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# THE FARMER'S ADVOCATE

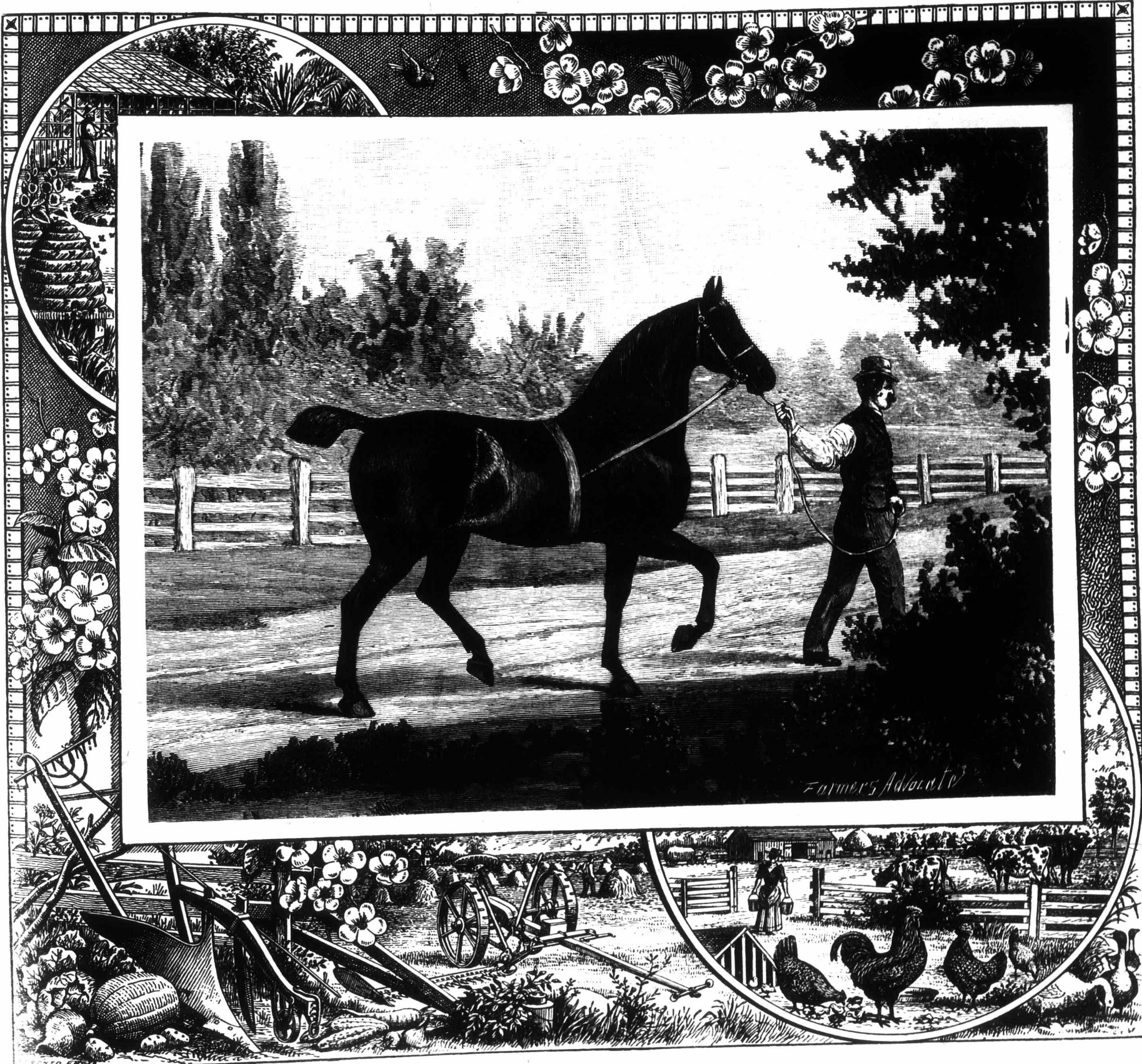
AND HOME MAGAZINE

\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*  
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KILNWICK FIREAWAY, A NOTED HACKNEY STALLION,  
 SOLD BY GRAHAM BEES, CLAREMONT, ONT., TO THE NOVA SCOTIA GOVERNMENT.



## EDITORIAL.

Let the young hogs pick up the refuse fallen fruit, which is usually wormy, and so help to keep down orchard pests.

Roads usually indicate the enterprise and thrift of the men living near them. By improving your road you improve the value of your farm.

The *Mark Lane Express* states that the farmers of England are securing the advantage of lower railway freight rates and greater facilities for despatch and delivery.

Go to the fair, whether large or small, to learn, for it is a splendid object lesson, showing the progress of the land, especially in agriculture. Most of the large fairs now furnish entertainment as well, but the former should always be the main object. If the managers tolerate freaks and fakirs, do not waste your time or money with them.

A campaign is being vigorously prosecuted in New South Wales and Victoria (Australia) with the object of establishing the sugar beet industry. In Victoria, stimulated by State aid, a company has been organized with a capital of £25,000, and in New South Wales the Government is distributing seed free of cost and offering prizes for successful growers, in order to give the industry a start.

Mr. A. W. Campbell, C.E., Provincial Instructor for Ontario in roadmaking, has been visiting Cornwall and other municipalities in the eastern part of the Province, meeting local authorities, inspecting roads and streets, and giving much valuable information as to their improvement. The gospel of good roads, both in theory and practice, is beginning to be propagated in real earnest, and Mr. Campbell is making a good impression.

"Mr. Sidney Fisher, the Minister of Agriculture in the New Canadian Government," observes the *Farming World*, of Scotland, "is a practical farmer—the first appointed to this office since its creation. His farms, in Eastern Quebec, are said to be models of care and cultivation. Mr. Fisher is also an experienced breeder, and has done much to improve the live stock of the Dominion. Educated in England (as well as in Canada), he has devoted his time and ability to Canadian farming, and there can be little doubt that he will make his mark in the high position to which he has now been called."

## Reaching the British Market.

We notice that the new Canadian Premier, Hon. Mr. Laurier, in discussing the important subject of canal improvement so that the upper lake traffic will have the inestimable advantage of a 20-foot draft from Lake Erie to Montreal, as it has down from Duluth and Port Arthur, makes the statement that substantially the only way in which the farmer on this Continent is to be helped is by "cheapening the cost of production and reducing the cost of getting it (farm products) to the European market." Cheapening the cost of production naturally includes reducing the farmer's current outgo and (by better methods) increasing the quantity and quality of what he produces, so that the farmer himself must share in this work as well as the Government in lessening his burdens. Reducing the cost (to the farmer) of getting our products to the British markets is, as the Premier states, a vital point. Denmark and other European countries, Australia, New Zealand, and the United States have made and are still making supreme efforts to secure that great consumptive point. Our neighbors across the lines, through a study of what the markets require and when, inspection before export, transportation facilities, etc., are bending their best energies in that direction.

It is too late in this day of the world to take an inactive position. Not only should the cost of transportation, if possible, be cheapened, but, we think, be made speedier, and, by means of cold storage facilities on the railroads, at the ports of export, and on the steamships, enable our products to reach Liverpool, London, Glasgow, etc., in a condition to equal, for example, the butter of Denmark or the products of far-distant Australasia. Canada is naturally very favorably situated in the temperate zone, but the competition is keen and constant, and must be met. Speed, as well as cold storage facilities, will, we believe, become a more important requisite as time goes on in getting choice perishable products to market.

Unquestionably this is one of the most important matters with which the new Government have to deal, and energetic action will be expected.

## A Glance About Cairnbrogie.

"Cairnbrogie" stud, the property of Graham Bros., Claremont, Ont., has been so prominently in the front rank of Canadian horse breeding sufficiently long—nearly a quarter of a century now—to render a lengthy introduction to a description of their present stock entirely unnecessary. It is in place, however, to mention that while almost the entire interest of the firm was for many years confined to the Clydesdale breed, the stables now contain a few of the best possible specimens obtainable of Hackneys, Thoroughbreds, and Standard-bred trotters. On our recent visit we found the stock doing finely; sixteen head being destined for the shows.

The Hackney stock has never, as yet, accumulated at Cairnbrogie, but nothing but the best stallions, possessing the most fashionable blood, have ever been kept. The subject of our frontispiece, Kilwick Fireaway, was for a number of years the stock horse. His excellence has been repeated time and time again to our readers in connection with the course of his showing winnings. He is not one of the biggest of the breed, but such quality, action, and style can hardly be outdone. He was bred by John T. Elgey, York, Eng., and is now just past six years old. He was by Lord Swanland, by Lord Derby, the winner of 37 prizes at Yorkshire shows. His dam was Trip, by Tripaway, a noted English mare. Kilwick Fireaway won first prize and sweepstakes gold medal at Ottawa Central Canadian Exhibition in 1893. In 1894 he won second at the Toronto Spring Stallion Show, also third at the Great National Horse Show at New York; and in 1895 he won first and reserved champion at Toronto Spring Horse Show, first and sweepstakes at Toronto Industrial, Montreal, Ottawa, and other exhibitions, also grand sweepstakes for best Hackney (male or female) at Montreal. He was sold by Graham Bros., in September, 1895, to the Nova Scotia Government, along with a number of other high-class Hackneys, which were subsequently disposed of at auction, on the condition that they were to be retained for breeding purposes in the Province for five years. Kilwick Fireaway was secured by the Dartmouth Agricultural Society, of which Mr. Ed. Foster is the able secretary, at what was probably the largest price ever paid for a horse in Nova Scotia. At last accounts, Kilwick Fireaway was in charge of Dr. Jackeman's (V. S.) stables, Halifax, and was doing exceedingly well.

The present stock horse at Cairnbrogie is Royal Standard, E. H. S. B. 3918, C. H. S. B. 55. He was bred by H. G. Lane, Bush Hall Farm, Linivady, Eng., foaled in 1890, and imported by his present owners in October, 1895. His sire was Excelsior 198, and dam Royal Lady 379. He is brown in color and stands 16 hands high. His first and only appearance in the Canadian showing was at the last Canadian Horse Show, held in Toronto in April last, where he swept all before him, going off with the first prize and sweepstakes gold medal for best Hackney stallion, any age or size. He is a handsome horse, very uniform, is grandly put up, and a real "air-line" goer, having perfection of gait as well as great speed. He stood for service in his own stable during 1896, when he did a most satisfactory season, many excellent mares coming from a distance to him.

The Standard-bred stallions comprise, among others, Vrowsky 8165, a handsome and speedy son of Red Wilkes. He is bay in color, and was foaled in 1887. His race record is 2.18½. He was bred by W. Shanklin, Nicholasville, Kentucky. His sire, Red Wilkes 1649, was by George Wilkes 519, by Hamiltonian 10; dam Nellie, also descended from Hamiltonian 10. His race record was made last October, in a hot race at Montreal. Vrowsky stands plump 16 hands, has lots of substance, is of very even conformation, and is one of the hand-somest Wilkes stallions ever foaled. Messrs. Graham purchased him in June last, from T. H. Love, of Montreal. Another Standard-bred stallion in the stud is Deacon 17380, a beautiful seal-brown 16-hands horse of 1,250 pounds. He is a great beauty and shows extreme speed. Deacon is himself a trotter, by a trotter, by a sire of trotters, and out of a mare the dam of trotters, and combines the blood of Hamiltonian, Membrino Chief, and Smuggler, securely based upon an intensely inbred Morgan foundation. He was bred by Huntley & Clark, Toston, Montana, U. S. A.; foaled June, 1887; sire Bishop 1688, dam Lady Graves, by Smuggler. Wherever shown, Deacon has taken the coveted first prize. At the Canadian Horse Show, Toronto, in 1894, he won first prize in the Standard-bred roadster class, and sweepstakes gold medal for the best Standard-bred stallion, any age. His half-brother, Bishop Hero, held the three-mile record made in a race, time, 7.19½; also the five-mile record of the world, in 12.30. Deacon's daughter, Bell B, won first prize and sweepstakes gold medal at the Toronto Industrial in 1895; also first at London and a number of other shows.

Thoroughbred. The king of all light-legged horses has a representative at Cairnbrogie, in Goddard, a beautiful chestnut, 16 hands high, weighing

1,150 pounds. He was bred by Chinn & Morgan, Lexington, Kentucky, and imported by Wm. Hendry, Hamilton, Ont. He was awarded, in 1889, first prize and diploma, at Hamilton, for the best stallion of his breed, any age; also first at Georgetown, Hillsburgh, and Charleston, and second at the Toronto Canadian Horse Show, 1896, which winnings proved his individual excellence. As to his breeding, we may state that his sire was imported King Ban, the sire of Punster, Violater, Queen Ban, Ada Ban, King Fox, Ban Fox, Safe Ban, Gold Ban, Highlight, Scalper, and King Thomas, a colt sold for \$40,000 at auction in New York. Goddard's dam was Ella Brickenridge, by Colossus.

Clydesdales.—The Messrs. Graham have been more closely identified with Clydesdale breeding than any other line of horses. It is now some 25 years since the original firm engaged in breeding and importing pure-bred Clydesdales, during which time the best showings on the Continent have been followed with pronounced success. This has only come about by wise management and the expenditure of large sums of money from time to time, in order to obtain the very choicest individuals, as well as the best-bred sires that Scotland could afford. The character and breeding of the Clydesdale stock always to be found within the stud is quite in keeping with what might be expected from such a course of operation. Such blood as that of Prince of Wales, Darnley, and MacGregor is always represented. Among the stock horses now in the stud is The Royal Standard (10014) B. C. S. B., the winner of first prize and sweepstakes gold medal at the last Canadian Horse Show. He is a beautiful brown, four years old, with characteristic white hind feet and a little white on face. He was bred by Wm. Robinson, Linkwood, Elgin, Scotland. His sire, Royalist (6242), was champion of the Royal Northern, and winner of numerous prizes at the Highland and other shows. The Royal Standard's grandsire, Darnley (222), stands without a rival in the history of the Clydesdale breed. The dam of The Royal Standard was the MacGregor mare, Betsinda, bred by the Marquis of Londonderry. As a show horse The Royal Standard has a great record. As a yearling he was first at Kilmarnock, Ayr, Dumfries Union, Royal Agricultural Society, the great Yorkshire Show, and second at the Highland & A. S., at Edinburgh. As a two-year-old he gained first and championship at Castle Douglas, first at Ayr, Glasgow, Edinburgh, the H. & A. S. Show, Aberdeen, and at the great Yorkshire at Beverley.

MacQuaker (9798) is one of the 1895 importations which has added to Canada's best class of Clydes. He was bred by Wm. Rain, Miefield, Kempton, Scotland. His limbs, style, and conformation would please the most critical Scotchman. His sire was MacGregor (1487), by Darnley 222. MacQuaker's dam was by Belted Knight 1395, a great horse with a great pedigree and showing career. Other exceptionally good stallions occupy places in the breeding stud, but we must pass on to mention a few of the leading females.

The four-year-old Lady Flashwood is a sweet mare, with abundance of quality and good breeding. Her handsome appearance, combined with action which is full of dash, at once captivates the eye and convinces a knowing Clydesdale judge that she is a great individual. She was bred by Messrs. Graham; by International (6853), 2nd sire Flashwood, 3rd sire Darnley (222). Her dam was Effie MacGregor (7407), by MacGregor (1487). Lady Flashwood is now in foal to The Royal Standard.

Ethel Armstrong (7408) A. C. S. B., also a four-year-old at Cairnbrogie, is full of the most desirable Clydesdale character. She is by International (6853), and out Nellie 7422 A. C. S. B., by Laird of Bute (4490). She too is in foal to The Royal Standard.

The black mare, Queen Mary (3001) A. C. S. B., is eleven years old, but as fresh as a filly. She has abundance of clean, hard, flat bone, and is grandly muscled, besides having fine carriage, good action and vigor. She has for a sire Marthon (2994), and dam Lady Wolsey, and is in foal to The Royal Standard.

Corinne (2226), by Queen's Own (71716), and out of Queen Mary (3001), was bred by her present owners. She has won a great many first prizes and has bred a deal of excellent stock. She is now in foal to The Royal Standard, which union cannot fail, with luck, to bring forth an interesting offspring.

The ten-year-old brown imported mare, Nellie (7422), was bred by Jasper Hiewat, Hillbarne, Kilmarnock, Scotland. She was sired by Laird of Bute (4490), and out of Maggie of Hillbarne (7352). She is a good mare, an excellent breeder, and is in foal to The Royal Standard. Nellie has been one of the most successful prizewinners of the stud, having come out victorious in many contests.

We might continue descriptions and pedigrees of members of Cairnbrogie Clydesdale stud, both male and female, until we had long overrun our space, but sufficient has been given to bring before our readers a fairly good idea of the present condition of Graham Bros.' famous stud. It will be seen that only the best of the best are kept. Horses have for some time been at a low ebb, but now, as the prices are beginning to ascend, is the time to be in possession of such stock as the stud in question is always prepared to supply. A horseman visiting Cairnbrogie cannot but be delighted with not only the grand specimens to be seen, but also the extremely genial welcome and hospitality of the proprietors.



**British Columbia Crops and Experimental Farm.**

Phenomenal mining developments have created a veritable boom for the Pacific Province during the past six months, and to-day it is more conspicuously in the public eye than any other portion of the Dominion. While its greatest possibilities doubtless exist in mineral wealth, lumbering, and salmon fishing, it is certainly making good progress in general farming, stock-rearing and dairying throughout its famous fertile valleys. Fruit-growing, of course, ranks foremost among its capabilities, equalling portions of California in that respect. The mining industry and a rapidly growing population will create a great demand for food products of all kinds.

The accompanying illustration gives a fine general view of the Experimental Farm established by the Dominion Government at Agassiz, in the valley of the Fraser River, some seventy miles east of Vancouver. It is under the superintendence of Mr.

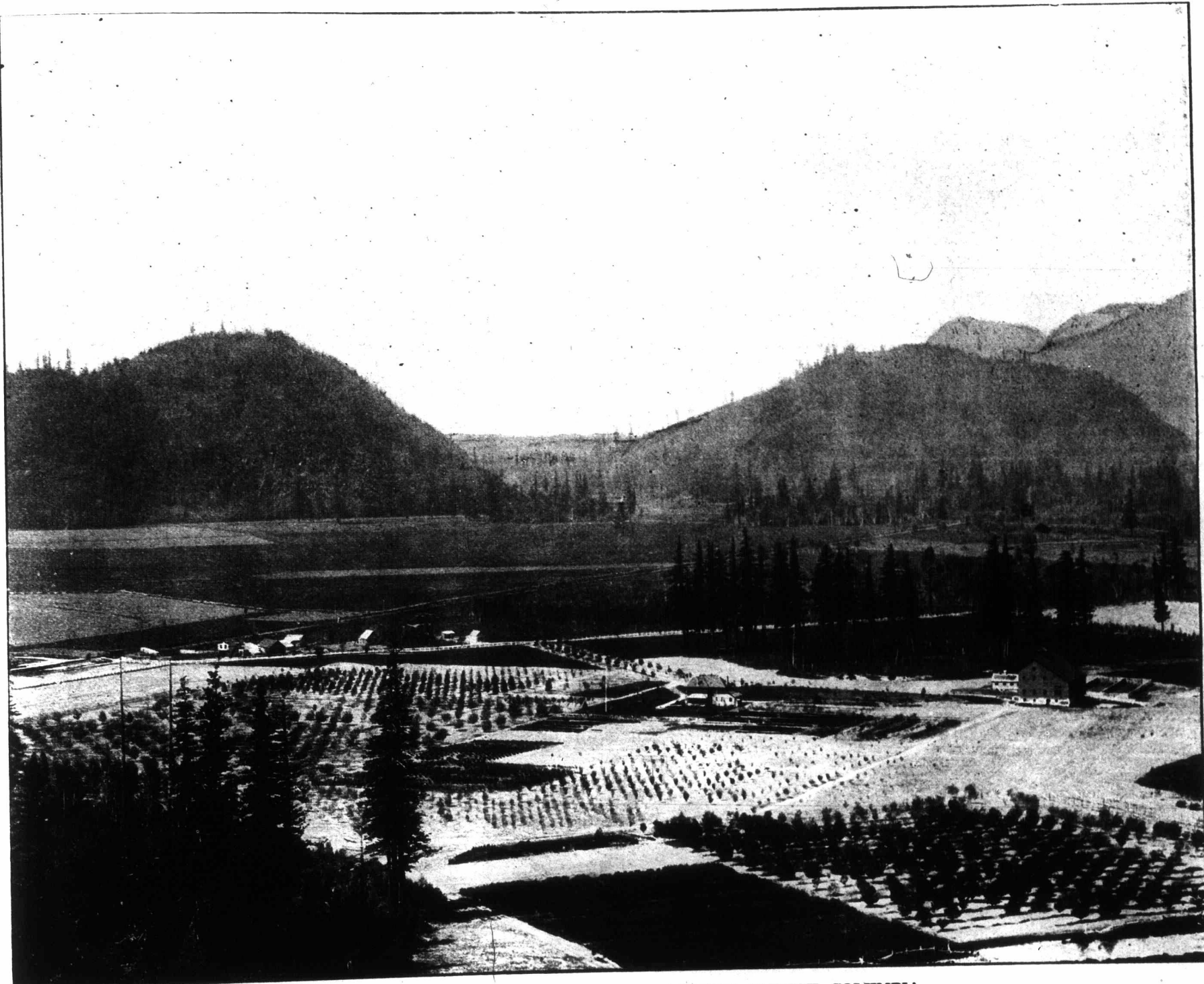
small fruits will be lighter than usual, but the growth of wood in both fruit and forest trees has been exceptionally strong.

With regard to this season's crop in the Province generally, he reports that the spring opened well, with timely rains, which gave the crops an early start, but the cold, wet weather and lack of moisture which prevailed from the middle of May until near the middle of June had the effect of stunting the growth. After the middle of June the weather was unusually hot, with an almost entire absence of rain, which hurried the grain crops along and, in some instances, lessened the yield by a premature ripening. The hay crop was a very fair one. Clover on the Experimental Farm averaged over two tons of cured hay per acre. Fall wheat was well headed and had made a good stand before the hot weather came, and the yield was very fair. Spring wheat and barley are yielding less than the average, but the oats promised well. Root crops and potatoes suffered from the long-continued drought, but turnips promise better than other roots, and with timely rains may

**Promotion of Agricultural Science.**

There convened in Buffalo, N. Y., on the 21st and 22nd of August, a meeting of America's foremost agricultural scientists, representing the Society for the Promotion of Agricultural Science. It was the seventeenth annual meeting, and had President W. R. Lazenby, of Maine Experiment Station, in the chair, with Prof. C. S. Plumb, of Indiana Experiment Station, as secretary.

*The Relation of Science to Agriculture* was the subject of President Lazenby's address, in which he explained that science is simply truth or fact classified and systematized. Agriculture is both a science and an art, particularly the latter. Science deals with causes and effects, and nearly every known science is connected with agriculture. Just here the Professor illustrated the difference between agriculture conducted by the application of science



VIEW OF THE EXPERIMENTAL FARM AT AGASSIZ, BRITISH COLUMBIA.

Thos. A. Sharpe. Although fruit is the most important branch of work carried on at the British Columbia Experimental Farm, grasses and roots receive a considerable degree of attention. All the new varieties of barley, oats, spring and fall wheat, field and garden peas are tested alongside of and under the same conditions as the older varieties of these grains, and the same rule applies to roots and potatoes. There are at present over 1,500 varieties of the large or tree fruits, besides a large collection of small fruits. Nearly half of the collection of the list of large fruits is apples, there being over 700 named varieties in our collection. The present year is an off one for most fruits, but there are on the Farm over 100 varieties of apples fruiting this year; over 50 of pears and also of plums; about 35 each of peaches and cherries; besides almonds, apricots, nectarines, medlars, and a large number of small fruits. Forest-tree planting, as well as the more valuable nut-trees, has received considerable attention, and the English, American, and Japanese walnuts, Spanish, American, and Japanese chestnuts are growing well, and Spanish chestnuts are fruiting this year. On account of the exceptionally dry season, the crops of grain, roots, and

yet give good crops. Peas a fair return, and Indian corn is doing well. Owing to the cold, wet weather which prevailed during the blossoming period, strawberries did not set well and the crop was light, with a considerable proportion of imperfect berries. Raspberries and blackberries promised a full crop, but owing to the prolonged drought the fruit was small. Red and white currants were very plentiful, and the size was above the average. Black currants gave a light crop, and gooseberries suffered more than usual from mildew. The bloom on fruit trees was very heavy, but owing to the cold, wet weather, which continued throughout the blossoming period, none of the larger fruits set well. The cherry crop has been below the average, although the sample has been good. The crop of apples, pears, and plums will be below the average. On Vancouver Island the crops are said to be better; also on some of the lower valley lands nearer the ocean; but on the ranges in the interior, although the cattle wintered well, the pastures are poor, owing to the long-continued drought. The foregoing would indicate the probability of a very considerable demand for products from other portions of Canada this season.

and farming simply as an art without education and the recognition of science. Scientific agriculture as effecting agriculture and horticulture was compared to a wheel having for its hub common school education and for its spokes the following sciences: political economy, meteorology, chemistry, geology, physiology, entomology, botany, and physics, while agriculture and horticulture as conducted without recognition of science was compared to a wheel sawed off the end of a log, without either hub or spokes. All the sciences representing the spokes of the scientific wheel were referred to as being most intimately connected with agriculture. Chemistry is the most important, as it has to do with all the changes going on in the growth of plants and in the soil. The science of chemistry teaches that nothing is created nor annihilated by finite power, but simply transformed from one form to another. By it we can learn whether or not the necessary elements are present in the soil in needful quantities, and by co-operating with it we are able to correct the defects. We can only continue to till land successfully by the application of science. No soil can stand continual cropping without a replacement of the elements removed by cropping.



Chemistry teaches how to meet this requirement by means of growing clover and applying the needed fertilizers.

Sometimes we see a man not educated in some respects succeeding in agriculture beside a so-called "scientific farmer" who is failing. We are then led to question, is science a failure? No, the failure is in its application. We are forced to recognize that good judgment must accompany successful agriculture, but in any case scientific principles must be applied. The intellectual and moral advantages of a knowledge of science are very great. It has elevated the calling, making wiser and better men by developing their reason. The conclusions arrived at by it can be verified. Agriculture as it now exists in America was referred to as being far below its possible standard. Science will aid this advance.

Dr. Jordon, of N. Y. Ex. Station, expressed a belief that the experiment stations can best improve the present condition of agriculture by more thorough and rigid investigations. The stations have been dealing too much with superstructures and too little with primary causes. A deeper investigation is needed, and less disposition to be continually saying something new.

The Influence of Animal Experimentation upon Agriculture was the subject of a paper given by V. A. Moore, V. S. The great losses that have resulted from the many diseases of farm animals were referred to. Pleuro-pneumonia was brought from Europe to the United States in 1843, but its effects did not become alarming until 1890, when strenuous efforts were made to exterminate it, which took six years. Hog cholera and swine plague (fever) in ten years—from 1879 to 1889—caused in the U. S. an annual loss of about \$25,000,000. Experimentation has proved that the diseases are not identical. Tuberculosis was in 1883 discovered to be the result of a specific organism, and causes the death of 14 per cent. of the human family. From 3 to 20 per cent. of cattle and some other animals are affected; the food from which is much to be dreaded. The enormous losses by glanders in horses was referred to, as well as its transmission, like tuberculosis, to man. The great need of sanitary regulations was here referred to. Hydrophobia can now be successfully treated, as the result of the late Prof. Pasteur's experiments. Prof. Moore considers there is a great need of the extermination of many useless dogs in cities and towns, which would prevent a great deal of the danger of rabies. Texas and Southern fever, Trichina, tapeworm, and liver fluke, as well as many fowl diseases, can now be diagnosed and treated fairly successfully as a result of scientific investigation, but there is still room and much need for further study.

The paper was concluded by a reference to the action of societies for the prevention of cruelty to animals in endeavoring to obtain legislation to prevent vivisection and other means of experimenting with live animals for scientific purposes. The result of this reference was the drafting of a resolution expressing the sense of the Society assembled, protesting against the proposed legislation of humane societies, upon the grounds that such experiments prevent great loss and much more suffering than they cause.

The Flowering Habits of Red Clover and Timothy was enlarged upon by Dr. A. D. Hopkins, who has observed that insects such as bees and the like have much to do with the fertilization of these plants. Both self- and cross-fertilization are known to exist, although the latter is much more the rule, especially with clover, which accounts to some extent for the lack of development of seed in the first crop, due to the scarcity of pollenizing insects at the first blooming season. Climatic conditions, too, have their effect upon fertilization.

Dr. C. V. Riley's Biography was related by Prof. L. O. Howard, who referred to his valuable life's work and the great vacancy in this Society caused by his death.

Forcing Cauliflowers, with Lettuce and Cucumbers, was discussed by Prof. H. C. Irish, of St. Louis. It has been found that three crops can be grown successfully under glass, by the aid of artificial heat, on the same ground during the winter season. Lettuce and cucumbers can be grown between the cauliflowers, and return a good profit, as the cauliflowers should be grown eighteen inches apart. The largest heads obtained weighed about two pounds and twelve ounces each. No moisture should be allowed to come in contact, externally, with the heads, else rot occurs. It was found that one-twentieth of an acre could be looked after by one man, and when adjacent to such a market as St. Louis, it could be made to return in one winter over \$600 for the wages of the man and interest on the capital invested. With regard to fungoid and insect enemies, it was found that evaporating sulphur was the best treatment for powdery mildew. For aphides and red spider, liquid extract of tobacco was found good as a spray. Cucumber fungus was best subdued by the use of potassium sulphide—one ounce to two gallons of water.

Electro-Horticulture.—"Range of Incandescent Lamp" was the title of a paper prepared by Prof. F. Wm. Lane, of West Virginia Station. It was found that with continued light—of sun during the day and electric during the night—spinach gained twelve inches growth in thirty nights over plants having no night light. Lettuce and cauliflower are influenced much in the same degree. While tomatoes grow very fast under continued light,

the fruit borne was uncertain to set, and never amounted to much, as it ripened small and insipid.

Prof. Roberts, of Cornell University, asked whether or not electro-horticulture promised to be practical, to which a reply was given to the effect that many gardeners are now using it commercially with success where the all-night system of large cities could be taken advantage of. Without this can be obtained at reasonable cost the practice is out of the question.

Pres. Lazenby advised that experimenters go slow in recommending the use of electric light in practical horticulture. It was claimed, however, to have been found especially beneficial in market floriculture.

Protective Inoculation Against Anthrax was dealt with by Prof. F. D. Chester, of Delaware Experiment Station. Experiments with guinea pigs have proved that immunity from the disease can be obtained from continued introductions of properly prepared anti-toxic substances. Hog cholera and swine plague were proved to be entirely different diseases by the indifferent effect of the serum of each upon the other. As mentioned, protective inoculation against anthrax is only effective when repeated every few months. The vaccine must be obtained through a series of generations of the disease in order to be weakened beyond the dangerous point. The preparation of the vaccine is a very delicate operation; it was therefore considered wise to have it prepared at one central laboratory conducted under government supervision.

The practical results from protective inoculation against anthrax have been enormous. In France, in 1893, 319,487 animals were treated, so important was the practice considered. The results have been about one-tenth of one per cent. loss when treated. In Delaware, U. S., deaths from anthrax have occurred to many animals in herds while those inoculated in the same herds escaped free of the disease.

Fungicides with Smut in Oats.—Prof. W. H. Kellerman, of Ohio Station, has been giving careful attention to this subject, and was able to speak, as he did, upon the merits of the various treatments that have been recommended. With regard to the value of copper sulphate, which has heretofore been recognized as perfectly effective, the speaker referred to it as having the desired effect in destroying the smut spores, but condemned its use because of the injury done the seed. Iron chloride and potassium sulphide are just as cheap, as easily used, and equally as effective for the purpose intended, while no evil effects occur to the seed by their use. Potassium sulphate used in a three-per cent. solution gave the desired effect from one hour's treatment. The seed may be dipped into the solution or a pile may be sprinkled while it is being turned on the barn floor with a shovel. The grain should be dried and sown in from three to five days after treatment. With the hot water treatment six months may elapse between treatment and seeding and it will be equally as effective in every way as though it were sown shortly after treatment.

White Muscardine of the Chinch Bug was considered by Prof. D. M. Duggar, of Illinois Experiment Station. This is a fungus which has, perhaps, done more to keep the chinch bug in check than any other known agency. The Professor has endeavored to ascertain whether or not it is profitable to scatter the fungus in infested neighborhoods, and has concluded that such is not the case. The most effective method is to cease to grow wheat for a term of years. The muscardine fungus seems to follow of its own accord the chinch bug as well as the squash bug wherever these insects are in large numbers.

Time of Seeding as it Effects Rust in Wheat and Oats was discussed by Prof. H. L. Bolley, of R. I. Station, who concluded that the varieties of grain had more to do with the rustiness upon it than had the time of sowing. The weather, however, has a marked influence.

Potato Scab has been found by Prof. Bolley to be preventable by treating the washed clean seed with corrosive sublimate solution, and also by mixing a quart of air-slaked lime with the soil of each hill.

Varieties of Timothy and Red Clover.—Dr. Hopkins has given a deal of time and attention to the selection and perpetuation of decidedly early varieties of both timothy and clover as found growing in the field crop. It has been determined that there are a great number of most desirable varieties and many that are worthless growing together in confusion in the ordinary field practice. From these, Dr. Hopkins has selected and perpetuated enough of sorts having individual characteristics sufficient to convince him that red clover can be obtained as early as crimson clover, and that timothy-growing can be revolutionized in the same manner.

Steer Feeding Experiments at Kansas Station was dealt with by Prof. C. C. Georgeson. The question at issue was whether or not could oil meal and other nitrogenous substances be profitably fed to cattle in corn-growing States. Three lots of steers of five each were selected for the experiment, fed respectively upon a balanced ration, corn meal, and ear corn. One hundred and sixty-six days was the time occupied with the test. The first lot consumed 1,155 pounds of balanced ration, and made a profit per head of \$3.21. The second lot ate 1,401 pounds of corn meal, and returned \$1.51 profit per head. Lot No. 3 took 1,757 pounds of ear corn, and

made three cents per head profit. The steers fed the balanced ration were in best condition when put upon the market; they therefore brought the highest price per pound. It was considered that if hogs had followed the cattle eating the ear corn the profit would have reached that made by lot 2. Reference was made to an experiment to ascertain the value of soaking corn as compared to feeding whole dry corn, when it was found to pay well to soak corn.

Election.—Prof. W. R. Lazenby was re-elected President, and Prof. C. S. Plumb, Secretary.

Mr. Gladstone on Country Life.

Though now out of active political life, Hon. Mr. Gladstone is yet foremost in the world's eye among the Nineteenth Century's greatest men. His speeches and writings are regarded everywhere with the intensest interest. A fortnight since, at the Hawarden floral fete, he alluded to the unfortunately excessive tendency in modern life to forsake the country for the town. This exodus, whether in the Old Land, Canada, or the United States, shows no sign of abatement, and to correct it is a problem not easy of solution. The veteran statesman commended the flower show for its educative influence in the right direction, and for the spirit of enterprise which it develops. The number of such institutions commanding a large and general measure of support may be accepted as indicative of the interest which is taken in the most attractive of rural pursuits. Those who live "in the eye of Nature," and breathe the pure country air, have, in many cases, themselves to blame if a large measure of ordinary human happiness does not fall to their lot. Yet more might be done by leading the people to take a genuine interest in the land and what it produces. The pleasures of country life [Mr. Gladstone spoke eloquently and feelingly on this point] are beyond cavil or dispute. They are not intoxicating pleasures, to which must be ascribed the craving for the stir and excitement of life in town or city which the younger generation find so difficult to resist; but in a seemingly humdrum existence, when it is passed among the brightest and best that Nature has to offer, there is often pleasure that is more than superficial and happiness that is more than transitory and fleeting.

The Progress of Agricultural Schools.

Having in view the marked progress of such Canadian institutions as the Agricultural College at Guelph, Ont., we can quite concur with the following observations by the Farming World (of Scotland) in relation to this subject in Great Britain: "The success of agricultural schools is quite a feature of the times, and there can be no doubt that they are gaining in popularity with the agricultural community. If the old days of prosperity in the farming industry had continued, it is doubtful whether the success of these schools and colleges would have been quite so pronounced and assured as it is at the present day. There might have been more apathy and less incentive to radical change. The long spell of low prices, with the consequent difficulty experienced in making both ends meet in the conduct of his business, has led the farmer everywhere to accept the aid of scientific teaching to enable him to work his land to the best advantage without doing injury to the soil. At the different agricultural schools throughout the country, farmers' sons are now being afforded practical, as well as theoretical, education in agriculture, and the firm hold which these institutions have obtained in our midst augurs well for the future of British farming."

Co-operative Selling.

According to an English exchange, the farmers of South Lincolnshire are to have the credit of being the first in England to apply co-operative principles to the distribution of their produce. Under the direction of Lord Winchilsea's British Produce Supply Association, a local society of farmers has been formed at Sleaford to collect and distribute the farm produce of the district, and will begin operations in the autumn. The society proposes to arrange for the systematic daily collection of eggs and other small produce, which will all be taken to Sleaford, and thence forwarded to central stores in London. It will be able to take advantage of the reduction in the railway charges on large consignments, and will thus effect a saving on the present cost of carriage to small farmers. Further, the society intends to erect a butter factory in Sleaford, and to establish separators in the neighboring villages for the farmers who are willing to sell their cream.

Milking-machines are not giving satisfaction in hot weather in the Old Country, owing to the difficulty of keeping them clean. One gentleman says he had a fortnight's make of cheese spoiled in that way.

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**THE FARMER'S ADVOCATE & HOME MAGAZINE**

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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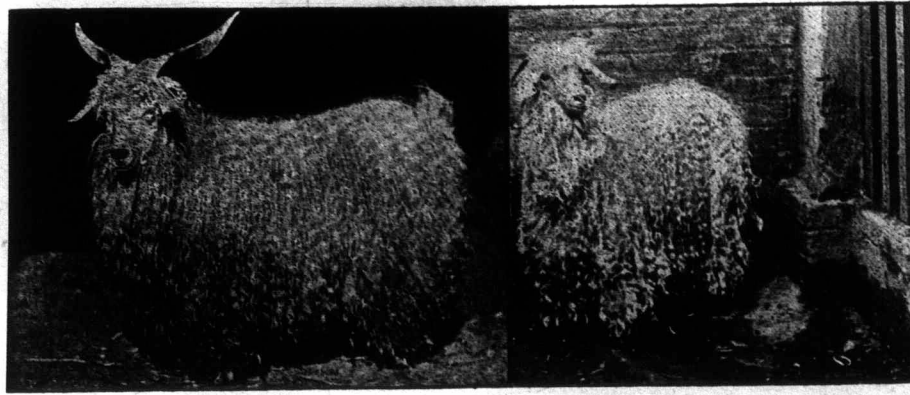
**An Opportunity.**

The Canadian exhibition season opens in Toronto this week, and will continue for the next six weeks in Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island. We invite the co-operation of our readers, young and old, in all these Provinces, as well as those in adjoining States, to extend the circulation of the FARMER'S ADVOCATE. Thousands of new names can thus be added to our lists. Read the PREMIUM announcement on page 361. Write at once for free sample copies, particulars as to CASH commissions, and agent's outfit. It will pay you and enable us to make the ADVOCATE still more valuable.

**Farming Industries of Cape Colony.**

Within the past ten years the nations of Europe, seeking new outlets for their commerce and possible homes for their surplus population, have taken possession of the larger part of Southern Africa. This procedure has resulted in a competition in which England has not been lax in her attention to the most important portion, especially for agricultural purposes—that of Cape Colony. Diamond and gold fields and the Transvaal troubles are usually associated in the mind with South Africa, but Prof. Robt. Wallace, of Edinburgh University, well-known as the author of "Farm Live Stock of Great Britain," has made a critical tour of the land to describe its agricultural resources and conditions, which he has done in a splendid volume of over 500 pages, profusely illustrated, and containing numer-

ous maps, plans, etc. It is published by P. S. King & Son, 12 and 14 King street, Westminster, S. W., South Africa.



AN OLD ANGORA GOAT AND A YOUNG EWEL.

ous maps, plans, etc. It is published by P. S. King & Son, 12 and 14 King street, Westminster, S. W., South Africa.

To attempt to describe the farming industry of Cape Colony in anything but the merest outline would more than exhaust the space which can be given to such a purpose in the pages of the FARMER'S ADVOCATE.

The capital, Cape Town, with its population of 50,000, provides a market center for the sale of farm produce; but the export trade is being developed, but to what extent South Africa will become a competitor in supplying the great food-consuming centers, it is not easy to forecast. The great majority of the farming population of the country are English of a progressive type, although some of the districts contain many industrious Germans. Farm laborers' wages range from 10 to 25 shilling per month and food. Attempts at thorough cultivation on the English plan have not always proved successful. The usual rotation adopted by the settlers is (1) mealies (corn), (2) wheat, (3) potatoes (manured), (4) barley (seeded). New varieties of seed of all kinds are wanted badly just now if good crops are to continue to be grown.

The general floral features are full of interest, as well as the geological and mineral treasures. It is believed that Cape Colony has fallen heir to representatives of the floras of two, or possibly three, great epochs in the world's botanical history. Among others, the Arum or Calla lilies grow in great profusion. A peculiarity of the South African flora is the large number of slow-growing trees and bushes, which are protected by sharp, hard thorns. Both bitter and tasteless water-melons grow luxuriantly, the latter of which provide drink for the traveling oxen through waterless tracts during a portion of the year. The prickly pear or cactus grows in abundance and has become the great curse of large areas of grazing land. The fruit is covered with minute sharp



FAT-TAILED HAIRY AFRIKANER SHEEP (RAMS).

prickles, which produce violent inflammation and swelling of the tongue, throat, and whole intestinal tract of animals consuming it in the natural state. Cattle like it and often continue to eat it until they actually die of the effects.

**Forage.**—There are several varieties of native grasses, but none are as valuable for forage purposes as British grasses and clovers, such as the rye grasses, timothy, red and lucern clovers. Green barley and rye are extensively grown in the Colony for winter forage. Lucern is without exception the most valuable of all green forage plants in dry and sunny climates liable to suffer from drought.

**Forestry.**—The system of forestry adopted is fashioned after the most scientific Indian and Continental methods, which involve protection against fire and other sources of preventable injury. The felling of trees is not now as wasteful, indiscriminate, and general as it used to be, but is

confined to certain areas, which in turn are reconstituted by resowing or replanting. The forestry department is only in its infancy, and is expected to give a great return for the money now being expended upon it.

**Fruit.**—All the fruits of the warmer temperate zone grow to perfection. Viticulture and wine-making are carried on quite extensively. The vines are not without insect and fungoid enemies, which are combated by governmental aid. The phylloxera is the worst enemy, and this is provided against by the Government establishing nurseries for the rearing of American phylloxera-proof vines for distribution. Sweet wines, dry wines, and brandies are the principal makes. The fruit industry has recently attracted a considerable amount of interest. The chief kinds grown are the grape, apple, pear, peach, apricot, quince, pomegranate, fig, orange, pineapple, banana, loquat, gooseberry, plum, and the raisin. Much of what is exported is shipped to London and other European markets. The interests of the fruit business are looked after by different fruit growers' associations and unions. Spraying machines have been perfected and are doing much to aid the industry.

**Ostrich farming** is a large and important industry in Cape Colony, although its introduction is of comparatively recent date. The ostrich has become fairly domesticated, and artificial incubation has done much to facilitate and extend the business. The adult birds do fairly well upon growing lucern. Upon a rich 200-acre farm, growing lucern under irrigation, the stock has been known to reach 550 birds, besides a number of cattle, horses, and sheep. The profits from ostrich farming are more remunerative than sheep farming. Three crops of feathers in two years are secured. Three pounds (£) each plucking is a good average return from a flock. As high as £17 each is sometimes obtained for fancy birds. The eggs also sell for high prices.

**Cattle.**—Large numbers of cattle were found in the possession of the Hottentots when the first European discoverers landed at the Cape, towards the end of the fifteenth century. They possessed, in addition, goats, sheep, dogs, and poultry. The Hottentot ox has been described as a gaunt, bony creature, with immense horns and long legs. They are used for riding, pack-carrying, and racing. The Afrikaner breed is regarded as the most direct descendant of the native cattle. Crossed with the Friesland or Shorthorn, it produces great size and aptitude to fatten, but while gaining in this direction, loses in constitutional vigor. While the cross-bred bullock rising four years old will yield 850 pounds of dressed beef, the Afrikaner bullock will yield 600 to 700 pounds. The milking qualities are also much improved by the Friesland and Shorthorn cross. The Cape cow, bred in the Cape Peninsula, belongs to a mixed breed famous for milking qualities, and though smaller in size, resembles the Dutch breed, which contributed largely to its foundation. Damaraland cattle are the best of animals for light bullock traffic. They are light and active, and are black and tan in color. The Pondo breed is hornless. Zulu cattle are diminutive, but hardy, active, and useful animals.

The two most popular European breeds are the Holstein-Friesland and the Shorthorn. The black and whites were first introduced and are still largely imported and highly prized. The Shorthorn is of much more recent introduction, and takes the lead as a general purpose farmers' animal in the production of meat and milk, but where dairying is the chief object the Dutch cow gives a better account of herself. The Ayrshire breed is present, but not largely represented. The Devon is in evidence, and crosses remarkably well with the Afrikaner stock. Hereford bulls cross well with the native stock. The Dexter-Kerry is to be seen in considerable numbers, not in herds, but as milch cows where only one or a limited number are kept. The Dexter-Shorthorn is a recently-formed, hardy breed, much thought of for general purposes. The Jersey and Guernsey breeds hold a sort of aristocratic position among the others.

The management of the cattle is by no means of the most modern. When cows are milked, while pasturing they sometimes travel as much as seven miles daily to feed and back again to water. They are brought up by boys in small clumps to the kraal, and milked once a day, the calves getting their only suck at the same time. The calves are kept apart from their mothers, and as each cow is tied up to a post, in turn her name is called out, and a Kaffir boy knowing each cow's calf at sight cuts out the calf wanted from the mob of calves, freely using a long whip to facilitate matters. The calf is permitted to take the first milk, and when the cow has settled down to parting freely with it the calf is driven back, and the milker takes the middle portion of the milk, leaving the last for the calf to finish.

In the more advanced districts dairying has



gone on in a most satisfactory manner within recent years. In local markets, butter has sold at from 50c. to \$1 per pound. Two traveling dairies have done much to improve the methods, and there is now a large export butter trade with Great Britain developing. Butter is now stored and carried in refrigerating chambers, and the industry promises to become of considerable moment. In some districts the co-operative plan is employed, especially in cheesemaking. Separators and milking machines have been introduced and will likely come more into use as the industry develops and they become better known. [NOTE.—Since March last that dreaded plague, rinderpest, has been causing great havoc among cattle in South Africa.—Ed.]

The horse is not indigenous to South Africa, the natives having no knowledge of the existence of such an animal at the time the Cape was discovered by Europeans. They were brought there about 1650 by Dutch settlers from Java. They belonged to the North African breed, and were known as the Gulf Arab. In 1813 English Thoroughbreds were brought in, and immensely improved the Cape horse. Turf clubs and jockey clubs sprung up, and since then Hackneys, Cleveland Bays, and Suffolk Punches have been taken in and are leaving their impress. Mules and asses are used to a considerable extent for transport purposes in the drier portions of the Colony. They can endure more starvation and rough usage than horses. Some mules are of immense size, reaching seventeen hands in height.

Goat farming is not without its place in the Colony. The goats are herded in flocks, and are reared for their meat as well as their hair. The Angora is one of the most popular breeds, although there are a number of other good sorts reared. The bastard goats are liable to retain the natural tendency to periodically shed the hair, and are therefore sheared twice a year to avoid loss. Cape mohair has not yet reached the perfection of Turkish-grown mohair, neither being so bright nor having the spinning property to make it of equal value by two pence to three pence per pound.

The sheep which the European discoverers of the Colony found in possession of the natives were a parti-colored, hairy, lop-eared, fat-tailed breed. They are a leggy sort, yielding light carcasses, having broad, flat tails, which usually weigh from six to fifteen pounds, some as high as twenty, and a few as much as thirty pounds. The Spanish Merino rams were introduced about the year 1793 and bred to many of the native ewes. The female progeny were again crossed with the pure Merino until the Merino characteristics were tolerably well fixed. Large flocks of these are now kept and raised principally for their wool, but their mutton is largely used at home, but not exported. One drawback to the sheep industry is the number of destructive wild animals, such as baboons and jackals, which have to be fenced against in some remote localities.

Little is yet known in the Colony of the respective merits of the most prominent English breeds. There are, however, a number of Hampshires, Shropshires, Suffolks, Border Leicesters, and Cheviots in the country, and they are being largely used for crossing with the Merinos and Merino grades.

Pigs.—Domesticated pigs, which are kept in considerable numbers in Cape Colony, though frequently far from pure, are descended from European breeds. The common country pig is a thick-set, well-bodied animal, on short legs, and frequently gray in color. The Tamworth is there, and does well. Pig breeding is not practiced to anything like the extent that would be profitable. Acorns, maize, and green foods are largely grown, which could be utilized to good advantage in pork-making.

Irrigation has to be practiced extensively in much of the country, especially in fruit-growing regions. Farm machinery and implements are much the same as our own.

Plows (single and double), diamond and disk harrows, self-binders, and other modern machinery are in use.

The field crops are wheat, barley, oats, oat hay, rye, maize (corn), Kaffir corn, potatoes, and tobacco. Each of these crops occupies a large area, the least grown being rye, of which in 1893 there were 182,362 acres. The crop returns of 1895 show for the whole Colony a yield of eleven fold harvested, exclusive of crops to the extent of over six fold that were destroyed, results which are a few bushels below the average of former years. This is estimated to be about eighteen fold.

Agricultural Department.—The first Department of Agriculture for Cape Colony controlled by a secretary was created in 1887, and associated with the office of the Colonial Secretary. In 1892 a reconstruction was effected, and the Department became a Department of Lands, Mines, and Agriculture, administered under the Colonial Treasurer. The existing Department, including the office of Minister of Agriculture, was created in 1893, and provisions made for its administration by an Act that year. The Department is well manned and managed, and is doing good work for the farming industry of the Colony.

If any one purposed going to South Africa to farm, or desired information on that country, he could not do better than read this work; but we would not recommend ADVOCATE readers to leave Canada for the Cape.

Despite its many possibilities, Prof. Wallace does not say yes or no to the question, Is it a great

agricultural country?—He is a bimetallist, and asserts with characteristic confidence that there is little hope for agriculture at the Cape or anywhere else in the world so long as the standard of currency remains in its present unsatisfactory condition.

### In the West.

A GLANCE AT MANITOBA AND ITS EXHIBITION THROUGH EASTERN EYES.

To the Editor FARMER'S ADVOCATE:

SIR,—Seeing the interest you have always taken in the progress of agriculturists, I take the liberty of sending you a few notes of observations made while on a trip to Manitoba. Having had the honor of being appointed judge on dairy cattle at the Manitoba Provincial Exhibition, which was held at Winnipeg, from July 20th to 25th, I left Carleton Place on July 14th at 2.50 p. m. and reached Winnipeg on the 16th at 3.30 p. m., making the trip in a little over forty-eight hours. When in sight of Winnipeg I thought I had made a very speedy trip compared with the time when I first visited Manitoba, twenty-two years ago. It then took me thirteen days to go there and twenty-six days to return, coming by the Dawson Road.

After an hour's stop at Winnipeg, I took the train again for Portage la Prairie, where a relative was waiting to meet me, and where I have several friends and relatives farming. I was surprised at the great change in Portage and the country around it since I was there twenty-two years ago. There were then only about half-a-dozen houses, scarcely worthy the name village; now it is a flourishing town with about three thousand inhabitants. I was also surprised to see the large, comfortable farm dwelling-houses, some of which rank high compared with what may be seen in the best country of Ontario. Next day came the Portage la Prairie Exhibition. It was a great success. I expected to see a good exhibit of grain, and was not disappointed; but that of horses, cattle, sheep, and swine quite surpassed my expectations. The ladies' department was also well sustained.

The crops in this part of the Province are not as good as usual, on account of the very wet spring, but when I tell you how they were sown I am sure you will wonder that they have any crop at all. The fields were literally covered with water, making it impossible for seeders to work, so that most of the grain was sown by hand from wagons drawn by two and sometimes three spans of horses. One man drove the horses while another sowed the seed from a box or tub placed in the wagon. Very little of the grain was harrowed, as it was sprouted before the water dried off. This wet season was followed by a severe drought, and lately the rust has attacked the grain. Notwithstanding all these drawbacks, I saw several very fine fields of wheat. The farmers say if they have half the grain they had last year they will be satisfied. Hay is an abundant crop and a great quantity of it was saved.

On the 20th I returned to Winnipeg and reported at the office of the Exhibition Association, and was pleased to hear that the Hon. John Dryden, Minister of Agriculture for Ontario, was to judge the beef breeds; Mr. McTurk, of Selkirk, the grade cattle; and Mr. Gibson, of Delaware, sheep and swine. Altogether the Exhibition was a grand success, the receipts being three thousand dollars more than last year. Tuesday was a very wet day, which gave the officers of the society the "blues," but the weather cleared that night and the remainder of the week the weather was almost perfect. The horse exhibit was very good; in fact, it was almost as good as Toronto and better than Ottawa. The exhibit of Shorthorn cattle was extra good, some of the prizewinners at the World's Fair being there. The competition was so close sometimes that Hon. John scarcely knew what to do, but he has a wonderful knack of pleasing every exhibitor and pleasing himself also. The other beef breeds were not so well represented, but there were some very fine specimens of Hereford and Angus cattle. The fat cattle were excellent. The first prize was awarded to a Hereford. The dairy breeds were all well represented, also the Holsteins, in numbers as well as in quality; some of them showed great individual merit. The Jerseys were not very numerous. The females were hardly up to the mark in quality, but some of the males were very good. The exhibit of Ayrshires was excellent, and their thrifty appearance shows that they are well adapted for Manitoba.

Hon. J. C. Patterson, Lieutenant-Governor of Manitoba, offered a gold medal for the best herd of dairy cattle, consisting of one male and four females, any age or breed, owned by one exhibitor. The judges were Hon. J. Dryden, Mr. Gibson, Mr. McTurk, and myself. Five herds were competing for the prize, viz., two herds of Holsteins, two of Ayrshires, and one of Jerseys. After all the herds were carefully examined, Hon. Mr. Dryden proposed that the judges should not speak to each other, but that each one be supplied with a slip of paper on which to write the name of the herd he thought worthy of the prize, and that they be handed to Mr. Greig, of the FARMER'S ADVOCATE, who was in the ring at the time. When the ballots were read it was found that three were marked for the Ayrshire herd (owned by W. M. & J. C. Smith,

Fairfield Plains, Ont.) and one for the Jerseys, so Messrs. Smith carried off the gold medal. The Association offered a prize of fifty dollars for the cow that would produce the most good butter in a single day. This is looked upon as being the most important prize offered by the Association. An Ayrshire cow, owned by Mr. J. S. Cochran, Crystal City, was an easy winner of the prize.

The sheep exhibit was a large one and some very good specimens were shown, but the country seems better adapted for hog-raising, probably on account of the grain being so plentiful. Hogs were a good exhibit, the Berkshire breed predominating. When judging that breed sometimes Mr. Gibson seemed scarcely to know what to do. On one occasion, when the crowd outside the ring thought he was in a "tight place" and expressed fears that he would get into trouble, Mr. Dryden allayed their fears by saying, "Richard will pull through all right"—and so he did. The root exhibit was much better than I expected to see, it being so early in the season. But no part of the exhibition was so much of a wonder to the Ontario visitor as the machinery, which was all in motion. The stubble-burner and the wind stacker were new things to us.

The ladies' department was an excellent show in itself, and the attractions were the best that could be procured.

Doubtless your Ontario readers will think it very strange to have an annual exhibition in July, but it is impossible for them to have it after harvest, for when the grain is off the fields threshing commences (much of it being done from the stack), and it is often not completed when winter sets in. At the close of the Exhibition I took the Manitoba & Southwestern Railroad for Crystal City and Pilot Mound, and found the crops there better than they were at Portage la Prairie. The prairie being more rolling, the water had drained off earlier. I also crossed the line into Northern Dakota to visit a settlement at Woodbridge, mostly composed of people from the County of Lanark, who first settled in Manitoba, but moved across the line because they could buy their agricultural implements, fence wire, etc., much cheaper and sometimes get one or two cents per bushel more for their wheat. I was surprised to find them nestled under the wing of the Eagle, and they would put up their hand and stroke her down as kindly as if they had been born under the shadow of the Stars and Stripes. The crops in Dakota are similar to those in Manitoba, but, as a rule, late. If the frost and hail do not strike them they may turn out very well.

When at Crystal City I visited the Crystal City Dairy Association's butter factory, which is running on the joint stock principle. The cream is gathered and paid for according to the oil-test churn. Mr. F. W. Tucker, the buttermaker, is a native of England and has made butter in the British Isles and New Zealand. Butter made by him took a gold medal at the World's Fair. About seventy-five or eighty patrons send cream to this factory. The butter is sold in Winnipeg, Victoria, and other large towns, and so far has realized 14½ cents per pound. It costs five cents per pound to gather the cream and manufacture the butter, but it is expected that the price of butter will increase so that the patrons will get at least twenty cents per pound for their product. There are twenty-eight butter factories in Manitoba and about twenty cheese factories. Some of the cheese factories are not running this season. One great drawback to cheese factories is the great distance they have to haul their milk, but of course that will be got over as soon as the country becomes more thickly settled.

From what I saw of the country I came to the conclusion that the farmer who follows mixed farming is the one who is going to make a success of his business. Some of the best of farmers I met told me that they could not depend on more than two crops of wheat without summer-fallowing. Now, summer-fallowing does not enrich the soil, but rather impoverishes it by making the fertile ingredients in it more available for plant food; but there is also a great loss of fertility with a bare fallow, and the time will come when summer-fallowing will not bring the crop of wheat without manure. I found some farmers who save their manure as carefully as we do in Ontario, and have beneficial results from doing so. I think every farmer should have at least ten or twelve milk cows and send the milk to a butter or cheese factory, and raise young stock, sheep and hogs enough to utilize all the coarse and damaged grain. There should never be a bushel of damaged wheat sent out of the country, as it hurts the name of Manitoba wheat and flour, while it costs just as much to send it to market as it does to send the very best. I met several parties from Ontario. One of them, Hon. Thos. Ballantyne, of Stratford, speaks very highly of this Province as a cheese producer. If this country makes as much progress in the next twenty years as it has done in the past twenty it will be a wealthy country. Twenty years ago there were only about six houses in Winnipeg; now it has a population of thirty-one thousand. I found that most of the business men were from Ontario. Mr. Heuback, the courteous, efficient, and energetic manager of the Winnipeg Exhibition, is from Ottawa. I would not be doing my duty in closing did I not mention the many kindnesses we received from the railroad officials. They seemed more like new officials catering to the wants of the public than merely running a train.

Carleton Place, Ont.

JOS. YULL.



STOCK.

Prof. Williams on the Cattle Embargo.

Mr. Henry Taylor, of Middlechurch, Man., son of Mr. R. R. Taylor, of that place, has recently passed very successfully his first year examination at the New Veterinary College, Edinburgh, Scotland. In a letter received by one of our staff, Mr. Taylor makes this quotation re the British embargo on Canadian cattle, as given in an address by Prof. Williams, principal of the above college, to the students before proceeding to an appointment under the Jamaica Government:—

"Prof. Williams said: 'I fully appreciate the honor which has just been conferred on me, all the more so because I have differed from the Government [the British] on some very vital questions, one of which was the Canadian cattle question, and I have never altered my opinion on that question, which the Government well knows, and I take this opportunity, being my last address before my departure, to say to you that I still think they were wrong, and that it was not pleuro-pneumonia with which these animals were affected, but a disease of a non-contagious type.' (The Professor's remarks were received with applause.)"

The fact of the matter is, as our readers well know and as is generally well recognized by competent authorities acquainted with the facts, that nowhere in the world can herds, flocks, and studs be found in such uniformly good health, and so free from contagious ailments, as in the Dominion of Canada. The climatic conditions are doubtless favorable; but it rests upon us, by effective measures, to see that immunity from disease is not lost through any negligence on our part. We need not cite again as a caution the disastrous ravages of stock diseases in countries nearer home; but in a late issue we referred to the "rinderpest" cattle plague in South Africa, which, it is estimated, has this year occasioned a loss of \$20,000,000 to the Bechuanaland Protectorate alone. In one district alone the chief lost 8,000 head, and his people 600,000 head of stock.

A Pair of Champion Shorthorns.

ROYAL HERALD (64736).

The English Royal winner, Royal Herald, portrayed in this number, is truly a great Shorthorn. He was bred and when shown was owned by Lord Polwarth, Mertoun House, St. Boswell's. His age is five years and six months, and he is said to weigh 2,500 pounds. Royal Herald is of the Mantalini tribe, from a dam by Mr. Booth's King Stephen, while his sire is old Royal Riby. Through Royal Riby he is a grandson of Royal Stewart and great-grandson of Royal Benedict, so that he is full of the best existing blood of Warlabry, and on the dam's side descended from the original Killerby herd. Royal Herald was the winner of the Shorthorn Society's prize, as well as being the "Royal" first-prize bull of 1896.

SHORTHORN HEIFER, AGGIE GRACE.

The Shorthorn heifer, Aggie Grace, was the winner of the female breed championship at the Leicester Royal Show, as well as a first-prize winner in her class. This heifer is the property of Messrs. Law, Mains of Sanquhar, Forres, N. B., her breeder being Mr. A. B. Law, Mains of Sanquhar. Aggie Grace was calved March 1, 1894, her sire being Sanquhar, dam Dandy Grace, by Ravensworth. The portraits are re-engraved from a special plate which the *Scottish Farmer* issued, and do no more than justice to the subjects.

Our Scottish Letter.

*How to Feed the Showgoer.*—The last communication under this heading dealt with some features of the Perth Show. It was an unqualified success in almost every sense of the term—the one department about which great dissatisfaction was expressed was the commissariat or catering for the creature comforts of the visitors. How you manage these things in Canada, or whether you do them better than they are done here, we know not; you certainly could not do them worse. It seems to be a fine art in which only a very few excel—the feeding of large numbers of hungry people at one time. Waiters are scarce, food is stale, tables are dirty, and charges are high. Occasionally an improve-

ment may be discerned, as, for example, at the Royal this year, when, undoubtedly, the strenuous effort made by the Society to improve in this department met with a measure of success. After all is said, however, much remains to be done, and there is a sphere for the genius who can feed a multitude at a cattle show.

*Hackney and Shorthorn Sales.*—Since the show we have been mainly engaged selling Hackneys and Shorthorns, and a really good job is being made in both cases. The Starborough Castle sale of Mr. Waterhouse's Hackneys was a most successful event, and splendid prices were realized. Twenty-nine brood mares were sold for an average of £236 15s. 10d., and 17 foals for £87 9s. 2d. each. Three-

of his draft sales, when he cleared off several dowagers and a number of young stock. His averages were fair, but in no sense sensational. Forty-two head, of all ages, made £1428, or £34 apiece. Of these, eighteen were cows, and their average price was £29 11s. 6d. Two-year-old heifers drew £33 5s. apiece; yearling heifers, £18 12s. 2d.; three bulls, £77 14s.; and nine yearling bulls, £43 18s. 6d. The most notable fact in connection with the sale was the high price drawn for the Rosehaugh-bred bull, Flower King, 125 gs., the buyer being Mr. Langley, from South America. The sale was largely one of Booth cattle, but this Scottish Shorthorn drew most money. At the same time there were sold the whole of the small herd owned by the late Lord Arbuthnot. There were fifteen of these, and the eight cows made an average of £42 apiece. A feature of the sale was the opportunity afforded for comparing the characteristics of the three great tribes—Booth, Bates, and Cruickshank. In one case, as we have seen, the Northern tribe bore the palm, and some of the Booth cattle exhibited in a marked degree the strength and weakness of the race. One, a magnificent heifer, which made a great price at the Warlabry sale, was sold for a good bit less money, but that was due to the fact that she was in bad condition, having broken service. She was a magnificent heifer in front, and indeed back to the hooks, but from the hooks to the tail root she was just about unpardonable. Why this should be so it is not easy to explain, but the wisdom of the policy pursued by the Cruickshank brothers in aiming at the production of beef where it is most valuable was clearly seen in the readiness with which any evenly-fleshed Scottish Shorthorn sold. A memorable sale, or, rather, the sale of what was a memorable herd, was held by Mr. Thornton on the following day at Holker Hall, Cark, in North Lancashire, when the herd collected by the late Duke of Devonshire was dispersed. Good prices again ruled, twenty-nine

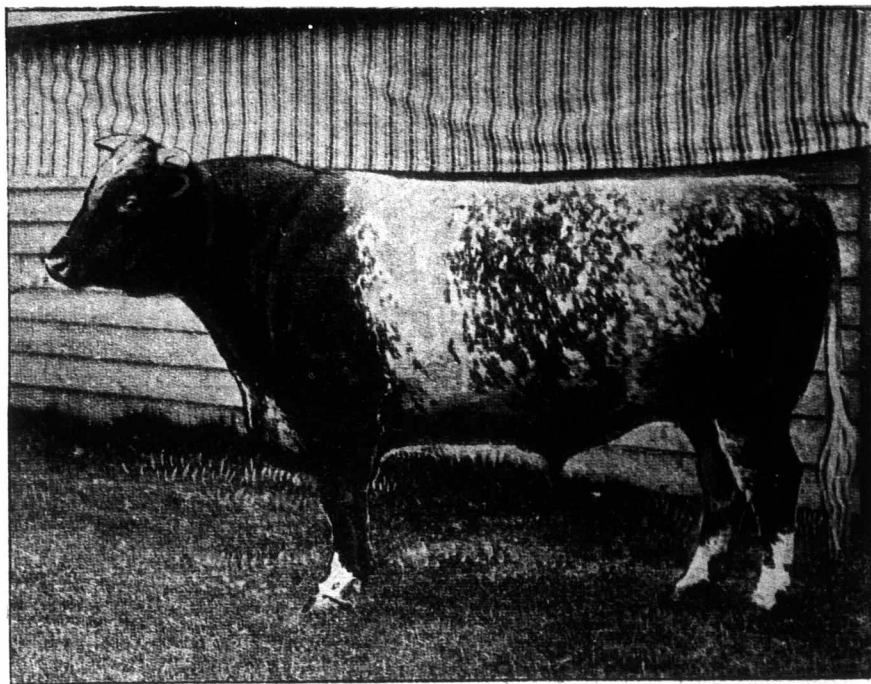
cows averaging £47 each. The bulls averaged £59 9s. each, one of them making 120 guineas. Numerous sales take place in the later autumn alike of Shorthorn and Aberdeen-Angus cattle. One of the earliest and best will be that of the Beaufort Castle herd, which Messrs. Macdonald, Fraser & Co. will sell on an early date. Lord Lonat's cattle have a fine reputation for soundness and general utility, and a brisk demand may be expected for them. The Collynie and Uppermill sales do not take place until October.

"SCOTLAND YET."

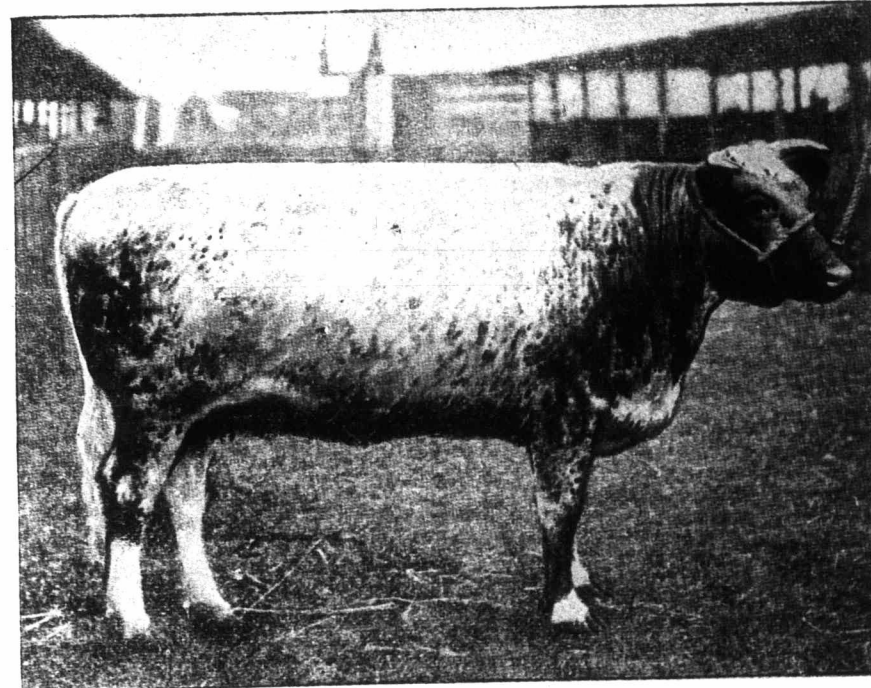
Shire vs. Clyde.

To the Editor FARMER'S ADVOCATE:

SIR,—In your issue of July 15th an article appears by "Scotland Forever" in which he castigates "Cloughbane" for daring to criticise his idol—the Clyde. Not content with that, he must try and libel a horse, the equal of that idol of his (I will not say superior), viz., the Shire. Part of his article is so preposterous as to give one the impression that it might be meant for a joke, and a practical one at that. I don't intend to defend "Cloughbane's" opinion, but when a person writes such rank nonsense re Shires—well, it's time a little information should be given him. He states that "Cloughbane" had the hardihood to compare, etc.—actually, "the hardihood!" Oh! dear, what consummate assurance that "Cloughbane" must have. Now, friend "Scotland Forever," were you ever at a horse show, or in a place where other kinds of horses were kept besides the Clyde? Many good horsemen will tell you that the Shire and the Clyde are so much alike as to, in many cases, render it almost impossible to distinguish between them. Now, that being the case, either the Clyde is a big, coarse, clumsy brute, etc., or he is not. For the sake of this critic's feelings we will say he is not the big, coarse, clumsy brute, etc. Go to, thou wiseacre, visit a good horse show, and if you view the horses calmly and dispassionately, look for points, etc., you will see a very slight difference between the breeds. Take the stud books, and you find the intermixing of blood has been carried on to a great extent, which the Clyde men surely would not do if they thought it would result in horns and other oxlike characteristics. If there is a slight advantage in favor of the ox, how is it such high prices are constantly being paid for Shires; in a number of cases, more than is paid for Clydes. The writer had the good fortune to visit the Shire horse show at the Agricultural Hall, Islington, London, Eng., and the evidence obtained by one's own observation there should be sufficient to combat the inane comments on this fine breed of horses. I am not bigoted in favor of either class,



LORD POLWARTH'S ROYAL HERALD, CHAMPION OF THE ENGLISH ROYAL OF 1896.



AGGIE GRACE, CHAMPION SHORTHORN FEMALE AT THE ENGLISH ROYAL.



but our good friend says he "waited patiently"—in my opinion, not patiently enough—to be able to write reasonably on such a topic. Probably some person has shown "Scotland Forever" a Clyde grade colt and called it a Shire, hence his criticisms. Among horsemen there seems to be the opinion that there is plenty of room for both breeds. I have seen and also been behind a team of Shires hitched to a plow, the speed of which would make our friend's head whirl. For further information I would refer him to your issue of July 1st, page 226, in the Questions and Answers column; trusting that column will be thoroughly digested by him in the wish of—

A. G. H.

#### Some Parasites of the Domesticated Animals.

(From an address to the Farmers' Institute, by Fred. Torrance, B.A., D.V.S., Brandon, Man.)

(Continued from page 308.)

Let us pass on to another class of parasites attacking the skin.

**The Acari or Mange Parasites.**—These are very much smaller than the *Pediculi*, or lice, and require the use of a good magnifying-glass or microscope for their detection. But the condition they produce in the skin, commonly known as mange, is very apparent. In horses there are three species of these parasites. Two of them produce mange of the body, while the other species confines its attacks to the extremities, when it produces foot-mange. Body-mange is fortunately not as common in this Province now as it was a few years ago. It is characterized by intense itching of the parts affected, followed by loss of hair and thickening of the skin. Usually beginning in the side of the neck, it spreads with greater or less rapidity until the whole body may be affected. While not difficult to cure in the early stages, it is different when the disease has become well established and the skin is thick and resembling the hide of an elephant more than that of a horse. This disease is included among the contagious diseases in the Act respecting the contagious diseases of animals; and it is the duty of any one having a case of this disease to notify the Department of Agriculture, when the Provincial Veterinarian will direct the treatment requisite to eradicate it.

Foot-mange is not so serious as body-mange, but is comparatively of common occurrence. It usually begins on the hind legs, causing the horse to stamp his feet and rub his legs together, and, after a time, producing a condition of the skin which is often mistaken for "grease" or *eczema*. Coarse-bred, heavy horses are most liable to become affected, the thick hair affording good shelter for the parasites. The skin is scurfy, and the hair much broken and woolly.

This form of mange follows an extremely slow course, and a horse must be greatly neglected by its owner, even for several years, before the disease invades the upper part of the limbs and the trunk. It shows itself almost exclusively during winter; not that the parasites abandon their host during the summer, but probably because during that season the natural secretions of the skin are more abundant and dispense with the necessity for actively pricking it in order to excite the exudation of nutritive fluid.

The disease may persist for several years if the horses are badly groomed. The skin then becomes thickened and the legs swell. Cracks form across the skin, above and below the fetlock, and in these furrows there is a greasy, purulent secretion, in which may be found the parasites.

Foot-mange is generally easy to cure if the remedies are properly applied. The first requisite is to clip off the hair; then wash the legs thoroughly with soft soap and water and apply the remedy selected. A mixture of sulphur, lard, and coal oil will be found effectual in most cases. Whatever the remedy, it should be applied more than once, at intervals of a few days, so that as the eggs hatch out the young parasites may be destroyed before they have time to breed. Curry-combs and brushes should be disinfected by washing in carbolic solution.

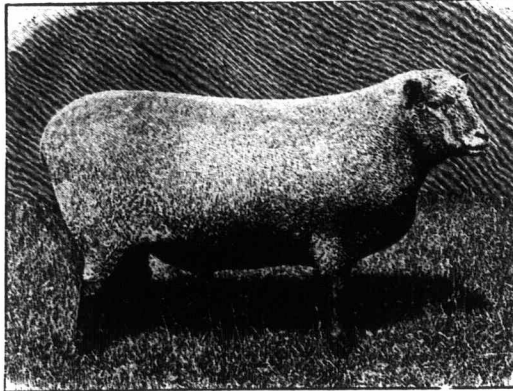
Each of the domesticated animals, as well as man, has its species of acarus or mange parasite, and it is a remarkable fact that, with few exceptions, the acarus of one animal will not thrive on an animal of a different species. The acari of the horse, for instance, will not attack cattle or sheep, and if purposely transplanted will live only a short time and disappear. The parasites of the sheep will not attack any of the other domesticated animals. Each species has its own particular parasite. Among the domesticated animals the sheep is the one upon which this form of parasitism is the most damaging. Living in flocks, they offer the best facilities for contagion. The wool offers an excellent shelter for the parasites and great opposition to the action of remedies. The large number of animals under the care of one shepherd makes it difficult for him to watch each individual case. All these facts concur to make an attack of mange among sheep, or *sheep scab*, as it is called, a most serious matter for the owner of sheep. In Manitoba we are fortunately free from sheep scab, I believe, but it has been imported into the Province in the past on sheep from the United States, and only the prompt action of the authorities prevented it from gaining a foothold. We need not, then, give it more than passing notice, but take up another parasitic skin affection which is very common and which I am sure you have all seen.

**RINGWORM**—"*Tinea tonsurans*."—Unlike the diseases we have been hitherto considering, this is caused by a *vegetable*, not an animal, parasite. Belonging to the same class of vegetable life as the molds which form on the surface of stale bread or cheese, the ringworm parasite differs from them in growing on living animal tissue. The ringworm parasite, then, is a fungus or mold, and propagates itself by spores in a similar manner to the smut of wheat. The spores, when they rest on a suitable part of the skin, grow and form filaments, which are virtually little roots striking down into the outer layer of the skin, and forming at the last a network of vegetable fibers, matted together by the exudation from the skin. By this time the hair has fallen out over a circular patch, which is covered by a thick brown crust or scab, which keeps slowly enlarging in every direction. The disease seems, in many cases, to be self-limiting, for after a certain time the crust stops growing, the scab drops off, and the hair gradually reappears. But probably, at the same time, the disease has appeared on other parts of the body, and one ringworm follows another.

It is more frequently observed on cattle than on other animals, but may be transferred from one to another, the parasite appearing to thrive on any of them, as well as on man. It is usually seen as a circular patch upon the face of a calf; near the eye being a favorite situation, and young animals more susceptible than old. Ringworm is frequently transferred from cattle to man, and I have seen children infected in this way. For this reason, if for no other, ringworm should always be treated, and is not difficult to cure. Carbolicized glycerin, 1-10, repeated twice a day, or ointment of white precipitate, 1-4, every second day, will effect a cure.

(TO BE CONTINUED.)

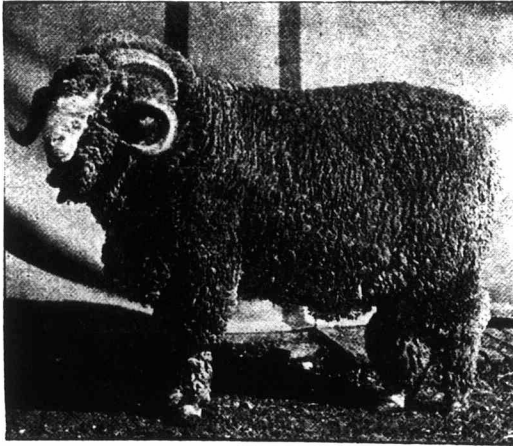
#### Two Breeds of Sheep—A Contrast.



THE ARISTOCRATIC SOUTHDOWN.

To the studious live stock breeder there is no more interesting subject than the consideration of the respective parts played by heredity and environment in the evolution of various types of pure-bred live stock as we find them to-day.

Men like the Ellmans (of Southdown fame) step in with ideals of beauty and utility, and, taking advantage of natural laws and conditions, in due time produce from the best material at hand a type which becomes so "fixed" as to earn the designation, "*breed*"; though when transplanted into other districts and conditions a very perceptible alteration will go on. Hence, if the original type is to be preserved, we find breeders returning to the original sources for breeding stock. From Prof. Wrightson's admirable work on the sheep we reproduce the engraving given above.



PURE AUSTRALIAN-BRED NEGRETTI MERINO RAM.

In striking contrast with the refined and graceful Southdown stands the Merino, which in so many countries (Great Britain and Canada being noteworthy exceptions) has been the dominant breed of sheep. As a corollary an English contemporary recently remarked: "In no country but Great Britain is good mutton so common." A widespread type of the Merino is illustrated herewith, and which Prof. Robt. Wallace regards as probably the best suited for the present requirements of South Africa, the agricultural conditions and prospects of which he has investigated with great thoroughness.

#### Live Stock Quarantine.

We understand that Hon. Mr. Fisher, the new Canadian Minister of Agriculture, will meet the members of the Dominion Cattle, Sheep, and Swine Breeders' Associations on one of the evenings of the second week of the Toronto Industrial Exhibition, to discuss the important matter of quarantine regulations and other questions of interest. The gathering will take place in the tent occupied by the Secretary of the above named organizations.

#### Home Surgery.

Many a good animal has been lost through neglect, which a little attention at the proper time would have saved. Neglect, very often simply because one does not consider himself a doctor, or because he dislikes to fuss with sick or wounded animals. A few stitches and some attention, even in a rough way, may save a wounded animal's life, or at least prevent an unsightly scar. Even a fowl is sometimes worthy of a surgical operation. If a chicken or young turkey is crop-bound, it is almost sure to die except treatment be given. A few lumps of lard poked down its throat may cause the removal of the grain, but it is quite safe to open the crop and remove the obstruction, then sew it up carefully with silk thread and keep the subject quiet for a few days, upon a soft and nourishing diet, when it will go on and thrive as if nothing had happened.

#### FARM.

##### Lightning Conductors.

The destruction of many valuable farm buildings by fires caused by lightning this season revives interest in the subject of lightning rods.

When an electrified cloud approaches another cloud or the earth near enough, its electricity and the opposite kind (respectively called positive and negative) induced on the neighboring cloud or earth rush together, producing the great electric spark called lightning, which is said to travel at the rate of nearly 200,000 miles per second. There are three kinds: *forked*, going in sharp zigzag lines by the way of least resistance to the earth; *sheet* or *heat*, of pale, diffused light, not usually accompanied by thunder; and *ball* lightning, a very rare form.

As to the efficacy or otherwise of lightning rods, we have made inquiry of the Manager of the London Mutual Fire Insurance Company, which carries farm risks to the amount of some \$15,000,000 annually, and he states that in an experience of thirty years that only on two or three occasions have they had barns struck that were rodged, but they were not burned. When the fact is also borne in mind that the Company's losses from lightning fires have averaged \$26,000 annually for the past five years, but in no case were they on protected buildings, it seems good evidence in support of rods, and we would say that the insurer with properly rodged buildings should receive some consideration in the matter of rates.

As Mr. Macdonald observes, lightning rods have fallen into disrepute very largely through the rascalities practiced by some agents selling them.

The principle of protecting buildings by lightning rods was discovered by Franklin. It is pretty generally conceded by men conversant with the habits of lightning, that buildings with conductors, when struck by lightning, suffer little damage compared with those without protectors. This is the case only when proper conductors are arranged as they should be. A blunted point, or a break in the continuity of the connection, renders lightning rods probably worse than useless, and we have seen very many of them in that condition.

The main function of a lightning rod is to conduct the charge to earth. It is therefore important that it be *continuous* and *terminate in damp soil* or *running water*. Another function claimed is the prevention of a violent discharge by silently and continually drawing upon cloud electrification, or neutralizing it by the opposite sort ascending from the earth.

Sir Wm. Thompson, an eminent authority, in a discussion at the British Association for the Advancement of Science meeting in 1888, said: "We have very strong reasons to feel that there is a very comfortable degree of security, if not of absolute safety, given to us by lightning conductors made according to the present and orthodox rules."

Galvanized iron or copper conductors may be used. If the latter, one weighing about six ounces to the foot, and preferably in the form of tape, is considered about right. If iron be used, and it seems to be in every way as efficient as copper, have it in rod or twisted tape form, weighing about 35 ozs. to the foot. If the conductor at any part of the course goes near water or gas mains, it is best to connect it with them. The tops of the rod should be plated, or in some way protected from corrosion and rust. Clusters of points or groups of two or three along the ridge-rod, at intervals, are recommended. Points and rods should be regularly and carefully examined throughout to see that they are in perfect condition and properly fastened to the building.



**Fall Wheat Pointers.**

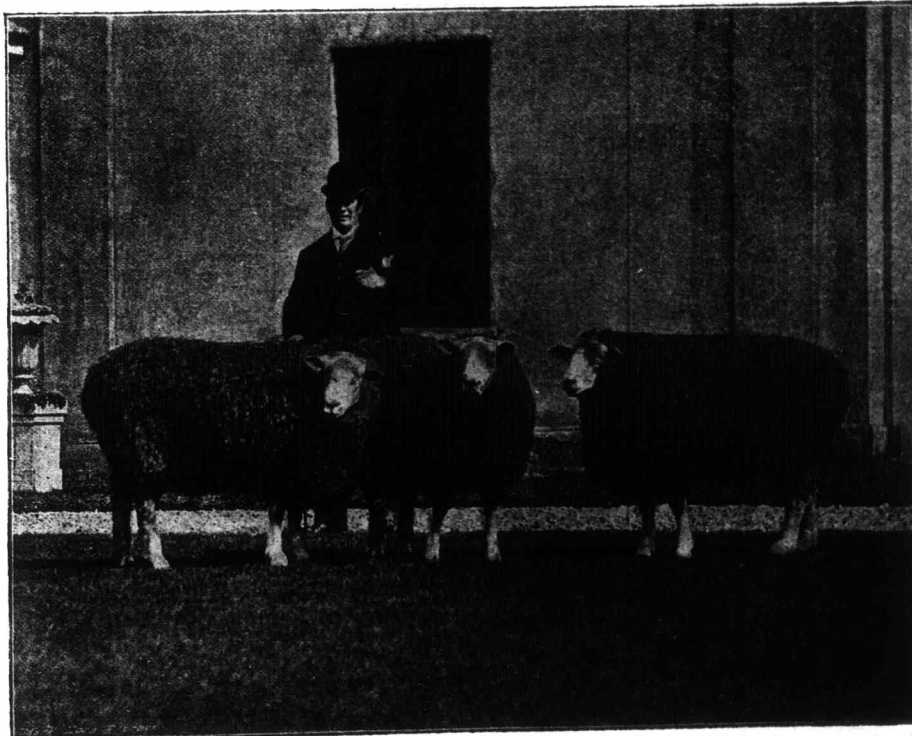
The following conclusions were arrived at by Mr. C. A. Zavitz, the Guelph "Farm" Experimentalist, at the end of a long series of experiments with the growing of fall wheats:—

1. The average results of winter wheat growing on the experimental plots for seven years in succession are as follows: Weight of grain per measured bushel, 60.5 pounds; yield of straw per acre, 25 tons; and yield of grain per acre, 38.7 bushels.
2. Dawson's Golden Chaff has given the largest average yield of grain per acre among fifty-three varieties of winter wheat grown at the Ontario Agricultural College for five years; also among eleven leading varieties tested over Ontario in 1893, nine varieties in 1894, and nine varieties in 1895.
3. The Early Genesee Giant has given the largest average yield of grain per acre among twenty-eight new varieties which were tested for the first time in 1894, and have now been tested for three years in succession. This variety also stood second in average yield per acre among nine leading varieties of winter wheat tested over Ontario in 1894, and nine leading varieties tested over Ontario in 1895.
4. The Early Genesee Giant, Giant Square Head, and Queen Meg varieties of winter wheat, which head the lists in average yield per acre among the varieties grown for three years, for two years, and for one year, respectively, are very similar in all characteristics.
5. Among eighty-one varieties of winter wheat tested in 1896, the Dawson's Golden Chaff, American Bronze, New Columbia, Early Genesee Giant, Giant Square Head, and Queen Meg produced the stiffest straw.
6. In the average of four years' experiments in seeding winter wheat on different dates, it is found that when the wheat was sown later than September 9th the crop was much poorer than when the seeding took place on or before that date.
7. In the average results from growing winter wheat for seven years in succession, it is observed that the white grained varieties have given the largest yields per acre in those seasons when there was but little rust, and the red grained varieties in those seasons in which the rust was abundant.
8. The varieties which have given the best average results in the experiments at the College are the varieties which have also given the best satisfaction throughout Ontario.

[NOTE.—For article by Mr. Zavitz, treating this subject fully, we refer our readers to page 309, Aug. 1st issue.—ED.]

**A Trio of Prizewinning Lincolns.**

As one of our extra illustrations in this issue we portray three Lincoln shearing rams, winners at leading English shows this year, bred by Mr. H. J. Dudding, many of whose sheep have been imported to Canada. They well sustain the reputation of this heavy British breed of sheep.



[From the "Mark Lane Express."]  
TRIO OF LINCOLN SHEARLING RAMS, BRED BY DUDDING, OF ENGLAND.

**Plowing Down Rye-- Grass Catch--Vinegar-Flaking and Evaporating Apples.**

To the Editor FARMER'S ADVOCATE:

SIR,—In issue of August 1st I notice query of F. S., Middlesex, Ont., in regard to seeding lawn. Perhaps a little experience I have had on a small scale might help him. About September 1st, 1895, I sowed one acre of quite poor land with rye, expecting to use it for a soiling crop in the spring, but grass made such a good growth last spring it was not needed, and manure being scarce, I decided to try plowing under, which I did towards the last of May, it being then about five feet high. I sowed with corn, which has made a grand growth—much better than some that was manured and twice as good as some that had no manure. I intend sowing this fall on a much larger scale. While I do not think it can nearly equal manure, it left the land in such fine tilth that the young plants got a fine start, and, I think, should ensure a good catch of grass seed.

Could any reader of the ADVOCATE give plan for making good, clear cider vinegar? As apples are very plentiful with us, we wish to make some use of them. Also something in the way of a cheap evaporator or handy way of drying at home.

Huron Co., Ont.

J. C.

Mr. Ellis F. Augustine, Lambton Co., an occasional contributor to our columns, sends the following: "To make good, clear cider vinegar, the cider should be made from well-ripened, slightly sour apples. After standing for a week the top should be skimmed off and the clear cider poured off into vinegar or whiskey barrels, being careful to get none of the settlings. About a quart of good vinegar-mother and two gallons of strong vinegar should then be added, and the bung-hole or top of the barrel securely covered with a thin cloth. The

barrel should be placed where it can be kept quite warm, when good vinegar will be formed in from five to six months."

[NOTE.—There is need of some improvements on the old plan of stringing apples or suspending them in an open rack over the kitchen stove as a roosting place for flies, where ashes, dust, and sundry flavors would all concentrate, making dried apples anything but an appetizing morsel. As an industry, evaporating fruit has attained large dimensions in some places. Whiteness is now one essential of dried apples. Elam Hatch, a U. S. farmer, is said to have discovered by accident that sliced apples could be made a clear, pure white by the use of brimstone fumes, since which it became a great business about Rochester, N. Y. In another column Mr. E. D. Smith suggests several farmers clubbing to secure an evaporator. Some reader can probably furnish the "homemade" plan "J. C." asks for. The G. H. Grimm Mfg. Co., of Montreal, advertise evaporators elsewhere in this issue.—EDITOR.]

**Harvesting Corn for the Silo at Guelph.**

To the Editor FARMER'S ADVOCATE:

SIR,—In my opinion, the coming implement for harvesting corn for ensilage will be a self-binder. It is a decided advantage in loading and unloading to have the corn tied in bundles. Several manufacturing firms in the United States are now making an implement specially for this purpose, but they are too expensive for the ordinary farmer. Several farmers might, with advantage, unite and get a complete outfit for cutting their corn and filling their silos.

I have been told that the low-down binder will cut and bind corn satisfactorily. It is my intention to try one when our corn will have attained its full

be green, but more tramping is required than with corn. Corn is cut with a binder, and allowed to lie on the ground in sheaves a couple of days. If touched by frost it may be put in the silo at once. Eighteen inches of cut straw or hay is put on top. Cutter is run with tread power; corn being cut into inch lengths. It falls in center of silo, where one man levels and tramps.

**DAIRY.**

**Buttermaking Without the Churn.**

Two members of the FARMER'S ADVOCATE staff recently witnessed at the Medway Creamery (Ont.) a demonstration of buttermaking in which the churn was discarded. It was given by Mr. Walter Cole, formerly of Australia, latterly of England. Instead of the churn was a round glass vessel about three feet high and a couple of feet in diameter. Lying flat on the bottom was a coil of small pipe, perforated at intervals with small holes. The pipe continued straight up the inside wall of the vessel to the top, extending a few feet across to a closed copper chamber containing water, under which were two oil lamps, by which the water was heated, say to 100 degrees. This chamber was in turn connected by a pipe with an air pump driven by the creamery engine. The glass vessel being about two-thirds filled with very sour cream (butter cannot be made from sweet cream by this process), the air pump was started and the air forced through, the hot water was raised to 80 or 90, and passing on down into the glass vessel, escaped through the holes, bubbling lively to the top of the cream. In about 40 or 50 minutes butter formed, and soon after cold water was added, the buttermilk drawn off, and the butter dipped out and removed to the refrigerator-room to be worked into prints.

The theory of this warm air process is that each butter globule is surrounded by an albuminous sack, and the hot air passing through the cream sets up a chemical action, dissolving the sack, freeing the globules, which coalesce. The day in question being excessively hot, with the warm air-currents rising through the cream, the butter did not present that attractive granular form which buttermakers desire to see. Still, butter it was, and in due course was made into prints.

As to advantages, it was claimed: (1st) That cream of any age or sourness could be used in making butter, so that it could be gathered from long distances; (2nd) that all objectionable flavors would be driven off, even to turnip; (3rd) that more butter—in fact, all—could be secured from the cream,

which churning did not do; and (4th) that the butter, being free from albuminous matter, would keep longer and more perfectly. The first point (cream gathering) conceded. That some odors might be driven off by the hot air rising would not seem unreasonable, but the claim is rather sweeping; there was no comparative test made on the day in question to demonstrate that a given quantity of cream would yield more butter than an equal quantity in the churn, nor was any test made of the buttermilk to show its freedom from fat, and, of course, we could say nothing as to its keeping qualities—claim No. 4. We suggested that the process be submitted to independent experts, such as the Professor of Dairying at the Ontario Agricultural College, or the Dominion Dairy Commissioner's staff, but understood from Mr. Cole that it was to be shown at the large fairs.

**A Canadian Buttermaker in Pennsylvania.**

Mr. Isaac Linton, a Canadian, now manager of the Silver Spring creamery, in Potter Co., Pa., writes us an interesting account of his present home and business, adding that he has read the FARMER'S ADVOCATE for the last 25 years and "it seems to get better the older it gets." He is in a beautiful section, fertile and well-watered. The pasturage is admirable. The army worm caused great havoc there this season; many fields of grain being cut green for fodder so that all would not be lost. The farm, of which, together with the creamery, Mr. F. L. Andrews is proprietor, consists of

**Cutting Corn With a Hoe.**

Mr. D. C. Black, of Ekfrid Township, Middlesex Co., Ont., expresses, in a letter to the ADVOCATE, his surprise at not seeing among the corn-harvesting articles in last issue the use of a hoe recommended for cutting the corn. He recommends, from experience, using a triangular hoe, with an 18-inch handle; the hoe made seven inches across the back, and 4½ inches from apex across to where the handle is attached. A blacksmith can make it from a portion of an old cross-cut saw blade. It should be kept very sharp.

**Silo Filling in the N.-W. T.**

In the event of a partial failure in corn, Supt. MacKay, of the Indian Head Experimental Farm, writes us that green oats, or a mixture of oats and barley, takes its place. In '94, oats well advanced toward maturity were used, but dried out, resulting in almost total loss. Not only must the grain



600 acres, mostly devoted to hay, pasture, and corn; 25 acres of the latter being for the silo. A new barn is to be erected, with two new silos. In the creamery (18 x 30 ft.) a De Laval separator and all the modern dairy appliances are used. The farm herd consists of 65 cows, and the milk from two other herds is bought. They have been turning out from 80 to 100 lbs. of butter per day, a portion of which is shipped to Buffalo—two large hotels taking 330 lbs. per week. Have sold none at the dairy for less than 25 cents per lb., and received more from the hotels. A systematic daily churning record is kept on a printed form, of which Mr. Linton encloses us a copy, showing kind of cream churned, weight, age, acidity, temperature at beginning and ending, hour, weight, butter, salt, with remarks as to quality of butter, prints, etc. We are glad to hear of the success of our old friend and reader.

**Skim Milk and the Babcock Test.**

It is most important to the dairy farmer and the creamery man to know that he is getting thorough separation of fat from the milk. The claims of separator salesmen and "taking it for granted" will not do. Without frequent reliable tests of the skim milk (and buttermilk also) there is no knowing how much valuable butter is running away to feed calves and hogs. In this connection E. H. Farrington, Professor of Dairy Husbandry at the Wisconsin Experiment Station, has been making a comparative investigation of the Babcock test and the gravimetric method (extraction with ether and weighing the fat) of estimating fat in skim milk. In bulletin No. 52 he says: "An effort was made to obtain samples of skim milk containing the least possible amount of butter-fat, such samples as are often claimed to contain no fat whatever, but which our experience has shown to contain nearly one-tenth of one per cent., and that failure to get any fat in a test is doubtless due to some error of the operator in manipulating the test." Accurate testing of skim milk by the Babcock test requires attention to the following details:—

1. Clean bottles.
2. About one-third more than the usual quantity of acid.
3. Sufficient speed of the testing machine.
4. Running the tester at full speed for at least five minutes.
5. Close attention to the thickness of the fat globules as well as their surface measure.

Two bottles have been devised especially for testing samples of buttermilk or skim milk containing very small quantities of fat. One of these is designed for using 35 cc. or double the usual quantity of both milk and acid. The graduated neck is smaller in diameter than the ordinary milk-test bottle, and a given amount of fat fills a longer space and can be more easily read. Each graduation represents .1 per cent. fat. The other is a double-necked bottle, provided with a much finer graduated tube for measuring the fat. Each division is so long that fractions of one-tenth per cent. can be estimated on the graduations—represent .05 per cent. fat. This bottle requires more care in handling, as it is more easily broken, but gives most accurate results.

**The Tring Dairy Trials.**

The great butter and milking trials conducted in August on the demesne of Lord Rothschild, near Tring, Eng., under the auspices of the Tring Agricultural Society, were this year of a more extensive character than usual, over sixty cows being tested. (There seems to be a growing feeling in England, however, in favor of testing under home conditions by some such plan as that carried out by U. S. experiment station officials for the American Holstein-Friesian Association.) Compared with last year, there was a distinct advance in the ratio of milk to butter. Lord Braybrooke's Jersey did credit to the buttermaking reputation of the breed by making almost one pound of butter to the gallon of milk. The Jersey easily held its position for richness of milk, although in the matter of quantity of milk and butter it gave way to the cross-bred. One of the chief features of the heavier class was the length of time the cows were in milk. The prizes ranged from £2 to £20, together with medals and certificates of merit. The following table shows the principal winners and quantities of milk and butter produced in the two classes, and will be of special interest to our readers at the present show season:—

COWS, ANY BREED OR CROSS, NOT EXCEEDING 900 POUNDS LIVE WEIGHT—26 ENTRIES.						
Cow.	Breed.	Milk.		Butter.		Awards.
		lb.	oz.	lb.	oz.	
Sundew IV.....	Jersey	30	2 6 1/2	12.54	1st.	
St. Bealade's Lady.....	"	30	12 2 4 1/2	13.38	2nd.	
St. John's Twist II.....	"	41	14 2 2 1/2	20.81	3rd.	1st.
Silver Cloud III.....	"	38	10 2 1 1/2	18.44	4th.	4th.
Violet.....	"	42	10 1 10 1/2	25.49	2nd.	2nd.
Do Good.....	"	41	9 1 13 1/2	22.35	3rd.	3rd.
COWS, ANY BREED OR CROSS, EXCEEDING 900 POUNDS—36 ENTRIES.						
Handy Maid II.....	Cross	54	12 2 15 1/2	18.44	1st.	
Isabel.....	"	67	11 2 14 1/2	23.16	2nd.	1st.
Sheila of Ruthvan.....	Jersey	52	14 2 11 1/2	19.6	3rd.	
Joyful Girl.....	"	47	13 2 11	17.79	4th.	
Beauty.....	Shorthorn	64	1 2 9 1/2	24.55		3rd.
Victoria.....	"	67	1 1 15 1/2	34.06		2nd.
Daisy.....	"	61	6 2 0 1/2	29.98		4th.

**High Character of Canadian Cheese.**

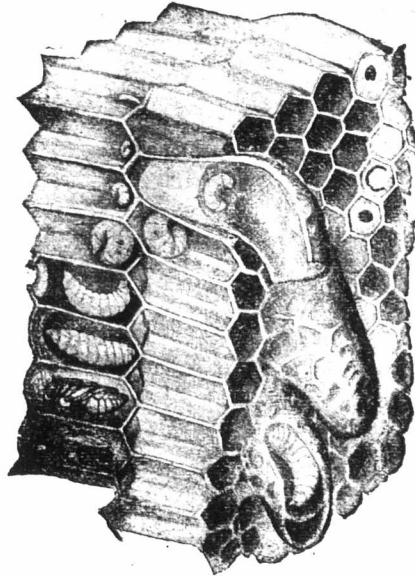
The Elgin dairy report, under the heading, "A Policy the United States Should Adopt," says: "The course of the Canadian Government in relation to the dairy industry of the Dominion is a notable example of the wisdom of preventing fraud in food production. Canadian cheese exports have increased enormously within the past few years, and the cheese has secured an enviable reputation in the foreign markets. Prosperous factories are scattered all over Canada, some in localities so remote from the seaboard or the business centers that their existence is a surprise. All this is the result of a policy which absolutely forbids the manufacture and sale of an adulterated or diminished article. The Government goes even further, and supplements its prohibition of wrongdoing by instruction in well-doing. Competent men have been employed to instruct the cheesemakers, until now Canada has not only a pure product, but a uniform product—uniformly good."

**APIARY.**

**Queen Rearing.**

It is considerable of a mystery to many people, how the queen bee originates, or what causes the difference in her size, instincts, and functions, as compared to the worker bees which are also of the female sex. The following article and illustration taken from Frank Benton's Bee Manual, issued by the American Department of Agriculture, sets forth quite clearly the points necessary to understand the early life of the queen:—

"When a laying queen is removed from a colony during the working season, eggs and larvae of all ages are left behind. Any egg which has been fertilized may be made to develop into a queen. So also larvae from such eggs may, up to the third day, be taken to rear from without danger of producing inferior queens. Cells in which to produce queens will be started over some of these larvae on the edges of the combs, or, by tearing down partitions and thus enlarging the lower portion of the cell, a beginning is obtained for a queen cell. The accompanying figure shows such queen



[Queen cells and worker brood in various stages.]

cells constructed over eggs or larvae originally designed to produce workers. They are known as emergency cells. The young larva is at once liberally supplied with the secretion, which is probably a production of the glands of the head, and which analyses have shown to be rich in nitrogen and fatty elements, being similar to that given at first to the worker larva. This is continued throughout the whole feeding period, while, as Dr. Von Planta has shown, in the case of the workers and drones, after the third day the proportion of the constituents of the larval food is so changed that they receive much less albumen and fat and more sugar. It is chiefly the influence of this food which causes the larva that would have developed as a worker to become a queen. The latter has somewhat changed instincts, and its reproductive system is developed, instead of abortive as in the case of the worker. The size of the cell, and, to a less extent perhaps, its position, no doubt influence this development, but the food seems to be the main factor, for the small cells built horizontally, if their larvae are supplied with the food designed for royal larvae, will be found to contain queens, and frequently these queens, even though small, are quite prolific, and show in all respects the instincts of a queen."

Mr. J. B. Stone, of Northumberland County, in a letter to the ADVOCATE, says that the Canadian Velvet Chaff wheat grown by him this season has again excelled all other varieties in the county. From thirteen acres he has threshed 520 bushels, of a very fine sample, being just 40 bushels per acre. Mr. Stone adds that the field was just thirteen acres when sown, as it was when threshed.

Captain Heaton, the well-known English game fowl enthusiast, once paid £100 for a black-red game cockerel, and the results proved the purchase to have been one of the best investments he had ever made. The bird formed the foundation of his now famous flock.

**SHOWS AND SHOWING.**

**Toronto's Great Exhibition Now in Progress.**

'Twas Addison who wrote:  
"Tis not in mortals to command success,  
But we'll do more, Sempronius, we'll deserve it."  
And yet some people and some things, considering the case with which they achieve it, appear to come perilously near to the commanding of success. Among the institutions at whose beck success joyfully approaches is Toronto's Great Exhibition, that opened on the day this journal is dated, and will continue until Saturday, the 12th. For eighteen years it has annually grown larger and better, until now one almost wonders in what department it can be improved. In this year of grace, 1896, it will present many superlative attractions, such as that model and modern marvel, Lumiere's Cinematographe, which at this moment is the reigning sensation, both in New York and in London, Eng., and has not yet been shown outside those two cities; the greatest array of horses, cattle, sheep, pigs, and poultry that have ever been gathered together within one enclosure; many beautiful pictures, including F. M. Bell-Smith's portrayal of events attending the death and funeral of Sir John Thompson, for which the Queen herself honored him with a sitting; an electrical theatre; wonderful elephants; a collection of cheese and butter that could not well be surpassed; a collection of minerals, cereals, vegetables, and fruit, all gathered in Canada, that no other country could equal, let alone excel; nightly presenting a startlingly brilliant display of fireworks and spectacles, affording amusement, instruction and information for hundreds of thousands of hard-working people; and this year the first week, with the live stock on the grounds, will be as complete as the second, and a single fare for the round trip will prevail from every point in Canada and the State of Michigan the whole time, with several cheap excursions, notably one on Thursday, Sept. 3.

**Canada's Favorite--The Western Fair, London, Sept. 10-19.**

The exhibition of this year will be an eye-opener to many. The buildings are now completed, and they are simply grand; every person who sees them passes the highest encomium upon them. The directors were determined that they would be constructed properly, regardless of the little additional expense connected therewith, and they now feel proud of their efforts. Prof. H. H. Dean, of the O. A. C., who visited the grounds last Thursday, expressed himself as surprised and delighted at the wonderful improvements made. The live stock buildings were not only new, but he could not see how they could be well improved.

The exhibitors also have shown a desire to appreciate their efforts by making a much larger entry than ever before. In all the live stock classes this is very marked, and will be an incentive to the Board to reasonably increase the prizes offered another year.

The wants of the exhibitors have been carefully studied with a view to the expansion of the number and quality of the exhibits, and we have every reason to expect that the Fair of 1896 will be an unparalleled success.

The buildings are so arranged that it will make little difference whether the weather should be a little off or not to those who arrive at the grounds, as they will be able to witness the whole exhibit under cover.

The comforts of the visitors have been greatly improved by the building of the large grandstand, with three excellent dining-halls underneath to supply the bodily wants, with the best of spring water throughout the grounds and at almost every turn inside and outside of the buildings.

Secretary Brown writes us that the attractions selected are the very best that could be procured for money, and far in advance of any previous year, and will satisfy the desires of all who enjoy a little recreation after seeing the live stock and other exhibits. The Wild West of Pawnee Bill, the second largest of his kind in America, consisting of 80 people and 60 head of live stock, and a regular village of tents, is the first or principal attraction. Sie Hassan Ben Ali's Moorish acrobats, 12 in number, are the very best that ever left their own sunny East, and are by royal assent visiting this country. Sie Hassan Ben Ali is a Prince and a 32-degree Mason, besides holding many other high offices. Their wardrobe will be a grand sight. Fireworks of a high order are arranged for the four evenings, and will be supplemented by all the special attractions, the principal of which we have only enumerated.

In addition to the above the Western Fair will be honored by a visit of His Excellency the Governor General of Canada, accompanied by Lady Aberdeen. Their Excellencies know London to be the center of one of the very finest agricultural districts of Canada, and, by their visit, show their appreciation of the efforts of the directors of the Western Fair in establishing an exhibition of national repute.

Last, but not least, the annual military camp will be held at London during the Fair week, and the presence of the soldiers will add greatly to the numerous attractions which have been described above.

The management are sanguine that the largest crowd ever gathered at any previous Western Fair will be eclipsed by the one in sight, should the weather prove as favorable as the past. It is a general invitation extended to all—exhibitor or visitor. Come.

**At the Commercial Metropolis.**

The Montreal Exposition which will be held from Sept. 11th to 19th promises to surpass anything of the kind hitherto held in that great metropolis. The Fair Grounds have been beautified by the erection of a splendid new building to be known as the Industrial Building, which will take the place of the old Crystal Palace which was destroyed by fire. It is estimated that between seven and eight thousand will be able to walk through the building, without being crowded, at one time.

The list of entries indicates a splendid display in all departments. The show of live stock and other farm and horticultural products will, as usual, be unexcelled, and will alone be worth farmers coming hundreds of miles to see. The mining exhibit will be a special feature.

Among the attractions there will be a great Cycle Carnival, in which several thousand wheelmen are expected to take part. The visitors will be given the opportunity of witnessing grand military and naval representations. Famous bands will furnish music. Children's Day, when several thousand school children of the city of Montreal will attend in a body and execute a programme of patriotic Canadian airs, will be unique.

Arrangements have been made for reduced rates on all railways. Montreal in September will be at its best, and thousands will no doubt flock to the metropolis to see the sights.

**The Show at the Capital.**

The Directors of the Central Canada Fair have performed great work at Lansdowne Park, Ottawa, this year. Not only have they erected superb new horse and cattle stables and sheds for sheep and swine, but they have also enlarged nearly all other structures. Machinery hall is twice as large as it was last fall, and the carriage building will have one-third more accommodation. Then an addition has been made to the poultry building, a new art gallery has been attached to the main building, and the horticultural hall has been vastly improved. But these are not all the improvements. The grandstand has been amplified, a new half-mile track constructed, and, indeed, the whole exhibition precincts enhanced generally in appearance and accommodation. Forty thousand dollars was a considerable sum to spend in that way, but the Directors had confidence in the show. They look for an increased number of entries in all departments, as well as added attendance, and no doubt their hopes will be realized. The magnificent Parliament Buildings and the Dominion Experimental Farm are among the many incidental attractions at Ottawa. A card dropped to Secretary McMahon will secure a prompt reply, giving complete information about Ottawa's great fair, which this year will be held from the 17th to the 26th September. Entries close on the 14th.



GARDEN AND ORCHARD.

What it Costs to Spray.

The accompanying engraving [made from a photograph of an Early Harvest apple tree in the orchard of Mr. W. H. Heard, near St. Thomas, Ont.; taken on July 25th] represents in contrast the effects of spraying and not spraying. The tree divides into two main branches from the trunk, and being at the end of the row and on a sidehill, one-half was not accessible to the sprayer. The other half was carefully sprayed throughout the season with the rest of the orchard, as indicated in the tabulated statement carefully kept by Mr. Heard and published herewith. All parts of the tree showed an equal profusion of bloom in spring and set about an equal amount of fruit; but, as the illustration shows, the sprayed fruit was large, free from spot, and the foliage had a much healthier appearance; the unsprayed fruit was small, misshapen, and badly spotted. On the unsprayed portion not one apple could be found free from spot; but in a count of 200 on the other side there were 180 perfectly clean. Though not so apparent, owing to their small size and scabiness, there were just about as many apples on the former side as on the latter, the limbs of which, we might say, were bent down far below the other with the weight of fruit. The growth of new wood on the sprayed portion was about five or six inches, while on the unsprayed about one inch. Mr. R. Stephens (whose orchard, near London, has been visited this season as a branch spray station by the Provincial Govt. traveling sprayer), looking over Mr. Heard's trees two days after the Early Harvest tree referred to was photographed, said had he not actually seen the tree he could not have credited the reality of the photograph. We have never come across a more graphic illustration of the benefits of spraying. As per request, Mr. Heard has furnished us with the details of his summer's experience in spraying, showing date of applications, quantities of materials used, and the cost. In spraying, one man, one boy, and one horse did the labor, of which, also, an accurate account has been kept, and his record is the most complete as to detail and most careful that we have yet seen. Of the trees, 275 were about 18 years old, and the balance about 29 years. The total cost for this large orchard for the season was \$45.76, or an average of 11.43 cents per tree. The copper sulphate is valued at 6 cents per lb.; lime, 1 cent per lb.; and the Paris green, 1 cent per oz. The man's labor was estimated at ten cents per hour and the boy's at five cents. The cost was lower than in some cases reported, the item of labor being reduced through the use of three-nozzle sprayer motor cluster on the end of the bamboo extension rod. Our readers would do well to study carefully this statement, preserving it for reference. In a future issue Mr. Heard promises to give us the final result of spraying his orchard, and if the rest of the trees give a product showing anything like the improvement secured on the sprayed section of the tree photographed, the \$45 invested should return a gilt-edged dividend, and at this writing we might say the orchard gives every indication of so doing.

Notes on the Apple Crop of 1896.  
BY E. D. SMITH, WENTWORTH CO., ONT.  
As the apple crop of Ontario, Nova Scotia, New York, and all the Northern and Northeastern States runs from heavy to very heavy, and as these are the three great apple-producing areas, it seems likely that very low prices are sure to be realized. When it is remembered that these areas will, in all probability, have from six to ten million barrels for export, and that England, the only great importer, never took from all America over 1,500,000 barrels, it will be seen at once that the expectation of low prices is no wail of a pessimist nor based on a desire to "bear" the market. It is well to know these facts and to be prepared to face them. If freight rates to Great Britain fell in proportion to prices of farm products generally, or if they fell in proportion as the quantity to go forward increased, then, with low prices for apples here, we might expect Great Britain to consume very much larger quantities than usual, more

Unfortunately, however, freights advance as crops increase, and we are sure to pay higher freights on our apples than when the crop is a light one. When the crop is light our freights are reduced to encourage shipments; when crops are heavy freights are advanced, as the steamer owners know they will get all they can possibly carry even at the greatly advanced rates, so we must give up the idea of coaxing the consumers in the "tight little island" to use more fruit than usual on the ground of very low prices, for we cannot lay them down very much cheaper, even if we get only sixty cents per barrel on the ground for our apples, than when we get one dollar other years, the fall in the price of the fruit being made up by the rise in freight rates. What, under the circumstances, then, is the best thing to do? That is the important question. In the first place, nothing should be sent forward but the very best of the fruit. It will certainly never pay to send forward any apples, this year of all others, that are blemished in any way.

Evaporate the Surplus.—Enormous quantities of apples are evaporated in the United States, and I believe very much more of it could be done here profitably. Two or three farmers with large orchards should combine and erect a good evaporator and put up all cull apples of their own at least.

Markets.—I would strongly advise those inexperienced in shipping to sell at home, if possible, especially this year; but if no reasonable offers are made for your apples, then if packed as I shall indicate they should carry to England without any loss. Montreal is the best port to ship from, by all odds, until navigation closes on the St. Lawrence. I believe there is a splendid opening for any one possessing large means to run cold storage steamers with apples to South American ports. Rio Janeiro and Buenos Ayres would take a great many thousand barrels if they got there in the month of November, before their strawberries were ripe. Also Australia would take large quantities if freight rates were reasonable, but the voyage across the tropics is too much without cold storage, although experimental shipments sold at a small profit last season, in spite of the large loss from rot. I believe, also, some of the Continental nations of Europe would use in the winter and spring our hard, long-keeping apples, which are of a quality much superior to theirs. In a season like this we should explore all available fields. It might be—I know not—that our apples would sell well in Japan, China or India. Has it ever been tried? We have plenty to spare this year. Why should not the Government make a trial shipment to test the matter? Sure it is, Great Britain cannot eat them all, and if we fully explore other markets this year when we have plenty of fine, cheap apples to use, we will know a little better what to do when the next big crop comes. [NOTE.—Manitoba, the Northwest, and British Columbia should take a considerable share of the Eastern surplus.—Ed]



APPLE TREE—ONE SIDE SPRAYED, THE OTHER NOT.

especially as our apples are of exceptionally fine quality—at any rate, here in the Niagara Peninsula, where we have had an exceedingly dry season, and, consequently, no scab on the fruit whatever.

COST OF SPRAYING 400 TREES, SIX TIMES, DURING 1896, BY W. H. HEARD, AT ST. THOMAS, ONT.

Date of Spraying.	Barrels used.	Gallons used.	Composition of Mixture.			Cost of each Spray ing, with out labor.	Labor per hr. per Boy, 5c; Man, 10c.	Horse, per hr. 5c.	Total Cost.	Cost pr. barrel.		Cost per Tree.	
			Copper sulphate. Lbs.	Lime. Lbs.	Paris green. Ozs.					Includ. ing labor.	With out labor.	Includ. ing labor.	With out labor.
April 18-20.....	7	350	none	28	42	\$0 56	15 h.	15 h.	\$3 56	51c.	08c.	.89c.	.14c.
Cost.....		1c. pr. g.		14c.	42c.								
May 1-2.....	9	450	36	33	54	2 88	3 00	1 00	6 88	76c.	32c.	1.72c.	.72c.
Cost.....		1.3c.	\$ 2 16	18c.	54c.								
May 14-16.....	10	500	40	40	40	3 00	3 90	1 30	8 20	82c.	30c.	2.05c.	.75c.
Cost.....		1.64c.	2 40	20c.	40c.								
May 30-June 2.....	11	550	44	44	44	3 30	3 75	1 25	8 30	75½c.	30c.	2.07c.	.83c.
Cost.....		1.5c.	2 64	22c.	44c.								
June 12-14.....	11	550	44	44	44	3 30	4 50	1 50	9 30	84½c.	30c.	2.32c.	.82c.
Cost.....		1.69c.	2 64	22c.	44c.								
June 29-July 1.....	11	550	55	44	none	3 52	4 50	1 50	9 52	86½c.	32c.	2.38c.	.88c.
Cost.....		1.73c.	3 30	22c.									
Total.....	59	2950	219	236	221	\$16 56	116 h.	146 h.	\$45 76			11.43c.	4.14c.
Total cost.....			\$13 14	\$1 18	\$2 21		\$21 90	\$7 30					
Average.....		1.48c.	\$2 63	39c.	45c.	\$2 76	\$3 65	\$1 21	\$7 63	75.97c.	27c.	1.905c.	.69c.

Picking.—As many, doubtless, this year will be handling their own apples, it may be well to mention some points as to packing. But first a word as to picking. Apples may be very much damaged by careless picking. I have seen hundreds of barrels so damaged that a prudent packer would not put them in his No. 1 stock by pickers dropping the apples into the picking-baskets instead of laying them in, or by pouring them out roughly upon the pile. Picking-baskets should be lined with canvas and every apple laid into the basket and not dropped into it even six inches; and when poured out of the basket they should be poured out carefully, as the slightest bruise injures the appearance and hurts the sale. Apples should be picked as soon as the apple parts from the stem on being turned upwards. They are oftener injured by leaving them on the trees too long than the reverse. Speaking of the three leading varieties, Greenings are ready first, Baldwins a week or ten days later, and Northern Spy last. Spys may generally be left on the trees to their betterment, until danger of freezing—they get more color, which is exceedingly important in an apple. Another important matter is the best thing to do with the apples after picking. In some parts it is customary to haul them to the barn, cellar or shed when picking; here they are usually placed in



piles under the trees upon a layer of straw if the ground is not sod, and it certainly should not be sod. Both plans have their advantages. After being picked, apples deteriorate fast if left exposed to sun and rain in piles. This is the serious objection to piling in the field. The advantage is in economy of work. Apples can also be packed faster from a pile in the field in fine weather, and, moreover, they are not so liable to be bruised as when hauled to the barn and emptied out there; but on the whole I would prefer to have at least as many under cover as can be conveniently stored, as rainy days in November can then be utilized to advantage in packing. The apples are not suffering from sun and rain; the culls are under cover and do not have to be picked up, perhaps, out of the mud, and there is not the fear of frost that one has if the apples are left in the orchard. However, if one has no proper place to store the apples, and they are left in piles, they can be protected best by covering with cornstalks, which, when removed, leave the apples clean, whereas straw, having chaff in it, leaves them, especially after a rain, mussed. Never put chaff, and especially pea chaff, on apples. Old applemen may laugh and say, "Whoever would think of doing such a silly thing?" But I have seen it done many times, and it is for the benefit of the novice I am writing these lines—I am aware I cannot teach experienced packers or growers. Apples should be a week, at least, in the piles before being packed, to sweat. They should be packed in perfectly dry barrels, and the apples should be perfectly dry, also.

**Sorting.**—Now as to size. I consider a Greening or Spy that is under 2½ inches in diameter, too small to be classed as a No. 1 apple, and a Baldwin or Russet or Ben Davis, under 2½ inches. I have seen packers put up smaller apples mixed up with those above this limit, but I have also noticed that they invariably lost money on them. When apples are in demand, a grade can be put up measuring in diameter from 2 inches to 2½ inches in the largersorts, and 1½ inches to 2½ inches in Baldwins and other sorts of a similar natural size, and marked as No. 2, which sells very well, but in a year of excessive production, I think it would be better to feed these to the stock on the farm, or sell to cider-makers or evaporators. No apple should be packed as No. 1 that has on it the slightest bruise, that has any worm hole, even in the blossom end, or any scab. We cannot be too exacting, especially this year, and we may rest assured that, even with the strictest grading and culling, there will be too many apples this year to be disposed of at any price. It is a good year to raise the standard of quality in the British market. Already Canada stands at the top, let us this year more than maintain our position. It is in such years, when inferior apples will not pay freight charges to Britain, that we can score a great advantage. Other countries that cannot produce as good apples will be driven to the wall, and will cease to plant apple trees, forced out of the race by the superior quality of our apples. In future years we will reap a magnificent advantage from this if we plant now. We have the climate here in Ontario and in Nova Scotia, surrounded by bodies of water, to produce the finest and longest-keeping apples in the world, and if we handle these properly we must eventually drive competition from the field, and be in a position to carry on a branch of farming permanently profitable. With the enormous loads of apples we have this season, even at 50 cts. per bbl., the crop is an exceedingly profitable one, and an acre of Greenings, Baldwins, or other apples equally well loaded, will yield from full-grown trees easily 200 bbls. What farm crop will produce \$100.00 per acre? Ten acres of orchard this year, twenty years old, that has been properly attended to, will give more profit at only 50c. per bbl. than almost any hundred acres in Canada in grain.

**Packing.**—For the benefit of those who intend to pack their own apples, I may say after driving down the quarter-hoops and nailing them, and heading the top end of the barrel and nailing the hoops, pick out a basket of apples representing fairly the contents of the barrel, pick them of the highest color and even size, not the very largest and not the smallest; lay these with the stems down in the top of the barrel, which now is the bottom, put upon this layer a basket of similar apples, fill up the barrel, giving it a good shaking at least three or four times while being filled. This is a very essential part of the process of packing apples, for, no matter how tight you press them, they will not stay tight unless well shaken while being filled into the barrel. When the barrel is nearly full, fix the apples up as near like the top end as possible, with the top layer stems up, of course, and fill to one inch on an average above the barrel; put on the head and press down steadily. One inch above the barrel means that the apples are to go down about two inches or two and a half. Some varieties will stand more pressure than others, and so need to be rounded up more. Russets, for instance, should be piled up about one and a half inches above the barrel, and Northern Spy hardly an inch. When the head is pressed in and head lined and the hoops nailed, turn the barrel over and mark the other end so that you will know which is the top of the barrel, for on the top should be marked the variety in the barrel and the trade mark or brand of the shipper. When hauling barrels, after being packed, they should be laid on their sides and not on their ends. Barrels of packed apples should be at once taken to cover, as they are rapidly injured by lying in the sun.

## POULTRY.

### September Suggestions for the Poultry-Keeper.

BY J. E. MEYER, WATERLOO, ONT.

**Provide Comfortable Roosting-places for your Chickens.**—The nights at this period of the year are generally quite cold compared with the days, and we often have raw, cold winds. During such weather the young chickens should have well-protected roosting-places or they are liable to take cold or distemper, which, when it once gets into a flock, is almost certain to go right through it. Chickens that roost out in the trees are not as liable to be affected as those roosting in the draughts of poorly-made coops full of cracks. This disease confines itself to the young birds, rarely attacking the old ones. Birds having distemper quickly lose all their flesh, and in a short time become nothing but skin, bone, and feathers. The cockerels become unfit for market, and all hope of the pullets becoming early winter layers vanishes. The food you so carefully fed these birds during the summer has been literally thrown away.

You will be able to detect this disease quite easily by the running at the nostrils and the slight cough that is nearly always present. It requires immediate treatment, because when neglected it very often turns to rouse. We use a small oil-can filled with one part sweet oil to two parts coal oil, and inject a small quantity into each nostril. Hold the head up and mouth closed, so as to force the oil through the nostrils. A few drops put down the throat will help, and also enough in the drinking water to cover it. We make a practice at certain seasons of the year of going among our flocks at night and putting a few drops of coal oil down the throat of all birds we find breathing heavily. We have found this treatment most beneficial.

In order to avoid this great loss amongst our chickens we must provide sleeping-places free from draughts, and warm, so that the birds may not be affected by the great and sudden fall in temperature from the day to the night. We believe that the best, cheapest, and most suitable way to do this is to build our hencoops large, roomy, and perfectly tight on three sides and the roof. Arrange them so that you can put perches in when the chickens are weaned, and also so that you can close up the front sufficiently to protect the birds in late fall. In such quarters as these your chickens may safely remain until the snow falls, which will be soon enough to put them into their winter quarters.

**Care of Molting Hens.**—The molting season is again at hand, and by this time your hens will be shedding their feathers rapidly. It is a very trying time to them, and they need special care and attention. The new feathers are a very heavy drain on her system, and unless the strength of the hen be kept up she is going to become so debilitated that her future usefulness will become greatly impaired. It will not do to force the hens to hunt the whole of their living in the fields, as they are not able to do it. They should have at least one good feed of grain a day. The best time to give it is at night. If you are anxious that the new plumage should be the very best possible, feed linseed meal or sunflowers. We find that a light feed (about half the quantity they will eat) of soft food each morning, together with the linseed or sunflowers, and a full feed of whole grain (wheat preferred) at night, will produce the healthiest, best, and most profitable yearling winter layers. If your hens are not worth such care as this, we doubt that they are worth having at all.

**Inbreeding is Most Unprofitable.**—We have time and again heard farmers condemn excellent varieties of poultry because their birds are always wanting to sit—they don't lay, etc. True, some varieties are greater setters than others, and yet careful breeders of these setting varieties are never troubled as these farmers say they are. Why is this? There must be some reason. We answer that inbreeding does it. It is no uncommon thing to meet with farmers who never think of introducing a new male into their flock every year or two, but who instead keep anywhere between six and a dozen cockerels each year. This is a most ruinous practice, and one which in a very few years would destroy the finest flock of poultry in the land. It destroys their size, laying qualities and health—destroys them in every way, in fact. To avoid this kill off every male bird you have about the farm, make up your mind what sort of a *thoroughbred* male bird you will use next season, and begin now to look for one. On no account use anything but a pure-bred male, and one is all you need. The price you will have to pay is insignificant compared with the benefit you will derive. By breeding in this way you will greatly increase the value and productivity of your flocks year by year if you are judicious in your care and management.

**The Market for Early Birds.**—We feel confident that had M. M. M. (see August 15th issue) taken those early birds to London in the latter part of June, when, according to his statement, they were fit for market, he would have found a first-class grocer with customers ready to pay a good price, or the proprietor of a first-class hotel anxious to have such an article. We would suggest that M. M. M. make arrangements with some such man as we have named to take his early birds next year. We believe satisfactory arrangements can easily be

made. We know that one large hotel in Toronto, and not the largest there either, uses 100 pairs of chickens per week. Our summer resorts are glad to get such, and pay, we believe, good fair prices generally. Be sure that whatever you do offer is the very best if you want best prices. We may say that we sold chickens to our grocer in Guelph in July at \$1 per pair. The demand there is, of course, much below that of London or Toronto.

## QUESTIONS AND ANSWERS.

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

### Legal.

MUST A TENANT STAY.

Q.—"A rents a farm from B for seven years, paying rent half-yearly and in advance. When five years have expired, A, who says he is losing money on the farm, wants to leave. Can he do so, by giving notice after harvest, or at least six months before the fifth year has expired, when B does not want to let A off before the seven years are up?"

[The tenant is liable to carry out his agreement, and if he quits the place within the seven years, he is liable to make good the landlord's damages.]

### LINE FENCE.

Q.—"B owns a farm joining mine. Neither farm being cleared up to the line, and he builds a fence along the line through the bush, can he compel me to build or pay for my share of the fence?"

[The law requires the owners of "occupied adjoining" lands to keep up fences, and whether or not your land is "occupied" within the meaning of the statute depends the answer to your question. If a comparatively small part of your farm is cleared and the balance is bush, unoccupied and not used, then you are not compelled to provide a fence, but if the farm is substantially cleared and occupied, although a portion of the land adjoining the line is still in a state of nature and unoccupied, then you could be compelled to provide your share of the line fence.]

### Veterinary.

BARREN COWS.

G. R., Carleton Co., Ont.:—"Several of my cows missed last year; and they were served this season, but are dry; those milking have not come in season again. I have a bull running with them, and they are in fairly good condition. Can you advise me of any means to bring them around?"

[It is somewhat difficult to say from what the trouble arises. Evidently it is not from impoverishment, as you say the cows are in good condition. It is not stated whether they are closely inbred, or whether there has been any abortion in the herd. Try giving once per week a pound of Epsom salts with tablespoonful of ginger added. As a general advice, the animals should be kept in good healthy condition, receive sufficient wholesome food, pure water, salt and water.

### WARTS.

J. F., Lambton Co., Ont.:—"Will you please advise me with regard to my heifer, three years old, with her first calf? She has a large wart on one of her teats about the size of a walnut."

[The usual method is to remove with a sharp knife, searing after with a hot iron to stanch the bleeding. Cauterizing with nitrate of silver is often attended with success.

DR. WM. MOLE, Toronto.]

### Miscellaneous.

ROUND SILO.

G. F. M., Frontenac Co., Ont.:—"1. Are there many round silos in Western Ontario, and are they a success? 2. Does the ensilage freeze in them, and does freezing hurt its feeding qualities? 3. How are they built?"

[1. There are a good many round silos throughout Ontario; the Western section has possibly a majority of them. Their owners are as yet loud in their praises. They are cheaply and quickly erected. 2. In exposed locations, the ensilage does freeze near the edge, but when it is allowed to thaw in the stable before being fed, its feeding quality is not materially injured. 3. The FARMER'S ADVOCATE of April 1st, 1895; Feb. 1st, March 2nd, and May 1st, 1896, contained descriptions and methods of building round silos. For the benefit of G. F. M., and many new readers, we repeat how one 16-foot silo, 25 feet deep, made of planks 10 x 2 inches, was erected. A perfect circle was first struck, using a stake and a string 8 feet long. The ground was spaded out inside, three or four inches deep, so that the bottom of planks would rest against the outer edge of trench. Four posts or scantlings 12 feet high were set up on opposite sides, and the bottom and top iron bands placed in position, notches being cut into the posts and the bands securely fastened. A plank was next set up, plumbed and nailed to post, and braced from the ground inside. Each plank as set up was toe-nailed to the one beside it and braced. The brace consisted of a 16-foot fence board, the lower end placed against stake in center. The planks were also braced from outside. The staves were finally held in position by seven half-inch round iron bands with a long thread at the



ends of each, which are run through two iron block castings (2 x 4) with two parallel holes through them. The bands can be slackened or tightened with nuts as required. They are in two parts, 25 feet each, with 5 ends. The silo was painted on the outside only, and covered with a shingle roof, as it stands in the yard a short distance from the stable door.

Since the above was written we have seen an improvement on the cast-iron blocks through which the ends of the round bands go, for holding and tightening or slackening the silo, viz., two round 4 in. by 4 in. oak scantlings, on opposite sides, extending from top to bottom. Holes are bored through these with a little slant, and with a good metal washer under the nut a very secure job was made.]

LIMING GRASS LAND.

P. G. MILLS, King's Co., N.B.—“Please give information, through the columns of your valuable paper, as to the proper time to apply lime to clay soils for grass, what quantity to sow per acre, and best method of application?”

[For grass land, early spring or autumn—in the form of a top dressing—are the best seasons to apply lime. Care should be taken to have the material thoroughly slaked to a fine powder, and to spread it evenly. From 40 to 60 bushels per acre is a good dressing. It may be applied with a fertilizer sower or from a wagon, cart, or stone-boat, by means of a shovel in the hands of a careful man.]

HARVESTING AND CURING TOBACCO.

J. H. LUDDE, Minn., U.S.A.—“Please publish in your valuable paper, the FARMER'S ADVOCATE, the process of harvesting and curing tobacco preparatory to manufacture?”

[There are two methods of harvesting: cutting down the whole plant or gathering the leaves singly. The former has been practiced for a long time by tobacco-growers, but the latter is regarded the more scientific method and has grown in favor. The first plan is the easier and permits of quicker handling, but the leaves have to be assorted afterwards; while the latter permits the sorting of the leaves in the first operation, and the development of a greater number of mature leaves. After the plant is wilted and becomes pliant and in good condition to handle without breaking, it should be strung on sticks in small bunches of leaves tied so that the blades hang downwards. Some tobacco-growers hold the opinion that the plants should be harvested without wilting at all, stringing on the stick as soon as cut, and carrying them immediately to the tobacco barn. The reason for this is that often at the time of cutting the ground is hot and the plant becomes very warm and quickly sunburnt. When hung on the stick, which is about four and a half feet long, six or eight large plants is the usual number. These are carried to the barn on a wagon having high sides upon which the ends of the sticks rest. The process of curing now commences. No matter how fine the plants may be, or how large the production, an error in curing is sufficient to largely destroy the work of the season. The tobacco barn should be built with windows and doors sufficient to insure a free current of air. The barn should be high enough to permit three rows of plants being hung one above the other, say 16 or 18 feet from floor to roof. This should be left open at ends and sides to admit the drying winds and heat, but in a wet time the doors will need to be closed and artificial heat applied, best by flues or radiators. After the tobacco is thoroughly cured, it should be packed to keep it moist and fresh. This is done by a man on his hands and knees, laying the tobacco in two rows. It may remain in this form until ready to send to the factory, when it is packed firmly into bales or boxes. It is sometimes left under pressure for a considerable time before being manufactured.]

LEAKING WATER-TANK.

CLODHOPPER, York Co., Ont.—“Please inform me in your next issue how best to stop a leakage in a wooden water-tank, made of 2 x 4 pine scantling, except the bottom, which is 1 1/2 inches thick?”

[It is one thing to stop a leak in a water-tank and another thing to keep it stopped, especially with a bottom as thin as the one in question. Two inches at least is light enough, especially for the bottom of a tank that frequently has to be driven over very uneven surfaces, as in the case of threshing engine tanks. If the leaks occur along the cracks, they may be temporarily stopped by allowing the tank to dry, bottom side up, for a few days, then stuff the openings with strips of old sack thoroughly saturated with tar or hot pitch, then pour pitch over the place on the inside. If oakum or tow can be obtained from a flax mill, or by fraying out an old rope, it will answer better than strips of sack. It must, however, be saturated with tar to remain watertight.]

FALL PASTURING MAMMOTH CLOVER—MEASURING OF CATTLE FOR WEIGHT.

FARMER, Perth Co., Ont.—“I have a good catch of Mammoth clover, and intend plowing it down for fertilizing purposes next May or June. Would it be advisable to have same eaten off closely or even moderately this fall? 2. I would like to learn a rule for determining the weights of live cattle by measurement?”

[1. Mammoth clover being somewhat tender, it would be unwise to pasture it closely this fall. A moderate grazing, however, should do no harm, provided it be not continued late in the season.

The roots should be well protected with top at the end of the growing season. 2. With regard to the weight of cattle by measurement, it may be taken as a rule that each cubic foot of living carcass is equal to 42 pounds (3 stone). The length of an animal is taken straight along the back, from the square of the shoulder to the square of the buttock, and the girth immediately behind the shoulder. Rule.—Girth squared, multiplied by 10 lengths, divided by 21, gives weight in stones, which, multiplied by 14, gives the weight in pounds. Measure in feet. This rule is simply approximate, and varies with the condition of the animal. It is for an animal in moderate beef condition.]

YOUNG PIGS.

SUBSCRIBER, Quebec:—“1. Would you be good enough to answer the following through the next issue of the ADVOCATE? We have two boar pigs over three months old; they have not shown yet except on one side. Can anything be done to bring the other testicle down? Does leaving the pig half complete cause the meat to be strong, and at what age does the meat of a young boar begin to get strong? 2. I saw a litter of pigs a few days ago that had been farrowed with small bladderlike protrusions on their foreheads. What is the cause of this?”

[1. The best treatment for the young boars is to make pork of them as early as possible, as nothing can be done to cause the invisible organ to descend, and the meat of a half boar, like a complete one, becomes rank at an early age, some say at four months old. 2. With regard to the litter of pigs with small bladderlike protrusions on their foreheads, this must be due to the want of development of the bones of the head. More bone will be deposited as they grow, and this condition will pass away. Give the sow some ground bones, and feed plenty of ashes; if this is not available a small quantity of limewater every day would be of service.]

LIVE STOCK MARKETS.

Toronto Markets.

The cattle trade has been moderately active during the last week; supply of beasts larger than usual, 85 loads on the market to-day. A large number of bulls were on sale at improved rates. Fat export beasts were more enquired for; the best made 4 1/2 per lb. The number of sheep and lambs was also larger, 1,200 on the market; all cleared up before noon. A few more exporters wanted. The Buffalo buyer, Mr. Sharp-miller, took all on offer, and will take good fat lambs for the next few weeks. About 1,200 hogs on sale; prices steady.

Export Cattle.—Trade generally was more brisk for really choice exporters. The feeling was better, as all the shipping cattle were bought before noon. Some Polled Angus were on the market for shipment to the Old Country. Dealers were operating slowly on lower cables from Glasgow. Prices ruled from 3 1/2 to 4 1/2 per lb. The best sale of the day was 4c, and \$1 over on the deal. The exporters are more cheerful. The last two shipments made money. Space was eagerly enquired for, as there is a large number of cattle ready for export from this market.

Butchers' Cattle.—Trade somewhat easier; the ruling figures, 2 1/2 to 3c, being paid for pick of load. Some of the inferior cattle went lower than 2c, and were hard to sell at that price. Choice butchers' stock always sells, but common, poor quality should not be sent here. About twenty carloads were shipped to Montreal by C. P. R. One carload, 22 cattle, 24,350 lbs. average 1,241 lbs., sold at 4c; one load, 22 cattle, 29,510 lbs., sold at \$3.75 per cwt.; one load, 21 cattle, 1,300 lbs. average, sold for \$4.25 per cwt., the best sale of the day. One carload sold for \$28 per head.

Bulls.—Steady; some good shippers changed hands at 3c. A few good ones wanted at 3 1/2c, would be paid for choice.

Sheep and Lambs.—Two nice bunches of lambs were taken for the Buffalo market by Mr. Sharpmiller. Lambs were firmer, at 4c per lb. Some were sold at \$2.50 to \$3.00 per head. This was paid for extra quality. Good exporters wanted; a large number required for the New York market. Butchers' sheep not in demand. The feeling was better, as all the shipping lambs were bought before noon. Some Polled Angus were on the market for shipment to the Old Country. Dealers were operating slowly on lower cables from Glasgow. Prices ruled from 3 1/2 to 4 1/2 per lb. The best sale of the day was 4c, and \$1 over on the deal. The exporters are more cheerful. The last two shipments made money. Space was eagerly enquired for, as there is a large number of cattle ready for export from this market.

Calves.—About 100 taken for the Buffalo market. No change in price from last quotation. Choice veals will fetch \$6 per head. There is no doubt this trade is somewhat hampered by the want of an official veterinary inspector. Both buyer and seller demur at paying inspection fees, as they consider if the U. S. authorities admit only by certificates, the Government should provide an officer for inspection free.

Milk Cows.—Not many on offer; common, from \$15 to \$20. Good cows fetch \$30 to \$35 per head, 1,000 on the market, including a very fine lot of Tamworth-Berkshire grades. Although these improved grades do not fetch any fancy price, they always reach the top, and are first choice for packers. A great improvement is to be noticed from year to year in the quality of the hogs offered. Scrubs come in, but are not so numerous as in former years. Prices steady; choice singers sold at 4 1/2c per lb.; light, \$4 to \$4.15 per cwt.; thick fat, \$3.20 to \$3.25.

The inspection of hogs made by the Government inspectors at the scales before weighing is very close, and their decision final, salesmen having no appeal therefrom.

Dressed Hogs.—Only one or two loads on offer; values quoted at \$5 to \$5.25 per cwt.; a fair demand; prices steady for next week. The exports this season have so far exceeded any previous year, with a good enquiry for hams and bacon.

Eggs.—The egg season is opening early in England this year. Already 2,250 cases of Canadian eggs have arrived at Liverpool. At the same period last year only 75 cases had arrived. A large contract has been made for delivery in November at 6s. 3d. per long hundred, twelve dozen; about \$1.50 per 100. Receipts are just about ample for demand. Dealers are just getting their surplus stock fairly well cleared up. Prices held at 9c. for strictly fresh laid.

Cheese.—England imports annually considerably over 2,000,000 cwt. of cheese. In 1895, Canada sent 1,150,018 cwt., or more than half; the United States, 500,000 cwt., less than one-fourth; Holland, 305,290 cwt., or about one-seventh; and Australia 32,750 cwt., or one twenty-third part. The local demand is light, but a good clean-up of the warehouses took place last week, leaving the market firmer, at 8c. to 8 1/2c. being quoted for new cheese.

Butter.—The choicest grades of dairy butter in pound prints are in good demand, and for such top prices of the market is paid, 18c. to 20c. per pound. Medium and low grade butter is plentiful, for which 11c. to 13c. is about the price.

Poultry.—Turkeys are scarce. Good chickens are quoted at 50c. to 60c. per pair. Ducks were in good supply, and best quality fetched 60c. to 80c. per pair.

Grain Market.—On the street market 200 bushels sold at 66c. to 68 1/2c. per bushel. There were 400 bushels of oats sold, at 20c. for new and 22c. for old. Hay.—About fifteen loads of hay sold, at \$13 to \$14 for new and \$14 to \$15 for old. Straw.—Bundled straw sold at \$10 to \$11; only four loads on the market. One load of loose straw sold at \$8. Farmers complain of drought east of Toronto.

Montreal Markets.

The rapid advance in prices in the British markets have not been of long duration, but it has, nevertheless, caused quite a firm feeling to prevail in our own local markets. Notwithstanding the fact that there were close on two hundred more cattle on the market this morning than is usually offered, at the close up very few remained unsold, and these were of the inferior grades.

Export Cattle were not wanted in any numbers, but a few were taken to fill space, for which from 3 1/2c. to 3 3/4c. per lb. was paid, and in one or two instances for a very choice beast 4c. was obtained.

Butchers' Cattle.—The demand has been very steady on most of the markets lately, and all offerings of really good stock do not remain long unsold. To-day was no exception to the rule. Considerable of this is, of course, due to the cooler weather that has prevailed of late, which has caused a much increased demand from butchers. As high as 3 1/2c. per lb. was paid for choice butcher beef, but was an outside figure for something very fine. Good beef was obtainable at from 3 1/4c. to 3 1/2c. per lb., and very fair to medium from 2 1/2c. to 3c. per lb.

Small Meats are selling well, sheep and lambs especially being absorbed early in the day. All told, there were only 750 sheep, lambs, and calves offered to-day, 250 of each; about half of the former being taken for export, at from 3c. to 3 1/2c. per lb., the culls going to the butchers, at 2 1/2c. to 3c. per lb. Lambs were strong and up fully half a dollar each, some of the best making \$4 each, the range being from \$2.75 to \$3.75, as to size and quality. Calves sold fairly well, at \$2 to \$3 each.

Live Hogs.—There is very little change to note in this line. Receipts in the yards continue light, seldom going over 300 on a market. Thick fats rule very low in proportion to light bacon hogs, the former rarely making over \$3.50 to \$3.60 per cwt., while the latter sell readily around \$4 per cwt.; 250 last Monday, averaging 177 lbs., making \$4.25 per cwt. off the cars, or about 4c. in the yards. The light bacon hog is the hog that is wanted.

Hides and Skins.—The hide market is in a very unsatisfactory condition, both from local and outside sources, at writing, at home the demand from tanners being almost nil, some of the houses actually threatening to close for a period, and the big drop that has taken place in U. S. markets, where they have dropped 1c. per lb. in almost all many weeks. Although at writing, dealers on spot have not reduced beef hides from the last half cent per lb. decline, it is more than likely that there will be another drop of one half cent before you go to press. Lamb skins will be advanced 5c. on the first of the month, to 45c. each. Green salted hides, 55 lbs. and down, each: No. 1, 5 1/2c. per lb.; No. 2, 4 1/2c. per lb.; No. 3, 3 1/2c. per lb. Heavy steer hides, 60 lbs. and up: No. 1, 5 1/2c. per lb.; No. 2, 4 1/2c. per lb.; No. 3, 3 1/2c. per lb.; Calf skins, No. 1, 6c.; Calf skins, No. 2, 4c. Lamb skins 40c. each.

The British Markets.

The recent sharp advance in cattle has not been maintained, values each week receding until to-day's cables were only quoted at 5 1/2c. (11 1/2c.) for best selected States cattle; 10 1/2c. for choice States sheep. Sheep were also weaker, and quoted at 10c. to 11c. per lb. (These quotations are for dressed beef, sinking the offal.)

Shipments last week from this port were 4,941 cattle, 3,576 sheep, and 238 horses, against 3,531 cattle, 3,206 sheep, and 182 horses for the previous week, the total shipments to date being 56,444 cattle, 34,758 sheep, and 6,300 horses. The offerings this week at ports named in Great Britain include all shipments from United States and Canadian ports:

Table with 4 columns: Location, Cattle, Sheep, Qrs. of Beef. Rows include London, Liverpool, Glasgow, Southampton, Bristol.

Canadian Horses in Glasgow.

A sale of horses, both from Canada and the United States, by Messrs. Macdonald, Fraser & Co., at Glasgow, was held recently, when there were over 60 animals on offer. Those presented were consigned by some of the largest exporters in Toronto, Montreal, Philadelphia, and Chicago. The animals exposed consisted of a nice selection of matching and carriage horses, suitable for either private or posting purposes, while a few of a heavier class on offer were fitted for farm and cart or lorry work. There were also a number of very superior animals catalogued, principally trotters, some with good records. The entire offerings showed well, exhibiting plenty of style and action, many being horses with good bone and substance. There was a good attendance of buyers from various parts of Scotland and England; but as the season was well advanced no improvement was recorded in prices. Thick-set horses for commercial purposes were in most demand, and made good prices. The highest values were recorded for the trotters, two cob mares from Messrs. Macchattie Brothers, Chicago, 6 years old, and 15.2 hands high and 14.2 hands high, realized 55 gs. and 50 gs. respectively. A chestnut cob, 7 years old and 15 hands high, shipped by Mr. George Watson, Indiana, was withdrawn at 56 gs. Mr. Weber, Philadelphia, had on offer the trotting stallion, Forrest Wilkes, said to be the fastest imported into this country, which changed hands at 51 gs. The brown prize mare, Dorcas, 8 years old, 15.2 hands high, the winner of 14 first prizes at various shows in America, was bought for 46 gs., while the other trotters were sold from 23 gs. up. Matching and carriage horses, 4 to 7 years old, and 15.1 to 16.1 hands high, realized from 17 to 22 gs.; matching cobs, 4 to 7 years old, 14.2 to 15.2 hands high, 15 to 35 gs.; cart horses, 6 and 7 years old, 15 to 20 1/2 gs.; and vanners, 20 1/2 to 21 1/2 gs. each.

Gossip.

Mr. Geo. N. Harris, of Lynden, Ont., is offering for sale in our advertising columns young registered Berkshires and Southdown sheep at rock-bottom prices. The Berkshire herd includes a sow bred by Col. J. Blandy Jenkins, Kingston House, Eng., and Cressman's Orkney—3220—sired by Dorset Chieftain (imp.)—1561—. The stock boar in use is Cressman's Dundee—2977—, also bred by Col. J. B. Jenkins. The Southdowns were founded from the flock of the late Thomas Wilkinson, a well-known breeder of the past, while others of the flock were purchased from the late Mr. Burgess, of Burgessville, Ont. The lambs are an even, nice-qualified lot, sired by a couple of shearing rams bred from Mr. Douglas's (of Galt) choice imported ram.

A reward of £1,000 is now being offered by Messrs. Sanders & Co., orchid importers, St. Alban's, for a growing plant of the Cypripedium Fairieanum, "the lost orchid." It is in Calcutta that the reward is being offered. For nearly forty years this prettiest of all the "lady's slipper" variety of plant has eluded the search of the Argus-eyed professional collectors.



Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.) Top prices for different grades of live stock, with comparisons:—

Table with columns for CATTLE, SHEEP, and various grades (e.g., 1500 lbs. up, 1350 @ 1500, etc.) and prices for present, two weeks ago, and 1895/1894.

The prices for poorest and best cattle are parting company. The competition of the Western rangers makes the ordinary and inferior "native" beeves sell at low figures...

Table showing closing prices for Wheat, Corn, Oats, Pork, and Lard from August to May, comparing 1896 and 1895 prices.

Corn is very low and prospects are that it will not appreciate in value very soon. In many places the current price is 15c. a bushel, and when the new crop is harvested many think it will drop to 10c.

Light bacon hogs were rather scarce the last week, and prices for 145 to 190 lb. averages closed 25c. higher than a week ago...

Suggestions for Apple Shippers. J. R. Shuttleworth, London, Ont., Canadian representative of the well-known British firm, J. C. Houghton & Co., suggests some essential points regarding packing, shipping, etc.

Buffalo Markets. Canada Lambs.—Receipts to-day about 8 loads, with the market a shade stronger than yesterday. Prime to extra grades selling from \$5.70 to \$5.75...



THE STREET SINGER.

BY E. NESBIT.

An October evening in one of our dreariest suburbs. True, the veil of night was over the ugly yellow brick houses, but the lights in the windows betrayed their inelegant shape...

The woman came nearer, nearer. Just as she perceived the passer-by the song came to an end, and she advanced timidly towards him with a hand outstretched. He stopped and looked. She was dressed in the shabbiest old black...

"What on earth," he said, with sharp decision, "do you mean by being out at this time of night in such weather as this?" "I have been singing ever since seven," she answered...

When George Massey became engaged to the beautiful Miss Halifax, his world pronounced him the happiest of men; her world, on the other hand, wondered what on earth she could see in the fellow...

"You will find out your mistake, my dear," said her aunt, placidly smoothing her black satin lap; "and my only hope is that you will not find it out too late."

"I wish you would come with me," said Kate. "My dear, your 'young man's' relations may call on me if they like. I am certainly not going down to Merton to call on them."

George Massey met her at the station next day with the dog-cart, and as they drove back to his mother's house, the frown came back to Kate's forehead more than once.

"You look awfully pretty to-day," he said, in a tone of one who makes conversation. I don't like aesthetic things as a rule; but I must say they suit you. Only when you are Mrs. George I shan't want you to wear things that are so—so noticeable, you know."

"That's the idea," he answered, cheerfully. "Nothing out, you know; nothing to set people chattering about Mrs. George Massey. Woa there, steady."

She found her lover waiting for her in the smart drawing-room, a crushing contrast in furniture and feeling to her own drawingroom in Kensington, where nothing was new and everything harmonized.

"Oh, my darling, I don't know what I have ever done to deserve you. How could you care for a fellow like me?" "To the genuine note rang the genuine echo."

"Have you forgotten?" she said, softly, "one wretched evening, in Brockley? There was a poor woman singing in the street, and you talked to her kindly, and promised to help her to find work, and when you left her you gave her your name and half a sovereign—your last."

Vertical text on the right edge of the page, partially cut off, containing various fragments of text and names.



"Let's have this distinctly understood," he said, and there was an altered tone in his voice that made her remember her aunt's estimate of him. "Do I understand that you were at one time singing in the streets for a livelihood? Good God, I never thought to inquire about your people! You seemed respectable enough."

"It's quite true," she said, holding her head still higher. "that I have sung in the streets for money; and what then?" "What then?" he answered. "Why, this. I can't be too thankful that my poor mother has been spared meeting you. It would have been so much more painful," he added quickly, regaining a little grasp of the customs of his class, "it would have been so much more painful to you to break it off, after you had been introduced to my people, whereas you can go back home, and you can write and break it off. No one has seen you, and I'll stand by anything you say."

He felt very generous as he said this. "Our engagement is ended, then?" she said. "How beautiful she was. He almost wished he hadn't been so precipitate. He might have made some inquiries. Perhaps it wasn't so bad as it looked. But, then, a wife with a past! What a clog for a rising man in his career!"

"Of course," he began, "if you have anything to say —" "No, I have nothing much to say," she answered, cheerfully, and he knew by the tone of her voice, and the curl of her lip, that it was too late for him to reconsider his decision. "I have nothing to say, except that I sang in the streets at Brockley for the sake of a foolish joke. It was very silly of me. I am very sorry for it."

"I hope," he said, "you won't think I have treated you badly, but I couldn't possibly marry a girl who thought it right to outrage all the conventionalities of Society for the sake of a foolish joke." "This wasn't true. If he had known at first that she had sung in the streets, not from necessity, but from mere folly, he would have forgiven her, but he saw the ice in her eyes, and knew that all that was left him was to accept the situation, as he had made it, with what dignity he might."

She had risen, and was standing with her hand on the back of her chair. "I'm going home," she said; "but before I go, tell me truthfully—did you not give me that half-sovereign?"

"No." "Then who could it have been?" "My cousin, Gen, I suppose. He's rather like me, and his cards are printed G. Massey. You know my cards have George on them. But he doesn't like to print his name because it's Gengulphus, and he says it's ridiculous."

As he spoke, a young man came up the conservatory steps from the garden, bowed gravely to Kate, and passed through the house, but as he passed, she recognized in him the man she had taken his cousin George to be, and he recognized in her the poor singer to whom he had once given his heart's sympathy, and his last half-sovereign.

"And so it was a mistake, aunt, and you were quite right and I was quite wrong, and George is a perfect beast, and I can't think how I ever could have liked him. Only you see I didn't like him—at least, I mean it wasn't him I liked, but somebody quite different; and oh, dear! aunt, it's astonishing what a fool a girl can make of herself if she tries."

"I can't be too thankful," Mrs. Halifax answered, "that you found it out in time. I am quite certain you would never have lived with him for six months. I should have had you running back to me some fine night with the information that George was a fool and a brute, and you couldn't stand him another minute. It's much better as it is."

"Yes, much," said Kate, still with a little frown on her forehead, "much better, only —"

It was three months later, at the winter exhibition of Old Masters, that Kate Halifax and Gengulphus Massey met again. He hesitated a moment, and then went up to her.

"You have done well, I see, and all your troubles are over, I hope?" "Your cousin did not tell you, then?" "My cousin told me nothing."

She blushed crimson with a shame at her escapade which she had not felt under George's reproaches.

"It was all humbug; it was a pack of awful lies. But I was obliged to tell them to keep up my character. I only sang in the street for a joke—at least it wasn't exactly for a joke's sake, but because a girl laughed at me, and said I should be afraid to do it."

He looked at her with an unspoken inquiry in his eyes. She looked down and twisted her catalogue tightly between her fingers.

"I was engaged to your cousin George," she said in a low voice.

The expression of his face changed.

"Engaged to George?" he replied.

"Yes," she answered, hurriedly; "but it was only because I thought it was he who had given me the half-sovereign—at least, I don't mean that, but —"

"And what did you do with the half-sovereign?" he asked.

She pulled at a black cord round her neck and a gleam of gold appeared.

"I have always worn it round my neck," she said, "in remembrance of that night. It was, it was—such fun, you know," she added, lamely. "Oh! aunt, this is Mr. Massey, the cousin of the other one, you know."

Poor Kate was sick with nervous excitement and a burning sense of her own folly, past and present. Mrs. Halifax raised her double eyeglass and looked from one to the other for fully half a moment before she spoke. Then her cool, calm tones sounded pleasant and comforting to both of them.

"I am very happy to make Mr. Massey's acquaintance. If he has nothing better to do, perhaps he would like to drive back with us to Kensington and have some tea."

**The Wolf and the Lamb.**

BY WILLIAM MULREADY, B. A.

"The Wolf and the Lamb" is a characteristic production of the British school. We may no doubt trace the inspiration of this class of pictures to the Dutch, who first dug into the rich vein of common life and brought to light the wealth of material there awaiting the seeker with eye and hand endowed with the power and instincts of art. But though the Dutch were the first to develop with genuine sympathy the art aspects of the life of the common people, and were for nearly a century singularly alone in this respect, in catching these inspirations British art assumed a form distinctly national. Mulready was a close student

of the mechanism of the Dutch school, but the spirit of his work is widely different, and the student would search in vain through the crowded galleries of Holland for any work analogous in conception or intention to such as "The Wolf and the Lamb," which is a characteristic example of the general direction of the artist's sympathies, gentle and refined and instinct with a touch of the genial humor of the "Spectator."

Mulready is one of the great names in British art. He is one of the four men who at once recur to the memory when reference is made to the state of art in England during the first half of the present century, now so near its close. Art, like poetry, changed its tone during the latter half—whether in the way of advance the most ardent believer in the present would be hard-set to maintain against any well-armed champion of the past. Who does not know Turner and Wilkie, and, though far inferior to them, West?—men who wrought during the same period as Mulready, and left the strongest impressions on the English mind, their works being found the world over, wherever Englishmen live. Many other names that recall work worthy of honor illuminate this period and shine clearly to the memory of the student of art, bright with the light of fair achievements, with the records of imagination, feeling, close observation, and strenuous labor.

Mulready holds his place by right of qualities

the world to his work. He would retain his pictures by him for a long period, sometimes for two or three years, till assured by repeated inspection and effort that they represented the utmost of his attainment.

"The Wolf and the Lamb" is one of Mulready's best efforts. We recognize the typical public-school bully of the English middle-class in the juvenile ruffian who is elbowing his victim against the palings. It matters little what has provoked his truculence. The unprotected meekness of his prey is inducement enough for the exercise of his tyranny. We have sufficient assurance that the reduced gentlewoman who is hastening to the rescue of her son will meet but scant courtesy from the young brute whose watch-ribbon, well-cut clothes, shapely boots, and strapped trousers indicate at least pretensions to gentility—the gentility of money rather than of breeding. The humble raiment of his victim would suggest the strained efforts of the widowed mother to give her son an education beyond her present position. The worst of the little lad's offence may well be supposed nothing more than the presumption of mingling with rich men's sons. Inoffensiveness and poverty are in themselves sufficient provocatives of the worse than animal cruelty of the ill-bred bully. The picture presents to our minds one of the humbler tragedies of life. None who know the capabilities of suffering inherent in the young but will have their sympathies aroused. To such it will be a matter of regret that the painter has not given us a companion picture indicating the deliverance of the poor little cowering orphan from the shadow that threatens his future. It is sufficient to say that the coloring and execution of this picture is worthy of the hand of a master of the craft.

**UNCLE TOM'S DEPARTMENT.**

MY DEAR NEPHEWS AND NIECES:

Is lack of energy, resulting from the extremely hot weather, the cause of the falling away in our puzzle ranks? I hope it is nothing more serious, and that with the return of a normal temperature our old friends will also return, reinvigorated and fully determined to make the old corner bright as before. Only four competed for the special prize offered for rebuses, and of these Annie P. Hampton's work was most neatly done. To her, therefore, is awarded the prize, viz., a book of poems. Our former contributor, Lily Day, sent in none during this competition, but her past work in this line deserves special credit, and to her also a book will be given. I think several of my nephews and nieces possess artistic talent, if they would but cultivate it—and all the talents should be cultivated as far as lies in one's power.

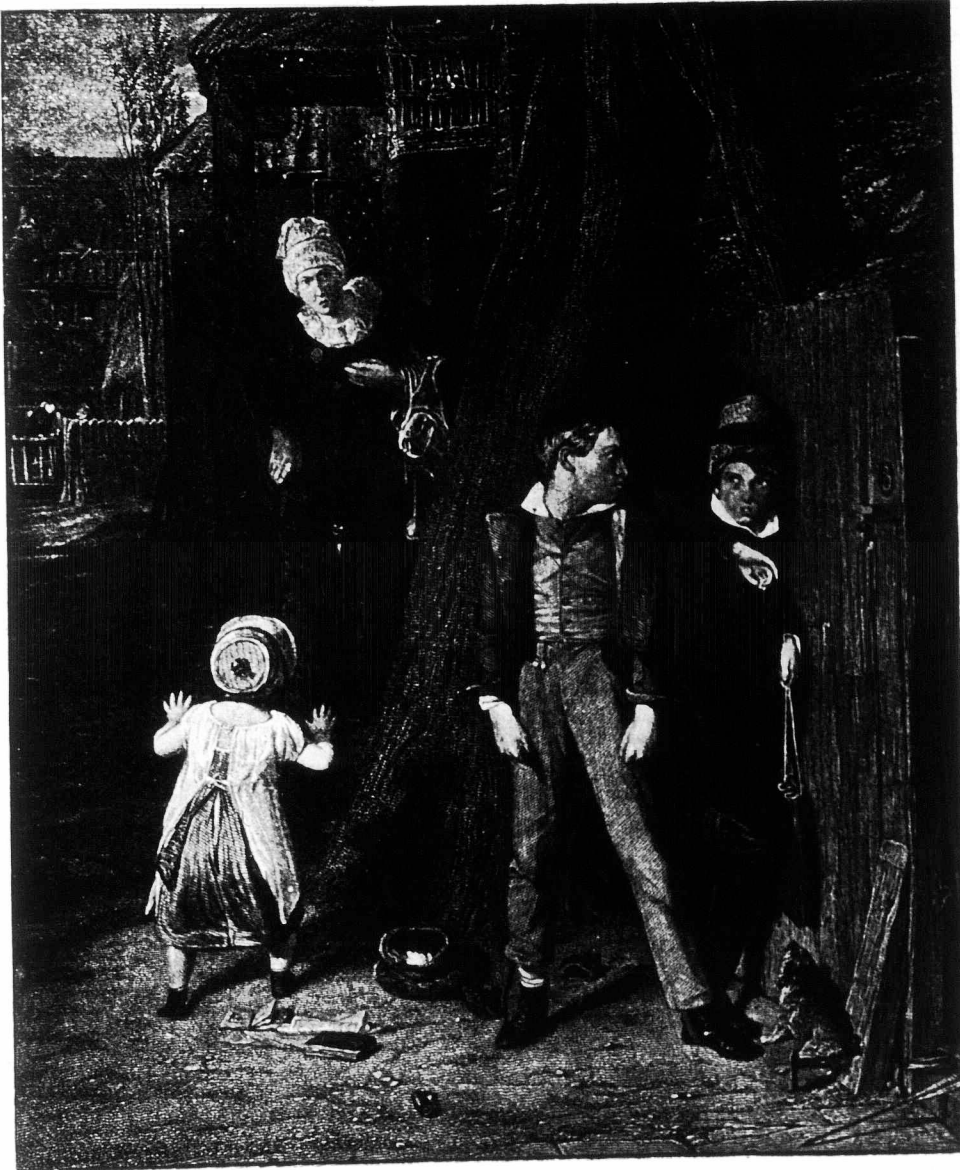
Did I only imagine that I heard a deeply-drawn sigh from among my merry crowd? "Imagine," you say! "No, indeed, 'twas real; and who wouldn't sigh to leave the glad vacation and return to the closeness of the schoolroom just when we were at the zenith of our enjoyment?"

But while "all work and no play makes Jack a dull boy," too much of the latter is quite as injurious; and while it leaves the present Jack very happy, it also makes the Jack of the future very ignorant, and that I am sure is a condition unenvied by any of you. The schoolrooms of the present day are so bright and cheerful, and the methods of teaching now employed so clear and interesting, that it should be a delight to every healthy-minded boy and girl to profit by them, and now is the time to do so.

"A place in the ranks awaits you. Each man has his part to play; The Past and Future are nothing. In the face of stern To-day."

When we read of the old-time schools, as portrayed by Charles Dickens in "David Copperfield" and "Nicholas Nickleby," we cannot help feeling thankful that we did not live in those days, when a tyrannical master held absolute sway. And the comparison should render us more appreciative of those who are now engaged in the noble calling of imparting knowledge to the youthful mind; many of them more for pure love of it than for the trifling remuneration they too often receive.

And what do you suppose your old Uncle did by way of amusement recently? Just what I'm sure most of you would enjoy—attended a circus, and enjoyed it too (quite as much as the little folks who thronged the large tents), from the strange and curious birds and animals, the beautiful horses, the wonderful acting, even to the gaudily-dressed clowns who kept the audience convulsed with laughter during the whole performance. This, and



THE WOLF AND THE LAMB.

that have always appealed, and never in vain, to the best side of the Anglo-Saxon character. Serious, intense, and laborious in execution, he never offered to the public anything but what was clearly "work" in the highest sense of the word. Nothing was careless, nothing the result of happy accident, nothing the casual throw-off of the passing hour—methods which a pretty large number of the present "Heirs of the Ages" seek to impose upon their day as the legitimate processes of genius. For sixty years Mulready labored at his art, every year evidencing some advance in acuteness of observation, breadth of conception, and increasing force of execution. This steady progression in power to the close of a long life is one of the numerous incitements to the patient and persistent exercise of capacity which the lives of many eminent in every pursuit offer to us. The healthy exercise of faculty under the impulse of high principle, with high aim, is one of the most efficient elements of a long, happy, and useful life.

Mulready's method was one of thorough study and laborious perfection of his work, leaving nothing to happy impulse or the chance temperament of the day. Having conceived his picture, he proceeded to make elaborate studies of every object introduced into it. So conscientious are these studies that they might pass themselves as finished pictures. He had also the patience of a master mind. He was in no hurry to call the attention of



a very pleasant visit from some of my own nieces and nephews, constituted my holidays, and very pleasantly they have passed away.  
I presume many of you are "making preparations for the big fall fair," and at this pleasant occupation I will leave you for the present.  
Your loving— UNCLE TOM.

**Puzzles.**

**1—RIDDLE.**

Though a godly gift I was,  
And am to them that truly seek me;  
Though I helped to form the laws  
Which rule the earth, the sky, and the sea,  
Yet I find I'm seldom sought,  
For patience is required;  
Folly's arts too soon are taught  
Where pride is the guide desired.  
For I am very humble, friends,  
As also must be they  
Who by the best means the best ends  
Obtain, not Folly's play. CLARA ROBINSON.

**2—BEHEADINGS.**

When whole I'm a small catastrophe;  
Behead me and I am mixed;  
Behead me again and I'm a tree,  
The lumber of which in a building is fixed. J. S. CRERAR.

**3—SQUARE WORD.**

My first is used to regulate sound;  
My second is simply the earth;  
My third is a cluster of stars around  
A giant of mythical birth;  
My fourth is demeanor of self-esteem;  
My fifth is covered with sand, I ween. CHARLIE S. EDWARDS.

**4—HALF-SQUARE.**

My first is a place where none care to go;  
My second is sovereign and king;  
My third is a name for the ever-green oak,  
'Round which the holly doth cling;  
My fourth will distinguish animals all,  
The males from the females, I mean;  
My fifth is a mineral precious to find;  
My sixth is contained in tureen. CHARLIE S. EDWARDS.

**5—TRANSPOSITION.**

Cousin J. S. C., you are welcome;  
For you there's a FIRST in the Dom;  
And it gives me abundance of pleasure  
To present you to dear Uncle Tom.

The boys in our corner are lacking,  
Though Richard has come to our aid;  
So I hope you won't LAST at first trial,  
But rival the effort you've made.

Thomas Banks and his friend, H. A. Bradley,  
Have deserted the corner table;  
I trust they will soon return thither,  
For they're missed more than they estimate.

But now that you've joined the department,  
Aim high for the prize that allures;  
Struggle on with determined endeavor,  
And at last the reward will be yours. CHARLIE S. EDWARDS.

**Answers to August 1st Puzzles.**

1— SAME ANY HARE  
BANE ARE A  
NO TEAR  
FANE  
ADO  
NO  
FLOE 2— SLAT 4— BOWER  
LAR OLIVE  
OR WIRE S  
DAME AVON EVENT  
ALE TENT REST S  
ME  
E

5—Sorrowful (fill).  
SOLVERS OF AUGUST 1ST PUZZLES.  
Clara Robinson, Charlie S. Edwards, J. S. Crerar; also, J. S. Crerar for July 15.

**THE QUIET HOUR.**

**Take Care of Yourself.**

A farmer dropped two grains of corn  
In the cold, dark earth one April morn;  
Together they sank in their careless bed,  
And the earth fell lightly overhead.  
"Oh, cruel fate!" cried one in fear;  
"What evil chance has brought me here?  
It is not meet that such as I  
Lie in the earth to waste and die.  
Within this stone a nice dry shelf  
Invites me to take care of myself!"  
The warm sun shone and the soft rain fell,  
The grain in the earth began to swell.  
The wise one cried from its snug retreat,  
"How prudent am I!—no rain or heat  
Can reach me here, I'm fair as at first.  
While you, poor thing, look ready to burst.  
You owe a duty to yourself—  
There's room for two on this dry shelf;  
Come out of the earth so close and wet,  
Perhaps you may save yourself even yet."  
"Nay," answered the other one from the earth,  
"Only from pain and death comes birth.  
Of such as we spake the Holy One:  
'Except it die it abideth alone;  
But if a seed of common grain  
Die in the earth, its death is gain.'  
So let me yield in patient trust  
To the hand that laid me in the dust."  
September's fields stand brown and sere,  
Now comes the "full corn in the ear."  
The grain that died in the darksome mold  
Has yielded more than a hundredfold,  
While that which cared for itself so well  
Lies alone in the earth, an empty shell.

**The Sower.**

Sowing is a sorrowful process. The sower goes forth weeping, bearing precious seed. He sows in tears; his act involves self-denial. The farmer sacrifices a certain portion of his corn in order

to gain a harvest. That seed-corn may be all that he has—he may be tempted to withhold it, and to use it for his own food; but unless he casts it into the ground, and leaves it in the cold furrow in spring, he cannot expect to get the rich increase in autumn. Self-denial is absolutely necessary on the part of the husbandman in order to succeed in his business. He must part with a certain amount of present good in order to obtain a larger amount of future good. And so it is with the spiritual sower. If he would succeed in his blessed work, he must deny himself, take up his cross and follow Christ. He must give away what costs him trouble, what causes him loss, what he will miss. He must hate his own life, surrender it as a fruit or seed to be sown and to die, in order to become the beginning of a new and blessed growth in others.

"To the giver shall be given:  
If thou would'st walk in light  
Make other spirits bright:  
Who seeking for himself alone ever entered Heaven?  
In blessing we are blest,  
In labor find our rest:  
If we bend not to the world's work heart and hand and brain,  
We have lived our life in vain."

As in the seed sown the nutritive part dies, or undergoes a chemical change, in order to feed the embryo, so in the great corporate body of mankind those who wish to fulfill the laws of Christ must give up for the good of others what would contribute to their own comfort and well-being, if spiritual life and health are to be generally diffused. They must make self-sacrifice the law of their existence, and willing suffering for others the medium of their own perfection. For "the paradox of the cross is the truth of life."

But the process of sowing is also sorrowful because of the uncertainty of the result. The seed lies long out of sight in the cold, dark soil; and when it springs up, it is exposed to a thousand casualties. Blight and mildew lie in wait to wither it. The sun may scorch it, the caterpillar may devour it, the rain may prevent its ripening, and after all the crop may not remunerate for the toil and cost expended on it. All these uncertainties call for the exercise of faith and patience, and tend to make the farmer provident and earnest. And is it not so with the Christian sower? Whatever may be the nature of our Christian work, the best and wisest of us can know but little of what we are really doing. We may toil and then be tempted, like Elijah, to think we have toiled in vain. We ourselves may see the fruit of what we sow; or we may labor, and others may enter into our labors. Our outward immediate results may be worthless, our spiritual results, unknown and unsuspected by ourselves, may be precious and enduring. And we can understand the reason for this uncertainty. Our ignorance of results is fitted to teach us greater faith and more implicit dependence upon God. By this is fostered all that is most precious and vital in our work. We have the assurance that we are toiling under the guidance of an unseen Hand, and in the strength of a never-failing promise, and this prevents our work from becoming a mere game of chance. And, on the other hand, there is an apparently capricious element in our toil: it is undertaken amid conditions whose force we have no means of calculating; and this prevents our work from becoming monotonous and mechanical, stimulates us to labor faithfully and prayerfully, tarrying the Lord's leisure, waiting patiently upon Him who can lift us above anxious care for immediate or striking results. "In the morning sow thy seed, and in the evening withhold not thine hand; for thou knowest not whether shall prosper, either this or that, or whether they both shall be alike good."

We cannot sow effectually in the spiritual seed-field what is merely handed down to us, what we buy with money, without any toil or trouble of our own. We cannot go forth with the experience of others to make it the seed of a spiritual harvest. We must give our own life in our teaching, as the plant gives its own life away in its seed—be at once the sower and the seed.  
The seed of God's truth must have been sown in our own heart, and grown up there, and from this fair plant that has grown with our growth we take the seed that is to reproduce a similar growth of blessedness in other hearts and lives. It is only the seed that is thus grown that will deeply influence those in whose hearts it is sown, transforming and renewing them—that will prove superior to all the powers of dead, inert nature opposed to it—and in a more wonderful manner than even the vegetable seed, pushing out of the way the strongest obstacles, will find lodgment and room for growth, in favorable soil, in all that is deepest and most lasting in human nature. And now, who will go forth under these conditions, and, counting the cost, undertake this blessed work? God needs sowers; for there are many destroyers—many who cut down and blight. Every reaper should be also a sower; every subject of divine grace should be a medium of it; every one who has gathered a spiritual harvest, however slight, should sow the fruit of it; every one who has got good should do good. The seed kept out of the soil will not only abide alone, but it will part with the life that it has, it will lose its germinating power, it will rust and wither and prove worthless; but if sown, it will preserve its life and be the parent of endless future life. "He that loveth his life shall lose it; but he that hateth his life shall keep it unto life eternal."  
—From "The Ministry of Nature."

**THE CHILDREN'S CORNER.**

A "Proverb Hunt" will now begin this column. A prize is offered for correct solutions of the first three pictures. Only children of subscribers may compete, and competitors must be under sixteen years of age. Answers should be sent in for each group, e. g., 1-3, 4-6, 7-9, etc. A prize is offered for each group of three pictures, and a better one at the end of the year for the largest number of correct answers. Letters marked "Proverb Hunt" will not be opened until ten days after the third picture of each group is issued. The first letter opened, containing correct answers, will be prize winner; all others will receive honorable mention. Address your letters to Cousin Dorothy, FARMER'S ADVOCATE, London, Ont., and mark them "Proverb Hunt"—outside the envelope.



HIDDEN PROVERB—No. 22.

**Daffodils and Willie.**

(Continued from page 357.)

So he was undressed very quietly, and Ellen went down to help in the pantry; and his mother came and heard him say his prayers, and kissed him good night, and left him wide awake alone. It was very still. His little bed faced the window, and all along the western sky was a clear, yellow glow, drifting up into the cool twilight. The window was open from the top, and the air was fresh and springlike. The sky made him think of the daffodils in the punch-bowl.

"I love daffydils," he said, and his voice sounded strange in the quiet. "I love daffydils," he said again, just to hear his own voice; and then he looked half ashamed, and wondered if anyone had heard him; and the little troubled look came back again, but there was no one to see.

All at once, he got up and ran to the top of the stairs. Young Mr. Stewart and Miss Nellie White were just going down, with Mrs. White and Miss Lucy behind.

"Mr. Stewart!" he called, "tell mamma I want her."

They all looked up and laughed. "Tell mamma I want her." Mr. Stewart called up, "All right, Len;" and immediately forgot all about it, while Len sat on the stairs and waited.

The guests were all in the parlor now, and it seemed as if everyone was trying to talk a little louder than everyone else. By and by there was a little lull, and they went out to dinner. There was a faint tinkle of silver and glass, and a good deal of merry chatter. Leonard wondered how soon they would have "the cunning little birds."

Suddenly he ran down one flight, and leaning over the baluster, called:

"Mamma, I want you! mamma!"  
There was a little burst of surprise, then a little laugh downstairs, and his eyes filled with tears, but she came. She looked a little surprised, and the least bit annoyed; but she sat down on the top stair, and gathered him into her arms, and said:

"What is it, Len?"  
The little story all came out. He had written a letter to Willie, asking him "to the party," and he was so afraid he would come and George wouldn't let him in; and the "looks of George might scare him and frighten him away; and the worst is, I know I should not have done it!"

The tears were coming fast now, but mamma wiped them away, holding the little yellow head close against the rosy fluffiness and bows; and then she took him to her own room, and tucked him up in the bed that had been "great-grandmamma's." It was very comfortable and "nearer people," being right across from the nursery, and where he could hear, and as if there were no dinner-party at all.

Mamma took time to tell him that Willie was not well enough to come; but, to make sure, she would tell George if he did come to bring him in.

"And next time," she said, "ask mamma before you invite anyone. And suppose to-morrow you and I take a bunch of daffodils to Willie!"  
—M. L. E.

**Grandpa's Glasses.**

My grandpa has to wear glasses  
Cause his eyesight is not very strong,  
And he calls them his "specs," and he's worn them  
For ever and ever so long.  
And when he gets through with his reading  
He carefully puts them away,  
And that's why I have to help find them  
'Bout twenty-five times in a day.

But at night when we sit 'round the table,  
And papa and mamma are there,  
He reads just as long as he's able,  
And then falls asleep in his chair.  
And he sits there, and sleeps in his glasses,  
And you don't know how funny it seems;  
But he says that he just has to wear them  
To see things well in his dreams.



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To any of our subscribers furnishing the required number of names we will send per mail or express, as most convenient, the following premiums, charges prepaid on all except Animals:

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Corn Silage vs. Roots.  
Corn Silage vs. Dry Roughage.  
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GOSSIP.

R. H. Harding, Thorndale, Ont., writes: "Having disposed of a few fitted Cheaters to H. George & Sons, Crampton, Ont., I have decided not to exhibit swine at Toronto this fall, but I hope to meet my many friends there, as I intend to exhibit a few Dorset Horn sheep at the Toronto Industrial and Western Fair. Intending purchasers will do well to inspect my flock before buying elsewhere."

HORSE BREEDERS TO MEET.

A special meeting of the members of the Canadian Horse Breeders' Association, and those willing to become members, will be held at the Albion Hotel, Toronto, on Monday, September 7th, at 8 o'clock p.m., for the transaction of general business.

HON. M. H. COCHRANE'S HACKNEYS, SHORT-HORNS, SHROPSHIRE, AND DORSET HORNS.

On a recent trip east the writer again had the pleasure of visiting the extensive stock farm of Hon. M. H. Cochrane, Hillhurst, near Compton, Que., and of which a more detailed account may be found in our September 2nd issue of 1895. The crops at Hillhurst at the time of our visit were looking magnificent; the corn for the silos was making an excessively strong growth, while the roots, oats and other grains were all that could be desired; the hay crop was being saved, and was yielding heavily, although in many parts of Quebec the hay crop was not nearly so good as last year. Among the Hackneys, probably the imp. two-year-old Barthorpe Performer is the most to be admired in the stud; he is a son of the great horse, Duke of Connaught, who is looked upon by horsemen in the Old Country as one of the best stallions in England. Barthorpe Performer is a fine actor, high-spirited, and very stylish. The mares are a handsome lot, and include the great show mare, Princess Dagmar (imp.), who, among her many showing honors, was awarded the ribbon at Madison Square Garden, New York, as champion mare of the Continent. She was sired by Danegelt, conceded one of the best stallions in England, and who cost Sir Walter Gilbey 5,000 guineas. She has bred some very handsome colts and grand actors, and now has a foal at foot by Fordham. Several particularly handsome young mares and stallions were under fit and training for the fairs, while in the pastures were a number of very promising two- and three-year-old mares and geldings. Among the Shorthorns many very choice animals may be seen, several of the young things by Riverside Hero 2nd being particularly admired. Riverside Hero is a massive, deep-sappy four-year-old, by Sultan Solih, and from an imported prize-winning cow, Bracelet 2nd, he himself being a winner of first at Toronto as a yearling, and many other good prizes.

A large flock of Shropshires, and also a good flock of Dorset Horns; the entire flock of the latter having been purchased by Mr. Cochrane a couple of years ago from T. W. Hector, and consisting mostly of imported ewes. Drafts had been selected from the flocks, and were being fitted for fall fairs, and it is unnecessary to add that many exceptionally choice individuals were seen.

NOTICES.

A new, cheap, pivoted land roller will be shown at the fair by the Estate of T. T. Coleman, Seaforth, Ont. See advertisement.

The London Mutual Fire Insurance Co invite our readers who may attend the Western Fair to give them a call at their office. See advertisement.

SHIPPING CANADIAN PRODUCTS.

Cold storage is what Canadian producers of perishable food products for export must have in order to compete in foreign markets successfully with like products from other countries. We have the best raw material, the best skill, and, better still, an enviable reputation, and now have access to proper cold storage accommodation on the Dominion line of steamers leaving Montreal every Thursday, to Bristol, Avonmouth, and London, Eng. They are fitted with all modern improvements for carrying live stock, butter, cheese, grain, and other general cargo. See advertisement elsewhere in this issue. The agents are Messrs. Elder, Dempster & Co., Commissioners street, Montreal.

BOOK TABLE.

Volume VI. of the American Southdown Record has been received from the Secretary, John G. Springer, Springfield, Ills. It contains two thousand pedigrees, numbered from 7001 to 9000, consisting of 1,410 ewes, 555 rams and 35 wethers; a list of transfers of 352 ewes and 237 rams, together with a list of 236 ram and ewes recorded in this appendix notes giving extended pedigrees of animals tracing to ancestors recorded in the English Southdown Flock Book and to unrecorded ancestors; also report of gold medals at fairs in 1895. The volume has been completed in one-half the time required for any of the previous volumes of the Record, thus indicating that Southdown sheep are in great demand.

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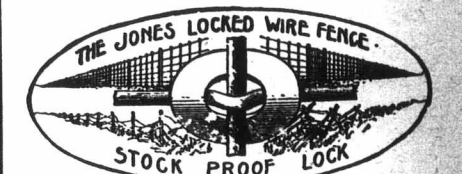
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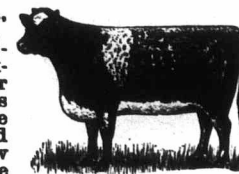


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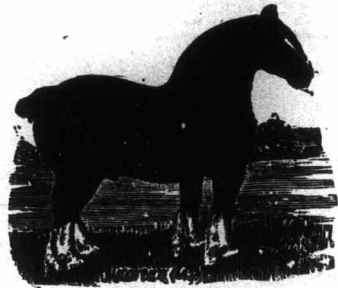
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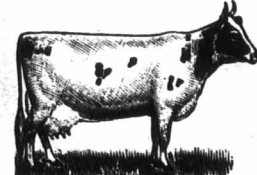
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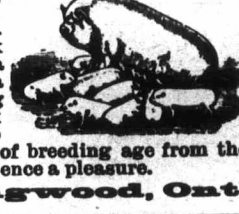
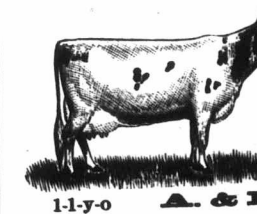
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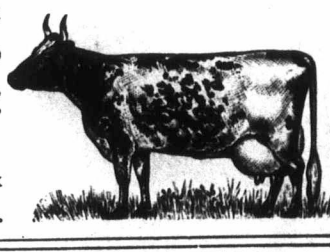
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THE ST. ANNE DE BELLEVUE SALE.

The sale of the St. Anne's herd of Jerseys came off as advertised, on August 19th and 20th, at St. Anne de Bellevue. This stock is well and favorably known, as the highly reputable St. Lambert blood predominates in the herd, which has proved its superiority by invariably doing well in showing contests with other noted herds. The attendance at the sale was fairly good, and the moderate prices obtained must have been more satisfactory to the various purchasers than to Mr. W. A. Reburn, the proprietor. Following is a list of animals and their purchasers:—May Pops of St. Anne's 38601, to Mrs. E. M. Jones, Brookville, \$47.50; Gipsy Hugo of St. Anne's 27688, to R. H. Pope, Cookshire, \$90; Jolie of St. Lambert 4th 38688, to Geo. Reburn, \$90; Queen Bess of St. Anne's 38694, to R. H. Pope, \$75.00; Dora of St. Anne's 41014, to W. A. Reburn & Co., \$110; Pet of St. Lambert 41016, to W. A. Reburn & Co., \$77.50; Pearl of St. Anne's 43343, to J. P. Dawes, Lachine, Que., \$62.50; Juliet of St. Anne's 41008, to W. A. Reburn & Co., \$65; Jolie of St. Lambert 3rd, 32365, to W. A. Reburn & Co., \$185; Pet of St. Lambert 4th 6870, to A. E. Masson, \$120; Pet of St. Anne's 2nd, with heifer calf two days old, to Geo. Reburn, \$150; Lorna Hugo of St. Anne's 2nd 47356, to Mrs. E. M. Jones, \$90; Countess of St. Anne's 2nd 47358, to R. H. Pope, \$57.50; Gipsy Hugo of St. Anne's 2nd 38691, to W. Ralph, Markham, \$100; Queen Vic of St. Anne's 3rd 38686, to W. A. Reburn & Co., \$110; Queen Vic of St. Anne's 4th 105653, to R. H. Pope, \$70; Fawnson Lady of St. Anne's 38370, to W. A. Reburn & Co., \$105; Lady Anne of St. Anne's 38685, to R. H. Pope, \$95; her five days old daughter, to Mrs. Jones, at \$30; Jolie Juno of St. Anne's 102348, to W. A. Reburn & Co., \$95; Hugo's Pet of St. Anne's 105628, to J. Maxwell, L'Orignal, Ont., \$120; Princess of St. Anne's 107073, to W. A. Reburn & Co., \$100; Saint Anne of St. Anne's 38603, to Wm. Ralph; Pet of St. Anne's 41011, to Wm. Ralph; Ruby of St. Anne's 2nd 38698, to L. Labelle, St. Jerome, Que.; Jolie Ligar of St. Anne's 68671, to W. Ralph, Markham, Ont. Heifers and Heifer Calves.—Ruby Fawn of St. Anne's, to W. Ralph, \$48; Jolie Pet of St. Anne's, to Mrs. E. M. Jones, \$100; Hugo's Jolie of St. Anne's, to Albert Garter, St. Therese, Que., \$48; Lady Anne of St. Anne's 2nd, to Mrs. E. M. Jones, \$80; Rubina of St. Anne's, to W. A. Reburn & Co., \$45; Victoria of St. Anne's, to Dr. Fortier, Quebec, \$50; Lily White of St. Anne's, to A. H. Masson; Jolie Eva of St. Anne's, to R. H. Pope; Nora of St. Anne's, to J. P. Dawes. A number of others were bought by W. A. Reburn & Co., at prices ranging from \$45 to \$75. Bulls.—Victor Hugo of St. Anne's 25705, to F. Villeneuve, Quebec, \$70; Fawnson of St. Anne's 38293, to W. A. Reburn & Co., \$90; Combination of St. Anne's, to R. A. Main, Waring, \$40; Dora's Hugo of St. Anne's, to W. A. Reburn & Co., \$75; bull calf, to Albert Garter, \$40; bull calf, to Dr. Fortier, \$40; bull calf, \$45, and heifer calf, \$55, to Mr. Freeman, Markham; and a bull calf each to J. Maxwell and H. Hogan, Montreal.

SALE OF GLEN DUART HERD.

A rare opportunity of securing most excellent Jerseys at one's own price will be given at the sale of Glen Duart herd, to be held as per advertisement in this issue, to which our readers are referred. The herd comprises the best and most fashionable blood to be found in the country. Representatives of the herd have been frequently exhibited at the Toronto Industrial, and invariably secured many worthy prizes, including silver medals upon some occasions. The champion Jersey bull of the Dominion, for several years, was bred at the Glen Duart farm and sold to Mr. Burgess, of Carleton Place, his present owner. Individuals of the herd have sold for upwards of \$1,000, and better animals than the herd now contains it never possessed. Any Jersey breeder desirous of improving his present herd should send to the proprietor for catalogue, and attend the sale while visiting the Toronto Exhibition.



Canadian Fairs.

Table with columns: PLACE, DATE. Lists various Canadian fairs including Sherbrooke, Toronto, London, Montreal, etc., with their respective dates.

GOSSIP.

Mr. J. B. Carruthers, Oak Point Stock Farm, Kingston, Ont., offers in this issue some very desirable Ayrshires, being well-bred and of the profitable dairy sort.

HON. SYDNEY FISHER'S GUERNSEYS. Most beautifully situated on the southern shore of Broom Lake, near Knowlton, is Alva Stock and Dairy Farm, owned by Hon. Sydney Fisher, Dominion Minister of Agriculture, and comprising some four hundred acres of grazing and agricultural lands.

Arthur Johnston



NOW OFFERS SHORT-LEGGED, DEEP-BODIED, THICK-SET YOUNG SHORTHORN BULLS

Also a very choice lot of young cows and heifers. We are breeding registered BERKSHIRES of the best English strains.

GREENWOOD P. O. AND TELEGRAPH OFFICE. Claremont Stn. C.P.R. or Pickering Stn. G.T.R. Parties met on shortest notice at either station.

Shorthorn Bull

FIT FOR SERVICE; WON FIRST PRIZE AT MARKHAM FALL FAIR; HAVE ALSO SEVERAL HEIFERS. Write, or come and see.

JOHN MILLER, Markham, Ontario.

A Splendid Lot

of young Shorthorn females, in calf to the grand young Scotch pedigree Shorthorn bull, Perfection's Hero - 20981 - a grandson of Old Lovely 19th (Imp.), at extremely low prices.

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Shorthorns, Shropshires, and Berkshires.

Six young Bulls from 10 to 14 months old; 25 Shropshire Ewes, one, two and three years old, due to lamb in March; 15 ram and 20 ewe lambs. Twenty Berkshire Sows, from 5 to 12 months old, several of them due to farrow in March, April, and May.

W.C. Pettit, Freeman P.O., Burlington Stn., C.T.R.

CARGILL HERD OF SHORTHORNS.

Have some good show material in Heifer Calves, also some grand Canadian-bred Cows and Heifers for sale. Write for catalogue.

H. CARGILL & SON, CARGILL, ONT. 11-y-om

Ten Shorthorn Bulls

FOR SALE. Of good quality and breeding. Prices to suit the times. W. R. BOWMAN, Mt. Forest. 13-1-y-om

H. I. ELLIOTT, DANVILLE, P.Q., Breeder of Scotch Shorthorns and Southdown Sheep. 15-1-y-0

HAWTHORN HERD OF DEEP MILKING SHORTHORNS.

FOR SALE - Several Heifers, got by the Golden Drop bull, Golden Nugget - 17548 - by imported General Booth, and from A1 dairy cows. WILLIAM GRAINGER & SON, 13-y-om Londesboro, Ont.

HOLSTEINS!

WE now offer young stock that have won prizes, and calves from our show herd, from one month to one year old, whose dams have large records - any age or sex - FOR SALE, at very low prices to quick buyers. Also some Poland-China Pigs, 1 and 6 months old; same quality (the best).

A. & G. RICE, Brookbank Stock Farms, CURRIE'S CROSSING, Oxford Co., Ont. 18-y-om

HOLSTEINS

None but the best are kept at BROCKHOLME FARM, ANCASTER, ONT. Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry. Yorkshires all recorded. 12-y-om R. S. STEVENSON, Prop.

MAPLE HILL HOLSTEIN-FRIESIANS.

FOR SALE - Yearling Bull, Sir Aagge Barrington; fine dairy form, good color, and in good condition. His grandam, Imp. Kaatje DeBoer, is now making, in my herd, from 24 to 3 lbs. of butter per day, at 12 years old. The bull resembles her very much in form and markings. Price, \$40.00. 11-y-om G. W. CLEMONS, St. George, Ont.

"Gem Holstein Herd."

NAP! \$75.00 CASH

Sir Archibald Mascot, No. 353, C.H.F. H. B., 4 years old 8th of October, 1895; was never sick a day; is very active, and a splendid stock getter, and is in every respect a first quality bull. We have used him as our stock bull with the very best results. Only part with him to change breeding. He was a prize winner three years in succession at Toronto Industrial Exhibition.

ELLIS BROTHERS, BEDFORD PARK P.O., ONT. Shipping Station, Toronto. 7-y-om

Springbrook Stock Farm.

HOLSTEIN-FRIESIAN CATTLE AND TAMWORTH SWINE. Four extra choice, rich-bred bulls ready for service. Write at once for bargains. Other stock for sale of best quality. A heavy stock of Tamworths on hand, bred from imported stock. 7-1-j-om

A. C. HALLMAN, New Dundee, Ont.

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A few good young Bulls and Heifers of choicest breeding, being from imp. Cows from the famous herd of B. B. Lord & Address, N. Y., or directly descended therefrom. JNO. TREMAIN, Forest, Ont. 3-1-y-0



HAVE NOW 3 Young Ayrshire Bulls, ON HAND 1, 2 and 3 years old, respectively; all prize-winners; the 3-year-old having won 1st at leading exhibitions. Write: 19-y-om MESSRS. ROBERTSON & NESS, Howick, Que.

OAK POINT STOCK FARM

Ayrshires FOR SALE.

I have now for sale a choice lot of young bulls and heifers of fine quality, and bred from best milking strains. Particulars on application. J. B. CARRUTHERS, Kingston, Ont. 17-y-0

J. YULL & SONS,

MEADOWSIDE FARM, CARLETON PLACE, ONT. We have a few young Ayrshire bulls left - 2 two-year-olds, 4 yearlings, and a fine lot of calves of both sexes; also Shropshire sheep and Berkshire pigs; pairs not akin for sale. Visitors met at Queen's Hotel. Give us a call before buying. 20-y-0



The Sydenham Herd of Ayrshires.

Owing to the ill-health of the proprietor, he has determined to dispose of his famous herd without reserve, also all his stock and implements. Date of sale will be announced in a later issue. For particulars write

Thomas Guy, SYDENHAM FARM, OSHAWA, ONT. -om

Ayrshires!

PURE-BRED, of different ages, and both sex. No inferior animals. Write for particulars. A. McCallum & Son, Spruce Hill Dairy Farm, DANVILLE, QUE. 22-y-0

WM. WYLIE,

228 Bleury St., MONTREAL, or Howick, P.Q., Breeder of high-class AYRSHIRES. Young stock always for sale; bred from the choicest strains procurable. Breeding stock selected from the most fashionable strains and prize-winning stock of the day. Farm located at Howick, Que. 5-1-y-0



Dominion Prize Ayrshires

We have the oldest established, largest and best herd of Ayrshires in Canada. Choice young stock for sale at liberal prices. Satisfaction guaranteed. JAMES DRUMMOND & SONS, 1-1-y-0 PETITE COTE, MONTREAL, P. Q.

AYRSHIRE BULL CALVES

For sale cheap, if taken immediately. Three dropped in August, sired by Imp. Glencairn; dams by Silver King. D. DRUMMOND, BURNSIDE FARM. 16-1-y-om PETITE COTE.

AYRSHIRE CATTLE

The bull TOM BROWN and the heifer WHITE FLOSS, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester Sheep and Berkshire Swine. 5-1-y-0

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MENIE, ONT., Breeders of high-class Ayrshire cattle; choice young stock of either sex and any age always on hand. Our herd contains a number of Columbian winners. 21-1-y-0

LAST CHANCE

To obtain a young JERSEY BULL from the famous Belvedere herd. As my whole herd now goes to Prince Edward Island, I have reserved for my customers

Six Splendid Young Bulls

Four months to eighteen months old. Sure prize-winners. Reasonable prices to immediate buyers. These are the best I have ever offered.

MRS. E. M. JONES, Box 324, BROCKVILLE, Ont., CAN.

Now Is Your Chance!

SALE of twenty head of registered JERSEY CATTLE

of the celebrated Glen Duart herd, the property of A. McLean Howard, Jr., Toronto, to be held at Empingham's Hotel, Little York on WEDNESDAY, the 9th day of SEPTEMBER, at 2 o'clock p. m. Animals on view at Mr. Howard's farm near Little York until day of sale. Day of sale at Empingham's Hotel, Little York can be reached from Toronto by street cars or Grand Trunk Railway.

SEND FOR CATALOGUE and further particulars to - A. McLEAN HOWARD, Jr., TORONTO, ONTARIO.

HENRY RUSSELL, Auctioneer, 17-a-0 120 Adelaide St. E., TORONTO.

JERSEY BULLS FOR SALE

ONE of the handsomest and richest two-year-old bulls in the Dominion, a grandson of Canada's John Bull. Dark fawn, solid color, black points; registered in A. J. C. C., and all right in every way. Has been shown three times, and won first prize each time, and is now in condition to do so again in good company. Will be sold at a reasonable price for a really high-class animal. Also two bull calves, one and five months old, solid fawn, black points (eligible for registration), from above sire and high-class St. Lambert dams, will be sold at a low figure.

J. E. RUDDICK, 17-c-om Box 631, Brockville, Ont.

MAPLE CITY HERD OF JERSEYS.

For Sale. - Bull dropped July 20th, 1895; solid color, black points; sire Massena's Son 17608, dam Lady Lill 86161. Bull dropped Aug. 23rd, 1895; solid color, black points; sire Massena's Son 17608 (whose dam made 902 lbs. 3 ozs. of butter in one year), dam Forest Fern. 3-1-y-0

WM. W. EVERETT, Box 552, Chatham, Ont.

Jersey Sale!

The entire herd of A. J. C. C. H. R. Lee Farm Jerseys. Forty head of reg. bulls, cows, heifers, and calves; same number of high grade cows and heifers. Excellent chance to start a herd cheap, as they must be sold within the next 90 days. Come and see, or write

E. PHELPS BALL, 17-y-0 Lee Farm, Rock Island, P. Q.

JERSEYS!

A NUMBER OF CHOICE YOUNG COWS FROM TWO TO FIVE YEARS OLD - PURE-BREDS AND GRADES, GOOD COLORS, AND ARE VERY RICH, DEEP MILKERS; QUIET AND DOCILE. FOR DESCRIPTION AND PRICES, WRITE TO

W. C. SHEARER, o Bright, Ontario.

The Don Herd of Jerseys

Comprise the choicest strains obtainable, including St. Lambert, Tennessee and combination blood. A m o w offering a few very choice bull calves from imp. and home-bred dams, and sires of best breeding obtainable.

Address: DAVID DUNCAN, 9-1-y-om DON P. O., ONT.

A.J.C.C. FOR SALE

Heifer calf, 21 mos. old, solid light fawn. Bull calf, 3 months old, dark fawn, little white on switch and hind legs. Price, \$60 for pair. Express prepaid. H. E. WILLIAMS, Sunny Lea Farm, 17-1-y-0 KNOWLTON, P.Q.



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**W. F. BACON,**  
Orillia, Ontario.

—BREEDER OF—  
**CHOICE REGISTERED JERSEYS**  
Young bulls and heifers of the best blood for sale. Write me for prices and particulars. 19-1-y-om

**MEADOWBROOK JERSEYS.**  
EDGAR SILCOX, Shedden, Ont.  
Two grand young BULLS FOR SALE. Foundation stock from the herds of Mrs. E. M. Jones, George Smith & Son, and Reburne, of St. Anne's. 21-1-y-o

**Ingleside Herefords.**  
UP-TO-DATE HERD OF CANADA!  
**Bull Calves**  
OF THE RIGHT SORT  
For Sale.

Address—  
**H. D. Smith,**  
INGLESIDE FARM,  
Compton, Que.  
17-y-om

**GUERNSEYS**  
This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine yearling bulls and bull calves for sale at farmers' prices. A few heifers can be spared.  
Address: SYDNEY FISHER,  
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**HILL HOME SHROPSHIRE**  
We have for sale shearing rams of exceptional merit; ram and ewe lambs of choicest quality and covering, sired by Tinker, a winner at New York and London and now heading our exhibition flock of '96, and an imp. Parker ram. Can also furnish grand show pens, right. Lambs from this flock won all specials offered at Toronto, London, New York, Guelph, and ten county fairs in 1895. Parties wishing stock of extra quality should visit this flock before purchasing elsewhere.  
14-L-o D. C. Hanmer & Sons, Mt. Vernon, Ont.

**"Best Quality with Greatest Quantity"**  
STILL THE MOTTO AT  
**MAPLE SHADE.**  
OUR Shropshire lambs are not numerous, but they are of good quality and good size. We still have left also a few strong, smooth, home-bred yearlings of good breeding and character. Our  
**Shorthorn Calves** are developing finely, and present the characteristic quality and thick flesh of the typical Critchbank Shorthorn. Prices moderate; if you doubt it, write and believe.  
Address—**JOHN DRYDEN,**  
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**REGISTERED SHROPSHIRE RAMS**  
(wholesale or retail) at less than half price.  
T. C. PATTERSON, Postmaster, Toronto. 17-b-om

**Henry Arkell,** ANKELL P. O., ONT.  
Pioneer importer and breeder of registered Oxford-Down sheep. Won many honors at World's Fair. Animals of all ages and sexes for sale reasonable at all times. 9-y-om

**F. BIRDSALL & SON,** BIRDSALL P. O., ONTARIO.  
A few choice high-grade Oxford Down ewe lambs for sale. From imported sires. 11-1-y-o

**LEICESTERS** at MAPLE LODGE STOCK FARM.  
A very choice lot of rams and ewes for sale now. We breed the best. JAS. S. SMITH. 9-1-y-om Maple Lodge P.O., Ontario.

**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, Sec., Lafayette, Indiana. 3-1-y-om

**120 J. L. ROE.**  
**Dana's Ear Labels** for sheep, cattle, etc. Stamp on each ear with name or address and consecutive numbers. This is the genuine label, used by all the leading record associations and breeders. Samples free. Agents wanted. C. H. DANA, West Lebanon, N. Hamp.

"The Dale Steel Land Roller is the strongest, heaviest, most durable and most economical roller for farming purposes at present made in the world."  
**THE ESTATE OF T. T. COLEMAN,** SEAFORTH, ONTARIO.

**AGRICULTURAL COLLEGE**

The Ontario Agricultural College will reopen on the 1st OCTOBER. Full courses of Lectures, with practical instruction in Agriculture, Live Stock, Dairying, Horticulture, Poultry, Bee-keeping, Veterinary Science, Chemistry, Geology, Botany, Entomology, Bacteriology, English, Mathematics, Book-keeping, and Political Economy.  
Send for Circular, giving terms of admission, course of study, cost, etc.

**JAS. MILLS, M. A., President,**  
Guelph, July 13th, 1896. 14-o-o Guelph, Ont.

**HEEBNER LEVEL TREAD POWERS** } **NONE BETTER; PERHAPS NONE QUITE SO GOOD.** } **THE JOHN ABELL ENG. AND MACHINE WORKS Co. (Limited), TORONTO.**

**To Stock Raisers:**  
We have a number of Second-hand Portable Engines, suitable for running cutting-boxes, or for steaming food for live stock, at very low prices. Correspondence invited.

**To Stockmen & Breeders.**  
**LITTLE'S PATENT FLUID NON-POISONOUS SHEEP DIP AND CATTLE WASH.**

For the destruction of Ticks, Lice, Mange and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc. Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.  
The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:  
"MAPLE SHADE" HERDS AND FLOCKS. BROOKLIN, ONT., Sept. 4th, 1896.  
DEAR SIR.—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.  
JOHN DRYDEN.  
Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to **ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, Ont.**  
Sole Agent for the Dominion. 7-1-y-om

**YORKSHIRE PIGS**  
Of the best type and breeding. Pairs not skin for sale at all seasons.  
**J. M. HURLEY & SON**  
Belleville, Ont. Box 448.

**Geo. N. Harris,** LYNDEN, ONT.  
Breeder of reg. Berkshires, and Southdown sheep. Young stock always for sale. Correspondence solicited. 17-1-yo

**Specialty of Improved Yorkshire Swine**  
A grand opportunity to purchase first-class stock to produce bacon hogs which bring the highest price in the market. Stock of different ages at moderate prices. Examine this herd at the exhibitions. **J. E. BRETHOUR,** 3-y-om Burford, Ont.

**FOR good healthy BERKSHIRES and YORKSHIRES** two months old, boars ready for service, and sows in pig of good quality, write  
**H. J. DAVIS,** Box 290, Woodstock, Ont.  
Breeder of LARGE ENGLISH BERKSHIRE and IMP. WHITE YORKSHIRE SWINE, SHORT HORN CATTLE and SHROPSHIRE SHEEP.

**Siprell & Carroll,** CARHOLME P.O., Ont.  
—BREEDERS OF—  
**BERKSHIRE SWINE**  
Quality of the Best.  
Our leading sows are Carholme Queen, Carholme Lass, and Lady Lightfoot. Choice young stock for sale. Correspondence solicited. 11-1-y-o

**LARGE ENGLISH BERKSHIRES.**  
My herd won 246 prizes, 10 diplomas, 5 medals; also Prince of Wales prize, and sweepstakes over all breeds since 1888 at the leading fairs in the Dominion. Choice stock of all ages for sale. Pairs supplied not skin. **GEO. GREEN,** Fairview P.O., Ont. Stratford Station and Telegraph Office.

**ADVERTISE IN THE ADVOCATE**

**English Southdowns for U. S. Shows.**

The Pagharn Harbor Co. of Selsey, have just shipped to their American agent, Mr. F. W. Barrett, of New York, a valuable consignment of Southdown sheep for exhibition, on their behalf, at all the American leading fairs this fall. It is expected that it will be the means of largely promoting the interests of the breed. The selected specimens that have been sent out to do battle are such as would in the ordinary course have been retained at home, as they are of the highest order of merit. A correspondent of the *English Live Stock Journal* states that the old ram sent is a grand one, as are also the two ram lambs, one of which is from the first-prize pen at Leicester, the two ewe lambs being own sisters to them on the sire's side, for all are sired by Chichester Vol. VI., a sheep descended from Chichester 106, who traces back through Goodwood blood to Webb, and the sire's dam was one of those grand old Penfold ewes (115), whose sire, Champion 470, Vol. II., traces back to J. Webb's Archbishop in 1843, and their dams are all selected ewes from the Pagharn Harbor Co.'s registered flock. Not only are these lambs well-bred from the best strains of blood in the county, but they are also beautiful and typical specimens of their breed, their character and wool being of the highest merit.

**GOSSIP.**

The Missouri College of Agriculture, located at Columbia, has just perfected the details of a school of horticulture, to open June 1st next, on the same general plan as the dairy schools, which have done so much in recent years to develop the dairy interests.

The Lord-Lieutenant of Ireland has issued his warrant appointing a Commission to examine and report upon the methods which should be adopted for the encouragement and improvement of the breeding of horses in Ireland. The commissioners are the Earl of Dunraven, K. P., Lord Ashkown, Mr. J. L. Carew, M. P., Earl of Enniskillen, Sir Thomas Henry Gratton Esmonde, Bart., M. P., the Hon. William Henry Fitzwilliam, Sir Walter Gilliv, Bart., Marquis of Londonderry, K. G., Mr. Percy La Touche, Lord Rathdonnell, Col. T. A. St. Quinton, and Mr. Frederick Wrench.

The "tick pest" (followed by fever and emaciation), referred to in the August 15th ADVOCATE is still raging with great violence in North Queensland, Australia, where the cattle are dying by hundreds. On some animals slaughtered not a square inch of their bodies was free from ticks, it being estimated that there were fully 10,000 on each beast. An immense number of cattle are being sent to the "boiling down" works, where good young steers that weigh 750 pounds realized only about 16 shillings. The Government has taken the matter up, prohibiting exportation from infested districts. Applications of oil and various dips are being tried.

**MR. JOHN RACEY'S SHORTHORNS AND BERKSHIRES.**

Mr. Racey's farm lies some four miles from the village of Lennoxville, Que., and on inspection of the stock a short time since, they were all found in good thriving form. The stock, which is still leading the herd, and has proved himself a capital sire. A number of very fine young calves were seen, sired by Strathroy, Highland Chief, and Highlander; also a couple of yearling bulls by Strathroy and Aberdeen =1879=. Among the Berkshires, the imported boar, Randolph 2871, bred by J. N. Benjafield, is still leading the herd, and has proved himself a capital sire. A number of very fine young pigs were noticed from this boar, and such sows as Sally 307th =4240-, by Negro; Rosette =4241-, by imp. Queen's Own; and Rachael, a fine yearling sow, by imp. Randolph. Mr. Racey carries a good line of Berkshires and is offering them at hard-time prices, and parties purchasing from him, we feel safe in saying, will be dealt with satisfactorily.

**MR. E. P. BALL'S JERSEYS.**

A representative of the ADVOCATE recently visited the stock farm of Mr. Ball, Rock Island, Que., and on inspecting the stock of high-bred Jerseys, which are a specialty with this gentleman, they were found in fine form, and a capital herd throughout. Mr. Ball has made during the past year a large number of very satisfactory sales, which is an evidence of the fact that the stock are of the sort that is in demand. Prince Hugo of St. Ann's is still doing good service at the head of the herd, and the young stock bred from him is good evidence of his high breeding. He is by Hebe's Victor Hugo 1833, and from Queen Hugo of St. Ann's 39682, tracing to Victor Hugo on the sire's side. Mr. Ball still has left several grand young bulls: The three-year-old, Stanley of Lee Farm 39127, by Stanley of St. Ann's 25342, and from Warrior Queen 51622 (imp.), is a very fine animal and should be a ready seller. He was a winner of 2nd premium at Montreal. Alexis of Lee Farm 36944, from Chief's Princess, was sired by Grand Duke Alexis. This bull was winner of 1st premium at Montreal as a yearling. He is now two years old, whole color, and of capital conformation. A good yearling was also seen, by Prince Hugo of St. Ann's; also a very fine bull calf, by Queen's Lucilio 2nd 36286. This calf has fine markings, is of good conformation, and solid color. The above bulls are all of the right stamp, and should sell quickly to those wanting good dairy bulls to head their herds, and Mr. Ball informed us that they would be sold at a bargain, as he wishes to reduce his stock still more before winter. The grand old cow, Chief's Princess, is still in the herd. This cow formed the foundation of the present herd, and most of the stock in the herd is descended from her. Chief's Princess was got by Walnut Chief 3130, who was by Grand Duke Alexis, out of Lucilio 1755 (imp.), with a record of 14 lbs. of butter in one week; her daughter, Lucilio 3rd, giving 14 lbs. 2 ozs. a week as a three-year-old.



**GOSSIP.**

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

Crusader, a handsome Hackney sired by Cadet, has been sold along with a few Hackney mares to go to Jamaica.

Mr. James Picken, Torrs, Kirkcubright, Scotland, has sold the Keir-bred stallion, Jasper, to Messrs. Colquhoun Brothers, Mitchell, Ont.

General Sir John Watson has purchased from Mr. Henry Moore the English Hackney stallion, Clansman II. 4683, for the Indian Government.

From June 2nd to July 27th the English Shorthorn Society granted certificates for the exportation of 210 Shorthorns, of which 237 were for South America and 3 for Sweden.

M. Vassilliere has been appointed Director of Agriculture in France, in place of M. Tisserand. M. Vassilliere has been for a long time Inspector-General of Agriculture, and knows well the needs of the industry.

It is announced that the Thoroughbred stallion, Serpa Pinto, belonging to the Prince of Wales, winner of three Queen's premiums, has been purchased by Lord Arthur Cecil, on behalf of the Government of Trinidad.

Filmaker, the celebrated horse which held the world's record for high jumping, died at Galveston, Texas, about two weeks ago. His highest vault was seven feet seven. The horse has made \$200,000 for his owner since 1890.

The cost of shipping fat cattle from Chicago to England varies from \$15 to \$20 per head, according to space rates on vessels and the insurance rates. The amount of shrinkage cattle undergo on the trip is very little except in bad weather. If cattle eat well on the voyage they often show quite a little gain when they land.

The British returns under the Diseases of Animals Act show recent outbreaks of anthrax, rabies, glanders, and swine fever. Of the latter, there were 82 outbreaks and 1,283 swine slaughtered, against 80 outbreaks and 1,068 swine slaughtered during the week ending Aug. 1st last year. The number of outbreaks for 31 weeks in 1896 has been 3,674, against 3,500 last year, with 51,347 swine slaughtered, against 31,552 last year.

The Executive Committee of the Aberdeenshire (Scotland) County Council has been called upon to deal with an alarming outbreak of swine fever which has just been discovered in Aberdeenshire. Within a few days no less than thirty-five outbreaks were found to exist in various parts of the county, and from what is known of its origin, it is believed that these do not represent nearly the whole of the cases which have suddenly sprung into existence. These cases have been traced to a lot of store hogs sold at auction by a dealer.

Three well-bred Clydesdale colts have been sold by the well-known Scottish breeders, Messrs. A. & W. Montgomery, for exportation to Buenos Ayres. Two are yearlings and being the Macgregor colt, Heather Darnley, and Moncrieffe Passport. The other purchase is the two-year-old Satisfaction, bred by Mr. William Dalziel, Muirhousedykes, West Calder, and got by Darnley's Last, out of the prize mare, Young Duchess. Mr. Alexander Scott, Greenoch, has sold the two horses, Woodlands and Forward Castle, to Messrs. Bossio & Camurano, Buenos Ayres.

James S. Smith, Maple Lodge Stock Farm: "Until we got the recent rains the prospect for the good condition of stock the coming fall, in our vicinity, was anything but bright; but now pastures are green again and grass is growing rapidly, and with a splendid growth of rape, our lambs and calves are likely to go ahead quite as well as usual. We have a most excellent lot of shearing ewes and rams, of which several are in good show trim, and have made several sales lately to parties in Ontario and some of the States, all of which, we think, will be likely to win at the different fairs at which their purchasers intend to exhibit. We will have a full exhibit out on the Toronto and other large fairs, of which we will not be ashamed. Our fifteen young bulls are very thrifty, and growing nicely."

Scottish Farmer:—"Mr. Robert Erskine, Gladenholm, Parkgate, has sold his well-bred Clydesdale stallion, Prince Gladen (9818), to Colquhoun Bros., Mitchell, Ontario, Canada. This strong, useful horse was bred by Mr. Robert Cochran, Portencallie, Stranraer, and was got by the well-known horse, Handsome Prince, out of Lady Bay (10591), a first prize mare at the Stranraer Show, and own sister to the celebrated Lady Louisa, which was sold at the Karnock sale in March, 1895, for 540 gs. Both the sire and the dam of Prince Gladen were got by Prince of Wales (673), out of mares by Darnley (222); the dam of Handsome Prince being Mr. Lockhart's renowned champion mare, Pandora, whose record has seldom been equalled. On the dam's side the breeding of Prince Gladen is of the first order, and we should hope the exportation of so well-bred and useful a horse may be advantageous alike to his buyers and the cause of horse-breeding in Canada."

The public sale of Berkshires made by N. H. Gentry, Sedalia, Mo.; A. J. Lovejoy & Son, Roscoe, Ill.; M. K. Prine & Son, Oskaloosa, and W. E. Spicer, Beshnell, Ill., at the Fair Grounds, Springfield, Ill., on August 12th, was a success. Heretofore this breed of swine has never, in the States, been sold at public auction, so that this sale was simply intended as an "ice breaker." The animals sold were in the main excellent in individuality and pedigree, but some were a little old and many very young. They went to Illinois, Indiana, Iowa, Kentucky, Missouri, Nebraska, Ohio, and Texas. The 46 animals, old and young, averaged \$63.00, showing that notwithstanding hard times the hog breeders have faith in making money out of low priced pork fed on low priced corn. Animals bringing \$100 and over went to: Seven Oaks Stock Farm, New Sharon, Iowa, boar at \$175, and boar at \$170; J. K. King, Marshall, Mo., boar at \$190; J. E. McGuire, Gatesville, Tex., boar at \$100, and sow at \$205; W. R. Stokes, Bellmore, Ind., boar at \$100; J. A. Leland, Springfield, Ill., boar at \$135; Harris & McMan, Lamine, Mo., sow at \$205; J. W. Ellington, Buffalo, Ill., boar at \$100.



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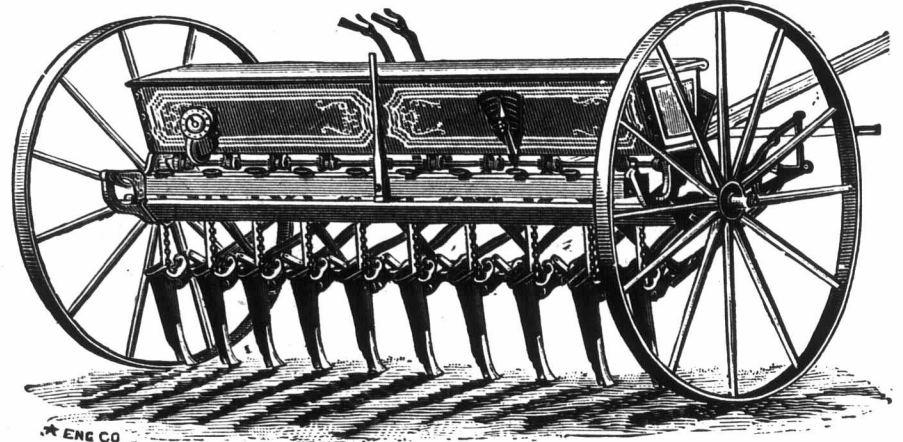
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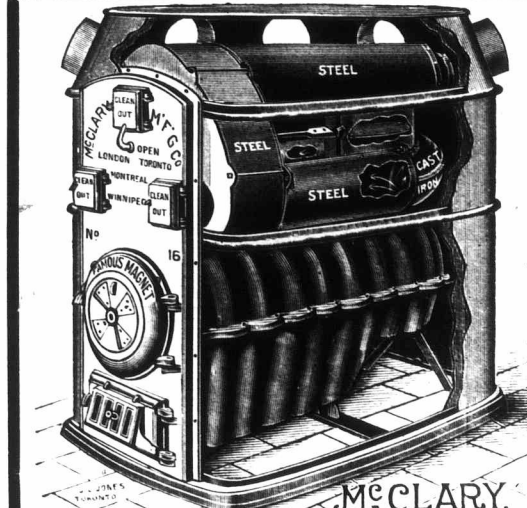
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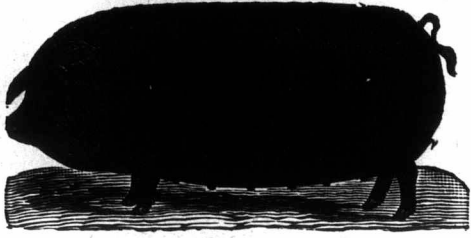
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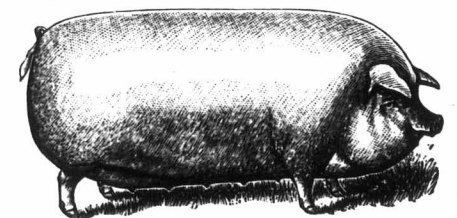
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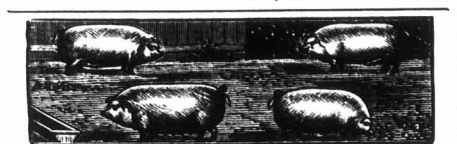
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We have at present for sale some choice Duroc-Jersey and Improved Chester White boars and sows, suitable for show purposes, which we can sell for prices to suit the times; also two imported Guernsey bull calves. Write for description, photo, and price. **WM. BUTLER & SONS, 17-y-om Dereham Centre, Ont.**

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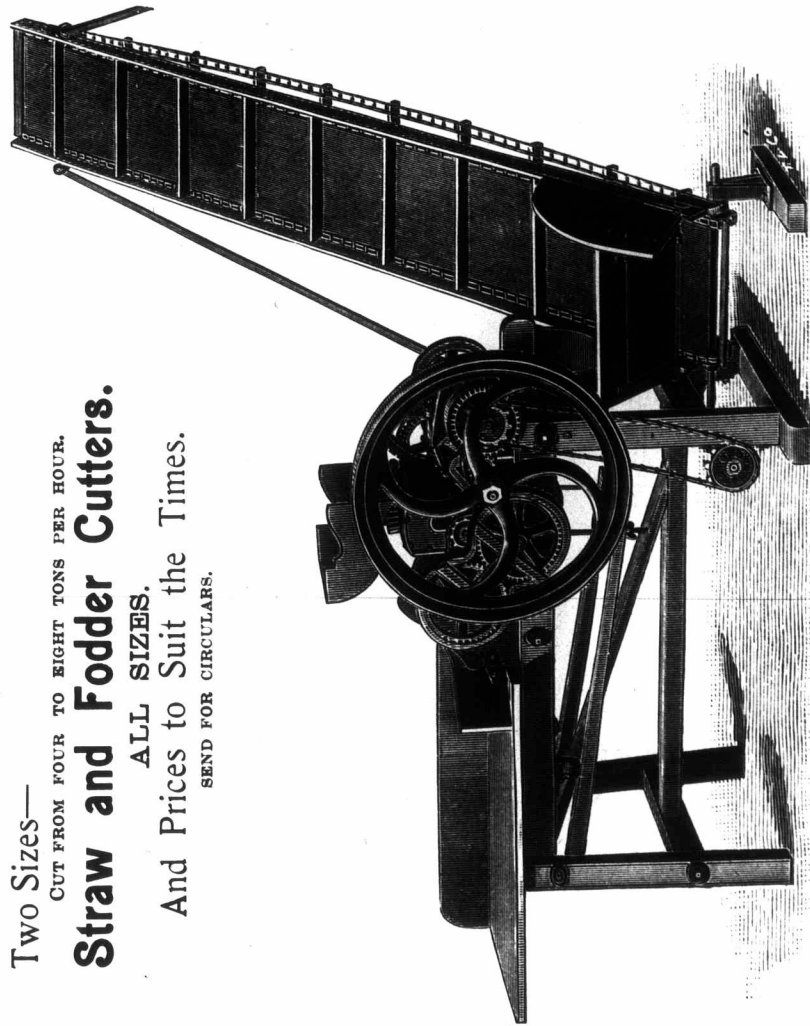
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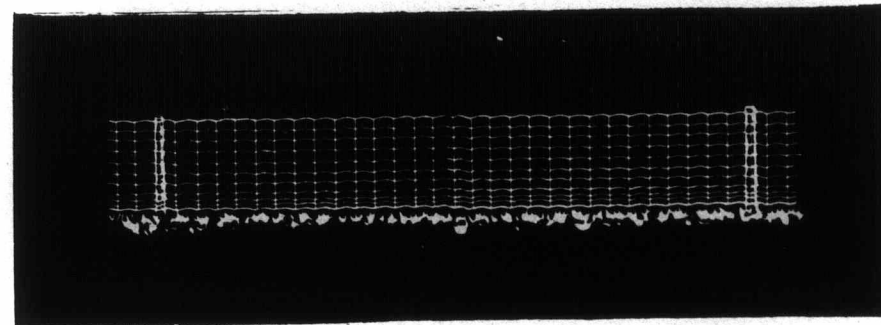
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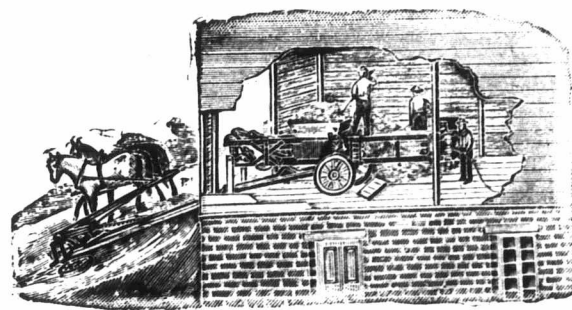
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**English Hackney Sales.**

At High House, Litcham, Norfolk, Eng., a choice lot of Hackneys from the stud of Chas. E. Cooke were sold. Six geldings sold averaged £30 apiece. The fifty-six lots disposed of realized a total of 3,157 gs., being an average of about 56½ gs. per animal.

The sale of Walter Waterhouse's Hackneys at Edenbridge, Kent, Eng., recently was extremely successful. The grand lot of animals catalogued realized nearly £10,000. The two noted Hackney stallions, Danegelt and Lord Derby II., were strongly represented in the brood mares, and their progeny made some of the best prices. Bidding for some of the lots was extremely keen, and the auctioneers were kept hard at work throughout the sale. Included amongst the purchasers were the following well-known Hackney breeders:— H. R. H. the Prince of Wales, Sir Walter Gilbey, Mr. R. G. Heaton, Mr. Lees Knowles, M. P., Mr. Hickling, Mr. Bachelor, Mr. J. Barker, and others. The top price of the day was given by the Squire of Eilsenham, for Titanic, a beautiful four-year-old chestnut-roan mare, sire by Gallant Sportsman, which was knocked down for 710 gs. Other brood mares made 620 gs., 620 gs., 530 gs., and many others realized over 200 gs. The foals sold exceptionally well, Mr. H. G. Heaton purchasing the best at 235 gs. The sixty lots realized 9,348 gs., or £9,815, the average per animal working out at £163 11s.

**GOSSIP.**

A. C. Hallman, New Dundee, Ont., writes:— "My herd of Holstein-Friesians are in splendid shape this fall. Just made another valuable addition to my already select herd, in shape of the imported cow Guillemette. She is one of the heaviest milkers and best breeders in Canada. My old silver medal bull is still robust and active as a three-year-old. My other herd bull, Flora's Sir Jacob, is developing into a very handsome bull, and his stock, like that of the other bull, is coming on finely. He is also a Toronto and London prizewinner. My females and other stock are of the high standard. This herd is noted for both winners and producers.

"My herd of Tamworth swine are a grand lot, now numbering sixty head of the choicest. Would just inform my numerous friends that I am not going to exhibit this year, owing to a trip to Manitoba, although I could have brought out a very choice herd. I hope they will pardon me for one year and remember the fact that I have been a regular exhibitor for the last ten years. My herd has such an unrivaled showing record that I consider it safe to rest on laurels for one year. Remember, I am still 'in it' and to the front, and if you intend to purchase, first write to the old reliable Spring Brook Stock Farm and get the best for the money."

**THE GREENWOOD HERD OF SHORTHORNS.**

The above herd is so well-known throughout the country that what the writer might say of them could add but little to their honors or that of their breeder, Mr. Arthur Johnston. The Greenwood herd has established an enviable and world-wide reputation for their high standard of breeding and the production of stock of exceptional quality, style and conformation, as well as for many of the leading winners at the principal exhibitions of the Continent. In looking over the herd, grand individuals of the Duches of Gloster, Mina, Nonpareil, Cecilia, and other noted families were noticed from the world-famed herds of the late Amos Cruickshank, of Siltlyton, Aberdeenshire, Scotland; Sylvester Campbell, Kinellar, Scotland; James Bruce, Burnside, Fochabers, Scotland; Geo. Bruce, Heatherwick, Scotland; and other famous breeders. Among the young stock many particularly choice specimens are to be seen, while the bull, full of quality, rich, mellow handlers, thick-fleshed, and possessing great style and character. Several lusty, strong-boned bull calves promise to turn out something more than ordinary, and should prove ready sellers for show or breeding purposes. The herd now numbers some seventy or eighty head, many of the cows being especially noteworthy for their milking propensities. From the following may be seen some of the successes in the showing of stock from the Greenwood herds: In 1891, 1892 and 1893—three years in succession—the sweepstakes for best bull, any age, was awarded to bulls bred by Mr. Johnston at the Toronto Industrial Exhibition—a record probably never equalled by any other breeder of Shorthorns in Ontario. The sweepstakes cow at the Industrial in 1893 and 1894 was also sold from the Greenwood herd; while as proof that the above achievements were not accidental successes, in 1883 the first and second premium cows at the Provincial Exhibition, and the first prize yearling heifer and second prize aged cow at Toronto Industrial the same year, were bred by Mr. Johnston, as well as many other well-merited successes in the showing. The famous old imported bull, Indian Chief, still heads the Greenwood herd. As a stock bull he has been a grand success. He has in his blood a combination of the very best blood ever used by Mr. Cruickshank, and his stock are much sought after as heads of herds, and have also proved very successful in the showing. Indian Chief is out of the same dam as Col. Harris' famous prize and breeding bull, Baron Victor (42824), said to have been the best Cruickshank sire ever used in the United States. Baron Victor was sold at auction for \$1,100, and was almost as successful in the showing as in breeding. In 1891, a son of Indian Chief won first in his class and sweepstakes as best bull any age as a two-year-old at the Industrial. Again, in 1892, another son won first and sweepstakes at Toronto, while another son won the grand sweepstakes over all beef breeds, as a bull under one year, at the Chicago Columbian Exhibition in 1893; and these are only a few of the many honors won by his sons and daughters. Many of his sons have been exported to the United States at high prices, as much as \$650 having been paid for yearling sons of his. Although up in years, Indian Chief is still very sprightly, active, and sure. A visit to the Greenwood herd, to the lover of good Shorthorns, would be found both instructive and interesting, while those in quest of choice stock of the top Scotch breeding would undoubtedly find what they require.



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 The managers of Dr. Barnardo's Homes will be glad to receive applications from farmers or others for the boys whom it is proposed to send out from England in several parties during the coming season. All the young immigrants will have passed through a period of training in the English Homes, and will be carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars, as to the terms and conditions upon which the boys are placed, may be obtained on application to Mr. ALFRED B. OWEN, Agent, Dr. Barnardo's Homes, 214 Farley Ave., Toronto. 4-y-o

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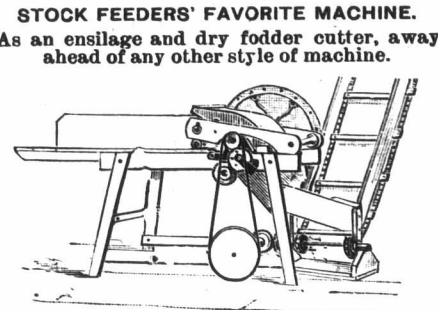
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