Can., Jan 8th, 1896.
DEAR SIRS,—I have used Newton's remedy for coughs and colds with excellent results. My brother has a mare that had the heaves so bad she was almost useless, and she was cured as sound as a colt by your remedy. I know of others that used it and to-day are as sound as a gold dollar.
Yours, etc.,
GEORGE W. CURTIS.

Windsor Salt.—As a butter salt, cheese salt, curing salt or table salt, one seldom or never hears a word against Windsor Salt—that is pure, dry, easily dissolved and clean. If for any reason the salt now being used in any household or dairy is unsatisfactory, it would be well to give Windsor Salt a trial, as those who use it do not want to change to any other. See their advertisement in this issue.

The Federated Business Colleges.—Instead of standing apart and opposing each other's interests, a number of Ontario business colleges have united and now exist as one grand institution, with separate branches at the various towns and cities mentioned in their advertisement in this issue. These various branches will be on equal footing so far as advantages to their students are concerned, so that a person contemplating a business education can attend the school nearest his home, if preferred, and receive the full benefit of the best in the land. See the advertisement in this issue and send for a new annual announcement.

Guelph Agricultural College.—A training at an agricultural college gives a farmer a confidence in himself, a knowledge of the principles of correct farming and stock-breeding, and it broadens his judgment and his views generally, thus materially assisting him to make a real success of life. A course at the Ontario Agricultural College several years ago was worth much more than the time and expense it cost. Since then improvements have been made each year, and, with the additions that are now in progress, it seems a very great pity that every prospective farmer should not personally participate in some of the advantages afforded at Guelph. See Agricultural College advertisement in this issue and send for a circular.

GOSSIP.

E. B. Hinman & Sons, Grafton, Ont., write: "Sales have been good, among them being two cows to Dentonia Park Farm. Both of these were sired by Marioram King, now owned in the States, and full brother to Exile of Glen Rouge 37213 (sire of three in list). The bull calf purchased from Dentonia has done well and will make a record for himself."

CAPT. ROBSON'S HERD REINFORCED.

In referring in our last issue to the purchase by Capt. T. E. Robson, Ilderton, Ont., of the choice imported bull, Wanderer's Last, a Marbled son of the famous Cruickshank bull, Wanderer, and of Missie 144th by Roan Robin, to head his herd, limited space forbade a reference to the acquisition of a half dozen high-class imported Scotch-bred females which has also recently been made to the Spring Grove herd, rendering it even stronger than at any time in the past in the breeding and character of the cattle found there. In this lot is included the thick and symmetrical 6-year-old Duthie-bred cow, Proud Amaranth, by the Highland champion, Pride of Morning, and of the Sittytton Azalea family. A quintette of charming yearling heifers, also bred by Mr. Duthie at Collynie, is composed of the following: Sittytton Lavender 4th, by Silver Plate, whose get topped the Duthie-Marr sale last year, dam Sittytton Lavender, of the favorite Cruickshank family of that name; Scottish Rose 2nd, by Lovat Champion, for whom Mr. Duthie paid \$1,000, for use in the Collynie herd, dam Primrose 2nd, of the Kinellar Rosebud tribe; Golden Fairy, by Scottish Champion, purchased by Mr. Marr for \$1,650, for a stock bull in the Uppermill herd, dam by the noted Star of Morning, sire of a host of champions; Jealous Girl, by Bapton Conqueror, bred by Mr. Deane Willis and bought by Mr. Duthie for a big price and sold for a long figure to go to South America; Scottish Molly, by Scottish Archer, the star performer as a sire of winners, dam Molly 2nd, a Marigold by Sovereign. Besides these there are in the herd the following imported cows: Star Princess, bred by Gordon of Newton, by Star of the Morning; Lavender Thyme 7th, bred by Wilson of Pirriemill, sired by Golden Star, and of the Cruickshank Lavender tribe, now believed to be in calf to Wanderer's Last; Bella 3rd, bred by Sir A. H. Grant, of Monymusk, by Martin, a son of Star of Morning; Lady Emma, by Morning's Pride, by Pride of Morning; and Goldie 46, bred by Mr. Marr, of Uppermill, sired by Golden Ray, a son of Scottish Archer. These, together with a strong array of home-bred cows and heifers and young bulls of similar type and breeding, make up a herd of uniform excellence, and one likely to well sustain the reputation of the owner as a breeder, a judge, and a successful exhibitor in many keenly-contested show-rings.

King Corn




"KING CORN" TO THE RESCUE. This year is apt to demonstrate beyond cavil that corn is king. Necessity is the mother of new departures in methods as well as of invention. It was necessity that gave birth to the corn harvester and the husker and shredder—two of the greatest inventions that have ever blessed the agriculture of the world—and it will be necessity this year that will compel indifferent farmers to use them. Every stalk of corn that shoots from the ground this season must be saved and fed. There is no alternative. Pastures are parched, meadows are scant. All of "the giant grass" must be utilized. The corn crop must be cut and shredded. And for these operations the American farmer can turn with implicit confidence to the McCormick corn harvester and shredder and husker. Experimental days are far past in the making of these machines. The name McCormick on a corn harvester and husker is as much a guarantee of perfection of work as it is on a self-binder and a mower—and more than this can not be said.—*Editor Breeders' Gazette, July 17, 1901.*

P. W. STANHOPE, MANAGER, TORONTO, ONTARIO.

U S U S U S

More Cream means More Butter
More Butter means More Money
Therefore every Dairyman should have an



Improved U.S. Separator
as that is the kind that Gets all the Cream

Other reasons why he should have one are its
Durability, Simplicity, Safety, etc

We furnish complete lines of Dairy Apparatus.
Write for illustrated catalogues.

U S U S U S

NOTICES.

A Good Farm.—In this time of rush to the West, some of those who do not follow the crowd will get some rare chances at the other fellow's expense. Down in Essex Co., Ont., only a few miles from Chatham—a good town and a good market—a farm of rich land is offered for sale in this issue. The advertisement gives considerable information regarding the farm, and when more is wanted Geo. G. Brooke, Bank of Montreal, Chatham, can furnish it. In any case it would be well to see the farm.

"King Corn" to the Rescue.—The provident farmer is the one who allows none of his crop to go to waste, but husbands as much as possible of that which he grows in the best possible condition. To do this with the corn crop effectively, expeditiously and economically farmers should provide themselves with both the corn binder and the corn husker and shredder, two machines that are now regarded by progressive farmers as being invaluable. These machines are illustrated and described in detail in a handsome book entitled "King Corn," published and mailed free by the McCormick Harvesting Machine Co., Chicago, U. S. A.

GOSSIP.

Colwill Bros., of Newcastle, Ont., have for a number of years been making a specialty of the breeding of Tamworth hogs. Their stock on hand at present is made up of some as choice animals as can be seen anywhere. The old prize-winning and champion boar, Colwill's Choice 1343, sired by Rob Roy 932, dam Thrifty Girl 1242, has lost none of his old-time symmetry, and will be on deck again this fall at the call of time, and it will take a good one to carry off the red from him. Also the sweepstakes sow, Evelina 1515, is looking grand, and will not be far away when the color is decided on. A particularly nice young boar is Newcastle Colonel 2091, from the above sire and dam. He is the ideal hog of to-day, and we bespeak for him a grand career in the prize ring. The pair of yearling dams, Newcastle Maid of Honor and Newcastle Queen, are as near perfection as it is possible to get it. The young ones are an extra good lot, and cannot fail to sustain the honor of their sire and dams. A batch of some half dozen young sows, and about the same number of young boars, will also compete for honors this fall at Toronto and elsewhere.

The Messrs. Colwill are also showing some very nice Shorthorns. The stock bull, Brave Baron 23259, by that great sire, Indian Chief (Imp.), dam Baroness Aberdeen 2nd 15964, by Heir Apparent (Imp.), is a really superior animal, being very lengthy, and well down on a set of short, perfectly-formed legs. From his gilt-edged breeding and perfect conformation, he should be what his stock prove him to be, a sire of the first water. One of the Colwill Bros. first Shorthorn dams is Beaver Meadow Lass 21286, sired by Imp. Oxford, and out of Emeline 5985. She is a Strathmore-bred cow, and has left her owners some beautiful types of the breed. Another nice cow is the Lavender-bred Lady Russel 26825, sired by Sir John, dam Maid of Pickering, by Duke of Lavender (Imp.). There are some heifers on this farm that should do honor to breeders of a great deal more pretensions. The calves are already showing the form that is wanted, and for which big prices are paid in these times.

GOSSIP.

E. B. Hinman & Sons, of Grafton, Ont., are showing a herd of some 30 odd head of pure-bred Jersey cattle of St. Lambert and combination families. The stock bull, Nero of Glen Rouge, is sired by the champion bull, 200 Per Cent, dam Naomi of Glen Rouge, who has a record of 18 lbs. of butter in one week. This bull is a true type of Jersey, and is exceptionally even in make-up. Mr. Hinman has lately purchased from Dentonia herd a young bull sired by Bim of Dentonia, dam Lady Ottawa (Imp.), by 18 Karat. The cows of this herd are a nice, even lot, showing good length of quarter, depth of ribs, and evenness of udder, characteristics that mark the profitable dairy cow. The young things are little beauties of great promise. Taken all in all, the Messrs. Hinman's herd of Jerseys are hard to beat. The sales of young stock are both satisfactory and profitable, and the dairy returns very satisfactory. Messrs. Hinman & Sons are well pleased with their investment, and consider that for the amount of food consumed, the Jersey is the most profitable dairy cow in existence.

EXTENSIVE NEW IMPORTATIONS.

From our British exchanges we learn that Canadian breeders are making extensive purchases of high-class Shorthorns, Mr. W. D. Flatt, Hamilton, having purchased the champion bull and female at the Highland Show, and four choice heifers from the herd of Lord Lovat. From the Earl of Roseberry Mr. Flatt has bought no fewer than thirteen yearling heifers, including the two beautiful animals which were first and second respectively at the recent Edinburgh show. From Mr. Duthie, Collynie, Mr. Flatt has secured five heifers; from Mr. Marr, Uppermill, eight heifers; while from Sir John Gillmour he has bought six two-year-old heifers, two cows and two calves. Mr. Flatt has also secured eight well bred animals from His Majesty the King.

ISRAEL GROFF'S SHORTHORNS, LEICESTERS, AND BERKSHIRES.

Maple Leaf Stock Farm, the home of Mr. Israel Groff, Alma P. O., breeder of Shorthorn cattle, Leicester sheep, and Berkshire swine, is situated about three miles east of Alma Station on the branch of the R. T. R. running between Harrisburg and Southampton. This beautiful farm and outbuildings won the Agriculture and Arts Association medal in 1899, and is a model farm indeed. The stables are simply perfect for convenience in feeding and cleaning, the floors being of cement concrete. The light is ample and even throughout. A man standing in any part of the stable can see every animal. The ventilation is on the most modern scientific principle. The water is also convenient. Feed is cut by wind power, and runs down a chute to the feed-room by the side of the chop box, where it is all mixed in one large box and wheeled around on a car to the different feed passages. In fact, that once monotonous winter labor, "doing chores," is more a pleasure than a labor in these well appointed stables. The farm proper slopes gently away from the buildings on all sides. The enormous crops testify to the superior tillage Mr. Groff gives his land. One thing that struck the writer very forcibly was the complete absence of thistles, mustard, wild oats or other rubbish.

Mr. Groff's Shorthorn herd was founded some 18 years ago on such noted families as Athelstanes, Crimson Flowers, and Stamfords. This is the herd that produced the cow, Gem of Athelstane, that won 1st prize at Toronto as a calf, and 1st prize and sweepstakes at Winnipeg as a 2-year-old; also the bull, Lyndhurst, now owned by F. W. Brown, of Portage la Prairie, a 1st prize and sweepstake. The white steer, Crimson Robe, that swept the board last year at Guelph Fat Stock Show, was also raised on this farm. This steer has lately been sold to Prof. Shaw for the Minnesota Experiment Station, right reserved for showing at the principal fairs this fall. The present stock bull is Royal Hero 34679 sired by Royal Sailor (Imp.), dam Mildred 4th, by imported and exported Haspodar. Royal Hero is a full brother to Judge, the champion bull that sired Royal Banner, the 1,500 dollar bull at Flatt's Chicago sale last year. He also sired the 2-year-old heifer, Matchless, that won 1st and sweepstakes at Winnipeg. Comment is needless on a bull of Royal Hero's gilt-edged breeding and illustrious connections. Suffice it to say he is an ideal, typical Shorthorn, from the ground up. It is needless to give a description of the various dams in the herd. The great number of prize winners that have been bred here speak louder than words of the high quality of the stock. In Leicesters, Mr. Groff has an excellent flock founded on Kelly's imported stock, and kept up to a high standard. The lambs are a rare good lot. Among the Berkshires are to be seen some extra long, deep-sided ones, just the kind that are in such active demand. The sire, Prince Lee, by Baron Lee 4th, is an ideal bacon hog. Another sire is Crown Prince, who is also an up-to-date type. There are a couple of extra good young boars for sale, out of the dam Matchless, and sired by Crown Prince.

FOR SALE OR LEASE: BEST HOG OR STOCK FARM IN CANADA.

200 Acres virgin land in best locality, best township, best county, in Canada. Corn turned out 150 to 200 bush. to acre in locality in 1900. Crop failure unknown. Whole Lot 20 (twenty), 7th Con., Dover East, Kent Co., Ont. Fronts whole width on Bear Line, 7th and 8th Con. Roads at either end. School, store, P. O. just opposite. Seven miles to Chatham, best market in Province. Seventy-five acres under crop, 30 to 40 acres ready to break, balance best bush pasture in county. Small house, good stable and granary, fair fences, 2 unfailing wells, plenty cordwood, and \$300 or \$400 worth timber. If not sold by 1st October, will lease for term of years. Make offer to

GEORGE C. BROOKE,
CARE BANK MONTREAL,
CHATHAM, ONTARIO.

**CAMPING TENTS,
HUNTERS' TENTS,
LUMBERMEN'S TENTS,
LAWN TENTS;**

Made to order, on short notice, at low prices.

Windsor Awning & Tent Co.

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Guaranteed Newton's Heave, Cough, Distemper and Indigestion CURE.
A veterinary specific for WIND, THROAT & STOMACH TROUBLES.
Strong recommends. \$1.00 per can. Dealers or direct.
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Trade supplied by Lyman Bros. & Co., Toronto.

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TEMPERANCE ST., TORONTO, CANADA.

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Patrons: Governor-General of Canada, and Lieut. Governor of Ontario. Fee \$65.00 per session. Apply to ANDREW SMITH, F.R.C.V.S., Principal. 18-2-y-om

CHOICE JERSEYS.
Am offering 1 cow, 4 yrs. old (very choice); 1 bull 17 mos. old; 2 bull and 1 heifer calves.
W. N. Haskett, "Avon Manor," Markdale, Ont.

ADDITIONS TO PRAIRIE HOME STOCK.

Jas. Yule, manager of Prairie Home Stock Farm, returned to Manitoba from Ontario recently with a carload of pure-bred stock. Included in this latest importation were, among others, the following: Lady Bell 4th, imported by and purchased from Arthur Johnston, Greenwood. She is of the low-set, thick type, with lots of substance, and is smooth and handsome. Her sire is Master of the Ring; he by Deane Willis' Paragon Baron. Her dam, Maria 10th, is by the celebrated Field Marshal. At foot, Lady Bell has a red bull calf by the noted Scottish Archer, the sire of the royal champion, Marengo. From John Miller & Sons, Brougham, was secured Village Lily 2nd, a good, bred-looking roan cow, with a beautiful red-roan heifer calf at foot, Village Grace, by Imp. Royal Prince, the bull at the head of Messrs. Miller's Thistle Ha! herd. This calf will be shown at Winnipeg, and she is a good one. Buffalo Bill, a 10-month-old roan calf, bred by John Walsh, Mosbora, and bought from Capt. T. E. Robson, is by Hillsburg Tom; he by Imp. Sirius. This youngster with the rough name is extra wide, deep, thick meat, with good straight lines and all substance and beefing quality. We don't just know where there is a calf that can turn him down. Robin Hood is an April calf of 1900, bred by John Morrison, of Brooklin, and sired by Royal Gloster, out of Mayflower, by Lincoln—a nice, growthy, good quality, straight-lined youngster. Sityton Hero Vet, by Sityton Hero, is a big, strong, good-handling, straight-lined yearling. Earl of Edrick, a red 2-year-old, a deep, thick, fleshy bull, by Imp. Prince Edrick, was brought up for the McLaren Bros., proprietors of the Brunswick Hotel, for their farm in Springfield. Mr. Yule also brought out for Mr. W. S. Lister, Middlechurch, the yearling bull, Baronet, imp., by Prince Victor. There were also in the car a few Berkshire pigs and Shropshire sheep, and everything came through in fine shape. We are pleased to say that Mr. Yule appears to have quite recovered his usual robust health.

The standing of the breeds for the tenth week in the Pan-American dairy test at Buffalo is as follows:

	Butter Value.	Profit.
Guernseys	\$14.47	\$9.34
Jerseys	14.54	9.18
Ayrshires	13.75	9.07
Holsteins	14.32	8.24
Red Polls	12.72	7.84
Brown SWISS	12.89	7.48
Friesians	10.97	7.18
Shorthorns	12.79	6.55
French-Canadians	10.87	6.54
Dutch Belted	10.21	5.00

GOSSIP.

Mr. Flatt has been making big deals in Shorthorns with His Majesty's herd and farm managers. He is a go-ahead man, Mr. Flatt.—(Scottish Farmer).

The Leicester sheep offered for sale by Messrs. G. & E. Wood, of Freeman, Ont., in their advertisement are an extra good lot, and bred in the purple. Parties wanting anything in this line will find it to their advantage to write the Messrs. Wood for particulars.

Mr. A. P. Alton, Appleby, Ont., reports the demand for Shorthorns as very active. He has lately sold three home-bred heifers, one Imp. heifer, and two bulls. Mr. Alton's stock are in fine condition. Two of his Imp. cows have calves by their sides; other two have not calved yet. The young cattle in the herd are showing fine form, and are principally from the Imp. Scotch-bred sires, Prince Cruickshank and Lord Banff.

Messrs. Brethour & Saunders report that they have recently purchased from the most noted English breeders several very superior Yorkshire pigs, among them being two young sows that won first at Royal Show in England, also a boar first at Royal Show and wherever shown. High prices have been paid, but they are reported the best that could be secured in England, and will make a splendid addition to the famous Oak Lodge herd.

Mr. E. B. Elderkin, Canadian Superintendent of Live Stock at the Pan-American, writes that the proposed horse show at the Pan-American Exposition, along the lines of the Madison Square Garden Horse Show and the Toronto Horse Show, has been abandoned. Consequently there will be no horse exhibit at Buffalo other than the exhibition classes, as provided for in the premium list as sent out.

The catalogue of 60 head of high-class Shorthorns to be offered at auction by Geo. Harding & Sons, Waukesha, Wis., at Dexter Park, Chicago, on Aug. 7th, has been received. From the breeding of the cattle, and what we know of many of them personally, and of others by reputation, we are sure a grand good selection for the sale has been made, and many of the females having been bred to such noted bulls as Alice's Prince, Baron Montrath, Imp. Golden Drop Victor, and Imp. Best of Archers, makes them very attractive and desirable. There should be a bumper attendance at this sale.

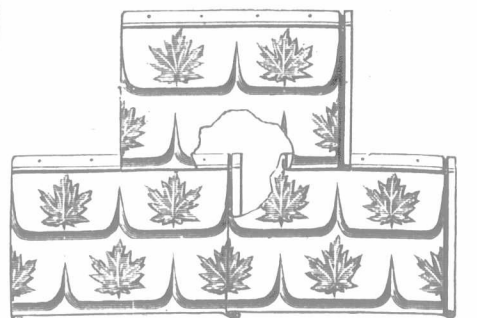
A number of cattle have recently died in the county of Stormont, Ont., from a disease which the veterinary authorities have pronounced anthrax. Some horses also contracted the disease and died of it. There seems to be no successful remedy for the disease, but its prevention may be effected by inoculation of healthy animals with anthrax vaccine, and the Ontario Department of Agriculture has, we understand, made provision for this when farmers make application for it. The bodies of animals dying from anthrax should be burned or buried in quicklime. It is dangerous to attempt to skin the animal, as the disease is transmissible to man, and it is unwise to sell the hide of an animal that has died of the disease, as it is liable to spread the disease.

IMPORTANT ADDITION TO THE BROOKSIDE HERD OF HOLSTEIN-FRIESIAN CATTLE.

Readers of the "Advocate" will be interested in learning of the recent purchase by Messrs. Henry Stevens & Sons, Lacona, N. Y., of the entire herd of Holstein-Friesian cattle owned by T. G. Yeomans & Sons, Walworth, N. Y. These cattle, with the 200 head already in the Brookside herd, gives them not only the largest herd in America, but probably also the strongest in point of official backing and general excellence of breeding. In the annals of Holstein-Friesian history, there is perhaps no parallel to the great combination effected in the uniting of these two herds. Mr. T. G. Yeomans personally selected his foundation stock in Holland, sparing no pains or expense to secure the choicest animals from the best herds and largest-producing families in that country; and from such stock has been developed one of the very finest herds on this continent, nearly every animal of milking age having been officially tested, and in the purchase are comprised such cows as Princess of Wayne 7th, Mutual Friend 3rd, Sadie Vale Concordia, and others that have attained wide reputation by their wonderful performances, many of which have never been offered before at any price. Among the bulls, special mention should be made of Beryl Wayne's Paul De Kol. This young bull has an almost unprecedented backing, his dam's official 7-day butter record of 27½ lbs., with that of his half-sister, Liith Pauline De Kol, standing to-day as the two highest official records ever yet made. Such strains as these, crossed with the De Kol, Hengerveld, and other noted families of the herd, should effect the greatest combination that has ever been made, and one from which may be expected higher achievements in breeding than have yet been attained in the development of the black-and-whites.

PLEASE MENTION THE
FARMER'S ADVOCATE

**SAFE LOCK
Metal Shingles**

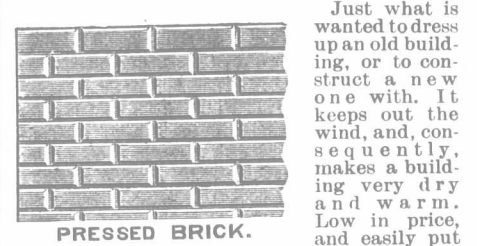


ARE FULLY ILLUSTRATED IN OUR
NEW CATALOGUE.

Our Baby shingles and free catalogue will satisfy you that we have the best-constructed roofing on the market. Ask for them.

Ottawa, January 27th, 1900.
Gentlemen,—The Galvanized Steel Shingles purchased by me last fall were used to roof the dwelling house on my farm at Myrtle, Ont. The workmen who put them on pronounced them of excellent quality. When the work was completed they presented a very pleasing appearance. I do not expect to have to touch the roof again during my lifetime. I recommend your shingles to anyone desiring a really good roof.
Live Stock Commissioner.

STEEL SIDING.



Our Catalogue Shows Many Patterns.

Garrison Road, Feb. 18, 1901.
Dear Sirs,—I am well satisfied with your Shingles and Siding. "Safe Lock" Roofing is far ahead of wooden shingles. It has a fine appearance. The Siding will never need to be painted again.
I shingled my barn four years ago with wooden shingles, and they were not on six months until they warped up by the sun and rain, and leaked in a good many places.
Yours truly,
JESSIE W. BENNER.

METAL CEILINGS.

A correct substitute for plaster. We will give you a sample ceiling for one of the rooms in your house at a low price, knowing that if you try a sample that you will never be satisfied until all the rooms are covered. Can be put on right over the plaster. Send us exact size of your ceiling for estimate.

Scottsboro, Que., Jan. 17, 1901.
Dear Sirs,—I have your Metal Ceilings on my dining-room and hall, and the only thing I am sorry for is that I did not use it on all my rooms, as I do not think that there is anything that can compare with it for a ceiling. It looks well, and when put up always is there.
Yours respectfully,
M. A. MACKENZIE.

METAL PUMPS.

Possessing great advantages over old style pumps now in use. No more wooden pump-logs required, as the metal tubing will at once replace them. They are galvanized and will not rust or taint the water. The cost is much less than wooden pumps, and you can take pump home complete and put it in place without any trouble or expense.
Send Depth of Well for Price.

The Metal Shingle & Siding Co.,
LIMITED,
PRESTON, ONTARIO.

Our Farmer's Library

A RECENT bulletin prepared by Prof. J. B. Reynolds, of the Ontario Agricultural College, gives a list of meritorious books on Agriculture, Live Stock, Dairying, and Fruit Growing, from which we have made a selection and added a few others. How to obtain, see below:

SOIL AND CROP.

- THE FERTILITY OF THE LAND.—*Roberts*. 372 pages. \$1.25.
 A BOOK ON SILAGE.—*Woll*. 185 pages. \$1.00.
 SOILS AND CROPS.—*Morrow & Hunt*. \$1.00.
 FORAGE CROPS.—*Thos. Shaw*. \$1.00.
 SOILING, ENSILAGE, AND BARN CONSTRUCTION.—*F. S. Peer*. 247 pages. \$1.00.

LIVE STOCK.

- VETERINARY ELEMENTS.—*A. G. Hopkins, B. Agr., D. V. M.* \$1.50. A practical book for stockmen and agricultural students.
 THE STUDY OF BREEDS (CATTLE, SHEEP, AND SWINE).—*Prof. Shaw*. 400 pages; 60 engravings. \$1.50.
 HORSE BREEDING.—*Sanders*. 422 pages. \$1.50.
 LIGHT HORSES—BREEDS AND MANAGEMENT. 226 pages. \$1.00.
 HEAVY HORSES—BREEDS AND MANAGEMENT. 219 pages. \$1.00. } Vinton Series.
 CATTLE—BREEDS AND MANAGEMENT. 270 pages. \$1.00.
 SHEEP—BREEDS AND MANAGEMENT. 232 pages. \$1.00.
 CATTLE BREEDING.—*Warfield*. 386 pages. \$2.00.
 THE DOMESTIC SHEEP.—*Stewart*. 371 pages. \$1.75.
 THE SHEEP.—*Rushworth*. 496 pages. \$1.50.
 PIGS—BREEDS AND MANAGEMENT.—*Sanders Spencer*. 175 pages. \$1.00.
 FEEDS AND FEEDING.—*Henry*. 600 pages. \$2.00.

GENERAL AGRICULTURE.

- AGRICULTURE.—*C. C. James*. 200 pages. 30 cents.
 FIRST PRINCIPLES OF AGRICULTURE.—*Voorhees*. 207 pages. \$1.00.
 AGRICULTURE.—*Storer*. 1,875 pages, in three volumes. \$6.00.
 CHEMISTRY OF THE FARM.—*Warrington*. 183 pages. 90 cents.
 FARMYARD MANURE.—*Aikman*. 65 pages. 50 cents.
 IRRIGATION AND DRAINAGE.—*King*. 502 pages. \$1.50.
 IRRIGATION FOR THE FARM GARDEN AND ORCHARD.—*Henry Stewart*. \$1.00.
 SUCCESSFUL FARMING.—*Rennie*. 300 pages. \$1.50, postpaid.

DAIRYING.

- AMERICAN DAIRYING.—*H. B. Gurler*. 252 pages. \$1.00.
 THE BOOK OF THE DAIRY.—*Fleischmann*. 330 pages. \$2.75.
 MILK AND ITS PRODUCTS.—*Wing*. 230 pages. \$1.00.
 TESTING MILK AND ITS PRODUCTS.—*Farrington & Woll*. 255 pages. \$1.00.
 DAIRYING FOR PROFIT.—*Mrs. E. M. Jones*. 50 cents.

POULTRY.

- ARTIFICIAL INCUBATING AND BROODING.—*Cypher*. 146 pages. 50 cents.
 PRACTICAL POULTRY-KEEPER.—*Wright*. \$2.00.
 AMERICAN STANDARD OF PERFECTION.—*Pierce*. 278 pages. \$1.00.

APIARY.

- THE HONEYBEE.—*Langstroth*. 521 pages. \$1.50.

FRUIT, FLOWERS, AND VEGETABLES.

- VEGETABLE GARDENING.—*Green*. 224 pages. \$1.25.
 FLOWERS AND HOW TO GROW THEM.—*Rexford*. 175 pages. 50 cents.
 THE PRINCIPLES OF FRUIT-GROWING.—*Bailey*. 514 pages. \$1.25.
 BUSH FRUITS.—*Card*. 537 pages. \$1.50.
 HORTICULTURIST'S RULE BOOK.—*Bailey*. 312 pages. 75 cents.
 SPRAYING OF PLANTS.—*Lodeman*. 399 pages. \$1.00.
 THE NURSERY BOOK.—*Bailey*. 365 pages; 152 illustrations. \$1.00.
 AMATEUR FRUIT-GROWING.—*Samuel B. Green*. 5x7 inches; 134 pages, with numerous fly leaves for notes; bound in cloth, and illustrated. 50 cents.

PLANT AND ANIMAL LIFE

- THE STORY OF THE PLANTS.—*Grant Allen*. 215 pages. 40 cents.
 THE STUDY OF ANIMAL LIFE.—*J. A. Thomson*. 375 pages. \$1.75.
 INSECTS INJURIOUS TO FRUITS.—*Saunders*. 436 pages. \$2.00.

MISCELLANEOUS.

- THE HOME PHYSICIAN AND CYCLOPEDIA OF MEDICINE. By seven eminent physicians, aided by specialists. 1,300 pages; illustrated. Cloth, \$4.75; leather, \$5.75.
 LANDSCAPE GARDENING.—*S. T. Maynard*. 338 pages. \$1.50.

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"	2.75	for 5 "
"	6.00	for 12 "

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WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means trashy goods, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

Gents' Watches.

No.	Description	New Subscribers.
No. 1.	Yankee Nickel Watch	2
No. 2.	Trump Nickel Watch	4
No. 3.	Trump Gun Metal Watch	5
No. 4.	No. 14 Silver Watch	8
No. 5.	7 Jeweled Gent's Elgin in 3 oz. Nickel Case	10
No. 6.	7 Jeweled Gent's Elgin in Gun Metal Case	11
No. 7.	7 Jeweled Gent's Elgin in Sterling Silver Case	14
No. 8.	7 Jeweled Gent's Elgin in 20-year Filled Case	18
No. 9.	7 Jeweled Gent's Elgin in 25-year Filled Case	21
No. 10.	15 Jeweled Gent's Elgin in 3 oz. Nickel Case	15
No. 11.	15 Jeweled Gent's Elgin in Gun Metal Case	15
No. 12.	15 Jeweled Gent's Elgin in Sterling Silver Case	18
No. 13.	15 Jeweled Gent's Elgin in 20-year Filled Case	21
No. 14.	15 Jeweled Gent's Elgin in 25-year Filled Case	25

Ladies' Watches.

No.	Description	New Subscribers.
No. 15.	Gun Metal Swiss Chatelaine	4
No. 16.	Sterling Silver Swiss Chatelaine	6
No. 17.	Nickel American O. F., large size	5
No. 18.	Gun Metal American O. F., large size	5
No. 19.	Nickel, small size	9
No. 20.	Gun Metal, small size	10
No. 21.	Sterling Silver, small size	10
No. 22.	7 Jeweled Elgin in 20-year Filled Hunting Case	20
No. 23.	7 Jeweled Elgin in 25-year Filled Hunting Case	22
No. 24.	15 Jeweled Elgin in 20-year Filled Hunting Case	23
No. 25.	15 Jeweled Elgin in 25-year Filled Hunting Case	25

Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows:

No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O. F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.

No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

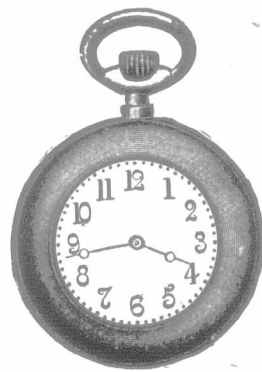
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.

THE WILLIAM WELD CO., LTD., LONDON, ONT.



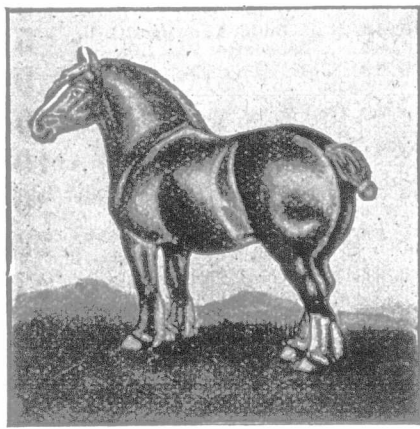
Hackney Geldings



TWO CARLOADS OF GELDINGS AND FILLIES

with two crosses of Hackney blood; 4 and 5 years old; 15 to 16 hands. Bays, browns, chestnuts. No visible brand. Apply:

Rawlinson Brothers,
BOX 20. CALGARY, ALBERTA.



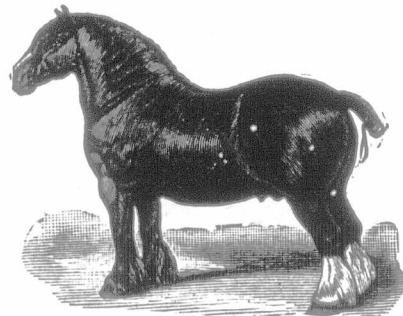
LATELY IMPORTED A FRESH LOT OF

Glydesdale Stallions,

Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character. I will make further importations as the times demand. Inspection invited.

Prices consistent with quality.
ROBERT GRAHAM,
Ringwood P. O., Ont.
Stouffville Station, G. T. R., and telegraph office.

GLYDESDALE STALLIONS ALL SOLD.



MR. DALGETY

sailed on July 10th for the home-land to bring out another large importation. Expects to arrive in Canada early in September with a grand lot.

Anyone having first-class heavy draft or high-class carriage horses may find a purchaser by writing

DALGETY BROS.,
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Agricultural College, GUELPH.

A large staff and first-class equipment, furnishing the kind of education needed by young men intending to live on the farm or follow any kind of practical or professional pursuit connected with farming.

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- (3) Dairy Course, Jan. 4th.
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- (5) Four Weeks' Course in Poultry Raising, Jan. 10th.

Send for circular giving full information as to cost, terms of admission, etc.
JAMES MILLS, M.A., President.

GOSSIP.

W. F. Stephen, Trout River, Quebec, makes a change in his advertisement of Ayrshire cattle, in which, besides several young bulls, he offers for sale the excellent stock bull, Klondyke of St. Anne's, sired by the grand old imported Glencairn 3rd, and used with very satisfactory results in the Trout River herd. Mr. Stephen writes: "I am through with this bull, who has proved a very successful stockgetter, and has left me some very fine young stock, and has crossed splendidly on heifers got by Uncle Sam. I have secured a young bull from the herd of the W. W. Ogilvie Estate to take the place of Klondyke. My heifers from Uncle Sam are turning out fine milkers."

W. S. Hawksaw, Glanworth, Ont., has had his Shropshire ewes and lambs feeding on luxuriant rape for a couple of weeks, in preparation for weaning, which will have taken place early this month. His half hundred choice lambs from imported ewes are well covered, good colored lot, and are well forward in growth. When the lambs are weaned the sexes will be separated, and each given a separate rape field, where they will be fastened in for a week. By this time they will have become well accustomed to their surroundings, and will feel at home on the feed they learned to like before leaving their dams. When weaned one week they will be given fresh fields and more liberty, including the run of a grass field to avoid the danger of swollen and festering ears, to which lambs confined on rape are liable. The ewes, until dry, will be confined to high dry pastures, and then returned to more succulent feeding to build up before the breeding season.

MR. GEO. D. FLETCHER'S SHORT-HORN HERD.

In placing with the "Advocate" an advertisement of his Green Grove herd of Shorthorn cattle, Mr. Geo. D. Fletcher, Binkham, Ont., near Erin Station on Elora branch of the C. P. R., writes: "The herd was established over 18 years ago by Mr. John Fletcher, Binkham, by selecting a few choice animals from the Scotch-bred herds of Mr. Hugh Thomson, St. Mary's, and Mr. Geo. Thomson, Alton. Since that time it has been the aim to improve the stock by adding a few choice females of favorite families, and selecting first-class sires from the herds of such prominent breeders as Mr. Arthur Johnston, Greenwood; Messrs. J. & W. Russell, Richmond Hill, and Messrs. J. & W. B. Watt, Salem, together with imported sires, such as Baron Camperdown and Primrose Duke. The stock bull now in service is Spicy Robin 28259, a grandson of Imp. Royal Sailor on one side and Barmpton Hero on the other, and tracing on his dam's side to Imp. English Lady, by Heir of Englishman, a combination of good blood that is sure to tell on his offspring. During the last few years this herd has made itself of particular note by heading many good show and sale rings, and the character of the cattle in breeding and individuality is such as to commend them to the attention of those looking for high-class stock."

IT PAYS TO ADVERTISE IN
THE FARMER'S ADVOCATE.

NOTICES.

MOWERS AND MOWERS.—This year the long tangled clover has struck the death knell of many so-called mowers. It is rumored that a number of foreign machines had to lower their colors to Canadian machines during the haying season. It is not a very difficult matter to build a mower that will cut under favorable conditions, but the Canadian farmer wants "the best for the money"—Canadian machines. He wants a machine that will go through the cutting season satisfactorily, and do its work well day in and day out, no matter how much the crop may be tangled or laid.—Adv't.

THRESHING MACHINERY.—The catalogue of the Waterloo Manufacturing Co., Waterloo, Ont., 48 pages in extent, illustrates and describes the three classes of engines, also separators, made by the Company. They include in engines: Plain or portable, 12, 14, 16 and 18 horse power; simple traction, 12, 14, 16, 18 and 22 horse power; and compound traction, 20-horse power. The separators are "Champion," "Advance Champion," and "Counterbalance." The catalogue tells all about these popular machines and much more besides that every thresherman should know.

A BUSINESS TRAINING.—Perhaps a young man can get through life with little or no business education, but he is seriously handicapped as compared to his fellow who has learned to deal in a businesslike way with business men. Fortunately the cost of a term or two at a business college is not a serious matter, as is pointed out by Albert College advertisement elsewhere in this issue. Albert College, at Belleville, Ont., is a well-equipped institution that gives thorough courses in the various lines advertised. See their advertisement and send for circular.

"FARMER BRIGHTON," FAIRFIELD, Iowa, offers in our columns, by advertisement, an instrument which has three uses on the farm. It will stop hogs rooting, mark any kind of live stock, and also dehorn a calf. The price is very low, \$1.50. Agents could make good money selling it.

DOMINION SWINE BREEDERS' RECORD.—Vol. XI. of this pedigree record has been received from the Registrar, Mr. Henry Wade, Parliament Buildings, Toronto. It is a substantial and well-printed volume, containing a total of 3,588 pedigrees, of which 1,265 are Berkshires, 1,487 Yorkshires, 434 Tamworths, 271 Chester Whites, 75 Poland Chinas, 38 Duroc Jerseys, and 18 Essex.

INTERNATIONAL CORRESPONDENCE SCHOOLS, Scranton, Pa., call attention to the fact that instruction is given throughout the entire year, the vacations of the principals and instructors being arranged so that there is no interruption in the work of the schools. This affords an opportunity for mechanics and others who have a dull season during the summer to take up a course by mail and make good use of what would otherwise be waste time.

GOSSIP.

The Royal Agricultural Society of British Columbia and Provincial Exhibition will be held at New Westminster, Oct. 1st to 4th, inclusive. Entries free. Open to the world. Twenty thousand dollars in prizes and attractions. Prize list on application to W. H. Keary, Secretary, New Westminster, B. C.

Canadian stockmen may congratulate themselves on the weather conditions that have prevailed throughout the Dominion, on the excellent crops of hay that have been secured, and on the fine prospect for full crops of coarse grains, as well as of roots and corn. In striking contrast are the conditions in many of the western States of the American Union, where, owing to the severe drouth, failure is written of hay, oats, and corn, while the skies continue hazen and the heat terrific.

Prince Edward Island, it appears, has abandoned the enterprise of holding a provincial exhibition, the Provincial Government, in its wisdom, having elected to divide the grant for exhibition purposes among the local district societies, and the reply to an enquiry as to the date of the fair at Charlottetown is that there will be none, but that the horse races will take place there Sept. 11th and 12th. Alas for the Island! The St. John (N. B.) exhibition is also off this year, for similar reasons.

We regret to record the death, on July 18th, at the age of 18 years and 4 months, of Everett Noble Fleming, eldest son of Robert J. Fleming, Esq., ex-mayor of Toronto. The young man was an ardent and enthusiastic admirer and exhibitor of Jersey cattle, winning on two occasions at the Toronto Exhibition the first prize and the female championship of the breed with the imported cow, Manor Lass 2nd, alias Canada's Queen, also first prize with her son, Canada's Prince, as under a year in 1899, and as a yearling in 1900. Everett was a genial and kindly young man, a fair and honorable showman, popular with the stockmen, and his untimely death will be sincerely lamented by all who enjoyed the pleasure of his acquaintance.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

None genuine without the signature of
The Lawrence, Williams & Co.
Sole Importers & Proprietors for the
U.S. & CANADA, CLEVELAND, O.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.00 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

KEMP'S

INSTANTANEOUS Sheep Dipping Fluid kills ticks, lice and all parasites or insect life on sheep, hogs, horses, and cattle; destroys mange on dogs.

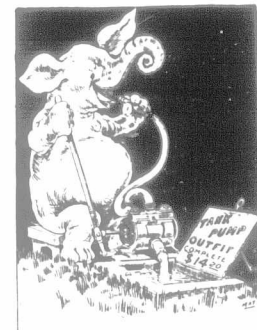
The best dip in the market. Thorough, permanent, effectual. Cheapest and best disinfectant for surgical and medical purposes, barns and outhouses. Used in the proportion of 1 to 100.

ONLY RELIABLE CATTLE FLY KILLER.

If your druggist does not keep it, we will express a half-gallon tin (prepaid) to any address in Manitoba, B. C., or the Territories, for \$1.25. Elsewhere in the Dominion, \$1.00.

W. W. STEPHEN & CO.,
MEAFORD, ONT.,
AGENTS FOR THE DOMINION.

Bargains for Threshermen



Every thresherman and every owner of an engine should have our large catalogue, which gives net prices on all kinds of engineers' supplies. Here are some sample prices: Grate bars, all kinds, 3c. per lb.; 3-inch 4-tone chime whistle, \$6; complete set of rasps for Monitor Jr. clover huller, \$15; best 2-inch wire-lined suction hose, 33c. per foot; 120 feet 6-inch 4-ply Veteran canvas drive belt, \$23.01.

Send for our catalogue and for special offer to customers in Manitoba and Northwest.

WINDSOR SUPPLY CO.,

160 Ouellette Ave., Windsor, Ont.

British Columbia.

Anyone thinking of farming in British Columbia should write for descriptive pamphlet of farms for sale in the Lower Fraser Valley—the garden spot of the Province.

We have compiled the largest and most complete list of farms, orchards, cattle-grazing and garden lands, and fishermen's attornments, in the Province. It has been very carefully selected, and we have a personal knowledge of every property described. Prices range from \$3.00 per acre to \$250.00 per acre, and in extent from 1 acre to 1,000 acres.

In the Lower Fraser Valley, and on the coast lands around Vancouver, we rarely have more than a month of frost and snow at outside, and the thermometer has only sunk to zero twice in ten years.

WRITE

HOPE, GRAVELEY & CO.,

536 Hastings St. VANCOUVER, B. C.

Lake View Farm for Sale

200 ACRES.

Lot 11, con. 1, Hope Tp., Co. Durham; half mile west of Port Hope. Soil good clay loam; well watered by two living streams. New brick house—11 rooms, kitchen and woodshed attached; also six-room cottage. Good barns and stables, and 10 acres full-bearing orchard. For further particulars apply to

GEO. HILL & SON,
LAKE VIEW. PORT HOPE, ONT.

Agents Wanted

for the New Pictorial Stock Doctor and Live Stock Encyclopedia, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages to agents. A full-page announcement of this book appeared in the ADVOCATE of the issue of June 1st. Particulars mailed free. Address WORLD PUBLISHING CO., Guelph, Ont.

NOTICE.

The Kamloops Provincial Industrial Exposition will be held in the City of Kamloops, B. C., on September 25th, 26th and 27th, 1901. We are offering \$10,000 in prizes and attractions this year. The Association has just completed a deal for forty acres of land for new exhibition grounds, and the contracts have been let for the erection thereon of suitable exhibition buildings to the value of \$8,000. Our prize list has just been published. J. T. ROBINSON, Secretary.

PLEASE MENTION FARMER'S ADVOCATE.

Buttermaker Wanted

o Immediately. Must be competent. Address: Annandale Farm, Tilsonburg, Ont.

HIGH PARK STOCK FARM.

GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited. A. M. & ROBERT SHAW, P. O. Box 294, Brantford, Ont.

W. G. HOWDEN, COLUMBUS, ONT.,
BREEDER OF

CLYDESDALE HORSES, SHORTHORN CATTLE

WM. SMITH, COLUMBUS, ONT.,
IMPORTER AND BREEDER OF

Clydesdale Horses & Shorthorn Cattle

4 Imp. Clydesdale Stallions

From such well-known sires as Sir Everard (5353), Prince Roberts 7135, Prince Alexander 8899.

2 Imp. Shorthorn Bulls.
4 Bulls Imp. in Dams.
2 Canadian bred Bulls.

21 Imp. Cows and Heifers.
7 Canadian-bred Cows and Heifers.

GEO. ISAAC & BROS., BOMANTON, ONT.
COBURG STATION, G. T. R.

Wm. Brash, Ashburn, Ont.,
BREEDER OF

CLYDESDALE HORSES and SHORTHORN CATTLE.

L. BURNETT, GREENBANK, ONT.
BREEDER OF

Clydesdale horses, Shorthorn cattle, and Shropshire sheep.

Four bulls from 12 to 14 mos. old, bred from imp. Cruickshank blood, for immediate sale.

Clydesdales and Ayrshires

Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry.

ROBERT NESS & SONS, Howick, Que.

FOR SALE.

CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD,

Richmond P. O., Ont.
R. R. Station, Stittsville, C.P.R.

FOR SALE:

Clydesdales and Shorthorns.

Young stallions and fillies bred from imported sires and dams. Also a choice bunch of Shorthorns, of both sexes and all ages, including a few extra choice young red and roan heifers and bulls.

JOHN BRIGHT, Myrtle, Ontario.

JERSEYS FOR SALE.

Two choice bull calves of the highest breeding and of true dairy type, at moderate prices.

W. W. EVERITT, Chatham, Ont.
DUN-ROBIN PARK FARM, P. O. BOX 552.

CENTRE WELLINGTON SHORTHORNS

Herd consists of Scotch and Scotch-topped females, with Lord Stanley 4th = 22678 = at the head. Stock all ages for sale. Farm adjoins the town.

Box 66. **H. B. WEBSTER, Fergus, Ont.**

LIDLAW'S CONCENTRATED TOBACCO POWDER



Sheep Dip.

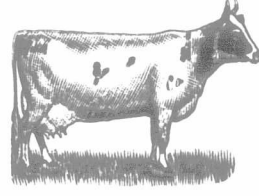
Contains correct proportion of sulphur, all mixed and ready for bath. For thirty years Laidlaw's Tobacco Powder Dip has had steadily increasing sale. Many hundred millions of sheep have been dipped with it. Non-poisonous; no injury possible to sheep or wool. For full particulars and prices, write—

ROBERT MARR, WALKERTON, ONT.

Sole manufacturers: Laidlaw, Mackill & Co., Limited, Richmond, Va.

FOR SALE:

Three Guernsey bulls, 5, 9, 18 mos. old, sired by Masher (imp.). Six Ayrshire bulls, 1 year and under, sired by Matchless. Shropshire lambs, sired by Canadian Flag-staff (imported direct). Address—



ISALEIGH GRANGE FARM,
J. N. GREENSHIELDS, Prop. o Danville, Que.

PLEASE MENTION FARMER'S ADVOCATE.

UNABLE TO SUPPLY DEMAND.—Massey-Harris Company report that they have been unable to supply the demand for their new Steel Hay Tedder, notwithstanding the large quantity built by them for this season's trade. It is evident Canadian farmers have adopted the motto: "Patronize Home Industry," and believe in using the best machines that can be procured.—Adv't.

STAY AT HOTEL LELAND

The Leading Hotel of the West.

ALL MODERN CONVENIENCES. RATES, \$2 TO \$4 PER DAY. CITY-BUS MEETS ALL TRAINS.
W. D. DOUGLAS, Prop., Winnipeg, Man.

GREEN GROVE HERD OF SHORTHORNS.

This herd was founded over 18 years ago, and contains such Scotch-bred tribes as the Missies and Mysies, Languishes and Butterflies, and is now headed by the famous stock bull, Spicy Robin = 28259 =, a worthy grandson of Imp. Royal Sailor = 18959 =, and of Bampton Hero and of Ruby Vensgarth = 15559 =, and is of the noted English Lady family. Some good young stock for sale. For prices and particulars, address **GEORGE D. FLETCHER, BINKHAM, ONT.** C. P. R. Station, Erin.

SPRING GROVE STOCK FARM

Shorthorn cattle and Lincoln sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the get of the great sire, Wanderer of the Cruickshank Braith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply



T. E. ROBSON, ILBERTON, ONT.

For Sale Two choicely-bred SHORTHORN BULLS, 12 and 18 months; also cows and heifers, with calves at foot and bred again to imported Red Duke = 36084 = (77585). 54 head to select from. **DAVID MILNE & SON, Ethel, Ont.**

SHORTHORNS: We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir.

ROBT. GLEN, Owen Sound, Ontario.

For Sale: 3 Shorthorn bulls of first-class breeding, sired by such noted bulls as Scotland's Fame (imp.) and Bold Britain, bred by John Isaac, Markham. Also some choice cows and heifers. **F. A. GARDNER, Britannia, Ont.** PERL COUNTY.

ARTHUR JOHNSTON

Greenwood, Ontario, Canada.

HIGH-CLASS SCOTCH SHORTHORNS

(First Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE

40 Imported Cows and Heifers,
40 Home-bred Cows and Heifers,
11 Imported Bulls and Bull Calves,
13 Home-bred Bulls and Bull Calves.

Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application.

R. Mitchell & Son,
Burlington Jct. Station, Nelson, Ontario.

Large herd of Scotch and Scotch-topped Shorthorns of the most popular Aberdeenshire tribes, including 4 imp. bulls, 12 imp. cows and heifers. Also a number of home-bred yearling and two-year-old heifers, and 7 good, thrifty home-bred bulls, from twelve to fifteen months old. Write for catalogue.



SHORTHORNS.

FOR SALE.—Bulls: Two 1 year old and one 8 months. A few heifers of choice breeding and superior quality. **AMOS SMITH, Trowbridge P. O., Listowel Stn. Ont.**

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28859, and Duncan Stanley = 16364 =. Grand milking cows in herd. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS, CALEDONIA, ONT.



We beg to call your attention to a new and indispensable article in

Barclay's Patent Attachment

FOR THE CURB OF BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.

J. & W. B. Watt, SALEM, ONT., BREEDERS OF Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.

Our SHORTHORN herd was founded over 30 years ago, and contains such tribes as the Village Buds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as Bampton Hero 324, Young Abbotsburn 6236, Challenge 2933, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Sittytton Chief 17060, Royal Sailor (imp.) 18959, Royal George 28513, Clipper King 16293 and Judge 23419, all of which have been first-prize winners wherever shown. Royal Victor 34681 and Royal Wonder 34682, by Royal Sailor (imp.), and out of English Lady and Mildred dams, now head the herd, assisted by Roan Cloud 31317, by Lord Gloster 26995, and out of Melody 21992, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

6 imp. Bulls, 14 months to 2 years.

20 imp. Heifers, 2 and 3 years old. Safe in calf.

2 Home-bred Bulls, 12 and 16 months old.

10 Home-bred Heifers, Scotch topped.

25 Choice Yearling Ewes, from imp. Ram.

W. G. PETTIT & SON, Freeman P. O., Ontario.

Farmers!

Now is the time to build your stable floors, hogpens, etc. You will find **QUEENSTON CEMENT** the cheapest and best. I warrant all structures when my instructions are carried out. Investigate my patented system of **VENTILATION.**

When properly arranged, it will give you perfect sanitary stables. It is free to all of our patrons.

For pamphlet, prices, and other particulars, write to **ISAAC USHER,**

QUEENSTON, - ONTARIO.

HILLHURST SHORTHORNS

THREE COLLYNIE-BRED BULLS IN SERVICE:

Scottish Hero, Joy of Morning, Scottish Beau,
By Scottish Archer. By Pride of Morning. By Silver Plate.

The herd comprises straight Scotch, Cumberland, Gloucestershire, and Canadian strains; bred to produce the best and most economical **MEAT and MILK MAKERS.**

Shropshire and Hampshire Down Sheep.

M. H. COCHRANE, COMPTON CO., P. Q.,
G.T.R., 117 MILES EAST OF MONTREAL. om HILLHURST STATION

SHORTHORN BULLS AND HEIFERS

FOR SALE. Choice quality and best Scotch breeding. Imported and home bred. Imported Knuckle Duster (72793) and imp. Royal Prince head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years. Catalogues on application.

H. SMITH, HAY, ONT.
Exeter Station on G. T. R., half a mile from farm.

MILK FEVER IN COWS.

Symptoms, cause, and treatment by the Schmidt system explained by **DR. WILLIAM MOLE, M. R. C. V. S.,** Price 25c. 443 Bathurst St., Toronto.

T. DOUGLAS & SONS, STRATHROY, ONT.,
BREEDERS OF

SCOTCH SHORTHORNS.

100 HEAD TO SELECT FROM. Offer for sale 8 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28801 =, at head of herd. Farm one mile north of town.

RIG. CASTRATION.

DR. J. WILSON, V. S., WINGHAM, ONT., Specialist in the castration of ridgelings. Terms and testimonials on application.

PLEASE MENTION FARMER'S ADVOCATE.

SHORTHORNS

SCOTCH IMPORTED.

Young imported cows with calves at foot for sale. A number of the calves are imported in dam.

Some of the families represented in the herd are as follows:

160
Head

AUGUSTAS
CLARAS
NECTARS
GOLDIES
JENNY LINDS
VICTORIAS
MATILDAS
BESSIES
CROCUSSES

ROSEBUDS
BRAWITH BUDS
LANCASTERS
MAYFLOWERS
AMARANTHS
BUTTERFLYS
CLIPPERS
EMMAS
BROADHOOKS

MEDORAS
MINAS
VILLAGE MAIDS
BEAUTYS
MISS RAMSDENS
FLORAS
RAGLANS
LUSTRES
GEMS OF THE VALE

160
Head

Herd headed by the Imported Bulls, **GOLDEN DROP VICTOR** and **PRINCE BOSQUET**.

IF INTERESTED, COME AND SEE US. OR WRITE

H. CARGILL & SON,

CATALOGUE FREE.

CARGILL, ONTARIO, CANADA.

TROUT CREEK HERD OF SHORTHORNS.

Since our Chicago sale we have imported sixty-two head, including some Royal winners; they were pronounced in Scotland superior to past importations. We try to import the best, believing that this is one of the ways to assist in improving the breed on this side of the water. Being thoroughly convinced, also, that a bull of the right sort is even more than half the herd, we have decided to keep the following choice ones:

Imp. Lord Banff.

Bred by A. Watson; of the Campbell Bessie family.

Imp. Consul.

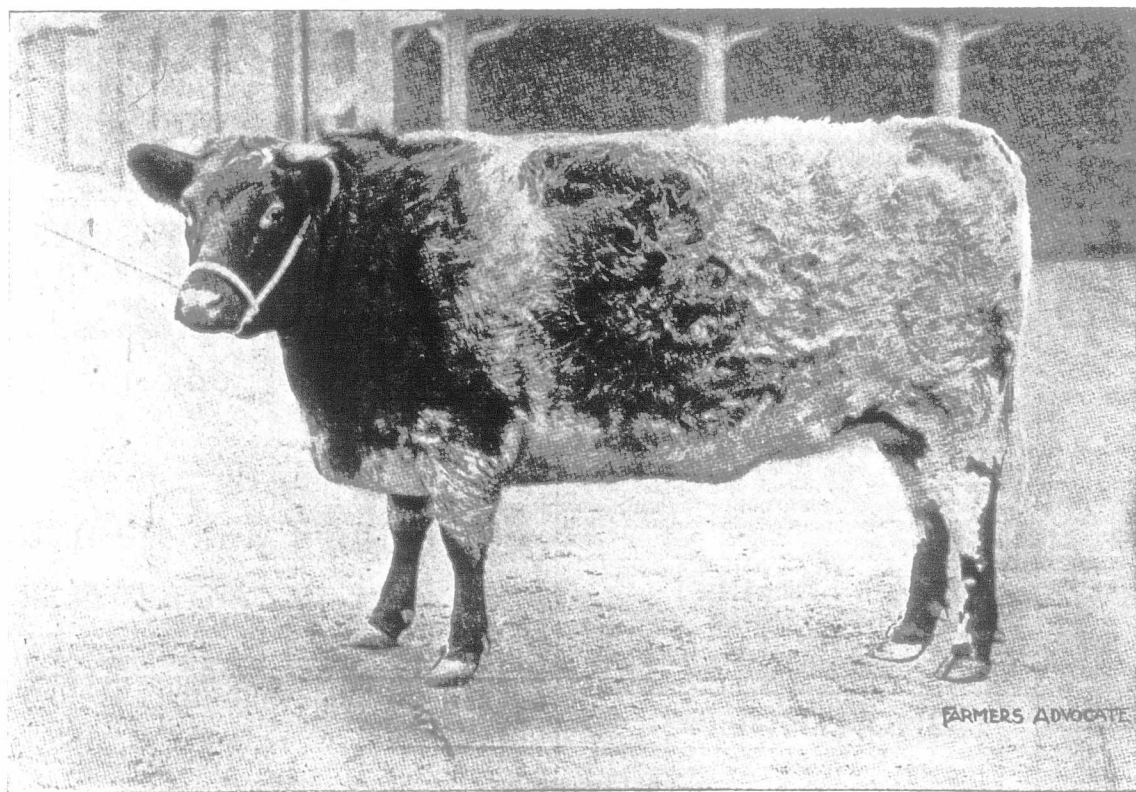
Bred by J. D. Fletcher; of the Campbell Claret family. Consul was awarded first at Edinburgh, first and champion at Provincial Union, first and champion at Creiff, and second at the Highland. His sire, Watchword, bred by Wm. Duthie, was first at the Highland in 1895 and 1896, and got by Scottish Archer. Watchfire, by Watchword, was first at the Highland, 1897. Consul is the highest-priced bull imported to Canada.

Hamilton is a city of over 50,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway—branch lines.

We have at present for sale the red yearling bull, Singapore, by Golden Star, 1st and champion at Royal Northern last year. We have also a good Canadian-bred bull for sale, fit for service.

W. D. FLATT, 378 HESS ST. SOUTH, HAMILTON, ONT.

JAS. SMITH, MANAGER.



CICELY.

Bred by Her late Majesty the Queen; undefeated in her class and many times champion; imported by W. D. Flatt.

Imp. Silver Mist.

Bred by Wm. Duthie; of the famous Missie family. He had many friends for first choice at Messrs. Marr and Duthie's sale. Mr. Beck, representing the Prince of Wales, made next to last bid.

Imp. Wanderer's Last.

Bred by W. S. Marr; also of the Missie family. Is the last calf got by that renowned Cruickshank bull, Wanderer. Mr. Marr considers this youngster very promising.

We keep in our herd a choice lot of both imported and Canadian cattle, of both sexes, from which to make selections. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.



Praises Pyramid Pile Cure.

Mrs. Aaron Medron, of Savannah, Ga., writes: "I had piles and rectal trouble for years until it was unbearable any longer. As I had often seen Pyramid Pile Cure advertised, I determined to try it, and for two years have never ceased to congratulate myself that I did so, for I have been entirely cured of rectal troubles, and two packages of the Pyramid did it."

The Pyramid Pile Cure contains no cocaine, opium nor any injurious drug whatever, and is absolutely safe, painless, and never fails to cure piles in any form.

Druggists sell full-sized treatment of this remedy for 50 cents.—Adv't.



"When choosing a Business College, be satisfied only with the best."

The Federated Business Colleges OF ONTARIO, Limited,

INCLUDE:

- The British American Business College**
Toronto, Ont. D. HOSKISS, Chartered Accountant, Principal.
- The Hamilton Business College**
Hamilton, Ont. C. R. McCULLOUGH, Principal.
- The Forest City Business College**
London, Ont. J. W. WESTERVELT, Principal.
- The Sarnia (Nimmo's) Business College**
Sarnia, Ont. W. BROOKS, Principal.
- St. Catharines' Business College**
T. F. WAIGHT, Principal.
- The Metropolitan Business College**
Ottawa, Ont. S. T. WILLIS, Principal.
- The Galt Business College**
Galt, Ont. G. E. WIGGINS, Principal.
- The Berlin Business College**
Berlin, Ont. A. W. YOUNG, Principal.
- The Royal City Business College**
Guelph, Ont. J. W. WIGGINS, Principal.

EVERYONE contemplating a business education should possess a copy of our New Annual Announcement—perhaps the handsomest and most complete College Prospectus ever published. Address College nearest your home. Students registering in one Federated College may transfer to any other School in the federation.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON,
DENFIELD, ONT.

NEWCASTLE HERD OF Shorthorns and Tamworths.

One choice 2-year-old heifer. About a dozen heifers, ranging from 2 to 4 months old; also a few nice young cows—all from Toronto prize stock. Be sure to write for prices. COLWILL BROS., Newcastle, Ont.

GOSSIP.

In this issue W. A. Reburn & Co. advertise a number of Jersey bull calves for sale. An unusual number of this firm's best cows produced males this season, and they are offered for almost give-away prices. This is a rare opportunity to get a bull that will improve the herd at a very low price, and it will not cost much to raise him.

H. Gee & Sons, Fisherville, Ont., change their advertisement in this issue, and offer Barred Plymouth Rocks and Pekin Ducks. Their 200 strong, young, properly-marked Rocks are sired by an eleven pound cock, a son of the first prize bird at Detroit, 1901. The ducks are mostly Hallock and Rankin strains, and include winners at Detroit and Chicago last winter.

At a sale on July 9th of a selection of Hackney brood mares and young stock from the Elsenham stud of Sir Walter Gilbey, 38 head of various ages, including foals and yearlings, made an average price of \$320. The highest price was 135 guineas for the 4-year-old mare Kiss Me Quick, by Yorkshire Post, and the second highest, 120 guineas, for Bright Dorothy, by Garton Duke of Connaught.

At a sale of Berkshire pigs last month from the herd of Mr. N. Benjafield, at Motcombe, Dorsetshire, 59 head made an average of \$37.50. The highest price, \$126, was paid by Mr. H. McCalmont, M. P., for a young sow, and Mr. Edney Hayter paid \$120 for a young boar. It is worthy of note that six pigs of one litter sold for 127 guineas (\$666), an average of \$111 each. Tally one for the sow as a rent-payer.

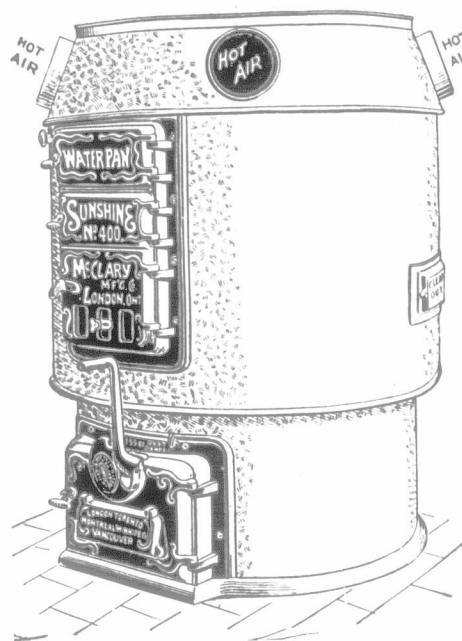
Rarely has it been our opportunity to see Hackney stallions equalling those of the Rawlinsons, Calgary. These gentlemen have at present in the stud, Robin Adair, the veteran show-ring habitue and favorite of the judges. Although in his eleventh year, the strong, well-built chestnut has held his own, possessing a pedigree showing good lineage, and such attributes as good bone and feet. Strong over the kidney, with good houlcers and hocks, it is not surprising to see the benefit resulting from his mating with the range mares. It is only a pity that more of his kind are not in stud service in the entire Northwest. Puritan, the aged six-year-old, assistant in stud duties, is a horse probably by Chocolate. The young horse probably shows a shade more quality than Robin Adair, has a good neck and well-laid shoulders, not heavy, and with plenty of slope. His legs and feet are hard to beat. An attractive head gives a finish to this horse, which is designed, as is his partner, for use as well as show purposes. Notice Messrs. Rawlinson's offering of choice mature stock, ready for the harness or the breeding stud, elsewhere in this issue.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS, FROM JUNE 20 TO JULY 6, 1901.

Reports of thirty-three cows have been received during this period, one of which was reported with four records of seven days each, and inclusive of these a record for thirty days. In the full-age class ten cows averaged:—Age 6 years 2 months 12 days, tested forty days after calving: Milk 440.8 lbs., butter-fat 14.390 lbs., equivalent butter 80 per cent. fat 17 lbs. 15.8 ozs., or 16 lbs. 12.6 ozs. 85.7 per cent. fat. The largest record in this class was 555.7 lbs. milk, 18.607 lbs. butter-fat, equivalent to 23 lbs. 4.1 ozs., or 23 lbs. 8.2 ozs. 85.7 per cent. fat, or 21 lbs. 11.3 ozs. 85.7 per cent. fat. In the four-year class nine were reported that averaged:—Age 4 years 3 months 25 days, tested thirty days after calving: Milk 419.9 lbs., butter-fat 12.754 lbs., equivalent butter 80 per cent. fat 15 lbs. 15.1 ozs., or 14 lbs. 14.1 ozs. 85.7 per cent. fat. The largest record in this class was made by a cow 4 years 1 month 20 days old. She produced 474 lbs. milk, 15.611 lbs. butter-fat, equivalent to 19 lbs. 8.2 ozs. butter 80 per cent. fat, or 18 lbs. 3.4 ozs. butter 85.7 per cent. fat. She made a thirty days' record of 1,988.5 lbs. milk, 62.958 lbs. butter-fat, equivalent to 78 lbs. 11.2 ozs. butter 80 per cent. fat, or 73 lbs. 7.2 ozs. 85.7 per cent. fat. The average of two heifers in the three-year class was 14 lbs. 5.7 ozs., equivalent butter 80 per cent. fat, or 13 lbs. 6.4 ozs. 85.7 per cent. fat. The most remarkable showing was in the two-year class. Twelve heifers in this class, averaging in age only 2 years and 20 days, produced an average of 304.5 lbs. milk, 9.598 lbs. butter-fat, equivalent to 12 lbs. 3.2 ozs. butter 80 per cent. fat, or 11 lbs. 3.2 ozs. 85.7 per cent. fat. The highest record in this class was of a heifer 2 years and 13 days old at date of calving. She produced an equivalent of 14 lbs. 3.6 ozs. butter 80 per cent. fat, or 13 lbs. 4.4 ozs. 85.7 per cent. fat. Six heifers in this class averaged an equivalent of 13 lbs. 5.9 ozs. butter 80 per cent. fat, 12 lbs. 7.6 ozs. 85.7 per cent. fat.

THE BEST TRADE IN PEAS HARVESTERS OF ANY YEAR YET—It is gratifying to learn that Messrs. Tolton Bros., of Guelph, Ont., have so far this season put out by far more pea harvesters up to the present date than in any previous year. Their machine has become so noted, and far-famed that they are shipping largely now to the United States, as well as their trade increasing in this country. Having known the merits of their machinery, as well as being personally acquainted with the firm and their motto: "Not low cheap, but low good"—can safely predict for them still greater things, and an excellent trade for this season.

A GOOD HEATER.



The Sunshine Furnace was specially constructed for farmhouse heating.

Burns coal, coke or wood. Feed-doors are large enough to admit rough blocks of wood.

A farmer can use up his rough wood in fall and spring, and burn coal in the severe winter weather.

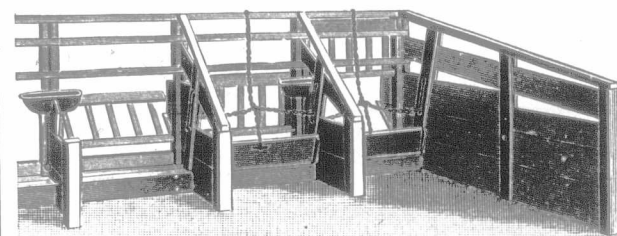
Made in three sizes.

Pamphlets free to any address.

THE McCLARY MFG. CO'Y.

London, Toronto, Montreal, Winnipeg, Vancouver; St. John, N. B.

THE Patented Cattle Stalls and Fixtures



Up-to-date Stalls.

Suitable for all kinds of stock feeding. Less lumber will build the above stall than any other in use. Special tie chains adapted for single stalls. Stock drinking basins a specialty. A full line of all stable fittings in stock.

Write for circulars, blank forms, and full particulars.

A. M. RUSH,

Box 178. HARRISTON, ONTARIO, CAN.

Canada Patent: Sept. 30th, 1899, No. 61144. United States Patent: Feb. 19th, 1901, No. 668118. J. W. SNELL, WINGHAM, ONT., sole agent for Huron County.

FARM RIGHTS CHEAP.

Buy a Right and it will tell you how to have your lumber cut.

Bill of lumber given.

A set of patterns sent, to enable you to make exact style as cuts.

A printed scale showing plan of your stable.

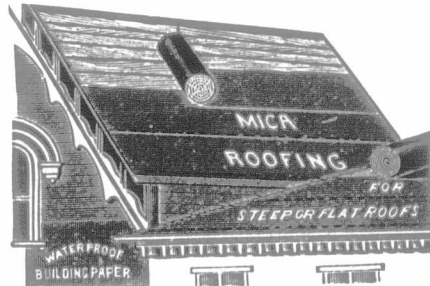
In short, the Right explains it all.

U. S. and Canada RIGHTS Promptly Issued.

MICA ROOFING.

USE MICA ROOFING on all your Buildings.

IT IS CHEAPER THAN SHINGLES. WATERPROOF. FIREPROOF.



USE MICA PAINT to Repair Leaky Roofs.

Shingle, Iron or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of one square each, 40 feet long by 32 inches wide, and costs only \$2.25, including nails, thus affording a light, durable and inexpensive roofing, suitable for buildings of every description—especially flat roofs—and can be laid by any person of ordinary intelligence.

HAMILTON MICA ROOFING CO., OFFICE: 101 REBECCA ST., HAMILTON, ONT.

Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

IMPORTED COTSWOLDS

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID,
COURTICE P. O.

SIX MILES FROM ORHAWA STATION, G. T. R.

SPRINGFIELD FARM

HERD OF
**Shorthorns, Oxfords,
AND Berkshires.**

Young bulls and Heifers on hand. Also a few choice Berkshires.

CHAS. RANKIN,
Wyebridge, Ont.
SIMCOE CO.



SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

SHORTHORNS.

6 choice young heifers, 4 imported cows. Also 16-months-old home-bred bull.

A. P. ALTON & SON,
Burlington Junction Station. Appleby P. O.

High-class Shorthorns and Yorkshire Pigs.

Just now three 10-months bulls, got by imp. Sirius 15281, great big massive fellows with lots of flesh and quality—away above the average. Also a few superior young cows in calf, and 5 or 6 heifers. We are booking orders now for the spring trade. Can ship some in six weeks.

JAS. McARTHUR, GOBLE'S, ONT.
Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met.

JOHN DRYDEN,
BROOKLIN, ONTARIO.

BREEDER OF
CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

Fifty superior yearling rams ready for August delivery.

YOUNG SHORTHORNS FOR SALE

Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.

A. & D. BROWN,
M. C. RAILWAY. IONA, ONTARIO.

SHORTHORNS (imported)

3 BULLS: 1 two-year-old, 2 one-year-olds. A few cows and heifers.

THOS. RUSSELL, EXETER P. O.

J. R. McCallum, Iona Station, Ont.

Offers young **SHORTHORN BULLS** and **HEIFERS**, of choice breeding, at reasonable prices. Iona Stn. on M.C.R., half a mile from farm.

To Rid **STOCK** of Flies, Lice,
AND ALL SKIN DISEASES, USE

West's Fluid

WHICH IS ALSO A SURE CURE OF
CONTAGIOUS ABORTION.

Standard Sheep Dip is Good, also Cheap.

Manufacturers: **The West Chemical Company,**
TORONTO, ONT.

Pedigree forms free to customers.

NOW, FOR THE FIRST TIME,

We offer you two herds to select from. Having purchased the entire herd of T.G. Yeomans & Sons, we now have 250 head on hand, of the best families, and with largest official backing. We want to sell 100 head before fall—at least 50 or 60 before starting for the fairs. Great inducements to quick purchasers.

HENRY STEVENS & SONS,
LACONA, OSWEGO CO., N. Y.

Shorthorns and Berkshires

FOR SALE. A few choice calves. Also a fine lot of young pigs of the Highlander family.

JOHN RACEY, JR.,
Lennoxville, Que.

Shorthorns, Berkshires, Leicesters

An offering at present the grand stock fair, Crown Prince; also some young ones.

ISRAEL GROFF, ALMA, ONTARIO.

Hawthorn Herd of Deep-Milking Shorthorns

Stock for sale of both sexes. Herd headed by the Isabella bull, Golden Eagle—30943, by Golden Measure.

Wm. Grainger & Son, Londesboro, Ont.

BONNIE BURN STOCK FARM
40 rods north of Stouffville Station, Ont., offers **Shorthorns, Shropshires, Berkshires.** Pigs just weaned, good breeding, good quality, including a few choice out of imp. sow. Pairs not akin at low prices. **D.H. RUSSELL, Stouffville, Ont.**

Maple Lodge Stock Farm
ESTABLISHED 1854.

SHORTHORNS—Grand young bulls and heifers for sale. We have the first-prize milking strains. Imported **Knuckle Duster** and imported **Sir Wilfred** in service.

LEICESTERS—First prize flock of Canada for past six years. Imported and home-bred for sale.

ALEX. W. SMITH,
MAPLE LODGE P. O., ONT.

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramsden dams. **THOS. ALLIN & BROS.,** Oshawa, Ont.

FOR SALE:

SHORTHORN BULLS AND HEIFERS from such sires as Mariner (imp.), Royal Judd 17499, Sultan Selam (imp.), Grenadier 26251, and Roseville Abott 30874, on a Victoria foundation. Also one extra Kinellar Stamp 10-mos. red bull. Come or write. **HURON COUNTY, THOS. CUDMORE & SON,** EXETER STATION, Hurondale, and Telegraph Office. Ontario.



90 HEAD
High quality,
Early-maturing
Herefords
Prizewinners.
Young bulls,
cows,
heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue.

H. D. SMITH, COMPTON, QUE.

GEO. RAIKES, BARRIE, ONT.,
BREEDER OF
SHORTHORNS & SHROPSHIRE.
YOUNG STOCK FOR SALE.

SHORTHORNS.

We are offering three choice-bred young bulls, 1 yr. old, two 8 months old—heavy-milking strain.

JAMES BROWN, NORVAL STN. and P.O.

Riverside Holsteins

Victor DeKol Pietertje and Johanna Rue 4th Lad head the herd.

Matt. Richardson & Son, Caledonia, Ont.

HOLSTEINS
FOR SALE.

I am now offering Holstein calves of both sexes, out of such cows as Panarista Pauline, Inka Darkness, Jiri's Jessie DeKol, DeBickert's DeKol, Belle Burke, Mechthilde, Pietertje Hartog DeKol, and others, all closely related to DeKol 2nd and Netherland Hengerveld, the greatest of Holstein cows.

J. A. CASKEY,
Madoc, Ont.

4 HOLSTEIN BULLS 4

FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inka, Netherland, Royal Aaggie, and Tritonia Prince, and out of imported females that have proven their worth at the pail. **THOS. B. CARLAW & SON,** Warkworth.

SPRING BROOK
Holsteins, Tamworths & B. P. Rocks.

2 choice De Kol bull calves, 1 cow, 2 heifer calves—all De Kols. Tamworths: One boar, 9 months; a few sows. Orders booked for spring litters.

A. C. HALLMAN,
Waterloo Co. New Dundee, Ont.

BROOKBANK

Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.

GEO. RICE,
Oxford Co. Currie's Crossing, Ont.

UNADILLA FARM.
F. L. GREEN, GREENWOOD, ONTARIO,
BREEDER OF

St. Lambert Jersey Cattle and Yorkshire Pigs.

My Jerseys are bred for business. Both sexes for sale. I offer an extra choice bull, dropped Feb. 27th, 1901, for sale, a son of **Queen May of Greenwood**, who made 18 lbs. butter in 7 days, and is at Pan-American now. A lot of very choice **Yorkshires** on hand. Also **Barred Rocks**, **Light Brahmas**, and **Bronze turkeys**. Prices right.

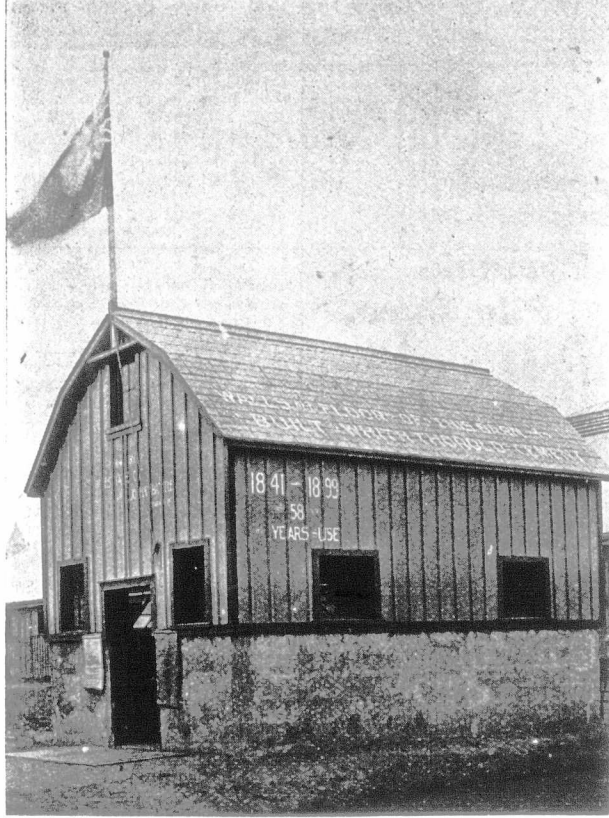
Industrial Exhibition, Toronto.

THE EXPOSITION HEADQUARTERS OF

BATTLE'S THOROLD CEMENT.

ACROSS THE ROAD FROM THE DAIRY BUILDING.

Every Farmer Visiting the Exposition is Invited to Call and See this Model Barn.

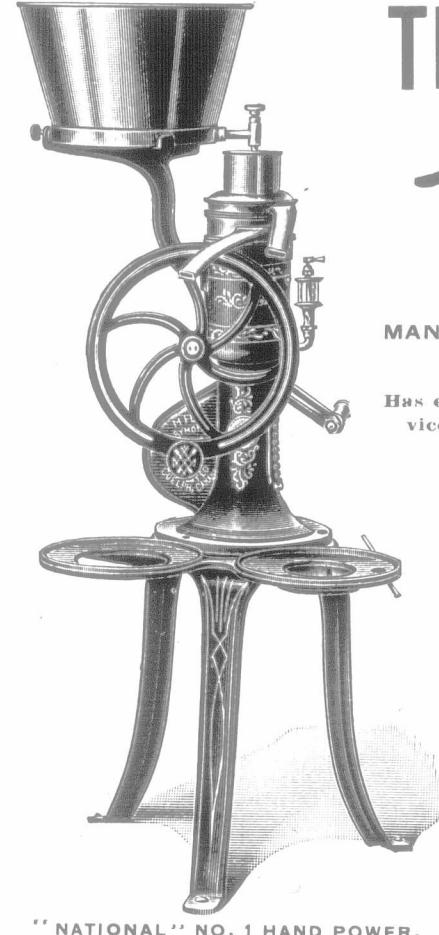


All will be Welcome. Hundreds Who Have Called Say it is the Coolest Building on the Grounds.

In this building will be found actual demonstrations of the adaptability of **THOROLD CEMENT** for use in the construction of Concrete Houses, Bank Barns, Horse Stables, Cow Stables, P'pens, etc. Also the office of the **ESTATE OF JOHN BATTLE**, where our **MR. JAMES BATTLE** will be constantly in attendance, and will be pleased to give all information.

ESTATE OF JOHN BATTLE, THOROLD, ONT.

MANUFACTURERS OF THOROLD CEMENT.



THE NATIONAL Cream Separator

MANUFACTURED BY THE RAYMOND MFG. CO. OF GUELPH, CAN.

- Has every valuable improvement to make it serviceable, reliable, easy and handy to operate.
- Has no complicated parts to wash, only two loose pieces inside of the bowl.
- Anti-friction ball bearings, to save power and cost of oil.
- The neatest in design and finish.
- Proven beyond a doubt to be a necessity to make dairying profitable on the farm when making butter or when sending cream to the creamery or city trade.
- It makes more butter and improves the quality so as to command the highest price.
- Saves labor, and earns an extra increased profit of from \$4 to \$8 per cow annually.
- Ask those who have them. Consider the waste of money by feeding the most valuable constituent in milk to calves, when grain meal, having the same feeding value, can be substituted at 1-16 of the cost of the butter fat.

"NATIONAL" NO. 1 HAND POWER.

The "National" is sold entirely on its merits. A free trial given at your own home.

THE CREAMERY SUPPLY CO., GUELPH,
GENERAL AGENTS FOR ONTARIO.

Maple Glen Stock Farm. Jersey Calves

SPECIAL OFFERING: A bull calf born Aug., 1900, a grandson of Inka Sylva, the sweepstakes prize and best winner last season. Also one year old dam a full sister of the great Carmen Sylva. A choice cow due to calve 1st July.

C. J. GILROY & SON,
Brookville, on C.P.R. or G.T.R. Glen Baell, Ont.

For description and prices write **W. C. SHEARER, - BRIGHT, ONT.**

GLEN ROUGE JERSEYS.

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

We have now on hand young females sired by Nero of Glen Rouge 50241, and cows and heifers bred to him.

FOR SALE. 6 pure St. Lambert Jersey bull calves, two to seven months old, fine individuals and well bred. Price, \$25.00 to \$30.00 each.

SPLENDID Jerseys for Sale.

Two bull calves and two heifer calves that will equal anything I know of: age, 1 to 3 months; price, \$30 to \$60. One yearling heifer, blood of old Massena, 900 pounds butter in one year, \$100. One yearling bull, extra breeding, \$80. All registered. Crated and put on express car.

MRS. E. M. JONES, Box 324. BROCKVILLE, ONT., CAN.

BRAMPTON JERSEY HERD.



For sale: 2 yearling bulls; 8 bull calves, sired by Brampton's Monarch (imp.), and out of first-class cows. A number of cows and heifers in calf. Also some unregistered cows and heifers, fresh-calved and springers—grand family cows.

B. H. BULL & SON, BRAMPTON, ONT.

Dairy Jersey Heifers FOR SALE.

10 Registered St. Lambert Jersey heifers, in calf to pure St. Lambert bull. No better dairy strain in Canada. Solid grays and fawns in color. Their dams have proved themselves dairy cows of high order. Can supply a carload of heifers from 6 months to 2 years old. Two fine solid gray bull calves 8 months old. No fancy price expected. Come and inspect or correspond. Address: om

E. PHELPS BALL, LEE FARM. ROCK ISLAND, P. Q.

FOR SALE.

Five bulls ranging from 11 to 23 mos., from such noted cows as Jean Armour, Lady Ottawa, Sprightly and Priurose (imp.), and from the best sires procurable. Also heifers and cows all ages, and poultry.

W.M. STEWART & SON, MENIE, ONT. Carr's Crossing, G.T.R. W.F. STEPHEN, Trout River, Que.

High-class IMPORTED AND HOME-BRED AYRSHIRES,

including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

WM. WYLIE, - HOWICK, QUEBEC.

CHOICE AYRSHIRE BULLS.

OFFER: Five bull calves, one dropped in each of the months of August, November, December, January, and April. Good individuals, and from deep-milking strains.

W. W. BALLANTYNE, STRATFORD, ONT. "Neidpath Farm" adjoins city, on main line G. T. R.

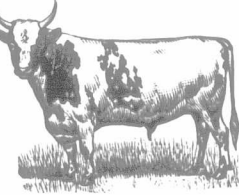
AYRSHIRES AND LEICESTERS

We breed for milk and quality, and employ only the best sires. Are now offering young Ayrshires of both sexes.

DAVID A. MCFARLANE, Breeder of high-class AYRSHIRES. Young stock for sale from imported and home-bred foundation. Prices reasonable.

Choice Ayrshires, AND BARED ROCK EGGS.

3 BULLS, from 7 to 17 months old, also a few COWS AND HEIFERS.



Eggs for hatching, from choice matings, at \$2.00 per 15. Incubator eggs \$4.00 per 100.

JAS. McCORMACK & SON, ROCKTON, ONTARIO.

AYRSHIRE FEMALES FOR SALE

Carrying the same breeding as our prize-winners, including such offspring as Floss and Tom Brown, the World's Fair winners. We breed for constitution, quality, and production.

DAVID BENNING & SON, Williamstown, Ont.

Spring Burn Stock Farm. H. J. Whitteker & Sons, Props. North Williamsburg, Ont.

AYRSHIRE CATTLE, OXFORD DOWN SHEEP, BERKSHIRE PIGS, AND BLACK JAVA FOWLS. FOR SALE: 1 bull, 11 months old; females any age; 6 choice ram lambs. Also young pigs and fowls. WINCHESTER, MORRISBURG, C. P. R. G. T. R.

Maple Cliff Dairy and Stock Farm. BREEDERS OF AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.

FOR SALE: 5 bull calves, a few heifers; young pigs, pairs not akin; 2 boars, 4 months old; young pigs. Farm adjoins Central Experimental Farm, Ottawa.

TREDINNOCK AYRSHIRES

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchinbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars, address JAMES BODEN, Mgr., St. Anne de Bellevue, Quebec.

Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal. om

Ayrshire Bulls: Write to J. YULL & SONS, Carleton Place,

for special prices on Ayrshire bulls from 1 1/2 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks.

Ayrshires for Sale: 4 yearling bulls and a number of spring calves of deep-milking strains. Prices reasonable.

F. W. TAYLOR, Wellman's Corners, Ont.

FOR SALE: That choice Ayrshire bull, Royal Star of Ste. Ann's (7916), by Glencairn 3rd (imported), winner of first prize at Toronto, first prize and sweepstakes at London. He is large size, and a sure stock-getter, and one of the finest show bulls in Canada. Also bull and heifer calves. For particulars write—

WM. THORN, Lynedoch, Ont. Norfolk Co. Trout Run Stock Farm.

Ayrshires and Yorkshires

We offer at low prices any two of our three Feb. and March bull calves, bred from our imported bull and from heavy-milking dams. We reserve one 6-months bull calf for showing. All are in show fit. Choice females of different ages. A few spring pigs still on hand.

Alex. Hume & Co., Menie, Ont.

Ayrshire bulls for sale: The celebrated bull, Klondyke of St. Ann's 8897, bred by R. Retford, sire Glencairn 6955 (imp.), 4 years old in Aug., for immediate delivery. Also several young bulls fit for service this fall, and several calves. All from the above sire, and from good milkers. Prices reasonable.

W. F. STEPHEN, TROUT RIVER, QUEBEC.

EUROPEAN ADVERTISEMENTS.

HENRY DUDDING, RIBY GROVE, STALLINGBOROUGH, LINCOLN, ENGLAND. Breeder of Lincoln Longwool Sheep and Shorthorn cattle.

The Riby Flock of upwards of 1,400 Ewes holds an unequalled record for true type, merit, and quality. Its produce and their descendants have won the highest honors at all the principal exhibitions and shows throughout the world; its wool exhibits being unbeaten. Established upwards of 140 years. Its produce leads the way from the fact that satisfaction is given. The Riby Shorthorn Herd of upwards of 300 selected specimens of Booth, Bates, Cruickshank, and Scotch strains, is one of the largest Herds in Great Britain. Its principal Stud Bulls are: "Pride of Fortune" 73240, s. "Pride of Morning" 145664, d. "Flora 2nd," by "William of Orange" 50684, s. "Golden Robin" 68718 (rich roan), s. "Roan Robin" 57992, d. "Golden Sunshine," by "Royal James" 54972; "Prompter" (Vol. XLV.), by "Prefect" 62255, d. "Risington Lass," by "Umpire 13th," 1st and champion at Omsersley, 1898; "Rosario" s. "Wiltshire Count" 69824, out of "Rose Blossom" (G. Harrison). This bull, his sire and dam, won 84 prizes, including first and championships. Telegrams: "Dudding, Keelby." Rail Stations: Stallingborough, 3 miles; Great Grimby, 7 miles.

REGISTERED Southdown Sheep, Suffolk Sheep AND Berkshire Pigs.

THE HEVELEY FLOCKS and herds, the property of Col. H. L. B. McCalmont, M.P., are unique for the purity of their blood, typical character, and individual merit. In their foundation, etc., no expense has been spared in securing the best and most perfect specimens of the different breeds. In each case full records are kept of individual pedigrees, so that any selections made from these flocks will, in addition to being of the highest merit and typical character, have also the great advantage of individual pedigrees. The Southdowns have secured the highest show-yard honors during 1900, including first prizes at the leading summer and winter shows. The Suffolks are equally well bred, and numerous prizes have also been won. In fact, for individual merit, pedigree, and purity of breeding, it would be difficult to find better and more suitable flocks of either of these breeds from which to perpetuate their high individual merits. Apply to— H. J. GARROD, Cheveley, Newmarket, England.

FAMOUS ALL OVER THE WORLD ALFRED MANSELL & CO., LIVE STOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MANSELL & CO., Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

The Biscathorpe Flock (Lincoln Flockbook, Vol. I, page 28).

ABSOLUTE DISPERSAL of this world-renowned flock of pure-bred Lincoln SHEEP, bred by the KIRKHAM FAMILY for upwards of 125 years, comprising about 1,500 breeding ewes, ram and she lambs, shearing rams, two-shear rams, and valuable stud rams.

WHICH WILL BE SOLD BY AUCTION, BY MESSRS. DICKINSON & RIGGALL,

ON Wednesday, 4th Sept., 1901,

AT BISCATHORPE HOUSE, LINCOLN, ENGLAND. (2 days previous to Lincoln great ram fair.)

A full pedigree of sire and dam of each animal is recorded in the Biscathorpe Flockbook, and will be given in sale catalogues.

Few foreign buyers of Lincoln sheep have visited England during the last 60 years who have not inspected and purchased sheep from this superb flock.

Catalogues may be had of the auctioneers, Louth & Grimby, a fortnight previous to the sale.

Inspection invited by arrangement.

MANSELL'S DISPERSION SALE.

Shropshires.

Andrew E. Mansell, Harrington Hall, Shipnal, England, who is settling in Tasmania, will sell by auction, without reserve, on Thursday, August 29th, 1901, his unrivalled flock of Shropshires. Sheep bought for America and Canada will, if desired, be sent in charge of Mr. Robert Mansell. Particulars and catalogues obtained from Alfred Mansell & Co., Auctioneers, Shrewsbury, England. Commissions carefully executed.

HAMPSHIRE DOWN SHEEP.

SPLENDID MUTTON, GOOD WOOL, GREAT WEIGHT.

THIS HIGHLY VALUABLE English Breed of Sheep

Is unrivalled in its rapid and wonderfully early maturity, possessing, too, hardiness of constitution adapted to all climates, whilst in quality of mutton and large proportion of lean meat it is unsurpassed. Full information of

JAMES E. RAWLENCE, SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION, SALISBURY, ENGLAND.

W. W. Chapman,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society. Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered. Address: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London.

SHEEP BREEDERS' ASSOCIATIONS American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

PLEASE MENTION FARMER'S ADVOCATE

EUROPEAN ADVERTISEMENT.

J. E. CASSWELL'S LINCOLNS. Loughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged £51 each; 14 of the best averaged £63 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearlings for sale; also Shire horses, Short-horns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

LEICESTERS. Our present offering are all ages and both sexes. Choice animals.

C. & E. WOOD, FREEMAN, ONTARIO.

Dorset Horn Sheep THE largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other. Awarded 5 out of 8 first prizes at Toronto, London and Ottawa in 1900. Flock of 300. Stock for sale always on hand.

John A. McGillivray, Uxbridge, Ontario.

LINDEN OXFORDS. A few extra nice yearling rams from Imp. Reading's 10 and Hampton Duke, winners at London, Eng., and Toronto; also two young Shorthorn bulls.

R. J. HINE, Dutton P.O. and Station, M.C.R.

"Farnham Farm" Oxford Downs. FLOCK ESTABLISHED 20 YEARS.

Forty superior yearling and two-year rams. Two extra fine imported rams. Sixty yearling ranch rams. Forty yearling ewes. One hundred ram lambs. Stock good and prices reasonable.

HENRY ARKELL, Quelfh, Ont., G.T.R. Arkell, Ont., C.P.R.

BROAD LEA OXFORDS. We have a choice lot of lambs this year, bred from our imported rams, Royal Warwick 3rd and May King 1st, some weighing 17 lbs. at birth. Also some good shearing ewes and rams. A few shearing ewes and rams fitted for show purposes. All of which we are offering for sale at reasonable prices.

HENRY ARKELL & SON, Teeswater, Ont.

LINCOLNS. Rams and ewes (all ages), consisting of those bred at Fairfield and importations from the flocks of Dudding, Dean, Wildsmith and Wright. I can supply show flocks that will win. Boynton Fairfield, 456 lbs, at the great International show at Chicago, first prize winner in England and sweepstakes ram of Canada and United States, at head of flock.

J. H. PATRICK, ILDERTON, ONT., CAN. 1 mile from Ilderton. Post office. Telegraph office. 10 miles from London. Railway station.

COTSWOLDS FOR SALE. Pure-bred Cotswold ram and ewe lambs. Extra choice ones.

JOSEPH FERGUSON, Uxbridge P. O. and Station.

Lincolns, Shorthorns, Berkshires.

Am offering a few choice bulls from 3 to 18 months old, from imp. stock of Miss Ramden and Varuna families; also some extra nice Berkshire pigs.

ALEX. LOVE, - EAGLE P. O. BISMARCK STATION ON M. C. R.

Stop! Look!! Listen!!! FAIRVIEW SHROPSHIRE

Good rams having the best of quality. Do you want one or two? If so, write for circular.

JOHN CAMPBELL, - WOODVILLE, ONT.

SHROPSHIRE LAMBS FOR SALE.

WM. PIERCE, BRINSLEY P. O. ONT.

SHROPSHIRE TO HEAD FLOCKS. ESTABLISHED 1861.

20 Yearling Rams, 30 Ram Lambs, 20 Ewe Lambs, of superior quality, form and covering, the get of an extra good imported ram and choice dams, a number of which have been imported from Thomas, Farmer, Tanner, Minton, and Barber flocks. Also a few choice English Collie pups ready for shipment.

GEO. B. PHIN, HESPELER, ONT. Waterloo County. G. T. R. and C. P. R.

REG. 50 SHROPS. 50 FOR SALE.

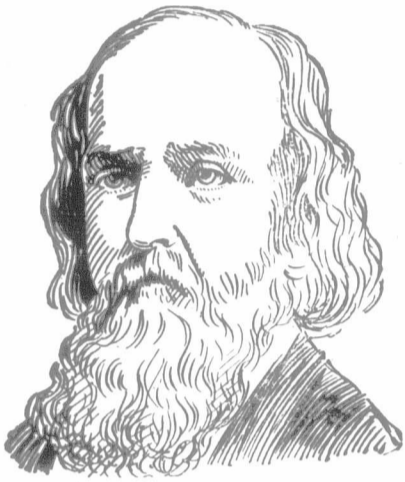
Shearling and two-shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade. Foundation stock bred by Mansell, England. Prices moderate. A card will bring them. KOWAT BROS., Pheipston station, G. T. R., 5 miles east, Simcoe County.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

For Well People.

An Easy Way to Keep Well.

It is easy to keep well if we would only observe each day a few simple rules of health. The all-important thing is to keep the stomach right, and to do this it is not necessary to diet or to follow a set rule or bill of fare. Such pampering simply makes a capricious appetite and a feeling that certain favorite articles of food must be avoided.



Prof. Wiegand gives pretty good advice on this subject. He says: "I am 68 years old and have never had a serious illness, and at the same time my life has been largely an indoor one, but I early discovered that the way to keep healthy was to keep a healthy stomach, not by eating bran crackers or dieting of any sort. On the contrary, I always eat what my appetite craves, but for the past eight years I have made it a daily practice to take one or two of Stuart's Dyspepsia Tablets after each meal, and I attribute my robust health for a man of my age to the regular daily use of Stuart's Tablets.

"My physician first advised me to use them, because he said they were perfectly harmless and were not a secret patent medicine, but contained only the natural digestives, pepsines and diastase, and after using them a few weeks I have never ceased to thank him for his advice.

"I honestly believe the habit of taking Stuart's Dyspepsia Tablets after meals is the real health habit, because their use brings health to the sick and ailing, and preserves health to the well and strong."

Men and women past fifty years of age need a safe digestive after meals to insure a perfect digestion and to ward off disease, and the safest, best known and most widely used is Stuart's Dyspepsia Tablets. They are found in every well-regulated household from Maine to California, and in Great Britain and Australia are rapidly pushing their way into popular favor.

All druggists sell Stuart's Dyspepsia Tablets, full-sized packages at 50 cents, and for a weak stomach a fifty-cent package will often do fifty dollars' worth of good.—Advt.

1901 Importation

of Shropshire rams and ewes of finest quality, from the best breeders, now being offered at reasonable prices. om

ROBERT MILLER, Stonnville, Ontario.

SHROPSHIRE.

FOR SALE: Yearlings of both sexes—extra good ones. Also this season's crop of lambs, om

N. H. Switzer, Streetsville, Ont., Peel Co

Shropshires...

At present I offer for sale: Shearling rams, shearing ewes, ram and ewe lambs. Also a few aged ewes. Prices reasonable. om

GEORGE HINDMARSH, AILSA CRAIG, ONT.

SHROPSHIRE

Shearling rams, ram and ewe lambs. Well covered. Good colors. Good individuals. CHESTERS: Bacon type. Litters ready to ship. W. E. WRIGHT, Gleanworth, Ont.

W. H. BEATTIE, Wilton Grove, Ontario,

IMPORTER AND BREEDER OF Shropshire sheep, collie dogs, White Holland and Mammoth Bronze turkeys, and Barred Rocks.

HIGH-CLASS SHROPSHIRE.

A flock of 75, of good type. Two-shear rams, shearing rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. Abram Rudell, Hespeler P.O., Ont. om C. P. R. and G. T. R.

Fresh Berkshire Blood, from the most noted prize herds of Eng. and the U. S., including among others the famous sow, Elphick's Matchless—never beaten, and imported at a cost of nearly \$100. We can offer some especially good young pigs, in pairs and trios not akin, of splendid length and type. Also young sows, bred to good boars. All at very reasonable prices. We are making no reserve for show this season, so our best are for sale. Take Kingston Road electric cars to the door from the city. DURHAM & CAVAN, East Toronto, Ont.

N. M. BLAIN'S TAMWORTHS.

Coldspring herd of Tamworths, owned by Mr. Norman M. Blain, of St. George, Ont., was founded in 1890 on imported stock purchased from the herd of the Ontario Agricultural College, and from stock imported by Mr. John Bell, of Amber, Ont. One of the first sows purchased was Amber Rose (imported in dam), a typical representative of that now favorite breed, and her descendants fully justify the excellent judgment shown in the selection of her as a dam. Among the first sires in use in their herd was Rattler 27, an enormous-sized boar of great length and substance, as well as fine quality, and who left many prizewinners. The present stock boar is Advance 610, bred by John Bell, and sired by Birmingham Duke (Imp.) 113. He was bred by John Norman, J. R., Tamworth, Eng. The dam of Advance is Amber Duchess 110, by Ingersoll Duke (Imp.). This boar has proved himself to be a sire of the highest rank, his stock being exceptionally even, very long and deep, and, withal, uncommonly smooth, and the active demand for Mr. Blain's stock is the best guarantee that they please the many purchasers. Stock from this boar has been sent to Iowa, U. S., Nova Scotia, Prince Edward Island, Quebec, British Columbia, and all over Ontario. One boar sold to parties in Iowa now weighs over 1,200 pounds. The dams at present on the farm are an extra nice lot. The sow, Amber Duchess 110, by Ingersoll Duke (Imp.), is one hard to beat. Another one is Beauty I Am 1190, by Robert Burns 585, dam Pride of Zurich 1188, by Duke of Dorchester May B. is a yearling of extra nice quality; she is sired by Five Points 1302, dam Blain's Fancy 1184. This sow captured 1st prize at Guelph Fat Stock Show last year as best pure-bred bacon type. Thrifty Maid is another dam that swept the board at Toronto last fall, capturing 1st and sweepstakes. She is sired by Rob Roy, dam Thrifty Girl. This sow also won sweepstakes at Guelph Fat Stock Show. These animals are all in splendid condition. Mr. Blain intends to compete for honors this fall at all the leading shows.

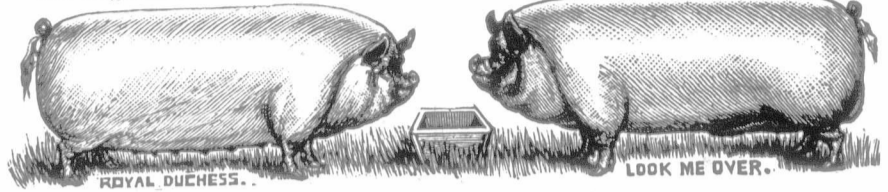
Mr. J. M. Gardhouse, of Highfield, Ont., the owner of Rosedale Stock Farm, where a herd of Shorthorns and flock of Leicester sheep are kept, has lately purchased the Imp. Clydesdale stallion, Coyton, Vol. 23, bred by William Kirkland, Lochend Farm, Aylton, Scotland. This excellent horse is a solid black in color, splendidly developed for a three-year-old, smooth evenly proportioned, with excellent feet and legs, and roadster action. He is sired by Ethiopia 5750, Vol. 10; dam Lochend Betty 8612, Vol. 12 and traces directly to the famous Darnley, and is half-brother to the famous horse, Brooklin 6547, sold for 700 guineas. This horse was bought to succeed King of Clydes, lately sold, and who won 1st prize at the late spring show in Toronto. Among Mr. Gardhouse's Clydesdales we noticed a particularly nice 2-year-old filly, Minnie Gordon 2900, Vol. 11, sired by Lewie Gordon (Imp.) 7918, dam Jess 2234, by MacNeillage (Imp.) 2992. This filly is a sweepstake at Toronto, which is all the recommendation she requires. In Shires, Mr. Gardhouse still owns the champion aged sire, Darnley (Imp.) 3585, sired by Champion, by Prince Denmark, by Iron Duke, dam Thumper 2137. This horse has left more prizewinners than any Shire stallion living in this country. Among the Shire dams is Cauliflower 104, sired by Kher Konk (Imp.) 3771, dam Columbine (Imp.) 103. This mare shows enormous substance, and withal, is very smooth and even. A beautiful year-old filly is Victoria 147, sired by Darnley, dam Queen of Highfield, by King of the Castle, Imp.

In Shorthorns, Mr. Gardhouse is up-to-date. His stock bull is Loyalty (Imp. in dam), sired by Prince Charlie 73263; dam Jennie Lind, imported by W. D. Flatt; she by Prince of Fashion, by the Great Scottish Archer. This bull belongs to the fashionable Missie family, being a grandson on his sire's side to that great bull, Musgrave. In dams, the cow Clarissa 19238 is a model. She is sired by Eclipse (Imp.) 49526; dam Cleta (Imp.) 5097. She belongs to the Claret family. Another good one is Clarissa Gem, a 3-year-old sired by Scottish Pride 26360, dam Clarissa, Wimple Heiress, by Golden Robe 20396, is suckling a little gem that, if present indications are any criterion, will make a sweepstake. It is sired by the Dutch bull, Imp. Prime Minister 15280. Another very fine 2-year-old is Verbena's Dandy, a roan sired by Prime Minister, dam Verbena's Blossom, belonging to the same family as the champion bull, St. Valentine, which was bred on this farm.

If one thing more than another has tended to make this farm famous, it is the high-class Leicester sheep bred here. The flock contains at present something over 100, and among them are a large number of prizewinners, both individually and in pens, having won 1st prizes and sweepstakes year after year at all the leading shows in Canada and the United States. This is the flock that produced the sweepstake winners at the International Live Stock Show in Chicago. Sultan, the ram which carried off the honors at Chicago is still looking hale and hearty, and fit to compete against the best of them in the pig-circus. Also the ewe which won the sweepstake at the same show will still have to be reckoned with. The prizewinning ewes, Kate and Vedora, have this spring produced four lambs that promise to be their mother's equals, being sired by the ram, Try Me.

Summer Hill Herd

HEADQUARTERS FOR THE IDEAL BACON HOG AND EASY FEEDERS.



The largest herd of imported and Canadian-bred Yorkshires in America. Out of 121 exhibits at the leading shows in '99 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Won most of the best prizes offered, including first prize for best pen of pure-bred bacon hogs, also grand sweepstakes over all breeds in a class of 13 entries. The foundation of our herd was laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont. om

D. C. Flatt & Son, Millgrove, Ont.

LARGE ENGLISH FOR SALE.

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star (Imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd. om

S. DYMENT, BARRIE, ONT.

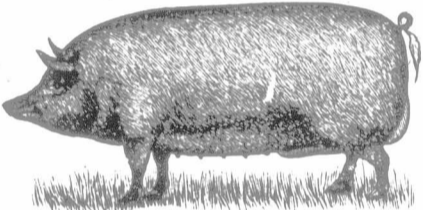
BERKSHIRES

A specialty. Can supply pairs and trios not akin. Various ages. om

MAC. CAMPBELL, NORTHWOOD, ONT.

Tams for Sale. Stock boar, Defiance, 2nd prize, Toronto. First-prize boar, six months; boars, sows, 5 months. Prices right. om

JOHN HORD & SON, Parkhill, Ont.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices. om

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Boars fit for service, and young stock of both sexes on hand and for sale. om

WILLIAM HOWE, BRUCE CO. NORTH BRUCE, ONT.

YORKSHIRES A SPECIALTY

OF THE IDEAL BACON TYPE. Boars and sows from 2 to 3 months old, from large, matured stock. Have only one young sow left, safe in pig, for sale—a choice one. Write— om

JAS. A. RUSSELL, Precious Corners, Ont.

YORKSHIRES

Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow. om

WM. TEASDALE, Dollar, Ont. Northern branch G.T.R., 15 miles from Toronto. om

HOLWELL MANOR STOCK FARM.

IMPROVED YORKSHIRES FOR SALE.

Young boars and sows carrying the blood of Oak Lodge Conqueror and Oak Lodge Royal King (Imp.) Write for prices. Satisfaction guaranteed. om

D. G. GANTON, ELMVALE, ONT. BOX 18.

YORKSHIRES AND POULTRY.

This month's specialty: A few very choice cockerels and pullets in B. P. Rocks, W. Wyandottes, White and Black Minorcas, and White and Brown Leghorns. A few choice young Yorks left. om

A. B. ARMSTRONG, CODRINGTON, ONT.

Improved Yorkshires FOR SALE.

of the most popular families. All ages and both sexes now ready for immediate shipment. Write for what you want. Prices reasonable—consistent with quality. om

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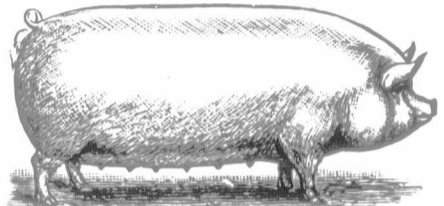
JOS. FEATHERSTON & SON.

IMPORTERS AND BREEDERS OF Improved Large Yorkshire and Essex Swine STREETSVILLE, ONTARIO.

We have some fine young pigs to sell, from imp. sows and by the celebrated boar, Whitton Star. He took first prize at Toronto and London fairs in 1899 and 1900. We have some more imported sows to farrow, bred to him, and have some nice young pigs from our home-bred sows, and got by the imp. boar, Nottingham Monarch, a sire of great promise. om

OAK LODGE YORKSHIRES

ARE THE CORRECT TYPE TO BRING THE GREATEST PROFIT.



We breed our winners, and we win more prizes than all other herds combined at Toronto, London, and other large shows. Sweepstakes in bacon classes over all other breeds in dressed carcass competition, also on foot, for two years in succession. Championship carcass in bacon class at Chicago, 1900. First-prize herd at Toronto Industrial for nine years. Write for prices. om

Brethour & Saunders, Burford, Ont., Can.

FOR SALE:

Yorkshires and Holsteins Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, om Brickley P. O., instead of Warkworth.

BARRED ROCKS. Extra fine. **PEKIN DUCKS.** Young stock for sale later. H. GEE & SONS, FISHERVILLE, ONT. om

Chickens FOR EXPORT.

We want every chicken in Western Ontario, and want good active agents to buy them. Get your territory, and secure poultry for the fall any spare time you have. Write for particulars. om

H. GEORGE & SONS, CRAMPTON, ONT.

BARRED ROCKS (Exclusively). I have a few good breeding hens from one to two years old to dispose of at 75c. apiece. Will also have a quantity of cockerels and pullets later on. A. E. SHERRINGTON, Box 100, Walkerton, Ont.

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(LIMITED), Manufacturers of the celebrated

Waggoner Extension Ladder

FOR GENERAL FARM USE.

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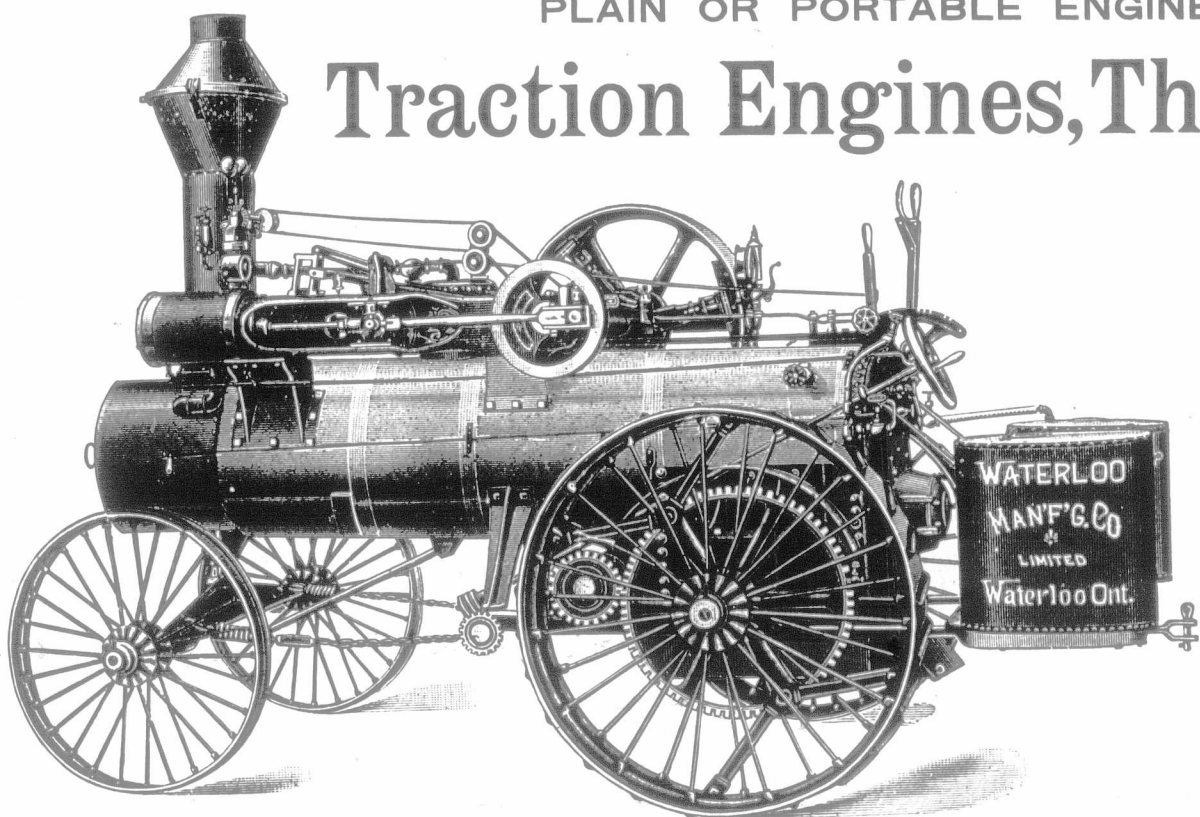
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"WATERLOO" THRESHING MACHINERY

PLAIN OR PORTABLE ENGINES.

Traction Engines, Threshers

FOR STEAM & HORSE POWER.



HORSE POWERS AND THRESHERS' SUPPLIES.

ALL STRICTLY HIGH-CLASS GOODS EVERY MACHINE GUARANTEED TO GIVE SATISFACTION.

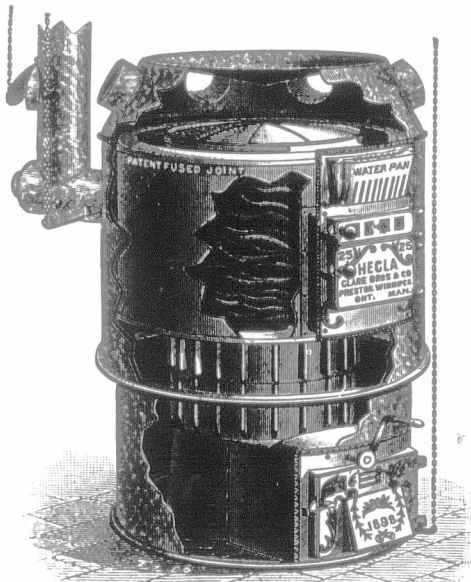
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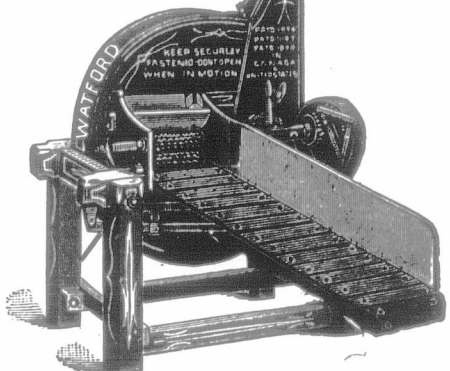
is the most valuable improvement in furnace construction in recent years. By means of this patented method we fuse the steel and iron which go to make up the dome and radiator into **ONE SOLID CASTING**. There is no danger of cement falling out, to let the dust, smoke and gas escape into the house. Another feature of the Hecla is that it will burn

EVERY KIND OF FUEL
COAL, WOOD OR PEAT.

Send us a sketch of your house, and let us give you an estimate.

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DE LAVAL CREAM SEPARATORS.

A FARMER'S STORY.

10 POUNDS OF BUTTER A WEEK ON 10 COWS.

HIGH FALLS, QUE., June 14, 1901.

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GENTLEMEN,—Three weeks ago I bought a "NO. 1 BABY" DE LAVAL separator from your agent, Mr. F. Wilson, of Montreal, and I gladly give you the following testimonial:

The machine does what is claimed of it; it skims the milk thoroughly. I make from 10 to 12 pounds of butter more now in a week than I did before using the separator. The butter is of far superior quality. My daughters, 16 and 19 years of age, have entire charge of separator, and run through the milk from 10 cows.

CHAS. NITSCHKE.

Write at once for a copy of **THE BABY DE LAVAL SEPARATOR CATALOGUE.**

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Ripley's Fly Remover

Instantly removes all flies, mosquitoes, lice and other insects from cattle, horses and other animals sprayed with it. It is healing to any sore. Animals rest easy and feed quietly all day. Cows give 1/2 more milk, which is a big saving. 1 gal. will protect 500 cows. Money refunded if animals are not protected. Endorsed by the best class of people. Order at once and secure agency, you can sell hundreds of gallons. Price, cash with order or C. O. D.—1/2 gal., 70c; 1 gal., \$1.25; 2 gal., \$2.40; 5 gal., \$5.25; 10 gal., \$10.00. Ripley's Special All Tin Compressed Air Sprayer for applying same, 90c; all copper, \$2.00; 5 gal. Galvanized Compressed Air Sprayer for applying on large herds, \$6.25; made of copper, \$10.00. The Ripley Hardware Co.,
Gentlemen:—For three years I have been experimenting with different things to keep flies off my cows, but not until I tried your Fly Remover and Compressed Air Sprayer was I successful. I used this last year and found that it cost less than one cent per week per cow. With your Compressed Air Sprayer it takes but a few minutes to put it on, and the result has been that my cows were free from flies, and during the year gave 6400 pounds of milk each, which made 324 pounds of butter per cow. I can heartily recommend it to all stock owners.—**JOHN ARMSTRONG,** Pres., State Board of Agriculture, De Smet, S. D., June 4, 1901. **RIPLLEY HARDWARE CO., LONDON, ONT., CANADA.** U. S. Factory at Grafton, Illinois.

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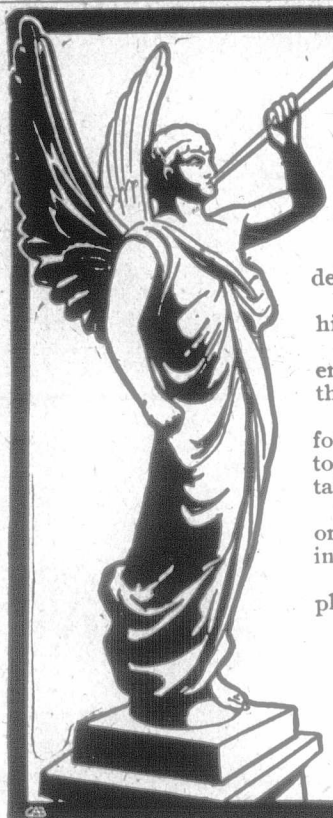
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