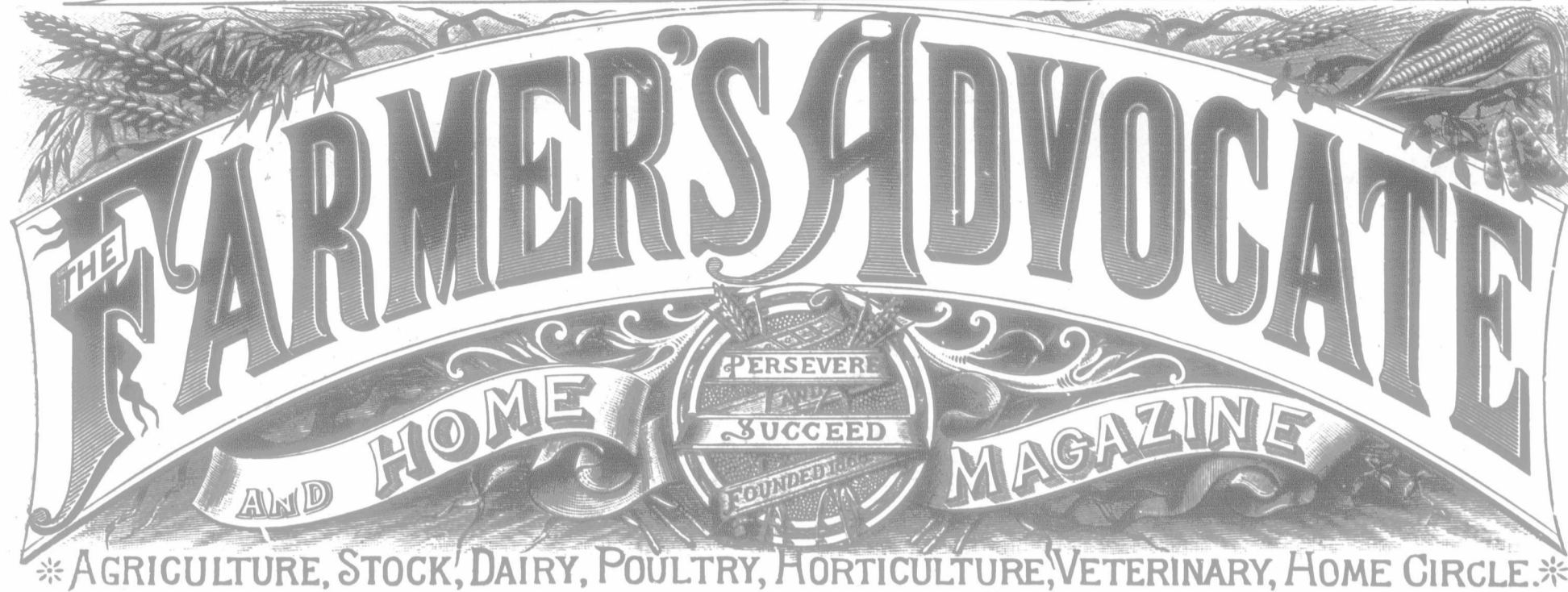


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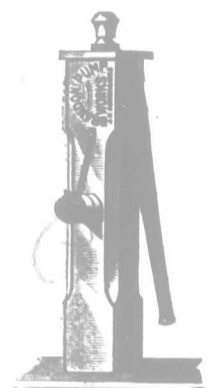
VOL. XXXIV. LONDON, ONTARIO. SEPTEMBER 5, 1899. WINNIPEG, MANITOBA. No. 485

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AND HOME MAGAZINE

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VOL. XXXIV.

LONDON, ONT., AND WINNIPEG, MAN., SEPTEMBER 5, 1899.

No. 485


The Grasshoppers are Being Watched.

Since early in the spring of 1898, specimens of the true Rocky Mountain locust have made their appearance in different sections of the country bordering on the Turtle Mountains. Dr. Jas. Fletcher, Dominion Entomologist, has on several occasions visited the localities, identified the species, and advised as to the best means of preventing the increase and spread of these hoppers. In the *ADVOCATE* of October 5th, 1898, and again of July 5th, 1899, appeared lengthy articles from the pen of Dr. Fletcher, describing the nature, characteristics and habits of the locust, and referring to the condition in which he found them at the time of his visits. In June last, Prof. Luggler, State Entomologist of Minnesota, an authority on grasshoppers, accompanied Dr. Fletcher, and to him some of the American newspapers credited a sensational statement that the Turtle Mountains were a permanent breeding-ground for the locust, and that there was imminent danger of an invasion into the wheat fields of Dakota and Manitoba. The railway companies and other large land-owners took fright, and appealed to Washington for a thorough investigation. The Entomological Department immediately sent Prof. Hunter, of the Department, to the scene of action. He, accompanied by Hugh McKellar, Chief Clerk of the Department of Agriculture, spent several days in the Boissevain and Deloraine districts, and the Professor continued his investigations throughout the Turtle Mountain district on both sides of the international boundary, and also visited other localities where grasshoppers were reported.

While the injurious species (*Melanoplus spretus*) exist in several localities, there is no great cause for alarm, providing the farmers exercise due precaution in fall-plowing stubble land and following the advice given by the scientists. Investigation does not show the Turtle Mountains to be a particularly favorable spot for breeding grounds.

Stacking Grain.

To most of our readers it may seem that the last word has been said about grain-stacking, more particularly as the severe lessons taught by the losses of last season are still fresh in the minds of most people. There are, however, in this new country a large contingent of newcomers who have had little or no previous experience in stacking grain. There is little or nothing new to be said about stacking grain, but for the benefit of those who have not had much experience we will try, briefly, to describe the method that, if properly carried out, will make safe stacks. Judging from past experiences, it is very unwise to count on dry weather; when stacks are built it is better to build them so that they will turn rain, as it takes no more time to build a good stack than a bad one. The one essential that must never be omitted is a full heart. Some build long, narrow or oblong stacks, and, of course, more grain can be put into the inside of such a stack, away from the weather, than in the ordinary round stack. It is well, where there are many weeds in the crop, to have a stack yard conveniently situated, and with an unbroken sod, so that all the dirt is drawn onto one spot, where it can be burned. It is customary to build four or six round stacks for a "setting" that is, one placing of the threshing machine. Six stacks

placed thus, , can be handled very conveniently. There should just be room for the separator to draw in between the two lots, the third stack on both sides built close to the others, to be forked on to whichever one wind and circumstances make most convenient.

Beginning a round stack, start with a round stook in the center, continuing the stook, keeping the sheaves as upright as possible, till the foundation is large enough. In this way no heads touch

the ground to get damp, and an even foundation is given, which makes the stack less liable to slip out when building, and less liable to lean when settling. Before beginning the regular outside tiers it will likely be necessary to lay some extra sheaves in the center to bring it up full, and keep all sheaves on the next tier sloping downwards towards the outside. Now begin a layer of sheaves round the outside, laying the second row at the same time, and placing the butts of the second about to the band of the first. The staker should keep his weight off the outer row, and in laying the inside rows continue round and round systematically, laying one row at a time as closely together as possible, stepping on each sheaf as laid, each course overlapping the one below about to the bands, or sufficiently to keep the center well above the outside row. Thus the outside will settle more than the center, as it will not be so compact and solid, and all sheaves slope downwards and outwards. By putting on a bulge—that is, letting the stack out a little larger each course till high enough for the take-in—more grain can be put under the same roof than if the stack is built with straight sides. At the "take-in" be sure and have the center full. Continue as before, taking in each course a little, and keeping the heart very full. The butts of the sheaves become set in the stooks, and by a little care in placing them with the slope downward on the outside roof tiers, a very smooth, neat job can be made, and if the heart is always kept full there will be little danger of wet getting in. Every course of sheaves should be continued systematically to the center of the stack: it makes the stack more solid, and more stuff can be put in than when merely a pile of sheaves are thrown into the middle. It is not necessary to carry the stack very high, or make a roof like a church steeple. A sharp-pointed stick about four feet long run down through the cap sheaf will hold it on and let in no water.

Weeds.

"It's an ill wind that blows nobody good," and one very great consolation for the lateness and backwardness of last spring is the general freedom from noxious weeds of this year's crop. The late working of the soil killed out the weeds which had at that time germinated, and thus pretty well cleaned the surface soil. Let no one delude himself, however, with the idea that because his crops are clean this year that he has annihilated the enemy, for the chances are ten to one that 1900 will be as favorable to weed growth as this year has been adverse. If possible, disk harrow the stubble early in the season while there is still warmth enough to cause the seeds to germinate; it is little use late in the season. What fall plowing is to be done, let it be done early, and let every furrow be turned as if in a plowing match; better five acres well plowed than ten slurred over. One of the greatest agencies for spreading weeds is the want of fences to prevent stock wandering over the stubbles, scattering weed seeds broadcast. Feeding at the chaff piles and heaps of weed seeds (that should be destroyed) left from the threshings, the manure is full of uninjured seeds. Good work has been done and is being done by many agencies in suppressing the noxious-weed nuisance. Still, weeds are spreading, and nothing but eternal vigilance on the part of every individual farmer will ever hold them in check.

Cream Separation.

To defective methods in cream raising or cream separation, as it is called, can be traced the most constant and serious of all the losses that occur in buttermaking. Dollar after dollar is steadily running away just as certainly as if they were slipping through a hole in the dairyman's pocket. And the aggravating feature of it all is that the losses are easily and cheaply preventable by the application of a little knowledge. Getting practically all the cream out of the milk in good condition is at the

foundation of success in buttermaking, and we therefore gladly give space in this issue to the comprehensive, practical and clear-headed communication from Mr. J. W. Mitchell, Superintendent of the Dominion Government creameries, Assiniboia, N. W. T., which is a valuable contribution to the dairy literature of the day. The raising of cream by deep-setting cans, shallow pans and centrifugal separation is forcibly presented and contrasted, and we look for another letter from Mr. Mitchell dealing further with separator management in order to obtain the best results.

The Annual Report of the Territorial Department of Agriculture.

The first annual report issued by the Department of Agriculture of the Northwest Territories has recently come to us off the press. It is a pamphlet containing 100 closely-printed pages, including a survey of the present conditions of the agricultural and pastoral interests, and also referring somewhat to the transactions of the Department for previous years. There is much in the pamphlet that is most interesting and instructive reading, and a copy should be on every farmer's book-shelf for future reference. Copies can, we presume, be had on application to the Department, Regina.

The benefits that may accrue to the farmers from accurate agricultural statistics are pointed out, the difficulties of securing such in so vast a territory where settlements are widely scattered are referred to, and the plan adopted by the Department described, i.e., to obtain reports of actual results from threshing-machine operators. For the purposes of this work, Assiniboia, Alberta, and Saskatchewan are divided into sixteen districts. Statistics of the crop of '98 are given in tabular form, showing the total yield of the Territories to have been as follows: Wheat, 5,542,478 bushels, an average of 18 bushels per acre; oats, 3,040,307 bushels, an average of 28.93 bushels per acre; barley, 449,512 bushels, an average of 26.29 bushels per acre.

The scheme that is being evolved for carrying on agricultural experimental work is also outlined fully. This has previously received considerable notice in the *ADVOCATE*. Several pages are devoted to the important subject of meteorology. To noxious weeds seven or eight pages are devoted, and reports are published from each of the eleven district weed inspectors. Reference is also made to the gopher pest. Dairying is referred to, and the statistics given. In this connection the report says:

"The greatest obstacle to successful dairying in the Northwest Territories at the present time is the absence of good dairy cows, and it is worthy of consideration whether some organized effort could be initiated by agricultural societies, or the creamery patrons themselves, having in view the importation of thoroughly good milking cows from the Provinces of Ontario and Quebec, to be sold to patrons of creameries or such as signified their intention to become patrons, at cost price, landed. The scheme for the importation of pure-bred bulls, referred to under a different heading, should be a valuable factor in the improvement of the dairy stock of the Northwest, but the correspondence with intending importers up to date reveals a disappointing lack of interest in the importation of thoroughbred dairy sires.

"A great deal of discussion has recently taken place in the agricultural world regarding the evolution of the 'dual purpose' cow. This is precisely the animal required in the Territories. It is found almost as difficult to induce ranchers to engage in dairying as to persuade the wheat farmer to patronize the local creamery. If such an animal as the dual purpose cow can be successfully produced as a breed, this difficulty would, to a very large extent, be overcome. The statement has, however, been made that such an animal has existed for generations in Ayrshire, Scotland. The practice of Ayrshire dairy farmers is to purchase young and well-bred Ayrshire milk cows and to cross them with a Shorthorn bull. Although the first cross is a fair milker, it is evident that the tendency of such operations is to breed into beef and out of milk, and the general practice is, therefore, when the cows, through old age or otherwise, become unprofitable, to send them to the block and purchase younger stock of the same breeding to take their places. The steers produced from the Shorthorn-Ayrshire cross are thought very highly of by the butchers. Great things are claimed for the milking strains of Shorthorns, and it is probable that this animal combines the beef with the dairy qualities."

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AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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Address—THE FARMER'S ADVOCATE, or THE WILLIAM WELD CO., WINNIPEG, MANITOBA.

Very exhaustive reviews of the condition of the several live stock industries, and suggestions given for the betterment and advancement of these important branches. The work of the Department in assisting in the importation of pure-bred bulls is outlined, and some system of Government inspection of stallions is suggested. Attention is also given to the general health of live stock, etc.

The whole system of brands has recently been reorganized. During the year, 3,068 brands were reallocated, 2,111 applications for new cattle brands received, and 941 for horses. Other subjects treated on are agricultural societies, local improvement districts, prairie fires, game protection, extermination of predatory animals, and territorial hospitals. Mr. Peterson, the Deputy Commissioner, in compiling his first report, is certainly to be congratulated upon the care with which it has been prepared, and the thoroughness with which every branch of the work of the Department has been treated.

Manitoba Crop Report.

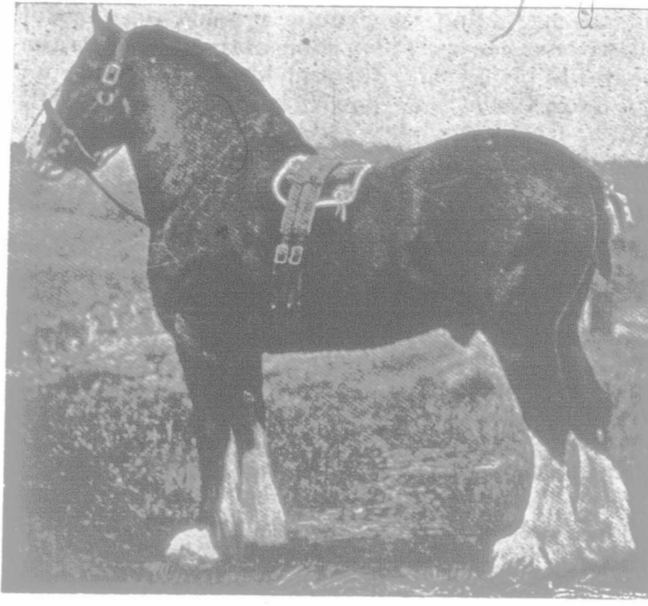
The unprecedented rainfall of last year left the ground throughout the whole wheat area of Western Canada full of moisture. This, followed by a very wet spring, waterlogged the soil, and when the dry, warm weather of July came, the evaporation of soil moisture was much more rapid than had there not been an excess of water in the soil. The wet, backward spring delayed seeding operations, and the July drought caught the grain just as the heads were forming. On thin, light soils the crops suffered most, and on such the yield will be light. Loamy, moist soils stood the season well, continuing the supply of plant food throughout the season, and producing heavy, well-filled crops. Owing to the late seeding, the maturing season has been later than usual, causing much anxiety in some quarters for fear of frost. The bulk of the crop has, however, been cut without injury, and the total yield, as estimated by the Dept. of Agriculture for Manitoba, will be slightly above the average. Below is a synopsis of the Government report:

District.	Acres.	Average yield.	Total bush.
North-western	86,920	35.12	3,042,620
South-western	196,020	42.67	8,364,173
North Central	90,160	38.66	3,485,585
South Central	111,156	41.4	4,601,858
Eastern	90,880	38.5	3,498,880
Province	575,136	40.	23,003,126
Dec. report of 1898	514,824	33.6	17,308,252

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District.	Acres.	Average yield.	Total bush.
North-western	18,590	28.15	523,308
South-western	35,640	30.45	1,085,238
North Central	33,840	30.03	1,016,215
South Central	55,842	32.14	1,794,761
Eastern	39,000	28.55	1,113,450
Province	182,912	30.25	5,532,972
Dec. report of 1898	158,058	27.06	4,277,927

Area in crop.	Average yield.	Total yield.	
Flax	21,780	13.6	296,208
Rye	3,217	20.4	65,626
Peas	1,366	19.5	26,637



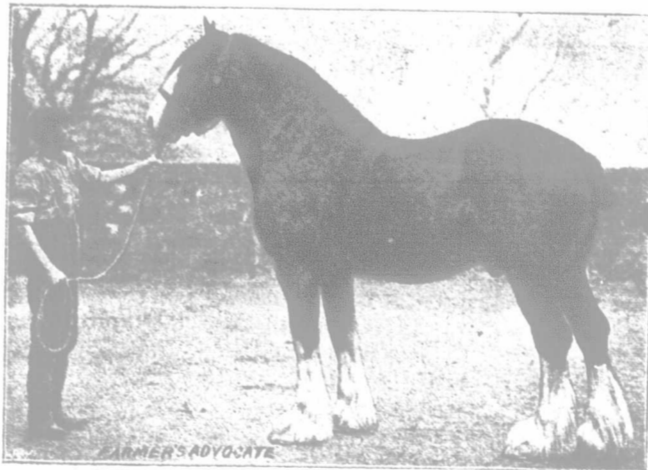
BARON'S PRIDE (9122).

The most successful Clydesdale sire of the day.

1899 total grain crop	1898	
62,429,335 bushels.	47,345,664 "	
Breaking.		
District.	Acres.	Summer-fallow.
North-western	27,850	43,053
South-western	61,911	230,539
North Central	22,688	61,448
South Central	25,544	53,200
Eastern	13,488	23,600
Province	151,490	411,840

It is estimated that 8,000 men are required to assist in securing the harvest, and the C. P. R. has made great efforts to secure the necessary help in Eastern Canada.

Throughout Manitoba, and particularly the eastern part, the weather during haying has been very showery, and considerable difficulty has been experienced in securing a supply of hay of good quality. Pasture has been exceptionally good, and stock of all kinds have summered well. Cattle have as a rule been free from disease, and in the



HIAWATHA (10067).

Clydesdale stallion. Winner of the male championship at the Highland Society's Show, 1899.

dairy sections the milk flow has been well sustained; and where cheese or butter factories have been in operation the season has been favorable for a large output. Prices have also been good. More attention is being given to hog-raising, and yet, so completely did people go out of hogs in the winter and spring of 1898, that as yet there does not begin to be sufficient hogs to meet the local demand, while Ontario hogs have actually been going through to the Kootenay market.

ALBERTA.

Alberta has had a season of unprecedented rainfall, making conditions entirely new to the ranchers and settlers. From the Medicine Hat News we take the following extract:

"The continued wet weather is throwing the ranchmen's calculations for summer work all out of time. Haying, beef hunting and shipping, and general winter preparations, will all be thrown

into a bunch, and there will be a rush of work as soon as the weather settles. The grass on the prairie is as green at the middle of August as it was at the beginning of June. No one in the range country ever saw such an abundance of grass in this section. If the weather clears up and the grass cures before the frost comes, an excellent winter pasturage is assured. Green grass for so long a period also furnishes protection against prairie fires, and will shorten the season during which it is necessary to look out for the devouring element. The News never makes any professions to this being a farming district, except with irrigation, but this year in this district crops of grain have been raised by some of the ranchers which cannot be beaten anywhere in the whole North-west."

The green, sappy grass has prevented the beef cattle from ripening, as stock shipped off soft, washy grass shrink badly on the road.

Neepawa Summer Fair.

The first summer fair under the direction of the Beautiful Plains Agricultural Society was held at Neepawa on August 8th, 9th and 10th, previous fairs being held in the fall. As a result of the change of season, or the extra exertion put forth by the management, there was a marked improvement in the number of exhibits. The main building was well filled with grain, roots, vegetables, small fruits, dairy products, ladies' work and fine arts. There was a large entry of wheat and good samples shown. Mr. P. M. Stewart was successful in winning the special prize of \$25 offered by the Union Bank for 11 bushels Red Fyfe wheat, on an even sample weighing 64 pounds to the bushel. He was closely followed by A. Willerton, on a sample weighing 63 pounds. Mr. G. S. McGregor had on exhibition a large collection of grasses. The butter was a good exhibit—quality all that one could wish. There was also a large display of homemade bread—a credit to the makers. P. M. Stewart won first, and Walter Sealey second, on two-pound loaves; and Robert Buchanan first, and Walter Sealey second, on loaves made from Beautiful Plains Mill flour. In preserves, from native and imported fruit, the exhibit was excellent. James Hill and Mrs. Leech were prizewinners with worthy exhibits. The potatoes shown—three varieties—were all good. Mr. Sealey won first on Early Rose, and B. R. Hamilton first on half-dozen largest and heaviest. The upstairs of the building was devoted mainly to ladies' work, and they made a creditable exhibit. Mrs. John Smale had a collection of beautiful house plants—an exhibit in itself. In ladies' work, Mrs. Leech, George Brydon, A. Dunlop, and Miss Lily Hamilton were among the chief prizewinners.

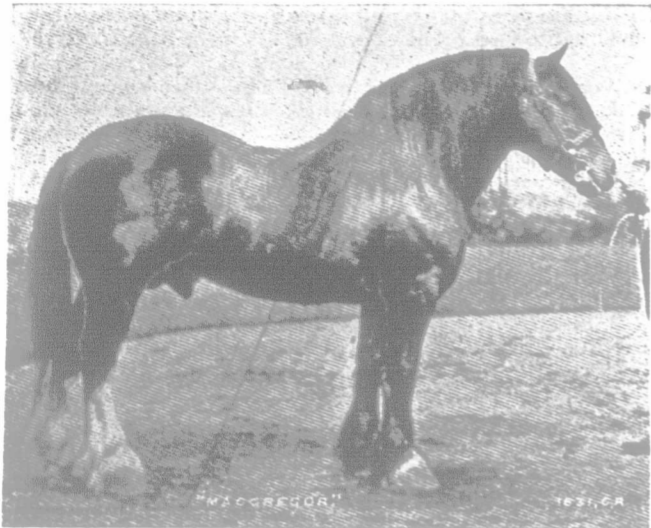
Horses were out in good numbers, and a good lot. In heavy draft stallions, S. McLean, of Franklin, showed a good Clyde in Pride of the West, sired by Charming Charlie, his dam being Meg Merless, by Premier, by Prince of Wales. He was awarded first prize. J. T. Munro's Grove Ringmaster, a well-put-together Shire, with lots of get-up, was placed second. Grove Ringmaster, sired by Grove Ringleader, imported by J. D. McGregor & Co., was a winner in his class at Winnipeg for three years in succession. A well-matched team of pedigree Shire mares—Headon Flora and Florine—owned by J. T. Munro, were placed first in heavy draft teams. This team have been winners at Winnipeg. J. W. Drysdale won first and second on brood mares with foal at foot. In agricultural horses, Harmon Lyons won first on a team of very useful horses. In carriage horses, Hugh Stewart, Arden, had out some good things, and won a number of red tickets. He exhibited a nice Yorkshire coach stallion, Golden King, sired by General Gordon. The Thoroughbred stallion, Rumpus, owned by R. S. Fulton, Brownsville, Ont., and the B. P. Horse Breeders' Association's Standard-bred Pliny, by General Stanton, both did credit to the light horse exhibit, being brought out in good form, and showed plenty of style and action. John Jackson was awarded first honors on a sweet single driver in harness, and Alex. Keachie won in the walking team match with a team of rapid movers.

Cattle exhibit was not large, yet a number of good ones were out. James Robertson, of Glendoe, showed a splendid pair of Herefords in Lord Glendoe and Samson of Ringwood, which he purchased from Wm. Sharman, Souris. Mr. Robertson also showed a young Hereford heifer and calf. In Shorthorns, Walter Card showed Smithfield Leader, bred by John E. Smith, of Brandon. He has straight top and bottom lines and nice head, but is a little undersized. He was awarded first prize and diploma. Mr. Card won first and second on yearling and second on '99 calf, the get of this bull, and first on herd, bull and three females. Peter B. Robb also showed Shorthorn. A bull from his herd won second prize, and a year-old heifer was placed first; also first on calf. Mr. Robt. Scott, Neepawa, another exhibitor in this class, came in for a share of the prizes—first on aged cow, second on herd, second on bull and heifer calf being won by him. In grade Shorthorns, R. Scott, J. B. Irwin, and P. B. Robb were the chief exhibitors. In Jerseys, H. R. Keyes, of Midway, showed a Jersey bull, Fitz Hugo, bred by James Bray, Longburn, and out of a cow with a high test record. This bull was awarded sweepstakes over all milk breeds, and a young calf sired by him was awarded first place in his class. Mr. Keyes was first on Jersey cow, and P. B. Hamilton second, the latter winning first on a nice Jersey calf. The Hol-

steins and Ayrshires were few in number. J. H. Irwin was awarded first on Holstein bull, and M. B. Halpenny on Ayrshire. A thick-set, promising young Polled-Angus shown by Charles Lee was awarded first prize.

Sheep.—Only a few were shown, Messrs. J. A. McGill and David Coulter, Jr., being the exhibitors.

Berkshires.—This department was well filled with as nice and even a lot of Berkshires as are seen at any local fair held in Manitoba. J. A. McGill was the chief exhibitor, winning first prize on a boar one year and over, sow one year and over, boar and sow under one year, boar and sow any age. Included in this exhibit were the following: Charmer 2nd, an excellent sow, with great length and depth of side, with full, deep hams and a fine head. She was purchased from the J. G. Snell



CLYDESDALE STALLION, "MACGREGOR" (1487).
Died July, 1899, in his twenty-second year.

estate, and is as handsome a Berkshire as can be found in this Province. The stock boar, Fitz Lee, made an enviable reputation in eastern showings before coming to Manitoba, and has proved an excellent sire in Mr. McGill's herd. The two-year-old boar, General Booth, was awarded first place and diploma. He is a lengthy, deep, level fellow, sired by a McKenzie-bred boar, out of Lady Clifford, of Coxworth breeding. Rosamond, a large, even sow, was awarded second place as sow and litter; her second litter this year. She is an excellent brood sow, as her young ones show, and is a profit to her owner, as she never fails to raise two litters each year. She is by Snell's Enterprise. Nora 1st, a particularly good sow, but thin in flesh, owing to having raised a litter of pigs. A spring litter from Rosamond, sired by Fitz Lee, were also an attractive addition to McGill's exhibit. The youngsters were well up in flesh and nicely proportioned, having good length and depth, nice heads and hams. Out of this young litter the first and second boar under one year were chosen. Harry R. Keyes, of Midway, was awarded first place on Lady Clifford, a smooth, low-set sow of Coxworth breeding, with a litter of five strong, well-fleshed youngsters, sired by a boar from Brown, of Portage la Prairie. Thomas J. Bell showed two sows and a boar, bred by Brown; and Walter Card showed two nice grades, and a Berkshire sow of Snell breeding. James Laidler was a large exhibitor of Berkshires, and showed some very good ones. He won a number of prizes—second with boar one year and over, second on aged sow, and second on boar under one year.

Mr. James Robertson showed Poland-Chinas. The foundation of his stock was purchased from D. Fraser & Sons, of Emerson. He won first on aged sow, on sow and litter, and on aged boar.

The exhibit of poultry was small, yet there were some good specimens of different breeds on exhibition. Pekin ducks were shown by R. Chisholm, and geese by Wm. Millar and H. Stevens. Brown Leghorns, the cock imported from New York, shown by H. R. Keyes, were first prize winners. Light Brahmas were shown by James Skelding, and Plymouth Rocks by J. A. McGill.

Upon the whole the Neepawa Fair was a splendid success, and President G. S. McGregor, Sec.-Treasurer John Wemyss, and the other officers, deserve congratulation at the result of their first summer fair.

Death of Mr. James Cooper.

We regret to learn from a press despatch of the death, on August 18th, in his 60th year, of Mr. James Cooper, of Kippen, Ont., well known to many of the readers of the FARMER'S ADVOCATE as an enterprising importer and successful breeder of registered Shropshire sheep. Mr. Cooper was born in the Township of Tuckersmith, on the farm adjoining the Village of Kippen, on August 26th, 1836. He was a man of fine physique and of more than ordinary intelligence and good judgment. He was frank, truthful, upright and honorable in all his transactions, and lived so that he secured the respect and confidence of his neighbors and of all who knew him. In addition to his many sterling qualities, he was also very kindly and genial in disposition and manner, and thus made hosts of friends. His aged and venerable mother, two sons and seven daughters are left to mourn their loss.

Through Southern Manitoba.

Without visiting South-western Manitoba very little idea can be had of the wheat-growing capacity of the Province. The crop acreage of the south-western statistical division far exceeds any other. Along the south-western branch of the C. P. R. magnificent crops could be seen, and on August 15th the ripening was well advanced, binders being at work in many fields, especially on the lighter soils. Generally speaking, the crop is wonderfully good; lightish on some thin soils where the dry spell that followed the wet growing season took out all the moisture, and, of course, light on land poorly farmed. As usual, good farming and thorough cultivation stand out conspicuously ahead of less careful preparation. During the past few years a wonderful improvement in the summer-fallows is distinctly noticeable. More pains appear to be taken in plowing, and surface cultivation is becoming more general, in order to encourage germination of weed seeds, destroy them as they germinate, and by keeping up the soil mulch, conserve moisture for the benefit of the succeeding crop. Of course on light and drifting soils there are great disadvantages to *fining* the surface, and the necessity of seeding down to grass to get root fiber into the soil, which will effectually prevent drifting, is becoming more and more apparent. As a rule, this year, there is a marked freedom from weeds in this crop, and there will be little complaint about handling dirt at the elevators this fall. With the exception of, perhaps, a few spots, the land along the Souris River is all excellent wheat land, mostly a sharp, easily-worked, warm, early soil.

MELITA DISTRICT.

Prettily situated on the north bank of the Souris River lies the prosperous little town of Melita, surrounded on all sides by good wheat land. Southward, on what is locally called the "peninsula," a representative of the FARMER'S ADVOCATE recently visited a few of the farmers, among them being Mr. J. T. Lennox, who has about 125 acres of wheat on his three-quarter-section farm. His garden is, however, the feature of greatest interest; situated on the steep banks of the Souris, with boating privileges and nicely sheltered walks and retreats among the natural shrubbery of the river banks. On the deep, rich bottom lands, closely sheltered on all sides, is a garden plot, where tomatoes, corn and other vegetables are growing in richest profusion. Above, on the higher slopes, with western exposure, are plots of small fruits, etc., sheltered by belts of maple, a number of hedgerows of which encircle the grounds and buildings. Mr. Robt. Gifford, on the adjoining half-section, from the very evident signs of good farming, and good management about the farm buildings, garden and crops, is not only making a success of farming, but a very comfortable home. A little further up the river Mr. John Williams, who always takes a prominent part in local Institute work, farms a good half-section, having over 100 acres of wheat and 65 of oats, barley and millet. Mr. Williams has a small herd of beef grades, headed by the Shorthorn bull, 4th Earl of the Manor, a four-year-old, bred by J. T. Gibson, of Denfield. Nearer the town, again, lives Mr. D. J. Dobbyn, Reeve of Arthur, and his two brothers. Northward of the river, for a number of miles, stretches a fine wheat district. Adjoining the town, to the east, with a beautiful situation on the river banks, is Dr. Davidson's farm, and on the west Postmaster R. M. Graham works a half-section. About the buildings, an illustration of which appeared in the FARMER'S ADVOCATE years ago, a beautiful grove of trees of many varieties not only adds adornment and comfort, but serves as an example of what may be accomplished. The native maple, ash, poplar, elm, spruce, and many shrubs go to make up the groves and hedges. Mr. Graham had 15 acres of fodder corn, one of the best fields we have seen in the country. North of the town, Mr. B. Underhill, Dominion Homestead Inspector, farms a half-section of excellent land on the banks of a deep coulee. The crop consists of 145 acres of wheat and 35 of oats, with 75 acres of summer-fallow. A Sylvester weeder was used this spring with most satisfactory results. It was kept going almost continuously, killing crop after crop of weeds as quickly as they germinated, without injuring the wheat in the least. Mr. Robert Oxley farms an adjoining section, and had one of the best pieces of oats seen on the trip. Mr. R. Edmondson, Mr. Cole, and Mr. Thos. Hope are also prominent farmers in this neighborhood. Mr. Edmondson's grounds are very attractively laid out with drives and lawns, bordered with trees. His vegetable garden is located in a circle surrounding what is known as a "pot-hole." A bunch of willows grow in the center, and catch lots of snow. The soil is rich and moist, and the luxuriant growth of vegetables is evidence of the suitability of the location. West of the town, A. M. Campbell, M. P. P., farms a whole section, and adjoining him on the north and west, J. J. Anderson and sons have some 1,200 acres of wheat, besides a large area in oats and summer-fallow.

ELVA.

This little town has only recently sprung into existence; has now four standard elevators, stores, etc. It is situated right in the center of a fine wheat-producing country. Everywhere are immense fields of wheat, with every prospect of big

yields. Big farms are the rule in this district. North of the town are, among others, Jas. Modeland, Jull & Sons, Stratton Bros., Sturgen Bros.; and to the south, W. A. Robinson, Skelton Bros., the Furtneys, Stirlings, and many others. Next the town, to the south, Mr. Jas. Bummell farms a quarter-section, and has devoted considerable attention to tree-planting and gardening. He has now the house well enclosed in a heavy growth of maples, with a few ash, cottonwoods, spruces, cedars, pines, caragana hedges, native plums, etc. An excellent vegetable garden and a fine lot of small fruits are also grown. These little green spots here and there among the great wheat fields give one a glimpse of the wonderful beauty this country will present when every home is adorned with plantations of trees, shrubs, fruits, etc. And the day is not far distant.

BOISSEVAIN.

From Deloraine to Killarney the crops are almost universally heavy. In driving south of Boissevain there was a remarkable evenness in the quality of the crops. Throughout all this district a marked advance is evidenced by the number of fine barns that are going up. Boulder stone is plentiful on the banks of the numerous ravines, and these are being turned to good account in stable walls and house foundations. Time being limited but few calls were made. Along the road travelled good substantial barns were noted at the following places: W. J. Armstrong, J. McCausland, S. Oaks, J. Fisher, Wm. Ryan, and J. G. Washington. Mr. Ryan is well known in connection with the Provincial Dairy Association. He has three quarter-sections, 200 acres of wheat, 85 of oats, and 70 in summer-fallow; and his son, N. J. Ryan, has 200 of wheat, 200 in fallow, and 70 of oats. Mr. Ryan has a fine stone basement barn, with windmill, etc. He aims to keep the temperature low in winter, and has satisfactory ventilation. Besides a few high-grade Shorthorns, several Thoroughbreds are kept. Mrs. Ryan, in addition to her household duties, finds time to keep up a fine yard of poultry, Bronze turkeys, Toulouse geese, Silver-laced Wyandottes.

Mr. Washington's buildings are well sheltered on the west and north by groves of maple, and the barn is of a neat design, on stone basement. His herd of Shorthorns numbers 18 or 20 head, among them some individuals of exceeding merit. (See Gossip columns.) Besides Shorthorn cattle, a few Clydesdale horses are bred. Mr. Washington farms quite extensively, and has been very successful in growing timothy and Brome grass.

PLUM COULEE.

Plum Coulee lies almost in the center of the Mennonite Reserve, has five grain elevators, and secures a good share of the trade from the well-settled and prosperous surrounding country. Mennonite villages dot the horizon east, surrounded with beautiful clumps of trees planted years ago; while as yet the progressive and business center lies unprotected on the bare prairie. Many of the Mennonites have left the "village" system and located on farms by themselves, and judging by external evidences of progress, are thus making decidedly more headway. One of the few Canadians farming in the vicinity of Plum Coulee is Mr. A. Wright, and he certainly does no discredit to his country. His half-section is first-class wheat land, bearing a very heavy crop, and his buildings and yards are almost without exception the neatest and tidiest to be seen anywhere. Dwelling house, stable, granary, piggery and poultry house, all are models of neatness and comfort. Prosperity is written in big letters right across the face of the whole farm.



FILLPAIL.

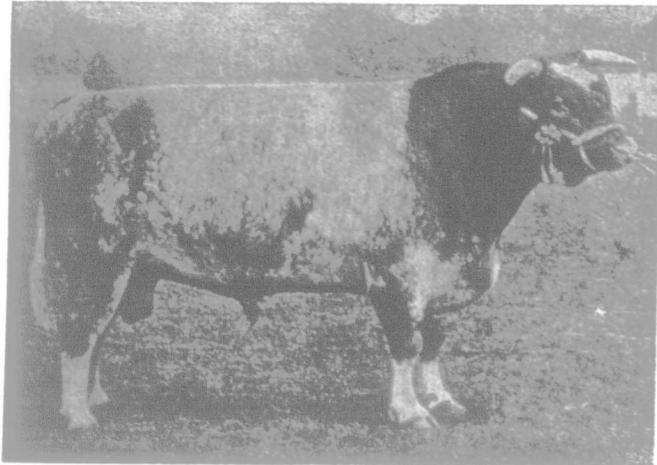
Grade Jersey. First-prize grade dairy cow for the last three years at the Winnipeg Industrial Exhibition. OWNED BY WM. SHARMAN, SOURIS, MAN.

Appreciated Abroad.

Under the heading, "Creamery Butter," we note the following in the Elgin (Ill.) Dairy Report: "We find in our esteemed contemporary, the FARMER'S ADVOCATE, an article on creamery butter by Mr. F. J. Sleightholm, of Ontario. We reproduce it in part, as it contains so much of good, sound, practical, everyday common sense as applied to the problems that are confronting our manufacturers of creamery butter in this country as well. It shows what has been done in Canada to produce the best results."

Pure-bred Live Stock Interests Prospering.

A careful review of the whole situation, from East to West, indicates that the pure-bred live stock industry of the Dominion is now enjoying an era of very great prosperity. From all parts of Canada and points in the United States the demand for good pure-bred stock for breeding purposes is remarkably strong. It is peculiarly gratifying to note that it comes not only from men known as breeders, but from farmers generally. Prices, too, are satisfactorily strong and steady, but without the intermittent sensational figures that sometimes precede a relapse. Breeders have been compelled, through the steady drain upon



CORNER STONE (68406).

Champion Shorthorn at the Highland Society's Show, at Edinburgh, 1899.

their "studs, herds, and flocks," to import from Great Britain to a greater extent than for probably a quarter of a century past. All this is due to no organized effort to work up "a boom," but to a real known scarcity of stock over wide areas, the increasing demand for animal products, a more general recognition of the success of farming with live stock, and the great gulf of difference between the values of common and high-class quality, which is sustained by consumers constantly becoming more critical in their tastes. This fortunate condition of affairs for the breeder has the substantial backing of higher prices for farm stock generally, good horses being from thirty to fifty per cent. higher than three years ago, and the best export beef cattle bringing from \$5 to \$5.25 per cwt. in Toronto and up to \$6.50 in Chicago, bacon hogs selling around \$5.00, the country being scoured for sheep, which are moving out weekly in carloads and in smaller lots at paying prices, eggs and broilers high, July cheese at no less than 10½c. per pound, and butter in proportion! The outlook is indeed encouraging to those who are strengthening their sails to catch the breezes that are coming their way. The healthy condition of the live stock trade in Canada should serve as an inspiration to all breeders to further improve and to raise the standard of the quality of their herds and flocks by selection and the introduction of fresh blood from reliable sources through sires and dams of strong individual merit. If we are to hold our own, or take a higher stand in the competition for the best prices in the markets that are open to us, we must improve the quality of our offerings. Both the demand and the prices encourage us to do so.

That Canadian breeders are alive to the need of sustaining the supply is evidenced by the rapid increase in the number of animals imported within the past year, the records of the quarantine station at Quebec alone showing that since September, 1898, no fewer than 216 pure-bred cattle and 630 sheep of various breeds for Canadian breeders have passed through that port; and we have knowledge of several other consignments which came through the Maritime Provinces ports during the winter season, when Quebec is closed to this trade. Another satisfactory feature in the business is that more than ordinary discrimination has been observed by importers in regard to the quality of the stock brought out; and we believe the character of the importations this year will rank higher than those of any period in the last decade, which speaks well for the enterprise of Canadian breeders, and will tell for good in the improvement of the stock of the country. The present is an opportune time for founding herds and flocks of pure-bred stock and for grading up the general stock—a course which, if generally adopted now, will in a few years add millions to the value of Canadian farm products.

The Horseless Age.

A writer in the *Saturday Evening Post*, of Philadelphia, tells of a bright genius in that city who sees a fortune for capitalists in buying up horses to distribute at different points in buying off the streets the automobile, that are continually breaking down. He will have stations all ready harnessed, and when the horse collapses the millionaire owner will telephone to the nearest station for help. "Talk about the horseless age! Why," he exclaimed, "I foresee a new era commencing upon a new sphere of investment."

Summer Fair at Emerson.

During the first week of August, the Emerson Agricultural Society held their first summer fair. It was very successful, and the number of exhibits good. Attendance was also good. D. Fraser & Sons and Edward Davis exhibited Shorthorns, both taking a number of prizes. D. Fraser & Sons got the herd prize, and E. Davis the prize for the best bull on the grounds. In Ayrshires, W. A. Scott and James Massie were the principal exhibitors. T. B. Rehill exhibited Holsteins, while Jerseys were shown by M. Whitley and D. McArthur. The turn-out of horses was fairly good. In heavy breeds, R. J. Ross won in the stallion class; J. D. Baskerville, with brood mare and on a foal of '99, sired by James Hunter's Clydesdale, Pride of Balsam; J. W. McDonald, on draft team; D. Fraser & Sons, J. F. Dupuis, W. A. Scott, J. D. Baskerville, George Park and J. H. Van Wart were prizewinners in the General Purpose class. In the Carriage class, J. W. McDonald won on team; D. Fraser & Sons on one, two and three year olds, and also on foal; D. H. McFadden winning on single carriage horse. In the Roadster class, J. H. Van Wart won with a stallion; E. E. Bucknam on brood mare; Van Wart on a pair of roadsters; and Rehill on single roaster.

In swine, Berkshires were shown by L. Calder and W. A. Scott; Poland-Chinas by D. Fraser & Sons; Yorkshires by W. A. Scott and J. T. Dupuis. D. Fraser & Sons showed Shropshire and South-down sheep. Shropshires were also shown by Jas. Massie, and Dorset Horns by W. J. Whitley.

Repairing Pumps.

I would like to say a few words to your many readers on the above subject. To many, a pump is an implement which has to look after itself, or any fixing required is left till there is nothing else to do, which time does not come very often on the farm. As a result of such carelessness we often find that on a cold winter day the pump gives out, and then the owner wishes he had looked at it sooner. Sometimes a pump gets frozen up, and can't be used again all winter. There is nothing so annoying as a pump that won't work. It is not like the majority of farm implements that are used only a short season of the year and then put away. The pump is used every day of the year, and often twenty times a day, hence the importance of having it in good repair. Now is the time to repair the pump; if left till winter it can't be done as well, joints won't go together as well, and everything gets covered with ice. Then, again, a man can't do as much work with coat and mitts on, consequently it takes more time and costs more. Now is the time to have the pump put in good repair.

Brandon, Man.

H. CATER.

The Call for Weightier Clydesdales.

A noteworthy contribution in this issue is the letter of our Scottish correspondent to the Stock Department, dealing with the question of size or substance in Clydesdale horses. This important matter was brought to the front in our July 20th issue by the letter of Mr. David Burns, who suggested for discussion by our readers the Shire cross. Mr. Wm. Hendrie, Jr., of Hamilton, Ont., and others have since discussed the subject in vigorous fashion, and now we have the communication of "Scotland Yet," who speaks as a man having authority. As might be supposed, he gives no countenance whatever to the admixture of any "alloy," but intimates that anything needed can be attained within the established Scottish breed of draft horses, well conserved by the authentic stud books. He touches the delicate question of the fashionable blood lines, because it has been hinted that a too rigid adherence to these may be the real kernel of the problem. His letter will be read with widespread interest among horsemen. Horse-breeding has wonderfully revived, and now is the time to preserve it upon safe and profitable lines. We cannot have too much light upon the subject.

A Good American Corn Crop Assured.

The permanent success of Canadian farming is dependent on live stock rearing and feeding. The long-continued drought in many sections has made serious inroads upon the supply of fodders, and present prospects are that hay and coarse grains will be high priced for a considerable time to come. It is, therefore, satisfactory to note that the United States is assured of an abundant corn crop for 1899, on which the Canadian feeder can draw to supplement the home-grown supply of foods. The August crop report from Washington estimates the yield at 2,138,214,000 bushels, as compared with 1,924,181,000 in 1898, and the largest grown since 1896.

An Illinois Stock-breeders' Testimony.

SIR, Please send the *FARMER'S ADVOCATE* to Mr. Elmer Greene, Waukegan, Lake County, Ill. I think I can get two or three more to take it. Please find enclosed two dollars—one to pay Mr. Greene's subscription and the other to extend my paper for another year. I think the *FARMER'S ADVOCATE* is the best paper of its kind that I have seen. I have taken nearly all of the leading papers on farm and stock-raising, and I think it the best of the lot.

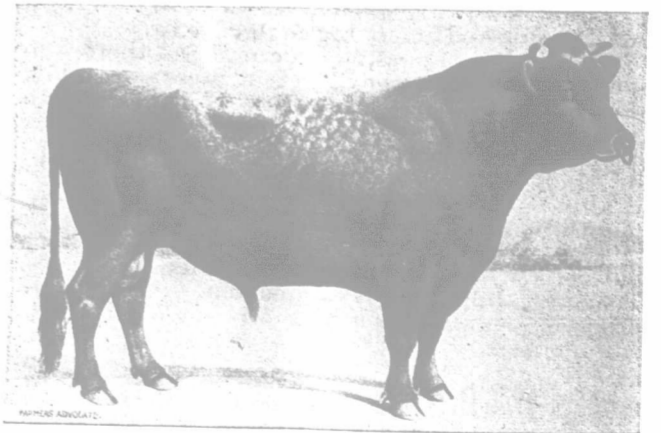
C. A. APPEL,
Libertyville, Ill., August 25th, 1899.

Our Scottish Letter.

DEATH OF MACGREGOR.

July 31st witnessed the death of the best-known Clydesdale stallion of the past ten years—Mr. Andrew Montgomery's "Macgregor" 1487. He died at Montrave, where he has been located for two seasons as stud horse with Sir John Gilmour, on Monday morning, of acute inflammation. He was a wonderful old horse, having during his long life of 21 years 3 months never had a "tout," and his last illness was his first. Macgregor was bred by Mr. Robert Craig, when tenant of Flashwood, in Dalry parish, Ayrshire, and was purchased from him when a yearling, by Mr. Andrew Montgomery, for £25. He was first at Dalry in that year, and at Kilmarnock a few weeks later he was placed second, for the first and only time in his long life, to Cete-waya 1400. Thereafter he was not shown until Dalbeattie Show, in October of the same year, when he was again first, and in the following year he was unbeaten, although exhibited at all the leading shows, including the Royal and the Highland. In 1881 he was first at Glasgow, and at the Royal, Derby, and in 1882 he was first at the H. & A. S. Show at Glasgow. Thereafter he competed only as sire of groups of five yearlings or two-year-olds, and for more than a dozen years was invincible in this capacity, being only once placed second, viz., at Glasgow, in 1885. In fact, until the stock of Baron's Pride 9122, most of them out of Macgregor mares, appeared on the scene, the stock after Macgregor in such competitions was practically invincible.

Possibly no stallion furnished a greater number of horses to the American and Canadian markets, and his sons, like himself, are good-tempered, sound, healthy animals, while his daughters are proving to be amongst the best breeding mares in the country. Next to his singular healthfulness, Macgregor's great characteristic was his good temper. We have seen him, when twelve years old, led round the courtyard, at Threave Mains, by the mane, and he was to the last as tractable and placid in temper as a lamb. Too much stress cannot be laid on this point, and too little importance is attached by some men to sound constitution and good temper in a stallion. Generally the produce of Macgregor were distinguished by the same characteristics as their sire. We have never heard of an ill-tempered Macgregor horse or mare, and during the past twenty years we only once heard of an unsound colt by him. He was individually a typical Clydesdale—sound in the feet, clean and free from all kinds of disease or greasiness in the limbs, with a magnificent crest and splendid shoulders, rising nobly at the withers. His back was straight and his ribs well sprung and deep, and he had great leverage behind. He was, like his sire, Darnley, a magnificent walker, and could keep the best man living going for all he was worth, at a swinging walking pace. Adverse criticism confined itself to these points in Macgregor; his head was rather small and ponylike—in this he resembled Darnley; his hocks were rather much set, and, in consequence, his hind pasterns were possibly not as long and springy as Clydesdale fancy demands. This peculiar formation of hind leg was possibly more apparent in some of his produce than in himself, but it is generally recognized as the "Macgregor hind leg." It in no way hindered the usefulness of his stock, commercially or in everyday work; on the contrary, experts frankly avowed their preference for a hind leg formed in the fashion indicated; it gives a horse great leverage, especially in backing, and the Scottish two-wheeled cart, balanced on the horse's back, calls for the exercise of strength when being pressed in that direction.



GENERAL MARIGOLD 45486.

Jersey bull sold at Mr. Cooper's sale, Coopersburg, Pa., May 1899, for \$500.

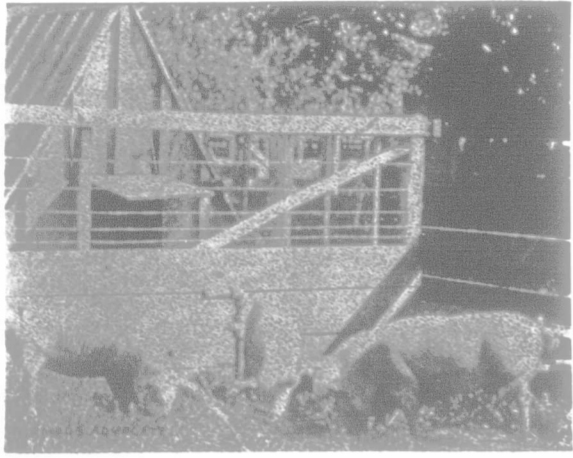
Macgregor was a right good Clydesdale horse, and his kind are "too thin sown."

SIZE AND SUBSTANCE IN CLYDESDALES.

Mr. David Burns' letter, in your issue of 20th July, suggests an important question, and one in which the fame of Macgregor is more or less involved. The chief criticism passed by the average buyer of cart horses on Macgregor's stock, is that the stallions are somewhat undersized. This is by no means a criticism of universal application. For example, the biggest two-year-old colt of this season—Drumflower—which won at the H. & A. S.,

at Edinburgh, is a son of the old horse, and there have been many other horses after him in which weight and substance were conspicuous. Still, there were amongst his colts undoubtedly a considerable number of neat, compact, short-legged, round-ribbed animals, with heads rather ponylike, and not too indicative of growth. This is a criticism which also applied to the produce of this famous sire, Darnley, and the greatest admirers of both will not deny that to some extent it is a valid criticism.

Mr. Burns' explanation of the alleged increasing fineness and lack of size, as well as slowness of growth in Clydesdales, is hardly likely to be accepted by Clydesdale breeders, and his suggested remedy—a Shire cross—would, so far as past experience has gone, be of no use at all. He attributes this increasing fineness to inbreeding, but draws an



GROUP OF YOUNG SOWS OF BACON TYPE. IN THE HERD OF MR. E. D. TILSON, TILSONBURG, ONT.

important distinction between "closely related" and "inbred." Many Clydesdale stallions are undoubtedly closely related. For example, all the Prince of Wales-Darnley crosses may be so criticised, and possibly the Baron's Pride-Macgregor crosses are open to the same criticism. But what does it amount to? The dams of Prince of Wales and Darnley were half-sisters (got by the same sire, Samson 741). What relationship would Mr. Burns say subsisted between Prince of Wales and a daughter of Darnley? Then take the other very popular cross at the present time, Baron's Pride was by Sir Everard, he by Top Gallant, and he by Darnley. Baron's Pride's dam was by Springhill Darnley, and he by Darnley 222. What relationship subsisted between the sire and dam of Baron's Pride? Obviously they were related—it may be closely—but what would the connection be called in the human family? If Baron's Pride be mated with a daughter of Macgregor, as has often been done, what relationship subsists between the two, seeing that Macgregor is also a son of Darnley? The late Mr. Drew experimented with the cross suggested by Mr. Burns as probably no man before or after him ever did. He selected Shire mares purposely to mate them with Prince of Wales 673, and he achieved many notable results. But he died in 1884, and no one continued his work. We are, therefore, able in some measure to form a judgment on the success of the cross in subsequent generations, so far as securing increase of weight and size is concerned. The most strenuous supporters of the Merryton colt will not affirm that Mr. Drew did not breed quite as heavy, if not heavier, horses from Prince of Wales and Clydesdale mares than he ever bred from Shire mares. Whatever advantage Mr. Drew's work has been to horse-breeding, there is nothing to show that it has resulted in the addition of any weight or substance to the Scottish breed.

But Mr. Burns may argue that he is not suggesting Mr. Drew's cross, but a cross the other way—that is, the use of the Shire stallion on Clydesdale mares. That, also, is not an untried cross in Scotland. Hendrie's Farmer's Glory and Galbraith's Tintock (your Canadian "Conqueror," imported by Simon Beattie) had a fair trial on Clydesdale mares—the former in Ayrshire and the latter in Stirlingshire; and although their vogue was before my day, I am disposed to think that Mr. Burns would find some basis for his theory in their history. When mated with the smaller, undersized farmers' mares, these horses undoubtedly left very notable stock, but the full benefit of their services has been secured to the Clydesdale breed. Their fame rests on their female progeny, and, without exception, all of them that were available were taken into the earlier issues of the Clydesdale Stud Book. If in spite of this the breed shows the characteristics alleged by Mr. Burns, there is small encouragement, even from his own standpoint, to resort to further experiments of that kind.

The truth is, what Mr. Burns complains of is not a matter of breeding at all, but of showyard fancy. There are plenty, and have always been plenty, of big, handsome, powerful mares in the Clydesdale breed; but the trend of public sentiment has for years been in favor of the very thing which Mr. Burns condemns as a defect—slow maturing. How that can be a defect in a bullock is intelligible, but it passes my comprehension to see how a big, rapidly-grown, soft-boned animal can for one moment compare for draft purposes with a hard-boned, wiry, slowly-maturing, short-legged horse. The big, overgrown boy, who is a man at seventeen,

is by no means, as a rule, the healthiest and most durable subject. You want draft horses to wear, and if that is admitted, the less the breeder has to do with a Shire the better. Letters like Mr. Burns' serve a useful purpose. There is a tendency in all kinds of breeding to separate the fancy from the utilitarian, and writers who advance views like those of Mr. Burns render admirable service by emphasizing the utilitarian side of things. Clydesdale breeders can never afford to forget that they are breeding cart horses, not van or express horses with hair on their legs. If they do this, they have plenty material in their own breed to enable them to produce horses of the right size and weight, and of the best wearing material.

"SCOTLAND YET."

Why Do we Take the "Farmer's Advocate?"

BY A CORRESPONDENT.

There are at least three hundred and sixty-five reasons why every farmer should take this best of farm journals. (I have examined dozens of farm papers, more or less, and find none quite so good.) I have only time for a few reasons, but it will not be hard to discover one every day in the year.

We take it because it is right up to date in every department and is so *seasonable*, as well as being properly *seasoned*. We get just the information we require in each number, and just at the time we need it. Stock-feeding—all kinds of it—and marketing in the right time, butter and cheese making, care of manures in the winter and spring, care of breeding stock and colt- and calf-rearing just as we need such information; haymaking in haying, harvesting, methods of spraying in the spring; corn cutting and curing in the early autumn, silo-filling, preparing ground for wheat, etc.—each work in its season.

There are farmers and farmers who have lost enough money this year, through not reading, and practicing what they read, in FARMER'S ADVOCATE, to pay a lifetime's subscription to it.

One man lost a colt and its dam, and others paid out several dollars to a V. S. for colt treatment, when, had they read and followed the plain and concise directions in F. A., this would have been saved.

Some have had patented lightning rods erected. Had they been one of "Our Folks" they would have saved by constructing equally as good, probably better, described in F. A., for much less money.

One man had a sick cow with an ailment which he pronounced "hollow horn." He split her tail and inserted onions, salt, and pepper. The virtue did not reach as far as the horn when the cow died. Had he read F. A. he would know that such diseases and treatment belong to other ages. F. A. gives advice in such cases that would probably save the cow.

Another paid 70 cents a rod for getting fence built, and now, less than three months after, the posts are all loose. Had he read F. A. he would have set his posts and braces according to the tried and proved plans of the best farmers in the country.

Others raise the most miserable specimens of calves and other stock and poultry on costly food often when they could have better animals, which would bring in many more dollars, if they would follow the ADVOCATE'S directions.

Some put up tons of inferior hay, yet F. A. tells how to properly cure it; while yet others cannot raise much to put up, and others waste time and money with unsuitable seed and work their land in the very most unsuitable way. And all the time the ADVOCATE is describing how and what is best for each district. And still others throw away money on frauds which have been exposed months before in FARMER'S ADVOCATE. As an old reader, it is but right thus to acknowledge the good services of your paper to farmers, "Lest we forget, lest we forget," to use the Kipling refrain. GYRA.

A Light Crop of Fall Wheat.

The August report of crop estimates for 1890, as compiled by the Ontario Department of Agriculture, gives the acreage of fall wheat in the Province as 1,049,681 acres harvested, yielding 14,201,314 bushels, or an average of 13.5 bushels per acre. Last year, 1,048,182 acres gave 25,158,713 bushels, or 24 bushels per acre. The average for the seventeen years, 1882-98, was 900,382 acres, giving 18,442,511 bushels, or 20.5 bushels per acre. The yield for 1890 is, therefore, an abnormally low one. There were 214,785 acres of fall wheat plowed in the spring, or over one-sixth of the acres sown. The estimates of other grain crop yields are well up to the average of the last seventeen years.

PETER SMITH, Grey Co., Ont.: "I see no agricultural paper that I like as well as the ADVOCATE. I think it leads them all."

Castration Without the Knife.

In buying feeding lambs one is very apt to get among them a few ram lambs, or in his own flock he may have been so careless as to allow some late-dropped lambs to go uncastrated until fall, or he may have a ram that he does not wish to use again. These cases call for emasculation in some way. Castration, be it ever so carefully performed, is dangerous in the sheep after his lambhood is passed. The operation of turning is not difficult—is safe, sure, and makes nearly as nice a wether as does castration. While it is easier to learn this process by personal instruction, yet anyone can do it who will follow closely these directions.

The assistant holds the sheep in a sitting position. The operator grasps the scrotum or bag, and by squeezing it firmly forces the testicles clear out of it and up into the sheep's groin, one on each side. Be sure that the testicles are entirely free of the scrotal membranes; it requires a little force to produce this separation. Now bring down one testicle and turn it squarely upside down, as shown in the cut. The cord is now alongside the testicle and attached to the (now) lower end. Holding it very carefully so that it will not slip, you must turn the testicle three times around the cord, or the cord around the testicle, and when this is done, keeping very careful, hold that it may not untwist, you push the testicle back up into the groin, where it will remain. Repeat the operation with the other side. This cannot be done with young lambs. There is nothing more to be done to the sheep. He will be very stiff for three days and then will do very much better than he would as an entire sheep. The secret of this is that the twisted cord contracts and holds the testicle from coming down into the scrotum, and the circulation being cut off from the testicle it withers away to a large extent and the scrotum also becomes somewhat smaller.

Raising Bacon Pigs on Annandale Dairy Farm.

Annandale Farm, owned by Mr. E. D. Tilson, Tilsonburg, Ont., has become famous for its extraordinary working dairy herd of 55 cows, that in 12 months and 3 days made the phenomenal average record of producing 11,472 pounds of 3/4 per cent. milk. It may be remarked, too, that this wonderful herd of largely grade cows were not selected from other herds and paid for at extreme prices, but it has been very largely built up from a foundation stock of grade Shorthorns, intelligently selected and crossed with Holstein sires of high-producing ancestry until the present results have been secured. Our readers are also aware that the development of the heifers and the breeding of the cows have been directed with the same intelligence and enterprise as characterized the selection and mating of the breeding stock.

Nor is it the dairy herd alone that absorbs the attention of the management of the Annandale Farm, as the bacon hog is here produced in as perfect and profitable a form as the dairy herd. In our issue of Feb. 21st, 1890, we portrayed and described Mr. Tilson's newly-constructed, elaborate and very complete piggery, but the bacon-producing



A PIGS' PARADISE ON ANNANDALE FARM.

industry soon outgrew even these extensive quarters, which are now chiefly used for brood sows and their young litters in the winter season, and the finishing hogs at all seasons of the year. The production of ideal bacon was recognized by Mr. Tilson and the farm manager, Mr. MacLeay, to require pig-gowing as well as pig-fattening, and to this end a system of outdoor ranges of one-sixth of an acre were set apart, and provided with movable 8x8 foot board pens, shown in the photographic illustration, giving a bird's-eye view of a portion of the yards. These pens have board floors, are battened up, and answer well for either summer or winter. The illustration, taken from the south, shows the door or entrance, which swings on a pivot at the top, so that the pigs can pass in and out by shoving the swinging door ahead of them. At the

back of the pen is a window, and near the peak is a 6-inch round ventilator, which can be closed if desired. Even in the very cold weather of last winter it was not found necessary to use much straw in order to keep the pens plenty warm enough. In fact, before the ventilating holes were put in the pens were too close. Each pen is banked around in the winter time a foot or two high with barnyard manure.

Especially for the summer season this plan of yarding and housing pigs is an ideal one, as there is no "piggy" smell noticeable, and the most healthful conditions prevail. Some of the yards have apple trees growing in them, providing shelter from the sun, which is secured by the others in their pens and along the fences. The yards have a complete watering system, and some of them were sown



MAGGIE 333.

First-prize Tamworth sow at the Winnipeg Industrial. OWNED BY L. A. BRADLEY, PORTAGE LA PRAIRIE, MAN.

with rape, tares, oats, etc., for green food, which provided a valuable supplemental food.

The brood sows used to produce the stock are 30 in number, which will be increased probably by five or six within the next year. Their breeding is an admixture of Poland-China, Chester White, and Yorkshire, with Yorkshire blood predominating. They are all very lengthy, deep-bodied sows, and were selected because of their favorable form and vigor. The boars used are pure-bred Yorkshire, of the best obtainable type, and from the form and thrifty condition of the litters, it would seem as though little improvement could be made upon the mating practiced. The bunch of four sows portrayed represents selections from the herd that are to be put into the breeding pens. They are about three months old. The illustration hardly does them justice, but it shows their length and thrifty look. They are in nice growing condition and should prove satisfactory as matrons. Two of them are pure-bred Yorkshire and the others are from a half-bred Yorkshire and Poland-China sow and Yorkshire boar.

Two Litters a Year.—While sows farrow twice a year and at all seasons, it is arranged, as far as possible, to have a large number of litters farrowed in February and March, so as to be ready for market in August, when the price is usually high. During the first two weeks of August, this year, there was shipped from the farm \$500 worth of pigs, averaging 180 pounds, and before September 1st \$500 worth more will have gone out from the pens. They were sold alive, at 5½ cents per pound. Besides these, there were some 300 young growing pigs in the paddocks and pens, which will be ready to go forward at six to seven months old. It is found that the sows that are allowed their liberty during pregnancy farrow large, strong litters, as the litters suckling at the time of our visit averaged about 10 living pigs, which is quite enough for a sow to rear well.

How the Pigs are Grown.—As already mentioned, the sows farrow in the large new piggery, which can be heated by a stove in the cold weather. From May 1st to October the litters are turned into outside yards, when two weeks old, to get earth, exercise and freedom. They are weaned when from six to eight weeks old, according to the way they are eating. They are kept in the one-sixth-acre paddocks to grow until about five months old, when they are put into the main piggery with fair-sized yards attached. During the finishing two weeks they are housed in roomy pens, without yards, but Mr. Tillson would prefer a little outdoor exercise even then, if it could be conveniently secured. When a shipment is made the pigs of different ages are moved up, so that some are always in preparation for the block and approaching that destiny.

The feed the pigs receive varies somewhat, according to the season and the condition of the feed market, but Mr. MacLeay believes firmly in the virtue of a balanced ration for all classes of stock, and compounds his rations with that in view. The brood sows get slop made from bran, shorts and a little corn, mixed twelve hours ahead, and fed warm in winter. They also get mangels in winter, and such green food in summer as alfalfa, green cuts and peas, tares, rape, etc. During the coming winter cut clover hay will be steamed and fed along with the slop. When the litters are weaned they get skim-milk slop with shorts, bran, peas and corn meal, fed four times a day. The aim is to keep the pigs growing as rapidly as possible, without putting on too much fat. All the growing pigs are fed 1½ rally with green food along with the grain, and as the finishing period approaches, the feed is made more concentrated by additions of peas and corn. Dur-

ing the last three weeks they are rushed as fast as possible, when they make rapid gains. The young sows are bred so as to farrow their first litters when 14 to 16 months old. They make good mothers of large litters, with strong constitutions. If they prove thoroughly satisfactory breeders and sucklers they are retained in the herd, raising two litters a year, till it is considered wise to replace them by selections from among their daughters. The system of raising bacon pigs of the most desirable type in the way we have outlined is within the reach of every farmer who has good judgment, and will set himself to the task with becoming energy. The cheapness, simplicity and healthfulness of the outdoor pens must appeal to everyone as far superior to the ordinary foul-smelling pig sty, or other extreme of allowing the swine to roam the farm, dooryard and garden at their sweet will, as we sometimes witness on Canadian farms.

Mr. H. Dudding's Sale of Shorthorns and Lincolns.

This event, which is one of the most noted of the annual sales of cattle and sheep in England, took place at Mr. Dudding's farm, at Riby Grove, Stallingsboro, Lincoln, on the 25th ult. Upwards of 500 visitors attended the sale, which was throughout most successful both for cattle and for sheep, the former this year being the most successful. Amongst those who attended the sale were Mr. P. L. Mills, who presided, the principal export buyers, the leading English and Scotch and Irish breeders, and the representative of the FARMER'S ADVOCATE, who was privileged to enjoy the generous hospitality of Mr. Dudding.

There was a strong demand for females, no less than seven being taken at high values for Argentine, including the cow that made top price; whilst for bulls the demand was beyond strong for the best specimens, and they were fairly scrambled for. Of the fifteen, no less than ten went to the Argentine, including all the highest priced ones. The sale of the bulls, especially, will be of great benefit to Mr. Dudding, whose grand herd of Shorthorns, numbering upwards of three hundred head, has never yet been so fully known and appreciated as it is worthy of. The highest price for a bull was \$1,800, and for a cow, \$430. Twenty-nine cows, heifers and calves sold for £1,184 8s., an average of £40 17s. 6d.; 15 bulls brought £1,535 2s., an average of £102 6s. 10d.; 44 head, in all, sold for £2,719 10s., an average of £61 16s.

The demand for the sheep was a useful one, and though there was no thousand-guinea ram nor nearly so many high individual prices as last year, the whole sale was a thoroughly good one, the top price for a ram being £231, and the average for the whole of the fifty sold was £33 5s. 6d.; whilst the ewes sold at prices from £26 5s. per head for the three unbeaten show ewes, downward, the whole 34 yearling ewes making an average of £8 4s. 10d.

"Separators," So Called.

We are in receipt of another letter regarding dilution cream separators, but can add little to what we have already published. If any farmer thinks he can get more cream, and get it any quicker, by dilution, he does not need to buy a high-priced, fancy can advertised as a "cream separator." All he needs to do is to add an equal quantity of water to the milk which he sets in an ordinary creamer or shotgun can. In the United States, especially, a great many forms of these so-called "separators" have been patented, and claims made for them which tests of dilution at experiment stations do not substantiate. Upon making careful inquiry into the subject, the FARMER'S ADVOCATE did not feel warranted in commending these "separators" to our dairy farmers, and refused to advertise them. They are not separators, as commonly understood, and to call them such is a misnomer. In this connection we note the following in a press bulletin from the Purdue (Indiana) Experiment Station:

In 1883 the Indiana Experiment Station, for two weeks, carried on an experiment on the influence of dilution of milk on efficiency of creaming. The results of this work, as published in Bulletin 44 of the Station, were that a greater loss of fat occurs in skim milk when dilution is practiced than with undiluted milk; that the loss is greater with cold than with warm water, and that by diluting the milk a poorer quality of skim milk for feeding is thereby produced. These results were in accordance with conclusions arrived at through similar experiments at the Vermont, Cornell, Illinois, and Ontario College Stations. The process of dilution was not to be recommended as a general practice. * * * The farmers and dairymen of Indiana are advised not to purchase these cans. The price, as a rule, is exorbitant, and the practice of dilution is undesirable. But if the farmer wishes to secure the same results advertised by the makers of these cans, he may obtain them by diluting his milk in a comparatively inexpensive round can, such as may be secured of any reputable dairy supply house, or can be made by any good tinsmith.

Just What we Needed.

The Wm. Weld Co. (Limited), Winnipeg: Your binder came to hand O. K., and it was just what we needed, for we much appreciated FARMER'S ADVOCATE. W. B. UNDERHILL, Melita.

Lincoln Ram Sale.

The first sale of Lincoln Long-wool rams of the present year took place at Lincoln on the 21st of August. The entry comprised 374 yearling rams, many of capital merit, but there were some considerable number hardly up to that standard that one would have expected to find at a sale where the reserve or upset price was \$28 per head, below which no ram was sold. Without doubt there is a check in the Argentine demand, and hence the present time is a most favorable opportunity for Canadian buyers to step in and take advantage of the lower values now ruling, before a shorter supply and increased prices again take effect. This certainly will be the case, for unless the newer ram breeders find remunerative sales they will revert to their former practice and castrate their lambs, and thus the supply of rams will be so reduced that the value will assuredly rise again, as the Argentine demand, even though it continues in reduced form, will be strong enough to keep prices, especially for those of tiptop quality, at a very high level. The great average of \$165, made by Mr. H. Dudding at his home sale, followed by the average secured by him at this sale for his five rams of \$372, shows that the value of the best rams is still very high. Mr. Tom Carswell's consignment, which numbered twenty-one, is still further evidence of this fact, for these rams were eagerly competed for at prices from \$1,000, and averaged for the entire consignment \$200 per head. Then, again, Messrs. Wright, whose flock is noted throughout the world as one of rare merit and quality, secured for their twenty an average of \$145 per head, and equally satisfactory was that secured by Messrs. S. E. Dean & Sons, whose twenty averaged \$126 per sheep; whilst the two best rams from Mr. Goodyear's flock made \$365 per head. Mr. Herd sold one at \$300, and Mr. Pears one at \$325. All demonstrate the high value of selected sheep.

VENDOR.	No. Sold.	Highest Price.	Lowest Price.	Average per head.
H. Dudding	5	\$ 800 00	\$100 00	\$355 00
Tom Carswell	21	1,000 00	70 00	200 50
Messrs. Wright	20	270 00	32 20	138 00
Messrs. Dean & Sons	20	250 00	40 00	120 25
H. Goodyear	10	375 00	40 00	112 00
T. Herd	7	300 00	40 00	90 70
J. Pears	15	325 00	37 50	75 75
F. Scorer	1	75 00	.....	75 00
G. T. Melbourne	6	250 00	37 50	73 33
C. Clarke & Sons	8	160 00	37 50	64 27
T. Brown	6	110 00	37 50	55 41
J. T. and A. W. Needham	10	105 00	40 00	50 00
C. Clarke	7	110 00	37 50	48 57
J. Anderson	5	45 00	37 50	41 00
J. B. Nelson	8	40 00	37 50	39 70
E. W. Howard	2	40 00	37 50	40 50
W. Drakes	3	40 00	37 50	38 33
Taylor Sharpe	9	40 00	37 50	38 05
W. C. Tong	2	40 00	37 50	40 50
J. Brocklebank	3	37 50	.....	37 50
G. Hoyles	3	37 50	.....	37 50
T. Atkinson, & Son	1	37 50	.....	37 50
Sir J. H. Thorold (Bart.)	1	37 50	.....	37 50
173 averaged				\$102 50

Fall Fairs.

Location	Dates
Dauphin, Man.	Sept. 19 and 20
Medicine Hat, Alta.	" 20 " 21
Yorkton, Assa.	" 21
Alameda, Assa.	" 27
Esterhazy, Assa.	" 27
Moosomin, Assa.	" 27
Meadow Lea	" 27
Calgary Industrial	" 27 and 28
Morden	" 27 " 28



PROUD VICTOR.

First-prize Berkshire boar (aged) at the Winnipeg Industrial. Sired by Baron Lee 4th. OWNED BY R. M'KENZIE, HIGH BLUFF, MAN.

Swan Lake	Sept. 27 and 28
Saskatoon	" 28 " 29
Kimistino	" 29
Cannington Manor, Assa.	" 29
Wetaskiwin, Alta.	" 29
Maple Creek, Alta.	" 29
Prince Albert	Oct. 2 and 3
Battleford, Sask.	" 3 " 4
St. Pierre, Man.	" 4
Oak Lake	" 4
Russell	" 4
Kildonan and St. Paul's	" 4 and 5
Baldin	" 5
Elkhorn	" 5
Wolseley, Assa.	" 10

Light and Heavy Meal Rations for Steers at the Ontario Agricultural College.

During the past winter there has been completed at the Ontario Agricultural College the third of a series of experiments in fattening steers. The object of the experiments has been to study the relative economy of feeding light, medium and heavy meal rations to fattening steers, when the feeding extends over a period of five or six months. In this third experiment no ensilage was fed. The meal used was composed of equal parts by weight of corn and oats. In addition to the meal, the animals were given a limited quantity of roots, together with what hay they would eat. The hay was of very inferior quality, and was cut and mixed with pulped roots a day in advance of feed-



BROME GRASS IN STOOK.

Brandon Experimental Farm. Sown first week of June, 1897, on spring-plowed barley stubble without a nurse crop, 10 pounds of seed (home grown) per acre. Volunteer crop and weeds were cut twice during the summer of 1897, and only a light crop of hay cut in 1898, as the stand was thin and weedy for seed. This year the yield was about four tons per acre. Photographed August 2nd.

The roots and hay were mixed in the proportion of 20 pounds of roots to 15 pounds of hay, and each animal was fed all it would eat of the mixture. All fodders were carefully weighed and recorded. The object was to feed only such foods as are available on practically every farm. Had ensilage been fed, or had a better quality of hay been used, no doubt the gains would have been larger.

The steers of the light-ration group were started on about one-third of a pound of meal per day per 100 pounds live weight, and this quantity was increased as deemed advisable. With the medium-ration steers the aim was to feed about two-thirds of a pound of meal per day per 100 pounds live weight. With the heavy-ration steers an effort was made to feed one pound of meal per day per 100 pounds live weight. It was found impossible, however, to keep all the steers up to this limit, so they were kept as near it as was deemed safe. The manner in which the rations were increased can be most easily shown by means of a table. The following table shows approximately the average daily meal ration per steer for each group during the different periods:

PERIOD.	Heavy ration meal per steer per day.	Med. ration meal per steer per day.	Light ration meal per steer per day.
	Lbs.	Lbs.	Lbs.
December 6th to January 3rd.....	10	8	4
January 3rd to February 1st.....	11	8	5
February 1st to March 1st.....	12	9	6
March 1st to April 1st.....	12.5	9	8
April 1st to May 23rd.....	12.5	9	9

The meal consumed by the heavy-ration group amounted to nearly nine-tenths of a pound of meal per day for every 100 pounds of the average live weight of the animals throughout the feeding period. The medium-ration group averaged two-thirds, and the light-ration group slightly over one-half of a pound of meal per day per 100 pounds of the average live weight of the animals during the feeding period.

The results, briefly stated, are as follows: The heavy-ration group made an average gain of 1.77 pounds per day, at a cost of 7.68 cents per pound of gain.

The medium-ration group made an average gain of 1.74 pounds per day, at a cost of 7.22 cents per pound of gain.

The light-ration group made an average gain of 1.62 pounds per day, at a cost of 7.21 cents per pound of gain.

It will be seen that while the heavy-ration group made the largest gain, the light-ration group made most economical gain, though the light and medium ration groups were practically equal in the latter respect.

It is a significant fact that in each of the three experiments, the heavy ration group made the most expensive gain. The average cost of a pound of gain in the three experiments is as follows: Heavy ration, 7.25 cents; medium ration, 6.69 cents; light ration, 6.53 cents.

It would seem, therefore, that when the fattening period extends over six months or more, the animals should be started on a very light meal ration, which should be increased as gradually as

circumstances will allow. In this matter the feeder must be guided by the rate at which his animals are gaining. The aim should be to have the animals ready for market on the day they leave the stable, and not the day before, if it can be helped. After a steer is finished he is fed at a loss, so that an effort should be made not to have him finished long before he is shipped.

No fixed rule can be given as to the amount of meal a steer should receive at the beginning, as much depends upon the condition of the steers. It is probable, however, that in any case it is not advisable to start animals on more than half a pound of meal per day per 100 pounds live weight. For a short feeding period no doubt this quantity would be small enough, and would need to be increased somewhat rapidly. For longer feeding periods the experiments described would indicate that a lighter ration to begin with, somewhat gradually increased throughout the feeding period, is the most economical.

It must also be borne in mind that the more attention paid to making the coarse fodders palatable, the better the results obtained. G. E. DAY. Ontario Agri. College, Guelph, Aug. 14th, 1899.

Improvements in Crop Growing.

To the Editor FARMER'S ADVOCATE:

I hold it to be the duty and privilege of every one to contribute for the public good whatever he can of information that will shed helpful light on the difficulties of farming,—and of living. It becomes one to do so with sincerity, modesty, and fearlessness. In this I am in accord with the known policy of your paper; and I therefore put in brief compass the main points of some of the subjects which I dealt with recently before the House of Commons Committee on Agriculture and Colonization. To do that, I subjoin some extracts from the official record of my evidence. You will observe that the statements in these extracts are quite different from the misrepresentations of them, and the inferences which have been put in their place or put after them, in the communication which appeared over the name of Dr. Wm. Saunders in your issue of June 15th. I think they—the statements and the truths they convey—will benefit the farmers of Canada. That is my faith; and, like faith in former years, has been abundantly justified by the results. JAS. W. ROBERTSON, Commissioner's Branch. Department of Agriculture, Ottawa.

THE USE OF FARMYARD MANURE.

"The fourth cause of small crops—the want of available plant food for crops that are growing—may be corrected by management, the rotation of crops and the application of farmyard manure."

"Everybody knows that if you have land particularly rich with farmyard manure, or other decaying vegetable material, in a wet season, the crops of grain do not ripen readily but keep on growing straw at the wrong time. That, in my opinion, was the main cause of the failure in the crops of wheat in the Maritime Provinces last year. The application of farmyard manure in the spring, followed by a wet season, had a tendency to make the straw grow too late and prevented the heads from filling with seeds."

"Here is a fundamental principle to guide in making a rotation of crops: Apply manure only for green crops and hay; and follow these by cereals sown in soil having a very fine tilth, since for them there is only a short growing season. That the early first part of it should be favorable is most important for the yield of grain."

"Application of farmyard manure directly for grain crops is almost always a wasteful practice; but put on for root or other green crops it puts and leaves the soil in the best condition for grain crops to follow. I do not contend for sowing grain on poor land, but for putting manure on for green crops and for grass and for hay, which take all the nourishment they require; and leave enough, and that in the best condition, for the growth of the succeeding crop of grain."

THE TWO PROCESSES OF INCREASE.

"In the growth of all plants that form farm crops there seem to be two processes that govern the increase; and the understanding of the principles of these will, I think, help any farmer and every farmer to form rotations for himself that will be exceedingly valuable; whilst without an understanding of these principles he will be always groping in the dark after the best methods. In the growth of plants one set of conditions make for increase in the size of the roots and the stems and the leaves. These are the vegetative part—the part of a plant that perishes utterly when the plant dies. There is another part of the plant that does not perish when the growth ends, viz., the seed that carries the life over to the next crop. The conditions which make for the enlargement of the roots and the stems and the leaves, do not make for increased production of seeds. That is to say, the conditions most favorable to the vegetative processes of the plant are not favorable to the maturing processes, but are almost the opposite. If you will allow me a parenthesis: The understanding of that principle, with the selection of seeds, will do more to improve farming in Canada than anything else I know of in regard to agriculture. The set of conditions favorable for continued increase in size of root and size of stem and size of leaf do not make for increase in the quantity of seeds, but rather for the opposite. The extension of the vege-

tative stages of development—the formation of roots, stems and leaves—is at the expense of the development of the reproductive parts—the seeds. Take the instance of a bunch of oats growing in a dung-hill; what happens? A very large root, a grossly large stem, broad long leaves, and very, very few seeds in the head. That is to say, the conditions that make for the continued enlargement of the root, the increase of the stem, and extension of the leaf do not make for an increase in number and weight of the seeds. This is an extreme case, but it reveals a principle."

"In some plants the farmer wants a large root and large stem and large leaf; and in others he wants only the seeds, the other parts being an unimportant and secondary consideration. An abundance of plant food, an excess of it if you will, early in the life of the plant, makes for the growth of roots and stem and leaves; and then after the plant is about full size, some difficulty in getting more of it, makes for the growth of seeds. If a man wants large turnips let him pile on the manure. You never saw too much manure on a turnip field, for the size of the turnips. That is quite unlike the bunch of oats on the dung-hill. Then you never saw a hay field over manured, so far as the growth was concerned. In the hay you want the stem and leaf; and in the turnip and mangel and carrot you want the root; therefore, manuring is the right thing for them. Besides, their period of growth and accumulation extends many weeks after the period of collection by ripening cereals has ended; and that at a time when the farmyard manure applied that season is most readily available; and when nitrification in the soil is most active."

RELATIVE PRODUCTIVENESS OF VARIETIES WHEN SOWN IN DIFFERENT LOCALITIES.

"The facts are, as shown by the Experimental Farms Report, 1898, that the variety of peas, Arthur, (46 bushels per acre) which was highest at Ottawa was the second lowest (23 bushels per acre) of all the varieties at Indian Head, N.-W. T.; and the variety, White Wonder, (20 bushels per acre) which was the lowest in yield of all the varieties compared at Ottawa, was second highest at Agassiz, B. C. (30 bushels per acre)."

"The variety, Harrison's Glory, (59 bushels per acre) which headed the list for productiveness at Brandon, Man., gave the lowest yield of all the varieties tested at Agassiz, B. C. (22 bushels per acre); and the variety, Creeper, (23 bushels per acre) which was at the very foot of the list of all the varieties tested at Brandon, Man., was included in the list of the twelve highest at Indian Head, N.-W. T. (43 bushels per acre). These are only instances, and the evidence of the whole of the lists is in the same direction."

"It is the most convincing evidence I find anywhere that the variety, in regard to productiveness, varies with the locality where it is grown, or varies in degree as it happens to hit the conditions of the locality, or as it adapts itself to them. Could anything be more convincing?"

PRODUCTIVENESS NOT CONSTANT IN VARIETY.

"There is much more evidence on the subject, all showing that the productiveness of a variety depends on whether it happens to fit into the conditions of the locality where it is grown, or adapts itself to them. Take for instance the relative place as to productiveness of some varieties grown on the Central Experimental Farm, Ottawa, and on the Experimental Farm at the Ontario Agricultural College, Guelph, Ont."

"Of 52 varieties of peas compared on the Experimental Farm at Guelph, Ont., a variety named



MERINO RAM.

Grand champion 1899 Show, New South Wales. Sold at the Annual Ram Sales for 500 guineas.

White Wonder stands at the head of the list for productiveness on the average of eight years' tests; it stands third on the list there for productiveness in 1898. The variety named White Wonder stands lowest on the list of the varieties compared at the Central Experimental Farm, Ottawa, in 1898.

"The variety Early Britain stands third lowest (55th) on the list of varieties of peas compared as to productiveness on the Central Experimental Farm, Ottawa, in 1898; whereas, it is the variety which gave the highest yield per acre of the varieties of peas tested by experimenters of the Experimental Union throughout Ontario in 1898; and it stands second highest on the average for eight years of

all the varieties grown on the Experimental Farm at Guelph, Ont.

"What is true of peas appears to be true also regarding other farm crops."

"First of all, allow me to supplement what I said in regard to the effect of change of locality and conditions of growth upon the productiveness of a variety to show that the variety as such does not maintain superior productiveness, except as it happens to hit successfully the conditions of the locality. It maintains the form, the color, the habit of growth and hardiness characteristic of it; but it does not hold equally productiveness except as the circumstances suit it. I said that last year—1898—65 varieties of oats were compared in five localities in Canada where the experimental farms are situated. The lists of the twelve most productive at



SOUTHDOWN SHEARLING EWES.

First at the show of the R. A. S. E., and first and champion at the show of the Royal Counties Agricultural Society. BRED BY AND THE PROPERTY OF EARL BATHURST, CIRENCESTER PARK, GLOUCESTERSHIRE.

each place included no less than 41 of these varieties. That made me think that the conditions under which a variety of grain is grown changes its relative productiveness so much that you have no constant superiority in any variety when the locality and conditions under which it is grown are changed. If the 24 varieties, which are not named in the five lists of 12 most productive, were among the poorest yielders on all the farms, they could be discarded. That is not the case.

"A variety which is at the head of the list at Agassiz, B. C., is at the very bottom of the list—65th—at Ottawa. Let me submit a table showing the relative place in the order of productiveness at the four other experimental farms of the 12 varieties of oats which were most productive at the Central Experimental Farm, Ottawa, in 1898:

RELATIVE PRODUCTIVENESS OF 65 VARIETIES OATS.

NAME OF VARIETY.	Relative place in order of productiveness on Experimental Farms at				
	Ottawa, Ont.	Nappan, N. S.	Brandon, Man.	Indian Head N. W. T.	Agassiz, B. C.
Hazlett's Seizure	1st	30	29	51	47
Joanette	2nd	52	42	48	58
Brandon	3rd	53	59	36	63
Oderbruch	4th	7	19	7	50
Golden Beauty	5th	39	31	33	10
Black Mesdag	6th	16	69	66	13
Early Golden Prolife	7th	36	18	14	49
Improved Ligowo	8th	62	43	55	28
Holland	9th	55	21	30	52
Russell	10th	57	46	37	41
King	11th	49	55	25	60
Abundance	12th	3	24	21	39

"Let me now submit a table showing the relative place in the order of productiveness at the four other experimental farms of the 12 varieties which were least productive at the Central Experimental Farm, Ottawa, Ont., in 1898:

RELATIVE PRODUCTIVENESS OF 65 VARIETIES OATS.

NAME OF VARIETY.	Relative place in order of Productiveness on Experimental Farms at				
	Ottawa, Ont.	Nappan, N. S.	Brandon, Man.	Indian Head N. W. T.	Agassiz, B. C.
Poland	53rd	31	65	24	59
White Wonder	51th	28	71	57	21
Siberian, O. A. U.	55th	19	40	16	48
Cronwell	57th	47	27	61	5
Rosedale	58th	41	33	2	31
Welcome	59th	37	33	54	55
Prize Chestnut	60th	6	56	50	66
Medal	61st	39	62	41	28
Rennie's Prize	62nd	42	3	33	33
Abyssinia	63rd	8	7	1	31
Prolife Black Tartan	64th	75	22	3	8
Danish Island	65th	2	44	13	1

"Again, if you run the eye along the line opposite each variety you will see there is no constant inferiority when a variety is grown in different localities in the same season. Varieties which are among the least productive in one locality are among the most productive in another locality. In fact, the very least productive variety at Ottawa is the most productive variety at Agassiz, B. C. The 3rd least productive variety at Ottawa—Abyssinia, the 63rd from the top—is the 4th most productive at Indian Head, N. W. T.; and is the 8th from the top of the list at Nappan, N. S. The variety—Rosedale—which is the 58th from the top at Ottawa, is 2nd from the top at Indian Head, N. W. T.

"Varieties of other classes of grain, wheat, barley, and peas, grown at the Experimental Farms in 1898, show similar changes in relative place in the order of productiveness."

A CHANGE OF SEED.

"What I want to say now is this, that so far as I can learn, and I will give you abundant proof in a moment, the sowing of seed in a new locality, a locality new to the seed, brings out the tendency to variation, evidently by the plant trying to adjust itself to the new conditions. If it succeeds in that effort, it becomes a suitable plant and suitable variety or strain for that locality. I have heard a great deal about the advantages of a change of seed; but indiscriminate change of seed is a dangerous practice; and the theory that seeds necessarily run out, and require to be changed from locality to locality, is misleading.

"Selection of seed from the best quality and most productive variety or strain in the locality, as seed for that locality, is the right plan and practice."

DOES SEED RUN OUT?

"That brings me to say a few words on the subject of whether a strain of seed, or a variety, will deteriorate in productiveness by being grown on the same farm from year to year. I submit some further evidence from the report of the Experimental Farm, of Guelph, Ont. If the different varieties of grain grown on that farm continuously for eight or ten years have deteriorated in productiveness, then there should be some evidence of a gradual decrease in the yield, independently of the fluctuations due to the season. On the contrary, the records of yields show that there is a progressive increase in the yield per acre of the varieties which have been grown for the longest period on the same farm. There are variations and slight exceptions to that, but that is the rule as shown by the records of yields."

SELECTION FOR THE PARTICULAR LOCALITY.

"I do not hold that variety has nothing to do with productiveness. It has a great deal to do with it. One variety is often very much more productive than another. To begin with, I would select the most productive variety or strain I could find in the locality. The point is that a variety very productive in one locality will not maintain its productiveness in another locality. The variety by selection will retain superiority in the same locality, but taken to another locality it may not do so. If you have a variety or strain that is succeeding in yielding large crops, further selection will maintain the superiority and improve it."

METHOD OF SELECTION RECOMMENDED.

"The safe practice for the farmers is to select large and heavy seed from any strain which is of good quality for the market, and which has been productive in their locality. A still greater improvement than that is practicable. The selection of seeds from the largest, earliest, most vigorous plants as they grow would give the very best seeds from that strain or variety. The power to overcome obstacles which is in evidence in the largest and most vigorous plants is worth seeking in the seeds from such plants.

"One day's work of selection when the crop is ripe would yield the farmer enough heads from the best plants for two bushels of cleaned seed. That should be cleaned thoroughly; and the small light seeds taken out by a stiff fanning and sieving. These two bushels (more or less) of selected seed should be sown on a plot of well-prepared fertile land. The crop from that will furnish seed for the general crop of the farm of that class of grain. It is important that that plot should be in the best possible condition for crop-growing. The productive qualities of those selected seeds are improved by being grown on land which bears large crops. Before the crop from the seed-grain plot is harvested, a selection of the heads from the most productive and vigorous plants should again be made. These furnish the seed for the seed-grain plot the succeeding year. The seed-grain plot itself should be one on which a well-manured root or green crop or a clover crop was grown the previous year. In a few years a farmer could grade up the strain of seed on his farm to yield from ten to twenty per cent. more per acre. Even if he does not follow that systematic selection, if he sows only heavy, plump seeds, from the largest yielding crop he can find in his locality, he will derive very great benefit.

"When I mention these percentages, what does 10 or 20 per cent., or 30 per cent., of increased yield in the crops over this Dominion mean? The value of the crops being about \$280,000,000, ten per cent. is \$28,000,000 a year. I believe we can get that increase in Canada by the means I have outlined today; that is my judgment in regard to the farmers of Canada in this work."

A Challenge from the Holstein Camp.

Under authority conferred at the annual meeting of the Holstein-Friesian Association of America, the board of directors has issued, through Secretary F. L. Houghton, Brattleboro, Vt., the following challenge:

The Holstein-Friesian Association of America hereby extends greetings to all associations of breeders of pure-bred dairy cows, and invites them to participate in a competitive prize contest for the production of pure butter-fat; such contest to be conducted upon the following general plan:

1. All tests and awards to be under the direction and control of a committee to consist of officers or representatives of agricultural colleges or experimental stations.
2. Each breed competing shall select one member of the committee.
3. All tests shall be conducted at the homes of the animals by a representative of an agricultural college or experimen station, and shall be made by employing the Babcock test.
4. Awards shall be for the highest production of pure butter-fat per cow, and for periods of not less than seven consecutive days.
5. Each association competing to contribute a like sum of money, not less than \$500 each, and from the aggregate sum so contributed the prizes are to be awarded.
6. Cows are to be divided into classes according to age.
7. It is recommended that four prizes be offered in each class, with not less than four cows in each class.
8. All tests to be made within a year from a date to be agreed upon; and all entries shall be made and prizes awarded within three months after the expiration of the test year.
9. The entries made from each breed shall be subject to the approval of a representative selected by each association.
10. All further details as to the division of the prize money, and necessary to carry this plan into effect, to be agreed upon by a committee consisting of three representatives from each association competing.
11. This proposition to be accepted by each association intending to compete, on or before the 1st day of December, 1899.

"San Francisco or Bust" --- Busted.

The following is very sad, if true, and we extend our sympathies to all concerned in promoting the "horseless age," especially the New York Herald, which, in the absence abroad of Mr. J. G. Bennett, shoots off in extraordinary tangents now and then:

"Mr. and Mrs. John Dyre Davis, of New Haven, Conn., who threatened to make 'Frisco or bust' on an automobile, have decided to quit. Mrs. Davis telegraphed to a friend here to-day that the automobile was partly wrecked, and that they had abandoned the trip. They are near Toledo, and will, they say, come home at once. The Stamford firm which manufactured the automobile has become disgusted at the idea of any attempt to cross from New York to California, and has declined to assist the tourists any longer."—Rider and Driver.



LINCOLN RAM LAUGHTON 235 GUINEAS 4613. Winner of first and champion prize, R. A. S. E. Show, Maidstone, 1899. THE PROPERTY OF MESSRS. S. E. DEAN & SONS, DOWSBY HALL, BOURNE, Lincs.

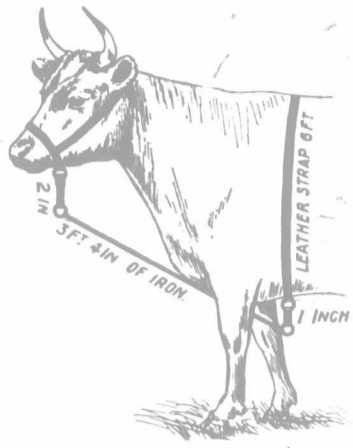
Harvest Excursions.

We have received the following despatch, dated August 26th, 1899: "The C. P. R. harvest excursions have brought in 10,846 people to this country—a good class of workers. All wanting work can no doubt find it. Many are women and old people, out to visit sons and daughters, sisters and brothers. It shows that Manitoba is growing."

JOHN H. PARLIAMENT, Prince Edward Co., Ont.: "I cannot get along without the ADVOCATE. It is always the first paper read by the family."

To Prevent a Cow from Sucking Herself.

To the Editor FARMER'S ADVOCATE:



SIR,—I enclose a sketch of a contrivance to prevent cows from sucking themselves. I tried about half a dozen different ways to stop a cow I have from sucking herself, and at last I tried this one, and I find it very successful. I went to my harnessmaker, and got him to make a halter for the cow's head, and a leather strap, six feet long, to go around just behind the front legs, and then I got the rest made of iron.

ARTHUR MILLS WILCOCKS.

Richmond Co., Que.

Worth Annexing.

A farmer, Mr. Laughland, in reporting his views of the Brandon Fair to his local paper, the *Hartney Star*, concludes with the following reference to the Brandon Experimental Farm:

"In addition to the fair, there is the attraction of the Experimental Farm. It is growing more beautiful every year, and possesses charms for the agriculturist, the apiarist, the stockman, and for everybody. It is an endless source of interest, beauty and surprise. The growth of the trees, shrubs and hedges since the corresponding week last year has been marvelous. It is a model farm, and there is a model man at the head, with a good staff.

"Eighteen years ago, when looking for land whereon to make a home, I went over the ground where the Farm now stands, and I would not have taken the land as a gift—to-day it is the garden spot of Manitoba. The transformation in ten years is a revelation of the capabilities and possibilities of the country.

"I had the privilege of associating with the members of the American press during their visit to the Farm, and I heard their private opinion of it—it is a high opinion: 'The Farm is worth annexing.'"

Don't Want Embalmed Bacteria.

There are some things that neither doctors nor professors can tell us; things which no amount of scientific argument will convince us of. One of these is the necessity, harmlessness or desirability of the use of preservatives in our food. We do not want it for ourselves or families, and we decidedly deny the right of any man, be he a Chicago packer or a small milk dealer, to compel us to swallow a daily dose of preservatives be they reputed never so harmless. Let us have the bacteria alive, and we will attend to the killing ourselves.—*Hoard's Dairyman*.

The long and severe drought which has prevailed in South-western Ontario will, if not soon broken by showers of rain, seriously interfere with the sowing of fall wheat. It would seem to be wise to wait for rain before sowing, as to sow where there is no moisture is risky. The land can be got into much better condition after rain, and wheat sown after rain grows more rapidly. It is well to be careful to not sow too deeply.

Cheese Booming.

Shortage of pastures, owing to drought, in many of the leading cheese sections, coupled with strong English markets, have sent prices kiting, as high as 11c., 11½c., and 11 9/16c. per lb. being paid at various Ontario markets during the past week.

Principle of Cream Separation--Comparison of Different Methods of Creaming Milk

Principle of Separation.—There are two methods of creaming milk: the *natural* or *gravity* method, or what is commonly spoken of as setting the milk, and the *mechanical* or *separator* method, in which the cream separator is employed.

In both methods the principle of separation is the same, depending upon a well-established law of nature, which may be stated as follows:

When a heavier and a lighter substance are mixed together and subjected to any outside force, the heavier substance moves as far in the direction in which the force is acting as the vessel confining it will permit of, compelling the lighter substance to move in the opposite direction, provided, of course, that the substances are of such a nature that they can exchange places, such as two fluids, or a solid and a fluid.

Now, milk may be looked upon as a mixture of a heavier and a lighter substance, the heavier being the *skim milk* or *serum*, and the lighter being the *butter-fat*. A vessel which would hold 1,000 pounds of water, would hold 1,033 to 1,036 of skim milk, and about 930 of butter-fat. When we set milk, whether in a shallow or a deep vessel, it is subjected to the force of gravity, which acts directly downwards, and, as a consequence, the heavier skim milk or serum moves towards the bottom of the vessel, compelling the butter-fat to move upwards, or opposite to the direction in which the

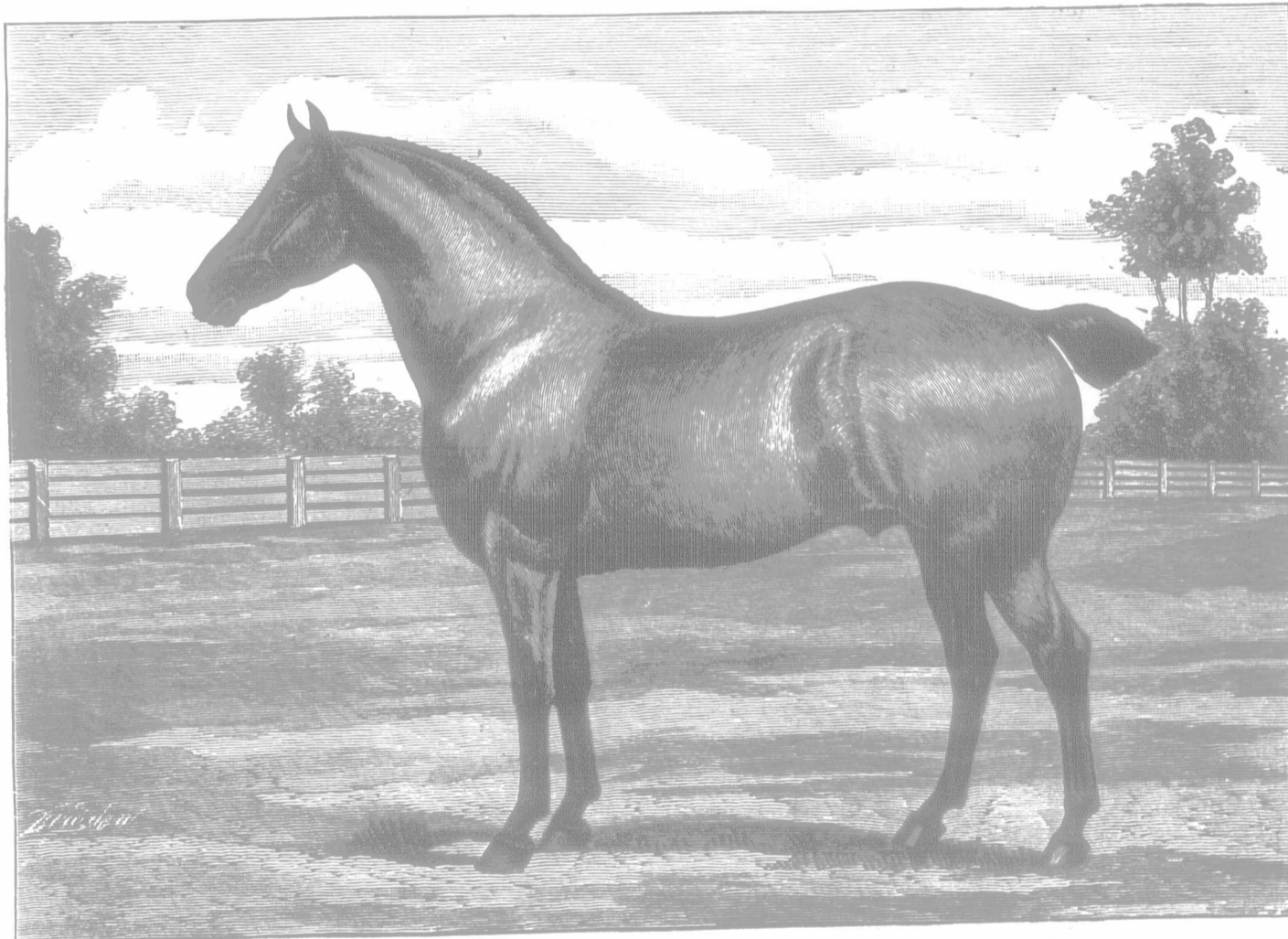
spring of 1898, devoted it to experimenting with the setting of milk in deep cans and in shallow pans.

Deep-setting System.—In all cases the deep cans were set in water, sometimes with and sometimes without ice. Where there was sufficient ice in the water surrounding the cans to hold its temperature down in the neighborhood of 40° F., comparatively satisfactory results were obtained, the average test of skim milk being .29, or practically .3 (three-tenths) of 1 per cent. But where the cans were set in water at 50° to 55°, without ice—a practice which is altogether too common—the skim milk tested as high as 1 per cent. and over. And since average whole milk contains only about 3.6 per cent. fat, there was a loss of over a quarter of the butter in the skim milk. Even when the milk was set in a tank of water at 45°, without ice, the skim milk, in several instances, tested as high as .8 (eight-tenths) to .9 (nine-tenths) of 1 per cent. fat, as the warm milk readily raised the temperature of the surrounding water. Setting the milk for 12, 24 and 36 hours was also tried. More exhaustive creaming, and a richer cream, was obtained from allowing the milk to set 24 hours than from allowing it to set only 12 hours; but no advantage was gained from allowing it to stand 36 hours before skimming. Skimming the cream off with a conical dipper, and drawing the skim milk off through a tap at the bottom of the can (the Cooley system) were also compared. The skim milk tested practically the same under the two systems, but the Cooley system was found to be the speedier, and to give a slightly richer cream—less skim milk going with the cream.

Shallow-pan System.—Under the shallow-pan system about 2½ inches in depth of milk was put into each pan, and the pans were set in a room at a temperature of about 50°.

The average test of the skim milk was .38 of 1 per cent. fat, where the milk was allowed to set 36 hours before skimming. Much better results were obtained under this system from setting the milk for 36 hours than for 24 hours. Of course, had the temperature of the room been much above 60° the milk would have soured within 24 hours, and, although the separation would have been very imperfect, no particular advantage would have been gained from allowing it to set longer.

The results of experiments in the setting of milk in deep cans and shallow pans, as given in the foregoing, correspond quite closely with those carried



ROSSEAU PERFORMER [5391] [34].

HACKNEY STALLION OWNED BY H. N. CROSSLEY, SANDY BAY STOCK FARM, ROSSEAU, ONT.

See "Gossip," page 477.

force is acting. Again, when milk flows into a separator bowl which is running at a high rate of speed—6,000 to 10,000 revolutions per minute—it is compelled to take the motion of the bowl, which subjects it to a great centrifugal force, and, as a consequence, the serum moves towards the outside of the bowl, or in the direction in which the force is acting, and compels the butter-fat to move towards the center of the bowl.

Thus, we see that whether we set the milk in a vessel, or put it through a separator, the principle of separation is the same, namely, the heavier skim milk moves in the direction in which the force is acting, and compels the lighter butter-fat to move in the opposite direction.

Now, if the fat globules in milk were large, the force of gravity would be quite sufficient to cause a ready and complete separation; but it happens that they are extremely small, it taking about 6,000, placed side by side in line, to extend over an inch in length; and as a result of their minuteness, and of the serum being somewhat viscous in nature, they are offered considerable resistance in rising. Hence, as the centrifugal force that milk is subjected to in a separator bowl is several thousand times as great as the force that it is subjected to under the gravity method, a much more complete separation is obtained from the use of a separator, and this within a very short space of time.

COMPARISON OF THE DIFFERENT METHODS OF CREAMING MILK.

The writer having some time at his disposal after the close of the Guelph Dairy School, in the

on at the same institution, on a much larger scale, by Mr. Rogers, the buttermaker in charge. These experiments extended over a period of five years, and the results are shown in the following table:

No. of Tests.	Pounds of Milk.	Method of Creaming.	Per cent. Fat in Sk. Milk.
150.....	7,690	Deep-setting	.31
150.....	7,690	Shallow-pans	.38
150.....	7,690	Separator	.1

But the foregoing results were obtained under the most favorable conditions of setting milk, and are much better than those obtained in the average farm dairy. The same experimentalist, Mr. Rogers, went to the trouble of collecting and testing a large number of samples of skim milk from several private dairies in the vicinity of Guelph, obtaining the following results:

Method of Creaming.	Av. Test of Skim Milk.	Remarks.
Deep-setting.....	.36	No ice used.
Shallow-pan.....	.35	

This means a loss in the skim milk of fully a quarter of the butter-fat.

CONCLUSIONS.

In order to obtain the best results under the deep-setting system, the milk should be set as soon as possible after milking and before it has cooled to any great extent, and should be surrounded by water, the temperature of which is held down to about 40° by the liberal use of ice. This insures a rapidly falling temperature in the milk, which is very favorable to separation in different ways. The serum portion of the milk cools more rapidly than the fat, thus creating a greater difference in

their relative weights, and causing them to separate more readily. And again, the rapid cooling of the milk causes up and down currents, the colder milk, which is heavier, going to the bottom, while the warmer milk, which is lighter, flows to the top and carries the light fat globules with it. Also, the rapid cooling of the milk tends to prevent the formation of a network of fibrin, which, when it forms, holds a portion of the fat globules in its meshes and prevents them from rising. A tank, with an overflow pipe for the water about two inches lower than the tops of the cans, should be used for setting the cans in. The water in the tank should always be as deep as the milk in the cans. All who adopt this system should lay in a store of ice, which should be used liberally, a fresh supply being put into the tank before the old has all melted.



GROUP OF SHROPSHIRE SHEARLING RAMS. IN THE FLOCK OF MR. RICHARD GIBSON, DELAWARE, ONT.

Where a conical dipper is used for skimming, it should be about six inches deep, and five or six inches across the top, and should have no wire or flange around the top. It should be dipped into cold water, or preferably skim milk, before using, to prevent the cream from sticking to it. When the skim milk is drawn off, the bottom of the can should slope downwards to the tap, so that any sediment that there may be will be carried off with the skim milk, instead of remaining to mix with the cream.

The best length of time to allow milk to set before skimming, under the deep-setting system, is 24 hours.

Where the shallow-pan system is adopted, the milk should not be more than 2½ inches deep, the temperature of the room should be below 60 degrees, and the milk should be allowed to set 36 hours before skimming. The best way, in so far as we know, to skim the cream off shallow pans is as follows:

First, run a thin-bladed knife (kept for the purpose) around the pan to free the cream from it; then, holding the cream back with the knife, tilt the pan and allow enough skim milk to flow over to wet the edge and prevent the cream from sticking to it, after which the cream may be floated off, using the side of the knife to assist in so doing. A ladle-shaped, perforated skimmer should never be used, as it allows all the thin portion of the cream to flow through the small holes in it and mix with the skim milk. Such a skimmer is a great source of waste.

Where the conditions for deep-setting are all favorable, it is a better system than the shallow-pan system, giving slightly more exhaustive creaming, and keeping the cream sweeter; but where the conditions are unfavorable for deep-setting, and fairly favorable for the shallow-pan system, it is frequently better to adopt the latter, provided the cream is churned at home. The shallow-pan system is not suitable where the cream is sent to a creamery, as the milk remains at a much higher temperature during the time it is set than milk in deep cans, and the cream is usually somewhat sour when skimmed off the pans, becoming overripe before it arrives at the creamery. If cream is to be sent to a creamery, either the deep-setting system or the use of a separator should be adopted.

When a separator is used the cream should be cooled immediately after separating, and before it is mixed with the cold cream.

A word by way of comparison of the different methods of creaming milk. With the adoption of the most favorable conditions, under the gravity method, the skim milk will contain about .3 (three-tenths) of one per cent. of fat, and usually the loss is much greater; whereas with the separator the loss need not exceed half a tenth to a tenth of one per cent. Since average whole milk tests about 3.6 per cent., a test of .3 (three-tenths) for the skim milk means a loss of about 1 pound of butter in every 12, while a test of .1 (one-tenth) of one per cent. for the skim milk means a loss of only 1 pound in 36; that is to say, a comparison of the best work done under the gravity method with just average separator work shows three times as great a loss under the gravity as under the separator method. I feel perfectly sure in saying that results of average work under the gravity method will show a loss of at least 1 pound of butter fat out of every 12 that the milk contains, while there will not be a loss of 1 in 40 where a separator is properly used.

I do not wish to be understood as urging everyone who keeps a few cows to buy a separator. Possibly a person keeping just 3 or 4 cows will not find it advisable to do so; this is a matter he must decide for himself after taking into consideration the losses he is sustaining under present methods. There is no doubt in my mind, however, but that where one keeps 8 to 10 milch cows, and frequently a much smaller number, a separator will pay for itself before any great lapse of time. Furthermore, the fresh milk from a separator has a greater feeding value.

Before closing, we would strongly urge upon all who have to do with the creaming of milk to have a Babcock test of the skim milk made frequently, to determine the amount of butter-fat it contains. It would be an eye-opener to many who, either through carelessness or faulty methods, are sustaining large and unsuspected losses. The Babcock test, freely and intelligently used, is one of the best educators a dairyman can employ.

J. W. MITCHELL,

Dominion Government Dairy Superintendent in Assiniboia, N.-W. T.

Poultry House for One Hundred Hens.

L. K. Grey Co., Ont.:—"Let me see a plan of a poultry house in the *ADVOCATE* for about 100 hens to have lots of room for winter and summer."

[The accompanying illustration, Figs. I. and II., represents a poultry house for a smaller flock than is asked for, but the same arrangement can be extended both in width and length. We would suggest that the house be divided into three pens, each one-third larger than those shown in the cut. These would each accommodate 33 hens, which is as large a flock as should be together. Or it may be better still to extend the pen in length and divide it into four pens, each to contain twenty-five hens. The dimensions would then be, for whole pen, 40 ft. long by about 12 ft. wide, as the passage would be better 3 ft. wide.]

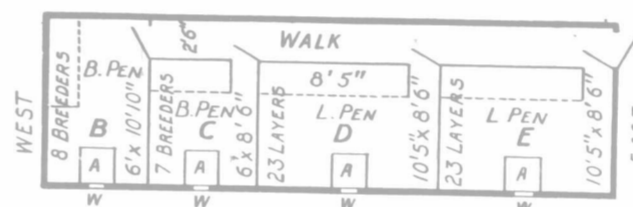


FIG. I.—POULTRY HOUSE PLAN.

In Fig. I., pens B and C are for breeding stock. These could be made into one pen for general stock if desired. Pens D and E are arranged for layers, in which five to six square feet should be allowed for each hen.

Fig. II., showing cross-section, shows nest-boxes one foot square. The diagram shows door opening from nest-boxes into walk, from which the eggs could be gathered from all the pens except B. The squares marked A in Fig. I. represent dust baths in front of windows. The building should run east and west, so the fowls could get the sun. The floor should be double-board, to prevent drafts. Yards can be extended south of each pen to any desired extent, and should be not less than 50 to 75 ft. if that is all the liberty the fowls are to be allowed. The division fences could with advantage be planted with grapevines, and plum or other fruit trees should be planted in the yards.

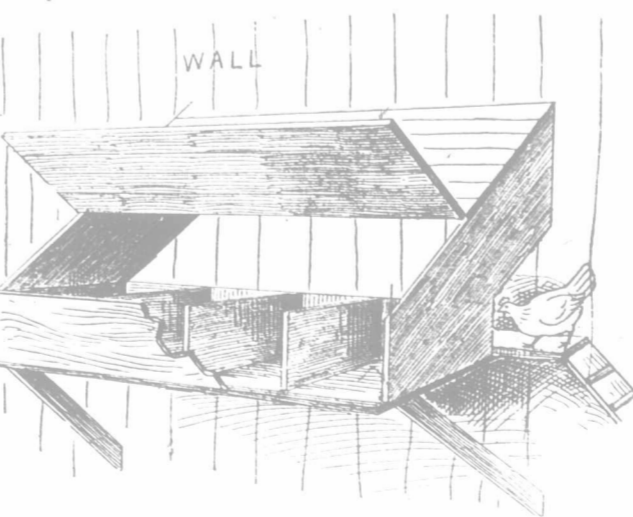


FIG. III.—NEST-BOX AGAINST WALL.

Fig. III. shows a suitable nest-box for any pen from which the eggs are gathered from the pen instead of from the passage. Each division is one foot square.

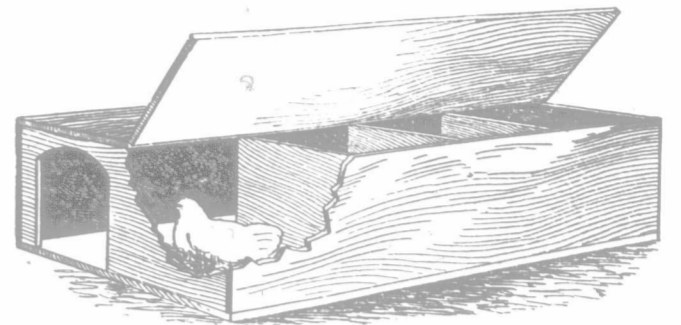


FIG. IV.—FLAT-TOPPED NEST-BOX.

Fig. IV. represents a nest-box from which the eggs can be taken from the passage. Either of these forms allows the hens to conceal themselves while laying, and also prevents egg-eating because of the darkness of the nests.

Birds for the British Market.

VISIT OF ALDERMAN RUDDIN, THE ENGLISH POULTRY DEALER, TO CANADA—AT THE OTTAWA EXPERIMENTAL FARM POULTRY YARD—CANADIAN POULTRY IN DEMAND IN ENGLAND—A GREAT MARKET FOR OUR FARMERS.

BY A. G. GILBERT, POULTRY MANAGER, CENTRAL EXPERIMENTAL FARM.

A telephone message from the Commissioner of Agriculture and Dairying a few days ago informed me that Alderman James Ruddin, the extensive poultry dealer, of Liverpool, England, would visit my department at the Experimental Farm that afternoon. It will be remembered that the first experimental shipment of fattened poultry from the Illustration Station in charge of Messrs. Joseph Yuill & Sons, of Carleton Place, Ont., was consigned to Alderman Ruddin. It will also be remembered that the poultry, which was composed principally of Barred Plymouth Rock cockerels, realized \$1.76 per pair wholesale. The poultry was plucked and dressed, but not drawn. The consignment was properly packed, and shipped in cold storage, under the auspices of the Commissioner of Agriculture. So much did Alderman Ruddin think of the shipment and the condition in which it arrived that he wrote to Prof. Robertson, and also to the Messrs. Yuill & Sons, that he considered the quality of the poultry of such unusual excellence that he was prepared to take a large quantity of equal worth and find a ready market for the same at 14c. to 16c. per lb. wholesale. I quote the words of Alderman Ruddin, in his letter to Messrs. Yuill & Sons, as follows:—

You can have no fear of the ultimate results. Only turn your poultry out in the same order and condition as you did the experimental lot, and I will see that profits accrue. I might say that the English market receives poultry from every country in Europe, as well as from Australia and New Zealand. I can state, however, without the slightest fear of contradiction, that the Canadian poultry has no competitor, and therefore no competitor, on equal terms. For not only is the Canadian poultry superior as to quality and suitability, but its condition is always assured through the services of the refrigerator. I hope to call on you in June or July. Meanwhile I hope to hear from you at your convenience.

JAMES RUDDIN.



GROUP OF SHROPSHIRE RAM LAMBS. OWNED BY RICHARD GIBSON, DELAWARE, ONT.

ALDERMAN RUDDIN COMES IN PERSON.

It was, then, with unusual pleasure that I received the announcement from Commissioner Robertson of Mr. Ruddin's arrival in the city, and soon after met the Alderman himself.

"I came," said Mr. Ruddin, "to see what your poultry was like. I am told that you have some good market fowls."

"I think," I replied, "that I can show you breeds of poultry that will suit the demands of your English market."

"Our market," said the Alderman, "requires a well-fed carcass, of white or light color of flesh and legs, and to arrive in as good color and condition as possible."

"In other words," I remarked, "of such poultry

try as you received as first consignment from Prof. Robertson's department."

"Yes," he replied, "we can take any quantity of such birds and make quick and profitable sale of them."

"And we can give you any quantity of such poultry, provided, of course, our farmers keep the breeds which supply the superior quality."

"Aye," said he, "you have got to get at the farmers. And do you find it hard to get your farmers to realize the importance to them of what you say?"

"Sometimes. But I can safely say the genius of our farmers is fully equal to the demand. The difficulty is rather to get them to realize that they must keep the thoroughbreds which make the large fowls. The birds which composed in great

showing me, and which you have been telling them we want, that we will take any quantity."

As Mr. Ruddin left, I could not but think of what vast import to the farmers of our country was his visit. Here was a leading dealer in poultry in England, perhaps in the world, telling our farmers that Canadian poultry of first-class quality has no compeer, and in consequence will command the highest price. And for such poultry he offers an unlimited market. Are our farmers equal to the opportunity?

Ottawa, August 21, 1890.

Feeding and Forcing Broilers.

First week.—For the first week you are limited to rolled oats, millet seed (which is a semi-green food) and cracked corn, run through a Wilson mill to make it fine enough, then sifted to save the meal, which, of course, is wasted by throwing it on the ground. We have kept milk before them *all* the time and have carefully washed the dishes *twice* a day, noon and night, as nothing gets any more filthy than do these dishes if left uncleaned, the fat of the milk, dirt and droppings all adding their mite to make it so, more especially as the chicks get older. Some think skimmed milk expensive to feed, but after trying it you will be convinced that the increased growth that comes from feeding it gives you a good profit on it, and this is what we should always think of when weighing the cost of food. The real question is, can I get enough quicker growth by using it and give me a profit on it? For feeding choice "fancy" chicks I have heard it contended that whole milk was cheap to feed. I have been able to buy all the skimmed milk I want for 5 cents a can, of 8½ quarts to a can, and have used as high as twenty-six cans a day for broilers and roasters. As we have put into each hover about one hundred chicks, we must see that the sand is carefully scraped off the top as often as necessary, probably twice the first week, which will be increased each week until about the third, then we commence to clean them regularly every morning. We run the wheelbarrow into the walk and lift the hover, which is hinged against the partition so it is easy to get at. We take a small dust pan, or, if you prefer, make a scraper by driving nails through a stick something like a rake, only close together. Then scrape or rake the top off, going quickly from one to another.

Second week.—For the first week we keep the board in the sides just forward of the hover, as stated before. Now the second week we will remove it and keep an eye on the chicks to see that they do not get lost and by staying away from the fire too long get chilled. For this week we will feed about the same, only, perhaps, it will be well to try them on a little mash made up of one-third corn-meal and two-thirds wheat bran, seasoned with salt and red pepper, just the same as though we were to eat it ourselves. Mix well and add boiling water. *Don't* put in enough to make it *sloppy*. Allow it to stand a short time, then feed. Not much will be eaten, but they will get so before the end of the week that they will look for it, as you feed your soft and hard grains alternately.

Third week.—The third week we always settle down to our regular routine, to be continued until about ready to market. During the second week we have cracked some wheat in our mill, so have had that for an extra dish and a change, giving corn as a last feed generally. A good many feed cut or pin-head oatmeal to little chicks. This we have found to be a trifle pasty or gummy, and have dropped it, as more will get stuck up around the vent when this is fed than when not.

There is one thing that is absolutely imperative—that is, to get your chicks out on the ground. If it is bright and warm put them out for a few minutes when a week old. Don't let them stand "humped" up and shiver, but make them hustle around by driving or feeding a handful of millet seed. After the second week they must go out *every* day unless it storms, *no matter if it is zero weather*. After you have tried it you will see how essential it is, for you will not keep them on their legs under such high feed in any other way.

As we enter upon the duties of the third week we will now get our routine started and will see the chicks push along for the next five weeks, at which time we hope to see two-pound birds ready for the market, and get sight of the returns for our labor. The first thing in the morning is a feed of hard grain; then comes a feed of chopped raw potatoes. As the chopping knife and tray were too slow, we got an Enterprise mince-meat chopper, had a new disk made with larger holes, about three-eighths of an inch in diameter, and ran the potatoes through that, catching in a pan the first and last to come out, as it is nothing but water. The other is the pulp. Now take their food dish and give each pen all they will eat. A little later we throw in a little cabbage, cut in strips, which they will seize and chase each other around for until it is all eaten.

This constitutes all the green food they have, except once in a while we may substitute onions in place of cabbage. We have gotten our mash made for the day, and as 9 o'clock has come we will give our first feed of it for the day, only feeding what they will eat *quickly*. We feed on tin plates, about fourteen inches in diameter and a quarter of an inch deep, with a wide fold at the top. These can be readily cleaned preparatory to another feed by

scrapping with the feeding shovel, which is a small shovel about four inches across, made of heavy sheet iron and a white iron handle. We have a pan to put the leavings in, if any. They go into the swill for the pigs. At 11 o'clock another mash, then the dishes are picked up, taken into the kitchen or cook room and washed.

Again at 1 and 3 o'clock we feed the mash, and if we have used good judgment we have had a hungry mob each feeding. If we have been liberal, we find they have left something each time and are not ready for their food. When this is so, just scant them until they clean up each time and do it *quickly*, taking care you have enough for all. You will find the number of plates will have to be increased as the chicks increase in size, in order that each may have a chance. At 5 o'clock, or before dark, throw down a liberal feed of cracked corn. For water fountains we have adopted galvanized iron ones, holding nearly two quarts, and shaped on top to keep the youngsters from roosting on them. This we find to be very satisfactory, as the chicks cannot put their feet in it.

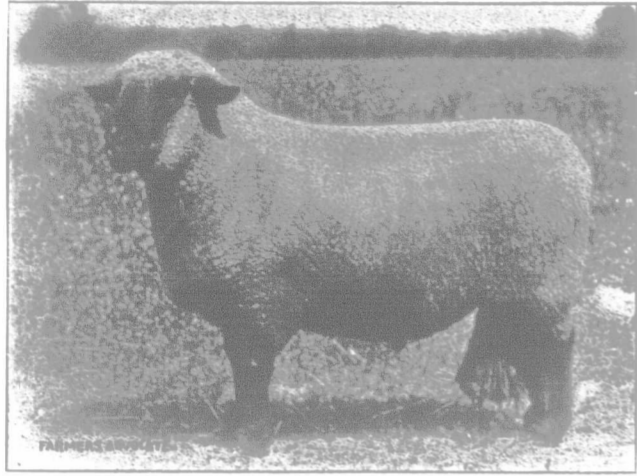
We follow this bill of fare for about four weeks. As we have crowded the chicks pretty well, by putting one hundred in a pen, we must take extra precautions against filth. At about four weeks of age a day's droppings are considerable on the floor of the pen, so the floor is now raked over each day and the collections wheeled out. For this we must use a loop-toothed rake.

Finishing period.—To come back to the six or eight weeks old chicks: We must now think of finishing them off. We examine them, weigh a few, calculate how much flesh can be made on them in about ten days, for as broilers, Boston has no use for anything over four pounds to the pair. We have fed so much bran that as we lay back the feathers on the breast we say, "They ought to have more color." How can we get it? We cast about for a way to get this. We know corn will do it, but we lose time if we drop off from soft feed to hard. The chicks won't grow as fast, and we must turn them off as soon as possible to get the most profit from them. So we put into the mash all the cotton-seed meal we can stir in and not make it "salvy" or "puddingy," as we call it. With a little treacle added we have accomplished the result.

We now have a fine yellow skin if we have not foolishly chosen a blue-blooded carcass, but any yellow-legged variety will succumb to the treatment. I would caution you against trying to feed this for too long a time, say more than two weeks, as the chicks will get cloyed by it and you cannot hold their flesh, to say nothing of making any, unless you can keep their appetites "up to the clip." This being such a high feed, it seems to become nauseous to them. One would find it difficult to keep them on their legs if it were fed from the first. We have now "forced" the birds for eight weeks and have obtained what we set out for, viz: Two-pound broilers at eight weeks.

The best breed.—This has been successfully accomplished on our farm here, with White Wyandottes. We have not done quite so well with any other variety. As I stated in my preceding article, they will stand on their legs when Plymouth Rocks would be rolling on their sides with the same food. We put up two pens of 110 each, and at eight weeks they weighed two pounds each, and a portion two and one-quarter pounds each, under this system of feeding and almost the same treatment. By continuing the regular food we have made five and five-eighths pound roasters at fifteen weeks old.

One thing more before closing: If you ship your



COL. d'ARBRES, No. 11 (2673).
Two-year-old Hampshire ram. First and champion, Royal Counties Show; first, Royal Show, Maidstone, 1889.
BRED BY MR. A. DE MORNEY. EXHIBITED BY MR. R. W. HUDSON, GREAT MARLOW, BUCKS.

part the first experimental consignment to you, and which gave you such satisfaction, were Barred Plymouth Rock cockerels, purchased from farmers in the neighborhood of Carleton Place. The moral is obvious. Our farmers must keep Plymouth Rocks, Wyandottes, Light Brahmas, and, it may be, Dorkings and Cochins. But come and see what our Plymouth Rocks, Wyandottes, and other breeds are like."

And then we went among the poultry, and I showed the worthy Alderman the plump Barred and White Plymouth Rock cockerels, the square and blocky White and Silver-Laced Wyandotte cockerels, and the Light Brahmas of same sex and about same age.

"These are fine chicks," said Mr. Ruddin, and so they are.

MERITS OF THE DIFFERENT BREEDS.

"Now," said I to Mr. Ruddin, "I am conscious that you should know the merits of the different general purpose breeds I am showing you, for it will convince you of our fitness to supply the requirements of your market. We have no difficulty in getting our Plymouth Rock and Wyandotte cockerels to weigh eight pounds per pair at the end of four or four and a half months. At an older age we have no trouble, and without any special fattening, in having them weigh ten and twelve pounds per pair. But such development is conditional upon:

"FIRST.—Having the breeds which make the rapid flesh-formers.

"SECOND.—Care and proper feeding of the chickens from time of hatching.

"A proper finish can be given to the chicks by penning them up and fattening them for two or three weeks before killing, on a ration composed of two parts ground oats or shorts, one part of ground barley, one of corn meal. The yellow on farmed Plymouth Rocks is sometimes very light. But you say there was no objection to the leg or body color of the first shipment."

"No," said Mr. Ruddin, "color and size were right."

"Doubtless owing to their being penned up and specially fattened before being shipped."

"Of course," said Mr. Ruddin, "I do not know anything about the feather-coloring of your different breeds, but I can tell you all about their merits as market fowls when I see them plucked and dressed or handle them. I think you understand what we want for our English market."

"I hope I do," I replied, "but I would like to explain to you that the breeds named supply good winter-laying females, as well as rapid flesh-making cockerels—a fact of twofold import to our farmers, who have a winter-egg market of paying prices."

DUCKS.

Then I showed the Alderman our Pekin and Aylesbury ducks, which are unusually large and fine in appearance.

"Ah!" said Mr. Ruddin, pointing to the Pekin ducks, "we could take thousands of such as these from you. They are going to send us a great quantity from Australia."

And soon after a very pleasant visit terminated. The last words of the Alderman to me as he shook hands were: "You can tell your farmers if they will only send us such poultry as you have been



HAMPSHIRE YEARLING EWES.
First-prize pen of same flock, Royal Show, Maidstone, 1889.
BRED AND EXHIBITED BY MR. R. W. HUDSON, GREAT MARLOW, BUCKS. IMPORTED BY MR. ROBERT MILLER, BROUGHAM, ONT.

poultry to market alive, and it travels twenty to thirty miles on the railroad, feed the night before, not too heavy, but some, as the birds will empty themselves in the night and on the journey. Give them *all* the water they will drink before they start on their funeral ride. You will thus save a portion of your shrinkage, to nobody's injury, but to their gain, I believe, as you help retain the juiciness of the flesh. The summing up of the discussion is, breed, feed, and care. Let us not disdain to use the breed because it may be bred to "fancy points," as the fancy has given us our best and most practical varieties, and the nearer a typical bird we have of almost any breed, the better carcass we have.—Arthur G. Duston, Marlboro, Mass., in "Artificial Incubating and Brooding."

A Model Bee Yard Portrayed and Described.

The illustration on this page represents Mr. S. T. Pettit's bee yard, near Belmont, in Elgin Co., Ont., as it appeared on August 9th, the day of our visit. The hives are not all shown, as the camera could not be situated so as to take in the whole yard to good advantage. Enough is shown, however, to indicate the general order of the yard, the honey house and the workshop where hive supplies, etc., are made. In round numbers, the yard contains 100 colonies, being an increase of 20 since they were brought out of the cellar in spring. Mr. Pettit makes a specialty of comb honey, and his bee yard would look more natural showing the hives with comb supers, but these were all removed at the end of the honey flow about the middle of July. In fact, comparatively little comb honey was produced this season, owing to the paucity of new swarms, which Mr. Pettit uses for comb-honey production. Mr. Pettit received less new swarms per colony this year than in any year since 1895, which is accounted for by the unfavorable weather, especially during the clover bloom. His entire honey crop from the 80 colonies, spring count, is about 5,000 pounds, 800 of which is comb honey. As there has been no honey coming in since the middle of July, the chances are the colonies will all require to be fed before winter. As will be noticed, the hives appear with extracting supers, which are divided from the brood chamber with queen-bars or queen-excluders. These prevent the queen from going up to lay, should she wish to do so.

The building to the right in the background is the honey house, where extracting, etc., is done, and honey is stored until shipped. The other building is a workshop, where Mr. Pettit makes all his hives and parts. Beneath this building is a stone cellar, where the bees are wintered. It is kept dark, well ventilated, and at a uniform temperature. The ventilating system is of Mr. Pettit's own invention, and is very unique. At the center of the end of the building facing the bee yard is an outside stairway leading to the cellar door. The door fits tightly, but has a number of 2-inch holes covered with wire screen. Covering the stairs on a level with the ground is a pair of doors which lie flat when closed, and it is through one of these that the ventilator is placed. It consists of an 8x8 inch square box, 20 inches long. This fits perpendicularly in the door, and has a slide passing through it, which can be opened or closed, as appears necessary by the temperature of the cellar. The top end is covered with wire screen. Now, in order to exclude the light, an inverted box rests loosely on the top, and at the bottom end a similar box hangs bottom down. Both boxes are about three inches larger than the ventilator, which they telescope about two inches each. A similar ventilator is provided for each of the two windows, so that a free circulation of air is admitted without the possibility of light entering the cellar. The temperature of the cellar is held at from 40 to 42 degrees, which prevents breeding and holds the consumption of honey down to a minimum, and at the same time retains the vitality of the bees to the greatest possible degree.

The yard will remain as it appears in the engraving until about Sept. 20th, when the extracting supers will be removed, the hives weighed, and the bees will be fed where necessary. Each hive should contain about 30 pounds to commence the winter. About Nov. 17th the bees will be transferred to the cellar, where they will remain till the time arrives to set them out in the spring.

We would draw attention to the proprietor of the apiary sitting in the shade of the tree in the foreground. He is wearing his bee-veil attached to the rim of a straw hat. It will be noticed that it is drawn tightly from the rim and tucked under his braces and drawn tightly across the breast, which holds the veil away from his face and neck, which makes a sting in those regions impossible. After the photograph was taken, Mr. Pettit recognized that his trouser legs should have been tucked inside his socks, that he would appear like a beekeeper at his work. When the trousers are thus tucked in, the bees cannot walk up inside to create trouble for themselves and the individual wearing the trousers. We would also point out the solar wax-extractor sitting in the foreground, near the clump of flowering shrub. It has a glass lid, through which the sun shines to melt the wax cappings. It is set on a pivot, on which it can be revolved to face the sun throughout the day. Below is a description of Mr. Pettit's comb-honey hives.

COMB-HONEY HIVE AND ITS ARRANGEMENT.

By following the description of Mr. Pettit's hive, some important points in his system of comb-honey production will be understood.

1. represents the cover, beneath which is a cushion, 2 inches thick, of soft, fine hay, and beneath this is a cotton cloth, of hard white cotton duck, which rests on the sections.

2. 2 are section supers, one-quarter inch deeper than the sections used. Mr. Pettit's are 17 1/2 inches square, inside measurement, each holding 36 sections.

3. queen bar or excluder, which covers the brood chamber, admitting only worker bees to the supers.

4. brood chamber.

5. wedges of wood one 1/2 inch deep in front, gradually tapering to a point at back. These are used

in summer to allow ventilation, and they also raise the front of the hive so as to induce the bees to go up the side walls of the hive and the comb racks near the back of the hive.

6. floor projects 3/4 inches in front of the brood chamber.

7-7, stand of two 6-inch boards and two 7-inch. This rests on bricks, as shown.

8. comb-honey supers, same as 2.

9-9, divider set on two sides of super, as shown in position. It is 1/2-inch thick and has 3/8-inch holes, through which the bees pass to the sections.

10. section in position, resting on 1 tins 12, and against divider. The section is filled with light foundation of good quality, within 1/8 inch of



COMB-HONEY HIVE AND ARRANGEMENT.

bottom. With sections fitted with foundation in this way, the bees fill them evenly.

11. bee space of 1/8 inch, created by six blocks numbered 13 on divider number 9. The advantage of this extra bee space at sides of super is to allow for a double quantity of bees to keep up necessary animal heat, which is advantageous to the finishing up and capping the combs in the sections.

Lice, and How to Fight Them.

BY J. E. MEYER, WATERLOO CO., ONT.

Any want of cleanliness during the warm summer months is almost sure to bring lice to our poultry houses and poultry, so that doubtless a very great many are now experiencing this trouble and looking about for means to get rid of them. There are a great many kinds of lice that trouble poultry, but we shall divide them into only three classes, viz.: (1) Those that live in the poultry house itself; (2) those that live on the poultry and do not leave them; (3) those that live on the heads of chickens and young turkeys. To the first class belong those insects that in the daytime can be seen about the perches, nests and drop-boards, and that are sure to crawl all over you if you go near them. At night they go on the fowls and suck their blood. The effect of them on laying hens is very bad. They will immediately



BEE YARD OF MR. S. T. PETTIT, BELMONT, ONT.

stop laying, no matter how well you feed them, until you rid their house of the pests. They trouble the sitting hen so much that she either breaks her eggs or leaves the nest; and if she does succeed in hatching chickens, it is not likely that she will succeed in raising many of them. We will suppose that we have a house that has been neglected, left dirty, and is infected. We should go to work in the following manner to clean it:

To Rid the House. Remove all litter, droppings, nest-boxes, perches and everything that is movable from the place. Carry perches and nest-boxes outside, away from the poultry house, and after cleaning out nests pour coal oil over every particle of the perches and nests, and leave them outside until the

house is thoroughly cleaned. Now *spray coal oil* wherever there is a place for lice to hide inside the house, in every crack, over, under and all about drop-boards. When you are satisfied that you have done this thoroughly—and much depends on it—sprinkle or throw air-slacked lime all about floors, drop-boards, and into every crack. If you can close the building up tight, it will be quite a help to thoroughly fill it with *sulphur smoke*. To do this, take an iron pot of live coals, set it in the center of the building, and put brimstone on the coals. Keep the house thoroughly filled with smoke for a few hours. Do this after you have used the coal oil and before putting the lime in. You may now put fresh litter on the floor, and put the nests and perches in their places again. Put fresh straw into the nest-boxes, and throw on it some insect powder, a handful of powdered sulphur or some refuse tobacco—a cigar stump would do.

You may now consider the house clean, but the hens must be cleaned before being allowed to roost in it again. Owing to their somewhat debilitated condition, they have not been able to fight off the body lice, and, besides, there may chance to be some of their nightly visitors still on them.

To Clean the Hens.—Take a Surprise soap box, or any box of about that size, and fill it a third or half full, according to the number of hens that you have got, with fine sifted sand. Saturate this sand with coal oil, being sure that each particle of sand is covered with coal oil. Pour on the coal oil, and stir up the sand until it is all moist, just as it would be after a rain when all the water is drained off. Take each hen, put her in the box, and with your hands thoroughly rub the sand all through the feathers, leaving as little as possible in her feathers when finished. Although this is not more effectual than any of the insect powders that are on the market, it is easier got and cheaper. It will be best not to allow the hens to go back to the house until the night following this cleaning. They can remain outside. Now you have the house clean, it will be well to *keep it clean*, which you will find very much less trouble than it was to clean it. In the first place you will have noticed that the great trouble came from not keeping perches and nests clean. To keep perches clean, you must have them movable and over a platform, so that you can easily get at them. The perches should be on a level, and the platform about thirty inches from the ground or floor. Make the nest-boxes movable also. By putting coal oil over the perches once a week in summer and once in two weeks in winter, and keeping the platform clean of droppings, and by cleaning out nest-boxes and putting in fresh litter every two weeks during summer, spraying well with coal oil at each cleaning before putting in fresh litter, you will not be troubled with lice. It is best never to set a hen in the poultry house, but wherever you do set her, be sure that she and the nest are both clean. Nothing is better to keep nest clean under a sitting hen than tobacco, but sulphur and insect powder may be used.

For Body Lice.—Any insect powder, or, unless when a hen is sitting, the coal oil and sand applied when necessary, will easily keep them in check. On the farm, where the hens have free access to good dust baths at all times, they will keep themselves clean without any insect powder at all, providing you keep their quarters clean. Be sure to provide a dusting place for your fowls in winter. Road dust is best, and it will improve it if a little

powdered sulphur be mixed with it when you can possibly do so.

The Head Lice trouble chickens and young turkeys, and are the cause of more dying than possibly anything else. If you are sure that there is not a louse about the sitting hen when the chicks or young turkeys are hatched, and then keep them in perfectly clean quarters, kept clean all the time, you are not likely to have much trouble. We have found that this year we have had more trouble than usual. After doing everything towards keeping the hens and their quarters clean, we have found that our chickens still had a few head lice. We have never used anything for head lice, using it as follows: When chicks are about a week old, we at

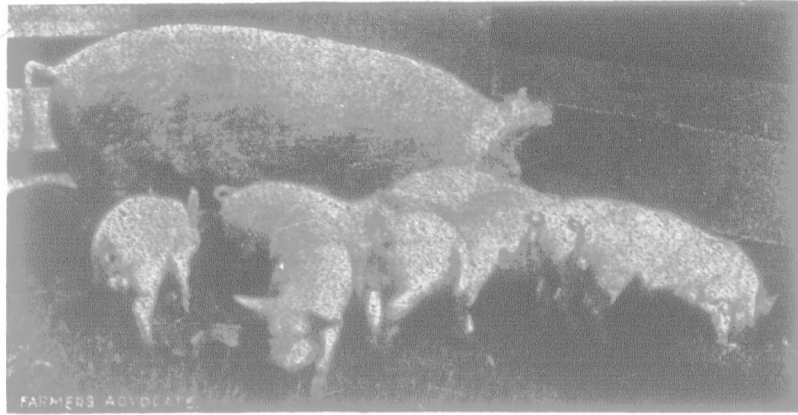
night grease the hen underneath, so that when the chicks crawl under her they get some—not too much—on their heads, and then when they get about three weeks old, grease their heads, putting some underneath, but mostly on top of the head. At six or eight weeks old, you will at times notice some get dumpy and seem very dull. Nine times out of ten it means head lice, and you had better put on a little lard at once. Indigestion seems to be caused by these lice when let go too far, and it is very difficult to save a chick when in that condition. The least signs of drowsiness should be carefully attended to. Similar treatment will answer for young turkeys, but you must be very careful not to put too much on, as it might kill them.

To be successful with your poultry you must keep lice away, and you can do that only by con-

would be necessary to know something more of the nature of the food upon which they were fed. Perhaps it would help "Old Subscriber" to give the estimated manurial values (American tables) of some of the feeding stuffs nearest to what he likely uses in Assiniboia: Manurial value per ton of hay made from mixed grasses [we presume cultivated grasses], \$12.99; manurial value per ton of wheat straw, \$10.69; do., oat straw, \$11.25; do., wheat bran, \$19.85; do., barley, \$19.37; do., oats, \$20.47; do., wheat, \$21.69; do., linseed meal, \$30.43. Nitrogen is one of the most valuable elements, and as it is voided by the animal mostly in the urine, it is important that all the urine be saved. From the Yearbook of the Department of Agriculture, U.S., 1898, we take the following extract: "Barnyard manure is a very variable substance, its composition and value depending principally upon (1) age and kind of animal; (2) quantity and quality of food; (3) proportion of litter; and (4) method of management and age of manure."

"Value of manure as affected by kind of animal and of feed: Mature animals neither gaining nor losing weight excrete practically all the fertilizing constituents consumed in the food. Growing animals and milk cows excrete from 50 to 75 per cent. of the fertilizing constituents of the food; fattening or working animals from 90 to 95 per cent. The amounts of fertilizing constituents in the manure stand in direct relation to those in the food. As regards the value of manure produced, the concentrated feeding stuffs, such as meat scrap, cottonseed meal, linseed meal, and wheat bran, stand first; the leguminous plants (clover, peas, etc.); second; the grasses third; cereals (oats, corn, etc.) fourth, and root crops, such as turnips, beets, and mangels, last."

In his work on the fertility of the land, Prof. J. P. Roberts gives a statement of about a dozen computations, made at the different experiment stations, of the value of cattle manure mixed with litter, which averages \$2.43 per ton.]



A GOOD MOTHER.

Yorkshire sow, Dewdrop Beauty 2596, and litter of twelve. First prize at Winnipeg Industrial.

OWNED BY JAS. BRAY, LONGBURN, MAN.

stant watching and cleaning. Arrange the inside of your poultry house so that it can be conveniently cleaned, then keep it clean. If you keep the house free from lice and give the hens a dust bath, they will keep themselves clean generally. If you keep the nest and the sitting hen clean, the chicks will be clean and will thrive.

QUESTIONS AND ANSWERS.

Veterinary.

PROBABLY ACTINOMYCOSIS ("LUMP JAW").

V. A. MCK., Selden, Man.:—"I have an eight-year-old cow that has a swelling on left side of the jaw, below the eye. It breaks now and again, and discharges thick matter. She is healthy in other respects."

[Your description of the case points to the above disease. Treatment: Give iodide of potassium, one dram, morning and night, in food or drench, for two weeks; then discontinue treatment for one week, and repeat, if necessary. If you prefer Fleming's or Mitchell's lump-jaw cure, you can obtain either from or through your druggist.

W. A. DUNBAR, V. S., Winnipeg.]

LAME CATTLE, AND SWELLING IN CALF'S THROAT.

SUBSCRIBER, Headingley, Man.:—"1. Would you kindly prescribe for lameness in cattle. The ankles become very swollen, heated, and the animals lose rapidly in flesh. 2. I have a calf with a swelling in its throat which prevents its drinking, though it is able to suck a cow all right. Please prescribe."

[1. Cattle grazing on marshy pasture land are from the irritation caused by continuous exposure to wet, frequently affected in the manner you have mentioned. Treatment: Remove the cause, and apply the following lotion twice daily to the affected parts: Acetate of lead, one ounce; tincture of arnica, four ounces; tincture of opium, two ounces; water, one pint.

2. Your description of this case is not sufficiently explicit to warrant a decided opinion as to its true nature. Apply, externally, over the lump, tincture of iodine, double strength, every alternate day until the skin becomes quite sore. Leave off for one week, and repeat if necessary.

W. A. DUNBAR, V. S., Winnipeg.]

Miscellaneous.

VALUE OF MANURE.

OLD SUBSCRIBER, Assa.:—"Can you give us the value of a load of manure from cattle fed on hay; also the value of manure from a steer stall-fed all winter, say for a period of five months?"

[It is impossible to fix the actual value of a ton of manure, except by actual analysis. Its value must depend not only on the available fertilizing elements contained in the manure, but upon the elements most lacking, and, consequently, most valuable, in the soil of the person using the manure. Manure is valued principally for the quality of nitrogen, phosphoric acid and potash (the most valuable elements of plant food) which it contains, and the quantities of these elements in the manure depends very largely upon the amount of nitrogen, phosphoric acid and potash contained in the food upon which the animals were fed. Therefore, before even a good guess could be made at the value of the manure from "Old Subscriber's" stall-fed steers, it

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Top Prices		
		Two weeks ago.	1898	1897
Beef cattle.				
1500 lbs. up.....	\$5 60 to 6 65	\$6 05	\$5 65	\$5 50
1350 to 1500 lbs.....	5 25 to 6 50	6 00	5 75	5 50
1200 to 1350 lbs.....	4 90 to 6 40	6 00	5 65	5 45
1050 to 1200 lbs.....	4 75 to 6 30	5 90	5 55	5 35
900 to 1050 lbs.....	4 45 to 5 85	5 60	5 45	5 25
Hogs.				
Mixed.....	4 40 to 4 82½	4 75	4 12½	4 20
Heavy.....	4 10 to 4 80	4 65	4 12½	4 17
Light.....	4 50 to 4 85	4 87½	4 10	4 25
Pigs.....	3 00 to 4 50	4 75	4 00	4 25
Sheep.				
Natives.....	2 00 to 4 30	5 25	4 75	4 00
Western.....	3 50 to 4 15	4 30	4 50	3 90
Yearlings.....	4 25 to 4 80	5 50	4 30	.....
Lambs.....	3 75 to 6 25	6 25	6 30	5 35

The \$6.65 cattle belonged to G. B. Blades, of Irwin, Iowa, being the highest price paid here since December, 1893. He sold cattle a few days before at \$6.60.

Top August cattle prices at Chicago:

1899 (to Aug. 23).....	\$6.65	1888.....	\$6.50
1898.....	5.75	1887.....	5.50
1897.....	5.50	1886.....	5.25
1896.....	5.00	1885.....	6.25
1895.....	6.00	1884.....	7.35
1894.....	5.35	1883.....	8.00
1893.....	5.35	1882.....	6.65
1892.....	5.70	1881.....	5.15
1891.....	6.25	1880.....	5.35
1890.....	5.50	1879.....	5.35
1889.....	5.00	1878.....	5.30

A Chicago commission concern sold for S. Fennell, of Hamburg, Iowa, 1,000 head of grade Hereford steers, averaging about 1,500 lbs., at \$6 per 100 lbs. in the feed lot. The Eastman Company, of New York, bought them. They also sold, for the same party, 400 two-year-old steers to Doud & Keefer at \$6. They are to be delivered inside of the next thirty days.

This shows the extent to which buyers are scouring the country for good cattle. The demand for feeding cattle is even stronger, and so it will be seen that the Western corn belt, as well as the range regions that have thin cattle to sell, are the center of a good deal of interest to the trade just now. It would seem that there is a fair margin between choice dry-fed cattle and good feeding cattle. The bulk of the feeding cattle offered at all of the markets, however, are not the kind that could ever be grown into anything like the few choice dry-fed cattle that are selling at such high prices. Out of a big week's run recently, on a Western market, men who were trying to buy good feeding cattle said there were very few that showed desirable quality. Men who furnish money for cattle-feeding operations point to the exceptionally high prices for cattle, and wonder whether it is safe to figure on cattle paying out next spring. There is a tendency among them to feel conservative, but with money so plenty and feed so abundant there is no doubt there will be enough to feed all the cattle that are available.

The local butchers are making a great hue and cry against the advance in cattle prices, or, rather, in the prices they have to pay for beef by wholesale.

Hog receipts lately have been extremely small. As a consequence, buyers are having a hard time to keep prices from going far above the point that leaves them any profit on their board of live contracts.

A good many Western range horses are being marketed in Chicago. A lot of 1,200 Wyoming and Montana horses sold at \$14 to \$62 per head for suckling colts to three- to five-year-old 1,050 to 1,300 lb. animals.

The 500 range branded horses from the ranches of Utah were sold in the pens in car lots, at a brood of \$13, \$16 and \$17.50 for yearlings; \$16 and \$21.50 for range mares with foals by their side; and \$35.50 for three-year-old and four-year-old unbroken animals.

The famous "Nun" ranch and NUN brand of cattle, in Lubbock County, Texas, has been sold in Chicago to Lake, Tomb & Co., the well-known South Dakota ranchmen and Chicago capitalists, for a sum aggregating about \$540,000 for cattle and land.

There are about 22,500 cattle on the ranch, not counting this year's calves, which sold at \$21 per head. The herd consists of some 6,000 two- and three-year-olds, 500 well-bred bulls

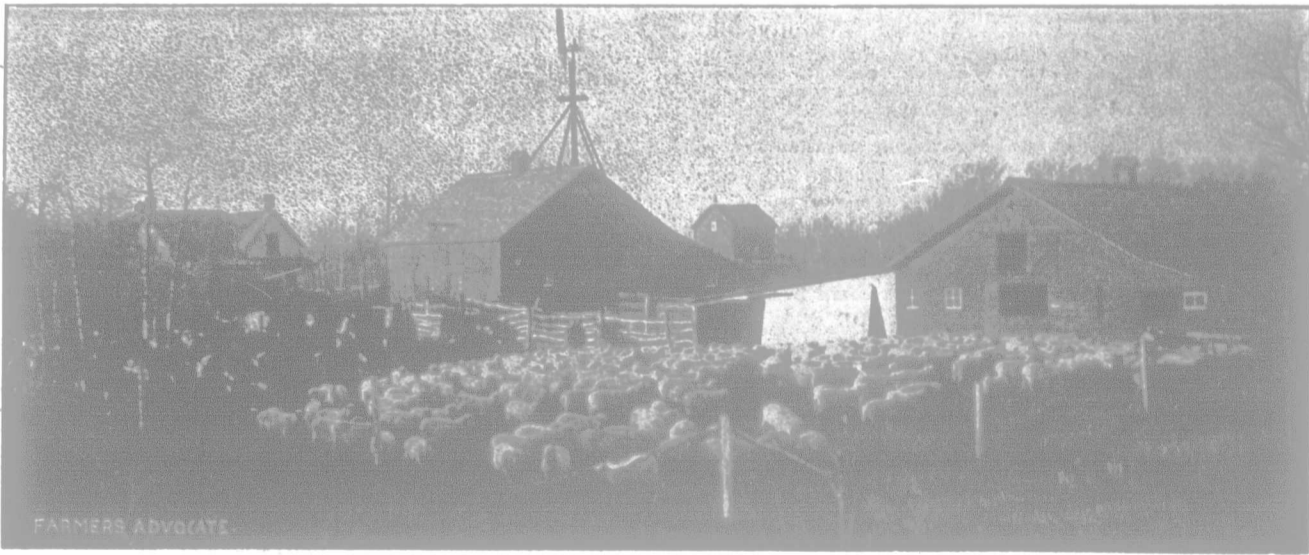
Montreal Markets.

Cattle.—Since our last report this market has undergone very little change, looking at it from the standpoint of volume of business put through; but from the quality of cattle offered, the change has been anything but satisfactory, the quality of cattle now coming forward being of a very poor grade, and although the rates of the best cattle have dropped from 5½c. and 5½c. to 4½c. and 4½c., the latter rates are certainly the most expensive for the buyers, owing to the quality of the cattle. Very few cattle reach the market in anything like good condition, and would be better for from six to eight weeks more on the grass. Best heaves have sold for 4½c. to 4½c., and in an exceptional case or two this figure has been raised a little, but it is practically the outside rate for the best on the market. Other grades range down to 2c. per lb.

Sheep and Lambs.—Fairly large offerings are forward, and all good suitable stock is quickly picked up for export at 3½c. to 3½c. per lb.; lambs ranging about 3c. per lb. more.

Calves.—The run of calves is steadily growing lighter as the season wears on, and prices range from \$2 to \$10 each, according to size and quality.

Hogs.—The run for offerings on the local market is on the small side, as most of the packers, like Laing, Masterman, and Morgan, all contract at Western points for their requirements. Locally, the prices range from 4½c. to 5c. per lb.



POPLAR GROVE FARM OF J. E. MARPLES, DELEAU, MANITOBA.

100 acres under crop. 100 acres fenced pasture.

Live Stock Shipments.—Shipments for the week show quite an increase on last week, and amount to 2,771 cattle and 3,053 sheep, as against 1,389 cattle and 1,781 sheep for last week; but the total is still far behind the same period last year, with the help of some 15,000 head of American cattle. So far to date, shipments have been 54,623 cattle and 30,119 sheep, as compared with 58,363 cattle and 13,720 sheep during the same period of 1898.

British Markets.

Hot weather and heavy supplies had the effect of forcing prices down from a half to one cent, as compared with last Monday's prices. Choice States steers sold down from 13c. to 12c. and 12½c. per pound, sinking the offal. Canadians sold at 11c. to 11½c. per pound. Argentines, 11½c.

The sheep trade was also weaker, and values for the week declined a ½c. to 1c. for Canadians and 1½c. for Argentines, sinking the offal.

Rates in Liverpool were on a par with the above.

mostly Shorthorns, and the balance yearlings and cows. More than half the herd consists of breeding cows.

Prime Western range cattle sold in Chicago as high as \$5.40, which is the highest since 1891.

High-grade Manitoba and N.-W. T. Wheat.

Later reports claim that the Manitoba Government crop estimates of 20.55 average per acre of the wheat crop will be considerably under the mark. Individual yields run as high as 35 to 45 bushels per acre. Mr. F. W. Thompson, manager of the Ogilvie Milling Co., pronounces new samples of wheat sent in the best he has seen for years, which is saying a good deal.

Dairy Shipments.

Shipments of cheese for the week, 75,527 boxes, as compared with 87,731, making the total to date, 1,058,199 boxes. As to the advance of butter and cheese in the country, readers have already been posted. Butter shipments for the week were very light, the total to date being 211,800 boxes.



AN AFRICAN MILLIONAIRE.

EPISODES IN THE LIFE OF THE ILLUSTRIOUS COLONEL CLAY.

BY GRANT ALLEN.

(Continued from page 441.)

Paul Finglemore shook his head. "Won't do," he answered, calmly. "Be sure of your ground. Outside the jurisdiction! You can only do that on an extradition warrant."

"Well, then, at Seldon, in London, in this house, and elsewhere," Charles cried out, excitedly. "Hold hard to him, Sey; by law or without it, blessed if he isn't going even now to wriggle away from us!"

At that moment Simpson returned with a convenient policeman, whom he had happened to find loitering about near the area steps, and whom I half suspected, from his furtive smile, of being a particular acquaintance of the household.

Charles gave the man in charge formally. Paul Finglemore insisted that he should specify the nature of the particular accusation. To my great chagrin, Charles selected from his rogues, as best within the jurisdiction of the English courts, the matter of the payment for the Castle of Lebenstein—made in London, and through a London banker. "I have a warrant on that ground," he said. I trembled as he spoke. I felt at once that the episode of the commission, the exposure of which I dreaded so much, must now become public.

The policeman took the man in charge. Charles still held to him grimly. As they were leaving the room the prisoner turned to Cesarine and muttered something rapidly, under his breath, in German. "Of which tongue," he said, turning to us blandly, "in spite of my kind present of a dictionary and grammar, you still doubtless remain in your pristine ignorance!"

Cesarine flung herself upon him with wild devotion. "Oh, Paul, darling," she cried, in English, "I will not, I will not! I will never save myself at your expense. If they send you to prison—Paul, Paul, I will go with you!"

But the man, his hands still free, unbound her clasping arms with gentle fingers. "My child," he answered, in a soft tone, "I am sorry to say the law of England will not permit you to go with me. If it did, stone walls would not a prison make, nor iron bars a cage." And, bending forward, he kissed her forehead tenderly.

We led him out to the door. The policeman, in obedience to Charles' orders, held him tight with his hand, but steadily refused, as the prisoner was not violent, to handcuff him. We hailed a passing hansom. "To Bow Street!" Charles cried, ceremoniously pushing in policeman and prisoner. The driver nodded. We called a four-wheeler ourselves, in which my brother-in-law, Dr. Beddersley and myself took our seats. "Follow the hansom!" Charles cried out. "Don't let him out of your sight. After him, close, to Bow Street!"

I looked back and saw Cesarine, half fainting, on the front door steps, while Dolly, bathed in tears, stood supporting the lady's maid and trying to comfort her. It was clear she had not anticipated this end to the adventure. "Goodness gracious!" Charles screamed out, in a fresh fever of alarm, as we turned the first corner, "where's that hansom gone to? How do I know the fellow was a policeman at all? We should have taken the man in here. We ought never to have let him get out of our sight. For all we can tell to the contrary, the constable himself—may only be one of Colonel Clay's confederates!"

And we drove in trepidation all the way to Bow Street.

VIII.

THE EPISODE OF THE OLD BAILEY.

When we reached Bow Street we were relieved to find that our prisoner, after all, had not evaded us. It was a false alarm. He was there with the policeman, and he kindly allowed us to make the first formal charge against him.

Of course, on Charles' sworn declaration and my own the man was at once remanded, bail being refused, owing both to the serious nature of the charge and the slippery character of the prisoner's antecedents. We went back to Mayfair—Charles well satisfied that the man he dreaded was under lock and key; myself not too well pleased to think that the man I dreaded was no longer at large, and that the trifling little episode of the ten per cent. commission stood so near discovery.

Next day the police came round in force and had a long consultation with Charles and myself. They strongly urged that two other persons at least should be included in the charge—Cesarine and the little woman whom we had variously known as Madame Picardet, White Heather, and Mrs. David Granton. If these accomplices were arrested, they said, we could include conspiracy as one count in the indictment, which gave us an extra chance of conviction. Now they had got Colonel Clay, in fact, they naturally desired to keep him, and also to indict with him as many as possible of his pals and confederates.

Here, however, a difficulty arose. Charles called me aside with a grave face into the library. "Seymour," he said, fixing me, "this is a serious business. I will not lightly swear away any woman's character. Colonel Clay himself—or, rather, Paul Finglemore—is an abandoned rogue, whom I do not desire to screen in any degree. But poor little Madame Picardet, she may be his lawful wife, and she may have acted implicitly under his orders. Besides, I don't know whether I could swear to her identity. Here's the photograph the police bring of the woman they believe to be Colonel Clay's chief female accomplice. Now, I ask you, does it in the least degree resemble that clever and amusing and charming little creature who has so often deceived us?"

In spite of Charles' gibes, I flatter myself I do really understand the whole duty of a secretary. It was clear from his voice he did not wish me to recognize her, which, as it happened, I did not. "Certainly, it doesn't resemble her," Charles' Colonel said, with conviction in my voice. "I should never have known her." But I did not add that I should no more have known Colonel Clay himself in his character of Paul Finglemore, or of Cesarine's young man, as that remark lay clearly outside my secretarial functions.

Still, it flitted across my mind at the time that the Seer had made some casual remarks at Nice about a letter in Charles' pocket, presumably from Madame Picardet; and I reflected further that Madame Picardet in turn might possibly hold certain key-words of Charles' in such terms as he might reasonably be expected to extract from Amelia. Indeed, I must allow that some of the "disguise" White Heather appeared to me. That day, however, the two disguises devoted slave from the next morning to me. It occurred to me, therefore, that the cleverest of us should call her what you will—might be the holder of the secret of our most secret communication.

"Under these circumstances," Charles went on, in his austere voice, "I cannot consent to be a party to the arrest of White Heather. I—I decline to identify her. In point of fact"—he grew more emphatic as he went on—"I don't think there is an atom of evidence of any sort against her. Not," he continued, after a pause, "that I wish in any degree to screen the guilty. Cesarine, now—Cesarine we have liked and trusted. She has betrayed our trust. She has sold us to this fellow. I have no doubt at all that she gave him the diamonds from Amelia's *rievre*; that she took us by arrangement to meet him at Schloss Lebenstein; that she opened and sent to him my letter to Lord Craig-Ellachie. Therefore, I say, we ought to arrest Cesarine. But not White Heather—not Jessie. Let the guilty suffer; why strike at the innocent—or, at worst, the misguided?"

Charles, I exclaimed, with warmth, "your sentiment does you honor. You are a man of feeling. And White Heather, I allow, is pretty enough and clever enough to be forgiven anything. You may rely upon my discretion. I will swear through thick and thin that I do not recognize this woman as Madame Picardet."

Charles clasped my hand in silence. "Seymour," he said, after a pause, with marked emotion, "I felt sure I could rely upon you—er—honor and integrity. I have been rough upon you sometimes. But I ask your forgiveness. I see you understand the whole duties of your position."

We went out again, better friends than we had been for months. I hoped, indeed, this pleasant little incident might help to neutralize the possible ill effects of the ten per cent. disclosure should Finglemore take it into his head to betray me to my employer. As we emerged into the drawing-room, Amelia beckoned me aside towards her boudoir for a moment.

"Seymour," she said to me, in a distinctly frightened tone, "I have treated you harshly at times, I know, and I am very sorry for it. But I want you to help me in a most painful difficulty. The police are quite right as to the charge of conspiracy. That designing little mix, White Heather, or Mrs. David Granton, or whatever else we're to call her, ought certainly to be prosecuted, and sent to prison too, and have her absurd head of hair cut short and combed straight for her. But—and you will help me here, I'm sure, dear Seymour—I cannot allow them to arrest my Cesarine. I don't pretend to say Cesarine isn't guilty. The girl has behaved most ungratefully to me. She has robbed me right and left, and deceived me without compunction. Still—put it to you as a married man—can any woman afford to go into the witness-box to be cross-examined and teased by her own maid, or by a brute of a barrister on her maid's information? I assure you, Seymour, the thing's not to be dreamt of. There are details of a lady's life—known only to her maid—which cannot be made public. Explain as much of this as you think well to Charles, and make him understand that if he insists upon arresting Cesarine I shall go into the box and swear my head off to prevent any one of the gang from being convicted. I have told Cesarine as much. I have promised to help her. I have explained that I am her friend, and that if she'll stand by me, I'll stand by her, and by this hateful young man of hers."

I saw in a moment how things went. Neither Charles nor Amelia could face cross-examination on the subject of one of Colonel Clay's accomplices. No doubt in Amelia's case it was merely a question of rouge and hair dye, but what woman would not sooner confess to a forgery or a murder than to those toilet secrets?

I returned to Charles, therefore, and spent half an hour in composing, as well as I might, these little domestic difficulties. In the end it was arranged that if Charles did his best to protect Cesarine from arrest, Amelia would consent to do her best in return on behalf of Madame Picardet.

We had next the police to tackle—a more difficult business. Still, even they were reasonable. They had caught Colonel Clay, they believed, but their chance of convicting him depended entirely upon Charles' identification, with mine to back it. The more they urged the necessity of arresting the female confederates, however, the more stoutly did Charles declare that for his part he could by no means make sure of Colonel Clay himself, while he utterly declined to give evidence of any sort against either of the women. It was a difficult case, he said, and he felt far from confident even about the man. If his decision faltered, and he failed to identify, the case was closed—no jury could convict with nothing to convict upon.

At last the police gave way. No other course was open to them. They had made an important capture, but they saw that everything depended upon securing their witnesses, and the witnesses if interfered with were likely to swear to absolutely nothing.

Indeed, as it turned out, before the preliminary investigation at Bow Street was completed (with the usual remands), Charles had been thrown into such a state of agitation that he wished he had never caught the colonel at all.

"I wonder, Sey," he said to me, "why I didn't offer the rascal two thousand a year to go right off to Australia, and be rid of him forever! It would have been cheaper for my reputation than keeping him about in courts of law in England. The worst of it is, when once the best of men gets into a witness-box there's no saying with what shreds and tatters of a character he may at last come out of it."

In your case, Charles, I answered dutifully, "there can be no such doubt except, perhaps, as regards the Craig-Ellachie Consolidated."

Then came the endless bother of "getting up the case" with the police and the lawyers. Charles could have retired from it altogether by that time, but, most unfortunately, he was bound over to prosecute. "You couldn't take a lump-sum to let me off?" he said, jokingly, to the inspector. "But I knew in my heart it was one of the 'true words spoken in jest' that the proverb tells of."

Of course, we could see now the whole building up of the great intrigue. It had been worked out as carefully as the Tichborne swindle. Young Finglemore, as the brother of Charles' broker, knew from the outset all about his affairs, and after a gentle course of preliminary rogues he laid his plans deep for a campaign against my brother-in-law. Everything had been deliberately designed beforehand. A place had been found for Cesarine as Amelia's maid; needless to say by means of forged testimonials. Through her aid the swindler had succeeded in learning still more of the family ways and habits, and had acquired a knowledge of certain facts which he proceeded forthwith to use against us. His first attack, as the Seer, had been cleverly designed so as to give us the idea that we were a mere casual prey; and it did not escape Charles' notice now that the detail of getting Madame Picardet to enquire at the Credit Marsellais about his bank had been solemnly gone through on purpose to blind us to the obvious truth that Colonel Clay was already in full possession of all such facts about us. It was by Cesarine's aid, again, that he became possessed of Amelia's diamonds, that he received the letter addressed to Lord Craig-Ellachie, and that he managed to dupe us over the Schloss Lebenstein business. Nevertheless, all these things Charles determined to conceal in court. He did not give the police a single fact that would turn against either Cesarine or Madame Picardet.

As for Cesarine, of course, she left the house immediately after the arrest of the Colonel, and we heard of her no more till the day of the trial.

When that great day came, I never saw a more striking sight than the Old Bailey presented. It was crammed to overflowing. Charles arrived early, accompanied by his solicitor. He was so white and troubled that he looked much more like prisoner than prosecutor. Outside the court a pretty little woman stood, pale and anxious. A respectful crowd stared at her silently. "Who is that?" Charles asked. "That's the prisoner's wife," the inspector on duty replied. "She's waiting to see him enter. I'm sorry for her, poor thing. She's a perfect lady."

"So she seems," Charles answered, scarcely daring to say her.

At that moment she turned. Her eyes fell upon his. Charles paused for a second and looked faltering. There was in those eyes just the faintest gleam of pleading recognition, but not a trace of the old saucy, defiant vivacity. Charles framed his lips to words, but without uttering a sound. Unless I greatly mistake, the words he framed on his lips were these: "I will do my best for him."

We pushed our way in, assisted by the police. Inside the court we saw a lady seated, in a quiet black dress, with a becoming bonnet. A moment passed before I knew—it was Cesarine. "Who is that person?" Charles asked once more of the nearest inspector, desiring to see in what way he would describe her.

And once more the answer came. "That's the prisoner's wife, sir."

Charles started back, surprised. "But—I was told—a lady outside was Mrs. Paul Finglemore," he broke in, much puzzled.

"Very likely," the inspector replied, unmoved. "We have plenty that way. When a gentleman has as many aliases as Colonel Clay, you can hardly expect him to be over-particular about having only one wife between them, can you?"

"Ah, I see," Charles muttered, in a shocked voice. "Bigamy!"

The inspector looked stony. "Well, not exactly that," he replied. "occasional marriage."

Mr. Justice Rhadamanth tried the case. "I'm sorry it's him, Sey," my brother-in-law whispered in my ear. (He said *him*, not *he*, because, whatever else Charles is, he is not a pedant. The English language as it is spoken by most educated men is quite good enough for his purpose.) "I only wish it had been Sir Edward Easy. Easy's a man of the world and a man of society. He would feel for a person in *my* position. He wouldn't allow these beasts of lawyers to badger and pester me. He would back his order. But Rhadamanth is one of your modern sort of judges, who make a merit of being what they call 'conscientious,' and won't hush up anything. I admit I'm afraid of him. I shall be glad when it's over."

"Oh, you'll pull through all right," I said, in my capacity of secretary. "But I didn't think it."

The judge took his seat. The prisoner was brought in. Every eye seemed bent upon him. He was neatly and plainly dressed, and, rogue though he was, I must honestly confess he looked at least a gentleman. His manner was defiant, not abject like Charles'. He knew he was at bay, and he turned like a man to face his accusers.

We had two or three counts on the charge, and after some formal business Sir Charles Vandrift was put into the box to bear witness against Finglemore.

Prisoner was unrepresented. Counsel had been offered him, but he refused their aid. The judge even advised him to accept their help, but Colonel Clay, as we all called him mentally still, declined to avail himself of the judge's suggestion. "I am a barrister myself, my lord," he said, "called some nine years ago. I can conduct my own defence, I venture to think, better than any of these my learned brethren."

Charles went through his examination-in-chief quite swimmingly. He answered with promptitude. He identified the prisoner without the slightest hesitation as the man who had swindled him under the various disguises of the Reverend Richard Peopie Brabazon, the Honorable David Granton, Count von Lebenstein, Professor Schleiermacher, and others. He had not the slightest doubt of the man's identity. He could swear to him anywhere. I thought, for my own part, he was a trifle too cocksure. A certain amount of hesitation would have been better policy. As to the various swindles, he detailed them in full, his evidence to be supplemented by that of bank officials and other subordinates. In short, he left Finglemore not a leg to stand upon.

When it came to the cross-examination, however, matters began to assume quite a different complexion. The prisoner set out by questioning Sir Charles' identifications. Was he sure of his man? He handed Charles a photograph. "Is that the person who represented himself as the Reverend Richard Peopie Brabazon?" he asked, persuasively.

Charles admitted it without a moment's delay. Just at that moment a little person, whom I had not noticed till then, rose up unobtrusively near the middle of the court, where he was seated beside Cesarine.

"Look at that gentleman!" the prisoner said, waving one hand, and pointing upon the prosecutor.

Charles turned and looked at the person indicated. His face grew still whiter. It was, to all outward appearance, the Reverend Richard Brabazon in *propria persona*.

Of course I saw the trick. This was the real person upon whose outer man Colonel Clay had modelled his little curate. But the jury was shaken. And so was Charles for a moment.

"Let the jurors see the photograph," the judge said, authoritatively. It was passed round the jury-box, and the judge also examined it. We could see at once, by their faces and attitudes, they all recognized it as the portrait of the clergyman before them—not of the prisoner in the dock, who stood there smiling blandly at Charles' discomfiture.

The clergyman sat down. At the same moment the prisoner produced a second photograph.

"Now, can you tell me who that is?" he asked Charles, in the regular brow-beating Old Bailey voice.

With somewhat more hesitation Charles answered, after a pause: "That is yourself as you appeared in London when you came in the disguise of the Graf von Lebenstein."

This was a crucial point, for the Lebenstein fraud was the one count on which our lawyers relied to prove their case most fully, within the jurisdiction. Even while Charles spoke, a gentleman whom I had noticed before, sitting beside White Heather, with a handkerchief to his face, rose as abruptly as the parson. Colonel Clay indicated him with a graceful movement of his hand. "And this gentleman?" he asked, calmly.

Charles was fairly staggered. It was the obvious original of the false Von Lebenstein.

The photograph went round the box once more. The jury smiled incredulously. Charles had given himself away. His overweening confidence and certainty had ruined him.

Then Colonel Clay, leaning forward, and looking quite engaging, began a new line of cross-examination. "We have seen, Sir Charles," he said, "that we cannot implicitly trust your identifications. Now let us see how far we can trust your other evidence. First, then, about those diamonds. You tried to buy them, did you not, from a person who represented himself as the Reverend Richard Brabazon because you believed he thought they were paste; and if you could you would have given him £10 or so for them. Do you think that was honest?"

"I object to this line of cross-examination," our leading counsel interposed. "It does not bear on the prosecutor's evidence. It is purely reformatory."

Colonel Clay was all bland deference. "I wish, my lord," he said, in a ringing tone, "to show that the prosecutor is a person unworthy of credence in any way. I desire to proceed upon the well-known legal maxim of *falsus in uno, falsus in omnibus*. I believe I am permitted to shake the witness' credit?"

"The prisoner is entirely within his rights," Rhadamanth answered, looking severely at Charles. "And I was wrong in suggesting that he needed the advice or assistance of counsel."

Charles wrigged visibly. Colonel Clay peered up. Bit by bit, with dexterous questions, Charles was made to acknowledge that he wanted to buy diamonds at the price of paste, knowing them to be real; and, a millionaire himself, would gladly have diddled a poor curate out of a couple of thousand.

"I was entitled to take advantage of my special knowledge," Charles murmured, feebly.

"Oh, certainly," the prisoner answered. "But while professing friendship and affection for a clergyman and his wife, in such circumstances, you were prepared, it seems, to take three thousand pounds' worth of goods off their hands for ten pounds, if you could have got them at that price. Is not that so?"

[TO BE CONTINUED.]

"A Singing Lesson."

Rather a novel one, is it not? Yet few singing lessons are given to more apt pupils. The wonderful imitative powers of the Piping Bullfinch are of world renown. This is a most unique and interesting picture. The attitude of the master is capital in its display of *carelessness* and *care*—if one may so combine these opposite expressions. His mouth is pursed up in whistling; but his pipe, you see, is handy, so that between whiles—when Master Bully is digesting his lesson—a comforting whiff can be indulged in. The stolid and plump little bird is very pretty, and the ridiculous difference in size between master and pupil is laughable. One can scarcely believe that fat mite is taking in—and memorizing—every note of the tune whistled. Only lately the present writer heard of a lady in England who had a Piping Bullfinch to whom she was very anxious to impart a song; but alas, she could not whistle! However, her friend (the writer's sister) could whistle—and well too—so carefully went over the air several times. The next day "Bully" was heard practising away in great style. These Piping Bullfinches often fetch large sums, and certainly their powers are wonderful. Many of them sing numbers of tunes. I have no doubt that that dear little ball of feathers sitting there listening so demurely will fill all space with his beautiful song to-morrow, and soon show his patient master what progress he has made. I will add that the breasts, cheeks, and throats of these clever songsters are of a rich crimson. This picture is supposed to be by the celebrated French artist, Meissonier, who died lately.

Our Library Table.

"THE GREAT COMPANY." Beckles Willson.—This history of the famous Hudson's Bay Company from 1660 to 1871 will be found of interest to many of our readers. Any exhaustive account of the work would be impossible—it must be read. It seems that up to 1671 the superiority of the fur dressing in Paris, Vienna, Leipsic, and Amsterdam, completely overshadowed that of London and Bristol, consequently the British traders, after gathering in a vastly superior lot of furs to any before received, advertised a great sale at Garraway's coffee house, London:

"On the fifth of December, ensuing, There Will Be Sold, in the Greate Hall of this Place, 3,000 weight of Beaver Skins, comprised in thirty lotts, belonging to the Honourable, the Governour and Company of Merchants-Adventurers Trading into Hudson's Bay."

Such was the notice of the first official sale of the Company. After this sale the tide turned, and London became the great center of the world's fur trading, which position it has ever since held.

A most graphic account is given of the capture of Fort Nelson on Sept. 11, 1697, and of the trading ceremonies of the Hudson's Bay Co. Indians in the 18th century (part of which seemed to consist in getting horribly drunk!). The seemingly impossible journey of the great fur trader, Sir Alexander Mackenzie, lasting from October, 1792, till July, 1793, was a wonderful feat.

"The memorable journey was now finished, and its purpose completed. In large characters, upon the surface of a rock under whose shelter the party had slept, the leader painted this simple memorial:

"Alexander Mackenzie, from Canada by land the 22nd of July, one thousand seven hundred and ninety-three."

The terrible Red River tragedy of 1816, when Governor Semple and his officers were treacherously attacked and murdered by the half-breeds, must make the Hudson's Bay Company's officials rejoice that they live in this century and not in that. The Company, now under British rule, yet co-operates with settlers and explorers and all its former enemies. The 126 posts of the Hudson's Bay Company extend from the coasts of Labrador to the frontiers of Alaska. Space forbids further extracts from this remarkable book—extracts which show that amidst the necessary dry business facts runs a thread of romantic adventure which will make "The Great Company" enjoyed by all—old and young. Copp, Clark Co., Toronto. FELIX.

Recipes.

It is customary with a real "Virginny" cook to boil a whole ham at a time until nearly tender, and then slice from that for broiling or frying to serve with eggs. Hams or strips of bacon that are to be kept on hand during the summer are rubbed all over outside with a thin coating of hickory ashes to prevent mold or rust.

VELVET SPONGE.

Two cups sugar, 6 eggs (leaving out the whites of three), 1 cup of boiling water, 2½ cups flour, 1 tablespoonful baking powder. Beat the yolks a little, add the sugar, and beat 15 minutes. Add the 3 beaten whites and cup of boiling water just before the flour, and bake as a layer cake.

Filling.—One pint of sweet cream beaten stiff (sweetened and flavored to taste), one pound almonds (blanched and chopped fine). Spread this between and on top.

GEMS.

Three eggs, two cups flour, ½ cup butter, ½ cup buttermilk, 1 spoonful baking soda, 1 spoonful mixed spice, 1 cup brown sugar. By adding a large cup of chopped raisins and peel, this makes a nice raisin layer cake.

ROLL JELLY CAKE.

One cup white sugar, 4 eggs (whites and yolks beaten separately), a pinch of salt, 1 tablespoonful cold water, 1 level teaspoonful of baking powder, 1 cup flour. Pour into a dripping pan lined with oiled paper, and when cooked, spread quickly with jelly, and roll.

THE QUIET HOUR.

At Sunset.

It isn't the thing you do, dear,
It's the thing you've left undone,
Which gives you a bit of heartache
At the setting of the sun.
The tender word forgotten,
The letter you did not write,
The flower you might have sent, dear,
Are your haunting ghosts to-night.
The stone you might have lifted
Out of a brother's way,
The bit of heartsome counsel
You were hurried too much to say;
The loving touch of the hand, dear,
The gentle and winsome tone
That you had no time or thought for,
With troubles enough of your own.



"A SINGING LESSON."

The little act of kindness,
So easily out of mind;
Those chances to be angels
Which all we mortals find—
They come in night and silence,
Each chill reproachful wraith—
When hope is faint and flagging,
And a blight has dropped on faith.

For life is all too short, dear,
And sorrow is all too great,
To suffer our slow compassion
That tarries until too late;
And it's not the thing you do, dear,
It's the thing you leave undone,
Which gives you the bit of heartache
At the setting of the sun.
—Margaret E. Sangster.

Wasted Opportunity.

To-day I have chosen, for the opening verses of our Quiet Hour, a little poem by Margaret Sangster, which is probably familiar to most of you, as it has been quoted over and over again. This very fact shows that it strikes home. At any rate, it fits in with my subject. What a strange thing it is that people will go on congratulating themselves that they are "no worse than their neighbors," and, therefore, are in no danger of being condemned for their sins. Like the Pharisee, they thank God that they are not "extortioners, unjust adulterers, or even as this publican" (some notorious evildoer of their acquaintance). They seem to think the only question under consideration is, what they are *not*, instead of being rather what they *are*. It is strange

that this should be so, when we have the Bible in our hands, so full of startling warnings against this false security founded on what might be called negative virtue—if there is such a thing. Take, for example, the vivid picture of the Last Judgment, given us by our Lord, in which the sheep are placed on the right, the goats on the left. Why are the latter condemned? Is there any hint given that they lived lives of reckless wickedness? See the reason for the terrible sentence—"Depart from Me, ye cursed, into everlasting fire." The offence is plainly stated by the Judge, and it is *not* open wickedness, but rather *neglected duty*; "for I was an hungred, and ye gave Me no meat: I was thirsty, and ye gave Me no drink: I was a stranger, and ye took Me not in: naked, and ye clothed Me not." We are told that the awful sentence will be a surprise, and yet it is not because men are unwarned of the danger of neglecting their opportunities. Again, think of the parable of the rich man and Lazarus. Was the rich man living a very wicked life? There is no hint of such a thing. He is simply represented as a self-indulgent person, who wasted the opportunity of ministering to the sick beggar at his gate. Then there is the parable of the barren fig-tree. The owner for three years looked in vain for fruit, and one year more of opportunity was given, with the warning: "If it bear fruit, well; and if not, then after that thou shalt cut it down."

A fig-tree was withered for the same offence—*no fruit*. The parable of the Talents teaches the same lesson, that we shall surely be punished if we do not put our opportunities to good account.

The five foolish virgins, too, were not accused of open wilful sin. They were only careless and neglectful—and yet they were shut out from the marriage feast. But it is unnecessary to quote further—these instances are surely enough to show that sins of omission are not to be treated lightly. Most of us have, probably, more reason to ask forgiveness for having "left undone those things which we ought to have done," than even for having "done those things which we ought not to have done."

But good works should not be performed in a cold, hard spirit of trying to satisfy a hard Master. If they are to be worthy of the name of "fruit" they must grow naturally from love to God and man.

"Love and believe! for works will follow spontaneous Even as day does the sun; the light from the Good is an offering,
Love in a bodily shape; and christian works are no more than
Animate love and faith, as flowers are the animate spring-tide.
Works do follow us all unto God; they stand and bear witness,
Not what they seemed—but what they were only."

There is a warning in those last words. God will not judge our works as *they seem* to man, but as *they are* in His sight. "Take heed that ye do not your alms before men, to be seen of them: otherwise ye have no reward of your Father which is in heaven." *No reward!* How much money is given away for the sake of display? When a subscription list is taken around, we ask, "What are other people giving?" and our contributions are graded accordingly. We give, sometimes at least, not as an offering to God, but rather because we don't want to be thought less generous than our neighbors. It is not only *what* we do, but *why* we do it, that must be considered, otherwise we shall have "no reward of our Father which is in heaven."

Let it not be said of us when we reach the eleventh hour of our lives,— "Why stand ye here all the day idle?" Opportunities are about us every day, and they never wait—they must be seized at once.

Shall the King answer and say unto us, "Verily I say unto you, inasmuch as ye have done it unto one of the least of these My brethren, ye have done it unto Me"; or, "Inasmuch as ye did it not to one of the least of these, ye did it not to Me."

Every day that passes is helping to decide the question. Which shall it be? **HOPE.**

The Proper Tune.

This story is told of an eccentric Hastings parson. One day on visiting the belfry he found a whitewasher whistling a dance tune as he worked. The parson reproved him sharply for choosing such music for such a place. "Beg your pardon, sir," said the man, "but I forgot where I was." And then, to show he was sorry, he started whistling the "Old Hundredth." His hand, however, kept time with the music, and so the "Old Hundredth" made the whitewash brush go wonderfully slow. "Oh, get back to your dance tune," the old parson shouted, "or the job'll never be done."

The Sum of It All.

The boy that by addition grows,
And suffers no subtraction,
Who multiplies the thing he knows,
And carries every fraction,
Who well divides his precious time,
The due proportions giving,
To sure success aloft will climb,
Interest compound receiving.
—Dr. Ray Palmer.



The Improvident Squirrel.

Their home was in the hollow of a great oak tree. Jack Frost had been out the night before and opened the chestnut burs so that the nuts were all ready to fall. It was a bright, frosty morning in October. The mother squirrel said to her children, Bushy Tail, Bunny, and Sport:

"Now that the acorns, hickory nuts, walnuts, and chestnuts are falling by the hundreds, we must go to work and fill this hole, for you know that winter is coming, and if we don't work now, we won't have anything to eat when the snow covers the ground."

In the old tree were many little corners or closets. The mother took each little squirrel and showed him his own closet, and told him to go right to work and fill it. She then went off and left them to work.

It was great fun at first to see the nuts come tumbling down and be the one to get the plumpest and best. The three squirrels worked hard all day long; up and down the old oak they went, carrying the glossy brown acorns and chestnuts, now and then a beautiful, white hickory nut. Bushy Tail found one or two walnuts as big as his head.

At night, when the mother came home, they each took her to see what a big pile of nuts they had in their closets.

"Why, yes, my children, you have worked well; but you will have to work well for many days before you will have nuts enough to last you through the long, long winter."

The next morning Bushy Tail and Bunny went out again gathering nuts, but Sport felt lazy and said: "There'll be plenty of time to gather my nuts before the snow comes." So off he went to have a frolic with the neighbors. Each day was the same; instead of working, he would say: "Oh, there's plenty of time."

All this time Bushy Tail and Bunny had been very busy, and their closets were full to the brim. One cloudy evening in November the mother squirrel came home, called up her three children and said:

"Have you all filled your closets? I saw the big snow cloud as I came home; to-morrow the ground will be white with snow."

Bushy Tail and Bunny were quick to answer: "Oh, yes, mother, we have."

But Sport began to cry; when they asked him what was the matter, he told them how he hadn't worked, but had been frolicking through the woods, and that he had only a few nuts in his hole. His mother looked very grave, and said:

"I am afraid you will suffer during the long winter, for we have just nuts enough for ourselves."

Bushy Tail and Bunny said they could each give him a few of their nuts, but not enough to last him.

Sport felt very sad to think how he had spent his time, and he hoped very much the snow wouldn't come; he might still have a chance to work.

When daylight came, you might have seen the three little squirrels, with anxious faces, peeping out of the big hole in the tree; for, sure enough, the snow had come in the night, and not a nut was to be seen. They all went back to Mother Squirrel to see what was to be done to help Sport.

Bushy Tail said: "Suppose we ask the little sunbeams to come down and take away the snowflakes; then we will go to work and help Sport to gather his nuts."

When they asked the sunbeams, they said: "All right!" and away they went. Soon the snow was gone.

The squirrels worked in earnest, but it was hard to get nuts now, as they were quite scarce; but they kept on until, at last, the closet of Sport was full too, and a happy Thanksgiving it was, for they didn't want to see Sport starve, although he had been so careless about his future.—*Elizabeth Brown.*

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

In the present age of cheap literature we enjoy a privilege too frequently undervalued. When a full set of Dickens' works may be purchased for less than a dollar, and the works of other great writers proportionately low, there is ample chance for all to communicate with these great thinkers, and such communication cannot fail to be beneficial to the general reader. Perhaps some may say they have little time and less time for reading. The first answer should be cultivated; as for the latter, it is a question how much may be accomplished by using the few moments, few though they seem, which are spent in acquaintance with several of the best writers. Good poetry is a tolerably rare commodity, and it is a pity that if you have a taste for it, you do not read it. If you have a taste for it, you do not read it. If you have a taste for it, you do not read it.

and not only familiarize yourself with the principal characters therein, but also learn all you can of the biography of the author; and last, but not least, do not leave the preface unread, as it frequently proves one of the most interesting chapters.

Novel-reading is condemned by many, and certainly many novels are worthy only of condemnation, but such works as the Waverley novels will only make one brush up his half-forgotten history, while Dickens will bring him face to face with many of the sad realities, as well as the pathetic and humorous sides, of life. The perusal of fine poems has an ennobling effect on all who possess even a meager degree of the finer sentiments, for even the reading about noble deeds lifts "the soul from the common clod to a purer air and a broader view."

In every book we read we find frequent quotations, and it is much more interesting when we know where to place them. Shakespeare's words confront us everywhere, but of the later poets Tennyson is, perhaps, the most widely quoted. All the following extracts, taken from his short poem, Locksley Hall, are very common quotations:

"In the Spring a livelier iris changes on the turtle dove;
In the Spring a young man's fancy lightly turns to thoughts of love."

"Love took up the glass of Time and turned it in his glowing hands;
Every moment, lightly shaken, ran itself in golden sands."

"Love took up the harp of Life and smote on all its chords
Smote the chord of Self, that, trembling, passed in music out of sight."

"Cursed be the gold that gilds the straitened forehead of the fool!"

"Every door is barr'd with gold, and opens but to golden keys."

"Till the war drum throbs no longer and the battle flags were furled
In the Parliament of man, the Federation of the world."

"Yet I doubt not thro' the ages one increasing purpose runs,
And the thoughts of men are widened with the process of the suns."

"Knowledge comes, but Wisdom lingers."

"The heir of all the ages in the foremost files of time."

Many of our Canadian poets and their American cousins furnish us with gems well worthy of being committed to memory, and I hope my boys and girls will strive to benefit by them.

How would you like to all read some long poem and make extracts from it, and then let us compare them? I think it would be pleasant, and am willing to take part in the game. What do you all say about it? Your loving—**UNCLE TOM.**

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c.; 3rd, 50c.]

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1—ANIMALS IN ANAGRAM.

1. The plane; 2, see law; 3, rail log; 4, fig fare; 5, toe plane; 6, shore; 7, tar skum; 8, O! colet. "MCGINTY."

2—NUMERICAL.

A wise saying, which should be righteously heeded, consists of thirty letters.

- 27, 13, 21, 9, 4, are invariably quacks.
- 18, 25, 1, 17, 3, 14, 26, are dear to me.
- 2, 16, 2, 7, 20, is in your eye.
- 15, 29, 19, 8, 18, is what we all sigh for.
- 30, 10, 5, 24, are used in games of chance.
- 23, 28, 12, 3, is a small bay.
- 5, 19, 30, 13, 14, goes through the press.
- 15, 7, 11, 20, is frequently presented.
- 25, 22, 5, 6, is part of a foot.

L. B. F.

3—RIDDLE.

When Christmas logs burn on the hearth,
And voices all are gay,
My first can join the vocal mirth
As merrily as they.

When winter snow's upon the ground
My second handy comes;
With that assistance warmth is found,
And light in happy homes.

But when the summer sun-line rolls,
And brown is every face,
How actively my jolly whole
Upon the green takes place!

L. B. F.

4—ANAGRAM.

Brown had a barnyard chancier,
With plumage mottled gray—
Down South the bird was hatched, I hear,
And christened Henry Clay.

Now Brown could read the future's roll
In a most curious way;
When quite prepared, in manner droll,
"CLAY, EAT MY CORN," he'd say.

"K. K."

5—AUTHORS TRANSPOSED.

Ldsnhtioq, Nltimo, Inbgõrnu, Toest, Ynosmet, Throwash, Arceapsekhs, Sbrnu. BERNICE PHIN.

6—CHARADE.

My first is a consonant pure—
It's sound, like another letter;
My second a plot of ground
For games, than others is better.
My third, it is a heap of earth,
That is found beside the wave;
My whole is a name about which, one time,
Every Canuck would rave.

7—SQUARE.

My first is used for weal or woe,
So keep it at a distance;
My second, like my first, lays low
The knight of weak resistance.
My third arises in the breast—
When flagrant wrong becomes its guest.
My fourth with any sight is classed—
It may be foul or fair;
A red-hot iron does my last.
Now build me up the square!

ESSEX.

8—DOUBLE ACROSTIC.

1, A species of malt liquor; 2, a root growing in the West Indies; 3, a sort of pear; 4, imposed on; 5, every large bird; 6, a slight alteration; 7, to hector.
Primals and finals name two of Shakespeare's well-known characters.

9—SQUARE.

1, Magnificent; 2, one who is carried; 3, maxim; 4, a beverage; 5, attire. F. L. S.

10—NUMERICAL ENIGMA.

My 1, 10, 15, 18, 17, is a small rodent found in Russia.
My 8, 14, 16, 4, 17, 5, to nestle.
My 20, 1, 19, 3, 9, 12, is to produce quickly.
My 6, 2, 7, 11, 12, an action of anguish.
Whole is what we all like to be.

"ARRY 'AWKINS.

11—ANAGRAM.

Said Farmer Ben Binn to Builder Ruf. Tinn:
"A house I must have pretty soon;
It must have but two floors (carte blanche as to doors),
And be neat as a new silver spoon."
Then Tinn in a trice showed his diagrams nice,
On which five ground-floor rooms were exposed.
"Then over your heads will be fine rooms for beds;
Four rooms 'bove these"—but Binn interposed
In a sentence oft quoted from an author quite noted:
(He was almost tempted to swear):
"BUT I SAY THAT R NOT SO THERE!" "K. K."

Answers to August 5th Puzzles.

- 1—Damask-rose-bud.
- 2—David Harum.
- 3—Lock.
- 4—Vacation holidays.
- 5—Whatever a man soweth, that shall he also reap.
- 6—h a s t e 7—Longfellow, Hutton, Tennyson, Dewey
- d a t e s M i l t o n, K i t c h e n e r.
- t r i a l
- m o r a l 8—
- h o r s e s
- m u d r u b
- p r a b o t
- c s u b j o i n
- p u t b o o t s
- c a p e r t i s
- n
- 9—Adam Zad.

SOLVERS TO AUGUST 5TH PUZZLES.

"Sigma," "McGinty," L. R. Force, Maud, M. R. G., "Dennis."

ADDITIONAL SOLVERS TO JULY 20TH PUZZLES.

"Pansy," J. McLean, "Maud," Bernice Phin, "K. K.," M. R. G.

COUSINLY CHAT.

"Pansy" and "Emma."—Will these new cousins send their real names next time, please? You both solve very well, and who knows but we may need your addresses at the end of the quarter?

Bernice P.—You are very welcome, little Assiniboia girl, and we do not expect too much from beginners, so do not fear to come again.

"Maud."—You are one of our successful new contributors, and with so many girls in the contest surely the boys will have a harder row to hoe.

"Pilot."—You'll be a valuable addition to our ship. How did we ever get along without a pilot? Yes, I know where your old home was, and I know a lady of the name you mention—L. R. (now Mrs. G.). If you ever visit the old home you must call and see me, that I may have the pleasure of hearing you play. It would be pleasant to correspond with distant cousins—why not try it? If you send a letter to any of them in my care I shall forward it. Your puzzles are pretty good.

"Thistle."—You are welcome, old friend, although as a rule thistles are not generally so. I am glad we are having more girls in the Corner. Where is your brother? We'd like to have him too.

"Essex."—Well, old fellow, it was a surprise indeed to hear from you again. You should not work so hard that you have not a few minutes to give to us occasionally. Remember, I expect a letter in the near future. Do you ever hear from our old friend Banks? He is at work similar to your own, I believe.

"Arry."—When do the rovers return? Did you know that Jack became my "really" cousin last month? J. N. is now a Winnipegger.

"You are as bad as a playful kitten in jumping at conclusions," remarked Keedick to his wife.

"Do kittens jump at conclusions?" asked Mrs. Keedick.

"Certainly, have you never seen kittens chase their tails?"

GOSSIP.

MESSRS. J. H. JULL & SON'S OXFORDS.

In the early 90's Messrs. J. H. Jull & Son, near Mt. Vernon, Ont., a station on the G.T.R., laid the foundation of their extensive Oxford flock, in the purchase of descendants of English-bred sheep selected from the best known and most successful prizewinners in that country. The flock has from time to time been replenished by purchases made from Canadian and English breeders, and when the writer called at their splendidly-equipped establishment, a few days ago, he found a strong and well-kept flock of up-to-date Oxfords. In the breeding pens were upwards of 70 fine breeding ewes, carrying in their veins a combination of the best English blood, where size, quality, and uniformity has been attained by the most careful and judicious mating. We also noticed a splendid lot of shearing ewes and rams, strong, well-matured, and uniformly well covered. Some 55 lambs of either sex were found remaining of the 1909 crop, and among them we saw individuals that would easily qualify for any showyard competition in America. In 1898 the firm distinguished themselves at the leading shows, with their own and imported animals, by landing many of the best prizes offered, and as they secured the highly commended ram lamb at the Royal Show from Mr. Green, of King's Langley, England, which afterwards defeated the Royal winner, it will not be too much to expect the Messrs. Jull & Son to bring out another good lot (especially young things) at the coming fall fairs.

Shooting Flying Fish.

A NOVEL SPORT CARRIED ON IN SOUTHERN CALIFORNIA WATERS.

The visitor to the Island of Santa Catalina, or he who goes out on the launches from Long Beach or San Pedro, is always entertained by the remarkable flights of flying fish, which in these waters attain a length of eighteen inches and a weight of two pounds. Alarmed by the boat or steamer, they dash out of the water by a vigorous movement of the screw-like tail and dash away in headlong flight, skimming over the waves like birds, presenting so remarkable an appearance that the tourist who has never seen so extraordinary a performance takes them for birds. The flying fish is not flying, but it has four very winglelike fins which serve it a similar purpose; that is, it hurls itself out of the water by the aid of its tail, and then, using the four winglelike fins as parachutes, goes soaring away, covering a distance of an eighth of a mile. When the inertia fails, the tail of the fish drops, and the moment it strikes the water it begins a violent twisting, which sends the fish into the air again; and by repeating this the fish is enabled to cover the long distance. The wings, or fins, are not flapped, the only motion being a tremulous one imparted to them when the tail is twisted in the water. As the boat glides along, these fish dart from the water and go soaring away on either side, and it is then that the sportsman, sitting in the bow, has an opportunity of some novel sport.

The fish moves like some quail, very low, not more than two feet from the surface, and are not the easy shots one might imagine. They move rapidly, and appear to rise and fall over the waves and go sweeping away in graceful curves. Sometimes four or five are in the air at the same time, and the good shot can bring them down to the right and left. All that is needed to carry out the idea of quail-shooting would be to have a dog, but there is a sea dog that flushes this attractive game, the agile tuna. The flying fish is its legitimate prey, and big schools come sweeping in from the

deep sea, driving the schools of flying fish before them, chasing them into the air, six, eight, ten feet, giving marvellous exhibitions of lofty tumbling. At such times the flying fish are crazed with terror, and leave the water by scores and hundreds. They fly into boats, out upon the dry beaches, strike boatmen who happen to be in the way of their headlong flight, and present a most attractive appearance to those who have never seen a flock of ocean flyers in the air, with fish six or seven feet long pursuing in a series of leaps or jumps. Sometimes the tuna chases the flyer along just below the surface, catching it as it drops—a cloud of foam alone telling the story.—Santa Catalina.

The Number Thirteen.

The superstition that thirteen is unlucky, which is traced back to a sacred source, meets with as many contradictions as confirmations. The fact that the horrible fire in the Paris Bazaar started at Booth Thirteen was telegraphed all around the world, whereas little notice is attracted by Nansen's success with thirteen men. At one time two was a dreaded number in England, owing to the dynastic disasters to all monarchs second of their name from Ethelred II. to George II. Yet Napoleon's number through all his life was two, and who could wish for better luck than came to Goody Two Shoes, or than that which results at times from having two strings to your bow? Three, which since the days of Pythagoras has been the divine number, shows that it is not invariably fortunate, for though the Fates are three, so also are the Furies. The Graces are three, but so also are the judges in hades and the heads of Cerberus. Then there are the records of three disloyal tribes in Welsh history, there are the three robbers in Orion's belt, there were the three tyrants at Athens, and three in mythology is as unlucky as it is divine. Just so clearly as it has been shown in time that the unlucky two can be lucky and that the pleasant three can be unpleasant, the followers of the late Captain Fowler would show that the

unlucky thirteen can be the luckiest number there is. So we may as well regret his departure, while we wish success to his associates.—Boston Journal.

Heirloom Cheeses.

One of the most peculiar bridal or marriage customs known is one that has prevailed for centuries in what is called the "cheese regions" of Switzerland. In that portion of the Alpine country, when a pair join in wedlock it is the fashion for their intimate friends to buy a "register cheese" for the young couple. This cheese is presented to the newly-wedded couple on the evening of the wedding day, and is ever after retained by them and used as a family register. On these heirloom cheeses the whole history of the family is carved, such as births, marriages, deaths, and other incidents which it may be desired to make matters of record. Some of these old Swiss family cheese records are said to date back to the middle of the seventeenth century.—Norwich Argus.

Counting the Steps.

"Ah, how many steps there are to take!" Said Midge in her own sweet way: "There are steps for baby and grandmamma, And it's nothing but steps all day; "Now papa calls me, I must surely go, And Tommy says: 'Find my ball'; But the steps I take for you, mamma, I never count them at all." "And why does my darling never count The steps as she takes them for me?" "Because," and closing her lips with a kiss, "I love you so, don't you see?" She drew away, but the tears ran fast From the eyes that had weary grown, For I had so long been counting the steps, As I had taken them one by one. A child of His, yet needing to learn, With so many steps to take, That we never count them as we go When taken for Christ's own sake.

J. A. S. MACMILLAN

—IMPORTER OF— Clydesdales, Shires, Hackneys.

STALLIONS:

Has a few choice ones for sale. Also Pure-bred

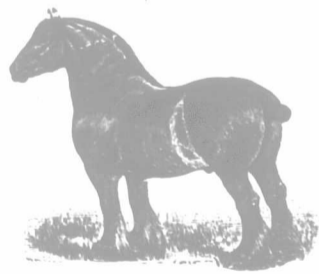


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Rams and Ewes, from the most fashionable imported blood. Inspection invited. For full particulars,

Apply: Box 483, Brandon, Manitoba.

J. E. SMITH, Box 274, Brandon.



Breeder and Importer of CLYDESDALE HORSES and SHORTHORN CATTLE, who owns one of the best and most extensive establishments of the kind in Canada, will hold his first

Annual Auction Sale Early in November, '99.

The aim is not to dispose of old stock. Nothing but young animals will be offered. In order to make this sale a success, the public can depend that every animal put up will be sold without reserve. This will be the greatest opportunity that the farmers of Manitoba and the N. W. T. have ever had to secure first-class stock at their own prices. Catalogue later, on application.

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Western Range Horses!

One hundred head of AGRICULTURAL, DRIVING AND SADDLE HORSES now on hand. Terms and prices right. Head Office: Fleming Block, Brandon. Barns and Corral, cor. 13th and Rosser ave. Selling agents at all principal points. Ranches: Rosebud and Bell, Montana. Tower, North Dakota.



SHORTHORNS

Will sell the yearling bull Lord Lottie 22nd = 29271 =, sired by the celebrated prizewinner Caithness. This young bull is red in color, and of extra merit. Fit to head any herd of Shorthorns. Also a few IMP. LARGE YORKSHIRES FOR SALE.

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A number of young Clydesdale Mares and Fillies. Also a few choice young Bulls, sired by Caithness = 22065 =. Address,

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Write for particulars.

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LEICESTERS!

40 Ram Lambs, 8 Shearlings, 50 Breeding Ewes, for sale.

A. D. GAMLEY, Box 193, BRANDON, MANITOBA.

GOSSIP.

ENQUIRER FOR LIGHT BRAHMAS WANTED.

J. W. Higginbotham, breeder of Brahmas, whose advertisement has been running in the FARMER'S ADVOCATE, has received a letter of enquiry for Light Brahmas from a reader of the ADVOCATE in Stonewall, but the letter bears no signature; consequently Mr. Higginbotham is unable to reply.

MR. MARPLES' HEREFORDS.

In our issue of August 5th appeared a beautiful illustration of the splendid pair of Herefords, Spotless of Ingleside and Isabel, owned by Mr. J. E. Marples, Deleau, Man., which won the male and female championship prizes at the late Winnipeg Industrial Exhibition. As the ages of the animals were not given in the footnote accompanying the cut, the impression may have been conveyed that they were matured, but as a matter of fact the bull is only three years and the heifer two years old. This explanation should be noted, as it may give a more correct impression of the superior excellence of the animals.

PLEASE MENTION FARMER'S ADVOCATE.

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J. H. KINNEAR, SOURIS, MAN.

YOUNG BULLS

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STOCK OF ALL AGES FOR SALE.

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Write or call. WM. SHARMAN, Ridgewood Stock Farm, SOURIS, MAN.

HOPE FARM, ST. JEAN BAPTISTE, MAN.

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J. C. & A. W. FLEMING, Rosebank Stock Farm, Pilot Mound, Man.

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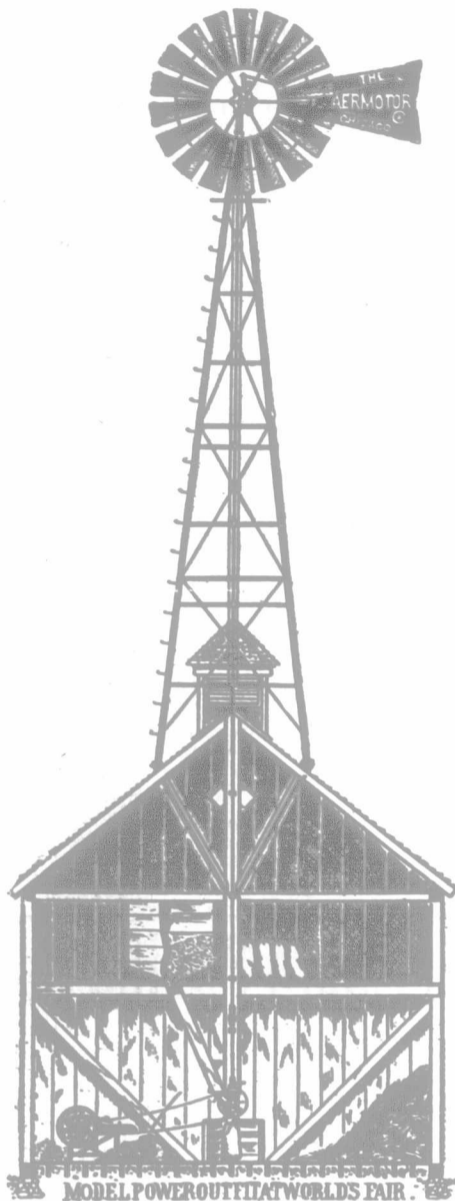
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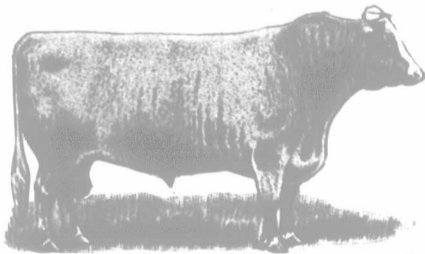
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**SHORTHORN
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SHROPSHIRE SHEEP.

A carload of Bulls suitable for Northwest Territories for sale. Orders booked for spring pigs. Berkshires, by the great boar, King Clerc, and out of such sows as Harmony and Gold Drop. Yorkshires, by the sweepstakes boar, Yorkshire Bill, and out of such sows as Stamina, Jubilee Queen, and Markham Maid.
THOS. GREENWAY, Proprietor. **JAS. YULE, Manager, Crystal City.**

Large and Unreserved Sale of **40 Reg. Ayrshire Cattle** By Auction at **BROOK HILL FARM, TROUT RIVER, QUE.**

On Tuesday, October 3rd, 1899, at 10 a. m.,

Comprising one bull 4 years old, one bull 3 years old, two bulls 2 years old, and four bull calves; thirty cows and heifers in milk, and several 2-year-old and yearling heifers. All animals tuberculin tested. TERMS: \$25 and under, cash; over \$25, 10 months' credit on furnishing approved joint notes; 4 per cent. discount on all cash payments over \$25. This stock must be sold without reserve, as the proprietor has given up a rented farm, and is going out of the dairying business for awhile. The farm is situated one mile east from Carr's Crossing, G. T. Ry., 5 miles west from Huntingdon, N. Y. C. Ry. Send for catalogue to undersigned.

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Prepared by the U. S. Department of Agriculture, and is the only one for Black Leg. In powder form: 10 lbs. \$1.00; 25 lbs. \$2.00; 50 lbs. \$3.50. In liquid form: 10 lbs. \$1.00; 25 lbs. \$2.00; 50 lbs. \$3.50. Ready for immediate use. For and imitations of our well known product.

Pasteur Vaccine Co., Ltd., **J. Mitchell & Co.,**
56-FIFTH AVENUE, CHICAGO, ILL. **WINNIPEG, MAN.**

GOSSIP.

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

Andrew Wright, of Headingly, has sold his entire herd of Shorthorns, consisting of thirty head, with an Indian Chief bull (bred by J. G. Washington, of Ninga) at the head, to W. G. Styles, of Rosser.

James Bray, Oak Grove Farm, Longburn, has sold to the Brandon Experimental Farm the Shorthorn bull Lord Lossie 22nd = 29271 =; bred by A. W. Smith, Maple Lodge, Ont.; sired by Calthness, out of Lovely Queen 16th, by British Flag, g. d. by Conqueror.

Arabas, the Standard-bred stallion that gave such interesting exhibitions at the Winnipeg Industrial and other summer fairs as the guideless pacer, has been sold by his owner, Mr. R. S. Fulton, Brownsville, Ont., to Dr. Henderson, of Carberry. Arabas is a large, handsome horse with a mark of \$2.15.

Adamson Bros., Gladstone, Man., write:—"The Farmer's Advocate contains valuable information for farmers and stock-raisers, such as the Experimental Farm reports, the veterinary department, and the articles contributed by successful farmers on the most successful methods of farming and stock-raising. The 1898 Christmas Number was worth half the subscription itself."

At a recent meeting of the Winnipeg Board of Trade, in connection with the new grain regulations, the following members were nominated to constitute the Survey Board: Messrs. S. A. McGraw, G. V. Hastings, S. Spink, A. Atkinson, Stephen Nairn, and F. W. Thompson. The Government of Manitoba and the Northwest Territories has the naming of the other six members (three each) to constitute the Survey Board.

William Ryan, of Ninga, has recently purchased the foundation for a herd of Shorthorns. Stella 2nd = 27657 =, a neat little dark red cow, by Prince John, a bull of A. T. Sharp's breeding. Her two-year-old daughter, Stella Jane, is a deep, thick-fleshed heifer; and a yearling, Maple Grove Maid, a red and white of good quality. At the head of the herd is a four-year-old red bull, Sir Charles Tupper, bred by Robert White, of Wakopa. He is a red bull of fairly good quality and flesh, but somewhat on the small size.

Dr. Swenerton, V. S., of Carberry, Man., has a couple of Clydesdale stallions that will bear careful scrutiny by any lover of draft horses. Woodburn Prince [2023] is a seven-year-old, sired by International, he by Flashwood, by Danroy, dam by Warrion [902]. He is a horse, although somewhat undersized, with good quality and action; clean, flat boned; good quarters and well-laid shoulders. The yearling colt, Rosemount (2385), bred by Graham Bros., Claremont, Ont., promises to be a "cracker." He is by Young McQueen [2290], out of Countess of Derby [1954], by Earl Derby (imp.). This youngster figured in the colt classes at the Toronto Horse Show coming to Manitoba. He is clean-legged, flash youngster of good size and weight, and should make an excellent stock horse.

S. J. Thompson, P. V. S., of Carberry, in addition to growing prizewinning Red Fife wheat, has one of the best vegetable gardens in the Province. The houses and buildings are situated almost in the town of Carberry. In stock he makes a specialty of Ayrshire cattle, Improved Yorkshires, and Silver-laced Wyandottes. In Yorkshires he has at the present time a fine lot of young pigs from spring litters. Among recent importations is the sow Oak Lodge Rosabel 2nd = 3615 =, and Oak Lodge King = 3628 =, bred by J. E. Brethour, Burford, Ont. Dr. Thompson showed Yorkshires at the recent Carberry fair, winning on pigs of his own breeding over some of his imported stock. Of the aged sows, Woodbine Lass and Marjory are perhaps two of as good sows of the breed as can be found in Manitoba.

W. S. Lister, Marchmont Farm, Middlechurch, has recently completed the sale of a very choice lot of Shorthorns for show purposes to N. P. Clark, of Meadow Lawn, St. Cloud, Minn. Mr. Leslie Smith, foreman at Meadow Lawn, and well known as an old resident of Manitoba, made the selection, which includes the grand show cow, Indian Princess, a red-roan, five years old, by Indian Prince, out of imported Royal, bred by W. S. Marr. Her sire is a Nonpareil bull by Indian Chief. Indian Princess is a thick-fleshed, mellow-handling, smooth, level cow of excellent quality. She was only beaten in the very strong class of aged cows at the late Winnipeg Industrial by her stall mate, Rosabel 1953, of Mr. Lister's own breeding. Rose Alberta 3rd, a white three-year-old, with heifer calf by Indian Nobleman at foot. This heifer was second prize two-year-old at the last Industrial; bred at Marchmont; sired by Gravesend Heir II, out of Rose Alberta. Also a Duchess of Gloster heifer sired by Royal Don, and Daisy Bright by Indian Chief. The prices obtained for this bunch are understood to be very handsome.

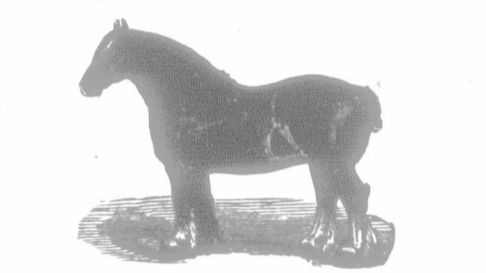
J. G. Washington, of Ninga, has for several years been building up a herd of Shorthorns, and now has some seventeen or eighteen head of pure-breds, among them some right good motherly-looking matrons. Nearly all of them with luscious calves at foot. The calves are all by Royal Hope, a bull that has been successfully used in the herd for several years, and recently sold to Hyslop & Sons, Killarney. Elysee Lass, a red five-year-old of Mr. Washington's own breeding, is a neat, tidy little cow, with a fine smooth calf at foot. Pride of Elysee, another red of the same breed, and of much similar type. Gem of Lakeside is a little roan, five years old, bred by R. McLeman, of Moropano, by Lollard Lustre. She has every appearance of being a good milker, and this is emphasized by the growth and sappiness of her red and white heifer calf, as well as by her own yearling, by Royal Hope, which is one of the best things in the bunch—deep and wide, thick and level, and with a little fitting a show heifer of no mean parts. Her stall mate is a red yearling out of Queen of the Prairie, by the same sire, and a right good one she is. In the big, massive roan, Butterfly, Mr. Washington has perhaps one of his strongest numbers. She is a cow built somewhat after the old-fashioned pattern, big and square, with a wonderful fore end, level upper lines, and thickly covered with deep, mellow flesh. She is bred regularly, and has a nice roan heifer calf at foot, and her red yearling heifer is a good one.



POTATO DIGGER
SOIL SIFTED FROM POTATOES WITH QUICK MOVING PRONGS. FREE ILLUSTRATED PRICE LIST. ALEX. WILKIN, MFR., LONDON, ONT.

**FOR SALE...
IMPORTED AND
CANADIAN-BRED
Clydesdale Stallions**

From One to Four Years Old. Also



SEVERAL THREE YEAR OLD FILLIES,
All registered and warranted sound. Inspection invited.

ROBT. DAVIES,
-om Thorncliffe Stock Farm, TORONTO.

English Shire and Clydesdale Stallions.

Last importation just arrived Aug. 5. Imported more stock in 1898-99 to this country than all other importers together; and I also handle no second-hand horses from the United States, but buy direct from the Old Country, and nothing but the best the market can afford. I have them on hand from 3 to 5 years old, weighing 1,800 upwards. These horses must be sold, and at reasonable prices and terms, in order to make room for more. Write for description. Address:

EDWARD R. HOGATE CO.,
10 Maitland Street, TORONTO, ONT.
Barns: College and Dufferin Streets. -om

**FOR SALE:
Nine Clydesdale Stallions**

Just landed from Scotland; also a few imp. and home-bred Shorthorn females.

JOHN ISAAC,
-om KINELLAR LODGE, MARKHAM, ONT.

SPRINGHURST SHORTHORNS

Herd bred for practical usefulness, and produces as large a proportion of top show cattle as any herd in Ontario. Young stock, both sexes, for sale.

Exeter Station, G. T. R., **H. SMITH,**
half mile from farm. -om **HAY, ONT.**

Patent Roller and Ball Bearing Galvanized Steel WINDMILLS, TCWERS, and FLAGSTAFFS
"MAPLE LEAF" GRAIN GRINDERS
IRON AND SPRAY PUMPS.
FANNING MILLS.
Send for new Illustrated Catalogue.

W. S. SHAPLEY & MUIR CO. LIMITED
BRANTFORD CAN.

COCKSHUTT PLOW CO. (Limited),
Agents for Manitoba and NWT, Winnipeg.

THE GLOBE FURNITURE COMPANY, LIMITED.
WALKERVILLE, ONTARIO.
CHURCH DESKS,
PRINTS, ATLAS, BAMA,
SCHOOL DESKS, ETC.
WRITE FOR PRICES

GOSSIP.

"BELVOIR" AND THE HERDS AND FLOCK OF RICHARD GIBSON.

Near the pretty rural village of Delaware, nesting in the valley of the River Thames, three miles from Komoka, a station with a train service equal to that of some cities, and twelve miles from the City of London, Ont., is the beautiful home and fertile 300-acre farm of Mr. Richard Gibson, one of the very best all-around judges of all classes of stock on the continent of America. The spacious, handsome and substantial dwelling, beautifully located, commanding a charming view of pastoral landscape, and surrounded by wide-spreading maple, evergreen and other ornamental trees and neatly-trimmed cedar hedges, strongly reminds one of some of the stately homes of England. The walls of the wide hall are decorated with costly paintings and trophies of the chase, and with numerous Indian relics and weapons of warfare found in the furrows of the farm; white in glass cases, neatly arranged, is an enviable collection of red and blue prize ribbons, emblems of the victories of peace and souvenirs of the shepherd's winnings in bloodless battles in the great competitions at leading shows in Canada and the United States, in which representatives of the Belvoir Shropshires have been signally successful. The library—the sanctum of the proprietor—contains a splendid collection of standard works on live stock and kindred subjects, herd books galore, portraits of eminent old breeders, and pictures of famous animals that have figured in the history of the breeds, including that of the \$40,000 cow sold at the dispersion of the New York Mills herd of Shorthorns, of which Mr. Gibson was manager at the time of that memorable event.

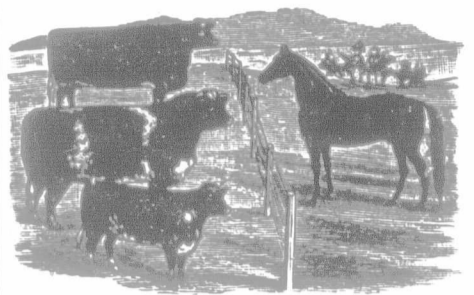
The stock at Belvoir embraces Clydesdale horses, Shorthorn and Jersey cattle, Shropshire sheep, and Yorkshire swine. At the head of the Clydesdales is the big and well-balanced imported stallion, Home Secretary (5875) 4794, now in his fourteenth year, but well preserved, as fresh looking as a five-year-old, and as useful as ever. A bay son of Windsor (2509) and of Craigleuir Boss, by Lord Derby, his breeding is in the purple, and to show that he is not open to the charge of being under size, it is only necessary to state that at four years old, when he was sold for \$1,800, in show form, he kicked the beam at 2,300 lbs., and is without a suspicion of coarseness, while such stout, flat bone, strong arms, big knees and admirable fore pasterns are rarely found in combination. The two grand brood mares, Jenny Dean 3115, by Nasmyth, by Edward of Wales, by Prince of Wales, and out of Jennie Roy, by Darnley, and Lady Mab 1st, by St. Cuthbert, are breeding regularly, and have a number of capital fillies and young mares to their credit. The former was sold at one time for \$1,025, and has been a very successful prizewinner; the latter sold for \$725, and won several first prizes at State fairs and at the Chicago Horse Show. A pair of four-year-old mares, bred from these mares, are a capital team, broad and low-set, with wide chests, deep ribs, strong, short backs, and a model class of bone. They would make grand brood mares or a splendid team for anyone needing such. A daughter of the imported mare, The Countess 1820, and by McLennan, is doing good work as a breeder, and has a yearling and also a colt by Home Secretary that are very promising, and have lots of size and quality.

The Shorthorns at Belvoir are principally founded on some of the best branches of the Bates' families, being stylish and symmetrical and mostly good milkers. On these Booth-bred bulls were used to secure depth of flesh, and recently Scotch-bred bulls have been introduced with good results. The bull in service at present is Scottish Archer—2545—a red two-year-old of good form and substance, sired by imp. Scottish Pride, a Duthie-bred bull imported in dam, got by the famous Pride of the Morning, and out of Missie 142nd, of the well-known Upper Mill family of that name. The dam of Scottish Archer was Clarissa, of the Kinellar Claret tribe, and was sired by imp. Eclipse, a Highland Society winner, bred at Collynie. A very promising lot of young heifers and bulls, the get of this and the former stock bull, are growing up in good form. The Jerseys are a handsome and useful lot, headed by the three-year-old bull, Pedro of Snelgrove, a first prize winner at the Western Fair as a yearling, a grandson of the sweepstakes cow in the dairy test at the Provincial Dairy Show in 1885, and winner of second honors at the Toronto and Ottawa Shows the same year. The first prize cow and championship female at the Toronto Industrial in 1895 was the beautiful Belvoir Pet, bred by Mr. Gibson, and a better type of Jersey cow, or one swinging a better milk vessel, has not appeared there since that time. There are a number of females of the same family as Belvoir Pet in the herd which have won first-class honors at the Western Fair and are models of the breed, and as Mr. Gibson purposes going out of the dairy business for the present, and offers his Jerseys for sale, a good opportunity is presented for anyone wishing to lay the foundation of a good herd.

The Belvoir flock of Shropshires is descended from that of Bulwell, which was established in 1877, on selections from the flocks of Bowen Jones, Crane, Tanner, Harding, and Fain. In 1879, some Bradburn ewes were added. In 1881, fifteen were purchased from Mr. Minton at big prices, and in 1883 additions were made from the flocks of T. J. Mansell and Crane and Tanner. In 1889, Mr. Gibson concluded the purchase of this flock, and upon this foundation the present Belvoir flock has been built. Since that time only imported rams of high-class quality and those bred from choice importations have been used, among which may be named imp. Bulwell Prince, a Royal winner; imp. Bonnie Belvoir, a son of the noted Bonnie Beau; imp. The Sort, bred by H. Williams, a son of Rare Sort and twin brother to Newton Lord.

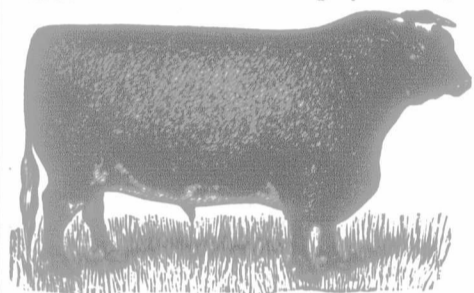
It has not been Mr. Gibson's custom for several years to feed ewes for show purposes, so that the best of the young ewes, which, if fitted, would have been mostly spoiled for breeding purposes, have gone into the flock rugged and robust to keep up its strength and contribute to raising the standard of excellence, while only rams and wethers have been fitted. By rigid selection and culling out of those below the standard, a singularly uniform flock has been maintained, quality being made the first desideratum, together with constitution, and the stock of yearling rams now on

W. D. FLATT, HAMILTON P. O. and TELEGRAPH OFFICE,



OFFERS FOR SALE
7 Imported Bulls,
16 Canadian-bred Bulls,
30 Canadian-bred Cows and Heifers;
ALSO A NUMBER OF IMPORTED COWS AND HEIFERS.
The noted imported bull, Golden Fame, is at the head of my herd. Prices consistent with quality. Correspondence and inspection invited. Visitors welcome. Catalogue on application. -om

ARTHUR JOHNSTON Greenwood P. O. and Telegraph Office,



OFFERS FOR SALE
15 SHORTHORN BULLS
FIT FOR SERVICE; 3 IMPORTED.
25 COWS AND HEIFERS
Including 9 recently imported heifers. Prices right. Catalogues on application.
Claremont Station, C. P. R.
Pickering Station, G. T. R.
"NO BUSINESS, NO HARM."

River Bow Stock Farm. B. SNARY & SONS, CROTON, ONT.,

Breeders of Shorthorn Cattle, Poland-China and Chester White Swine.
We offer for sale seven good young bulls, from seven to twelve months old; eight heifers of choice quality and breeding. Sired by Chief Captain. Pigs of both sexes and all ages at moderate prices, quality considered. -om

John Miller & Sons, BROUGHAM P. O. and TELEGRAPH OFFICE,

OFFER FOR SALE...
4 Imported Clydesdale Stallions.
10 Scotch-bred Shorthorn Bulls.
10 Yearling Shropshire Rams, 3 of them imp.
20 First-class Ram Lambs.
PRICES REASONABLE.

Claremont Stn., Pickering Stn., C.P.R., G.T.R.
Correspondence Invited.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstakes at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Imported Blue Ribbon—17095—and the famous Money-fuffed Lad—20521—High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply
T. E. ROBSON, Ilderton, Ont.

Scotch Shorthorns FOR SALE.

109 head to select from: 23 2-year-old young bulls by Valkyrie—21506—and cows and heifers of all ages, of the most approved breeding, served by imp. Diamond Jubilee—28861—now at the head of our herd.
T. DOUGLAS & SONS, Strathroy Station and P. O. Farm 1 mile north of the town. -om

hand, mostly by imp. The Dandy, bred by Parker, and by Prince Royal and Golden Crown, are such as to satisfy the most fastidious as to quality, character, color, flesh, fleece and skins. They are healthy, muscular, fellows, on short legs, with strong necks well fitted into the shoulders, good masculine, light-colored, well-covered heads without any coarseness, firm, fleshy backs, full twists, a good leg of mutton, and the best class of bone. The ram lambs of this year are a real good lot, of similar character, by imp. Martinette, bred by Mansell, out of the same ewe as the famous Phenomenon, and by imp. Watchman, bred by Williams, by Farmer Newton, and a few by the Claimant, bred by R. P. Cooper, Shensstone, and got by Dunsmore Owl.

The success of the Belvoir flock at the leading fat stock shows in Canada and the U. S. since 1895 with wethers has been phenomenal, and this, after all, is the true test of quality, for the butcher's block is the ultimate way of all such flesh. In 1895, at the National Live Stock Show of America, at Madison Square, New York, with four sheep, they won first for ram lamb, first and second for wether lambs, and sweepstakes for best wether lamb in the show, of any age or breed. At the Provincial Show at Guelph in 1895, first for wether, first and fourth for wether lambs, and first for pen of three lambs. In 1896, at New York, five sheep shown won first for shearing wether, first and second for wether lambs, and first for pen of three lambs; and at Guelph, the same year, second for shearing wether, first for wether lamb, and first for pen of three. In 1897, at the Provincial at Brantford, first for wether lamb, first for three lambs, and two firsts given by the Shropshire Association, a record which was substantially repeated in 1898, so that Mr. Gibson enjoys the enviable notoriety of never having been beaten for wether lambs or for pens of three. Mr. Gibson advertises, in this issue, stock for sale of all classes enumerated in this review.

AYRSHIRE SALES FROM TREDINNOCK HERD.
Mr. James Boden, manager of Mr. Reford's noted herd of Ayrshires, at St. Ann's, Que., writes:—"We have had a very successful summer at Tredinnock, visitors and letters being the order of the day, and all pleased with what they got and saw. Prices never better. Calves, from \$110 to \$150; two-year-olds and cows, from \$150 up to \$275. I have just sold to Mr. Yule, for Premier Greenway, of Manitoba, 7 head of our young stock. In the lot was the first prize two-year-old heifer, 3 of the first young herd of year-olds, 2 of the first prize calves at all the leading shows last year, and a heifer calf—the flower of the flock. They were a fine lot, and they were very hard to buy, as they were the best of our young stock. To R. B. Angus, of Lennoxville, Que., a pair of cows and 1 heifer calf; to the Experimental Farm, Ottawa, the first calf by imp. Napoleon, and out of one of our best cows; to A. A. Reid, of Landsdowne, Ont., 1 bull calf, son of the first prize two-year-old heifer sired by Napoleon; 1 bull calf to Napoleon Lachapelle, of St. Paul l'Hermitte, the first prize year-old bull calf at London to David Leitch, of Grant's Corners, Ont.; one of the first prize calves to Easton Brothers, of Charlottetown, P. E. I.—this is a beauty, and the makings of a fine cow; 1 cow and 2 calves to the Charlemagne Lumber Company. Not a bad summer's work. We have still two young bulls left, and we have 15 cows—sired since the 1st of August—7 bulls, 8 heifers—so can supply a few more. Our cows are milking splendidly, but pasture is scarce, having no rain for a long time."

IMPORTANT SHIPMENT OF ENGLISH PEDIGREE SHEEP.
Referring to the shipment of 317 sheep by Alfred Mansell & Co., Shrewsbury, per the S.S. Monterey (Elder-Dempster Line) on July 24th, from Bristol, the Farmer and Stock-breeder writes:

"In numbers and variety of breeds, Mr. Robert Miller, the well-known importer, of Stouffville, Ont., took the lead, his shipment comprising something like 230 sheep of various breeds, the Shropshires including the first prize pen of shearing ewes from Mr. P. L. Mills, three prize rams and ewes from Mr. J. Harding, and several from Mr. A. E. Mansell, Mr. R. P. Cooper, Mr. H. C. G. Parker, and Mr. F. W. Rudgard, Mr. J. S. Harding's prize ewe lambs, and a very superior two-shear ram from Mr. W. F. Inge. The Oxford came from Mr. Treweeke, and a splendid selection of prize Cotswold rams and ewes from Messrs. Garne, Mr. William Houlton, Mr. T. Gillett, and Mr. C. Gillett, Lincoln from the prize-winning flock of Mr. Dudding, and Hampshires from Mr. Hudson. Altogether, this was a very valuable and well-selected lot of sheep, and reflects great credit on the judgment shown by Mr. Miller in selection.

IMPORTANT AUCTION SALE OF AYRSHIRES.
Mr. W. F. Stephen, Trout River, Quebec, announces, in an advertisement in this issue, that on October 3rd, at his farm, 1 mile east of Carr's Crossing, G. T. R., and five miles west from Huntingdon, N. Y. C. R., he will sell 40 head of choice-bred Ayrshires—cows, heifers, and young bulls. Catalogues will be ready about September 10th. Send for one and study the pedigrees and descriptions.

NOTICE.
Wm. Shier, Sanilac Co., Mich., U.S., writes:—"THE FARMER'S ADVOCATE is the most reliable, up-to-date farm paper that we take, and we take several."

Thorold Cement at Toronto Fair.—We desire to call the attention of our readers to the advertisement of the Estate of John Battle, manufacturers of the celebrated Thorold hydraulic cement, which will be found in another column. This firm has been most successful with the many structures in which their cement has been used. A unique method of advertising their goods has been found in the construction, on the Exhibition grounds, Toronto, of a miniature barn—basement walls and floor, all of which are built with Thorold cement. To all who visit the Exhibition a hearty invitation is extended to call and inspect the "new barn." This structure will prove especially interesting to the farmers, who during the last year or two have evinced quite an interest in the possibilities of cement for farm building purposes. A representative of the firm will be present, who will cheerfully give any information required as regards the use of cement for building purposes.

Thirteenth Importation.

Am Salling for England, Scotland, Jersey, and Guernsey, October 14th, and would be pleased to have commissions to select and import any class of farm stock, particularly Jerseys, Guernseys, Ayrshires, Herefords, Red Polled and Polled Angus cattle, Dorset and Lincoln sheep, or Hackneys. Have made twelve importations without loss or accident for best breeders in America and Canada. Send for circular and estimate cost on stock required. Address, F. S. PEER, MT. MORRIS, N. Y.

JOHN DRYDEN, BROOKLIN, ONTARIO,

BREEDER OF
Scotch Shorthorns,
—AND—
Choice Shropshire Sheep.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Baron Blanc 11th at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON, DENFIELD, ONT.

SHORTHORNS
I have six young females for sale—three are in calf and three old enough to be bred. These heifers have four or more crosses of the finest Booth sires, on imported Marr and Gordon Castle foundation, a desirable and needed line of breeding.

D. ALEXANDER, Bridgen, Ont.

HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.

3 heifers bred to Beau Ideal—22554—, of first-class quality and A 1 breeding. -om

Wm. Grainger & Son, - Lonsdale, Ont.

SCOTCH SHORTHORN BULLS AND HEIFERS HERD ESTABLISHED IN 1872.

Such sires as imported Royal George and imported Wariare have put us where we are.

A. & D. BROWN, ELGIN COUNTY, -om IONA, ONTARIO.

SHORTHORNS.

Bulls from 6 to 15 months old. One cow 3-year-old stock bull, brother to the noted bull, Noninee. Also cows and heifers.

J. R. McCallum & Sons, IONA STATION, ONT. -om

BONNIE BURN STOCK FARM

Forty rods north of Stouffville Station, has for sale three excellent young Shorthorn Bulls, yearling and two-year-old Heifers in calf. Shropshire Lambs, both sexes; also Berkshires. At very moderate prices.

-om D. H. RUSSELL, Stouffville, Ont.

ELMHURST FARM.

FOR SALE—One extra good Shorthorn bull, Golden Flash—26441—; calved May 25th, 1897.

-om W. J. BIGGINS, Clinton, Ont.

SPRINGBANK FARM.

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

-om JAS. TOLTON, WALKERTON, ONT.

Ayrshire Bull Calves of 1899

3 YET on hand, and more to come within the next month, from some of our best imported cows. Will sell at reasonable prices. Address:

ROBT. HUNTER, Manager to W. W. Ogilvie. LACHINE RAPIDS, QUE. -om

AYRSHIRES FOR SALE.

The kind that can speak for themselves. Size, constitution, dairy and show combined. Six young bulls for sale, by Glencairn 3rd (imp.), dam Primrose (imp.). Five from Napoleon of Auchincrain (imp.). Their dams are all Glencairn heifers. Five of their dams were shown last fall at Toronto, London, and Ottawa. Also a few good cows. No culls sold.

JAMES BODEN, TREDINNOCK FARM, -om STE. ANNE DE BELLEVUE, QUE.

CHOICE AYRSHIRE BULLS

Three calves, 5, 8 and 12 months old, also one 1 month old, from that fine cow, Daisy 1st of Auchincrain (imp.), and all sired by Craigieles of Auchincrain (imp.). -om

W. W. BALLANTYNE, Formerly Thos. Ballantyne & Son. Stratford, Ont. "NEIDPATH FARM" adjoins city, main line G.T.R.

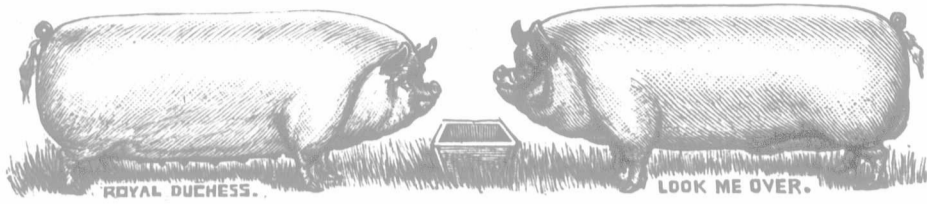
MAPLE CLIFF Dairy and Stock Farm.

AYRSHIRES Three young bulls fit for service, and bull calves.

BERKSHIRES, TAMWORTHS, Booking orders for spring litters. -om

R. REID & CO., HINTONBURG, ONT. Five minutes' walk from Cen. Expl. Farm, Ottawa

Summer Hill Herd



The largest herd of imported and Canadian-bred YORKSHIRES of the large English type in Canada. Twenty-five matured imported sows, among them being several Royal winners. Six imported sows sired by Ruddington Lad, Royal winner and gold medal boar for the best pig of the white breed. Have three imported stock boars bred by such noted breeders as Sanders Spencer and Philo L. Mills. Twenty-five April pigs (imported) of both sexes for sale. Also a number imported in dam. Two hundred Canadian-bred pigs of all ages for sale. Write for prices. Personal inspection preferred. I prepay express charges, and guarantee stock as described.

D. C. FLATT, MILLGROVE, ONT.

Choice Ayrshires for Sale.

Herd now headed by Royal Star of St. Ann's, 1st prize two-year-old at Toronto, 1st and sweepstakes at London, 1888. For sale: One fine bull calf seven months old, sired by a Morton bull; also younger ones, sired by Royal Star. Cows, fresh milkers, and cows due to calve in August; No. 1 stock; size, constitution, dairy and show combined; also heifer calves; at reasonable prices. All kinds of Cochins and Brahmas, B. P. Rocks, B. and White Minorcas. Write for prices and full particulars.

WILLIAM THORN,

Trout Run Stock Farm, Lynedoch, Ont.

MEADOWSIDE FARM, J. YULL & SONS, Props., Carleton Place.

Breeders of high-class, deep-milking Ayrshires. Sweepstakes young herd at Ottawa. Shropshire sheep from prizewinning stock. Berkshire pigs and Barred Plymouth Rocks. Young stock for sale. Visitors met at Queen's Hotel. Give us a call.

MILK FEVER CURE.

It is now KNOWN that the udder is the seat of milk fever. Schmidt's udder injections CURED 90 per cent. of the first 412 cases treated.

TREATMENT for 1 severe or 2 mild cases, with instrument (specially designed for the purpose) and full printed instructions by mail, \$3.00. Extra bottle for 1 severe or 2 mild cases, \$1. Extremely simple. No drenching.

JOHN SPENCER, V.S., Bowmanville, Ont.

INGLESIDE HEREFORDS.

UP-TO-DATE HERD OF CANADA!

TAMWORTHS

CHOICE PIGS SIX TO SEVEN WEEKS OLD.

Send for Illustrated Catalogue. Address,

H. D. SMITH, COMPTON, QUE.

F. W. STONE ESTATE, GUELPH, ONTARIO.

The first Hereford herd established in Canada by importations in 1859 of the best prizewinners of England, followed by repeated further importations, including winners of first prize at Royal Agricultural Show. Choice young Hereford Bulls for sale. Also McDougall's Sheep Dip and Cattle Wash, fresh imported, non-poisonous and reliable; thoroughly tested by over forty years' use on farms of above estate.

Jersey Cattle

THAT WILL PUT

MONEY IN YOUR POCKET.

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BRAMPTON JERSEY HERD.

Offering high-class A. J. C. C. cows and heifers in calf, and heifer calves; 9 choice young bulls; High-grade cows in calf; and Berkshires.

B. H. Bull & Son, BRAMPTON.

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MOUNT DENNIS, ONT.

Offer two Registered A. J. C. C. Jersey Yearling Bulls. These are grand youngsters; cheap if sold at once. We have also some fine Registered C. K. C. Cattle Pigs; also some fine Registered Hitches. Manufacturers of the "S. Wicks" Cattle Wash. Hatches for sale. Write for prices and full particulars.

MAPLE CITY JERSEYS.

FOUR JERSEY BULL CALVES FOR SALE.

All described by me in the Farmer's Advocate from 9 to 14 months of age. They were the winning stock of the 1895-6 season. They were years when they were born.

W. W. FIVEY,

Box 111, Cambridge, Ont.

REVOLUTION IN WATERING STOCK



BY ADOPTING THE Woodward Water Basins. ABSOLUTELY AUTOMATIC.

See sample outfits at fall fairs. Write Ontario Wind Engine and Pump Co. (Ltd.), TORONTO, ONTARIO.

We Now Have on Hand 30 Holstein Bull Calves

That are royally bred. Their dams and their sires' dams have made large official tests. They have a combination of blood of the richest and largest producing strains known. We have forty yearling heifers, and one hundred cows and heifer calves. We are not going to show this fall. A grand opportunity to secure animals of either sex, and show animals of highest order. You will find our prices right. There is no quarantine, and we furnish papers to pass them through without duty. Write for what you want, and get our prices before buying.

Henry Stevens & Sons, Lacena, N. Y.

GLEN ROUGE JERSEYS.

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

OAK LODGE HERD

Large Yorkshires

The oldest established and largest herd in America. This herd has a uniform and fixed type, acknowledged by the best judges to be what the market demands. It has a record of its own in the showings, winning more prizes at the largest Canadian and American shows than all other herds combined. Parties wishing high-class stock should examine this celebrated herd at the leading shows. All stock fully guaranteed.

J. E. BRETHOUR,

BRANT COUNTY, ONT. HURFORD, ONT.

PINE GROVE FARM HERD OF LARGE YORKSHIRES.

Imported and Canadian-bred, from the Hasket family, which has taken more prizes at the leading fairs in Canada and the World's Fair at Chicago than any other family of Yorkshires in America. Young boars and sows fit for breeding for sale. Correspondence solicited, which will receive prompt attention.

JOSEPH FEATHERSTON, Streetsville, Ont.

SNELGROVE BERKSHIRES.

We intend to exhibit our Berkshires at the coming Toronto Industrial Exhibition. Our exhibit will include some really good young boars and sows from 6 to 12 months old that are just the sort that are now wanted, and are for sale. Can supply young pigs from 6 to 10 weeks old, of the most approved type and breeding.

SNELL & LYONS, SNEGROVE, ONT.

LARGE ENGLISH BERKSHIRES.

Herd headed by four first class stock boars of large strong bone and fine color. Young boars and sows for sale. Or send for spring pigs.

GEORGE GREEN, FAIRVIEW P.O., ONT.

Station 1, Stratford, G. T. R.

GOSSIP.

John Miller & Sons, Brougham, Ont., announce in their advertisement the arrival of their new importation of Clydesdales, Short-horns, and Shropshires, and offer for sale some of these and a number of the same classes of stock from their home-bred herds and flock.

At Mr. J. E. Casswell's annual sale of Lincoln rams, at Laughton, Lincolnshire, July 28th, 74 rams sold for an average of £14 16s. The highest price, 90 guineas, was paid by Mr. Dudding. Messrs. Dean paid 70 guineas for one, and a third brought 55 guineas. The lowest price was 10 guineas.

Mr. F. S. Peer, Mt. Morris, N.Y., announces in our advertising columns that he will sail for England, Scotland, Jersey, and Guernsey, October 14th, and will accept commissions to import stock. Mr. Peer is an excellent judge and an honorable man, and has imported many high-class animals for Canadian breeders. He will judge the Ayrshire cattle at Toronto, Sept. 1st.

The annual letting of Messrs. T. Brown & Son's Cotswold rams and ram lambs took place at Marham Hall, Downham, Norfolk, July 28th. The catalogue contained 100 lambs and 80 shearlings. The shearlings averaged £9 7s. 6d., and the lambs £8 10s. The highest price for shearlings was 22 guineas, and for lambs 22 guineas.

A very important meeting of the directors of the Dominion Cattle, Sheep and Swine Breeders' Association will convene in the tent of the Superintendent of Farmers' Institutes, Industrial Fair Grounds, Toronto, at 8 o'clock, on the evening of Wednesday, September 6th. You are urgently requested to be present. The Hon. Sydney Fisher and the Hon. John Dryden are expected to be in attendance.

One of the representatives of the FARMER'S ADVOCATE writes that in making a tour among the leading Holstein breeders in Western Ontario, he found the herds of Messrs. G. W. Clemens & Son, near St. George; Messrs. A. & G. Rice, at Currie's Crossing; and Messrs. Hattie Bros., near Norwich, in fine form for the coming exhibitions, and that in all probability the breed would be represented by the best lot ever brought out together at the coming 1899 shows. The demand for good Holsteins has been encouraging, many young animals having been sold before they were old enough to ship.

SALE OF THE LATE MR. J. J. COLMAN'S SOUTH-DOWNS.

On August 2nd the dispersion sale of the flock of Southdowns belonging to the estate of the late Mr. J. J. Colman was held, and the features of the sale were generally high average prices for so large a number of sheep—999 making an average of £5 7s. The highest price for a shearing ram was 110 guineas (\$575), paid by the Prince of Wales; 81 guineas was the next highest price, for a two-year-old ram; 33 shearing rams averaged £25 7s. 3d.; 16 aged rams, £26 6s. 4d.; 56 ram lambs, £9; 247 shearing ewes, £5 16s. 1d.; and 197 two-shear ewes, £3 3s. The highest price for a pen of 5 shearing ewes was \$60.50 each. Much praise was bestowed upon Mr. Garrett Taylor, the Superintendent of the flock, for the skill shown in the breeding and care of the flock, which was noted for uniformity of excellence.

DEATH OF GAY MONARCH.

The great Scotch Shorthorn bull, imported Gay Monarch 92411, died August 2nd, at the age of 12 years. He was bred by Mr. W. S. Marr, Upper Mill, Aberdeenshire, and was one of Luther Adams' importation of 1887, having been selected by Mr. Wm. Miller, formerly of Athol, Ont., now of Storm Lake, Iowa. Gay Monarch was sired by the Cruickshank bull, William of Orange; dam Alexandrina 17th, by Athabasca. He was a bull as devoid of faults as any we recall, and was of the most approved modern type. He won many prizes and championships at State fairs, and gained the second prize at the World's Fair at Chicago in 1893, being beaten only by Young Abbotsburn, a Canadian-bred bull; and he headed the herd of Messrs. J. G. Robbins & Sons, of Horace, Indiana, which won the grand sweepstakes prize of \$1,000, at the same exhibition, for the best herd of one bull and four females, open to all beef breeds, a prize which the present editor of the FARMER'S ADVOCATE had the honor of awarding as one of a bench of three judges. He was also a very prepotent sire, his sons and daughters having been very successful as prizewinners and breeders.

CLYDESDALES FOR CANADA.

"Mr. John Miller, Jr., of the well-known firm of John Miller & Sons, Brougham, Ont.," says the *Scotsman* "sailed from Glasgow on Monday, by the Donaldson Line steamer, with four well-bred Clydesdale horses, purchased from Messrs. A. & W. Montgomery. One of these horses was Earl of Lothian (10510), bred by the Duke of Buccleuch, and half-brother to the celebrated Cawdor-cup champion and H. and A. S. champion of this year, viz., Hiawatha, both being got by the well-known prize horse, Prince Robert. The dam of Earl of Lothian was Lady Lothian (12084), whose sire was Craig Isla (6641), which won first at the Royal, and her dam was the noted Darnley mare, Lady Cairngan (9145). Another is Border Duke (10514), bred by Lord Polwarth, and got by Ferguson (9526), out of the noted prize mare, Duchess of Robgill (11901). This mare was got by MacGregor, and her dam was the well-known Mary of Threave (991), which gained first prizes at Kirkcudbright and Dalbeattie as a brood mare, and also at other shows in the South of Scotland. Ferguson, the sire of this colt, is known as a good breeding horse, and particularly well bred. The third two-year-old is Prince Brilliant (10698), a brown colt bred by Mr. John Adam, Springbank, Stranraer, and got by William the Conqueror from Una (8922). This is a particularly well-bred colt, and a good one. His sire is too well known as the sire of big, weighty horses to require comment. His dam was own sister to the well-known prize horse, Bonnie Blossom, owned by Mr. Wm. Renwick, which stood fourth at the Glasgow Stallion Show some years ago, and won other prizes. Una was also dam of the well-known prize horse, Prince Craighour, and she has also bred other stock which have taken good positions. The fourth colt is a yearling bred by Mr. Robert Turner, Cairnton, Portsoy, and got by the well-known prize horse, Royal Standard (9547), out of Mrs. Montrose (11906). This is a right good colt, and there must be better young Clydesdales in Canada than we know of if some of these do not take leading positions at the Toronto Show."

EUROPEAN ADVERTISEMENTS.

Hampshire Down Sheep.

SPLENDID MUTTON. GOOD WOOL. GREAT WEIGHT.

This highly valuable English breed of sheep is unrivalled in its

Rapid and Wonderfully Early Maturity, possessing, too, a hardiness of constitution adapted to all climates, whilst in the quality of

MUTTON AND LARGE PROPORTION OF LEAN MEAT IT IS UNSURPASSED.

Full information of **JAMES E. RAWLENCE,** Secretary, Hampshire Down Sheep Breeders' Association, SALISBURY, ENGLAND.

W. W. Chapman,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London.

FAIRVIEW'S

SHROPSHIRE

AND IMPORTATION.

WHO wants a choice ram, or a ram lamb of best quality, or extra good ewes to tone up flock. Of unsurpassed quality and breeding. Come or write, or see exhibit at leading fairs.

ALL WELCOME. COME EARLY.

JOHN CAMPBELL

WOODVILLE, ONT.

"BELVOIR."

We are offering the best lot of

Shearing Shropshire Rams

That have as yet been produced at Belvoir. The flock descends from England's best blood, and has been carefully bred, the rams used having been all imp., viz., a son of Bonnie Beau, a twin brother to Newton Lord, a son of Farmer Newton, a son of Dunsmore Owl, and a Mansell out of the same ewe as his noted Phenomenon. **RAM LAMBS, YEARLING EWES and EWE LAMBS** also for sale. Some imp. **CLYDE MARES** and a stallion. These are extra good and worthy of attention of any wanting first-class stock. Also **JERSEYS** for sale, and **YORKSHIRE SWINE.** We sell on honor, and guarantee satisfaction.

RICHARD GIBSON,

DELAWARE, ONT.

Shropshire Rams and Ewes

Newly imported from the greatest English breeders. Home-bred rams and ewes of best quality. Scotch Shorthorns and Clydesdale horses for sale at moderate prices, and in large numbers, by

ROBERT MILLER,

STOUFVILLE, ONT.

MAPLE LODGE LEICESTERS.

A grand lot of ewes and rams for sale, all ages. All the FIRST prizes offered for flock at Toronto, London, and Brantford Winter Show, including the gold medal (1898), came to our flock. A very choice lot of young Shorthorn Bulls and Heifers also for sale—milk strains.

ALEX. W. SMITH,

MAPLE LODGE P. O., ONT.

6 CHOICE REG. LEICESTER RAMS 6

Strong, even, well-covered sheep, especially selected from flock of 1898. Also ram and ewe lambs. Write

E. GAUNT & SON,

LUCKNOW, ONT.

HENRY ARKELL, ARKELL, ONTARIO.

IMPORTER AND BREEDER OF

OXFORD-DOWN SHEEP.

Animals of all ages and both sexes for sale. Have some imp'd **RAM LAMBS.** Prices reasonable.

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 LEVING,** Secretary, Lafayette, Indiana.

20 - Imported Scotch Shorthorns - 20

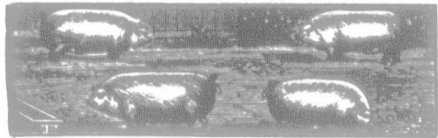
2 BULLS, 1 and 2 YEARS OLD; 14 HEIFERS, 2 YEARS OLD;
4 YEARLING HEIFERS.

THIS importation came out of quarantine on the 12th July, and representatives of many of the leading Scotch families are amongst them, including Minas, Brawith Buds, Secrets, Mysies, Beauties, Lady Mays, Lustres, etc. The home-bred herd contains Indian Statesman =29004=, and 15 young bulls from 6 to 18 months old, and 50 cows and heifers of all ages Registered Shropshires, yearling rams and ewes, ram lambs from imp. Flashlight. Any of the above will be sold at reasonable prices. Correspondence or a personal visit solicited. Catalogues on application.

Burlington Junction Station and Telegraph Office, G. T. R., within half a mile of farm. **W. G. PETTIT & SON, FREEMAN, ONT.**

PURE-BRED GUERNSEY CATTLE

Chester White Swine.

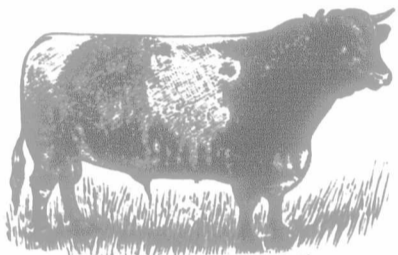


Duroc-Jersey Swine.

FOR SALE—Two young Bulls ready for service, and Heifers bred. First-class Pigs of all ages from imported and prizewinning sires and dams. Twenty head of HOLSTEINS for sale. Write for particulars and prices to **WM. BUTLER & SONS, DEREHAM CENTRE, ONT.**

2 Imported Shorthorn Bulls 2

4



4

2 - YEAR - OLD HEIFERS.

1 - YEAR - OLD HEIFERS.

ROYAL MEMBER (64741)

HEIFERS ALL IN CALF TO IMPORTED BULLS.

Correspondence or a personal visit solicited. Catalogues on application.

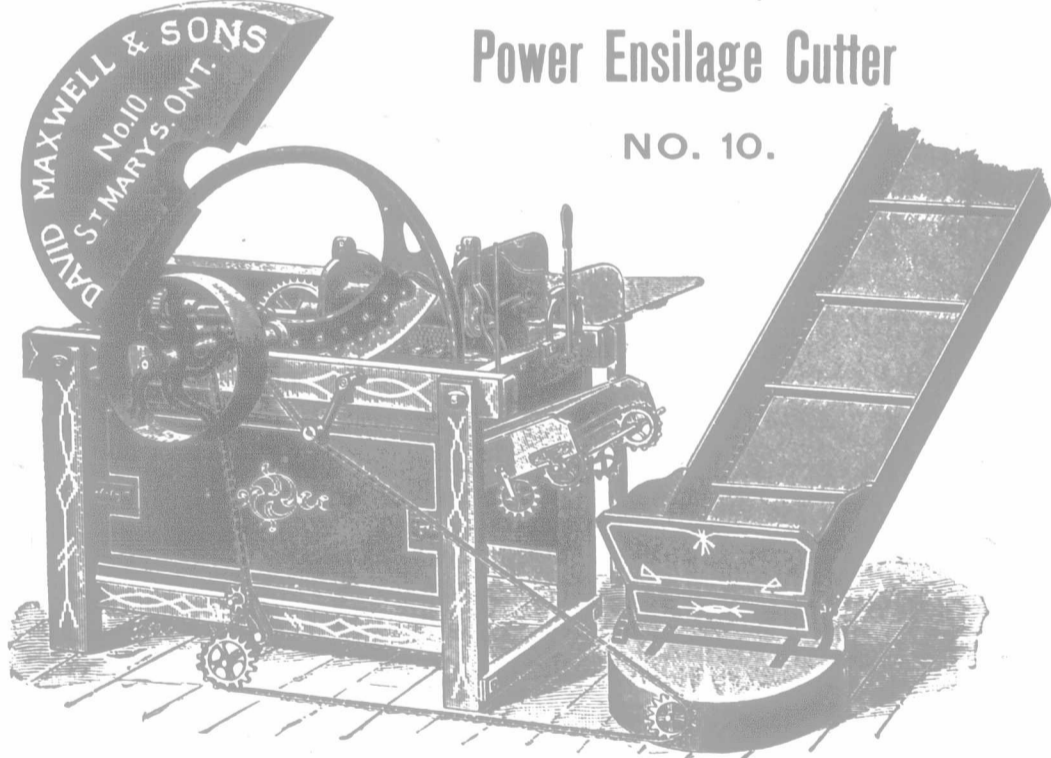
H. CARGILL & SON, CARGILL, ONT.

Cargill Station and Post Office on G. T. R., within half a mile of barns.

DAVID MAXWELL & SONS, ST. MARY'S, ONTARIO.

Power Ensilage Cutter

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The most modern—from new and improved patterns. Durable, Powerful, and Efficient. Send for Catalogue with full description.



The Favorite Churn

Made in seven different sizes, from five to fifty gallons. Steel Frame, Improved Roller Bearings, Patented Hand and Foot Drive, Best Quality Oak Barrels, Superior Finish. Sold by first-class dealers everywhere.

CANADIAN DAIRY SUPPLY CO., WINNIPEG, AGENTS.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

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

The *Farmer and Stock-breeder*, England, says:—"Cotswolds are selling much better this year. Last year they were a drug on the market. When one recollects the extent of the Cotswold trade in Canada and the States, one marvels that depression should exist in ram-breeding here."

The annual sale of Suffolk sheep at Ipswich, England, August 9th, attracted a large company from all parts of the kingdom, and competition was very keen for the best ram lambs, all previous records at Suffolk sheep sales being eclipsed by the price of 145 gs., given by Mr. S. R. Sherwood, of Playford, for a grand ram lamb bred by Mr. Herbert Smith, of Walton Range, whose consignment averaged over 30 gs. apiece. Mr. Thomas Goodchild, of Great Yeldham, gave 100 gs. for a ram lamb of beautiful quality, bred by Mr. S. R. Sherwood. Prices for ewes ran from £10 up to £14 per head; 120 shearing ewes from one flock averaged \$36 per head; and 80 two-shear ewes made an average of \$24; 1,200 ewe lambs averaged \$18, with a top price of \$37.

SHROPSHIRE SHEEP FOR CANADA. "On July 31st," says the *London Live Stock Journal*, "Alfred Mansell & Co., of Shrewsbury, shipped, per steamship Tritonia, from Glasgow, on account of Mr. John Miller, Brougham, Ont., twenty very nice shearing ewes from Mr. R. P. Cooper's prizewinning flock, sired by Shenstone Dreamer, purchased by Mr. Cooper at 165 guineas; Hatton's Reserve, bred by Mr. J. Beach; Shenstone Patriot, and Haydon's Deemster; also three good rams from the same flock, and a very promising ram lamb, bred by the Duke of Sutherland, by Lilleshall Dreamer, a son of the 175-guinea Montford Dreamer. These sheep were personally selected by Mr. Miller, with the assistance of Mr. Alfred Mansell, of the above firm, and will form a valuable addition to Mr. Miller's flock of Shropshires."

ROBERT MILLER'S IMPORTATION AND SALES OF SHROPSHIRE AND COTSWOLDS. Mr. Robert Miller, Stouffville, Ont., writes:—"Shropshires.—My 1889 importation consisted of 178 head, among which was one great 2-shear ram for Follyfarm, Abington, Pa.; one good 2-shear ram for W. M. McFadden, West Liberty, Iowa; a good 2-shear breeding ram for Follyfarm; the choice yearling ram from Philo L. Mills' flock for Follyfarm; the first prize Highland Society aged ewe, with mate; the first prize pen of ewes at Royal and Shropshire and West Midland for Follyfarm, except one ewe of the five that went to McFadden Bros.; the choice ewe lambs from second, third and fourth prize pens at Royal; also first prize pen in tenant farmers' class at Shropshire and West Midland. Follyfarm will show at Toronto and London, then Indianapolis or some show in the West, the strongest collection I have ever seen. Messrs. McFadden will show at Iowa and Western Shows. T. W. Davisson, Mechanicsburg, Ohio, will show a beautiful yearling ewe imported for him, and many others will show sheep sold to them since importation reached home."

Cotswolds.—Before the Royal Show I went to see the best Cotswolds, and had bought or gotten an option on the second prize yearling ram, which I liked best, and still think him the best ever imported by me; the first, second and third prize ewes and some lambs. I bought lambs that I liked better than those going to show. George Allen, of Oriel, Ont., will show the strongest flock it has been possible to buy in England for many years. George Harding & Son, Waukesha, Wis., got nearly all the balance of Cotswolds, including rams and ram lambs, ewes and ewe lambs. They sold some to remain in Canada."

E. GAUNT & SON'S LEICESTERS AND SHORTHORNS, NEAR LUCKNOW, ONT.

At the dispersion sale of Messrs. E. Gaunt & Son, three Shorthorn females were retained, and during a short visit to their home, a few days ago, the writer took a look over the stock in general, and did not overlook the little Shorthorn herd. The first to attract our attention was the six-year-old Cruickshank cow, Caprice, by Earl of Moray, and out of Eda Buckingham, a massive, thick, smooth, and level cow, carrying a great wealth of natural flesh, of the low-set, early-maturing sort so much sought at present. She is an all-round good animal. Next we came to the red Missie Needpath 16th, by Indian Prince (a son of imp. Indian Chief), and in her we found a splendid type of a Shorthorn, bearing the fine quality which has made her family name so popular. Her heifer calf by Admiral (half-brother of the champion Nominee and Reveue), is also a sweet thing, with grand quality. The other cow, we learned, was Lystra 2nd, by Earl of Moray, and out of Lady Lovel, making her a full sister to Hon. John Dryden's stock bull. She also is a good representative of the worthy families to which she belongs; full of natural flesh, and has a splendid, level, broad back. They all are in prime form, enjoying their liberty in the luxuriant pastures of that section.

Amongst the Leicester flock we found the firm fully up-to-date, with a long string. Our first stopping place was among the shearing rams, and here we found a grand bunch, in superb form. A half dozen in all were selected from last year's crop, and we doubt if a better, even, and better covered lot could be collected in the whole Province. The firm were always extremely successful in the show-yards with their shearings, and we venture to say that if they were to be drawn out this year they would take a lot of beating. Next we looked over the lambs in another field and, barring a few late triplets, we found a bunch of 54 good, thrifty, well-covered animals, bearing out the splendid uniformity so characteristic a feature in the entire flock. We did not count them, but Mr. Gaunt informed us that about half were rams. Among the 37 breeding ewes we recognized many of the former prizewinners. The entire flock is in good form, having a decided advantage over many sections of Ontario in having occasional rains, which has been most favorable to pasture lands. It will be remembered that the firm were highly successful in the show-yards, and as Mr. Gaunt, Jr., has had the misfortune, through injury, to be unable to come out this fall, parties desirous of purchasing foundation stock will have exceptional opportunity to select the best they have. See their advertisement, and note the address is now E. Gaunt & Son, Lucknow, Ont.

CANCER

CURED WITHOUT KNIFE OR PLASTER. FULL PARTICULARS FREE. -om

F. STOTT & JURY, Bowmanville, Ont.

WINDMILLS

AN INTERESTING PART OF THE



Toronto & London Exhibitions

IS THE Canadian... Steel Airmotor

Every FARMER should make it his business to investigate

ITS MERITS.

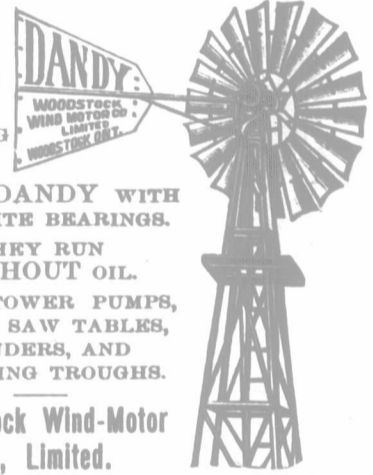
MANUFACTURED BY A CANADIAN FIRM FOR CANADIAN PEOPLE.

Ontario Wind Engine and Pump Co., Ltd., TORONTO, ONT.

Manitoba Agents: BALFOUR IMPLEMENT COMPANY, Winnipeg, Man.

Woodstock Steel Windmills

FOR POWER AND PUMPING



GET A DANDY WITH GRAPHITE BEARINGS.

THEY RUN WITHOUT OIL. STEEL TOWER PUMPS, TANKS, SAW TABLES, GRINDERS, AND WATERING TROUGHS.

Woodstock Wind-Motor Co., Limited.

WOODSTOCK, ONT. -om Write for catalogue. Agents: SYLVESTER BROS. MFG. CO. -om Brandon, Manitoba.

DUROC - JERSEY SWINE

We have a fine lot First-Class Stock of all ages and either sex. Address, -om TAPE BROS., Ridgetown, Ont.

MAPLEHURST BERKSHIRES.

Modern Bacon Type.

OUR early litters are all sold. We offer only a few choice sows and boars of May and June farrow. Orders looked upon for August and September pigs—distinct strains. Correspondence invited.

J. J. FERGUSON, BOX 373. -om SMITH'S FALLS, ONT.

OXFORD HERD OF POLAND-CHINAS

The home winners of the Imported Boars, Conrad's Model and Klondike, assisted by Bacon Boy and Lennox. Has won 64 out of a possible 69 first prizes. Stock of all ages for sale. Write for prices or come and see

W. & H. JONES, OXFORD CO. -om MT. ELGIN, ONT.

SPRING OFFERING

Yorkshires AND Berkshires

A fine lot of boars and sows eight weeks old. Pairs and trios supplied, not akin, of the best breeding and individual merit. A number of Yorkshire boars fit for service, and fine lengthy sows in pig to an imported boar. Berkshires, all ages, quality of the best. Write H. J. DAVIS, BOX 290, WOODSTOCK, ONT. -om Breeder of Yorkshires, Berkshires, Shorthorns.

IMPORTANT TRUTH

FOR STOCK RAISERS.

LUMP JAW has been transformed from an incurable to an easily curable disease. The entire credit for this wonderful result is due to

Fleming's Lump Jaw Cure.

When this remedy was discovered no other real cure was known. No other positive cure is yet known. FLEMING'S CURE was first introduced in Saskatchewan, and from there its reputation has spread over the entire continent. It is the only remedy endorsed by leading ranchers, shippers, and stock journals. It is positively guaranteed; money is returned if it fails. One bottle usually cures one to five cases.

Like all other articles of exceptional merit, it is imitated in external respects, but these imitations wholly lack the distinctive qualities of the genuine.

GET FLEMING'S LUMP JAW CURE AND BE CERTAIN OF RESULTS.

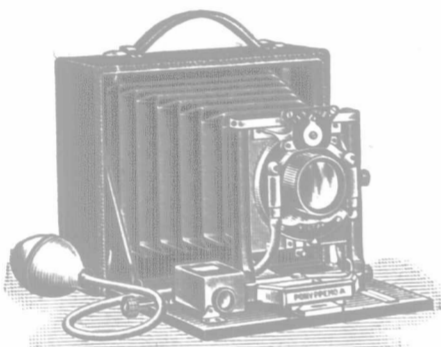
PRICE, \$2.00.

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WITH THE

Premo = Camera



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ANTISEPTIC FIBREWARE

—FOR—



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Catalogue Printing our Specialty.

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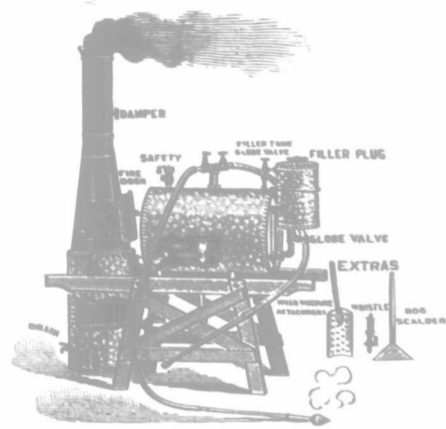
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GOSSIP.

W. A. Reburn & Co.'s sale of Jerseys, at Mississippi, Quebec, August 2nd, was fairly successful. Five of the females sold at prices ranging from \$100 to \$135 and \$175, which was the highest price of the day, for Jolie Fawn of St. Ann's, bought by J. J. Riker, New York City. Mr. Geo. W. Sisson, jr., Potsdam, N. Y., purchased four head.

At the annual show and sale of Shorthorn bulls specially suitable for export, at Carlisle, Cumberland, July 29th, the first prize went to a roan bull, calved in April, 1898, which sold for 86 guineas; the second prize to a roan, calved May, 1897, which brought 105 guineas; third prize to a red, 2 years and 7 months old, sold for 70 guineas. Others sold at prices ranging from 30 guineas to 78 guineas.

SHIRE HORSES FOR CANADA.
Says the *London Live Stock Journal*:—"Shire horse breeders are glad to welcome the Canadian buyers again, and we trust that the horses sold them will be such as will encourage them to come again. Mr. E. R. Hogate, of Toronto, has just made several purchases from the Cannock stud, and these include some first-class Shires. Among these is Cannock Blymhill, by the well-known horse, Nallstone Royal Ensign (14755), that was sold by the late Mr. John Barrs to Mr. Heywood Lonsdale for £1,250. Blymhill's dam was a Hatherton mare, so he should improve the size of the Canadian horses. He is two years old, and is a typical Shire horse likely to get big dray horses. He has good feet and legs, with plenty of hair; he is stoutly and compactly built, with a short, strong back and well-sprung ribs, and is a free mover. Another purchase of Mr. E. R. Hogate's is another young stallion, Groundslow Charming, by Revival 13508. The latter was a large prizewinner and well known and liked in Staffordshire as a hard, sound dray-horse stallion. After Revival won the £50 premium at Lechlade, Mr. Hart sold him for export to Argentina two years ago at a high price. Then at the big National Show he won the champion prize as the best heavy stallion, beating Clydesdales and all comers. Groundslow Charming's dam is by that noted horse, the late King Charming 3166, and resembles very much his half-brother, Cannock Perfection 8990, that was sold by Mr. Hart some years ago to Messrs. Galbraith Bros., Wisconsin, U. S. A. Cannock Perfection was champion at Chicago. Groundslow Charming has beautiful feet and legs, and hair of the Clydesdale character, but of a heavier type, and should make his mark. These two will be shipped with a consignment next month. Mr. Hogate, the Canadian buyer, has also bought from Mr. John Brandon, of Aston, Stone, the four-year-old stallion, Prince Hatherton. This young sire is 17 hands high, with grand feet and legs. He is a sure stockgetter, and is a dark bay, with very little white about him. He was shipped last week."

ROSSEAU PERFORMER AND OTHER HORSE STOCK AT SANDY BAY FARM

The subject of our illustration, on page 463 of this issue, is the well-known and popular Hackney stallion, Rosseau Performer (5391) E. H. S. B. (34) C. H. S. B. (198) A. H. S. B., who has been such a prominent figure at all our leading shows during the past six years. Rosseau Performer is a strawberry roan stallion, six years old, 14.34 hands high, good conformation, and good all-round action, his knee action in particular being something phenomenal. He was imported from England, in the year 1894, by his present owner, Mr. Horace N. Crossley, of the Sandy Bay Stock Farm, Rosseau, District of Parry Sound, Ont., and has been traveling in that district, in which he is a great favorite, during the last three seasons. He has proved a sure foal-getter. As a stock-getter he has been one of the most successful Hackney sires in Canada. His get all more straight and true and are particularly marked for their high hock action. So far four of them have been exhibited eight times and have carried off one first, three second, and four third prizes, two of these awards being gained in classes for mares including older ones than themselves. Performer himself has won five firsts, four seconds, two thirds, and one fourth prize, among which may be particularly mentioned 3rd at New York in 1896. The rest of his winnings, except two firsts, were all scored either at Toronto Industrial or Canadian Horse Show.

As to the pedigree of Rosseau Performer, it may be mentioned briefly that he was sired by Enthorpe Performer, who was by Matchless of Londesboro, by Danegelt, by Denmark, etc. These horses were all sold for large figures, and are particularly marked for their high hock action. The two first named are now owned in the latter country, and have there carried off the championships whenever exhibited. Performer's dam was Ill. Fanny, by Phenomenon (Bromley's), and won in England twenty first and two second prizes, besides breeding over twenty foals. Mr. Crossley having now had the above horse for so long, and wishing to change the strain, is offering him for sale, at reasonable figures, in order that others may have the benefit of such an excellent sire.

Amongst the other horses at Sandy Bay Farm should be particularly noted the two-year-old Hackney stallion, Rosseau Swell, who is also being offered for sale. He should make an excellent purchase for any one wishing to travel a Hackney stallion next spring.

Rosseau Swell (71) C. H. S. B. is by the well-known horse, Royal Standard (55) (3918), who during the last few years has obtained so many victories at our Canadian horse shows, and is out of (20) (6357) Althorpe Countess, a full sister to Rosseau Performer.

As to the action of this two-year-old, it is good all round, and his conformation is splendid. He has won first at Toronto Industrial as yearling stallion, 1898, and second at Canadian Horse Show, 1899, in the class for stallions three years and under. These are the only times he has been exhibited. Another good one is the yearling Hackney stallion, Rosseau Royal Oak (78) C. H. S. B., who, judging by his present action and conformation, will make an extraordinarily good horse. Royal Oak has never been shown.

Among the brood mares kept at the farm may be mentioned the old and well-known favorites (5419) Lady Bird, (47) Rosseau Birdie, (6357) Althorpe Countess, (5330) Lady Cocking, Sure-foot No. 1, E. S. But as these mares have been so frequently described in our paper, it is not necessary to go into particulars. There are also a number of fillies, geldings and foals, all by Rosseau Performer.

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I see you are still handling the Gombault Caustic Balsam. I wish to say right now and here, that it is far the best liniment I ever used, and I have in years past used a good deal. I would rather have one bottle of it than one barrel of any other kind I ever used. It never failed to cure for me. CHAS. E. ROSS.

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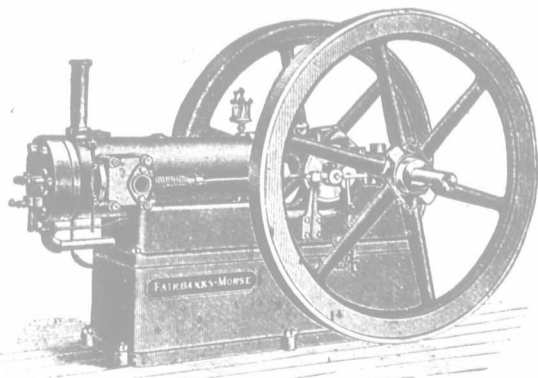
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