

**PAGES
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THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

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Address—THE FARMER'S ADVOCATE, or
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LONDON, CANADA.

Agriculture in the Public Schools.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—A recent number of the ADVOCATE contains an interesting letter from Mr. John I. Hobson, on the teaching of agriculture in the public schools. He enumerates the value of this kind of teaching, the list culminating in the following words: "And what would be even still more important, it would prepare the pupils to study such subjects (the sciences bearing on agriculture) more intelligently when they come to take them up systematically afterward." The context shows that he means by "afterward" the time when these pupils will be farmers.

Now, sir, I believe that every educationist who has carefully studied this question will endorse Mr. Hobson's position, that the chief aim of the teaching of sciences bearing on agriculture should be to prepare the student to study and understand that book, when he shall get it, which we call his own farm. In other words, it is to train the boy to be an investigator, to give him a start and as much training as possible in the use of his own powers of observing and reasoning upon his observations in order that he may derive the greatest pleasure and profit from his farm and the most benefit from the failures and successes of his neighbors.

The value of an elementary education in science is correctly measured, not by the information thereby deposited in the memory, but by the training obtained in its acquisition. Ten facts acquired by the learner's own investigation and discovery better qualify him to study his own farm, by and by, than a hundred learned from books and hearsay.

It is no more difficult for a teacher to store an attentive boy's memory with a hundred pages of the names of plants, composition of soils, lists and relative values of different breeds of stock, and feeding ratios, and many other classes of facts relating to agriculture, than to teach the same number of pages of history or geography; but it is not an easy matter to train him to discover the several qualities that give weeds their aggressiveness, or to recognize soils, or to know Herefords from Holsteins by studying the animals (not the pictures) and their respective merits by observing what the animals accomplish. A bolus of information concerning agriculture, or any other science, divorced from its objects and processes will oftener prove, in real life, a hindrance than a help. Hence the contemptuous references one too often hears to what is called "book farming."

Consider the time and effort required at the public and high schools, and at the model and normal schools, before a person becomes fairly well qualified to teach reading, spelling, arithmetic, and the ordinary literary branches. Comparatively little time is devoted to the sciences auxiliary to agriculture. If the teachers have not learned the elements of these sciences, and the distinct and difficult art of teaching them by the scientific method, what use will it be for either the Education Department or the trustees to say to them, you must teach these subjects? One might as well say to a teacher who doesn't know a note, or cannot run the scale, you must teach these children music.

Mr. Hobson holds that leaving the introduction of these subjects optional with the trustees is

"a mere farce." Three attempts already made, ending in as many failures, have shown that the farcicalness rests not with the trustees, but in the lack of knowledge of the subjects and how to teach them on the part of the teachers. Failures will likely result from future attempts unless the teachers are specially instructed in the high schools and trained in the model schools and normal schools.

But if the teachers were properly qualified to teach these subjects, who else than the local authorities could see that it is done? Possibly it is expected that the Education Department should at once make the teaching of agriculture obligatory. We know how the Education Department can do that. It is by putting it on an obligatory written examination. A written examination can test knowledge, but cannot test power. The written examination in this kind of work inevitably entails the result that Mr. Hobson rightly describes as "lifeless routine bookwork." Than that result, better not have the subject at all.

If the high schools are to continue the work of educating intending teachers, and to receive public support therefor, they should seriously undertake teaching the elements of the sciences in a thoroughly practical manner, having in view the end that they are training young people to be teachers.

Further, a training in the investigation of natural phenomena, while of such obvious benefit to boys who are to be farmers, is just as valuable to girls who are to be housekeepers, and scarcely less valuable in artisan, commercial or professional life. Therefore, instruction in the elements of the sciences—now often spoken of as nature study—should be the right and privilege of every child, whether in town or country, and every teacher should be trained to impart it.

To summarize:—My contentions are: 1st. That persons who aspire to be teachers should be taught at the high schools a course in the English branches, mathematics and sciences, that will well qualify them to teach these subjects efficiently in the public schools, and at the same time make them generally well-informed. To these groups, at the option of the candidates, may be added a study of foreign languages, but such languages should not be allowed to supplant the essentials.

2d. That the training schools, normal and model, should give as much attention to methods of teaching elementary sciences as to the teaching of the other groups of studies.

3rd. That pupils in all kinds and grades of schools should have the benefit of some scientific training, and that in rural schools such training ought to be given as large a bearing on agriculture as is practicable.

Yours truly,
J. DEARNESS.

London, Ont.

How Shall Agriculture be Taught?

The teaching of agriculture or agricultural science in the public schools is a subject of very grave interest in more than one Province of Canada. The publication of the new agricultural text-book written by Mr. C. C. James, which now occupies a tentative position as far as the school curriculum is concerned, has revived interest in the subject in the Province of Ontario. In our October 1st issue Mr. John I. Hobson began a further discussion of the subject, and his suggestive letter is the subject of a thoughtful communication in this issue by Mr. John Dearness, I. P. S., a well-known educationist and investigator in natural science, who very forcefully presents the modern conception of what useful education in science really means, and which is not favorable to the commonly-understood text-book method. We noticed in the *Saturday Evening Post*, of Philadelphia, recently, a severe arraignment of the modern system of education, which is set down as a brilliant failure. The writer declared that colleges had degenerated into mere knowledge factories where the youth was stuffed with facts after the food-cramming plan of fattening geese at Strasburg. "The education of the future," concluded the writer, "will be a simple system of training and exercising all of the senses, teaching him (the scholar) how to think, and making his mind ready on the instant." This indicates a revolt in the popular mind against old notions, and may be extreme.

There are signs of a rising movement in cities and towns in favor of technical education, presumably to follow the more elementary work of the public schools, and with the growing specialization of agriculture the foundation for more technical information applicable to the profession of agriculture in its various branches must be laid at least in the rural public schools. There is great danger that foreign languages, and some other subjects as well, will continue to hold sway, supplanting or blocking the way against those that have a more direct bearing upon the successful pursuit of the country's greatest industry—that of the farmer. We welcome Mr. Dearness' letter as a valuable contribution to the discussion of this theme, which we trust will be taken up by others of our readers.

READ THIS COLUMN FIRST!

"Proud of the Farmer's Advocate."—W. J. Young, Adler, North Dakota, U. S. A., writes us as follows: "We get a number of agricultural papers at this farm, but I want to say that I feel quite proud of the FARMER'S ADVOCATE as a Canadian farm journal. It has a fine appearance, better cuts, more practical reading matter for the farmers and stockmen, and a greater freedom from fake advertisements than any paper we get."

The above note, just received from a reader on the American side of the line, is a fair sample of the appreciation in which the FARMER'S ADVOCATE continues to be held. We honestly strive to give the farmers the best that can be furnished in agricultural literature; hence subscribers write us like the following from Mr. H. N. Bingham, of Simcoe Co., Ont.: "I consider that every number is worth \$1.00 to me." But the FARMER'S ADVOCATE does not stop at that.

A New Dress.—Among the many improvements in the FARMER'S ADVOCATE for 1899 will be a complete new dress of type, which will add greatly to its present handsome appearance. It will be worn for the first time in the Christmas number to be issued December 15th next.

Our Christmas Number for 1898.—It will be unique in agricultural journalism, and we hope worthy the splendid attainments of the Canadian farmer. The pictorial features will, perhaps, be the most striking, embracing views of a large number of the best-appointed farms in every Province of the Dominion, examples of what has been accomplished in different branches of farming, such as stock-raising, fruit culture, dairying, grain-growing, etc. Many of them will be full-page representations, and others over one-third page in size. There will also be engravings of the Dominion Experimental Farms, and the Agricultural College at Guelph, Ontario, and a score of other attractive illustrations. They will be executed by the foremost artists on the continent, and accompanying them will be articles of interest and practical value written by various members of our editorial staff. A fine series of contributed articles out of the beaten path, and a few in lighter vein suited to the season, together with a glimpse at the home life of a typical European farmer, will afford something of interest to every reader. On the part of artists, engravers, editors, and contributors, it entails some six months' labor, and a very heavy outlay on our part. The price has been fixed at fifty cents per single copy, but all regular subscribers will receive it without extra charge.

New Subscribers Get It.—Every new yearly subscriber receives the balance of the present year's issues, the magnificent Christmas number, and all the issues for 1899 at the ordinary subscription rate of \$1.00.

Grand Cash Prize Competition.—As a special inducement to our friends who will aid in extending our subscription lists, we have decided to offer a cash commission of 25 cents for every new subscriber sent in, together with \$50 in cash, to be divided as follows among those sending in the seven largest lists during November and December. Prizes: 1st, \$15.00; 2nd, \$12.00; 3rd, \$10.00; 4th, \$8.00; 5th, \$4.00; 6th, \$2.00; 7th, \$1.00. Everyone sending in one or more new subscribers will receive at least the 25 per cent. cash commission, and also stand a chance of earning one of these handsome cash prizes. Names and money should be sent in as fast as obtained, and will be credited the person getting up the club. Renewals will not count in competition. Our regular salaried agents and agricultural society or farmers' institute lists are excluded from this competition. Send for free sample copy and subscription forms and begin work at once, in order to make the best possible use of the two months' time. Every new subscriber receives the balance of this year, the Christmas number, and every issue of the paper issued in 1899. No subscription must be taken at less than \$1.00. The 25 per cent. commission may be retained as the names are sent in. Final lists in cash competition must be mailed before January 1st, 1899.

A Great Teacher's Bible Offer.—Many of our readers will remember the beautiful new Bagater's Teacher's Bible which we gave last year to those sending us in the names of three new subscribers. We are glad to be able again to bring this volume of inestimable value within reach of our readers, and on even more favorable terms. A copy will be sent post free to each one sending us the names of only two new subscribers, at \$1.00 each, during the months of November and December.

Our New Self Binder.—Each copy of the FARMER'S ADVOCATE, as received, is safely secured as in a fine cloth-bound book. Handy, handsome, durable. Will be sent post prepaid to any subscriber sending us two new yearly subscriptions, or to any subscriber who, during November or December, sends in his or her renewal for another year, accompanied by one new yearly subscription.

How to Get the Paper Free.—Any present subscriber sending in two new subscribers and \$2.00 will have his or her subscription extended for one year.

An Englishman's Opinion of Canadian Butter and its Competitors.

A well-known English provision merchant (of the Edgware Road, London), Mr. Peter Keevil, for many years a practical dairyman, expresses a high opinion of the Canadian butters which are being imported in increasing quantities and at the same time showing a steady improvement in quality. This improvement is manifested in the uniformity of the flavor and texture, and he believes is undoubtedly the result of the spread of information, education through the medium of dairy schools, and the establishment of creameries and butter factories throughout the Dominion. He does not think the States butter compares favorably with that from Canada, and it commands a lower figure, the prices for recent consignments being: Canadian, 97s; States, 91s. The objection to American butter was on account of what might be termed its "strong" flavor. This was not due to over-salting, a disadvantage which had been overcome, but it pointed to the fact that less pains were taken in shipping than was the case in Canada, and consequently it did not arrive in such good condition. With many of the dairies there was a distinctly herby flavor, which was not present in the Canadian butter. Whether this could be obviated by pasteurization he is not prepared to say.

Mr. Keevil, however, does not by any means yet rank Canadian butter first in quality. Danish butter, he considers, still holds the premier position for quality, but in this respect Ireland was coming well to the front. Many of the Irish creameries were reaching a level attained only by the best Danish, and he had purchased only recently one lot of Irish butter at the price of 105s., f. o. b. The co-operative system was no doubt largely responsible for the resuscitation of the buttermaking industry in Ireland, but the dairy schools had had a decided effect in improving the methods of production, their influence being slowly but permanently felt.

The Australasian butters were vigorously competing with other butters for a firm place in the English market. The quality, especially in the case of the Victorian butters, was undoubtedly superior to the Canadian. Some of the New Zealand butters also were very fine. It was significant that for the last few years butter had been cheaper in the winter than in summer, which was due to the fact that the Canadian supply keeps up until the Australians are well in. There had been very little trade in French salt and firkin butter since the development of the colonial trade.

As regards fresh (or unsalted) butter, Normandy supplies England with the best of it, the finest of which is manufactured at Carentan. The drought there last summer caused the price to rise as high as 16s., against 14s. last year. Ostend fresh commanded a few years ago a very considerable trade, but is now replaced by Italian, some brands of which have a very good hold on the public. There are also one or two good brands of Dutch fresh, but the cask (or salt) is now almost a thing of the past. Mr. Keevil regrets that the British colonies do not supply as good fresh as they do salt butter.

German butter practically held no place in the English market. Argentine butter was coming on and would be likely to prove an important factor in the future of the butter industry. He had tasted samples which were in every respect as fine as Danish, and it was only a question as to the quantity that could be produced to keep up an export trade.

There was no such thing as a distinctly English butter in the market. For the past ten or fifteen years the trade in fresh milk has so largely increased that farmers have found it more remunerative to send their milk up to London than make it into butter. What English butter does come into the market arrives between March and May, but only in very small quantities.

Best in America.

Please find enclosed \$1 for one year's subscription to the *ADVOCATE*, which is the best agricultural paper printed in America. I hope I shall always have a dollar for it. Yours truly, C. F. S. Range P. O., N. B.

The Percentage of Tuberculous Animals.

One of our readers who has given the subject a good deal of consideration writes us regarding the Ottawa report, according to which from five to seven per cent. of the cattle subjected to the tuberculin test by the veterinary officers of the Dominion Department of Agriculture showed the reaction indicative of tubercular trouble. If that percentage were taken as applying to the entire cattle stock of the Dominion, he considers it entirely too large and calculated to give an erroneous impression. It may be well to emphasize the point, though we do not think that such an inference could reasonably be drawn. In the first place, only a comparatively limited number of animals were tested, and it is only fair to suppose that owners have had the test applied in cases only where, from external evidences, there was reason to suspect the existence of disease, hence the proportion reacting would appear much larger than is actually the case.

STOCK.

The Canadian Hog to the Front.

The *FARMER'S ADVOCATE* is doing good work in pressing the importance of the Canadian bacon trade with Britain to the front. If intelligence in meeting the most critical requirements of the markets is observed, the trade will be a profitable one to the Canadian farmer. The changed and more refined taste for a finer quality of pork is not very new, nor is it confined to Britain. We at home will not use the three- to six-hundred hog. To meet this change it was only necessary to feed less concentrated food, less confinement, and earlier slaughtering. Instead of this, however, many farmers went in search of new breeds, and after a



MONEYPUFFEL LAD. MYSIE'S ROSE. MALE AND FEMALE CHAMPION SHORTHORNS AT TORONTO, LONDON AND OTTAWA EXHIBITIONS, 1898; OWNED BY CAPT. T. E. ROBSON, ILDERTON, ONT.

few trials of these have next gone wild on crosses, usually getting back to a Berkshire cross. The *FARMER'S ADVOCATE* of October 15th favors its readers with an able editorial on this subject, and also English correspondence giving views of experts in that country, in which it is stated that Berkshire sells from 3 to 1 cent higher than Yorkshire per pound. That, however, is the least part of the difference to the farmer. A lank, coarse hog will cost the producer more than a smooth, plump one. The Berkshire has more points of excellence than any other breed, and has the power of transmitting these to their offspring, with a certainty and uniformity in size, shape and color, with docile disposition, constitutional vigor, and very especially early maturity, making him a profitable hog to the farmer. His small offal, fine bone, fine-grained, solid, marbled meat makes him profitable to the butcher and consumer. With proper mating, judicious feeding, and early dressing, there is not much room for that coming hog. The principal object of this letter is to attract the attention of fair boards that are doing nothing to aid or encourage this trade. They offer prizes for seven different breeds, altogether 178 prizes, which mostly go into the pockets of one or two men in each of the seven breeds. Can anyone see where the people are enlightened or the trade aided? These great blubbers of fat are unfit for food. They are not wanted at home or abroad. Why not rather offer prizes for best pen of bacon hogs, open to all breeds, and after the award alive give other prizes on the butchers' block test, with other prizes on the trade. The pork-packers would handle these hogs at a profit to the producer, the *ADVOCATE* would favor its readers with a report giving age, breed, feeding, etc.

In this way farmers would find just what the trade wanted, and those unfit for the trade would go to the wall, the fittest only surviving. Our fair boards should be composed of up-to-date men in every line, but the management would indicate that some of them are still riding high wheels. There is always a danger of old societies becoming moss-covered. THOS. B. SCOTT. Middlesex Co., Ont.

[NOTE.—It is not so much a question of breeds as of type, and we fear our correspondent is over-enthusiastic in ascribing to one breed all the virtues. We would be glad to believe that the Berkshires all measured up to the standard of the bacon hog, retaining meanwhile the qualities of early maturity, profitable production, and the necessary length and depth; but we are yet in receipt of too many reminders that a large proportion of Berkshires are too short and too thick for the bacon trade. The best of that breed—and, we are glad to know, an increasing number—are filling the bill, but there is much room for improvement in the rank and file; and improvement comes only by careful selection, rigid culling and breeding only from those most nearly approaching the desired type.—ED.]

The British Dairy Show.

The results of the milking trials and butter tests at the London, Eng., Dairy Show, held Oct. 18th to 21st, were beyond the average, although no "record" was obtained in quantity of milk or butter. The three best milking results were remarkably close to each other, as shown by the details, as follows: Mr. George Long's Guernsey-Shorthorn, 52 days in milk—65.2 lbs. of milk, 3.62 per cent. of fat, and 9.23 of other solids—137.5 points. Mr. Birdsey's Welsh cow, 17 days in milk—61.1 lbs. of milk, 4.23 per cent. of fat, and 9.38 of other solids—135.3 points. Mr. Spencer's Shorthorn, 21 days in milk—60.7 lbs. of milk, 4.23 per cent. of fat, and 9.3 of other solids—134.4 points. The greatest quantity of milk per day ever given at the Dairy Show was 79.7 lbs., yielded by a Dutch cow in 1896, but as this milk contained only 2.7 per cent. of fat and 8.4 of other solids, the cow was disqualified on account of the poverty of her milk. Last year Mr. Evens' champion cow, a Lincoln Red Shorthorn, gave 68 lbs. of milk per day 27 days after calving, the percentage of fat and other solids being 3.88 and 8.18, and the points gained 143.5. Mr. Birdsey's Shorthorn, second in the trial for her breed, gave 68 lbs. of milk seventeen days after calving, with 3.61 per cent. of fat and 8.67 of other solids, gaining 140.0 points. No other cow last year scored as many points as lowest number given above for the three cows of the recent show. It is to be borne in mind, too, that forty days were deducted this year from the days in milk before counting one point for every ten days, whereas last year, and for many previous years, only twenty days were deducted. As to the butter test, the quantity of butter per day given by Lady Henry Bentinck's Shorthorn cow Procter this year (3 lbs. 1 oz.) stands third in the tests carried out hitherto. The greatest yield was that of Mr. Britton's Jersey, Baron's Progress, in 1889, namely, 3 lbs. 5 oz.; and second was 3 lbs. 2 oz., yielded by Mr. Shepherd's Shorthorn, Dairy Model, in 1896.

A Steer Feeding Test.

In a test recently concluded at the Minnesota Agricultural School in steer feeding some interesting deductions are made, according to Bulletin No. 10, which contains a detailed account of the experiments. Two grade Shorthorn steer calves were secured, as near alike in every particular as possible, and put on similar treatment, an exact account of everything they consumed being kept till they were slaughtered at two years old. They were fed just to keep them gaining nicely without any forcing till the last five months, when they were pushed to a finish. At no time during the finishing period could they be induced to eat more than fifteen pounds of grain each per day. One steer could only take about thirteen pounds, and he made an average daily gain during the finishing period of 1.81 lbs., while the other that took the 15 lbs. of grain made an average daily gain of 2.03. When ready for the block, expert butchers were brought in to value them, and valued the best feeder (he being also slightly the better individual) at \$4.75 per 100 lbs., and the other at \$4.40. "Including the value at birth, the entire cost of growing Jack (the best steer) was \$15.17, and of growing Prince, \$40.21. The shrunk weights, with a shrinkage of 3 per cent., were 1,392 lbs. and 1,280 lbs. respectively. The first was sold for \$66.12, and the second for \$56.32. The profit on the first, therefore, was \$20.95, and on the second, \$16.11." Thus showing a difference of \$4.84 in net profits, which goes to demonstrate very forcibly the importance of selecting the right steer for feeding purposes. How can this be done? Only by long experience. No one can hope to judge of the individual characteristics of animals without careful study and patient observation of every detail.

Our Scottish Letter, which contains a report of the Duthie and Marr sale of bulls, came to hand too late to secure its usual place in Stock Department in this issue, but will be found on page 540.

Pasturing Steers.

Results made at the Ontario Experimental Farm from pasturing steers during the summer, less than six months:

Fifteen steers were bought May 2nd, total weight 16,790 lbs., at \$4 per 100 lbs.—\$671.60. Sold Oct. 27th, to A. P. Scott, Brampton, weighing 20,800 lbs., at \$1.90 per 100 lbs.—\$1,019.20; leaving a balance of \$347.60.

In addition to the pasture, they received at the commencement four pounds each per day of chopped grain and bran, mixed two-thirds grain to one-third bran, which was increased to eight pounds per day. During October the steers were kept in loose boxes and fed cut corn and clover hay. Total cost of grain and bran, \$132. They were dehorned in the spring and pastured during the summer with the cows.

Last week twenty-four two-year-olds were bought for winter feeding, which will be sold in the early spring and another lot put in.

By feeding off two lots in the year instead of one a double profit is gained, and young growing animals will increase in weight more rapidly and at less cost than mature animals.

O. A. C., Guelph. Wm. RENNIE.

Feeding Sheep in Winter.

Any farmer who has a good flock of sheep to winter, and has a liberal supply of clover hay, well-saved pea straw, oats and peas, corn ensilage and roots, is well fixed for winter feeding.

To my breeding ewes, which are all Shropshire, I feed the following: In the morning, first thing, a bushel of cut turnips (for ten or twelve) and as much pea straw as they will pick the leaves and pods out of clean, which is afterwards used for bedding; this is all I feed in the morning. At noon their feed consists of a bushel of corn ensilage (for ten or twelve), or more if they will eat it. At night they get roots, the same as in the morning, and clover hay instead of pea straw. This I feed until about three weeks before lambing, when I commence to feed clover hay instead of pea straw, but always feed pea straw in their yard for them to pick at, as it gives them exercise, which I consider is very necessary for breeding ewes. About a month before lambing they get a gallon of oats and peas (for eight) mixed in the proportion of three parts oats and one part peas. After lambing, their feed in the morning consists of a bushel of roots (for eight or ten), clover hay all they will eat up clean, oats and peas (a gallon for five or six), and as much warm slop as they will drink, made of oat chop and bran. At noon I feed roots, the same as in the morning, and as much corn ensilage as they will eat up clean mixed with cut clover hay, equal parts. At night they get the same kind of feed as in the morning, but no slop. By feeding this way I find my ewes milk well and the lambs thrive and grow fast.

My young sheep rising one year old get a bushel of cut turnips (for ten) and as much clover hay as they will eat up clean, and a gallon of oats, peas and bran (for eight or ten). At noon they get roots and corn ensilage mixed with cut clover hay, and at night I feed as in the morning.

I have never had much experience in fattening sheep for market, as I have always bred registered Shropshires, which I always sell for breeding purposes. I would recommend the following: In the morning feed a bushel of cut roots (for ten), cut clover hay and corn ensilage, equal parts, as much as they will eat up clean, and a quart (for two) of the following mixture: Oats three parts, peas one part, and one part each of bran and nutted oil cake.

At noon, feed cut roots and a little clover hay, and at night I would feed the same as in the morning, and an occasional feed of pea straw, which can afterwards be used for bedding.

Ontario Co. ROBT. SPENCER.

Ensilage Approved.

With regard to feeding ensilage, I have had but four years' experience, and I can say I never fed anything that gives me so much satisfaction. I prefer feeding cut straw and roots with it. I mix layer about—ensilage, roots, and straw—and tramp it down solid and let it stand twenty-four hours before using. (Of course, it must be kept from freezing.) Then I feed about one bushel per head, with about four to six quarts of pea- and oatmeal, and a little bran, if you wish, for milk cows, three times per day, and as much good clover hay as they will eat up clean between meals. This ration is for fattening cattle and milking cows. Of course, store stock do not require any meal. We find the cows milk well and the butter is of better quality, better color, and firmer. As for horses, I only give just a little, once a day. Some think cattle have no need of roots when they have ensilage, but it is a mistake. I think the roots make the ensilage more valuable.

I think the FARMER'S ADVOCATE about right as a farmer's friend. B. W. ROSSER.

Middlesex Co., Ont.

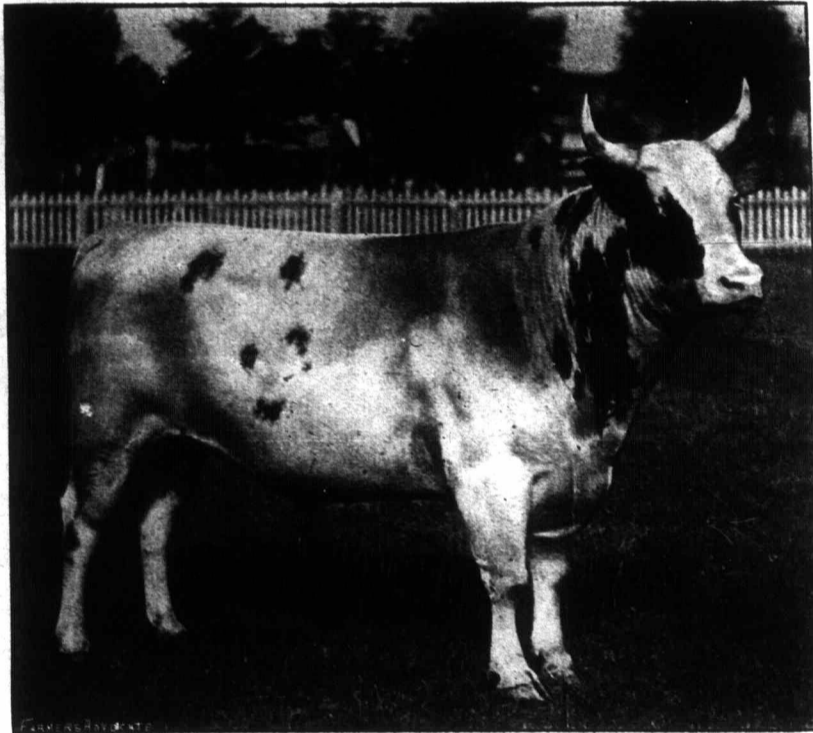
FARM.

Preserving Information.

One test of the merit of a periodical for the farmer is that it is not only carefully read, but preserved for future reference. Judged by this standard, the FARMER'S ADVOCATE has long held an enduring place in the esteem of those well qualified to judge of what is reliable and helpful. Issue after issue as they arrive, many of our readers carefully preserve them for permanent binding at the end of the year, and thus have formed a library on practical agriculture in all its departments, the equal of which it would be almost impossible to obtain in any other way, and it could not be done for so small an outlay. Its contents record the steady and remarkable advancement of farming and stock-rearing on this continent. Not only the everyday agriculturist, but public men, officials, and investigators commend it upon this score. For instance, on Nov. 9th, Mr. Hy. Wade, Parliament Buildings, Toronto, Ont., Registrar for the Dominion Live Stock Record Associations, wrote us that he was getting back numbers of the ADVOCATE bound, and found the following missing: No. 388, August, 1895; No. 421, Dec. 7th, 1896; and No. 422, Dec. 14th, 1896, for copies of which he asked.

Under date of October 21st, 1898, Mr. W. P. Cutler, Librarian in the U. S. Department of Agriculture, Washington, D. C., wrote: "I thank you very much for sending the three numbers to complete the year 1891. We have complete volumes for 1883, 1891, 1892, 1897, with numbers of 1898 up to date. We also have incomplete volumes for all the years since 1880. We should be glad to obtain a complete set of the paper."

Prof. Chas. E. Thorne, Director Ohio Agricultural Experiment Station, wrote, on Nov. 2nd,



IMPORTED AYRSHIRE BULL, OLIVER TWIST OF BARCHESKIE, 1ST PRIZE AT LONDON AND 2ND AT TORONTO EXHIBITIONS, 1898; THE PROPERTY OF ROBT. DAVIES, THORN-CLIFFE STOCK FARM, TORONTO, ONT.

1898, that they value the ADVOCATE so much that they wish to preserve it permanently. In arranging their files for binding, however, they found several numbers missing, for which request was made. "If you can supply these numbers," he added, "it will be a great boon, and we shall be glad to pay for them if you will send bill."

Since the introduction of our new binder at the beginning of the present year large numbers of readers, who had not done so before, have begun to preserve their copies as they are received, a practice which for many reasons is to be commended from the reader's standpoint, particularly in preserving for convenient reference specific answers to questions and articles on technical and seasonable subjects.

To Destroy Twitch Grass.

SIR,—The question is asked in a former issue, how to kill twitch grass? I have been trying every way for seven years, but the two last years have proved a sure cure. Don't cut or pasture, but let everything grow till the 15th of June, then put a chain on the plow and cover all the grass, and sow one bushel per acre of buckwheat and harrow it well and it will kill all the grass.

Simcoe Co., Ont.

B. TRACY.

The Armour Packing Co. dresses from 3,000 to 6,000 chickens a day. They say that pure-bred are far superior to common chickens in plumpness, fullness of breast, smooth skin and yellow legs. And they pay three cents a pound more for the pure-bred than for common stock. They advise farmers who raise chickens for the market to keep only pure-bred males of the best varieties, such as Plymouth Rocks, Wyandottes, or Indian Game. The farmer who keeps the pure-bred in two ways: they are larger and weigh more, and they get several cents a pound more for them.

Disposal of Town Sewage for Fertilizing.

The disposal of sewage is one of the most vital, vexatious and costly with which city and town corporations have to deal. It has its relation to farming because vast quantities of matter, valuable for fertilizing purposes, are literally wasted every year. In that respect we are behind Japan, for example, where all such material is carefully utilized in agriculture. Obviously, any plan whereby sewage can be effectually and profitably disposed of must be a boon of the very greatest importance. In this connection we have read with much interest letters published in the *Montreal Herald* some time ago by Dr. Arthur Fisher (father of the Dominion Minister of Agriculture) on what is called the Liernur or pneumatic sewage system extensively used in France and Holland. Dr. Fisher, we believe, visited the latter country a couple of times to investigate the plan, which he describes below:—

"Under the pneumatic system the sewage is transported to its destination by atmospheric pressure, the air performing the part which the water does in the present mode of carriage, delivering it concentrated and in small volume, while the dilution and increased bulk under the water-carriage system renders its utilization in agriculture almost prohibitory. The system in Amsterdam, the longest in use and perhaps the most perfect, was to establish a main pumping station outside of the city, in the most convenient situation for all purposes. At this point there are powerful steam engines which pump the air out of a receiver, the vacuum of which exercises a constant and even suction on the sewage in the pipes. It is here subjected to desiccation by evaporation and treatment with sulphuric acid, by which it is converted into merchantable guano, which is considered little inferior in value to the Peruvian. In addition to the great vacuum at the pumping station, there are cast-iron reservoirs distributed all over the drained portions of the city, generally placed at the crossings of the streets, by which arrangement they command the sewage from the greatest number of houses. Each one has ingress openings communicating with a network of house drains, and an egress one by which it delivers its contents to the main station. These openings are all supplied with valves, by the opening and closing of which the workmen convert the reservoirs into vacuum receivers, which suck the sewage from the houses. Then by closing the ingress and opening the egress valves it is rapidly drawn away to the main station." Separate provision is made by a cheap system of drainage for carrying off storm and waste water. Dr. Fisher sums up as follows the advantages of the pneumatic system:

1. The pneumatic engineer, in the selection of a pumping station and the placing of the reservoirs and pipes, will not have to consider the level, as the atmospheric pressure will drive the sewage either up or down.
2. There will be little or no expenditure of water, as in the closets of the water-carriage system.
3. Agricultural production of the country largely increased with easy application of manure.
4. No pollution of rivers, streams, lakes, and the sea.
5. No offence of the senses by sewer gases.
6. The sanitary condition rendered nearly perfect.
7. The most economical, sanitary and effective method of municipal drainage ever devised.

Market Legislation.

Every man has a natural right to produce goods and to dispose of the same, so long as such goods are not harmful to the health or the morals of the people.

If any goods are entitled to be freely sold, the food produced by the farmer from the soil should be so entitled. Farms are taxed without fail. The produce of such farms is especially and properly exempted from taxation in the farmer's own municipality.

When, however, the farmer wanders to places where people do congregate, the towns and cities tax his produce. He benefits the towns in two ways. He sells to them the food they need and must have; he buys from them the goods that they wish to sell. But the townsman is not satisfied with this double advantage. He demands a third advantage. He must have a market fee for the half-rod of space that the farmer occupies while selling to him the food that is needed to keep his body above ground.

If farmers were a compact community, this abuse would have been swept away long since.

In all private as well as public business, room is reserved for customers. The shopkeeper, the doctor and the lawyer are glad to see such spaces fully occupied. When they cannot make enough to pay for the spaces occupied by their customers they quit. This is what the townsman should do. They should give way to men who can comprehend modern civilization. When a man has paid his taxes where his

home and property are situated, he owes no municipal tax to a town or city into which he goes to sell and buy. Other men in thousands resort to towns and cities and are not taxed. The farmer alone is cornered in the market and made to pay a small fine for trying to sell what Nature, with man's help, has produced.

Because farmers work and produce, towns are called into being. Gratitude and coddling we can do without, but the time for fair play has arrived.
Welland Co., Ont. E. MORDEN.

The Peace River District.

A LETTER FROM A PIONEER AT VERMILION, PEACE RIVER, N.-W. T.

To the Editor FARMER'S ADVOCATE:

SIR,—The rush to the Klondyke has brought this region prominently before the world, and I am constantly receiving inquiries from widely different sources as to the possibilities and capabilities of this country. It is very difficult to answer these inquiries within the confines of a letter, and just about as difficult to answer them in a brief article for a paper. People naturally seem to shrink from anything of an Arctic character, and when the North is even mentioned a sort of closing up of one's mind seems to take place and the ability or disposition seems to be lost to accept the fact that there are other powerful factors besides latitude which might be taken into consideration. The possibilities and fertility of this favored land have been a revelation to scores of intelligent men who have visited us during the early part of this season on their way to Northern gold fields and to whom we have been able to show something of our resources. Many who have passed here have declared that if they did not strike anything rich further north they would certainly come back and settle here.

In the first place, the Peace River is one of the very best steamboat rivers in the world, and Americans have repeatedly declared it to be larger than the Mississippi at New Orleans, with a greater volume of water. There is a stretch of this magnificent river between the falls and the mountains—some six hundred miles—which has never yet seen a steamboat. The country all along on both sides is a fertile section adapted to general farming. There are no large plains and no open prairies, but a country interspersed with wood, prairie, beaver lakes, bluffs, etc. The wood is decreasing and the prairie increasing year by year. The usual kinds of Northwest timber are prevalent. The vegetation, in fact, is very similar to that of the Saskatchewan region with its wood, hay meadows and pasture grasses.

After a residence of nineteen years in Vermilion, with always a large household to provide for, I have come to believe that we are as highly favored here climatically as almost any other region of our great and glorious Northwest. Speaking from personal experience, I have never had but one frosted crop of grain, and that was in 1881. Some years we have suffered from drought and light crops as a result, notably last year, but on an average we have had very good crops of beautiful sound grain and vegetables. A few of the things we raise are wheat, barley, oats, millet, rye, potatoes, tomatoes, turnips, corn, pumpkins, cabbages, cauliflowers, squashes, beets, carrots, onions, radishes, peas, lettuce, and as much more garden truck as we like or have time to bother with. Wild fruits, such as the Saskatoon, strawberry, raspberry, dewberry, cranberry (two kinds), black and red currants, and gooseberries are in abundance. We gathered ripe strawberries last year the 14th of June and this year a week earlier. The raspberries and Saskatoons were getting ripe July 14th. These latter are dried and enter largely into domestic cookery, as other dried fruit. We are not troubled with potato bugs here and Ireland herself cannot compete with us in the fruit of the Green Isle. One man passing here last spring said: "I am from Wisconsin, about ten miles from its southern boundary, and your spring (May 14th) is further advanced than ours generally is at this date." Parties from California were specially struck with the beauty and fertility of this country. As to the healthfulness of the climate there can be no question. You see, I hope, excuse me for writing about myself, but I am asked, as being the pioneer and a long resident, to state what I know and to state facts. It is for this reason I introduce the first person plural. My health was always good, but that of my wife and children—I had three children when I came here—was always delicate, and it was thought my wife was going into consumption before we left the East. The trip here was hard, for we were out 119 days, and there was not one of those days but some of the children were sick. They began to mend about the time we arrived here and never knew a sick day here afterwards, except when measles, scarlet fever, etc., visited us. We had not resided here many years before my wife and I had each gained fifty pounds above our heaviest eastern weight, and years ago the children we

brought with us exceeded us in physique. One born here—a girl—weighed heavier at eleven and a half years than her mother ever weighed in the East. We have a dry, bracing atmosphere, destitute of high winds, which prevail in many other places. In my next letter I will endeavor to give you more particulars, especially relating to the physical geography of Athabasca District, which will better explain our unique position here, and will show that though we are sub-Arctic, we are also sub-tropic, and have a land of which Canadians will one day be proud.
E. J. LAWRENCE.

Preserving Timber.

The following extracts are from a bulletin issued by the Forestry division of the United States Department of Agriculture, and will prove useful to everyone who has to use timber for fencing or building purposes:—

"A large amount of timber and labor is wasted by lack of care for the timber after it is cut. Rotting of timbers and fence posts necessitates not only the cutting of a large quantity of wood, but also the labor of replacing them oftener than if the wood could be made to last longer.

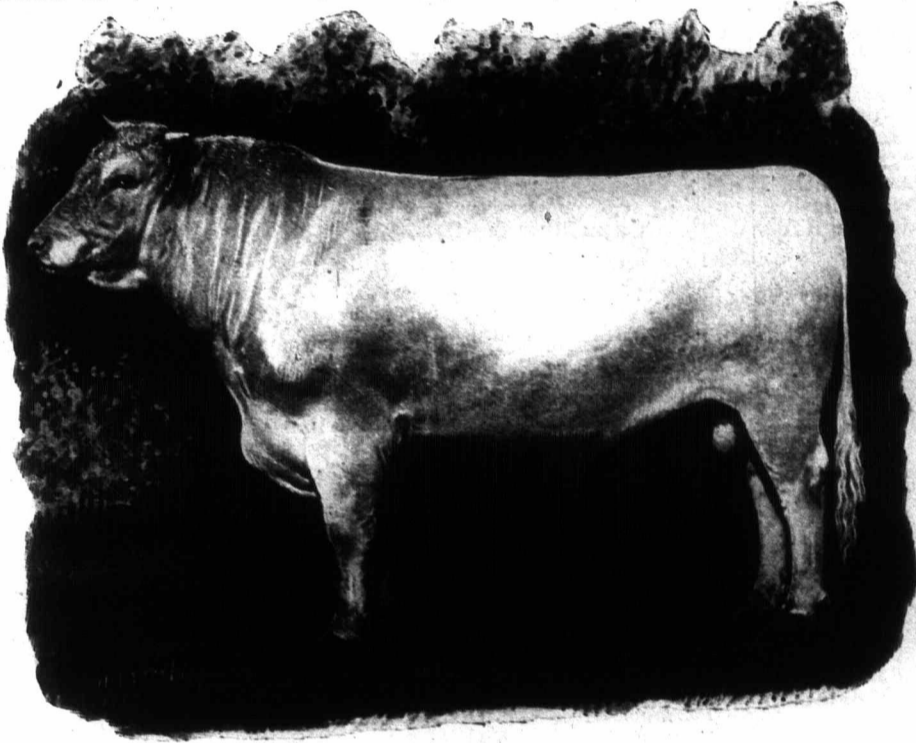
"There are some rules in the handling of timber which are too often overlooked, and which should be observed by everybody who uses wood in places where it can be kept dry or wholly submerged. There is also much unintelligent use of paints and other coatings which are applied in the hope of preserving timber, when it should have been well known that by painting green or badly-seasoned timber decay is hastened rather than prevented.

"The decay of wood is produced by fungi or low forms of plants. All these fungi require moisture for their development. Wood containing less than ten per cent. moisture is not subject to

and oil paints have the disadvantage that they act as mere covers. If the wood has any chance to get moist before painting they are harmful instead of useful. Heavy tar oils, freed of their volatile as well as their thick, tarry constituents, such as are now offered in the market under the name of Carbolineum, are preferable to paints and tars. These oils penetrate and act as antiseptics, actually killing the fungi, or, at least, retarding their action and development. They are applied with brush or else as baths, usually and preferably hot. They cannot replace paints where the looks of the material are to be improved. Charring assists merely as an insulator, separating the wood from the ground, and as fungi cannot eat their way through charcoal they are prevented from entering. Generally, however, the process develops large cracks, and thus exposes the interior to the attacks of fungi."

Deciduous Tree Seeds and Their Management.

Nature, through her various agencies (the wind, the birds, squirrels, etc.), at this season of the year is noticeably endeavoring to multiply its flora and to replant much of its denuded soil. The percentage of germination of seeds is largely influenced by the variety and year. The structure of the seed coat largely determines the length of time it takes them to sprout and the methods we must pursue in their management. Seeds of the willows, soft maples, poplars, and elms (except that of the red or slippery elm), should be sown on ground that remains reasonably moist, as soon as possible, as they lose their germinating power very quickly. The depth to which they are planted influences the success attending to no small degree, for covering too deep is death to many kinds. As maximum depths, elm, poplars, birch, and elder should be covered as thinly as possible, not more than one-half inch; maple, ash, box elder, and basswood, from three-quarters to one inch; oak, butternut, hickory, from one and a half to two inches. It is more convenient and economical to plant in rows. The question of management of fall-ripening seeds is one which admits of more discussion, but as a general rule it is preferable to plant them in the fall, except those which can be kept over without danger of their spoiling. Owing to the added danger fall-planted seeds have to pass through, it is necessary that they be planted a little thicker and deeper on account of the heaving effect of frost, washing down of soil, and ravage by rodents, etc. They also come up earlier, and hence are more subject to damage by late frosts. Those of a dry nature, such as ash, maple, box elder, birch, linden (basswood), etc., are almost certain to grow if kept until spring properly. The most common method of preserving them is by stratifying; that is, mixing them in layers with sand or leaves. When only a small amount is handled they can be mixed with moist sand in a box and the box buried in the earth in some well-drained spot, or they may be spread out on the surface in such a place and covered with boards. Those above mentioned may also be preserved dry by being mixed with



SHORTHORN BULL, SILVER CHIEF, WINNER OF FIRST PRIZE AND SWEEPSTAKES AND HEAD OF FIRST PRIZE HERD AT ST. JOHN, N. B., AND HALIFAX, N. S., 1898; PROPERTY OF F. G. BOYER, GEORGETOWN, P. E. I.

decay. The fungi require moderate warmth, cooled to near the freezing point they do not die, but cease to be active and to multiply; heated to 150° Fahr. they die, and the wood is thereby disinfected for the time. They need the oxygen of the air,—entirely submerged under water for a long time, with exclusion of the air, they perish, and the same seems to be the case when the wood is deeply buried, especially in impervious soils. Wood lasts better in cold countries and cold places, is safe either under water or deeply buried in the ground, or if constantly saturated, as in a conduit, and resists decay if kept dry or hot. A thin fence-rail seasons and lasts; a thick one of the same wood rots before it can season. A thin picket lasts longer than a log, and a picket without paint lasts better than one which has been painted before it was really dry. Fence posts, railway ties, bridge and trestle timbers (which are alternately dry and wet and never season, especially at the points of contact, like the sills of houses and timbers in badly-ventilated cellars, basements, wells, and mines) are especially subject to decay.

"Never apply paint or any other coating to green or unseasoned timber. If the wood is not well dried or seasoned the coat will hasten decay. Oil paints are used to increase the durability by protecting the wood against moisture. An exposed unpainted board becomes gray and fuzzy, warps and checks, the nails rust out, and even if it is not exposed to rain, damp air, steam, etc., occasion similar mischief.

"For coating, coal tar, with or without sand or plaster, and pitch (especially if mixed with oil of turpentine and applied hot, thus penetrating more deeply) answers best. A mixture of three parts coal tar and one part clean, unsalted grease (to prevent the tar from drying until it has had time to fill the minute pores) is recommended. One barrel of coal tar will cover 300 posts. Both tar

leaves and hung up in sacks in some cool, dry place. But if kept in this manner they must be thoroughly soaked before planting, or many of them which have become very dry are liable to "lie over" and not sprout until the second season. The thorn-apple, or wild thorn, and mountain ash seed, like that of the red cedar and juniper, does not, as a rule, germinate until the second season, and may be kept either in a stratified condition or else planted and the row mulched, mulching to be removed the spring of the second season. Seeds of a fleshy covering, such as the cherry, plum, etc., should be separated from their pulp and kept stratified with moist sand until planted. They too, like the nuts, require to be frozen, and may be planted in the fall with safety, although many hold them over until spring. When purchased direct from some near-by nursery, seedlings can be obtained at a very low figure, and it is doubtful if in the majority of cases it would be profitable for the average farmer to raise them from seed. But in many of our prairie sections, where there is a large demand for them for protection, ornamental and timber planting, it will repay him for what time or attention is bestowed on his forest nursery, where, when trees are needed either by himself or neighbors, the choicest may be had direct from the seed-bed of nursery row.
GEO. W. STRAND,
Sec. Minn. Forestry Association.

A First-class Wagon Grease.

Take a teacupful of tallow, melt until like oil, then pour the same quantity of machinery oil into it, and let cool, when it will be ready for use.

Read our important Christmas Number and Premium Announcement in another column.

POULTRY.

Some Lions in the Way of the Thoroughbred.

POINTS RAISED BY FARMERS' DAUGHTERS—POULTRY AND EGGS SHOULD BE SOLD BY WEIGHT—WHO THE HIGGLER IS—THE BEST QUALITY IN DEMAND—TURKEYS LIKELY TO BE IN DEMAND.

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

Said a farmer's daughter to me a few days ago: "It will not pay the farmer to fatten his poultry by the 'forcing' process. He may rear the chickens, but a second party will have to purchase and fatten them."

Another farmer's daughter, Miss Ryan, of Barriefield, near Kingston, writes: "I have beautiful large White Plymouth Rocks. Two weeks ago I killed and plucked four cockerels and took them to the Kingston market. The four birds weighed 27 pounds. The people did not seem to know what good poultry was. Some laughed at the idea of such large birds being this year's chickens and said that they could not be fooled in that way. Others offered me the same price as they paid for the half-starved scrubs that are put upon the market in such large numbers. I was quite discouraged. Poultry will have to be sold by weight if the best quality is ever to receive the price it is worth."

FACING THE TWO POINTS RAISED.

The two points raised had better be squarely faced and dealt with before leaving the all-important subject of rearing a superior quality of poultry, or they will be constantly coming up in connection therewith. It is true that the subject of raising the superior quality has been recently discussed with an eye to the high-price English market, because in raising the standard of quality to suit that market we should also be making the quality better for our own. We are surely not going to send all that is good out of the country! Why, that would be tantamount to the admission that we considered the "inferior" good enough for ourselves! On a visit to the leading poultry dealers in Montreal in the winter of 1896-97, the writer was told that very little of the superior quality of poultry reached that market, and that for good birds, suitable for first-class customers, from nine to ten cents per pound would willingly be paid. The poulterers visited were Brown Bros., H. Gatehouse, and Mr. Lamb, of Lamb's market. In the presence of Prof. Shutt, who happened to accompany me, Mr. Lamb said: "Why, I received poultry to-day from Huntington County that was not worth paying the express charges on. Talk of a good quality of poultry—I would be glad to take from you at this moment four tons of first-quality birds and pay you 9½ cents per pound for them." There can be no doubt that the second party, or the "higgler," as he is called in England, will make his appearance on the scene when the occasion requires him, but meanwhile our aim should be to have only the best, and in such quantity that there will be enough for home consumption and abundance for export.

NOT EXPENSIVE TO RAISE THOROUGHBREDS.

"Oh!" remarks someone, "that at once brings up the question of cost. It will be so expensive to raise thoroughbreds!"

Not at all, we reply. All the experience gained so far goes to show that it is not any more expensive to raise the thoroughbred to marketable age than it is the nondescript, the small frame of which will not permit of the taking on of more flesh than its size will permit.

"But," says someone else, "if thoroughbred chickens are put on the market in the same number as the scrubs, the price will become the same."

Not so, if they are sold by weight, is the reply. And that brings us to Miss Ryan's remark as to the necessity of selling poultry and eggs by weight.

SELLING POULTRY AND EGGS BY WEIGHT.

There can be no doubt that such is a likelihood of the near future. It would certainly be a great incentive to the production of the heavy and superior birds and large eggs. But even supposing that the price of thoroughbreds should come to that of the nondescript there can be no loss, for it has been stated that the price of bringing to a marketable size is no greater in the case of one than it is in the other. And, again, your thoroughbred would be available for sale for export, while the other would be useless for such a purpose. It is well known that it is owing to the fact of poultry being sold by weight in England that such attention is given to the hatching and rearing by the farmers of birds likely to make large size, and the fattening of them afterwards by the "higglers," so as to get as much weight on them as possible. But who is the "higgler?"

WHO THE "HIGGLER" IS.

In explaining who the higgler, referred to by our first farmer's daughter, is, it is necessary to state that in England the chickens are, with very few exceptions, hatched and carefully reared by the farmers. At three or four months of age the chickens are sold to higgles. These higgles visit the farmers frequently and take away the chicks in wagon loads. It is gratifying to know that al-

though the higgles are so numerous as to almost "run over one another," they seldom get enough young birds, and the farmers profit by the competition. It is equally important to learn that the rearing and disposing of the chickens pay the farmers well. The chickens are taken away by the higgles, or second parties, and are put in the fattening pens, and the "forcing" or "cramming" process adopted for putting on weight.

"Oh!" it may be said, "these people have been at it for centuries, and have got it down to a fine thing." No doubt they have, but it is equally certain that our Canadian farmers are mighty quick to rise equal to occasion, if required. For proof, see our cheese, butter, and bacon.

THE ANSWERS SUMMARIZED.

The answer to the first farmer's daughter may be put in this way: Do not worry about the forcing process at present. It will come in due time. Let us meanwhile improve the quality of our poultry so as to fill the requirements of our city markets and have a large surplus for export. As the Montreal dealer said, the market is flooded with inferior birds, while there is a dearth of first quality.

Miss Ryan is certainly entitled to sympathy in having to deal with such unappreciative customers. But do not let her be discouraged. As soon as the quality of her goods is known they will be sought for. It is quite possible in some localities that the customer will have to be educated to know a good thing. Meanwhile she might try to find a private customer, with a cultivated taste and honest appreciation of worth, or she might try one of the large city dealers. And it may be that farmers do not advertise their wares enough. It is quite possible to hide the light under the bushel in more ways than one.

It is very gratifying, however, to realize that the demand for the best is becoming general. I am informed by undisputed authority that an English agent is either on his way or in the country for the purpose of buying THIRTY THOUSAND TURKEYS. And there are far too many small turkeys throughout the country. Does it cost any more to raise a large turkey than it does a small one?

Canadian Poultry for Export.

In response to the request of the FARMER'S ADVOCATE, Mr. Chas. Abbott, of London, Ont., who has had an extended experience as a dealer and exporter of Canadian poultry and other produce, furnishes the appended suggestions as to the preparation of poultry for market. Besides British orders, he reports also large orders from the Maritime Provinces, Manitoba and British Columbia for Ontario poultry. In addition to chickens and geese, he expects to ship to England between 35,000 and 40,000 turkeys. We understand that the representative of one English house, Harris, Chate & Co., of London, lately placed a single order with Mr. Abbott and Mr. A. J. King, of Toronto, Ont., for no less than 30,000 turkeys.

During the last few years a great many shipments of Canadian poultry have gone forward to British markets, and in a great many cases have shown a loss to the shipper owing to the way the birds have been killed and packed.

Turkeys.—For the British markets we require turkeys that will weigh not less than 9 pounds, birds weighing from 12 to 16 pounds being preferred, but they will take a much larger turkey as well. For most of our English customers we are dressing them differently from last year. This year they wish the turkeys killed by jerking (or breaking) their necks, but not bleeding them.

EDITORIAL NOTE.—Advice received at Ottawa from the British agent of the Dominion Department of Agriculture suggest breaking the necks, but also bleeding from the mouth, so that no external cutting or mutilation will appear. The feathers on the neck and wings to be left on, but all the rest of the feathers to be taken off. Each bird to be wrapped in parchment paper and packed in cases containing about 140 pounds. Most of our turkeys will go forward about the 2nd or 3rd of December for the Christmas market in England. In order to have the birds in good condition the farmers should commence feeding them early. The birds should be shut in and fed well about three weeks before they are delivered to us, which should be from the 20th of November to the 1st of December, so we may have them properly prepared to leave the first week in December. Any birds that are not in good condition should not be placed on the market, as the English dealers require choice stock. For the turkeys that are too small to ship to England we have a very good demand in the Eastern Provinces, the Northwest, and British Columbia, the Maritime Provinces preferring a well-fatted, small turkey, weighing from 7 to 8 lbs. dressed, so in this way we can use all sizes of turkeys. For the Maritime Provinces, as well as the Northwest and British Columbia markets, the style of dressing the birds is altogether different from that required for the English markets. They wish the poultry picked clean, all the feathers off, the heads off, and in some cases the feet as well; the birds to be drawn and almost ready for the oven. This year we are buying most of our turkeys alive, as our orders require a uniform style of dressing and packing, and until the farmers get accustomed to dressing their birds for export we will have to buy them this way and have our own men to do the dressing. We make a difference

from one to one and a half cents per pound between live and dressed poultry.

Geese.—The English market will take also a quantity of geese, but all the birds must be large and well fatted, geese weighing from ten to twelve pounds selling better than those of any other weight. The different markets in the Old Country require their geese to be dressed differently, and it is impossible to give a style of dressing that will suit all their markets. British Columbia and the Northwest will take all the geese that Ontario raises at present, and as the production increases we expect the English market will take all our surplus, as the orders are increasing every year. The Eastern market requires geese to be clean picked, with the exception of the wing feathers and the heads left on. The Western market requires them to be clean picked, heads off, and drawn.

Ducks.—In regard to ducks, there are comparatively few raised in Ontario, and the demand for choice stock always exceeds the supply. On the Eastern markets they are sometimes preferred to turkeys. For both the Eastern and Western markets they require to be dressed the same as the geese.

Chickens.—Last year a few shipments of chickens went forward to England. This year my correspondent in Liverpool has asked me to supply him with 20,000 chickens, to be shipped in February. If the farmers here would have all their spring chickens kept until January or February and well fatted we could place them on the English market during March and April, when chickens from the Continent and Ireland cannot be had. In England, March, April and May is the time when highest prices are paid for chickens. This year, in December, we are sending over several sample shipments of a few tons. Each shipment dressed in a different way, and when they land we will see which style of dressing suits the English market best. There is also a large enquiry from the Western market for chickens, and we can place large quantities there. For this market chickens should be clean picked, with the exception of the wing and neck feathers. Old hens do not command a very high price, but we can place a limited quantity on both the Eastern and Western markets.

Starving and Dry Picking.—One of our greatest troubles, with chickens especially, is that the farmers scarcely ever starve them before killing, and very often scald them so the feathers will come off easily. This is a great mistake and helps to keep down the price. Care should be taken to have all kinds of birds dry picked, as scalded poultry is not worth within two to three cents per pound as much as that which is dry picked. All kinds of poultry should be starved from 24 to 36 hours before they are killed; 36 if they had a heavy feed; but the best way is to give them a light feed and then starve for 24 hours.

Fifteen Thousand Laying Hens.

The newest Canadian industry about to be established near Toronto, Ont., is a chicken farm. Parties are now organizing a company to carry on the raising of chickens and the production of eggs, the latter to be shipped to the Old Country. Land has been secured on Yonge street, about three miles north of the Canadian Pacific track, and the stocking of the farm will commence shortly. The capitalization of the proposed company is \$40,000, of which a considerable portion has already been subscribed. Mr. John Wilson, of the Imperial Bank, is spoken of as the manager of the new company. Among those who have taken stock are G. W. Gooderham, W. Gooderham, S. B. Brush, H. M. Pellatt, J. Riordan, W. Douglas, and F. Rolph. It is proposed to stock the farm with 15,000 laying poultry, and besides the export of eggs, chickens will be specially raised for broiling purposes, to be sold in Canada and the United States.

Fattening Quickly for Market.

"There is a quick way of fattening fowls for market. It cannot be done by confining them in coops, as they will become discontented and refuse to eat, losing flesh rather than making a gain. Put them in yards, having several together, and feed four times a day. Give a variety, especially of chopped grass, and make the morning meal of mixed ground grain, the next of chopped grass, then ground grain with ground meat added, and at night all the wheat and maize they will eat. Fed in this manner, and kept free of lice, fowls should be made fat in ten days."

Poultry for Christmas.

It is now time to begin to fatten turkeys, and if one will count the number of weeks from now to Christmas it will be surprising how short a time remains. What is wanted with turkeys is weight, and it must be remembered that weight is not fat only. First get the size—the frame for the fat—and then put the fat on. The object now should be to make the turkeys increase in weight; to do this begin with one meal a day at night for a week, and then give two meals a day. The food should not be grain solely. Let the ration be meat and cut bone in the morning, and a full meal at night.

Any present subscriber sending us in two new subscribers and \$2.00 will have his or her subscription extended one year.

DAIRY.

Buttermaking in Canada on the Creamery Plan.

[FOURTH PAPER.]

SKIM MILK.

Scalding or Pasteurization.—All creameries should scald all the skim milk to a temperature of 160 degrees Fahr. (higher rather than lower) before it leaves the factory. Patrons have a perfect right to insist on this, as it very materially improves the keeping quality of this by-product. This practice of scalding the skim milk is usually spoken of as "pasteurizing" it. The value of this feeding stuff is so great, and its application to stock-feeding so wide, that when the manager of a creamery fails to exert all necessary effort to return a keeping article he evidences either laziness or ignorance. Business shrewdness warrants the adoption of a "scalded" skim milk. Where the pasteurization of the whole milk is in practice, no extra apparatus will be necessary to heat the skim milk. Ordinarily, however, it will be necessary to scald the skim milk separately. This may be done cheaply by running the skim-milk pipe into a 50-lb. butter tub (wood is easier cleaned than tin) which stands in the skim-milk vat. The pipe should extend to within a couple of inches of the bottom of the tub. Then introduce either live or exhaust steam by pipe (we prefer the former), with valve to control supply. This pipe must also extend to the bottom of the tub and be perforated by very small holes (say 40 to 60) and have the end capped or plugged. The tub should be covered to prevent splashing, and enough steam turned on to heat the milk to the desired temperature before it runs out of the tub. We hope to report at an early date on a scalding more suitable for large creameries.

Distribution of Skim Milk.—Skim milk should be accurately distributed to each patron, if for no other reason than that a thoroughly satisfied patronage means financial gain. The only methods that commend themselves to the writer are two: First, to weigh the skim milk by use of ordinary weigh-can and scales; and, secondly, to use a reliable automatic skim-milk weigher. We are trying one at the Western Dairy School this season. The only way known to the writer to control the "froth" common to separated and scalded skim milk is to use a tank large enough to hold both skim milk and froth. A galvanized steel tank is better and cheaper than a tin-lined or wooden tank.

Care at the Farm and Feeding Value.—The farmer, as well as the creamery-owner, ought to look well after the skim milk. The main point in its care is to keep it in clean vessels until it is fed, and not in dirty, ill-smelling, disease-breeding, never-cleaned barrels or other receptacles. Well-kept skim milk is worth, in any well-posted, wide-awake farmer's stockyard, at least twenty to twenty-five cents per 100 lbs. There are hundreds of patrons of factories in Canada to-day whose milk, by reason chiefly of a low percentage of fat, does not net them more than forty to fifty cents per 100 lbs. Think of it—skim milk worth half as much, pound for pound, as whole milk! It is an excellent food for poultry, especially in warm weather.

But we must pass on to

CREAM RIPENING.

The Vat.—A properly constructed twin cream vat is a fairly good article if the vat proper is narrow and there is abundant space for water and ice. The use of the expansion coil for cooling cream we will consider in our coming article on refrigeration for creameries. Wide cream vats, made on the usual plan, are comparatively useless articles. In the best cream-ripening vat (lately perfected) known to the writer the cream is cooled or heated, stirred and aerated by power. The cooling is more perfectly under the control of the operator than in the ordinary vat, and the stirring more perfectly done. As the sides are double, with space between, the temperature of the cream is less affected by surrounding atmosphere. A cover to a cream vat is a convenience rather than an advantage. Exposure to a sweet, clean atmosphere stands, in our opinion, in relation to the covered cream as the apple ripened on the tree to the one ripened in the cellar; as the early to the late peach.

If obliged to cool the cream in the vat, we would not separate higher than 85 degrees or 90 degrees Fahr., because the temperature, and consequently the ripening, is not sufficiently under the control of the operator, and the result cannot fail to be a non-uniform product. It is necessary to separate at a temperature never much lower than these in order to do satisfactory skimming. If a properly constructed cooler is at hand, and plenty of cold water, the milk may be skimmed at a higher temperature, up to pasteurizing standpoint.

The proper ripening temperature is a much-debated matter. That it will admit of some variation without appreciable effect upon the product is known. Nevertheless, there are known limits to it in the making of fine butter. It must not be so

low that the bitter class of fermentations will develop rather than the lactic acid varieties, neither must it be so high as to result in bacterial growths that give a flavorless, insipid butter. The lactic acid germs must have free action. Flavor, on the other hand, is not the only point to be considered. The texture or body of butter and the keeping quality are important matters. The higher the temperature the shorter-lived is the keeping quality—other things being equal—and the less excellent is the texture in many cases. High temperatures also make it less easy to control the ripening, and an overripe cream frequently results. But there are other matters to be considered. Most creameries separate one day and churn the next, and thus have twenty-four hours or less in which to cool, ripen, and then cool again to churning temperature. All these things considered, we approve of ripening at or about 60 to 65 degrees Fahr. in summer time and 70 to 75 degrees Fahr. in winter. The difference we set is due chiefly to the different ripeness, or acidity, of the milk as it comes in. These temperatures are such, in the writer's opinion, as are well suited to the manufacture of an export butter—which must be made to keep—despite opinion to the contrary. For home trade higher temperatures may be used to get fuller, quicker flavor, though at the expense of keeping quality. For the export market a cream of 35 to 40 per cent. fat may be taken, since it is a clean, sweet butter and uniform that is then desired; whereas for home consumption we would prefer a cream of 30 to 35 per cent. fat or less to get a fuller flavor and more delicate aroma. Even as a 3.5 milk will make a cheese that comes more rapidly and certainly to a full, rich flavor than that from a 4 per cent. milk, even so does a ripened cream of 30 per cent. fat result in a butter of richer, fuller flavor and more delicate aroma than would a 40 per cent. cream. Cream rich in fat may safely and advantageously be ripened at a higher temperature than cream poorer in fat. A pasteurized cream will require a higher ripening temperature

ripened), heat to 157 degrees Fahr. and hold there for twenty minutes, then cool to about 85 degrees Fahr. and keep closely covered. Before it commences to thicken add a little water. Do not stir, but allow to stand till quite sour. It should then be of clean, acid flavor and quite thick. Skim off the top. Break up fine by pouring and add to the cream. The amount will depend on the season and the cream. The starter should be made fresh each day, a little of the previous day's starter being added to hasten the acid development and to preserve the same flavor. If the starter gets out of condition discard it and make a fresh one. Pasteurized cream requires a greater proportion of starter than raw cream.

Pure Cultures.—By this is meant the bacteriological selection of a form or forms of bacterial life that have been found to produce satisfactory fermentations. They are usually sold in the form of a powder. The "starter" is prepared from them much in the same way as a commercial starter. They are little used in Canada, but are intended as a step to more accurate and uniform work.

F. J. SLEIGHTHOLM, Supt.

Western Ontario Dairy School.

The Production of Milk.

Milk is a complete food; therefore the people of our cities and towns are wisely drinking more of it. How to get it of the best quality and at lowest cost is a very important subject to producer and consumer.

From his standpoint, the farmer should consider how he can produce milk of such purity, flavor, color and keeping qualities as will please his customers without costing too much. It is comparatively easy to tell how the best quality of any product can be made; it is not so easy to make it without costing more than you can get for it. The thing is to get the best quality of milk at the least possible cost. There is one way of getting it—by feeding the cow on a cheap food that will make her give the best quality of milk and the largest quantity which she can give.

From the consumer's point of view, milk must first of all be pure. The permanent vigor and health of our people depend on the supply of pure, wholesome milk for children. This is an important and far-reaching question which touches the vitality of the people. It should not only be pure in regard to its wholesomeness, but clean in its condition. Milk is more often rendered impure by being exposed in a foul atmosphere than from the cow eating anything offensive. The cow is a wonderful organization, and will generally prevent anything impure that she may eat from damaging her milk; but under normal conditions she prefers what is good. Milk is seldom unwholesome from what the cow eats, but it may be dangerous from what she drinks. Above all things, in the dairies and milk houses, let the atmosphere be as pure as possible, free from bad odors and taints. The cows must have an abundant supply of pure water. It is desirable that the milk should be of a most pleasant flavor. I need only give you one illustration: Few people like the flavor of turn-

nips in milk; nobody likes a sour flavor in milk, although it may come from bad ensilage. If milk is left exposed to the smell of ensilage, you will get the flavor and odor of vinegar. I will make only one more observation on that point: If milk be suspected of being unwholesome or impure in the least degree, let it be heated to 160 or 170 degrees before it is consumed.

It would pay the farmer to bear in mind two matters in feeding milking cows. First of all, give them the juiciest kind of food he can provide. Let him take June grass as his model feed: it is succulent and nice flavored. The question is how to get feed for winter as near as possible equal to what the cow gets in the pastures in June. There are two ways. It can be obtained by saving grass (in the form of hay) and preparing it in such a way that it can be given to the cow succulent and juicy. You cannot bring the original juiciness of the grass back to hay by simple soaking, but you can help a good deal in that way. If hay be fed with roots, and the whole mass be left mixed for twenty-four hours before it is fed, you will get about twenty per cent. more milk out of your hay; about twenty per cent. more milk out of your hay; it will be brought back as near as possible to its natural state. Another way is by providing ensilage. I need not say anything on this subject, as it is fully discussed in the columns of the FARMER'S ADVOCATE from time to time.

The point needing attention in the food for cows is to have it palatable and even stimulating in its flavor. I do not know that all stimulants are bad for either man or beast. Ensilage made of Indian corn and sunflower heads is very stimulating. The stimulant in ensilage from the oil of sunflowers makes the cattle greedily fond of it. Any kind of hay well cured and well preserved will have this property; but if it be left loose and exposed for a day or two, or if it be taken off the mow and tossed and trampled underfoot for twenty-four hours, the appetizing, stimulating fragrance and flavor will have gone and the cattle will not relish it.

Some people suppose the giving of salt to cows a trick of the trade to get them to drink more. If



CROSS-BRED GUERNSEY-SHORTHORN COW, NANCY, CHAMPION OF THE MILKING TEST, LONDON DAIRY SHOW, 1898; AVERAGE MILK YIELD IN TWO DAYS TEST, 64 LBS. 12 OZS. DAILY.

than a raw cream. In summing up this part of our subject, it is very apparent in the work of nearly all our creameries that the apparatus and surroundings are faulty and that the power to control temperature is lacking. As a result, we resort to methods of ripening and cooling that suit our circumstances rather than the product.

Stir Cream Often and Thoroughly between the time of separation and the time of cooling down for churning. Frequent stirring means more uniform ripening and more thorough churning, and in the great majority of cream results in improved flavor by reason of the aeration or oxidation of the cream. The acid test should be used occasionally to test the condition of the cream, and when about four-tenths per cent. acidity is reached, and before the cream thickens, the cooling should be commenced. As we see it, the acid test of cream should be used much as a score card for judging cattle—as an educator and to draw out one's perceptive faculties, that he may have a better understanding of that which he sees. The cream should be cooled to churning temperature as long as possible before being churned (three to four hours or more), to give the butter finer texture. This latter is of very great importance. When about .6 to .65 of one per cent. of acid has been developed, and the cream is nicely thickened and pours smoothly, it should be churned.

Commercial Starters.—Whenever cream cannot be ripened sufficiently within reasonable temperatures and during the available time, a fermentation starter should be used to hasten the ripening. The only other condition that necessitates the use of a starter is when the cream is of undesirable flavor, when a first-class starter, rightly used, will be of material advantage in overcoming the difficulty.

How to Make a Starter.—A commercial or home-made starter is best made of skim milk. Using whole milk results in a loss of fat. The use of buttermilk or sour cream regularly is objectionable, because any off-flavoredness is aggravated and gives trouble. Catch sufficient skim milk as it runs from the separator, choosing the best (say 5 to 10 per cent. of the amount of cream to be

a cow can be fed in any way so that she will give the largest possible flow of milk and still be in good health, that milk will be the best of milk from that particular cow. The more work you can make a man do, if he keeps well, the better work he will do. Let a man work at half speed and capacity, and the work will not be half so well done as if he were working hard but not overworked. Let the cow give the largest flow of milk possible, and the quality of the milk will be good for that cow.

The animals should be kept comfortable. If cows have lice on them you cannot get more than seventy-five per cent. of the amount of milk you can get from cows thoroughly clean. A treatment of kerosene emulsion rubbed in will kill the vermin. If cattle are not turned out so that they can lick themselves, they will be uncomfortable unless they are brushed occasionally. It is profitable to select cows from those we have, so that a less number of animals will give more milk on less feed. Some cows do not deserve stable room.

I know of no infallible method of judging the merits of a cow except by weighing her milk and watching how she is fed. It will pay to keep cows milking as long as ten months in a year. That prolonged season has a decided influence on the milking of the cows the following year.

It will pay farmers to make the most of the by-products of milk; what is done with them is intimately connected with the profits of the man who makes the milk. Small pigs can be reared on skim milk and buttermilk, and there may be swine products to sell with the direct products of the cows.

In concluding, I have the following suggestions to make: Get the milk pure and wholesome, because on this depends the increasing demand and the health of the people; give the cows a chance to make it like that by feeding them good succulent feed, in warm stables in cold weather, with all the salt and water they want; see that the milk is handled afterwards so that no impurity comes to it, and you will find the production of milk to be one of the most profitable branches of farming. Progressing from that, you can sell milk, butter, cheese, bacon, and beef. That is the kind of agriculture which pays best in Canada.

J. C. Bruce Co., Ont.

English Jersey Cattle Society. SUMMARY OF BUTTER TESTS, 1897.

| Shows. | Date of Show. | No. of Jerseys tested. | Average yields per cow. | | Butter Ratio. |
|--------------------------|-----------------|------------------------|-------------------------|-------------------|---------------|
| | | | Milk Lb. oz. | Butter Lb. oz. | |
| Royal Jersey | 1897. May 13 | 38 | 33 15½ | 1 12 | 19.40 |
| Bath and West of England | May 26 | 12 | 37 6 | 1 15 | 18.30 |
| Royal Counties | June 7 | 13 | 39 5½ | 1 14½ | 20.78 |
| Tunbridge Wells | July 22 | 11 | 37 0 | 1 15 | 18.97 |
| Tring | Aug. 5 | 48 | 33 2 | 1 8½ | 22.02 |
| London Dairy Show | Oct. 20 | 14 | 35 13 | 1 11½ | 20.59 |
| Total cows | | 136 | 36 14 | 1 12½ | 19.91 |

* Butter ratio is the number of pounds of milk required to make 1 lb. of butter. Ten pounds of milk are reckoned as equivalent to an imperial gallon. The average for 136 cows was about 2 gallons or 8 quarts of milk for 1 lb. of butter.
† The churning took place in very hot weather—the temperature of the dairy rising to 86 deg. Fahr.

VETERINARY.

A New Approved Treatment for Bog Spavin.

Bog spavin, or thoroughpin, is a very common, unsightly unsoundness met with in horses. It is more common to animals of the draft class, especially those having too straight hind legs or being otherwise predisposed. The enlargements, as most of our readers are aware, are due to a dropsical condition of the capsules or capsular ligaments which surround the joints and contain the synovia (joint oil). From strain, or hereditary defect, these secrete too great a quantity of the lubricating fluid. To give rest, applying bandages, blisters, trusses, etc., has been tried with varying success for many years, but too often with very little effect. Occasionally a veterinary surgeon will draw off the synovia with an instrument, but bad results frequently follow. Recently, however, there has been discovered by an English veterinarian a method of treating the affected joint which promises to give good results. One Mr. Dean, M. R. C. V. S., is reported by the *Farmer and Stockbreeder* to have operated successfully on a great number of horses by employing an aspirator, which withdraws the superfluous fluid without the admission of air, and then he proceeds to inject a powerful irritant in the form of corrosive sublimate in iodine, with spirits of wine. The operation has to be performed by a qualified veterinary surgeon, who will understand the use of the necessary instrument and the preparation of the injection.

See particulars in another column of our Christmas Number. Special premiums and \$50 cash prize offer.

Abortion in Cattle.

[From a paper read at meeting of the Irish Central Veterinary Association by E. C. Winter, F.R.C.V.S., Limerick.]

The amount of money lost annually to dairy farmers and stock-raisers by the abortion of their cows is almost incalculable; the former in most cases losing the season's milk from the affected cow, or the greater part of it at least, as aborted cows never milk so well as if they calved normally, and the latter losing the calves for that season, and often the next one as well, and also the services of any bull or bulls who may have served an affected cow, it being well known that the bull is often a fruitful cause of spreading the contagion from cow to cow and herd to herd. Abortion may occur in any of the domestic mammals, and affects them in about the following order, viz., cattle, pigs, sheep, goats, horses, dogs, and cats. In this paper I propose to confine my remarks chiefly to the bovine tribe.

Abortion may be described as "the premature birth of a dead fetus," in contradistinction to ordinary cases of premature birth where the fetus is born alive and continues to live; although I am well aware that this definition does not exactly fit every case, as a good many fetuses in cases of sporadic abortion may be born alive, but they rarely or never live more than a few hours at the most. Abortion may occur at any period of gestation, but it is most common at what is known as half time. In cattle it generally takes place about the fourth or fifth month, but may occur at any time between the third and seventh month, after which time it rarely or never occurs.

Abortion is now recognized in two distinct forms: the sporadic and the epizootic or contagious form. The sporadic form is seen in isolated cases and is generally due to some accident, whether physical or dietetic, or to constitutional disease in the mother. The epizootic form is now well known to be contagious, and due to a specific germ. Galtier in 1890 claimed to have proved the contagious nature of this disease, and says it exists primarily in the mother and secondly in the fetus. The old-fashioned theory that existed, and still exists in a good many parts of this country, that abortion might be brought about by sympathy between pregnant cattle is now exploded, and the cause of its spread traced to the true cause; i. e., contagion.

Direct violence, such as kicks from brutal attendants or from horses, being horned by other cattle, or crushed in narrow doorways, or slipping upon smooth floors or ice, are common factors in the production of sporadic cases of this disease. Fright and excitement have from time to time caused both mares, cows and ewes to abort. Any disease, such as tubercle, foot and mouth disease, and pleuro-pneumonia in cattle, and laminitis, pneumonia, lymphangitis, and allied diseases in mares, may so affect the constitution of the mother as to produce abortion. Colic in in-foal mares is nearly always followed by abortion.

Having given some of the causes of sporadic abortion, I will now proceed to speak of the epizootic forms, the cause of which may be summed up in one word—contagion. Although it is difficult to produce abortion artificially by dietetic errors, or the administration of drugs, no such difficulty exists in producing the disease by direct contact of an affected cow with a pregnant one, or even by indirect transmission through a bull that has previously served an affected cow; and an affected cow should not, for this reason, be put to the bull for a period varying from one to three months after abortion, or until all discharge from the vagina has disappeared and the genital organs have resumed their normal healthy tone. Should this precaution not be adopted, every cow subsequently served that season by the bull is liable to abort, and in her turn affect every member of the herd she may be brought into contact with.

The introduction of a cow from an affected herd, whether the cow in question has herself aborted or not, is always fraught with danger; and in cases where no fresh cows have been brought in, the cause of an outbreak might reasonably be looked for in a bull or bulls that have served the cattle the previous season. Cows heavy in calf do not readily abort, even when placed in contact with affected cows, but they are very liable to do so the following season. Cows having aborted one season and being served again generally carry their calves for a longer period next season and finally become immune—that is if they do not become sterile, as unfortunately 50 to 60 per cent. of them do; but should a cow prove in calf for a second or third season she will resist the action of the virus for the future. Of course, in the case of ordinary dairy cattle the cows would not be worth retaining for a season or two on this chance, but in the case of pedigree cattle of great value the fact might be worth remembering. Cases of abortion have been known to follow the introduction to a stock-yard of a calf only fourteen days premature, and even the introduction of the skin of an aborted fetus.

In the case of contagious abortion the virus enters through the vulva and vagina and propagates between the foetal membranes and the uterus, and where the contagium has once entered, treatment is useless as far as that particular host is concerned. The bacteria are conveyed through the membranes to the fetus and their products, and the products of the decomposition of the membranes set up irritation and sever the connection

between the foetal membranes and the uterus and so favor the expulsion of the fetus. Experimentally the disease has been produced by placing a little of the discharge from an affected cow within the vulva of a healthy one, and even by rubbing the foetal membranes or the skin of the fetus about the vulva or buttocks of healthy cows. In these cases abortion follows sometimes as early as fourteen days after. MacFadyean and Woodhead have produced abortion in this way in ewes, and have proved that the virus of one species is quite capable of producing the disease in other species.

The unsanitary conditions under which cows are kept are largely responsible for the spread of this disease. The cows themselves are never, as a rule, cleaned, and the drainage from one end of the byre generally runs down along all the stalls to the other end, often remaining in pools of filth behind the cows, who get their buttocks and tails soaking with it and so bring it into direct contact with their vulvas, and things are in this way made very easy for the entrance of the germ, who on his part is not slow to do the rest. In this way one cow in a byre may affect the rest of the inmates. The contamination of the litter and stalls, as well as the hands and clothing of the attendants, are also fruitful sources of the spreading of the contagion, and, as I have before remarked, a bull that has served an affected cow may spread the disease through a whole district. A cow coming from an affected herd, or having been in contact with an affected animal, may spread the disease although she may not herself have been affected.

The symptoms of abortion are somewhat similar to those of approaching parturition, but the indications, as a rule, only show a few days or weeks before delivery, instead of, as in normal parturition, coming on gradually for a comparatively long period. In cattle about to abort there is never the same relaxation of the parts about hips and vulva, nor does the udder become as full or hot as in normal parturition. The fetus is, as a rule, expelled quickly and the membranes are usually retained, often for a considerable number of days. The discharges from the vagina are acrid and foul smelling; the fetus is nearly always born dead, and often assumes a parboiled or macerated appearance, owing to the action of the decomposed uterine fluids. Cows that abort lose their condition and do not seem to recover their normal state of health for a long time.

No treatment of this affection can avail once the germs have entered the uterus of a cow, and our attention must be directed to the prevention of the disease in the remainder of the herd; this is best accomplished by disinfection and the free use of antiseptics, as well as bestowing attention on the general hygienic surroundings of the herd. All fetuses and foetal membranes, as well as soiled litter, should be burned; cows that have aborted, or appear likely to abort, should be at once isolated; and in connection with this matter I may add that any cow purchased should, if the slightest suspicion exists, be also isolated, say for a couple of months. No attendant that touches an aborted cow should be allowed to have any recourse to the others, if at all possible, and if this is not practicable, the hands and boots of such attendants should be thoroughly cleansed and disinfected after each visit to the affected cow.

The placental membranes are, as a rule, retained after abortion, and should at once be removed and burned. This removal of the membranes is not by any means one of the sweets of the veterinary profession, and apart from the offensive smell, which sometimes will cling to the hands for days at a time, the practitioner runs a serious risk of getting blood poisoning, and too much caution cannot be exercised in cleaning and disinfecting the hands and arms.

After having carefully removed the placenta (intact, if possible) the uterus should be well washed out with lukewarm water containing (1) a solution of hyd. perchlor. 1-1000, (2) 1 per cent. creolin, (3) or carbolic acid 1 per cent., along with 20 per cent. of sod. bicarb. The buttocks and tail and the hind legs should be also washed with either of the above solutions. The hinder extremities of all in-contact cows should be cleaned and treated as above and the tails cleaned and trimmed. The vaginas of those cows should also be douched with one of the above or a similar antiseptic.

Some people object to interfering with the vaginas of in-calf cows and say that douching is liable to bring on straining and abortion of itself, but I have never known it to do any harm, and in cases where abortion has followed its use the probabilities are that the cows had been previously affected and would have aborted in any case. [NOTE.—From our veterinary experience of several years' practice we disagree with the above statement and would say that vaginal injections in any pregnant animals are more or less dangerous and liable to excite the uterus to contraction.—Ed.] In the case of a bull having been unwittingly allowed to serve an affected cow, the penis and sheath should be thoroughly washed and disinfected in a like manner and with a similar solution to that used with the cows. The washings may be repeated every day for a week. The floors of the byres, as well as the walls, stalls, and drains, should be thoroughly cleaned and washed with a 10 per cent. hot solution of calc. chlor. twice or three times at intervals of a couple of days and the liquid manure disinfected with calc. chlor., carefully swept up and put away from contact with the cattle, and not allowed to run into drains communicating with pasture land.

GARDEN AND ORCHARD.

Orchard Planting and Management.

If my experience is of any value to my brother fruit-growers, I cannot do better than give it through the columns of the valuable FARMER'S ADVOCATE. Assuming a man is about to set out an orchard, I would recommend, first, that the land should be well drained, more especially in heavy or clay soils, as nothing is more injurious to young trees, or old ones either, than "wet feet." Having got the land ready (which is better to be done in the fall), get your trees from some good, reliable firm, and a wise precaution is to plant such varieties as you know have been successful in your particular locality, as I find climatic changes very naturally effect different varieties of fruit, and many varieties are practically worthless if planted in either too cold or too warm and dry localities. I find the best results if the planting is done where clover or clover sod has been plowed down. Set the trees 30 to 40 feet apart each way; tramp the ground very solidly around the trees when filling in, and prune at once into the desired shape. I prefer to cut off all branches that are nearer than 4 1/2 to 5 feet from the ground, and that means on most young trees all the branches except the leading one, more especially on such varieties as Talman Sweets, R. I. Greenings and all others that are spreading and drooping in their habit. After pruning, a good mulch of half-rotted manure should be spread around every tree to serve two purposes: 1st, to retain moisture during the hot, dry season; 2nd, to help feed the rootlets when the manure rots. Corn or root crop can be grown in a young orchard provided that the ground is thoroughly worked during the summer, but grain of any kind, except corn, should never be grown in a young orchard. If ashes are obtainable, apply them to the land every two years, as I consider wood ashes are indispensable to the fruit-grower. A solution made of muriate of potash, applied about the time the buds are opening, is a splendid invigorator for both young and old trees. Perhaps I may be permitted to give some of my own experience for the present year, as we just finished gathering our apples yesterday, Oct. 21st. First: In spring, just before the buds opened, we sprayed with the copper sulphate solution; then when the blossoms began to show, before they opened out, we sprayed, adding Paris green according to the formula for Bordeaux mixture. The next spraying should have been done in about two weeks, but owing to accident was omitted for nearly a month, when I observed some of the young apples were being effected when they were not larger than thimbles. We at once set to work and sprayed very thoroughly, after which we let them grow. Now for the results: We have never had so much No. 1 fruit and so small a percentage of culls in any year in twenty years. Our packers refer to our crop any who are sceptical as regards spraying. Our crop will be about 80 per cent. strictly No. 1. In packing 16 barrels of Greenings there was not a half barrel of culls. In closing, let me urge on fruit-growers the absolute necessity of growing strictly No. 1 goods if we are to retain the high standard we have reached, and it can only be held by attending to the details of the work at the proper season, as after the fungi has once attacked the fruit it is next to impossible to eradicate it and save the fruit. Keep bearing orchards well cultivated, and the best and cheapest way to do this is by means of a good one-horse scuffler. I find the following varieties best loaded this year: Baldwin, Salome, Boston Star, Spy and Ontario in the order named; those thinly loaded were Greening, King, two or three varieties of Pippins, Wrinkled, Canada Red, Swarr, etc.; and one or two trees had none. Keep all fruit trees well pruned, the land well scuffed, and the trees sprayed at the proper times, and you will find the results both pleasant and profitable. R. L. HUGGARD, Experimenter. Ontario Co., Ont.

Results of Spraying in 1898.

To the Editor FARMER'S ADVOCATE: SIR,—Now that the growing season of 1898 is ended and the crop of fruit is harvested, it is worth our while to look over the situation carefully and see what lessons may be learned from the summer's experience. If the season had been designed expressly for the purpose it could hardly have been better adapted to testing the efficacy of spraying in preventing fungous diseases; and to assist still further in settling this most important question, an unusual interest in the subject was manifested by fruit-growers at the beginning of the season, and many who had never before done so were induced to spray their orchards carefully. If one will consider all sides of the question, the results are very conclusive. There was, of course, the usual percentage of failures, some of them, no doubt, the result of careless work in making the applications or of ignorance in preparing the materials, and others resulting from no apparent cause whatever; but, as is usually the case, for every failure there were dozens of successes, and some of them were very striking indeed. Perhaps none of these successes was more marked than that of Mr. Ralph S. Eaton, of Kentville. Mr. Eaton's orchard consists of young trees ten years set, and it is one of the best kept orchards in the Province. The trees used in conducting the ex-

periment were Gravenstein. He began early in the season and sprayed carefully and thoroughly, making five applications in all, but allowing one row to remain unsprayed. In every other respect all the trees received the same treatment, the land being plowed and cultivated in identically the same way and at the same time. At the end of the season the difference between the fruit on the unsprayed row and that on the rows which had been sprayed was so marked that it could be easily noticed in walking through the orchard. The writer visited the orchard when these apples were being gathered and took photographs of a half-bushel of fruit from the unsprayed row and another lot from an adjoining sprayed row (see cuts). The apples photographed were average baskets, as the men picked them from the trees, without any sorting whatever, and the men had no previous knowledge as to what use was to be made of them, so that they were absolutely fair samples



SPRAYED APPLES.

The fruit was piled on the ground in such a way as to show every blemish caused by black spot in both samples, though in the case of the unsprayed lot there were so many apples thus injured that it was almost impossible to have them all show. It is scarcely necessary to comment on the result as shown by the pictures presented. Not only were the sprayed apples almost free from cracks and spots, but in size they averaged much larger than those which had not been sprayed.

Where one man sprays his orchard and another does not, if the results favor the former such results are always open to the suspicion that there was some other difference, aside from the spraying, which was responsible for the improvement in the sprayed fruit. But in the case under discussion there could be no such doubt, as there were unsprayed rows on either side of the check or unsprayed one, and in every case the sprayed fruit was conspicuously better than the unsprayed.

In this connection it may be well to mention another matter which sometimes hinders men from spraying their orchards. This is the fear that if they spray they may give a brown or russet appearance to their apples. And this does occur



UNSPRAYED APPLES.

sometimes, especially in wet seasons and on fair, thin-skinned varieties, but I have been assured by Mr. John Lowe, of the firm of Northard & Lowe, London, that this russet appearance is of slight importance when compared with the damage caused by black spot. Buyers will rarely bid less for apples simply on account of this russeting, but they are shy of investing in fruit which is badly infested with black spot, for this not only hurts the appearance of the apples but seriously impairs the quality. It is to be hoped that with further knowledge on the subject we may be able to avoid even this slight injury to the appearance of our apples, but until then no man can afford to refrain from spraying simply because he fears damage in this respect. F. C. SEARS. Nova Scotia School of Horticulture.

While inferior fruit now (Oct. 31st) is worth only 2s. to 3s. a bushel, good apples sell at 6s. to 8s., not to mention the extreme price for very choice fruit. The quantity of rubbish grown, and particularly in the West of England, is astonishing and lamentable. No doubt the drought has made the proportion of small and inferior fruit larger than usual, and the lack of selection and careful picking and packing counts for a good deal.—Agr'l Gazette.

QUESTIONS AND ANSWERS.

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

Veterinary.

Wool Balls in Sheep.

A. B. C., P. E. I.:—"Would you kindly, in the next issue of the ADVOCATE, give me some information regarding what is termed wool balls in sheep and lambs. What is it, what the cause, effect, and cure?"

[The cause of this trouble is not thoroughly understood. Some are of the opinion that it is of the same nature as the depraved appetite of cows which leads them to eat all manner of articles other than ordinary feed. Some incline to the opinion that it is the product of imitation, and that when one lamb starts the wool-eating habit others follow suit until several may be seen eating wool from one sheep. Others think it is the result of a lack of some chemical ingredient in the feed. It is seen most in winter, when feed is scarce or lacks variety. In lambs the habit is apparently often formed when picking clover leaves which have fallen upon the fleeces of the ewes while being fed. It is probable that both imitation and needed nutrients produce the habit. It may be that in many cases the trouble arises from the lambs taking wool locks into their mouths when sucking from an udder that has not been cleared of wool tags by the careful shepherd. It has also been suggested that lambs suck the wool at first just as calves do each other's ears, and gradually take in wool in this way, which forms into a hard packed ball, interfering with digestion, causing in some cases constipation, in others diarrhoea and inflammation, from which, after loss of flesh and retarded growth, they die. The treatment must be largely preventive. Clip all wool away from the udder; change the feed of sheep and lambs showing the habit, and separate wool-eaters from the rest of the flock; supply the flock with salt, or, better, a mixture of salt, bicarbonate of soda, powdered charcoal and ginger root.]

Probably Sheep Scab.

F. A., Frontenac Co., Ont.:—"My lambs are scratching and rubbing themselves most of the time. On examination, I find the skin in spots to be covered with a scurf or scab, the wool on such spots being mostly scratched off. Please give me a cure in next issue of the ADVOCATE."

[From the description, we judge this is the dreaded scourge, sheep scab, and immediate and vigorous measures should be taken to stamp it out, or it will give endless trouble and prove disastrous to the flock. Thorough dipping in one of the sheep dips advertised in this paper, at the greatest strength allowable in the directions, and as warm as the sheep can safely bear it, is the treatment imperatively demanded. Care should also be taken to break up the scabs with the thumb or finger nails, so that the solution may get to the bottom of the trouble; this is essential. This is more readily accomplished when the scab has been softened by the warm solution. It is important that this be attended to before the sheep go into the winter quarters, as the germs will lodge in the walls of the buildings and the trouble will be liable to reappear. The dipping may need to be repeated in two or three weeks if the work has not been sufficiently thorough, and it will be well to examine the sheep from time to time to see if any signs of the disease are left. If there are but few they may be treated the second time by pouring. Sheep should be dipped twice a year in any case as a preventive of skin diseases and for prevention and destruction of ticks and lice.]

Miscellaneous.

Dipping Sheep.

A subscriber whose letter has been mislaid enquired for information as to construction of a vat or tank for dipping about 100 sheep. Such a tank should be about six feet long by two feet wide at bottom and two feet six inches at top and about two feet six inches or three feet high, and should be constructed of good sound planks one and one-half inches thick, well matched (tongued and grooved). A dripping rack is required at the end of the tank where the sheep go out. This should have a water-tight bottom, and sides six or eight inches high, with a second bottom made with slats and an inch space between it and the lower bottom, and should stand with the outer end elevated an inch or two, so that the drippings will run back into the vat. Three men with this style of vat can easily dip 100 sheep in a day by getting an early start. Unless there is evidence of scab or other skin disease in the flock we do not think it necessary to dip at this season, as very good work may be done by pouring from a coffee pot, opening the wool at intervals of about four inches all over the body. Three men are required to do this expeditiously—one to hold the sheep, one to pour, and the other to open the wool. The sheep is first set on its rump, the neck, belly, and sides being treated while in that position, and then allowed to stand while the back wool is opened from end to end and the last pouring performed.

A Breeding Box.

F. W. S., Wentworth Co., Ont.:—"Some two or three years ago, I noticed in the FARMER'S ADVOCATE a description of a support which facilitated the service of small sows where a heavy sire was in use. Will you please repeat it in brief and oblige?"

[The dimensions are 4 feet 10 inches long, 2 feet wide, and 2 feet 9 inches high. The front should be close, and may be made to slide up so as to let the sow out at that end, and a second or false front may be used for small or short sows. A 2x4 inch bar behind keeps the sow from backing out. The foot rests for the boar's front feet are the principal features of the box. Two pieces of strong, tough wood 2x2 inches and 2 feet 8 inches long are used; round these at the rear end, to fit into holes bored in the rear corner posts, which should be 2x4 inches. Of these holes there should be three at intervals of say four inches. The front end of the strip is left square and fitted into a square staple which goes through the middle side board at the distance of 2 feet 8 inches from the rear post and is secured by nuts on the outside of the middle side boards; thumbscrews are handiest. On the top of these two strips nail a six-inch board about four inches shorter than the strips at each end. This board is the foot rest, and also prevents the sow from moving sideways, if a small sow. If a large sow and more room is needed, loosen the nuts on the front staples, pull out the rounded end of strip and change the square of the front end so as to let the shelf fall down. The crate should stand in a corner of a pen and a short, low hurdle is handy to guide the sow into it.]

MISCELLANEOUS.**Our Scottish Letter.**

SALES OF SHORTHORNS, ABERDEEN-ANGUS, AND CLYDESDALES.

This is going to be a stock letter, and, as the boy said, whoever does not like it can just "lump" it. But all Canadians are interested in stock, and especially in Cruickshank bulls and cows. The show season witnessed a signal triumph for lovers of Aberdeen Shorthorns, but the laurels then gained were nought as compared with those involved in the prices secured at the Northern sales. Mr. J. M. Fraser, of the celebrated firm of Macdonald Fraser & Co. (limited), was auctioneer, and had a very busy week. The results, however, far surpassed the most sanguine expectations of the Shorthorn fanciers who were present from all parts of the world. Tillycairn is a farm on the estate of the Earl of Aberdeen, tenanted by Mr. William Duthie. It lies midway between Mr. Duthie's better-known farm of Collynie and Mr. W. S. Marr's equally famous holding of Uppermill, and being thus situated and within easy hail of Oldmeldrum and Uduy, it forms an admirable center for a great sale. When a joint sale of bull calves is held, to Tillycairn all men direct their steps, and this year they were certainly not disappointed. The sale was one of the most spirited ever known in Shorthorn annals, and in the end of the day 43 bull calves of the red, white and roan had changed hands at the remarkable average of £78 11s. 7d. each. For the first time in the history of these sales an Uppermill calf made the highest figure, and it was high—330 gs., or £346 10s. Any good counter can make that into dollars, but I think it is somewhere about \$1,734. This is quite a satisfactory paying price. The bidder who proved triumphant was Mr. George Harrison, Gairford Hall, Darlington, who, as it transpired, was acting for Mr. Duthie, and the runner-up was an Ohio man who wanted to buy some of the best things, but found the way frequently blocked. This bull calf is a red-roan named Scottish Champion, and his sire was Wanderer 60138, two of whose sons on this eventful day made the respectable average of £254 12s. 6d. The dam of Scottish Champion is noted for her dairy qualities, and her sire was a Kinellar bull. The sire which followed Wanderer for an average when the day was over was Mr. Duthie's renowned champion stud bull Pride of Morning 64546. Five of his calves made an average of £118 13s. apiece—quite a good figure. In previous years another Collynie sire, Scottish Archer, was bad to beat, but this year his calves were younger, and apparently the bulls amongst them are not numerous. The average price of three of them was £49 14s. The highest price made by a Collynie calf on this great day was 215 gs., or £225 15s. This youngster had a peculiar experience. He is named "Count Valiant," and was got by a young bull named Count Arthur 70194, eleven of whose calves made the fine average of £66 12s. 6d. When Count Valiant appeared he was entered at 20 gs., but the more he was studied the better he was liked, and when he finished at the figure named his buyer was Mr. Sidney Hill, Langford, Bristol. The average of Mr. Duthie's 24 bull calves was £80 9s. 1d.; and of Mr. Marr's 19, £76 4s. 2d.

The second day's sale was held at Gordon Castle, away in the far North, the seat of the Duke of Richmond and Gordon, K. G. Here the visitors had an excellent object lesson in "how not to breed." The sale was a joint one, but it was uniform in this respect, that the cattle were not bred in any definite way. They were mixed Booth and Cruickshank, and bad colors; that is, colors such as are not objected to, but rather fancied, in the Ayrshire were not uncommon. The impression

made on visitors was undoubtedly that the mixing of bloods should only be resorted to very sparingly, and with well-balanced judgment. Fifty-eight Shorthorns of all ages from Gordon Castle herd made £21 8s. 6d., and 57 from the Broadlands herd of Mr. D. C. Bruce made £22 7s. 7d. These figures speak for themselves, and of course there were no fancy or even high figures.

The third day's sale was of a different character. It was held at Newton, Inch, and was a great day's outing. No fewer than five breeders combined to make the sale: Mr. A. M. Gordon, the laird of Newton; Mr. John Wilson, Pirriessmill, Huntly; Mr. J. Durno, Westertown, Oldmeldrum, and Mr. James Durno, Jackston, Rothie-Norman—tenant farmers; and Mr. Graham Stirling, of Strowan, the owner of the H. & A. S. champion bull Star of Dawn, which was bred at Newton, and is reported to have been sold in Buenos Ayres for £800—say \$1,000. The cattle from all five herds were of a high order of merit. Probably no one in the north of Scotland has a herd of cows surpassing in merit that of Mr. Gordon, of Newton. A leisurely examination of the females grazing in the fields was a liberal education in Shorthorn points, and the stud bull Star of Morning, sire of Mr. Duthie's champion Pride of Morning, is probably unrivalled amongst bulls of his age in this country. The highest price realized amongst the Newton lot was 110 gs., at which figure the yearling heifer was secured by Mr. P. L. Mills. The Roan Bess was secured by Mr. Gordon was 20, namely, eight total sold by Mr. Gordon was 20, namely, eight yearling heifers, three heifer calves, and nine bull calves, and the average price of the 20 was £42 1s.

No herd has sprung more rapidly into popularity than that at Pirriessmill. Mr. Wilson is a man of retiring disposition, factor on the Duke of Richmond and Gordon's Huntly property, as well as tenant of Pirriessmill, but he is proving himself to be one of the most successful of the Scottish Shorthorn brigade. His contribution to the day's enjoyment at Newton was sixteen bulls, all calves but one, and the average price of the lot was £43 19s. 4d. One of the calves, a sweet roan, named Janissary III., made £189—the highest price of the day—and more than one made £84. The purchaser of the dearest animal was Mr. Earle, from Catterick, the very home of the Shorthorn breed in Yorkshire. The Durno family are well-known in the North as eager, painstaking, and highly successful tenant farmers. Their steadings are kept in apple-pie order, and they are never easily beaten in the showyards. The quality of their stock is a good index to the enterprise of the Northern farmer, and Jackston has frequently been at the front at the Northern spring bull sales. The average price of 23 Shorthorns from Westertown was £23 7s. 5d., and of ten (six yearling heifers and four bull calves) from Jackston, £32 2s. 7d. The Strowan herd is an old-established lot of cattle in Perthshire. It has always enjoyed a high reputation, but in the hands of its present laird it bids fair to outstrip its competitors. From it there were sold on the 13th Oct. two two-year-old heifers, two yearling heifers, and eight bull calves, the average price of the twelve being £34 9s. At a sale held at Tabby Grange, in England, in the same week, Mr. John Thornton sold 30 head of cattle at an average of £32 4s. 8d., and at the last of the Northern sales, held at Fingask, on 14th October, 62 head of all ages drew the excellent average of £24 8s. 5d. This was a purely tenant-farmers' sale, the stock being the property of Mr. George Anderson. A selection of seventeen was sold same day from Mr. Manson's old herd at Kiblean. They realized an average of £23 4s. 9d. Everyone had reason to be satisfied with the Scottish Shorthorn week of 1898.

The Aberdeen-Angus week occurred about a month earlier, but although there was excellent trade, the Shorthorns had rather the better average over all.

Trade for all classes of stock has this autumn been very satisfactory. Clydesdales are experiencing a share in the revival, and both for home and foreign purposes improved rates have been obtained. At Lord Londonderry's sale of foals excellent prices were realized, seven filly foals making an average of £40 10s., and seventeen colt foals £35 2s. 10d., 47 Clydesdales of all ages going as high as £48 11s. 1d. Even more satisfactory are the prices being paid for young geldings and fillies at the autumn auction sales, and a new one is tempted to examine the causes of this enhanced value, and to moralize on the character of the stock which commands the best prices under these conditions. In Cumberland a number of horses are traveling which do not command the unqualified admiration of fancy horse breeders. But the produce of these horses go high in value, and as much as £70 or £80 can be obtained for good big two-year-old geldings. The most successful breeding horses, according to the results of the showyard, have been Baron's Pride 9122, Prince Alexander 8890, Macgregor 1457, Sir Everard 5353, Royal Gartly 9814, Prince of Wales, 673, Prince of Carruchan 8151, Prince of Albion 6178, Montrave Mac 9858, Lord Lothian 5998, Prince of Kyle 7155, Prince Robert 7135, Gold Mine 9540, Mains of Aries 10379, Mount Royal 8065, Duke of Rothesay 9191, Royalist 6242, and others. Of these there have unfortunately died during the season Sir Everard, Royal Gartly, and Duke of Rothesay. The others, with the exception of Prince of Wales, are all alive. Baron's Pride wins an easy first, being far ahead of all the rest. He is a wonderfully fresh horse, of the best quality, and like living for many a day.

As for sheep, there is no use attempting to sum up the situation. Of all breeds they have been making high prices and great averages during 1898, and if their owners are not satisfied they are very difficult to please. Stock breeders have no doubt had a good time; stock feeders have quite a different tale to tell.

"SCOTLAND YET."

Alberta Horse Ranching.

To the Editor FARMER'S ADVOCATE:

I settled in Alberta in 1896, and since then have been giving a good deal of attention to horse breeding.

As everyone knows, a depression of the market value of horses naturally had a great effect on the horse-breeding industry of this Territory, and a great many became discouraged and sold out. Those who did stick to the business are reaping the benefit now. There has been a great demand lately for all classes of horses. A number of small ones have gone to the Klondyke as pack ponies, and heavier ones to the mining districts. There is no scarcity of good brood mares in the country, and breeders who have continued to take an active interest in their business are now feeling the advantage of using good sires. It seems a very important matter to use a sire with constitution, having a good thick chest, deep heart-girth, as well as lots of vitality, as the colts he produces are better able to winter out.

There is a greater demand for heavy horses than any other kind, and, besides, prices are much better for that class. There is a fair market for horses of the coach type suitable for stage purposes, but prices do not range so high as for the former.

I always keep my stallions stabled, and prefer to use judgment in mating rather than to breed indiscriminately, and more especially when a number of my mares are registered animals. I never care to have foals come earlier than April, as the weather is liable to be too cold for them, and it is a great advantage for mares to have green grass about foaling time. I am not in the habit of stabling any colts or giving them any extra attention, except those that I intend to keep and sell for stallions. The feed that I am in the habit of using is hay, oats, and oat hay.

Horses that are well broken to work bring much better prices than those that are unhandled. I find the better they are bred the easier they are to handle.

We have had a remarkably good season this year, and animals are in good condition to enter the winter. Yours truly, JOHN A. TURNER.

"Balgreggan Ranche," Alberta.

For Pure Milk.

The city authorities of Winnipeg have been stumbling along for several years, making vain attempts to provide pure milk for the use of her citizens. By-laws were passed intended to bring the careless and indifferent among the milkmen into line; veterinarians inspected the cattle, applied the tuberculin test; and then the city, powerless to go further, permitted the condemned cows to be disposed of for beef or to be sold to unsuspecting farmers from surrounding districts to poison their families with diseased milk and to perpetuate and spread the disease throughout the country and among the stock from which fresh supplies of cows are continually drawn for the city dairies. Finally the Dominion Minister of Agriculture was appealed to, with what result the following letter from the Hon. Sydney Fisher shows:

"We do not undertake to more than quarantine the animals found to be diseased under the Contagious Diseases Act. This means that the animals and their products cannot be sold. In many cases I am fully satisfied that the meat of tuberculous animals will be found on slaughtering to be perfectly safe for human food, although there are many other instances in which it would not be so. I have never undertaken, and do not wish to undertake, any inspection or decision in regard to the sale of meat. It is in the hands of the local health authorities. I therefore leave the matter entirely in your hands. If your people wish to have cows tested I will authorize Dr. Little to do so at the expense of my department. We have done a good deal of this around Ottawa, to the great advantage of the city and neighborhood. We have no compulsory test; we only test when the owners are quite willing to have their animals tested."

We understand that the city now contemplates acting on this plan and licensing no milkman who cannot produce a certificate from the Dominion veterinarian that his herd have been tested and found free from tuberculous. While the Dominion authorities do not compel any man to undergo the test, the milkmen will thus be forced to request the Dominion Veterinarian to make a thorough inspection or they will not be allowed to sell milk in the city. Under Dominion inspection, reacting animals are quarantined, and can only be disposed of under inspection. This will save the country surrounding Winnipeg from becoming polluted with condemned cows.

It does seem, however, that when a man, through no fault of his own, is called upon to suffer personal loss through the reacting of some of his cows to the tuberculin test, for the benefit of the public, that the public should be prepared to share the loss and allow the dairyman compensation.

MARKETS.

FARM GOSSIP.

Canadian Horses at Glasgow.

The Mark Lane Express, referring to a recent sale of Canadian horses by Messrs. Macdonald, Fraser & Co., Glasgow, Scotland, says: "There were fifty animals catalogued, consisting principally of coaching horses. Among them there were a number of Canadian matching and brougham horses, while there were also a number suitable for van purposes, as well as a few cobs. All the horses showed remarkably well, exhibiting splendid style and action, were of good substance, suitable ages, and fashionable colors. There was a large attendance of buyers from all parts of Scotland. Business during the day was of a satisfactory character, although for some classes bidding was comparatively slow. The ages of the animals ranged from five to eight years. The best demand was experienced for the coaching and brougham horses, for which bids came readily, at times the competition being most animated. Matching and vanners also were in good demand and realized fair prices. Coaching horses of the best sorts made up to 44 guineas; secondary, from 13 to 20 guineas. Canadian matching horses realized up to 40 guineas for the best sorts; secondary, from 20 to 30 guineas; vanners, from 13 to 30 guineas; and cobs made up to 35 guineas."

Bruce County.

We have had rather disagreeable weather, with considerable rainfall, for about a month, which was much needed; but last week was a notable exception. The Indian summer weather with which we were favored last week gave us the opportunity of finishing up the taking up of the root crop. The crop on the whole is not large. With some the potato crop is fairly good, whilst with others it is almost a total failure. The mangolds and carrots were good, but the area under these crops is small. Swede turnips is the root crop that the farmers here largely depend upon for feeding purposes. This crop is fairly good, averaging from 400 to 600 bushels per acre. Potatoes are selling from 75c. to 90c. per bag. The prices of grain have advanced somewhat: Wheat, 65c. to 70c.; peas, 58c. to 60c.; barley, 38c. to 42c.; oats, 25c. to 26c. Feeding and stock cattle have declined some in price. They now can be obtained for from 3 1/2c. to 3c. per pound. In sympathy with the Buffalo markets, butcher lambs are lower in price. There are a few small flocks being fed on rape for that market. We had our first fall of snow on the night of Oct. 27th, about enough to make the ground white, and have had another light fall, an inch in depth, the night of the 6th Nov.; otherwise the weather has been mild, with but little frost.

P. E. Island.

We are having very fine, mild weather just now. Grass is still growing, and the sheep are feeding well on the fields. The cheese season is over, and the factories have turned to buttermaking a week ago. There is a large quantity of cheese here unsold yet, but some Septembers and Octobers are now selling for 8 1/2c. The cheese make has been very much in advance of any former years. There will be a large make of butter this winter. Most of the cheese factories have separators or butter plants now. Butter is selling for 17 1/2c. for factory and 15c. for dairy makes. Produce is scarce for shipping. Potatoes and the later oats did not turn off more than half a crop. Oats are now worth 29c. and potatoes 25c. for shipment. The turnip crop turned out fair. Thousands of lambs have been shipped during the last month at an average price of 2 1/2c. per lb. live weight. The Lake Winnipeg, our direct steamer, sails to-day from Charlottetown to England, and takes as part of her cargo from this port 1,000 sheep, over 100 cattle, and a large amount of dairy produce, fruit, poultry, etc. The apple shipments in the last steamer netted good prices to shippers, except some kinds, such as Duchess of Oldenberg, which were too ripe and rotted very much. Late fall and early winter apples are worth about \$2.00 per bbl. here. Fat cattle are scarce and high—that is, anything really choice. Good sheep are in demand at \$4.00 each. Live hogs have dropped, the best worth \$4 to \$4.25. Carcass pork brings \$5 to \$5.50. Live hogs are being rushed to market, scarce, and anything at all fit is being rushed to market. There will be more cattle stall-fed here than for many years—the excellent clover crop has given a stimulus to feeding. All stock are going into winter quarters in excellent condition. The farmers who have been running in the old ruts, and have not good beef stock or a good balance at the dairy station to their credit, will experience great difficulty in making both ends meet this fall, as there is little grain or potatoes to market; and, on account of the failure of the wheat crop, a great amount of flour to buy.

November 7th.

Brandon District.

For the last month or six weeks the chief topic of conversation and the subject of the most anxious thought has not been the yield of wheat (which is usual at this season), nor the price nor the quality, but the weather. I have not been the yield of wheat in this country, and twice previous taken off twenty crops in this country, and twice previous to this year (1884 and 1890) we considered we had wet to this year (all the wet in all the nineteen preceding harvests, but all the wet in all the nineteen preceding harvests put together wouldn't be a patch to what we have had this year. Rain came in torrents and floods. The great wonder is that there is a bushel of good wheat in the country, and yet there does seem to be lots of it. Of course, damage has been wrought and no small amount of it, but still I believe 50 per cent. of the wheat will grade No. 1 hard, 25 per cent. Nos 1 and 2 northern and No. 2 No. 1 hard, and 25 per cent. too damp for marketing. Though hard, and 25 per cent. too damp and drenched with rain standing in shock for two months and sprouted wheat. Very score of times, there is practically no sowing wheat. Out of fair milling wheat is now (Oct. 21) being thrashed out of shock, and there hasn't been one day of drying weather for weeks. Two things are now conclusively demonstrated respecting our country: that with either no rain at all throughout the growing season or with oceans of it in the

harvest time—in fact, under the most unfavorable conditions possible—we can in this country produce a crop which would be the envy of most other wheat-growing countries.

Yield.—The yield will be close around twenty bushels, probably a trifle under as the average, though some localities where spring drouth was not so intense are running thirty to thirty five bushels. Price, 60c. It's an ill wind that blows no good." The wet weather which has paralyzed harvesting operations has put the land in the best possible condition for fall plowing, and an excellent growing season for next year is almost assured. Oats were a good crop, but mostly all in shock yet. Barley a fair yield, but only fit for feed. Roots and vegetables are a big crop in every variety, and the finest specimens ever put on an exhibition. Butter not plentiful, at 17c. Eggs apparently out of season, bringing 25c. Hogs scarce at 4 1/2c. live weight. Beef on foot 2 1/2c. to 3 1/4c.

Northwestern Manitoba.

The season very backward for harvesting and thrashing. Not more than 35 per cent. of the threshing done yet. Many hundred acres in shock yet. Majority of stacks in bad condition from excessive rains. In some places ground too wet to move traction engines. Fodder will be scarce, owing to the wet season for saving it. Hundreds of acres of hay uncut; acres still in the coil under water. Very little fall plowing done. Very few hogs being fed this season owing to scarcity of feed during early summer. Few cattle will be fed this winter on account of the extra demand for stockers. Very few colts raised this summer. The outlook for heavy draft horses good. Wheat, present price, 56c. to 63c. per bushel. Oats, present price, 20c. to 23c. per bushel. Barley, 25c. per bushel. Hay—none being marketed on account of bad condition of roads. H. I. Bran, \$10 per ton. Neepawa.

Chatty Stock Letter from Chicago.

Following are the current and comparative prices for the various grades of live stock:—

Table with columns: CATTLE, Extreme Prices, Top prices (ago, 1897, 1898). Rows include 1600 lbs. up, 1800 @ 1600, 1200 @ 1350, 1050 @ 1200, 900 @ 1050, Fed Westerns, HOGS, SHEEP, Natives, Western, Texas, Lambs.

Cattle dealers predict that there will be very little demand this year for the old-fashioned Christmas cattle. Indeed, buyers say they have to have for every day trade cattle that formerly they would have been all right for Christmas, except that they are not now wanted so heavy. The Western range cattle this season has been quite profitable to owners. It is said that the Western range cattle owners have not had to use any borrowed capital this year, and on the contrary most of them have large amounts of money out at interest or to their credit in bank. The matter of dipping Southern cattle for Texas ticks has been successfully passed through the experimental stage, and been dipping plants are now being put in at all the leading markets. This will enable cattle from all parts of Texas and the South to go into Northern feed lots at this season of the year. The oil used seems to finish the ticks in short order, and it is the ticks that make the Chicago stock yards last month 11,184, against 10,119 in Sept. and 11,201 in October, 1897. Referring to the hog situation, said: "From correspondence received lately I believe that the so-called hog disease is considerably less in point of mortality, and especially in point of mortality, than it has been for a number of years. It is but natural for some people to go to extremes on this as well as many other forward does not necessarily prove good many pigs are coming forward with more hogs than the standpoint that the season started in with more hogs than this country has ever produced, it should not be surprising to the more experienced and thoughtful that the supply at times seems excessive." An optimistic Chicago hog man says: "It certainly looks as if hog prices touched bottom this week. Packers seem to want provision which now prevails there is a good show for hogs to get around the \$4 mark again."

The following shows the receipts of live stock at our points for the first ten months of 1898, with comparisons:

Table with columns: Cattle, Hogs, Sheep. Rows: Chicago, Kansas City, Omaha, St. Louis, Total, 1898, Same period, 1897, Same period, 1896, Same period, 1895, Same period, 1894.

A party of eleven men representing different interests in the city of Montreal have been in Chicago studying the packing house system at the stock yards. They are G. N. Ducharme, W. B. Sunt, H. B. Cady, G. L. Telfor, Dr. Laberge, Dr. Gilford of the Gazette, Mr. Larson of La Patrie, Aldermen Premoreau, Jaques, Gallory, and Dufresne, J. B. Bourassa, and M. Cummings. A Montreal company is contemplating the erection of a slaughter-house to cost \$100,000, and the men now in Chicago are studying the best methods of construction and operation. The aldermen are sent by the city authorities, as slaughter houses are under municipal supervision in Montreal. H. B. Cady, superintendent of the Montreal stock yards, a former Chicago man, had the party in charge.

Canada Live Stock Exports.

The following are the live stock exports for the week ending Wednesday, November 2nd, as prepared by R. Bickerdike, of the Live Stock Exchange, Montreal: Cattle, 3,531; sheep, 2,069. Nov. 9 - Assyrian London 207 cattle. Nov. 9 - Lake Huron Liverpool 126 cattle. Nov. 9 - Aleutian Glasgow 208 cattle. Nov. 8 - Manitoban Glasgow 159 cattle. Total 691 cattle.

Toronto Markets.

If farmers want good prices for their cattle they must pay more attention to fitting them for market. All kinds decreased in price—5c. to 10c. per lb. When trade is dull only the best quality is taken, and local butchers' trade is the only business going just at present.

Export trade dead for the season, with six bankruptcies to record for the year. Export Cattle.—Although deliveries were not so heavy as two weeks ago the price fell to 4c.; many loads went at \$3.80 to \$3.90 per cwt. This is a decline of 25c. per cwt. since my last quotation, when \$4.25 per cwt. was top price. To-day many loads were purchased at \$3.90 to \$4.10 per cwt. Mr. W. Leback bought 100 head of cattle, mixed exporters and butchers' at \$3.12 1/2 to \$3.60 per cwt. Mr. Thos. Crawford sold one load of light exporters for the byres at \$3.62 1/2 per cwt. Mr. A. Ironsides purchased one load of exporters, the pick of the market, at \$3.80 per cwt., average 1,350 lbs. each. Mr. W. H. Dean purchased one load, 1,225 lbs. average, at \$3.60 per cwt., and one load, 1,400 lbs. average, at \$3.50 per cwt. To show what a depressed state the export trade is in at the present time, we heard that the last four shipments of export cattle stood to lose the operators \$10 per head. In fact, there are now only two exporters operating on this market.

Butchers' Cattle.—Cattle of this class are equal in quality to the best exporters, but not as heavy. Choice picked lots sold at \$3.90 to \$4.00 for those weighing 1,000 lbs. average. Loads of good butcher cattle sold at \$3.35 to \$3.60 per cwt. Stockers.—Prices for Buffalo stockers were easier, at \$2.75 to \$3.15 per cwt.; \$3.25 per cwt. was reported, but could not be confirmed by purchaser.

Feeders.—Heavy feeders were in demand. Good steers weighing from 900 lbs. to 1,000 lbs. each sold at \$3.30 to \$3.50; weighing from 800 lbs. to 900 lbs. each, at \$3.20 to \$3.40. A few choice heaves, that would have been exported, were taken for feeding purposes at \$3.80 to \$3.65 per cwt. Mr. Hearn is a purchaser of 40 good steers, 1,000 lbs. average. Sheep.—Prices a little firmer, owing to small run, about 400; a few wanted to make up a shipment. Ewes at \$3.00 to \$3.35; bucks at \$2.50 to \$2.75 per cwt.

Lambs.—Prices for lambs were the lowest this season, the bulk going at \$3.90 to \$4.00 per cwt., or at \$2.75 to \$3.75 each. Good veals scarce. For the very best \$5.00 per cwt. is paid for common run, \$4.00 to \$5.00 per head; choice quality and heavy weight in demand.

Milk Cows.—About 30 cows on offer, extra choice quality; milkers at \$50 each, but average price \$25 to \$40 per head. Mr. S. Jones is a purchaser for 20 head of good dairy cows at market price.

Hogs.—Receipts heavy and further decline of a quarter. Best selections of bacon hogs are now quoted at \$4.12 1/2. Choice Best (singers), over 100 lbs. and under 200 lbs., off cars, not watered or fed at scale—light fat, \$4.00 per cwt.; heavy fat, \$4.00 per cwt.; medium, \$3.90 per cwt.; sows, \$3.00 to \$3.25, \$4.00 per cwt. Blackwell & Co. started business in their new packing house to-day. It is their intention to handle all kinds of farm produce—butter, eggs, poultry, pork and beef. A large and very complete building has been erected to slaughter hogs and convert into bacon products for the home trade and export foreign market. They start with a capacity of 1,000 hogs per day, 100 head of cattle. They are prepared to receive consignments direct, paying market price for all live hogs delivered; they will also cater for the dressed hog trade by receiving these at the abattoir at the foot of Bathurst street. From a hurried inspection we made to-day we notice that the premises are substantially built, consisting of two buildings, the four stories in height, with about 150 x 100 floor space; the storage has a capacity of 1,500 hogs, the cold storage 2,000, whilst the ham and bacon store about 5,000. This factory is the most recently erected under the supervision of Mr. Davison, architect. The fittings of hog-cleaning machinery are by the well-known firm of Messrs. Perrin, Chicago. This factory premises well to absorb 6,000 hogs per week, and offers to the farmer another outlet for his produce. We cordially wish it every success. The close proximity to the cattle markets renders it convenient of access, and while the farmer cordially invites farmers to consign direct, they are obliged to purchase from the open market to keep up a steady supply.

Dressed Hogs.—It pays to deal fairly with the farmers. Mr. Wm. Harris, Jr. who started purchasing dressed hogs last year, bids fair to monopolize this trade; his secret has been fair dealing. Every farmer who sells his hogs at a Jarvis Street Store, on the St. Lawrence Market, knows to a cent what he should receive, and gets it. In fact, many deliver their hogs without asking the market price, and there is no dispute as to weights. They are weighed separately, and 1 lb. per 100 lbs. deducted for the head—no more, at the published price paid for them, and the city market scales may be taken if desired, with the 1 lb. per head deducted. The experience of many farmers and their complaints to me on the score of deductions, weight, etc. calls for this recommendation: It is the custom of the trade to deduct 1 lb. from every 100 lbs., and the packers also expect the draft of the scale; this leads to many disputes. Mr. Wm. Harris, Jr. desires it to be publicly known that he has always accepted the city weighmaster's (James R. Dunn) weights and prices as on enclosed specimens of weigh tickets.

Grain Market.—It is difficult to forecast this market—this is in reply to a correspondent. Wheat rises and falls daily, and almost hourly; all that we can do is to give actual prices paid here, which cannot help our correspondent. Wheat—Steady with a slight disposition to advance—1,250 bushels on offer. Goose wheat advanced 1 cent. White, 73c. to 73 1/2c. per bushel. Red, 72c. to 73c. per bushel. Goose, 71c. to 71 1/2c. per bushel. Barley—1,000 bushels selling at 54c. to 55 1/2c. per bushel. Oats.—Market steady; 300 bushels selling at 31 1/2c. per bushel to 32c. Peas.—Advanced 1 cent, at 65c. to 67c. per bushel. Hay—Sold at \$10 per ton for timothy, and \$6 to \$7.50 for clover.

Straw.—Very scarce. Wanted. Firm in price, at \$9 per ton, bundled; loose straw at \$6.50 per ton. Butter.—Quality very poor; quoted at 18c. to 21c. per lb.; very choice at 22c.; in good demand. Eggs.—New laid are selling at 22c. to 25c. per dozen. It is reported that the large shipment of eggs from cold storage made a good return to shipper on this market.

Apples.—Are very scarce on this market. Greenings, Spies, and all choice kinds realized \$2 to \$2.75 per barrel. In a recent return from the Old Country these apples fetched \$4.50 per barrel.

Wool.—Unwashed at 10c.; small lots of fleece, 15c. per lb. Poultry.—A firm has started to purchase turkeys on this market, select and place in cold storage for export to the Old Country in January. They are prepared to take any quantity, to be delivered alive at the St. Lawrence Market or at Messrs. Harris' abattoir, Western cattle market annex, any time during the next few weeks. Market price paid on delivery. To-day turkeys are quoted at 7c. per lb. November 11, 1898.

Good Book Premiums.

We have made special arrangements with the publishers for a supply of the following valuable works, which we offer on very favorable terms: "Feeds and Feeding," by Prof. W. A. Henry, for 3 new subscribers to the FARMER'S ADVOCATE at \$1.00 each; "The Domestic Sheep," by Stewart, 3 new subscribers; "Horses, Breeds and Management" (heavy and light breeds), 3 new subscribers each; "Cattle, Breeds and Management," by Wm. Houseman, 3 new subscribers; "Pigs, Breeds and Management," 3 new subscribers; "Sheep, Breeds and Management," by John Wrightson, 3 new subscribers; "The Fertility of its Nature and Management," by Prof. King, 2 new subscribers; "Milk and Its Products," by Prof. King, 2 new subscribers; "Testing Milk and Its Products," by Farrington & King, 2 new subscribers; "The Silo and Ensilage" (paper cover), one new subscriber, or in cloth, 2 new subscribers.



AN AMERICAN GIRL IN LONDON.

BY SARA JEANNETTE DUNCAN.

(Continued from page 521.)

I did not think before that anything could wobble like an Atlantic steamer, but I experienced nothing more trying coming over than that Hammersmith bus. And there were no straps from the roof to hold on by—no, nothing but a very high and inconvenient hand rail; and the vehicle seemed quite full of stout old gentlemen with white whiskers who looked deeply annoyed when I up set their umbrellas and unintentionally plunged upon their feet.

More room outside, miss!" the conductor said, which I considered impudent, thinking that he meant in the road. "Is there any room on top?" I asked him, because I had walked on so many of the old gentlemen's feet that I felt uncomfortable about it.

"Yes, miss; that's wot I'm a-sayin'—lots of room outside!"

So I took advantage of a lame man's getting off to mount the spiral staircase at the back of the bus and take a seat on top.

It was lovely up there—exactly like coming on deck after being in a stuffy little cabin in the steamer—a good deal of motion, but lots of fresh air. I was a little nervous at first, but as nobody fell off the tops of any of the other buses I concluded that it was not a thing you were expected to do, and presently forgot all about it, looking at the people swarming below me. I had never ridden on the top of anything before; it gave me an entirely new revelation of my fellow-creatures—of your monarchical feelings will allow that expression from a republican. I must say I liked it—looking down upon people who were traveling in the same direction as I was, only on a level below. I began to understand the agreeableness of class distinctions, and I wondered whether the arrangement of seats on the tops of the buses was not probably a material result of aristocratic prejudices.

Oh, I liked it through and through, that first ride on a London bus! To know just how I liked it and why, and how and why we all like it from the other side of the Atlantic, you must be born and brought up, as most of us have been, in a city twenty-five or fifty years old, where the houses are all made of clean white or red brick, with clean green lawns and geranium beds, and painted iron fences. Having been a monarchist all your life, however, you can't possibly understand what it is to have been brought up in fresh paint. I ought not to expect it of you.

I don't know whether you will like our admiring you on account of your grimelessness, but we do. There is nothing artistic about white brick. It is clean and neat and sanitary, but you get tired of looking at it, especially when it is made up in patterns with red brick mixed in. And since you must be dirty it may gratify you to know that you are very soothing to transatlantic nerves suffering from patterns like that. "The Strand!" "Fleet Street!" "Ludgate Hill!" "Cheapside!" And I was actually in those famous places, riding through them on a bus, part of their multitude! The very names on the street corners held fascination enough, and each of them gave me the separate little thrill of the altogether unexpected. I had unconsciously believed that all these names were part of the vanished past I had connected them with, forgetting that in London names endure. But I began to feel that I ought to be arriving.

"Conductor," I said as he passed, "stop the bus and let me get down at Half Moon Street, Piccadilly." "We're going straight away from it, miss. You get that red bus standing over there—that'll take you!"

So I went all the way back again, and on to my relation's, on the top of the red bus, not at all regretting my mistake. But it made it almost twelve o'clock when I rang the bell (Mrs. Portheris' bell) at the door of her house in Half Moon Street, Piccadilly.

III.

The door opened and I was confronted by my first surprise in London. It was a man—a neat, smooth, pale, round-faced man—in livery, rather fat and very quiet, but Mrs. Portheris' interior. This was very dark and very quiet, but what light there was fell richly through a square stained-glass window at the end of the hall upon the red and blue of some old china above a door and a collection of Indian spears and a twisting old oak staircase that glowed with color. Mrs. Portheris' exterior had prepared me for something different. I did not know then that in London everything is a matter of the inside—I had not seen a duchess living crowded up to her ears with other people's windows. With us the outside counts so tremendously.

"Does Mrs. Portheris live here?" I asked, thinking that it was just possible that she might have moved.

"Yes, miss," said the footman, with a subdued note of interrogation.

I felt relieved. "Is she—she well?" I inquired.

"Quite well, miss," he replied, with the note of interrogation a little more obvious.

"I should like to see her. Is she in?"

"I'll inquire, miss. 'Oo shall I say, miss?"

I thought I would prepare my relation gradually. "A lady from Chicago," said I.

"Very well, miss. Will you walk upstairs, miss?"

In America drawing-rooms are on the ground floor. I thought he wanted to usher me to Mrs. Portheris' bedroom.

"No, sir," I said; "I'll wait here." Then I thought of Mr. Mafferton and of what he had said about saying "sir" to people, and my sensations were awful. I have never done it once since.

The footman reappeared in a few minutes with a troubled and apologetic countenance. "Mrs. Portheris says as she doesn't want anything, miss! I told her as I didn't understand you were disposin' of anything, but that was 'er message, miss!"

I couldn't help laughing—it was so very funny to think of my being taken for a lady peddler in the house of my relation.

"I'm very glad she's in," I said. "That is quite a mistake! Tell her it's Miss Mamie Wick, daughter of Colonel Joshua P. Wick, of Chicago; but if she's lying down or anything, I can drop in again!"

He was away so long that I began to wonder if my relation suspected me of dynamite in any form, and he came back looking more anxious than ever.

"Mrs. Portheris says she's very sorry, miss, and will you please to walk up."

"Certainly," I said; "but I hope I won't be disturbing her!"

And I walked up.

It was a big square room with a big square piano in it, and long lace curtains, and two or three gilt-framed mirrors, and a great many old-fashioned ornaments under glass cases, and a tinkling glass chandelier in the middle. There were several oil paintings on the wall, low-necked portraits and landscapes, principally dark green and black and yellow, with escapes, principally dark green and black and yellow, with cowes, and quantities of lovely china. The furniture was red, and with spindly legs, and there was a tall palm in a pot, which had nothing to do with the rest of the room, by itself in a corner. I remembered these things afterward. At the time

I noticed chiefly two young persons, with the pinkest cheeks I ever saw out of a picture-book, sitting near a window. They were dressed exactly alike and their hair hung down their backs to their waists, although they must have been seventeen, and they sat up very nicely indeed on two of the red chairs, one occupied with worsted work and the other apparently reading aloud to her, though she stopped when I came in. I have seen something since at Madame Tussaud's—but I dare say you have often noticed it yourself. And standing in the middle of the room, with her hand on a center table, was Mrs. Portheris.

My first impression was that she had been standing there for the last hour in that immovable way, with exactly that remarkable expression; and it struck me that she could go on standing for the next without altering it, quite comfortably. Her skirt fell in a commanding way from her waist, though it hitched up a little in front, which spoiled the effect. She had broad square shoulders and a lace collar, and a cap with pink ribbons in it, and gray hair smooth on each side of her face, and large well-out features, and the expression I spoke of. And she kept her hand—it was her right hand—upon the table.

"Miss Wick," she said, bowing, and dwelling upon the name with strong doubt. "I believe I have a connection of that name in America. Is your father's name Joshua Peter?"

"Yes, Mrs. Portheris," I replied; and he says he is your nephew. I've just come. How do you do?" I said this because it was the only thing the situation seemed to warrant my saying.

"Oh, I am quite in my usual health, thank you! My nephew by marriage—a former marriage—a very distant connection."

"Four thousand five hundred miles," said I. "He lives in Chicago. You have never been over to see us, Mrs. Portheris."

"At this point I walked across to one of the spindly red chairs and sat down. I thought then that she had forgotten to ask me, but even now, when I know she hadn't, I am not at all sorry I sat down."

The old lady gathered herself up and looked at me. "Where your father and mother?" she said.

"In Chicago, Mrs. Portheris. All very well, thank you! I had a cable from them this morning before I left the hotel. Kind regards to you."

Mrs. Portheris looked at me in absolute silence. Then she deliberately arranged her back draperies and sat down too—not in an amiable way, but as if the situation must be faced.

"Margaret and Isabel," she said to the two young pink persons, "go to your rooms, please!" And she waited till the damsels, each with a little shy smile and blush, gathered up their effects and went, before she continued the conversation.

As they left the room I observed that they wore short dresses, buttoned down the back. It began to grow very interesting to me, after the first shock of finding this kind of relation was over. I found myself waiting for what was to come next with the deepest interest.

In America we are very fond of types—perhaps because we have so few among ourselves—and it seemed to me, as I sat there on Mrs. Portheris' spindly red chair, that I had come into violent contact with a type of the most valuable and pronounced description. Privately, I resolved to stay as long as I could and lose no opportunity of observing it.

"Then I suppose," said Mrs. Portheris, the supposition being of the vaguest possible importance, "that you are with a party of Americans. It seems to be an American idea to go about in hordes. I never could understand it—to me it would be most objectionable. How many are there of you?"

"One, Mrs. Portheris—and I'm the one. Poppa and mamma had set their hearts on coming, but at the last minute something interfered with their plans and they had to give it up. They told me to tell you how sorry they were."

"Something interfered with their plans! But nothing interfered with your plans!"

"Oh no, it was some political business of poppa's—nothing to keep me!"

"Then do I actually understand that your parents, of their own free will, permitted you to cross the Atlantic alone?"

I hope your mind explaining it again."

"Upon my word! And you are at a hotel—which hotel?"

When I told Mrs. Portheris the Metropole her indignation mounted to her cap, and one of the pink ribbons shook violently.

"It is very American!" she said, and I felt that Mrs. Portheris could rise to no more forcible a climax of disapproval.

I did not mind Mrs. Portheris' disapproval; in fact, according to my classification of her, I should have been disappointed if she had not disapproved—it would have been out of character. So I only smiled as sweetly as I could, and said, "So am I."

"Is it not very expensive?" There was a note of angry wonder as well as horror in this.

"I don't know, Mrs. Portheris. It's very comfortable."

"I never heard of such a thing in my life!" said Mrs. Portheris. "It's—it's outrageous! It's—it's not customary! I call it criminal lenience on the part of my nephew to allow it. He must have taken leave of his senses!"

"Don't say anything nasty about poppa," Mrs. Portheris, I remarked; and she paused.

"As to your mother—"

"Mamma is a lady—a great intelligence and advanced views, I intend to say, though she isn't very strong. And she is very well acquainted with me."

"Advanced views are your ruin in America! May I ask how you found your way here?"

"On a bus, Mrs. Portheris—the red Hammersmith kind. On two buses, rather, because I took the wrong one first and went miles straight away from here; but I didn't mind—I liked it."

"In an omnibus, I suppose you mean. You couldn't very well be out, unless you went on top." And Mrs. Portheris smiled rather derisively.

"I did—I went on top," I returned calmly. "And it was lovely."

Mrs. Portheris very nearly lost her self-control in her effort to grasp this enormity. Her cap bristled again, and the muscles around her mouth twitched quite perceptibly.

"Careering all over London on the top of an omnibus!" she ejaculated. "Looking for my house! And in that frock!"

"I felt about ten when she talked about my 'frock.'"

"Couldn't you feel that you were altogether too smart for such a position?"

"No, indeed, Mrs. Portheris!" I replied, unacquainted with the idiom. "When I got down off the first omnibus in Cheapside I felt as if I hadn't been half smart enough!"

She did not notice my misunderstanding. By the time I had finished my sentence she was rapping the table with suppressed excitement.

"Miss Wick!" she said (and I had expected her to call me Mamie, and say I was the image of poppa) "you are the daughter of my nephew—which can hardly be called a connection at all—but on that account I will give you a piece of advice. The top of an omnibus is not a proper place for you—I might say for any connection of mine, however distant! I would not feel that I was doing my duty toward my nephew's daughter if I did not tell you that you must not go there! Don't on any account do it again! It is a thing people need do!"

"Do they upset?" I asked.

"They might. But again, I must ask you on personal—on family grounds—to go inside. In Chicago you may go outside as much as you like, but in London—"

"Oh no!" I interrupted. "I don't go for the world—in Chicago!" Which Mrs. Portheris seemed to understand.

I had stayed dauntlessly for so long that she was so much interested in Mrs. Portheris'—and I was so much interested in Mrs. Portheris'—that I was not able to prolong the interview, and she at last got up to go. Mrs. Portheris also rose, with

"Have you any friends in London?" she asked, with a very weak solution of curiosity in her tone, giving me her hand to facilitate my going, and immediately ringing the bell.

"I think not," I said with decision. "I don't think I shall stay at the Metropole! I don't think you will remain another day at the Metropole! It is not usual for young ladies to stay at hotels. You must go to some place where only ladies are received, and as soon as you are settled in one, communicate at once with the rector of the parish. Alone as you are, that is quite a necessary step. Lights and fires will probably be extra."

"I thought," said I, "of going to the Ladies' Guide Association—we have heard of it in Chicago through some friends, who went round every day for three weeks with lady guides, and found it simply fascinating—and asking them to get me a private family like in England."

Mrs. Portheris frowned. "I could never bring myself to approve of lady guides," she said. "There is something in the idea that is altogether too—American."

I saw that the conversation was likely to grow personal again, so I said: "Well, good-bye, Mrs. Portheris!" and was just going, when, "Stop!" said my relation, "there is Miss Purkiss."

"Is there?" said I.

"Certainly—the very thing! Miss Purkiss is a very old friend of mine in reduced circumstances. I've known her thirty-five years. She lives in an exceedingly modest way in Upper Baker Street, very convenient to both the omnibuses and Underground, and if you cast in your lot with hers while you are in England, Miss Wick—here Mrs. Portheris grew almost demonstrative—"you need never go out alone. I almost necessitate her asking you rather more than the usual rate for board and lodging, in compensation for her chaperonage and companionship. All I can say is that both will be very thorough. I will give you Miss Purkiss' address at once, and if you drive there immediately you will be sure to find her in. John, call a hansom!" And Mrs. Portheris went to her writing table and wrote the address.

"There she is, holding it up and giving it to me. 'By all means try to arrange with Miss Purkiss, and she being a friend of my own, some afternoon, perhaps—I must think about it—I may ask her to bring you to tea! Good-bye!'"

As the door closed behind me I heard Mrs. Portheris' voice on the landing. "Margaret and Isabel," it said, "you may come down now!"

"Ware to, miss!" said the driver.

"Hotel Metropole," said I. As we turned into Piccadilly a little flutter of torn white paper went back on the wind to Mrs. Portheris. It was Miss Purkiss' address.

After lunch I made careful notes of Mrs. Portheris, and then spent half an hour in the midst of my trunks, looking in the "Board and Lodging" column of the "Morning Post" for an accommodation which promised to differ as radically as possible from Miss Purkiss'.

IV.

I found it difficult to make a selection, the heavens were so very different and all so superior. It seemed that I could be taken in all over London at prices varying from one "g." to three "g." per week, although the surprising cheapness of this did not strike me until I had laboriously calculated in dollars and cents the exact value of a "g." I know now that it is a term of English currency exclusively employed in Bond Street, Piccadilly, Regent and Oxford Streets—they never give you a price there in any other. And the phrases descriptive of the various homes which were awaiting me were so beautiful. "Excellent meat breakfast," "a liberal and beautiful," "a mother's devoted supervision," "charmingly refined home," "fashionably situated, and elegantly furnished," "just vacated by a clergyman," "foreign languages understood"—which would doubtless include American—"a lofty standard of culture in this establishment." I wondered if they kept it under glass.

My choice was narrowed considerably by so many of the addresses being other places than London, which I thought very peculiar in a London newspaper. Having come to see London, I naturally did not want to live in Putney, or Brixton, or Chelsea, or Maida-vale. So I picked out two or three places near the British Museum (I should be sure, I thought, to want to spend a great deal of time there) and went to see about them.

They were as much the same as the advertisements were different, especially from the outside. I spent the same length of time upon the doorstep, for instance, before the same tumbled and apologetic-looking servant-girl appeared, wiping her hands upon her apron, and led me into the same little dark hall, with the same interminable stairs twisting over themselves out of it, and the smell of the same dinner accompanying us all the way up. Always palls and brushes that on the landings—what there is about palls and brushes should make them such a distinctive feature of boarding-house landings I don't know, but they are. Not a single elevator in all three. The servant-girl in the first elevator, about half-way up the fourth flight, if there was no elevator. "No, indeed, miss," she said; "I wishes there was! But them's things you won't find but very seldom 'ere. We 'ad American ladies 'ere before, and they allus asks for 'em, but they soon finds out they ain't to be 'ad, miss."

Now, how did she know I was an "American lady?" I didn't really mind about the elevator, but that I found annoying, in spite of my desire to preserve my identity, which was very odd. In the course of conversation with this young woman I discovered that it was not my own possibly prospective dinner that I smelled on the stairs. I asked about the hour for meals.

"Aun, we never gives meals, miss!" she said. "It's only them boardin' 'aouses as gives meals in! Mrs. Jones, she only lets apartments. But there's a very nice restroing in Tottinim Court Road, quite convenient, as your breakfast, miss, you could 'ave cooked 'er; but, of course, it would be extra, miss."

In the other two places I saw the landladies themselves in their respective drawing-rooms on the second floor. One of the drawing-rooms was "draped" in a way that was quite painfully aesthetic, considering the paucity of the draperies. The flower-pots were draped, and the lamps; there were draperies around the piano legs, and round the clock, and where there were not draperies there were bows, all of the same scanty description. The only thing that had not made an effort to clothe itself in the room was a paper umbrella; and a big idea about the room, principally a paper umbrella, that it would be necessary to live up to a high standard of starvation in that house, and she confirmed the impression. She was in that house, and she confirmed the impression. She was a tall, thin, and a nose like an angle of a very smooth hair, Miss Hippy, a short, stoutish person, with very preternatural lips, and a nose like an angle of a very smooth hair, round her neck. I feel that the particular variety of smile she gave me with her "Good morning!"—although it was after 11 p. m.—was one she kept for the use of boarders only, and her whole manner was an interrogation.

"We have a few rooms," said Miss Hippy, "certainly." Then she cast her eyes upon the floor and twisted her fingers up in her watch chain, as if in doubt. "Shall you be long in London?"

I said I couldn't exactly tell.

(TO BE CONTINUED.)

Haydn is pronounced Hyd'n; Gluck, Glerk; Beethoven, Bay-toe-ven; Mendelssohn, Mendell-sone; Weber, Vay-bur; Meyerbeer, Myer-beer; Wagner, Vok-nur; Liszt, Leest; Paderewski, Pah-ter-iff-sky.

\$50-IN CASH PRIZES-\$50

Attractive Advertisement Awards..

We intend to give our readers the opportunity to make a little money, and at the same time to benefit others. To accomplish this we offer the following inducements: 25c. for the name of every new subscriber, and seven additional cash prizes for the largest lists of names forwarded to us: \$15.00 for the highest number, \$12.00 for the second, \$10.00 for the third, \$8.00 for the fourth, \$4.00 for the fifth, \$2.00 for the sixth, \$1.00 for the seventh.

The winners of the special prizes will also receive 25c. for each new name, thus securing quite a considerable sum of money; hence every one will be fully compensated for any trouble they may take. Each new name must be accompanied with \$1.00, the price of a year's subscription to the FARMER'S ADVOCATE, and the addresses of the subscribers and sender plainly written. Final lists for competition must be mailed not later than Dec. 31st, 1898.

To each new subscriber we intend giving the balance of this year's numbers entirely free. This will include our magnificent special Christmas number, with its numerous beautiful engravings, and replete with interesting matter for every member of the household,—single copies of which will cost 50c. to non-subscribers.

Show our journal to all your friends and neighbors, and see what you can do,—WE'LL DO THE REST!!

Our regular salaried agents and agricultural society and farmers' institute lists are excluded from this competition.

Memory Gems.

CONTRIBUTED BY MISS MAGGIE MATHESON, MASSIE, ONT.

I. Why should we quarrel with our existence, here it lies before us, our field and inheritance, to make or to mar, for better or for worse; in which, too, so many noblest have, even from the beginning, warring with the very evils we war with, both made and been what will be venerated to all time.—Carlyle.

II. The drying up of a single tear has more of honest fame than shedding seas of gore.—Byron.

III. It isn't worth while to fret, dear, To walk as behind a hearse, No matter how vexing things may be, They easily might be worse; And the time you spend complaining And groaning about the load, Would better be given to going on, And pressing along the road.—Margaret Sangster.

IV. To smile at the jest which plants a thorn in another's breast is to become a principal in the mischief.—Sheridan.

V. The only way to regenerate the world is to do the duty which lies nearest us, and not to hunt after grand, far-fetched ones for ourselves. If each drop of rain chose where it would fall, God's showers would not fall as they do now.—Charles Kingsley.

VI. Finish every day, and be done with it. You have done what you could. Some blunders and absurdities have crept in, no doubt; forget them as soon as you can. To-morrow is a new day; begin it well and serenely, and with too high a spirit to be cumbered with your old nonsense.—Emerson.

VII. We are always responsible for the existence of every evil which we have the power to destroy.—Charles Garrett.

VIII. Act well at the moment, and you have performed a good action to all eternity.—Luther.

IX. Life is before you; from the fated road You cannot turn: then take ye up the load. Not yours to tread or leave the unknown way. Ye must go o'er it, meet ye what ye may. Gird up your souls within you to the deed: Angels and fellow-spirits bid you speed.

X. Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindnesses and small obligations, given habitually, are what win and preserve the heart and secure comfort.—Sir Humphrey Davy.

XI. Labor to keep alive in your breast that little spark of celestial fire—conscience.—George Washington.

XII. Life is hard for many people, and we have no right to withhold any look or word or act of love which will lighten the load or cheer the heart of any fellow struggler. The best use we can make of our life is to live so we will be a benediction to everyone we meet.—J. R. Miller, D. D.

XIII. Kind words prevent a good deal of that perverseness which rough and imperious usage often produces in generous minds.—Locke.

XIV. Nor love thy life, nor hate; but while thou livest, Live well, how long or short, permit to heaven.—John Milton.

CONTRIBUTED BY WILL M'VETY, SEAFORTH, ONT.

I. Dost thou love life, then do not squander time, for that is the stuff life is made of.—Benjamin Franklin.

II. Our greatest glory consists not in never falling, but in rising every time we fall.—Goldsmith.

III. When a man has not a good reason for doing a thing, he has a good reason for letting it alone.—Scott.

IV. Write it on your heart that every day is the best day in the year.—Emerson.

V. Ambition is a lottery, where, however uneven the chances, there are some prizes; but in dissipation every one draws a blank.—Stephen Montague.

VI. "Honesty is the best policy," but he who acts on that principle is not an honest man.—Whately.

VII. Pitch thy behavior low, thy projects high, So shalt thou humble and magnanimous be, Sink not in spirit; who aimeth at the sky, Shoots higher much than he who means a tree.—G. Herbert.

VIII. Who never doubted never half believed, Where doubt, there truth is—'tis her shadow.—Bailey.

IX. Like unto ships far out at sea, Outward, or homeward bound are we.—Longfellow.

X. Go always beyond designated duties, and remain within permitted pleasures.—Madame Swetchine.

XI. The sweetest lives are those to duty wed Whose deeds both great and small Are close-knit strands of an unbroken thread Where love ennobles all.—E. B. Browning.

XII. We shape, ourselves, the joy or fear Of which the coming life is made, And fill our future atmosphere With sunshine or with shade.—Whittier.

XIII. Self-reverence, self-knowledge, self-control; These three alone lead life to sovereign power, Yet not for power (power of herself Would come uncalled for), but to live by law; Acting the law we live by without fear.—Tennyson.

CONTRIBUTED BY JESSIE E. MATTHEWS, ASHTON, ONT.

I. Speak kindly, for our days are all too few For any angry strife; There is deep meaning, if we only knew, In our brief life. No nobler mission can be ours, if we One pang can stay, Or if amidst the rush of tears we see Wipe one away.—L. Trevor Francis.

II. Is the road very dreary? Patience yet! Rest will be sweeter if thou art a-weary As if deep meaning, if we only knew, In our brief life. Just bide a wee and dinna fret!

III. The clouds have silver lining— Don't forget! And though he's hidden, still the sun is shining: Courage instead of tears and rain repining— Just bide a wee and dinna fret!—Anna Shipton.

IV. Strength for the day is all that we need, As there never will be a to-morrow— For to-morrow will be but another to-day, With its measure of joy and of sorrow; Then why be forecasting the trials of life, With such sad and such grievous persistence— Why anxiously wait for the coming of ills That never may have an existence? Far better to trust in the wisdom and love Of the Providence ever beside us, For He guides all events that befall us.—Richard Metcalfe.

V. The look of sympathy, the gentle word Spoken so low that only angels heard, The secret act of pure self-sacrifice, Unseen by men, but marked with angel's eyes— These are not lost.

VI. The kindly plan devised for other's good, So seldom guessed, but little understood, The quiet steadfast love that strove to win Some wanderer's feet from the ways of sin— These are not lost.—Richard Metcalfe.

VII. Hath any wronged thee? Be bravely revenged! Slight it and the work is begun; Forgive it and the work is finished.—Quarles.

VIII. Have more than thou showest; Speak less than thou knowest; Spend less than thou owest.—Shakespeare.

IX. Nurse thou no sorrow, only learn all that it has to teach.—Arthur Weir.

X. "Joy is a duty," so with golden lore The Hebrew rabbis, taught in days of yore; And happy, human hearts, heard in their speech, Almost the highest wisdom man can reach.—Henry Van Dyke.

XI. Do all the good you can, By all the means you can, In all the ways you can, In all the places you can, At all the times you can, To all the people you can, As long as ever you can.—John Wesley.

XII. Make good use of time if thou lovest eternity. Yesterday can not be recalled; to-morrow Cannot be secured; to-day only is thine, Which, if once lost is lost forever.

XIII. As, when dies a sound, Its spectre lingers round; Haply my spent life will Leave some faint echo still.—Whittier.

XIV. Nay, we are children, who all day Beside the unknown waters play, And dig with small toy spade the sand, Thinking our trenches wondrous deep; Till twilight falls, and hand in hand, Nurse takes us home, well tired, to sleep; Sleep, and forget our toys, and be Lulled by the great everlasting sea.—William Watson.

THE QUIET HOUR.

Unconscious Influence.

"Yet in herself she dwelleth not, Although no home were half so fair; No simplest duty is forgot, Life hath no dim and lonely spot That doth not in her sunshine share.

"She doeth little kindnesses Which most leave undone or despise; For naught that sets one heart at ease, And giveth happiness or peace, Is low-esteemed in her eyes.

"Blessing she is; God made her so, And deeds of week day holiness Fall from her noiseless as the snow; Nor hath she ever chanced to know That aught were easier than to bless."

A twofold influence attends and follows every life. The one is planned and intentional; the other is unperposed and unconscious. In the ordinary reckoning of the results achieved by men, the purposed things only are counted. We point to the churches he built, the pictures he painted, or the books he wrote, and we think we have given all his biography, but we have not. There is a part of his history that is never written, that cannot be written; and it is probable that in every good life this is the better part—that a man's unconscious, unrecorded, unintended influence aggregates more in the end than his purposed acts.

Anyone who carefully notes the comparative value of lives in a community will soon learn that the element which counts for the most is that subtle thing which we call personal influence, a spiritual force which flows out from one life and touches other lives and strangely affects them.

It is to a man what fragrance is to a flower, what light is to a lamp. It is part of himself, and yet it reaches outside and beyond himself.

It is, so to speak, the projection of the man's own character, the flowing-out of his own life into other lives. It is the energy of the man's spirit working, as it were, beyond his body, and working without hands. The lamp that burns in a Christian's heart is the flame of the Divine spirit, and the personal influence of a Christian becomes spiritual power. It is like the shadow of Peter: it has a healing, life-giving effect wherever it falls. Such a man goes about his daily duty as other men do, but while he is engaged in common things he is continually dropping seeds of blessing, which spring up behind him in heavenly beauty and fragrance.

Every good life is constantly scattering these unconscious, unperposed influences. A mother works hard all day in her home, keeping her house in order, preparing comforts for her family, watching over her children. She can tell in the evening just how many garments she has mended, how many rooms she has swept, and the entire day's history; but all day long she was patient, gentle and kind. At every turn she had a bright smile for her children, she had cheering words and fond attentions for her husband, she had a pleasant welcome for the friends who called. In all these things she was unconsciously scattering seeds that will spring up in sweet flowers in other hearts and lives.

Who doubts which of these two ministries is in reality the richer and the most effective? Yet the tired woman does not think of counting these wayside influences and services at all in her retrospect of the day's work. If she could do so it would greatly cheer her and strengthen her for a new day's life when it begins. She often comes to the day's close discouraged and depressed because she has seemed to do so little beyond the endless routine of her household duties. When she sits down with her Bible, after all are quiet in her household, and looks back, she can scarcely recall one earnest word she has spoken for her Master. The whole day has been filled with earthly commonplace, and she thinks of it with pain and disheartenment; yet if she has lived sweetly and patiently amid her toils and worries, dropping cheerful words in the ears of her household, singing bits of song as she went about her work, bearing herself with love and faith amid all the experiences of the day, she has unconsciously performed a ministry of blessing whose value she can never know till she gets to heaven.

We do not realize the importance of this unconscious part of our life-ministry. It goes on continually. In every greeting we give to another on the street, in every moment's conversation, in every letter we write, in every contact with other lives, there is a subtle influence that goes from us that often reaches farther and leaves a deeper impression than the things themselves that we are doing at the time. After all, it is life itself—sanctified life—that is God's holiest and most effective ministry in this world—pure, sweet, patient, earnest, loving life. It is not so much what we do in this world as what we are that tells in spiritual results and impressions.

How, then, can we give direction and character to this unconscious ministry of our lives? When we do things voluntarily and with purpose we can shape the effects to some extent, but how can we guard this perpetual outgoing of unintended influence? Only by looking well to our hearts. It is what we are when we are not posing before men that we are really, and it is this which counts in this subtle ministry. We must be, therefore, in our own inner secret lives what we want our permanent influence to be. This we can become



Worth Trying.

"Our Mabel's a perfect treasure," thought Mrs. Lowell as she watched her sunny-faced daughter admiringly. Mabel wheeled a little table up to the sofa on which her mother was lying, covered it with a white cloth, then set out on it an inviting-looking dinner, and with a most determined expression informed her that she must eat it all, "every scrap." Then, with a light kiss on her mother's forehead, she danced out to the dining-room where the merry chatter of lively voices and the busy clatter of knives and forks announced that the family dinner was in progress.

Mrs. Lowell was confined to her room with a severe cold. She seemed to be always catching cold, especially when she persisted in taking the long drive of three miles to church; and Mabel had made up her mind that, in some way or other, the money must be procured to buy her mother a warm fur coat. It was no use asking her father; he had all he could do to feed, clothe and educate his large family.

All the afternoon Mabel puzzled over ways and means. Was there anything she could teach? She had been pretty well educated at the high school in the village, and her father, who was a farmer, had managed to send her for a year to a Toronto boarding-school, where she had picked up some small knowledge of music and French. However, during a fortnight's visit in Montreal last summer she had discovered that the latter accomplishment was of very little practical use, for she could not follow the simplest conversation.

In the evening, when all the work was done, she managed to secure the FARMER'S ADVOCATE, which had been already read through, advertisements and all, by the busy farmer, although it had only been two days in the house. Archie and Fred were busy with their lessons, the three little ones were in bed, and Mabel had a nice quiet time to read the Home Department, which she always thoroughly enjoyed. But is she reading to-night? "What's the matter with my bonny lassie?" said her father at length. He had been watching the thoughtful face for nearly half an hour, and her eyes had not moved from one place in the paper. Mabel started, colored, then answered, "Oh! I was just thinking out an idea;" then she turned over the leaves absently. Presently she said: "Where's Dick? Does anyone know?" "He's out in the woodshed cleaning his wheel," said Fred, glancing up from the scribbler in which he was writing furiously. "He got it awfully muddy last night." Mabel picked up the paper and was soon out in the woodshed, where Dick was polishing up his beloved wheel by the light of a stable lantern which he had hung up on a nail.

"When you are quite through, I want to speak to you," she said at last; and soon the wheel was shining, the oil-can was packed away in the tool-bag, and her twin brother said with a laugh, "Now I'm ready for you, Miss Sobersides; what's the row?" "It's about a fur coat for mother, Dick; she does need one so badly, you know." "Yes, I know, Mab; but what can we do? The pater is having all he can do just now, and I am only an expense to him yet. If Uncle Richard had only given me the money instead of this bike it might have been managed." But as he looked down tenderly at the wheel which was the pride and delight of his heart, he could hardly feel sorry that it had been so arranged.

"Just look here, Dick! See what splendid prizes the FARMER'S ADVOCATE is offering," and she pointed eagerly to the open paper in her hand. "You know I can have Topsy and the covered buggy every afternoon just now, and if you were to go to some of the neighbors' on your wheel in the evenings, we could surely get some new subscribers. Perhaps we might each win a prize, and then you see there is twenty-five cents extra for each new subscription we send in. Do let's try it, Dick dear!" And the gentle little hand laid so pleadingly on his arm was enough to make any reasonable young man respond as heartily as Richard Lowell did: "All right, little woman! We'll work hard; and where there's a will there's a way, you know." And, with his arm round her waist, he gave her a brotherly kiss as he remarked to the old cat which was lazily watching the pair: "This young woman's a brick, puss; and if any fellow denies it, just let him come on! I'm ready for him!"

These two determined young people have less than two months in which to accomplish their purpose. Will they succeed, do you think? It is well worth trying, anyway. Don't you want to follow their example? There are plenty of prizes offered, and every one has a chance to earn something, even though it be only the 25 per cent. commission on each new subscription sent in. I wish you all good luck.

COUSIN DOROTHY.

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 open for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

Oh, friend, loved and dear one, I have something to say To celebrate fitly the coming of May. My language, you see, is no simplest of rhyme, With little attention to meter or time. The work of a poet is measured and true, But these simple rhymes are the best I can do.

- (a) Behead a quality in line 1, transpose and get a series of years.
(b) Curtail a word in line 2, transpose and form an exertion.
(c) Thrice behead a word in line 3, transpose and get the perfect participle of a verb.
(d) Double curtail a word in line 4, transpose and form the stem of a verb.
(e) Curtail a word in line 5, and leave the name of a famous poet.
(f) Behead a word in line 6, transpose and leave to place.

By selecting letters from each of these words, form a new word which will define the original: Acknowledge, Assever, Valotudinarian, Demise (the verb), Produce, Detestable, Recline. A. F. F.

3.—ONTARIO TOWNS.

- 1. A catalogue, to be due to, fifty.
2. Myself, one, river-crossing.
3. Ocean, forwards.
4. Relatives, vehicle, to take a meal.
5. To do, above.
6. Dawn.
7. Family name of the Queen.
8. Either, sick, myself, an article.
9. A wild goose, to wade through.
10. Equality, exists.
11. A small tack, shallow part of a stream.
12. A pair, a crossing over a river.
13. Depart, five hundred, a cardinal point (abbr.), wealthy.
14. Part of a bird, part of a pig.

4.—RIDDLES.

- 1. These walk, run, and jump with the quadrupeds; they glide with the serpents; they fly with the birds; and they swim with the fish.
2. There are only two of these in every year; yet there are two in every week and one in every day.

5.—HALF-SQUARE.

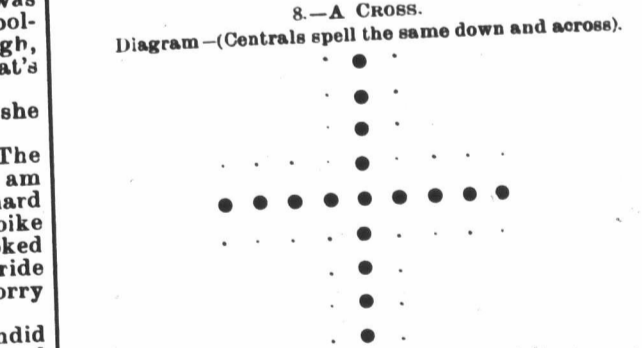
Diagram. (1) An invented story; (2) to graft by joining a scion to a stock without separating it from its parent tree; (3) a word curtailed, meaning to heave; (4) the largest of the vegetable kind; (5) water congealed to hardness; (6) an interjection; (7) a consonant. "DICKENS."

A peculiar proverb is this; WELT'S its name; We can do no more than miss, But we'll try it just the same. H. C. G.

7.—FIVE KITCHEN PROVERBS IN HASH.

Small cooks make a better light pudding of a fish than some broth to rise in a pie dish. To go, long suppers is better than an empty supperless lives. Better have none too many bed than to spoil the debt. H. C. G.

8.—A CROSS.



(1) With bread and cheese I drink it; (2) hot, strong and sweet, old ladies like it; (3) about this time of day; (4) though as a liquor it is not considered altogether of "rare attraction"; (5) lone in a "great metropolis of ships and emigrants"; (6) but in its "lowness of price"; (7) is known to every "lad"; (8) and in its inmates are dispersed or "sick." A. F. F.

9.—RHOMBUS.

Across: 1, a assumer; 2, custom; 3, dorsal; 4, pieces of cloth wrapped around the feet by Indians before donning the moccasins; 5, kindly. Down: 1, makes good goods; 2, an exclamation; 3, the front; 4, dark; 5, a constituent of gunpowder; 6, a narrow ribbon; 7, used to stand on; 8, Salvation Army; 8, "OGMA."

10.—CONUNDRUM.

What are the two hottest and the two coldest letters in the alphabet? H. C. G.

11.—CROSS-WORD ENIGMA.

In woman, not in man; In ring, not in fan; In master, not in boy; In laugh, not in joy; In motion, not in mute; In organ, not in flute;

In worth, not in less; In wheat, not in chess; In map, not in book; In leather, not in cook; In flower, not in bud; In clay road, not in mud. My Whole is one versed in the spelling or writing of words with the proper letters. "DICKENS."

12.—ANAGRAM.

The boys won near all the prizes, Now girls that is too bad; Surely it will not continue, Or really we'll go mad. Now, let us get up our ginger,— Excuse me if I say it As a thorough-bred Scotchman would, Now, come girls, "WE'LL NO HAE" it. "MARGARETA."

Answers to October 15th Puzzles.

- 1.—Hospitable, Tyrannical, Opposition, Resolution, Reputation, Delightful, Negligence, Comparison, Systematic, Scurrilous. Hypothesis.
2.—A clock. 4.—Snap dragon.
5.—Converse. 6.—Sweet are the uses of adversity.
3.—Heaven, forming each on other to depend, A master, or a servant, or a friend, Bids each on other for assistance call Till one man's weakness grows the strength of all.
8.—Apteral, proves, topped, even, red, as, l. 13.—Tampion, aliens, milan, peat, inn, os, n.
7.—NesS, EpiC, LasH Nelson, SalL Schley, OncE, Navy. 10.—GRAND ROVER, AVERE, NEREAD, DREAD.
9.—Sub-scrip-t-i-on. 12.—Wind-ward.
11.—Honey-locust. 15.—Blue bell.

11.—enquired—quire—end.

- furnish—urn—fish.
wearing—ear—wing.
treasured—sure—tread.
father—the—far.
holiday—Ida—holy.
story—or—sty.
honour—no—hour.
wanted—ant—wed.
debate—bat—Dec.
galaxy—lax—gay.
beaten—eat—Ben.

Questionable.

SOLVERS TO OCT. 15TH PUZZLES.

"Dennis"; "Toledo"; M. R. G.; Lizzie Conner; Mary Nagle; Oaagh Kennedy; Blanche Galloway; H. C. G.

ADDITIONAL SOLVERS TO OCT 1st PUZZLES.

H. C. G.; Una Shepherd; Oaagh Kennedy; Lizzie Conner; Mary Nagle; M. R. G.

COUSINLY CHAT.

Blanche.—We welcome you to our Corner and hope you will come regularly, especially after New Year's. "Toledo." Some time I'll answer that question—if I ever get time. I presume I received the other note all right, as your answers were always on hand, but it is difficult to acknowledge every one every time. "Lon."—I'm so glad you've joined the puzzlers, as I'll hear from you more frequently. Kind regards to M. and O. Hope to see you soon.

H. C. G.—While your latest suggestion sounds plausible enough, I am not certain that it would be much of an advantage; while, on the other hand, it would entail more labor on your humble servant. Again, I believe it would discourage more than it would spur on to greater efforts. Your "originals" certainly possess the merit of novelty, a very interesting feature in our column. Some time I'm going to beg Uncle Tom to let me have his column for a real good chat with the cousins, and we shall discuss things at greater length. We have not much space in C. C. but are for even a little. "Mai."—I should be delighted, my dear, but it is utterly impossible. Thank you, just the same. See here, old girls, I want that promised photo of you and your chums, M. and N. Did you get the recitations?

Una.—A great many of our Manitoba cousins have deserted us of late, but I hope the New Year will coax them to return and bring still others with them. Do not leave us yourself, little one.

O. K.—Lucky girl you are. No matter how things go you are O. K. anyway. Congratulations on your success at the fair. I hope my boys and girls have noticed the prize offer contained in my last number—fifty dollars in cash prizes for new subscribers. As in everything else undertaken by the FARMER'S ADVOCATE, honorable dealing is the rule. This is an easy way to make a little money, and I hope all my young friends will put their shoulders to the wheel and work with a will to get a prize and to introduce into many homes our paper, which is daily increasing in popularity. ADA A.

Do not fail to notice our prize offer, and do not be deterred from trying by thinking the number of subscribers need be large. The largest number, however small, takes first prize, and the rest in succession, as advertised. Let all try. We somehow think some of our boys or girls will head the list. Try away, youngsters, and see who will reach the winning-post.

FAT STOCK SHOW

THE FOURTEENTH ANNUAL CHRISTMAS FAT STOCK SHOW WILL BE HELD AT WOODSTOCK ON

MONDAY and TUESDAY, Dec. 5th and 6th, '98

In the Caister House stock yards, under the auspices of the County of Oxford Fat Stock Club.

A large and liberal list of prizes will be offered for competition. Competition open to the Province. A fair for the sale of cattle will be held on the second day, so any person having stock for sale would do well to bring it to the fair. It is confidently expected that this will be the best fair ever held in the county. Prize lists furnished on application to the Secretary. Address—WOODSTOCK.

JOHN SMITH, President. M. S. SCHELL, Secy.-Treas.

ARE YOU GOING TO THE

Ontario Provincial Fat Stock & Dairy Show

To be held in Brantford, Nov. 30th and Dec. 1st and 2nd. Over \$1,000 given in cash prizes. Prize lists and entry forms may be had by applying to F. W. Hodson, Secretary-Treasurer, Parliament Buildings, Toronto, Ontario. The exhibit in the fat cattle, dairy and sheep departments promises to be better than ever before. The exhibit in the swine department will be very large, and for the first time in this Province carcasses will be awarded for the best dressed carcasses. During the time of the exhibition the following meetings will be held: A joint public meeting, at which the Hon. A. S. Hardy will preside, will be held in the Opera House, Brantford, on the evening of November 30th. An excellent programme has been provided. On Nov. 30th the annual meeting of the American Oxford Down Record Association. On Dec. 1st the annual meeting of the American Leicester Breeders' Association. On Dec. 2nd the annual meeting of the Dominion Swine Breeders' Association. Reduced freight and passenger rates on all railways.

The Smithfield of Canada!

GUELPH CHRISTMAS FAT STOCK and POULTRY SHOW.

The seventeenth annual Christmas Fat Stock and Poultry Show, under the auspices of the Guelph Fat Stock Club and Guelph Poultry Association, will be held in the Victoria Curling and Skating Rink, in the City of Guelph, on Tuesday, Wednesday and Thursday,

DECEMBER 6th, 7th and 8th, 1898.

Prize lists on application. JAMES MILLAR, President. JNO. M'CORKINDALE, Secretary.

AUCTION SALE OF 30-IMPORTED SHORTHORNS-30

The undersigned will offer by public auction at his farm, 1 1/2 miles from Markham Village, on January 11th 1899, 10 bulls and 20 females, recently imported and selected from the best herds in Aberdeenshire, Scotland; also a few Canadian-bred. They include such families as the Nonpareils, Ribbuds, Minas, Bessies, Claras, Gold Drops, and Violets, and other noted families. Farm twenty miles north of Toronto. Catalogues on application.

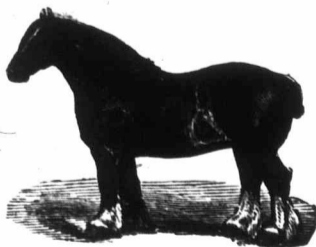
JOHN SMITH, M. P. P., Auctioneer, Brampton, Ont. JOHN ISAAC, Markham, Ont.

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, Thorncliffe Stock Farm, TORONTO.

FOR SALE!

Five young Shorthorn Bulls, five Berkshire Boars, fourteen Southdown and Leicester Rams, and Females of all the above. Write for prices. Visitors welcome.

E. JEFFS & SONS, BONDHEAD, ONT.

AUCTION SALE

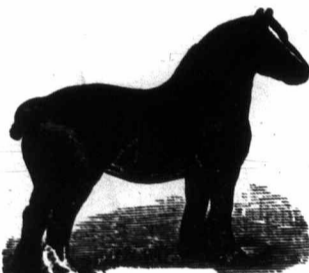
Valuable Farm, known as Snell Homestead

The undersigned has received instructions from the Administratrix of the estate of the late J. G. Snell to offer for sale by public auction at the Revere House, at the TOWN OF BRAMPTON, on Saturday, the TENTH day of DECEMBER, A. D. 1898, at the hour of 2 P. M., the following real estate, namely: The east half of Lot Number Fifteen in the first concession east of Hurontario Street, and the south half of the west half of Lot Number Fifteen in the second concession east of Hurontario Street, in the TOWNSHIP OF CHINGUACOUSBY, in the County of Peel, containing together ONE HUNDRED AND TWENTY-FIVE ACRES, more or less. On the premises are situated a comfortable dwelling house; a large bank barn, 120 x 56; stable, 75 x 30; sheep pen, 80 x 30; pigpen, 80 x 30; driving house, 48 x 40; henhouse, 24 x 18. There is a silo 16 x 28 in the barn, and there is a large galvanized windmill and grinder, and the above buildings are considered the best in the County of Peel. There are two orchards on the property, and an abundance of water, and a right-of-way to the River Etobicoke. The property is situated two miles from Snellgrove Station, and four and a half miles from Brampton, and is considered to be one of the best farms in the County of Peel. The land is a splendid clay loam, and is in first-class condition. TERMS OF SALE.—Ten per cent. to be paid in cash, and the balance, without interest, to be paid on the 1st of April, 1899, when possession will be given, or half the purchase money may be had upon application and be secured by mortgage for a term of years, with interest at 5 per cent. Further particulars made known on day of sale, and in the meantime may be had upon application to ANNIE M. SNELL, the administratrix, at the above premises, SNELGROVE P. O., to J. C. SNELL, of the FARMER'S ADVOCATE, LONDON, or to the undersigned. Dated at Brampton this 22nd day of October, A. D. 1898.

McKechnie & Heggie, BRAMPTON, Solicitors for the Administratrix.

John Smith, AUCTIONEER -om

CLYDESDALES



QUEEN. Calves. Write for prices or come and see

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

W. D. FLATT,

Hamilton P.O. and Telegraph Office,



Ten Choice Shorthorn Bulls

from four to nine months,

Fifteen Cows and Heifers,

served by imported bull, Golden Fame =2656=; also, a few cows with calves at foot. Farm 6 miles from Hamilton. Catalogue sent on application. Visitors met at G. T. R. or C. P. R. if notified.

Arthur Johnston,

Greenwood P. O. and Telegraph Office,



17 FIRST-CLASS YOUNG SHORTHORN BULLS

Big, Good and in Fine Form. Also cows and heifers of various ages. All of which will be sold at moderate prices.

Berkshire Boars and Sows for Sale

SEND FOR CATALOGUE. Claremont Station, C.P.R. Pickering Station, G.T.R. -om

FOR SALE! Good Young Cows

two years old, yearlings and heifer calves out of imported and home-bred cows, and the imported bulls, Royal Member and Rantin Robin. Come and see them, or write, if you want something special.

H. CARGILL & SON, Station on the farm. Cargill Sta. & P.O., Ont.

Spring Grove Stock Farm



Apply T. E. ROBSON, Ilderton, Ont.

Maple Lodge Stock Farm

ESTABLISHED 1854. SHORTHORNS—10 grand young bulls, from excellent milking dams; sired by the great show bull, Calithness =22065=.

LEICESTERS—A splendid lot of ram lambs and ewes. Both the open pen and pen bred by exhibitor came to our flock this year (1898) at Toronto and London. We had first-prize flock at Toronto and London in '95, '96, '97. We import and breed the best and have them for sale.

A. W. SMITH, MIDDLESEX COUNTY. Maple Lodge, Ont. -om

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 1,000-guinea ram.

-om J. T. GIBSON, Denfield, Ont.

Maple Bank Stock Farm

OFFERS—15 SHORTHORN BULLS with Scotch-topped pedigrees. Splendid reds and roans, and sired by Valkyrie 21806, and out of dams by Young Abbotsburn's Heir 15947 and Imp. Mariner 2720. Also a few good females of all ages and in good form. Farm one mile from depot. T. DOUGLAS & SON, Strathroy, Ont.

SHORTHORNS AND LEICESTERS!

AM OFFERING 4 SPLENDID YOUNG BULLS Two descended from Waterloo Daisy (World's Fair Dairy Test), balance Missie and Lady Jane strain, and by Keneller of York; as well as a FEW COWS AND HEIFERS equally well bred. Also 15 RAM and 15 EWE LAMBS by a Maple Lodge bred sire and registered.

F. MARTINDALE, YORK, ONT., Caledonia Stn., Haldimand Co.

8-SHORTHORN BULLS-8

Reds and roans, by St. Louis (a Morton-bred bull), and from our best cows reserved from sale. Also a few females of all ages. FITZGERALD BROS., Mt. St. Louis, Ont. -om

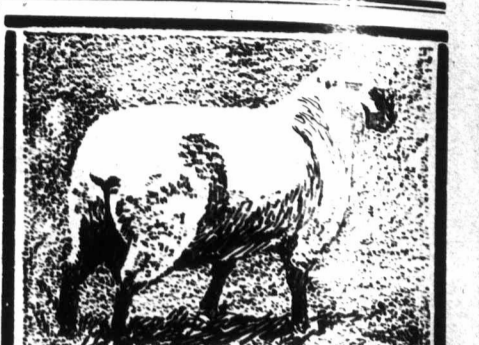
Shorthorns, Shropshires and Berkshires.

Indian Statesman =23004= at the head of the herd. 12 choice young bulls, and 15 two-year-old heifers and young cows forward in calf; 15 ram lambs, quality, got by Imp. Flashlight, and 12 choice yearling ewes, and Berkshire boars and sows of all ages.

W. G. PETTIT & SON, FREEMAN P. O., Farm 1/2 mile from Burlington Station, G. T. R.

6 Shorthorn Bulls

from 5 to 12 months old, of choice breeding. Apply to J. R. McCALLUM, Ilderton Station, Elgin County, Ont. -om



Persicatic Sheep and Animal Wash

For the complete and effectual removal of all insects or vermin peculiar to sheep and cattle. Powerful, without being harsh; immediate in effect, without any irritating effects; it leaves the animal refreshed and in good spirits after use; does more than destroy the pests, it completely removes all traces of their attacks—healing sores or boils, curing open sores and leaving the skin whole and sound. Mr. G. A. Brodie, a prominent stock-raiser of Bethesda, Ont., used it with great success in castrating lambs, the wash healing the wounds rapidly and keeping the maggots away. He considers it the most effectual wash in the market, and heartily recommends it to farmers generally.

If your dealer hasn't it, write us for it, and tell us of anything special in the ailments of your flocks or herds and we'll advise you how best to use it.

THE PICKARDT RENFREW CO. (LIMITED), Stouffville, Ont. TRADE MARK.

SHORTHORN CATTLE

Six tippy Scotch-bred young bulls; most of them fit to head first-class herds, and a number of good females for sale. Nice Barred Plymouth cockerels.

H. SMITH, Hay, Ont. Exeter, G. T. R., 1/2 mile. -om

2 Shorthorn Bulls 2

Of Canadian Duchoess of Gloster and Laverder breeding, from imported sires.

Thos. Allin & Bro. OSHAWA, ONT.

JAMES E. GAUNT,

ST. HELEN'S, ONTARIO, Is prepared to conduct public sales of pure-bred stock in all parts of the Province. Practical experience, combined with a thorough understanding of pedigrees and breeding.

Satisfaction Guaranteed. -om ASHTON FRONTVIEW FARM A. J. WATSON, CASTLEBERG, ONT.

Shorthorn heifers, by Statesman; and Berkshires 8 weeks old, by Baron Lee; also one Baron Lee boar 10 months old. -o

HAWTHORN HERD

OF DEEP MILKING SHORTHORNS. For sale: 4 young bulls of the choicest breeding and good quality, and from A 1 dairy cows. WM. GRAINGER & SON, Lonsdale, Ont.

4 SHORTHORN BULLS

from 5 to 18 months, by Elvira's Saxon 21624 and from Viola bred dams. -o R. MITCHELL & SON, Burlington Station, Nelson P. O.

"Gem Holstein Herd."

STOCK FOR SALE!

We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited.

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

HOLSTEINS FOR SALE

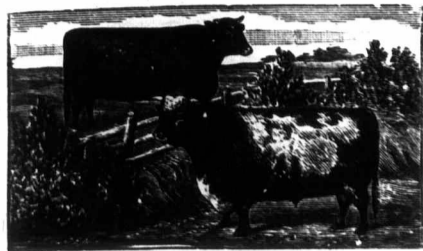
Do you want the blood of DeKol 2nd or Netherland Hengerveld? These two cows have produced more butter in seven days than any other two cows that have been officially tested. Their daughters are large producers. Sons of these two great cows head our herd. Animals of all ages and richest breeding. Come or write.

HENRY STEVENS & SONS, Lacona, Oswego Co., N. Y. -o

MENTION FARMER'S ADVOCATE

SHORTHORNS

OF THE
Crimson Flower and Minnie Strains



And from such sires as Scotchman 2nd, Duke of Lavender, Premier Earl, Indian Chief, and Clan Campbell. A few splendid young bulls ready now. Cotswold Sheep.

DAVID BIRRELL,

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Maple Hill Holstein-Friesians

BULL CALVES FROM

Queen DeKol 2nd, winner of Prince of Wales prize over heifers of all breeds in public test; Lady Akkrum 2nd, 67 1/2 lbs. milk in one day and 21 lbs. butter in a week; Kaaije DeBoer, 63 lbs. milk and 3 pounds butter per day at 14 years old; Marcona, 57 lbs. milk per day at 14 years old; Daisy Teake, dam of Daisy Teake's Queen, the great test winner. Finest cow I ever saw.

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BROOKBANK HOLSTEIN HERD

50—Champions for Milk and Butter—50 A number of desirable young BULLS on hand from one month to eight months old, from our great milkers. Write for just what you want. Females of all ages.

A. & G. RICE, Oxford Co., Ont. CURRIE'S CROSSING.

HOLSTEIN-FRIESIANS

of the very richest butter breeding and superior individuals for sale at Maple Grove Stock Farm. For breeding and particulars, address—H. BOLLERT, CASSEL, ONT.

2 HOLSTEIN BULLS 2

fit for service, by Father Tenson and Butter Boy 2nd, and out of Bollert-bred dams.

R. W. WALKER, UTICA, ONT. Shipping Stations: Port Perry, G. T. R.; Myrtle, C.P.R.

ONE FIRST PRIZE BULL

A. J. C. C. Sire King of Highfield, winner of 1st prize over all Canada; dam, St. Lambert's Kathleen, made 21 lbs. 3/4 ozs. of butter in 7 days; dam of King of Highfield, Signal Rosa May (22 lbs. all Canada 4 times), also dam of Unoma May (26 lbs. 4 ozs. of butter in 7 days, and 64 lbs. of milk a day).

J. H. SMITH & SON, Highfield, Ont.

4--JERSEY BULLS--4

Three Yearlings and a Calf, by Costa Rica's Son, and out of St. Lambert dams.

DAVID DUNCAN, Farm 9 miles from Toronto market. DON P. O., ONT.

BRAMPTON JERSEY HERD

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

B. E. BULL & SON, Brampton

A. J. C. C. JERSEYS FOR SALE!

Bulls fit for service, bull calves, heifer calves and young cows, from tested cows. Grand individuals. Prices right. Sire St. Lambert of Arcfoot, whose sire was 100 Per Cent.

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GLEN ROUGE JERSEYS.

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

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Breeder and importer of choice and fashionable

A YRSHIRES

From deep-milking strains Two bull calves for sale. Write or come to

Brook Hill Farm, Carr's Crossing, G.T.R., -om TROUT RIVER, QUE.

MEADOWSIDE FARM

J. YUILL & 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.

YORKSHIRE HOGS

Among them being the undefeated prizewinning boar, "LOOK ME OVER" 2602. Also Royal Duchess, a first prize sow at the Royal Show of England, in 1888, together with a choice lot of other sows. Young boars, fit for service, and pigs 8 weeks old, single or in pairs, not akin. We ship to order, prepaid express charges. Guarantee stock as described.

D. C. FLATT, - MILLGROVE P. O., ONT.

PRIVATE SALE OF THOROUGHbred DURHAM CATTLE.

Owing to a change in their business, the farm having been rented for the past five years, JOHN MORGAN & SONS, of Kerwood, Ont., have decided to offer by private sale, for the next three months at Special Rates, the following desirable animals:—10 very choice Young Bull Calves, from 3 to 12 months old; also 12 Cows and a number of choice Heifers, all superior stock. The young stock were all bred from Vice-Rogent, by Imported Aberdeen, one of the best stock bulls in Canada. Call and see the stock at once, and secure first choice. Terms made known on application. JOHN MORGAN & SONS, KERWOOD, ONT.

GUERNSEYS.

The greatest of dairy breeds; good size; hardy, persistent producers of the richest colored milk and butter when fed in the stable. A few young bulls and heifers from prizewinning stock for sale.

CHESTER WHITES.

The farmers' favorite; easy feeders, early maturers, good breeders, giving satisfaction bred as pure or as cross breeds. The largest prizewinning herd in America to select from.

DUROC-JERSEYS.

Easiest fed, easiest fattened; will do the best when fed on forage crops. Sweepstakes herd to select from. Seventy now for sale.

TAMWORTHS.

The ideal bacon hog; two boars fit for service; 10 sows (bred); some prizewinners included. Write

WM. BUTLER & SONS, Dereham Centre, Ont.

CHOICE AYRSHIRES and POULTRY for sale!

A number of fine Ayrshire Bulls fit for service, sired by Jock Morton, and from heavy-milking dams, and a few heifers. Also, choice birds in Barred Rocks, Black Spanish, and Romen and Cayuga Ducks.

JAS. McCORMACK & SONS, Rockton, Ontario.

GLENGARRY STOCK FARM AYRSHIRES ARE STILL TO THE FRONT!

Orders taken for young stock. Specialty in bull calves. Correspondence solicited.

John A. McDonald, Jr., WILLIAMSTOWN, - ONTARIO.

CHOICE AYRSHIRE BULLS FROM IMPORTED STOCK.

We offer for sale Six (6) Bull Calves, from 4 to 11 months old; good individuals, and from the very best milking strains obtainable in Scotland.

Thos. Ballantyne & Son, "Neldpath Stock Farm," STRATFORD, ONT. Farm adjoins city, main line G. T. R.

South Brant Stock Farm

T. BROOKS & SONS, BREEDERS OF HIGH-CLASS AYRSHIRES, IMPROVED CHESTER WHITES, AND PURE TAMWORTH PIGS.

Young stock in these three lines for sale. Male or female. Breeding right, stock right price right. T. BROOKS & SONS, Box 329, Brantford, Ont.

AYRSHIRE CATTLE.

KAINS BROS., BYRON, ONTARIO (London Station), now offer some choice females from prize-winning sires and dams, and of a strict business type. Prices right.

AYRSHIRES!

Descended from high-producing dams, bred by Norton & Son, and equally well-bred sires. A few splendid young females now ready.

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GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.

Address: SYDNEY FISHER, Alva Farm, Knowlton, P. Q.

Ingleside Herefords.

UP-TO-DATE HERD OF CANADA!

Tamworths Berkshires.

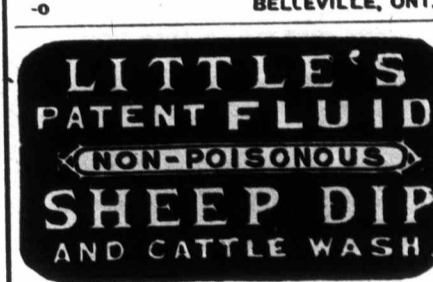
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Non-Poisonous Fluid Dip.

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large stockmen.

FOR SHEEP:

Kills ticks, maggots; cures scab, heals old sores, wounds, etc.; and greatly increases and improves growth of wool.

CATTLE, HORSES, PIGS, ETC.:

Cleanses the skin from all insects, and makes the coat beautifully soft and glossy. PREVENTS the attack of warble fly. HEALS saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

NO DANGER; SAFE, CHEAP, and EFFECTIVE.

BEWARE OF IMITATIONS.

Sold in large 75c. Sufficient in each to make time at 75c. from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

Sold by all druggists. Send for pamphlet.

Robt. Wightman, OWEN SOUND, ONT.

Druggist, Sole agent for the Dominion. -om

AT FAIRVIEW FARM ARE A FEW OF THE BEST SHROPSHIRE

RAMS, RAM AND WIVE LAMBS, AS WELL AS PIGS THAT HAVE BEEN BRED TO NOTED PRIZEWINNING RAMS. WRITE ME FOR PRICES.

John Campbell, WOODVILLE, ONT.

Shropshire Sheep, Chester White Hogs, BRONZE TURKEYS

W. E. WRIGHT, - GLANWORTH, ONTARIO.

W. S. HAWKSHAW & SONS, Glanworth, Ont.

Shropshire Sheep, Tamworth Swine, Mammoth Bronze Turkeys. Quality assured. Write for particulars.

SMITH EVANS, Gourrock, Ont.

Breeder and importer of registered Oxford-Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited. 6-1-y-o

HENRY ARKELL, ARKELL, ONTARIO,

Importer and Breeder of OXFORD DOWN SHEEP Imported and Canadian-bred rams, yearling ewes and ewe lambs for sale. Prices reasonable.

JERSEYDALE FLOCK OF DORSETS

Is the most celebrated flock of prizewinners on the continent. Stock always on hand for sale.

JOHN A. MCGILLIVRAY, - UXBRIDGE, ONT.

LEICESTER RAM LAMBS

C. & E. WOOD, - FREEMAN P. O. Burlington Station. -o

Large Yorkshires!

OF HIGHEST QUALITY.

LEICESTER RAM LAMBS

IMPORTED and Canadian boars and sows of all ages. My stock of hogs is larger and better than ever. The best quality of bacon hogs to be purchased in England are now in the Oak Lodge herd. Write for prices.

J. E. BRETHOUR, BURFORD, BRANT CO.

Dorsets and Chesters

Sheep of all ages and both sexes. Boars five to twelve months old.

R. H. HARDING, THORNDALE, ONT.

SPECIAL OFFERING FOR 30 DAYS Shropshire rams, 120 to 150 lbs.—\$10 to \$12; Yorkshire sows in farrow, \$12; Yorkshire and Berkshire boars ready for work, \$12; 6-weeks pigs, \$5.00. All stock shipped C. O. D., and all registered.

W. R. BOWMAN, Mount Forest, Ont.

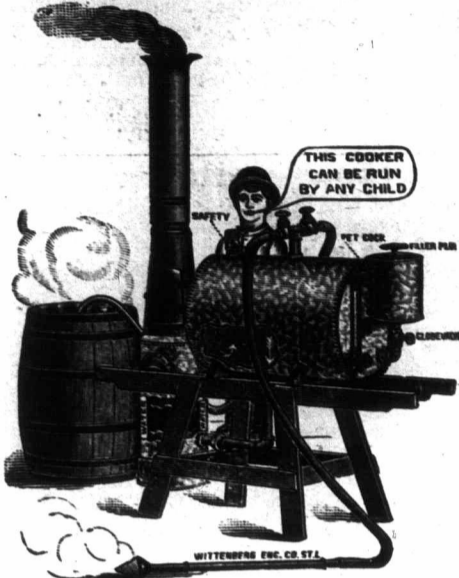
SCABBY SHEEP. \$5000 REWARD

To any party who can produce a scabby sheep which the Lincoln Dip will not cure. Write for particulars. Lincoln Sheep Dip Co., 855 Elliott St., Bldg., Buffalo, N. Y.

Canadian Office: WEST CHEMICAL COMPANY, 15 Queen Street East, Toronto. -om

...RELIABLE...

Feed Cooker, Tank Heater and Steam Generator.



HURRAH!! HURRAH!!

We again prove our claims by taking Medal and Diploma at the Omaha Exposition. This is the Cooker that sells on its merits, and we guarantee it to do all we claim.

WHY OUR COOKER IS THE BEST ON THE MARKET.

- 1. It is constructed on scientific principles. 2. It is constructed of boiler steel, and will last for years. 3. It has no flues to leak or burn out if water gets low.

WHAT THEY THINK OF IT.

Woodland Farm, Hall's Ferry, R. I., April 28th, 1898. GENTLEMEN:—The cooker bought of your agent some time since is giving perfect satisfaction. My cows give over 50 per cent. more milk while being fed on cooked feed than on raw. I will never regret the purchase.

RIPLLEY HARDWARE CO.,

Patentees and Manufacturers, 800 OAK STREET, GRAFTON, ILL.

YORKSHIRES AND COTSWOLDS!

Young Boars and Sows on hand now; also well-covered shearing and two-shear Rams, and half a dozen Ram Lambs.

R. HONEY, WARKWORTH, ONT.

GOSSIP.

B. H. Bull & Son, Brampton, breeders of Jersey cattle, write us that they receive many enquiries for stock from their advertisement in this paper and have made numerous sales.

Mr. John Isaac, Markham, Ont., announces in our advertising columns his intention to sell at his farm, on Jan. 11th, 30 head of imported Shorthorn cattle, selected from a number of the best herds in Scotland.

NOTICES.

The Rippley Hardware Co., of Grafton, Ill., place an advertisement in our columns of their "Improved Reliable Feed Cooker, Water Heater, and Steam Generator," for which they claim great merit.

The Canadian Airmotor, manufactured by the Ontario Wind Engine and Pump Co., of Toronto, has become so popular that the Company have found it very difficult to fill their orders.

THE NOXON BROS. MANUFACTURING CO.

The differences reported in some of the daily papers existing for some time in the Noxon Bros. Mfg. Co., of Ingersoll, Ont., have finally been adjusted and the company reorganized on a stronger basis.

Mr. Cotter has been identified with the Noxon Bros. Mfg. Co. for the past twenty-seven years and is thoroughly familiar with the details of the extensive business.

The Messrs. Ball & Ball are well-known throughout this country as County Crown Attorneys, as men of high standing in their profession, with wide and honorable connections.

The Noxon Mfg. Co. has an enviable reputation among the farmers, not only of Canada but in foreign lands.

Operations were resumed at the works on Monday, Nov. 7th, and we bespeak for the establishment a long continued era of success.

THE FARMER'S WIFE.

The cares of family, of the household, of the marketing cause sickness, weariness and nervousness among the women of the farm. A constant tired feeling, headaches, constipation, female troubles, etc. are common symptoms.

"I have been a sufferer for a number of years with stomach trouble, nervousness and similar complaints. Nothing seemed to be of any use to me. Reading some of the testimonials from people who had been cured through using Dr. Ward's Blood and Nerve Pills, I bought two boxes and began to improve almost immediately.

Dr. Ward's Blood and Nerve Pills 50c. per box, 5 for \$2.00 at druggists or mailed by THE DOCTOR WARD CO., Limited, Dept. F., 71 Victoria St., Toronto, Ont.

XXXXXXXXXXXXXXXXXXXX

Successful Farmers

Are those who best understand the science and practice of agriculture, and who transact farm business in a businesslike manner. The agricultural college teaches the one, the business college the other.

C. R. McCULLOUGH, Hamilton Business College, Hamilton, Ont.

Large Yorkshires

The grand YEARNING BOAR, Seymour Hero, has sired several litters of sixteen each. YOUNG BOARS fit for immediate service. YOUNG SOWS just bred, and several litters of young pigs just ready to ship of either sex.

ALEX HUME & CO., Menie P. O., Ont. Breeders of Agri-ees and Yorkshires.

AUTUMN OFFERING.

50 HEAD OF YORKSHIRE Boars and Sows

from six weeks to six months. Good quality. Also some lengthy Berkshire boars and sows, fit for service. Two Shorthorn bulls, 10 months old. Write for prices.

H. J. DAVIS, Woodstock, Ont.

I HAVE NOW A CHOICE LOT OF BERKSHIRES

7 months old, of both sexes, that I will dispose of. Remember, these pigs are prizewinners. Write for price, also for my new catalogue.

CHRIS. FAHNER, CREDITON, ONT.

English Berkshires

One boar 18 mos. old, bred by J. G. Snell, at a bargain. Several boars fit for service; sows ready to breed; young pigs of either sex; B. P. Rock cockerels. Write for prices.

H. BENNETT & SON, St. Williams, Ont.

ENGLISH BERKSHIRES AND CHESTER WHITES.

Young boars fit for service; sows ready to breed. Also young stock of either sex ready to ship.

CAMPBELL & MARTINSON, Near Lewisville, G.T.R. - Northwood, Ont.

English Berkshires.

Herd headed by three first-prize boars. Large size, strong bone, fine quality, and a choice lot of breeding sows. Orders booked for spring pigs.

GEORGE GREEN, Fairview P.O., Ontario. Stratford Station and Telegraph Office.

ROSE HILL FARM.

JAMES DORRANCE, SEAFORTE, ONT., BREEDER OF—

REGISTERED: BERKSHIRES

Of the most approved type. Choice young stock always for sale. Write at once and secure a bargain. 18-2-y-om

BERKSHIRES, BERKSHIRES, BERKSHIRES

My herd contains such blood as Baron Lee, Varna Duke, and other imported strains, with the celebrated sire, First Prize, at the head.

2-2-yo WM. McALLISTER, VARNA, ONT.

BERKSHIRES

In my herd there is such blood as Baron Lee, Dorset-Chieftain, and Windsor Supreme, and other noted strains.

GEO. N. HARRIS, LYNDEN, ONT.

FOR SALE!

Young BRONZE TURKEYS at \$1.00 per pair. PETER ARKELL, TEESWATER, ONT.

TAMWORTH AND CHESTER WHITE BOARS

fit for service. Sows ready to breed, and a choice lot of fall pigs now ready to ship at rock-bottom prices from the

sweepstakes herd at the leading exhibitions of Ontario and Quebec in 1897. We pay express charges to your station, and guarantee the safe arrival of all stock shipped. Pairs furnished not akin. Drop a card before buying elsewhere.

H. GEORGE & SONS, Grafton P. O., Ont.

E.D. GEORGE

PUTNAM, ONT. Importer and Breeder of Ohio Improved Chester White Swine

The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 14-2-7-0

CHESTER WHITES

Write me for particulars. The imported sire, John A. 751 and Nonsuch 910, at head of herd.

JOS. CAIRNS, LAMBTON CO. - CAMLACHIE P. O.

CHESTER WHITE BOARS

and Sows, 1 to 6 months, that are

BRED FORMED } RIGHT. HENRY HERRON, Avon P. O., Ont.

HEADQUARTERS FOR DUROC-JERSEY SWINE

Our herd secured nine of the first prizes out of the eleven offered at Toronto Exhibition, and a similar portion at London and Ottawa. We are justified in saying we have the best herd in Canada. First-class stock of all kinds for sale at all times. Address—TAPE BROS., RIDGETOWN, ONT.

Oxford Herd of Winning Poland-Chinas.

Having won the herd prizes at Toronto, London, Ottawa, and Brantford Fat Stock Show, we feel justified in stating that we are in a position to offer you what you may ask for from gilt-edge prize-winning stock. W. & H. JONES, M.T. ELGIN, OXFORD CO.

Spring Brook Holsteins and Tamworths

One yearling boar; 3 six months' boars ready for service, sired by imp. Nimrod; and a few young sows. Am booking orders for fall litters; have good ones; prices reasonable. A few calves for sale.

A. C. HALLMAN, Waterloo Co. NEW DUNDEE, ONT.

OAK HILL HERD OF TAMWORTHS.

For sale—young boars and sows, 3 and 4 months old, by Sandy 3rd and Nimrod and out of prizewinning dams; also young pigs. Prices reasonable.

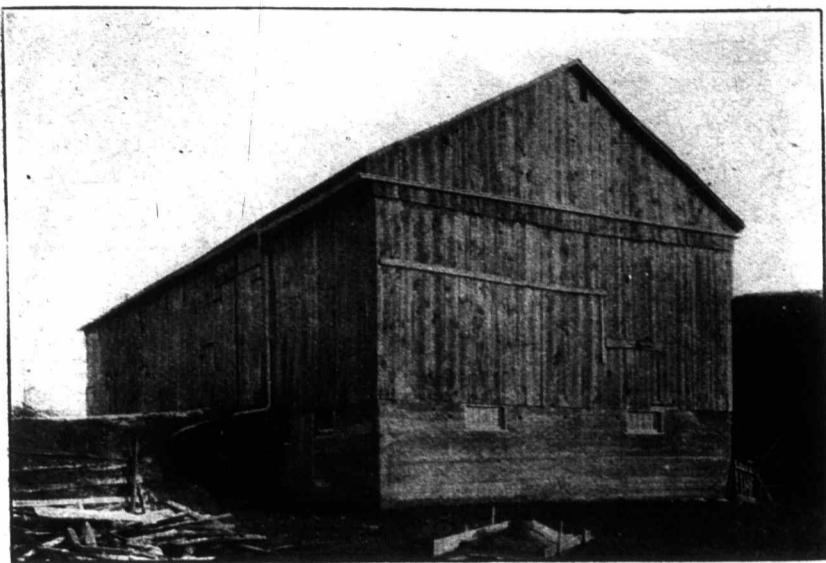
R. J. & A. LAURIE, -o WOLVERTON, ONT.

STRATFORD BROS., Brantford.

Tamworth boars, Dorset rams, Shetland ponies, Light Brahmas, Houdans, Cornish Indian Game, Black Langshans, White Langshans, White Plymouth Rock, Buff Plymouth Rock, Barred Plymouth Rock. Prices right.

H. C. Graham, Ailsa Craig, Ont., writes us that the Shorthorn bulls offered in their advertisement are fashionably bred, are in good condition and from good milking families. The Bronze turkeys offered are the admiration of all visitors and are a beautiful flock; the male at the head bred by Beatrice of Wilton Grove, and the females selected birds. Those shipped to order during the year have given entire satisfaction, and many complimentary letters have been received from purchasers.

THE Thorold Cement HIGH IN QUALITY. LOW IN PRICE. 56 YEARS IN USE.



BARN OF GEO. AXFORD, TALBOTVILLE, ONT. Size of Basement Walls, 34 x 88 x 9 feet. Built with Thorold Cement.

Estate of John Battle, Thorold, Ont.

DEAR SIR:—It is with pleasure that I testify to the good qualities of your Thorold Cement for building purposes.

During the past summer I have built a basement under my barn, 34 x 88 x 9 feet high from bottom of foundation; footing for foundation 18 in. thick; above the footing 12 in. thick. I used six parts of gravel to one of cement. I also built a cistern under the approach to the barn 8x18x7 feet high; wall around cistern 16 inches thick; arched over the top 10 inches thick.

The total cost of gravel and cement for the above work was \$108. The work was done under the direction of your Mr. Norval Hagar, who very courteously showed me how to do the work free of all charge, an advantage which I appreciate very much, as I consider him thoroughly master of the business.

I also put a floor into my cow stable, 32 x 57, 4 inches thick, in which I used 27 barrels of Thorold Cement. I used six parts gravel to one of cement. The floor is as hard as a stone. I consider both wall and floor better than I could have made of any other material, and much cheaper.

Yours truly, GEO. AXFORD.

FOR FREE PAMPHLET, WITH FULL PARTICULARS, ADDRESS ESTATE OF JOHN BATTLE, THOROLD, ONT. AGENTS WANTED IN UNREPRESENTED DISTRICTS.

W. C. EDWARDS AND COMPANY, IMPORTERS AND BREEDERS. Ayreshires, Jerseys, Shropshires, Berkshires. Shropshires and Scotch Shorthorns.

Our excellent aged herd of Ayreshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Lisgar Fogis of St. Anne's heads the Jerseys. The young stock are all from time-tried dams. A. E. SCHRYER, Manager.

We can be reached either by steamboat, the C. P. R., or C. A. R.: the C. A. R. making connections with the G. T. R. at Coteau Junction. Rockland is our station on all lines.

DENTONIA PARK FARM, EAST TORONTO (Coleman P. O.) W. E. H. MASSEY, Proprietor.

DENTONIA JERSEY HERD—Winners of the herd prize at both Toronto and London fairs this fall, also some thirty other prizes. The herd comprises fourteen head of imported cattle, many of them winners of valuable prizes on the Island; also some thirty animals carefully selected from the best Canadian herds. Heifer and Bull Calves, also good cows always on sale.

DENTONIA POULTRY YARDS—S. C. Brown Leghorn and Light Brahma Cockerels for sale.

DENTONIA TROUT PONDS—100,000 healthy fry ready for delivery this fall. Prices reasonable. Trout eggs in season. Market trout supplied on short notice.

Reg. Jersey Cattle for Sale

Table listing cattle for sale: 1 BULL, 14 months, solid color, a perfect picture, \$85.00; 2 YOUNGER BULLS, solid colors, \$40 to 75.00; 1 BULL, 3 months old, fawn and white, 35.00; 1 HEIFER, 14 months old, solid color, 100.00; 1 HEIFER, 9 months old, solid light fawn, 85.00.

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

There is No Doubt About the Merit of THE KEYSTONE DEHORNER KNIFE. It cuts both ways, does not crush. One clip and the horns are off close. Write for circular. The Keystone Dehorner Mfg. Co., Picton, Ont., Can.

GOSSIP.

In another column will be found an advertisement of the Ontario Provincial Fat Stock and Dairy Show, which promises to be more attractive and successful than on any previous occasion. Single passenger and freight rates have been procured for all those who wish to attend the exhibition.

Miss P. J. Caldwell, Const. vice, Ont., in sending change for her advertisement of Plymouth Rocks, writes that sales have been fairly good and prospects bright for more business. The cockerels she is offering are a splendid lot, and as she breeds nothing but B. P. Rocks, purchasers may be assured of obtaining first-class pure-bred stock.

The Minister of Agriculture for Newfoundland recently gave an order for 20 Shropshire 20 Horned Dorset, and 10 Southdown sheep, and one stallion, to be purchased in Ontario for account of the Government of the Province, in accordance with the policy of helping the farmers in the improvement of their live stock.

We are in receipt of Vol. XX. of the Ohio Poland-China Record, from the secretary, Mr. Carl Freigau, Dayton, Ohio, a handsome, substantially bound book of over 900 pages. Entries of boars are carried from 12,147 to 44,993 and sows from 103,596 to 109,578. It contains a vast fund of carefully compiled information for breeders of this great American breed of swine. The Association is prospering.

Four hundred unregistered and grade heifer calves, bred on a Texas range, and sired by Hereford bulls, were sold by auction in lots of ten head each, at Kansas City, Mo., Oct. 26th, at an average of \$37.50. If they had been the got of scrub bulls they would probably have sold for less than one-third of these prices, and would have cost as much or more to raise, and twice as much to feed into marketable beef, and never could have been made good enough to command higher than third-class prices.

Yearly report of business done by the American Aberdeen-Angus Breeders' Association in 1897-1898. Treasurer's report for the year ending October 31st, 1898: Total receipts, \$9,112.01; disbursements, \$3,722.67; receipts in excess of disbursements, \$5,389.34. The year has been one of singular prosperity. The demand for pure-bred Angus cattle has exceeded the supply. Over 6,000 names of purchasers of Angus cattle are now on the list of transfers of ownership maintained in the recording office. The secretary is Thos. McFarlane, Harvey, Ill.

The Oxford Fat Stock Club held their annual Christmas Fat Stock Show at Woodstock on Dec. 5th and 6th. The show is open to the Province, and the date being between those of the Brantford and Guelph 'shows makes it convenient for exhibitors, buyers and visitors to take in the three. The former shows under the direction of the Club have been very successful, and there is every reason to believe that this year's show will surpass all its predecessors, the prize list being more liberal and varied than in any former year. See their advertisement in this issue.

The Statistical Year Book of Canada for 1897, issued by the Department of Agriculture, and compiled by Mr. George Johnston, Dominion Statistician, of Ottawa, contains a vast fund of useful information conveniently classified for reference, including a summary of the history of the Dominion and dates of leading events. The volume contains over 550 pages, and is in two parts—the Record and the Abstract—the latter giving much information with regard to all matters of trade and commerce, and the departments of government, as well as of public, religious, social, educational and charitable institutions, and also a list of members of the various legislatures—Dominion and Provincial.

The American Shropshire Record Association reports receipts and disbursements for fiscal year ending Sept. 30th, 1898: Receipts (including cash on hand at date of last report, \$3,773), \$14,943, of which \$10,291 is for registrations and transfers. The disbursements amount to \$9,366, leaving a balance on hand of \$5,577. The business of the past year is reported the largest in the history of the Association, and 55 per cent. increased business for the year over the year previous.

W. F. Stephen, Trout River, Que., writes: "I have sold my other stock bull, Uncle Sam 6024 to Mr. Robt. McFarlane, Howick, Que. He has left me a choice lot of heifers, and I have been able to send out a lot of splendid young bulls. I have 30 cows in calf to him for the coming season, and already orders are coming in for bull calves. My young stock bull, Klondike, is doing splendidly, and is pronounced by all judges of Ayreshires. Some of my heifers are already in calf to him. My stock will go into winter quarters in fine condition, as our pasturage has been excellent during the past season. I have sold a large number during the past season, and have decided to sell no more females at present, unless at top prices, as I wish to build up again. In the showing we carried off quite a few red tickets and a few of the blues. See change of advertisement.

Wm. Butler & Son, Dereham Centre, Ont., in ordering a change in their advertisement, write that their herd of Guernseys are doing well and that the demand for this class of dairy cattle is increasing. The sweepstakes bull at the British Columbia Provincial Exhibition this year was from their herd and was a first prize winner at Toronto in 1897. The two-year-old bull, King of Maple Hill, winner of first and sweepstakes, Toronto, '97, and first at Toronto and Ottawa, '98, a perfect model of a dairy bull in conformation, color, and breeding, is offered for sale on account of being related to more than half the herd. Records of cows offered for sale are as follows: Irma, silver medal cow, Toronto, '96, 70 lbs milk and 3 lbs butter; Lady Suke, 6,000 lbs of 5% milk in 1897; My Fancy of Sedgfield, 2 lbs. butter daily before she was two years old; Phyllis Lassie, first prize three-year-old, Toronto, '98, 35 lbs. per day of 5% milk; Etta of Sunny Springs, 1st in Montreal, '97; heifer calf, first in London. Are making up a carload of cattle and pigs for the Northwest, having a number of orders. Have a fine lot of Chester Whites and Duroc-Jerseys, all ages and both sexes, including 30 young sows bred to high-class boars.

BELLEVILLE BUSINESS COLLEGE

Bogle & Jeffers, Proprietors.

The business training given at this College is Specific and Thorough—none more so.

DEPARTMENT I.—Comprises Bookkeeping—double and single entry—in its various applications, Business Papers and Customs, Calculations, Business Writing, Business History and Geography.

DEPARTMENT II.—Comprises Office and Court Work.

DEPARTMENT III.—Comprises Precise Writing, Statistics, English and French Options.

This College is OPEN THROUGHOUT THE YEAR. Students may enter at any time.

J. FRITH JEFFERS, M. A., Principal.

Write for Calendar. Be careful to address in full BELLEVILLE BUSINESS COLLEGE,

BELLEVILLE, ONT.

DO YOU WANT TO INCREASE YOUR MILK AND BUTTER YIELD FROM 10 TO 25 PER CENT. WITH LESS FEED AND LESS TROUBLE, BESIDES HAVING A BETTER PRODUCT? WOULD YOU LIKE TO SEE THAT OLD RUN DOWN HORSE THAT YOU WANT TO SELL BUT CAN'T, LOOK, FEEL AND ACT LIKE A COLT?

If so, get a pall of "Pearce's Canadian Stock Tonic,"

and use it according to directions. You will be surprised and pleased with the results. If your dealer does not keep it, send to us for full particulars and a sample of the "Tonic." These will be cheerfully sent by

JOHN S. PEARCE & CO., The Canadian Live Stock and Poultry Supply House,

LONDON, ONTARIO.

1898 SWEEPSTAKES HERD OF TAMWORTHS AT TORONTO & LONDON.

Sows in pig and sows ready to breed. Young stock of both sexes by my sweepstakes boar, Amber Luther 215; out of prizewinning sows.

JOHN C. NICHOL, Hubrey, Ont. Express Office: London.

TAMWORTHS

My stock was founded on Hallman & George bred females, with Spruce Grove Model 465 at the head. Young boars and sows now ready for shipment, and other sows to farrow.

R. O. MORROW, - HILTON P. O. NORTHUMBERLAND CO.

TAMWORTHS—THE PACKER'S CHOICE.

Sows in pig, and sows ready to breed. Boars ready for service, and fifty head from six weeks to five months. Orders booked for fall pigs from 14 cows and 4 boars. Prices right.

JOHN J. H. SIMONTON, Box 304, CHATHAM, ONT.

FOUR MONTHS 3 TAMWORTH BOARS 3

By a Bell-bred boar, and out of an O. A. C. bred sow. Prices right.

JOHN PULFER & SON, BRAMPTON, ONT.

Harding's Sanitary Iron Hog Trough



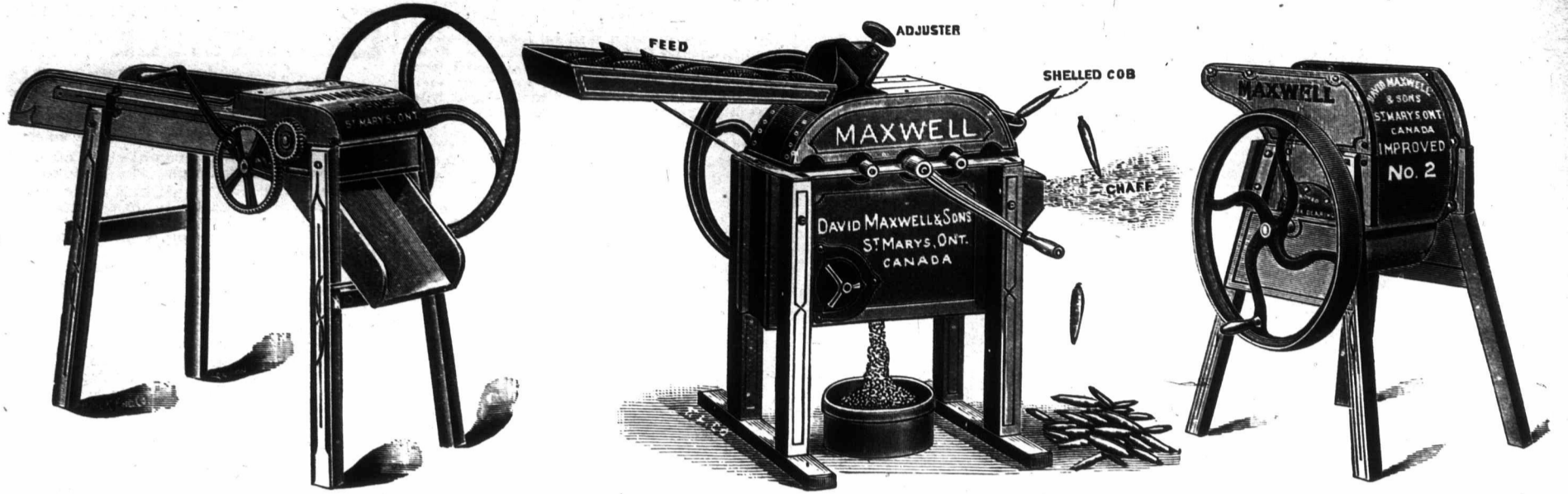
IS INDESTRUCTIBLE, PORTABLE, SANITARY, CHEAP,

and answers all requirements of a desirable Hog Trough. One price only, 60 cents per foot.

VOKES HARDWARE CO., Limited, 111 Yonge St., Toronto.

POULTRY!

Good breeding cockerels of Barred and White Rocks, White Wyandottes; also a few yearling Dark Brahma Hens, at \$1.50 each. Write A. J. GEORGE, 52 Clarence St., London, Ont.



David Maxwell & Sons

St. Mary's, Ontario, Canada,

Manufacturers
of

High-Grade Farm Implements:
Binders, Reapers, Mowers, Hay Rakes, Hay Loaders, Hay Tedders, Disk Harrows, Scufflers, Turnip Sowers, Turnip Slicers and Pulpers, Cider Mills, Hand Straw and Corn Cutters, Lawn Mowers, Churns, Wheelbarrows, and Corn Shellers, Iron Jacks, Riding Plows, etc. Agents wanted in all unoccupied territory.

SEND FOR CATALOGUE.

BARRED PLYMOUTH ROCKS (Exclusively)

A number of extra good cockerels for sale, bred from imported stock. \$1.00 and \$2.00 each. Breeding pen (4 hens and a cockerel), \$1.50; also a few pullets at \$1.50 per pair. Write for particulars, enclosing stamp if convenient.

MISS P. J. COLDWELL,
CONSTANCE, HURON CO., ONT.

BRONZE TURKEYS

Up till January 1st, we offer choice young Bronze turkeys (Bell's strain) at bargain prices. Also, a few Barred Plymouth Rock and Silver Laced Wyandotte cockerels.

JAS. S. HENDERSON, ROCKTON, ONT.

H. G. GRAHAM, AILSA CRAIG, ONT.

Offers for sale Bronze turkeys of good breeding, size, shape and markings. Prices, until Dec. 10th, male \$3, female \$2, pair \$1, trio \$5.50. Also, SUPERIOR SHORTHORN BULLS.

EMBDEN GEESE, Pekin ducks, Bronzes, White, Holland, and Arragansell turkeys, Cattle dogs and Oxford sheep, all of the best strains. Have on hand some fine Oxford ram and ewe lambs; also some good ducks, turkeys and geese.

AND. ELLIOT, POND MILLS.

Poultry.

L. and D. Brahmas, B. and W. Rocks, S. and W. Wyandottes, Black Minorcas, Indian Game and Red Caps. Young stock and eggs from above breeds. Eggs, \$1.25 for 15; \$2 for 25. Satisfaction guaranteed.

JACOB B. SNIDER, Corman Mills.

FOR SALE AT REASONABLE PRICES—12 Buff Coochin Cockerels, 12 Barred Plymouth Rock Cockerels, 12 White Leghorn Cockerels, 20 Pekin Ducks.

All are selected birds, and will be sold cheap. We also offer a fine litter of Tamworth swine. W. R. GRAHAM, Bayside, Ontario.

BARRED PLYMOUTH ROCK COCKERELS

of Shoemaker strain. Also a few Bennet-bred Indian Games.

H. G. GEE & SONS,
HALDIMAND CO. FISHERVILLE, ONT.

BRONZE TURKEYS FOR SALE.

To make room will sell up to 15th Nov. next, first-class Bronze Turkeys (hatch of 1898) at \$1.50 per pair. Can furnish them not akin.

JAMES TOLTON, Walkerton, Ont.

Silver and Golden Wyandottes

From imported stock and prize-winners at Boston and Madison Square.

Pekin ducks. JAS. LENTON,
Park Farm, OSHAWA

Send 15c. for Poultry Annual and Almanac for 1898 to C. G. Shoemaker, Freeport, Ill., U.S.A.

YOUR CASH ACCOUNT

will be much larger in the end for a course of study that will increase the value of your work many times. Success guaranteed. Best and simplest text books free. Courses in

BOOK-KEEPING

Bridge, Steam, Electrical or Civil Engineering; Mathematics; Chemistry; Mining; Architectural or Mechanical Drawing; Surveying; Plumbing; Architecture; Metal Pattern Drafting; Prospecting; Shorthand; English Branches

TAUGHT BY MAIL

Circular free. State subject you wish to study. \$2.00 a Month

NIMMO & HARRISON

Business and Shorthand College.

I. O. O. F. Building, 2 College St., Toronto.

Thorough, practical, up-to-date courses:

COMMERCIAL SHORTHAND, TYPEWRITING, ENGLISH, CIVIL SERVICE. Individual instruction. Call or write for free information.

GOSSIP.

W. B. Smith & Son, Holstein-Friesian breeders, of Ohio, offer \$35 in cash prizes in addition to badges for judging dairy cattle, to the students of the Ohio State University. Thirty students will compete.

The noted trotting stallion, Directum, was bought last week by W. E. Spiers, of Glens Falls, N. Y., from the California parties who previously owned him, for \$30,000 in gold coin. The horse, now eight years old, proved himself the champion four years ago, ending a great season on eastern tracks by reducing the world's trotting stallion record to 2.05%. He was bred by the late John Greene, of Dublin, Cal., and is by Director; dam Stemwinder, by Venture.

"THE SMITHFIELD OF CANADA."

The promoters of the Guelph Fat Stock Show to be held on December 6th, 7th and 8th, have taken time by the forelock by inviting the new Governor-General, Lord Minto, to open the exhibition. It will be the seventeenth annual show, and bids fair to eclipse all its predecessors. A handsome regular cash prize list for cattle, sheep, swine, live and dressed poultry is offered, besides a large number of valuable specials and many handsome trophies. Visitors to the show will have the opportunity of seeing the Ontario Agricultural College, and attending the annual gathering of the Ontario Experimental Union, to be held concurrently with the show. The Ontario Beekeepers' Association meets in the city hall, Guelph, on December 7th, 8th and 9th. Copies of the prize list, rules, etc., and any other information desired may be obtained from the secretary, Mr. John McCorkindale. The show is under the auspices of the Guelph Fat Stock Club, the South Wellington Agricultural Society, and the Guelph Poultry Association, and has an enterprising set of officers.

NOTICES.

LABOR-SAVING MACHINERY.

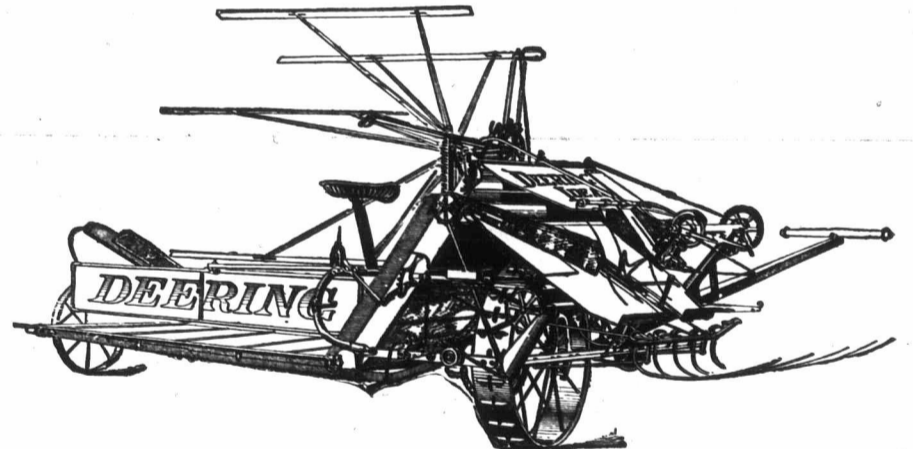
The cut in the advertisement elsewhere of the Folding Sawing Machine manufactured by the Folding Sawing Machine Co., Chicago, Ill., gives a very correct idea of this useful and labor-saving implement. Every man who has had any experience knows of the slavish labor connected with the sawing of wood or timber by the old method. It is not only most laborious work, but it is also very slow. This machine obviates these two great difficulties in sawing wood either for private or commercial use. The makers claim for it the following advantages: "It will saw down trees in any position on any kind of land; adjusts itself to all kinds of slants and angles, and is of particular advantage on the hillside; saves always the labor of one man in cross-cutting logs; it folds up into a neat package, easily carried; it enables one man to saw as much wood in one day as two men can saw in any other way. No matter at what angle the machine works the man always stands erect; there is no stooping or bending of the back." Constructed of the best and most durable material throughout. Those of our readers who have wood to saw, either for their own use or to sell, should correspond with the Folding Sawing Machine Co. They will send you a large illustrated catalogue fully illustrating the machine and giving the endorsements of many users if you ask for it.

A VALUABLE PREPARATION.

Mr. Joseph W. Barnett, manager for W. C. Edwards & Co., "Pine Grove Stock Farm," Rockland, Ont., writes as follows: "I have been using Little's Sheep and Cattle Wash for some time, and I find it all that can be desired as a wash for sheep, cattle, etc. It not only cleanses the animals from all vermin, but can be used for so many different purposes. A year ago last August we had some sheep so badly torn by dogs that we thought there was no hope for them, but by taking them to the pen and treating them regularly with your Wash, the flies were kept off, and the wounds soon commenced to heal, and they did splendidly. A few weeks since we had a colt commenced with the Thrush, and after cleaning the foot, and using two or three applications of the Wash, it was completely cured. I can heartily recommend Little's Sheep and Cattle Wash to my fellow breeders and stock-raisers. Little's preparation, for which Robert Wightman, druggist, Owen Sound, Ontario, has the Dominion agency, is also an effective remedy for internal use in case of worms, etc., in stock."

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