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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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## EDITORIAL.

A wealthy Englishman, Mr. John Corbett, has donated £50,000 for the establishment of an agricultural school in Worcestershire.

Mr. Octave Ouellette has been appointed Secretary of the Council of Agriculture for the Province of Quebec, in place of the late Mr. Ed. A. Barnard.

Steps are being taken in England to organize an association of agricultural and horse shows, in order to avoid the clashing of dates, to arrange for uniformity in prize colors, and to take a common line of action regarding exhibitors and attendants who "misbehave" or transgress regulations.

The Fat Stock Shows which commence with the Provincial at Brantford, Nov. 30th to Dec. 2nd, to be followed by the Oxford Club Show at Woodstock on Dec. 5th and 6th, and the Guelph Show on Dec. 6th, 7th and 8th, promise to be of greater interest than ever before.

Commenting on the lessons of the recent British dairy shows, the *Scottish Farmer* says: "They teach something regarding milk yields and butter tests, and they also suggest reflections on the different breeds of cattle. There is no best breed, but there is such a thing as a serviceable general-purpose breed."

Hereafter all horses at the English Royal Shows are to be subjected to veterinary examination before being allowed to gain a prize, and must be pronounced free from indications of hereditary unsoundness. Hitherto the rule has only applied to stallions and brood mare, but now the rule applies to animals of all ages in the breeding classes.

Mr. Duncan McEachran, Chief Live Stock Inspector for the Dominion, as a result of his observations at British ports of landing while on a visit there during the past season, came to the conclusion that our beef cattle, compared with others, are degenerating for want of fresh blood, and says that something ought to be done to encourage more importations of pure-bred bulls. The Argentine stockmen have been the most extensive purchasers of British pure-bred stock of late years, and their cattle as a result show great improvement on reaching the British markets. "To get the benefit of our nearness to the English market," concludes the Doctor, "we must produce cattle of the most improved and most profitable breeds."

The *Iowa Homestead*, in discussing the bacon hog question from the Western States point of view, says: "With supplies of the various breeds as they are, we believe that, under a favoring environment and favorable feed conditions, where a bacon hog is desired it would be easier, cheaper and quicker to develop him from one of the existing breeds that are plentiful than it would to multiply bacon hogs from one of the breeds, the conformation of which is at the moment more favorable to the purpose, but which are comparatively scarce. We believe, further, that it is vain to attempt, with any stock, to grow the bacon hog unless favorable environment and favorable conditions are supplied." The *Homestead* believes that in those western localities where barley, peas and alfalfa do well, there will be a tendency toward the bacon hog. The successful experience of the Dominion, however, would go to show that slow progress will be made without the aid, to begin with, of the prevalent modern Canadian type of bacon animal, the characteristics having been fixed by a long, persistent and intelligent course of breeding, backed up by our system of feeding and general management.

### The Production of Linseed.

It has been a matter of surprise to onlookers interested in the trade of Canada, that so much money is sent from the Dominion to England to pay for linseed oil, when we have a hundredfold more acreage than enough to grow within our own borders all the seed for the linseed oil that is wanted. Its principal uses are for the manufacture of paints, varnishes, floor oilcloths, etc. The *FARMER'S ADVOCATE* has been making inquiry into this matter, and finds that the total consumption of linseed oil in Canada is about 28 000 barrels of 50 gallons each, representing 1,400,000 gallons, which, taken at 18 bushels to the acre, and 2 gallons of oil to the bushel, shows a required area of about 40,000 acres to produce the oil wanted in Canada. According to Government reports the flax-growing area approaches 30,000 acres, but this does not appear to be realized, for the importation of oil continues to go on heavily. Imported oil is crushed from seed grown partly in India and partly in South America, and it seems strange that seed grown in these countries can be imported to England, crushed, and the oil shipped into Canada, where there is a protection of 25 per cent., less one-quarter, in favor of the home-grown seed. We observe that several shipments of Dakota and other Western linseed went to England recently, part of which is quite likely to be re-imported, in the form of oil, to the Dominion.

The principal growers of linseed in Canada at present are the Mennonites, and others in Southern Manitoba, the farmers in what may be called the German district of Canada around Baden, Ont., and in Perth county. That there is a ready market available for much larger quantities of seed than is grown is abundantly evident; it is, moreover, a market which is not subject to the violent fluctuations that apply to wheat and other products. The average price obtainable for seed in Western Ontario is about 75 to 80 cents per bushel, and in Manitoba about 70 cents, though it has been over \$1.00; the fiber also can be marketed for various purposes.

Flax-growing is looked upon as drawing somewhat heavily upon the soil, and many complained in past years of being furnished unclean seed, causing weed growth, but the latter difficulty could easily be overcome. The Dingley tariff checked the export of flax products to the United States, by putting \$5 per ton on dressed flax, 3 cents per lb. on hatched flax, and 1 cent when not hatched, each of which were formerly free; and increasing the duty on seed from 20 cents to 30 cents per bushel; but with a paying price at home the latter cuts no figure in the question. Hand-pulling, practiced where the fiber is an object, does not seem to agree with the average Canadian backbone, but in Western Ontario a good deal of this work is done by Indians. In Manitoba the common plan is to cut flax with the binder the same as ordinary grain, and the threshing machine is easily adjusted to separate the seed from the straw.

The climate of Canada is peculiarly adapted to the cultivation of flax seed; indeed, we are informed by consumers that Canadian is the finest oil they can buy. It does seem a loss of revenue to Canada that she should be obliged to draw her supplies from other countries when her own producing capacity, if taken advantage of, would more than meet the requirements of her home consumption. It has just been reported that a company is presently being organized with ample capital to crush linseed at Montreal, and we understand that it is their intention to import American seed, which comes in duty free, until the Canadian farmer grows the necessary supply.

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

### Going into Winter Quarters.

The change from pasture to winter feeding is always a critical experience for farm stock, and calls for the exercise of good judgment and practice on the part of the stockman.

The temptation to delay the commencement of winter feeding as long as possible is apt to be yielded to by the average farmer, who, mayhap, finds himself pressed with many jobs requiring attention before Jack Frost calls a halt by a seizure of the soil, and the stock are left to shift for themselves till the snow becomes too deep for them to find a living, when they are hustled into perhaps unprepared quarters, and for days, it may be weeks, kept solely on dry feed before settling down to normal winter rations, which on most well-conducted stock farms include a fair proportion of roots, ensilage or other succulent food calculated to keep the animals in a healthy and thrifty condition. All experienced feeders know it is truer economy to hold the flesh and weight gained than by carelessness to allow shrinkage to take place, which occasions loss of time and of money value in regaining what has been lost, while in some cases temporary ailment, and in others permanent or fatal disease, may result from undue exposure. We take it that, as a matter of course, on all well-regulated farms the milking cows have for many weeks been stabled at nights and fed a liberal ration in addition to what they have picked on the pastures during the day, for it is well known that milk-secretion shrinks rapidly if the animals are left out when night frosts prevail and chilly winds blow, and that it is difficult, if not, indeed, impossible, even by patient and persistent coaching, to bring back the normal flow. Not only the cows, but all young cattle, and especially those to be fed for beef during the winter, should be taken up in good time, before commencing to fail, and fed light rations of bulky food, with a little bran and a few roots to keep them thriving until regular winter feeding is adopted.

The working horses, which have received regular exercise and full feed while plowing, until stopped by the frost, are apt to be left standing in the stables when farm work ceases, their regular feed being continued, which is liable to cause constipation, swelling of the limbs, and blood ailment, which should be guarded against by lowering the diet, adding some succulent food (such as carrots or ensilage), and by turning them out for a few hours each day for exercise, if no teaming is on the tapis.

The sheep, which are usually the last of the stock to be housed (being, as a rule, left to find for themselves till the snow covers the grass so deeply that they cannot by scratching get a living), will pay for protection and more generous treatment by holding their flesh and increasing their growth of wool, and in view of this should have shelter from cold rains and drifting storms. Where shelter is not practicable, a daily ration of oats and bran, given in troughs in the field, will go far towards maintaining flesh and thrift. The thoughtful shepherd will not forget at this season to examine the flock for evidences of skin disease and of ticks or lice and make timely preparation for combating those enemies of the health of the flock. Experience has taught us that it is safer to treat for these troubles at the beginning of winter, whether the indications are there or not, believing that prevention is better than cure and that the labor and expense will be repaid a hundredfold in the thrift of the sheep and the weight and quality of wool produced; while if it is neglected and scab or vermin find a footing towards lambing-time, treatment will be found inconvenient, if not almost impossible, and weary months of suffering by the sheep and of shame by the shepherd must be endured before relief can come by the way of the shears and the dipping tank, while a depreciated flock is the inevitable outcome.



## THE FARMER'S ADVOCATE AND HOME MAGAZINE

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### Poultry Fattening in England.

All who in any way are concerned in the growth of Canadian poultry-rearing will peruse with special interest the letter from one of our English contributors, who recently visited several farms where this industry is made a specialty, in order to make a study of their methods for the benefit of our readers. There was a time, doubtless, when the keeping of one breed (the Game fowl), for sporting purposes, monopolized a large share of attention, but now the main idea is the economical value of poultry as furnishers of food in the shape of flesh or eggs. We on this continent are setting about the business in a more energetic manner; hence the special interest attaching to the English letter published in our Poultry Department, in which a good many useful suggestions are made. In it attention is again called to the all-important fact that if large success is to be attained great care must be taken in the initial stages of the industry, such as breeding the right class of fowls. Our poultry breeders have the proper foundation stock, but it is upon the general run of farms that the greatest improvement must be made, because from them the supply for home use and export is drawn. Breeds such as the Plymouth Rocks and Wyandottes appear to be in high favor at the English establishments referred to, but others have their admirers, and our correspondent notes the special popularity of the Dorking-Game cross. In Canada the Brahma holds a higher place than it does, according to our correspondent, in England. Several other crosses are described, and he lays much emphasis upon the profitableness of cross-bred birds as flesh-producers. The aim is to get a plump, compact, fine-boned bird, with a good meaty breast and leg, with white flesh and white, clean legs. The "nice yellow legs" that some of our breeders talk about are apparently not the proper thing about Old London. The cramming system, described and illustrated in our issue for Nov. 1st, is reviewed at length, in actual operation. The birds are put in at about four months old and fattened in from three to four weeks, being fed three times daily with a mixture of ground oats, sour milk, and fat. By means of a machine, as many as 200 have their crops crammed per hour by an expert attendant with a boy to assist him! While companies or individuals of large capital may embark in such enterprises, we wish to see a general advance in farm poultry-keeping. One feature of these big English fattening concerns is that they do not breed their own birds, but buy them, and it may be that they make more profit than the farmer who raises them. As a general system, we would advise our farmers to do their own fattening, which, in the meantime at all events, they can do on a more modest plan than cramming thousands of birds by machinery.

### ATTENTION!!

**Of Inestimable Value.**—EUSTACE SMITH, "Park Farm," West York, Ont., writes: "I enclose my subscription for the FARMER'S ADVOCATE for April, 1899. I have much pleasure in saying that without doubt your paper is of inestimable value to farmers, and I only wish I had known of it when I was managing Lord Aberdeen's ranches in British Columbia. It would have helped me there in many difficulties as it helps me now in my dairy farm. I get quite a number of English and Scotch agricultural papers, the *North British Agriculturist* amongst the number, and in my opinion, for practical facts and methods, your paper excels them all, and this is also the opinion of some eminent agriculturists in the Old Country to whom I regularly forward the FARMER'S ADVOCATE after reading it right through myself. It seems to me that every issue contains just the solution of the difficulty you were in."

**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, \$6.00; 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 Bagster'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.

### STOCK.

#### Influence of Food Upon Firmness of Bacon.

To the Editor FARMER'S ADVOCATE:

SIR,—the question of the influence of food upon the quality of bacon is an extremely important one. If we are to maintain our footing upon the English market, it is necessary that we should look carefully after the quality of our product, for it will be of little use to us to produce cheap bacon, if by so doing we ruin the reputation of our goods. For some years our packers have encountered more or less soft bacon, and it seems as though softness were on the increase, so that it is high time for us to look after our laurels in this matter.

Soft bacon does not mean fat bacon. In fact, observations during the present year indicate that softness is more likely to develop in hogs that are too lean than in those that are too fat. The softness develops while the bacon is in the salt, and when taken out of the salt the fat is soft and spongy, reducing the value of the bacon according to the degree of softness.

During the past summer, some experiments were conducted at the College with different foods and methods of treatment, in order to test their effect upon the firmness of bacon. The hogs were shipped to the Wm. Davies Co., Toronto, and the condition of the bacon from the different groups was carefully noted when it came out of the salt. Though the results constitute merely a beginning, they are not without value.

A table is given below, showing the number of sides in each group, the way in which the hogs were treated, the food given to each group, and the condition of the bacon as to firmness.

The terms used in the table require some explanation. Wiltshire bacon is made from well-fed hogs, weighing from 160 to 200 lbs. live weight. Cumberland bacon is made from lighter and, generally, leaner hogs, and the side is cut differently. Group I. is the only group in which all the hogs were heavy enough for "Wiltshire." When the tenderness is barely noticeable, the bacon may pass as "number one selection"; when there is decided tenderness, it must go into a cheaper grade; but a really soft side is of very little value.

TABLE GIVING DESCRIPTION OF GROUPS AND CONDITION OF BACON IN EACH.

Description of Groups.	Condition of Bacon.
GROUP I.—8 sides. Previous to experiment hogs had been running on stubble fields. Average weight at beginning of experiment, 118 lbs. Fed six weeks on corn meal and rape, and given two-thirds as much meal as Group II.	Wiltshires— 8 sides: firm.
GROUP II.—8 sides. Same previous treatment as Group I. Average weight at beginning of experiment, 107 lbs. Fed six weeks on corn meal.	Wiltshires— 6 sides: firm. Cumberlands— 2 sides: firm.
GROUP III.—8 sides. Same previous treatment as Groups I. & II. Average weight at beginning of experiment, 104 lbs. Fed six weeks on peas, barley and shorts, equal parts by weight.	Wiltshires— 4 sides: firm. Cumberlands— 2 sides: firm. 2 sides: tender.
GROUP IV.—8 sides. Hogs had no outdoor exercise from time of weaning. Previous to experiment were fed wheat middlings and shorts, with skim milk. Average weight at beginning of experiment, 160 lbs. Fed six weeks on peas, barley and shorts, with rape. Meal ration, two-thirds of that given Group V.	Wiltshires— 2 sides: firm. 2 sides: showing slight indication of tenderness. Cumberlands— 2 sides: firm. 2 sides: soft.
GROUP V.—8 sides. Same previous treatment as Group IV. Average weight at beginning of experiment, 94 lbs. Fed six weeks on corn meal.	Wiltshires— 2 sides: firm. Cumberlands— 6 sides: firm.
GROUP VI.—6 sides. Same previous treatment as Groups IV. and V. Average weight at beginning of experiment, 107 lbs. Fed six weeks on peas, barley, and shorts; equal parts by weight.	Wiltshires— 2 sides: firm. Cumberlands— 4 sides: firm.
GROUP A.—24 sides. Pure-bred hogs, comprising two hogs of each of six different breeds. Purchased when from 7 to 9 weeks old. Kept in pens with small outside yard. Fed wheat middlings from June 14th to Aug. 19th; barley and shorts, equal parts by weight, until Sept. 12th; peas, barley and shorts, equal parts by weight, until Oct. 21th.	Wiltshires— 4 sides: firm. 2 sides: showing inclination to tenderness. 2 sides: tender. 2 sides: soft. Cumberlands— 4 sides: firm. 8 sides: tender to soft.
GROUP B.—24 sides. Same as Group A. Same treatment and same meal ration as Group A, but fed whey with meal ration; about two lbs. whey to one of meal.	Wiltshires— 20 sides: firm. Cumberlands— 2 sides: firm. 2 sides: tender.
GROUP C.—22 sides. Same as Groups A and B, except that three unthrifty hogs were put into this group. Hogs ran in a half-acre lot during whole of experiment. Lot furnished some grass until about middle of August. Fed same rations as Group A.	Wiltshires— 10 sides: firm. 2 sides: very slightly tender. Cumberlands— 2 sides: firm. 8 sides: tender to soft. Decidedly superior to Group A.

A careful analysis of the results brings out some rather interesting points, but care must be exercised in drawing conclusions at this early stage of the investigation.

In the first place, it will be noted that the condition of the first three groups was generally satisfactory. All these hogs had received the same treatment previous to the experiment. It is scarcely probable that the tenderness developed in Group III. was due to the food, since only one hog was tender, while the remaining three were remarkably firm. Neither must it be assumed that corn cannot produce soft bacon, for it must be borne in mind that the hogs in these three groups were strong, fleshy hogs before the corn feeding com-



mened, and had had an abundance of exercise previous to the experiment. It is fairly safe to assume, however, that there is little likelihood that either corn or rape will injure hogs that have been reared in the manner that these hogs were.

Passing on to Groups IV., V. and VI., which all received the same treatment previous to the experiment, we find that tenderness is evinced in only one group, namely, that receiving peas, barley, and shorts, with rape. A logical conclusion would be that the tenderness is due to the rape, but a difficulty is encountered when we refer back to Group I., where rape produced no injurious results. Possibly the hogs in this group, having had no exercise, were more susceptible to injury from rape than those in Group I. There is need of further investigation on this point.

But the most striking comparisons are yet to be made. A glance at the condition of Group A shows it to be very bad indeed, while that of Group B may be called very satisfactory. The only difference in the treatment of these two groups consisted in feeding whey to Group B along with the meal ration and giving Group A only water and meal. The difference in firmness is so striking that we are forced to the conclusion that whey tends to produce firm bacon.

Again, Group C, though it can hardly be called satisfactory, is decidedly superior to Group A in point of firmness. Both groups received the same ration, but Group C had the run of a half-acre lot, while Group A had only the small yards outside the pens.

One more comparison remains. Until Sept. 12th, Groups IV., V. and VI. were fed practically the same meal ration as Group A, and were confined in pens with even less liberty than Group A. Previous to Sept. 12th, however, Groups IV., V. and VI. received skim milk with their meal ration, but after that date the ration of Group VI. was exactly the same as that of Group A, while those of IV. and V. were different. If Groups IV., V. and VI. are compared with Group A, it will be seen that their firmness is much superior to that of Group A, a condition of affairs which is difficult to account for on any other basis than that the superior firmness of these three groups is due to the skim milk which was fed previous to Sept. 12th.

A peculiar feature of the experiment is the greater development of softness among Cumberlands as compared with the Wiltshires. From this it would appear that softness is more likely to result from underfeeding and from marketing hogs too light and thin than from marketing more matured and heavier hogs, even though they may be too fat. If the comparison of Groups A and C is made on the basis of Wiltshire sides, there is a marked difference in favor of Group C, while in Cumberlands Group A has the advantage. In justice to Group C, it must be borne in mind that the most unthrifty pure-breeds were purposely put into this group because it was not used in comparing the gains made by the different breeds, and at the time of marketing there were at least four hogs in this group decidedly too thin for slaughtering. For this reason it would be fairer to base the comparison of Groups A and C on the condition of the Wiltshire sides.

The principal things indicated by these experiments may be summarized as follows:—

1. That corn is not likely to produce soft bacon when used simply for finishing well-grown, fleshy hogs which have had plenty of exercise or have been fed skim milk and a mixed meal ration previous to the fattening period.
2. That the same probably applies to rape, though the evidence is not clear on this point.
3. That whey and skim milk appear to have a marked influence on the firmness of bacon, tending to produce bacon of very desirable quality.
4. That hogs fed in outside lots which afford plenty of exercise make firmer bacon than those confined in pens, when whey and skim milk are not fed.
5. That firm bacon may be made from hogs confined in pens, when whey and skim milk are fed with a mixed meal ration.
6. That well-finished hogs, weighing from 170 to 200 pounds live weight, are less likely to produce soft bacon than lean, unthrifty hogs.

The points mentioned above are not offered as definite conclusions, as the investigation is only well begun. On the whole, however, there seems to be little contained in the results which might not reasonably be expected, a fact which adds to their value in no slight degree.

G. E. DAY.  
Ontario Agricultural College.

**Keep Up with the Times.**

MR. HARPER McCLUNG, Simcoe Co., Ont., writes:—"The FARMER'S ADVOCATE is a welcome guest to my home. I would not like to be without it. In many cases one number is worth the year's subscription. Any farmer who does not take it is many years behind the times."

**The Cross-bred Bacon Pig and How to Feed Him.**

*A Word for the First Cross*—In these days of keen competition the one great factor is to obtain the best results at the least possible cost. In dealing with the above subject there are two all-important points to be considered: (1) to obtain the most suitable animal to convert into bacon; (2) to convert that animal in the quickest time and at least cost into flesh of finest quality.

No doubt each breeder of pigs has his special breed of animal to which he more or less pins his faith, but I will endeavor, as far as possible, to avoid bias, and try to explain to my readers what I think the best lines to adopt in order to meet the public fancy.

We must all admit that at the present time the tastes and appetites of the British public are far different to what they were even a few years back, and the consumer is becoming more fastidious day by day. Years ago it used to be

*The Great Aim of the Producer of Bacon* to grow large, fat pigs, and in order to attain this end he would run his pigs as stores until ten or twelve months old, and then commence to finish them off for the butcher. When so finished they would probably weigh twenty scores and upwards. You would find, when these animals were slaughtered and split down, there would be on the back something like six or eight inches of solid fat. This our forefathers would boil and eat cold, and consider it a most delicate, sweet, and mellow dish. This taste has quite—or nearly so—gone, and the great object now is to provide sides of bacon and hams containing as much lean flesh as possible. In order to attain this object experience has taught us that

also seen very good results by crossing a Middle White boar with a Tamworth sow. The animals I am now suggesting are those best adapted to produce the quality sides of bacon and hams.

*To Produce Porkers.*—If it is your object to produce porkers, say five to six scores each, and which are intended to be consumed principally in their green and uncured state, then you must somewhat vary your cross in order to produce the requisite animal. I think the premier honors for this purpose must be given to the Berk. boar and Middle White sow. In using this word "Middle," I would wish to indicate that I mean the pure typical Middle White, of which there seems to be very few at the present day; many of the so-called Middle bred ones, in my humble opinion, look very much as though their ancestors had been nearly related to animals of the Large breed. I have also seen a nicely-selected Berk. boar and Tamworth sow produce animals that come to very early maturity and the best of quality.

Possibly some of my readers will wonder why I have made no suggestion as to cross with the Small White. Well, my reason for this is that I always consider them what I may term "toy pigs," and quite useless as a rent-paying animal. Before leaving this subject of cross-bred animals I must, with very great emphasis, point out that only the first cross is of any real advantage. I have known many instances where a man has produced an exceptionally fine animal by this crossing process, and will say to himself, "I will breed from this animal," and so he falls into a very grievous error; for as sure as possible he will find out to his cost that he has made a great mistake. You will therefore see that it is absolutely necessary that pure breeds should be maintained in order to produce the requisite material for crossing purposes.

*As to Feeding.*—I think all will agree that if we are to produce the best flesh in the shortest time, the animal must always be going forward. When on the sow, at about six or eight weeks old, the little grunters should be allowed a trough, and have fed to them a little milk or milk and water (warm). They will then soon learn to do without their mother, so that when they are weaned they do not receive any check. Their food should be gradually improved by addition, in the first instance, of a little sharps, and then on to meals of various kinds. Barley meal is, to my mind, the safest and most reliable you can use, and certainly it produces the primest and sweetest flesh. But as you require your animal to arrive at maturity as soon as possible, it is necessary to tempt the appetite, and in order to do this you must vary the food, for if you continue feeding on one food alone you will certainly find the animal get tired of it. He will not clean up his trough, and by this you will know at once that he has either had too much given him at one time—an error into which many feeders fall—or that the food has become distasteful to him. It is beneficial to give a little whole corn now and again—maize, peas or oats are all good for this purpose—and I like to give just a little green food, say a cabbage, mangel or lucerne, about twice a week. I think it has a beneficial effect on the blood, and keeps them in a healthy and thriving condition. When your animal is really on the high way for fattening he does not require much exercise; his quarters should be warm, with plenty of overhead air, and he should be allowed to rest quietly. Under these circumstances I think we shall find our rent-paying friend will lie and sleep as a contented feeding animal should do.—J. Norman, in *Farmer and Stock Breeder* (Eng.)



YEARLING AYRSHIRE BULL, MATCHLESS 2ND, WINNER OF FIRST PRIZE AND SWEEPSTAKES AT THE PROVINCIAL EXHIBITIONS AT ST. JOHN, N. B., AND HALIFAX, N. S., 1898; THE PROPERTY OF F. S. BLACK, AMHERST, N. S.

results depend in a great measure upon the breed of the pig we feed. As I have before intimated, each breeder has his special fancy, and it is quite right that this should be so, for there is no doubt that without pure and carefully-bred animals it would be next to impossible for the stamina and symmetry of our herds to be maintained.

*The First Cross*—I am one of those who will admit, and give it as my opinion, that the first cross is the best animal for feeding purposes. In selecting your cross you should attempt to obtain the breeds of animals which, what I may term, "nick in together." From minute observation, I find that the Berkshire pig is a quick feeder, light in bone, and full of quality, but has a tendency to get too fat when pushed along to meet the butcher at an early age. This latter remark will also apply to the middle breed of White pigs, but in order to counteract or modify this fattening tendency it is requisite to introduce one of the larger breeds of pigs, either the Large Yorkshire or Tamworth. Both of these animals are longer in coming to maturity, but when they have arrived at the killing stage they will be found to contain more lean flesh than either of the former breeds. Now, what we actually require is the cross between one of the former and one of the latter breeds mentioned, and my experience has shown me that if you want an ideal bacon pig it is to be obtained by mating a Berk. boar and a Tamworth sow. They produce good litters, are strong and healthy from birth, grow to a large size, are light in offals, feed quickly, and the quality of the flesh is unsurpassed. I may almost apply the same remarks to the cross Berk. boar and a Large Yorkshire sow, with these two exceptions—they are rather coarser in bone, and take a little longer to reach maturity. At the same time I think they will attain to a slightly heavier weight. I have

it has a beneficial effect on the blood, and keeps them in a healthy and thriving condition. When your animal is really on the high way for fattening he does not require much exercise; his quarters should be warm, with plenty of overhead air, and he should be allowed to rest quietly. Under these circumstances I think we shall find our rent-paying friend will lie and sleep as a contented feeding animal should do.—J. Norman, in *Farmer and Stock Breeder* (Eng.)

**Encouraging Milking Shorthorns.**

At a recent meeting of the English Shorthorn Society's Council, it was moved by Mr. R. Stratton, seconded by Mr. Herbert Loney, and unanimously resolved: "That the sum of £200 be given in prizes for pure-bred Shorthorn cows in milk, and that no prize be offered to any society which does not adopt this Council's resolution of 1897 respecting the milking capacity and form of udder, etc., in the Shorthorn cow and heifer classes; and that the General Purposes Committee draw up a scheme of prizes in accordance with this resolution."

**Ottawa Exhibition for 1899.**

MR. E. McMAHON, Secretary of the Canada Central Exhibition, writes us as follows: "For the information of your many subscribers, I have much pleasure in informing you that our Directors, at a meeting held a few days ago, unanimously decided to hold our exhibition next year for two weeks, instead of one, as heretofore. They also decided to open on the first Monday after the close of the Toronto fair, thus enabling the exhibition to open one week earlier in the season than heretofore."



### Feed Rations at the Annandale Farm -- Results Testify.

To the Editor FARMER'S ADVOCATE:

SIR,—Now that the regular winter feeding of live stock has commenced, perhaps the following stray jottings may not be amiss.

With the necessary well-matured corn ensilage on hand such as we have here on Mr. Tillson's farm, with clover, alfalfa and timothy hay, oats, straw, peas, barley, turnips and mangels, an excellent balanced ration can profitably be compounded, which will practically give, with a little trouble and figuring, the same proportion of digestible nutriment with a ratio of about 1 to 5.9, as follows: Organic matter, 25; protein 2.5 to 3; carbohydrates, 13 to 15; and fat, .60 to .70. To make the above we use about 45 lbs. ensilage, 4 to 6 of bran, and about equal parts pea meal, cotton-seed, and you can add oat chaff and clover hay. For several years the above figures, with only slight variations, have constituted the rations on this farm; but of course the use of these feeds depends entirely on the relative value, and a fluctuation of the market may necessitate a change by the selling or buying to a financial advantage, but please note that in making up our mixtures several things other than mentioned are purchased, viz., cotton-seed meal, linseed meal, and bran; the latter, in my opinion, being most essential. With a surplus of oat straw and timothy, by all means sell same, and as hogs (the only animals fed timothy) do well on clover, or half timothy and clover, with about 15 lbs. ensilage added, and a little bran and oats, sell as much as possible of the timothy hay, which, in my opinion, should only be grown to a limited extent. Clover being a nitrogenous plant, is therefore valuable for our land. Would sell surplus of oats, dispose of barley or feed to hogs, and buy bran, cotton-seed meal or linseed meal. The cotton-seed meal is of great manurial value to the farm, and in raising and feeding stock this important point should always be kept in view.

In compounding valuation of roots at their feeding value, and from analyses which I accept from the best authority of our esteemed college professors, roots on an average give a very low comparative feeding value. Still, roots (turnips and mangels), when fed to steers, with oat straw added to enhance their value, good results follow. We feed a few carrots to horses, and mangels make an excellent feed in conjunction with peas, corn and shorts for hogs. Clover hay is valuable and is as nearly a balanced ration of itself as any feed grown. If alfalfa is fed, the more nitrogenous grains should be reduced.

My reasons for suggesting the selling of oats, straw, timothy, and some roots, if a fair price is obtainable, and the judicious buying of other grains, are illustrated as follows:

Taking the comparative value of feeding stuffs based upon per cent. of digestible protein: Bran, \$10.00 per ton, would give oats per bushel 12c.; peas, 47c.; barley, 18c.; shorts, per ton, \$5.00; timothy, \$10.00; clover, \$22.00; cotton-seed meal, \$26.00; and linseed meal, \$22.00. The latter meal cannot at present be very profitably purchased, but pure cotton-seed meal can be bought at a figure considerably less than here quoted.

Young stock we feed—and they thrive—ensilage and a little bran in morning, corn stover and a little bran or corn meal in evening, with a "pickling" of clover hay thrown in their rack.

The feed rations here formulated are given and may be accepted for what they are worth, but from my experience with Mr. Tillson's stock, they have given satisfactory results, as the record of last year will show, giving each cow credit for over 10,000 lbs. milk in 11 months.

Norfolk Co., Ont. JOHN D. MACLEAY.

### Testing for Export in Britain.

Acting under instructions from the Canadian Minister of Agriculture, Dr. McEachran, when in Great Britain early during the present year, consulted the leading authorities there and made arrangements that the appended list of members of the veterinary profession issue certificates of having applied the tuberculin test to animals intended for exportation to Canada, the same to be accepted by the Canadian Cattle Quarantine Officers without the animals again being subjected to the test in Canada. This list was furnished the High Commissioner of Canada, Sir Donald A. Smith, at London, with the suggestion that when application was made for the name of a V. S. a letter be sent from the High Commissioner's office, informing him of the arrangement and explaining that it did not mean an appointment to the Canadian Government service, but that their remuneration be paid by the parties employing them. The suggested scale of fees was for one animal £1; for the next nine animals, 4 shillings each; and for each animal in excess of ten, 2 shillings; tests to be made according to furnished directions. Following is the appended list:—

James Thomson, Flour Mill Brae, Aberdeen; W. Skinner, M. R. C. V. S., Oldmeldrum for Taries and Inverurie; John Beattie, M. R. C. V. S., Longside; W. D. Snowball, M. R. C. V. S., Huntly; D. Clerk, Kilmartin; T. A. Douglas, Kilmarnock; A. E. MacGillivray, Banff; John Connochie, Ayton; Robt. Watson, Coldstream; Thos. W. Lapper, Aylesbury; Sir H. Simpson, Windsor; Albert Wheatley, F. R. C. V. S., Reading; A. I. Cattle, Brecon, South Wales; Robt. Morris, Wick; Geo.

A. Banham, F. R. C. V. S., Cambridge; James Stover, F. R. C. V. S., Chester; Thomas Oliver, Truro; James G. Bell, Carlisle; A. J. McIntosh, Dumfries; John Roberts, Wrexham; R. B. Aulton, Derby; W. H. Bloye, Plymouth, Devon; Chas. H. Colledge, Sherborne, Dorset; H. Ferrier, F. R. C. V. S., Alexandria; Chas. Hunting, F. R. C. V. S., South Hetton; Prof. John R. U. Dewar, F. R. C. V. S., Edinburgh; Peter S. Cowan, Colchester; J. Borrowman, Auchtermuchty; J. Clark, Abby Hill, Coupar Angus; Andrew Spreull, Dundee, Forfar; Prof. James McCall, F. R. C. V. S., Glasgow; George Holtham, Gloucester; George Burton, M. R. C. V. S.; T. B. Goodhall, Christ Church; Wm. Wilson, F. R. C. V. S., Gt. Berkhamstead; Fred. Geo. Reynolds, St. Ives; Wm. Logan, Inverness; T. Campbell, F. R. C. V. S., Kirkcudbright; W. A. Edgar, F. R. C. V. S., Dartford, Kent; Samuel Locke, Grosvenor St., Manchester; Wm. Woods, F. R. C. V. S., Wigan; J. Geo. Parr, F. R. C. V. S., Leicester; W. G. I. Dickinson, F. R. C. V. S., Boston; Prof. J. W. Axe, Sloane Street; Sidney G. Villar, F. R. C. V. S., Harrow; David M. Stowar, F. R. C. V. S., Abergavenay; Chas. Moir, Cardiff; James McGavin, Montgomery; Geo. Tait, Elgin; F. Low, Norwich; Wm. Bower, Rudham; Clement Stephenson, F. R. C. V. S., Newcastle-on-Tyne; Harry Moore, Workop; Charles Taylor, M. R. C. V. S., Clumber Street, Nottingham; J. P. S. Walker, Oxford; Wm. Houston, Paisley; Justus Littler, Oakham, Rutland; John Hutton, F. R. C. V. S., Kelso; W. E. Litt, Shrewsbury, Salop; James Martin, M. R. C. V. S., Mansion House, Park Street, Wellington, Salop; T. W. Whitney, Shepton Mallet; Wm. Carless, Stafford; Geo. Wartuaby, Burton-on-Trent; Geo. H. Elder, Taunton; Philip Turner, Ixworth, Suffolk; Wm. McQuiston, M. R. C. V. S., Buchlyvie; W. A. Macgregor, Stranraer; J. McMillan McConnell, Wigtown; J. M. Parker, Birmingham; Thos. Horton, Warwick; W. T. Broad, Marlborough; Henry Hussey, Devizes; Abraham Green, Dudley; Frank Halliday, Easingwold, York; Gavin Scott, Scarborough; Joseph Abson, F. R. C. V. S., Sheffield; Fred. Percy Carter, F. R. C. V. S., Bradford; Herbert John Parkin, Doncaster; John S. Wheatcroft, Rotherham.

### The Tuberculosis Investigation.

The Dominion Department of Agriculture is at present digesting the report of Professors McEachran and Adami (of McGill University), who have been making a series of experimental tests with the object of determining the extent to which tuberculosis exists in Canada, and the best means to combat and root out the ailment. It is the intention to prepare the various reports for publication during the winter, so that farmers can be apprised of the whole matter. The Department has very properly been continuing its plan of testing for the public, as described in a recent issue of the FARMER'S ADVOCATE, whenever asked, and the result has been quite a number of examinations. We understand that the number of cases (mainly in the vicinity of cities and towns where too often dairy herds are kept under very unsanitary conditions) more or less pronounced in those tested, which have been found tuberculous, represents the following percentage:

In the Province of Ontario.....	6.01
" " New Brunswick.....	5.81
" " Prince Edward Island.....	5.26
" " Quebec.....	8.33
" " Nova Scotia.....	17.55
" " Manitoba.....	49.22

There are said to be special reasons for the apparent greater prevalence of the malady in the two last named divisions of the Dominion. But this is, taking it all together, a very small percentage of affected animals, when compared with other countries. Then, it must be remembered that only those who have entertained suspicions of the health of their animals have, as a rule, applied for the application of the test; so that if compared with the total number of cattle in the country, the percentage actually diseased would be infinitesimal. All told, there appears to have been a trifle over 7,000 animals tested, the great bulk of which were in Ontario and Quebec, and of these some 600 odd showed the reaction, or about 8 per cent. Of those tested, we learn that some 407 were for export, and of these but seventeen gave a reaction, which was a smaller percentage than in the case of the others. It will be remembered that in New York State, where cattle were extensively tested, it was shown that a very much smaller number of pure-bred stock were tuberculous than of the cattle generally. In conversation with a representative of this journal, a short time since, Hon. Mr. Fisher, the Dominion Minister of Agriculture, expressed the conviction that the amount of disease in Canada is much less than was supposed when the work was undertaken. There is, in his opinion, no doubt that the information which has been published, and the amount of attention which has been drawn to the question through the policy of the Department of Agriculture, has contributed very largely to a reduction in the extent of the trouble. The Minister has probably good foundation for his hope that a few years of this quiet, careful, persistent work, and increased attention to the housing of animals, and to

the securing of fresh air and ventilation for them at all times, will practically eradicate the disease.

In this regard, it is probable that the example of Canada will be emulated by Great Britain. When in England, this summer, Hon. Mr. Fisher found that the British authorities were disposed to follow the lines that the Dominion Minister of Agriculture is carrying out. The Imperial Government has not yet adopted the course, though the Minister of Agriculture, Hon. Walter Long, in a discussion at Edinburgh, the other day, said he was prepared to do so, and to ask the Treasury for the needed funds as soon as the various agricultural societies were ready to accept the plan.

### Madison Square Horse Show.

The exhibit of Harness, Saddle and Jumping horses at the New York Horse Show was superior to any former year, but in the breeding classes there was rather a falling off, also in the attendance, which shows that as a fad the New York Horse Show is wearing out, but as a horse show for the above mentioned classes of horses is improving every year. Canadians have done remarkably well, winning some \$2,000; Mr. Pepper, of Toronto, having taken prizes to the extent of \$500 and also sold his celebrated horse King Crow for \$2,500 to a lady in New York. He also sold all his other horses at good prices to go to Boston. Adam Beck and Mrs. Beck, of London, were also very successful in winning prizes for their Hunters and Jumpers, their winnings amounting to \$1,285. Mr. Robert Beith, M. P., won second on his Hackney stallion Squire Rickell, being beaten only by Enthorpe Performer, a horse that has been victorious a great many times. Squire Rickell was also one of the four, the gets of Cadet, winning first for stallion and four of his get. The Hackney mare and younger stallion classes were not strongly contested; the principal winners were from the studs of F. C. Stephens, Attica, N. Y.; F. G. Bourne, Chestnut Hill Stock Farm, and Plymouth Hackney Stud. This breed was judged by James Cochrane, Hillhurst, Que.; Robt. Graham, Claremont, Ont., and Henry Fairfax, Alder, Va. Mr. Hendrie's (Hamilton, Ont.) Thoroughbred stallion Othmar took second prize in Thoroughbreds qualified to improve the breed of saddle horses and hunters, while Wiley Buckles, owned by Quinn Bros., of Brampton, Ont., took third. The stallion that took first was Applegate, by Buchanan, a five-year-old chestnut owned by Francis D. Beard. Strange to say, he also took first in the class where breeding and racing qualities were only to be considered. It was the opinion of many outside the ring that he should only have been third in the Hunting classes. Messrs. Crow & Murray, of Toronto, were also very successful. Both this firm and Mr. Pepper had their horses at St. Louis and Cleveland and finished up at the New York Horse Show, having had wonderful success in all three of these places. The high-stepping horse Blucher, sired by Lord Rosebery, is considered to be the best horse shown in any of these rings during the year, although he was beaten in St. Louis by a horse owned by John S. Braddon, of Philadelphia, in his class, but when it came to the championship Blucher won easily. He also won in his class at New York.

It was not unexpected that some sensational horses appeared in the trotting classes at New York. In no section was there a plethora, but choice things were in evidence. The stallion Heirat-Law (2.05½), by Mambrino King, won in the mature class. Burlingame (2.18) and Master Cole (2.27½) were also competitors. The three-year-old Earl (2.17), by Mambrino King, and the two-year-old Eighteen Karat, by King Wilkes, were fortunate in their respective sections. In the open Standard stallion class Dare Devil (2.09½), by Mambrino King, defeated Crescens (2.09½), by Robt. McGregor, and Quarterstaff, by Quartermaster. In mares and fillies the gets of Mambrino King, Electioneer, Island Wilkes, Monterey, Chimes, and other famed stallions won the trophies in moderately filled sections.

The New York Show is run remarkably well, everything being so solid and substantial about the fit-up of it, hurdles, etc. They always until this year have had a large income. It will be plenty large enough this year, but still a marked falling off to former years.

### Farm Wages in England.

The British Board of Agriculture, in a report on agricultural wages, shows that, while the number of persons employed in agricultural labor is diminishing, the average wages earned by each man are rising. Out of 87,385 agricultural laborers of whose wages an industrious office has taken cognizance, 82,453 have increased their wages since 1896, and only 4,932 have to admit a decrease. The rise is slight, but fairly general, and there is reason to hope that the lowest prices and wages were alike left behind us with 1895, when the year of agricultural depression reached its worst.

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



FARM.

Fattening Hogs in the Winter.

BY DAVID LAWRENCE, OXFORD CO., ONT.

The genus swine may be truly said to be omnivorous animals, for when hungry enough they will eat almost anything that is not too hard for their teeth to break. We are not to consider what they will eat or what they will not eat, but what sort of food we can feed to them so that we can produce a pound of good pork at the least possible outlay. I do not think it is profitable to keep pigs in winter and feed nothing but shorts or grain, whole, ground or cooked. I think that pigs, to be healthy and kept at a profit, should be fed a considerable quantity of roots, either pulped or cooked. A great deal has been written both for and against the cooking of food for pigs. We cook roots in a large vat, described in the ADVOCATE of 16th March, 1896. The vat will hold nearly twenty bushels, and can be cooked with a small quantity of dry wood; and the food will keep warm for two days, and can be kept warm longer by putting in any rotten stick to simply keep a few coals under the vat. We like carrots as well as any roots, and we take cooked roots and juice to feed one pen in one large pail or keg, and mix chop in it when hot, mashing and mixing it well together. This is prepared at least six hours ahead, or the morning feed is prepared in the evening, and when fed it is mixed and thinned out with a little separated milk, whey or swill, and makes a very inviting dish for piggy. When we run out of cooked food we pulp mangolds, and mix with chop or shorts. We generally give a little dessert of a few ears of corn for each pig, which they relish very much. I think the pork produced from a mixed diet is much more healthy for human food than if the pigs were fed an all-grain ration. I believe sugar beets are even better than mangolds, and I intend to try some; but mangolds and carrots are good, and turnips do very well. Of course, to the old sows we feed the mangolds whole, but for the young pigs they are pulped. I think the best chop is made from oats, barley and peas—say two parts of peas, three of barley, and four of oats, ground by these composite emery-cement stones. I feed three times a day, and keep seven pigs in one pen. Oh, yes! about the amount of exercise required. I sold a pig to a man who kept a cow. He put the pig in a very small pen, for when the pig was full-grown it did not have much more than room enough to turn round. The balance of the litter I kept in a nice roomy pen and allowed them to run out a little. They did pretty well, but the one pig that was kept in the little pen did far better. At the end of seven months it was far heavier than mine. Was it the small pen? No. It was, I think, the quantity of milk and swill and mixed foods that it got that made it thrive so well when growing. This man had a handsome profit from the feeding of his pig after paying for all the grain he bought for it. I think that there is a good deal to be learned from this. Some parties were advertising a condiment they were putting on the market for farm stock, and after enumerating what it would do for horses, cattle and sheep, brought the ad. to a climax by saying that it "made pigs happy." Now, I believe that there is a great deal in that. We all know that a man would not be happy or healthy if fed on nothing but beef, neither a horse if fed nothing but oats, and piggy is no exception to the rule. Our pens are about 10x12 for seven pigs, and when they feel like it they take a nice run round the pen, chasing and playing with one another; but it would be a very easy matter to give them enough grain to cripple and founder them and put them off their feet. A man to feed pigs successfully must make a study of their tastes and requirements, and give them what they require in suitable quantities. As we finish off we give a decreasing quantity of pulped or cooked roots and an increasing quantity of corn or peas. I think it a good plan to give a half-shovelful of ashes to each pen about once a week, or, better still, take a stick of wood when it is more than half burnt up and put it in water and then give to the pigs, and they will soon eat all the charcoal off it, and I think it does them good. About the quantity of food? Well, I think piggy ought to have enough to fill his stomach comfortably, as then the process of digestion goes on better.

To summarize, I think it does not pay to keep pigs in winter unless you have a warm, comfortable pen (at least above freezing), and have cooked or pulped roots to feed. It does not pay to cook food in the old way in a cauldron kettle. It does not pay to keep mongrel-bred pigs. One cross is all right enough, but more than that is not good. Berkshire and Tamworth or Berkshire and Yorkshire make very good crosses for pigs for the pork factory.

I am sorry that the packing establishments do not give the farmers a little share of the large profits they are deriving from the business, as they might easily afford to give us a cent or two

more per pound. The late Prof. Drummond, in his wonderful book, "Natural Law in the Spiritual World," has a chapter on environment, in which he shows clearly how we are imperceptibly influenced by our environment and surroundings, so I suppose that the pork-packers, spending all their time amongst hogs, cannot help getting a little hoggish.

An Experienced Feeder's Methods of Feeding.

To the Editor FARMER'S ADVOCATE:

SIR.—Assuming that I have just the right quantities of clover hay, well-saved straw, oats, peas, corn ensilage and roots, I would first cut my fodder, as I think that you save enough in cutting to pay for the extra labor, then I would pulp my roots, and mix fodder, roots and ensilage all together, and if I were feeding only one kind of stock I would mix my grain at the same time (grain to be ground or crushed); but in feeding cattle that require different quantities of grain, would add it in the manger after they had been fed their mixed feed, and give all a stir with the hand to mix it together.

For cows or grown cattle I would not care to feed more than about 30 or 35 pounds of ensilage, and about the same of roots, with what hay or straw they will eat up clean. By watching their feeding you will soon know about what quantity to use. If cattle have good clean oat straw or chaff they will do nicely without hay until within two months of grass time, when a little hay will be an improvement. To dry cows and two-year-olds I would give no grain, and by substituting clover hay for the straw yearlings will winter all right.

After the feeding cattle have been stabled about a month I would commence giving them some grain, say two pounds a day at first, equal parts peas and oats at first, and two parts peas and one of oats at finish; and would gradually increase the feed up to about six pounds per day, with a little more to any that are behind. In increasing the



SITTITON HERO = 23313 = AND 54TH DUCHESS OF GLOSTER; A PAIR OF SHORTHORNS, SIRE AND DAUGHTER; FIRST PRIZE TWO YEAR-OLD BULL, AND FIRST PRIZE HEIFER CALF UNDER SIX MONTHS, AT TORONTO EXHIBITION, 1898; THE PROPERTY OF JAS. I. DAVIDSON & SON, BALSAM, ONT.

feed I would be governed by the condition that my cattle were in, and the time that I wanted to market them.

We feed our nursing cows about the same as fattening cattle, only not too much grain and more rough feed. We feed mostly turnips, but cows rough feed. We feed mostly turnips, but cows rough feed. We feed mostly turnips, but cows rough feed.

We have had very little experience feeding ensilage to horses. Last winter we fed a few brood mares with about half the quantity of ensilage and turnips that we fed the cattle, and rough hay and chaff, with a little bran. The mares came out in good shape and our foals never were so little trouble. We will give them the same treatment again this winter.

J. W. BARNETT.  
Russell Co., Ont.

Plowing Match at O. A. C., Guelph.

The annual competition in plowing sod by the first and second year students of the Ontario Agricultural College, Guelph, was held on Nov. 19th. There were forty entered in the competition. The following are the names of the successful competitors:

- 1st—W. G. Cowle, Ontario County.
- 2nd—A. Stewart, Middlesex.
- 3rd—R. Wilson, Huron.
- 4th—M. Switzer, Wentworth.
- 5th—G. Humphrey, Wentworth.
- 6th—J. R. Hutchison, Leeds.
- 7th—S. W. Ling, Wellington.
- 8th—H. Williams, Dufferin.
- 9th—J. A. Sangster, Glengarry.
- 10th—C. Kidd, Simcoe.

The above received badges. The following six were highly recommended, in the following order: W. J. Black, Dufferin; J. A. Hall, Parry Sound; J. Hilborn, Wellington; J. R. Shields, Lanark; T. L. King, Oxford; and G. A. McIntyre, Renfrew.

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

Experience with Ensilage Feeding.

To the Editor FARMER'S ADVOCATE:

SIR.—I may say my experience with ensilage has extended over a number of years, and I have had opportunities of judging of its value as a cattle food. I have never fed it to either horses or sheep to any extent, so I shall leave that for someone else to answer.

From the analysis of ensilage, we know that it is not a perfect food for cattle, containing as it does too large a proportion of carbohydrates. This is borne out by practical experience in feeding it. Although, no doubt, cattle would live on anything like as well as when some food such as clover hay, bran, oats, peas or oil-cake meal is added to balance the ration. I believe a good deal of the prejudice against ensilage has arisen from the fact that some farmers thought when they had provided ensilage for their stock that they did not require anything else until they began to run down. So to get the best results from ensilage it must be fed in conjunction with other foods, preferably those of a flesh-forming nature, known as protein foods. In my own experience I have found that pea meal is an excellent food to balance ensilage. We on an average feed from six to ten pounds of pea meal to mature animals per day. Oats are also very suitable, so are bran and oil cake. I never liked barley as a cattle food, although I believe some farmers claim to have had good results from feeding it. A mixture of two or three kinds of grain, I think, is better than any single grain for feeding. When feeding ensilage we have always found that the addition of some dry fodder, such as clover hay, oat straw, corn fodder, etc., was greatly relished by the cattle. As we generally have a considerable quantity of dry cornstalks from which the corn has been husked, we have found by running them through the straw cutter and mixing them with the ensilage, in the proportion of one bushel of dry stalks to two of ensilage, that they were eaten up very clean. The two should be mixed about twenty-four hours before being fed.

Wheat straw or inferior hay may be used in the same way. One of my neighbors followed this plan last winter, and he told me recently that he had never had as good results from his cattle before. As to the feeding of roots when you have ensilage, we find that the ensilage largely takes their place, although we still grow some roots, more for the sake of giving the cattle a variety of foods, as every feeder knows how cattle relish a change. For the feeding of dry cows and young cattle: If I had plenty of ensilage from well-earred corn I would not feed anything in addition except clover hay, uncut, say once a day. I might add that we feed mature animals about forty pounds a day of ensilage, besides what dry fodder and grain they may get. Of course, some cattle will not eat that amount, so we must be governed by the individual animal. I have not found ensilage a good food for calves getting milk; I thought it gave them indigestion; probably the acidity of the ensilage was the cause.

R. S. STEVENSON.  
Brant Co., Ont.

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," Hy. 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 the Land," by Prof. Roberts, 2 new subscribers; "The Soil, its Nature and Management," by Prof. King, 2 new subscribers; "Milk and Its Products," by Prof. Wing, 2 new subscribers; "Testing Milk and Its Products," by Farrington & King, 2 new subscribers; "The Silo and Ensilage" (paper cover), 1 new subscriber, or in cloth, 2 new subscribers.

The Canadian Bacon Trade.

To the Editor FARMER'S ADVOCATE:

SIR.—In your issue of October 1st, I read that one large dealer in the British metropolis expressed himself as having fought out the battle between Canadian and Danish bacon, and having downed the Danes in that which they most excelled. I would ask what does this salesman mean? He must either be trying to be funny or to mislead Canadians and thus check them in their most laudable endeavors to continue to improve their bacon pigs. I have to-day a letter from an eminent London salesman, in which he writes: "Danish bacon is now actually being quoted on the London market above Irish bacon." This does not look as though the Danes were downed.

SANDERS SPENCER.  
England.



## DAIRY.

## New Plan in Cheese and Butter Factory Management.

The FARMER'S ADVOCATE takes pleasure in laying before its readers the outline of a new system of factory management just being inaugurated in one of the older dairy sections of Western Ontario. Our readers are well aware that one of the essentials to success in establishing a successful and permanent local trade in products like butter is to provide customers with a regular supply of good quality. Once the consumer's taste is satisfied and his or her eye pleased with the style of package, the great point then is to preserve uniformity, and next, without fail, to deliver the article when wanted. The same rule holds good in an export trade when we follow up to their final distribution our butter, cheese, bacon, eggs or other food products. Cold storage is effecting a revolution in transportation, but it does not and cannot overcome all the difficulties, some of which have their origin in the factories. One of the greatest benefits ever conferred upon the Canadian cheese-factory system was the inauguration of the plan of travelling instructors, of whom the late Prof. L. B. Arnold was a distinguished pioneer. In this and other ways Canadian Cheddar cheese came to be made in a fairly uniform style. But the consuming market under keener competition grows more discriminating and exacting. These conditions must be met. One of the largest provision houses of Liverpool, that have come to be heavy importers of bacon, butter and cheese during recent years, but latterly from their customers have found the need of being certain of a regular supply of dairy products, uniformly fine in quality. A representative of the house recently visited Canada, and a new plan was mapped out for the future, which we trust will prove beneficial to patrons of the factories concerned, and a success as far as the company is concerned, because they have ventured very considerable capital therein. If the results are satisfactory it may mean the embarking of a great deal more British funds in the same way. They have purchased out and out three well-known factories: "The Thames factory, at Nilestown, Ont., owned by Mr. Jas. A. James, for many years on the directorate of the Western Ontario Dairymen's Association; the Dorchester Station factory, owned by Mr. Smith; and the Pond Mills factory, owned by Mr. Carrothers; the first named being in the center and the two others a couple of miles distant on either side. In making this purchase the company have had the association of Mr. T. B. Millar, of Kincardine, who has taken a share in the enterprise, and who will be their Canadian representative and manager of the Thames Dairy Company (and will be entirely responsible for its management), as the trio of factories is now to be called. Mr. Millar is well and favorably known to dairymen in that part of Canada. A farmer's son, he finally adopted cheesemaking as a profession, and was engaged for five or six years at the Burgoyne factory near his home in Bruce County, where he enjoyed marked success; so much so that eight years ago the Western Association selected him as one of its travelling instructors, and for the past two years he has been the chief instructor and inspector. For six seasons he has been one of the teaching staff in the Dairy School in connection with the Ontario Agricultural College at Guelph. A man of integrity and good business judgment, he is therefore in every way qualified for the work entrusted to him, and the factories should prosper. As he remarked himself the other day, much depends upon the satisfaction and hearty co-operation of the patrons, as their interests and those of the company, which is investing some \$15,000 in this enterprise, are mutual. Meetings will be held with the latter, when a fair basis will be arranged, so that full market value will be received by them for the products, which will probably go forward in regular weekly or fortnightly shipments, as may prove best. Necessarily, it will prevent the evil of refusing to accept cheese, which has too often been done, we fear, upon mere quibbles, where cheese is sold on the open market subject to inspection, and from which some makers and patrons have lost heavily. In the matter of milk routes there will naturally be less friction than is sometimes the case in contiguous factories, and a good deal of needless expenditure might be saved in that regard. Mr. Millar will go from factory to factory, personally superintending the making, curing and shipments of butter and cheese. The Nilestown factory is already splendidly equipped with a new creamery building and buttermaking plant, including two separators. Last season (the first) Mr. James turned out some 21,000 pounds of butter. The Dorchester Station factory has just been equipped for winter buttermaking and will be run as a creaming station; likewise the Pond Mills factory, providing sufficient milk is assured at the latter. The patrons will get their sweet skim milk, and the cream will be taken to the central factory at

Nilestown, which is splendidly located and possesses one of the finest spring wells in the Province. The buttermaking will all be done there, thus ensuring uniformity. The three factories now have a total output of about 400 tons of cheese per year, which ought to be increased and the winter butter output at least doubled. Mr. David James, a successful dairy school graduate, will continue in charge of the buttermaking. The cheesemaker at Nilestown will be Mr. Robert Murray, a first-class maker, from Ethel, Ont., who also had the advantage of a dairy school course. Mr. R. R. Milne, who has been making for nine years, the last four at Burgoyne, and who also took a dairy school training, will have charge at Pond Mills. The cheesemaker at Dorchester Station will be Mr. Moses Knechtel, who has been for some years maker in the celebrated Ballantyne & Bell factory at Tavistock, Ont., an extended description of which, by the way, was given in the Sept 1st issue of the FARMER'S ADVOCATE. Mr. Millar is taking control on December 1st inst., and has already let contracts for making a number of needed improvements about some of the buildings, so that everything will be in "shipshape" for future operations.

## How an Indiana Town Jersey Dairy is Managed.

[BY AN OCCASIONAL CORRESPONDENT.]

One of the places of interest at Indianapolis, the capital of the State of Indiana, is Col. J. T. Polk's dairy farm. It is located at a small suburban village nine miles from the city, and connected therewith by an electric railway. The herd comprises one hundred and thirty pure-bred Jersey cows, besides a small drove of young things that are reared to increase the herd and to take the place of cows that may be sold. The milk produced by the herd is sold in the city, and the business is steadily growing. On the farm there is



YEARLING JERSEY BULL, PRINCE FRANK'S SON 48753, WINNER OF FIRST PRIZE AT WESTERN FAIR, LONDON, 1898; OWNED BY W. G. LAIDLAW, WILTON GROVE, ONT.

also a large canning factory, and the refuse from the corn, peas, etc., used in it, preserved in silos, forms no inconsiderable part of the feed of the cows. Col. Polk, while giving a general supervision over all his business interests, gives his personal attention to the management of the canning factory. A superintendent is given the oversight of the dairy herd, and the city office, through which the milk is sold and distributed, is managed by a member of the Polk family.

Many of the citizens of Indianapolis, patrons and others, appear to take a lively interest in this dairy, and when the weather is fine there are few days on which there are no visitors at the time of afternoon milking, while there have been as many as thirty to witness this interesting sight. An elevated platform for the accommodation of visitors is erected in such a position as to give them a view of two milking barns. The cows live and are fed in a covered yard with sides, open in summer and closed in winter. At a signal, morning and evening, the cows march into the milking barns, each to her own stall, where a small ration of bran or meal is awaiting her. The order and regularity of this march of the cows from their living room to the milking rooms are remarkable. Not many schoolrooms give better evidence to the visitors' platform of careful drill than do these Jersey "ladies." As soon as a cow has been milked and has eaten her ration she is released from her stall, when she returns of her own accord to the covered yard, with the same order and precision with which she entered the milking-room. The use of wholesome food and pure water, the frequent brushing and cleaning of the animals, and the freedom of movement and pure air of the covered barnyard, are potent elements in maintaining the health and vigor of the herd. Cleanliness and order are marked features in the milking-rooms. The milkers, men and women (some of whom come from the village for this special work) and have no

connection with the farm except at milking times), are clad in white caps and jackets. Before milking, the udder of each cow is carefully wiped off with a damp cloth. The milkers have nothing to do with the milk after it is drawn from the udder and weighed—for the milk of each cow, morning and evening, is carefully weighed and tabulated. Each cow's milk, as soon as it is weighed, is carried to the aerating and bottling room, where helpers continue the work in such an orderly and expeditious manner that usually the milk is all bottled in twenty minutes after the last cow is milked. For the aeration of the milk, fresh pure air is introduced from the outside of the building and forced through a small closed compartment partially filled with water. This small piece of apparatus is of much interest to the average visitor from the city, for it is explained to him that any bacteria that may be in the air brought from the outside to aerate the milk are drowned in the passage of the air through the water! To the skilled dairyman this apparatus is only a simple and harmless means of giving the bacteria a bath. The milk is shipped and sold in bottles. The bottles are thoroughly washed and then sterilized with steam, filled, placed in crates, and covered with small blocks of ice, sawn by a machine made for this purpose. Previous to the building of the electric railway, two years ago, the milk was conveyed to the city in a large wagon drawn by four horses, but the railway now carries it, at a great saving of man- and horse-energy.

An unusual feature in the distribution of the milk of this dairy is that it is all delivered in the night time. The carriers, with their wagons, leave the city office about one o'clock a. m., and their work is over by five or six o'clock. Each patron is supplied with a close box, which is placed of easy access by the carrier. In it the patron places the empty bottles and the tickets necessary for the requirements of the day. The carrier takes the empty bottles and tickets and leaves the required number of full bottles. Col. Polk's people have given this system a thorough trial, and they have no desire to return to the old system of delivery. This new system has several advantages. Amongst them are the delivery of the milk in the coolest part of the day; no interruptions in the work of delivering the milk, and a consequent saving of time; the carriers are free to earn additional money during at least a portion of the working day, and consequently a better class of carrier than the ordinary is available; and the patrons always have fresh milk for breakfast. Occasional visits to the patrons by the manager of the city office, to make collections or sales of tickets, help to keep the business in good running order. The average dairyman who caters to the town and city daily milk supply has a good deal to learn before he reaches the ideal method of handling his product. This recital of Col. Polk's methods—unique in some respects—may help some dairyman to attain to better methods than he now uses.

ORIGEN.

## Buttermaking in Canada on the Creamery Plan.

[FIFTH PAPER.]

CHURNING.

Scald and cool the churn. Always stir the cream thoroughly in the vat just before removing it into the churn, and when at all possible run it in by gravitation. This saves time and frequently cream. The cream must, of course, be strained. For export no extra color is required. The temperature at which cream should be churned will vary, but only slightly. As a general rule the proper churning temperature for separator cream will be within the limits of 48 degrees to 52 degrees Fahr. Experience has proven to us that under actual creamery conditions a temperature above 52 degrees Fahr. results in loss of fat and less excellent texture, while below 48 degrees Fahr. we reap no advantage, and at the same time it costs considerable to get a lower temperature. As the butter is about to break, a little water should be added to assist in getting a complete separation. Butter-makers who experience undue loss of fat in the buttermilk should use the thermometer at this stage to be sure that the cream has not warmed up too much during churning—a frequent source of loss. The temperature of the water should be such as will keep the butter in nice firm condition—as cold as possible in summer, and about 52 degrees, to 55 degrees Fahr. in winter. Churn until the separation is complete, then stop.

Washing.—After standing a few minutes, draw the buttermilk. Then wash with plenty of water. If the butter is in good condition once washing will do, otherwise twice is better, the idea being to wash until the water runs off practically clear. The temperature of the water available in a creamery is a very important consideration. Quantity cannot be made to offset an unduly high temperature, and unless the temperature of the water be low, especially in summer months, it is not possible to turn out as much butter from a given weight of cream, nor to make as excellent an article as where water of low temperature is available.

We would emphasize here the advisability—yes, we would say necessity—of churning and working



butter in a room partitioned from the separating room, and all creameries with any pretensions to first-classness will be so built. It ought to be possible to keep this room at a temperature not higher than 60 degrees to 65 degrees Fahr. Creameries that find this impossible, and that are in need of a cold storage room, will find it advisable to install an ammonia compressor, rather than to put up ice, as the former system makes it possible to control the temperature in the butter room, while the latter does not.

**Salting.**—When the butter has been properly washed it should be allowed to stand 20 to 30 minutes to drain. The amount of salt will be gauged entirely by the requirements of the market. It is hardly necessary to say use good salt, as Canadian creameries always do this. Where the butter is made in a trunk churn and worked on (or in) a separate worker, the butter will be weighed before working and salted accordingly; but when it is salted in the churn, or when a combined churn and worker is used, the weight of salt should be calculated from the weight of milk and not from the cream. It is very necessary that the salting be *uniformly* done, especially for our export trade. The writer is in favor of salting butter in the churn. First sift on a portion of the salt, then tilt the churn and sift on some more, till all is put on. Then fork it over gently until well mixed, using a wooden fork made for the purpose; after which the butter should be allowed to stand to take salt about three to four hours, either in the churn or in entry to cold storage, as may be most suitable. This system insures a more uniform color, and less working is necessary. About one-eighth ounce more salt should be used per pound of butter than when salted on the table and worked at once.

**Working.**—When butter is worked only once, and this immediately after being salted, the work should be carefully done. All small pieces of butter should be incorporated into the mass from the beginning, and not left lying around the edges and center of the worker. It is best to work by number of revolutions of the worker, and to find out the proper number by careful examination of the product after standing for 24 to 48 hours. If underworked it will be streaked; if overworked, greasy, showing injured texture. If the butter is salted in the churn, and held for three to four hours at a suitable temperature, once working will give as great satisfaction as twice under any other system. We think, however, that for the export trade, and a revolving table worker, that butter is better twice worked.

When using a combined churn and worker every care should be taken to have cream at as low a churning temperature as is found advisable, and to wash with cold water, otherwise the butter will not drain well, nor will it work satisfactorily. Not only so, but as the butter has to be salted in the churn, a uniform salting will be difficult to obtain. We find in actual practice that it is not more difficult to make an A1 creamery butter by the combined churn and worker than by the trunk churn, either in texture or uniformity of color. We have recently shipped to some prominent exporters sample boxes of butter made from same lot of cream, but churned in trunk and combined churns respectively, and the scores received for the six lots submitted were practically the same.

F. J. SLEIGHTHOLM, Supt.  
Western Dairy School.

**Butter and Cheese.**

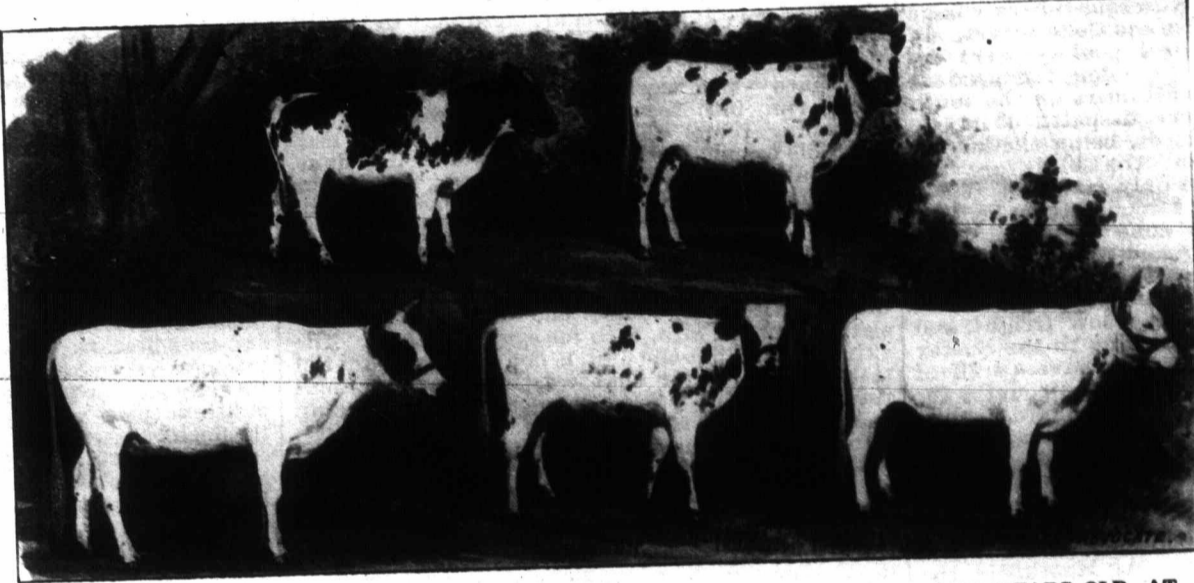
The past month has witnessed a remarkable movement of cheese and butter to the United Kingdom. For October, Canadian exports of butter to Great Britain were 42,849 cwts., as against 22,154 cwts. the same month in the previous year. Large as this increase is, it is unimportant when compared with the phenomenal increase in cheese exports. In the case of butter, this increase has been sufficient to bring the total movement of that year up to a point much in excess of that of previous years, viz., 115,182 cwts., as against 92,968 cwts. in 1897, and 69,351 cwts. in 1896. The butter demand in Great Britain has been very good, and of late shipments of butter from France have been smaller than usual, and other sources of supply have been drawn upon. The weather in Argentina has been very unfavorable to the production of butter, while currency difficulties have also stood in the way of export trade from this country. The total cheese shipments for the nine months ending 31st October are less than the same period of 1897, to being 1,179,769 cwts., as against 1,218,166 cwts. to the same date in 1897. The movement in this last

year was exceptionally large, however, as only 886,689 cwts. were sent to date in 1896. The total imports of cheese in the United Kingdom during the present year have been less than those of the past year.—*Monetary Times.*

**Effect of Oil Cake on Butter.**

With the purpose of discovering something about the effect of oil cakes on butter, experiments were undertaken last season by the Agricultural College, Wye, Eng., on behalf of the Board of Agriculture. The following are the conclusions summed up from the experiment:

1. The cows fed on cotton-seed oil cake produce milk the butter-fat of which gives cotton-seed oil reactions.
2. The reactions appear when the cows receive only small quantities of cake. They increase somewhat with continuous feeding, but apparently cannot be carried beyond a certain point, even when the amount of cake is increased to the full limit which cows, under ordinary circumstances, care to eat.
3. Reacting substances pass into the milk within less than twenty-four hours after the cake-feeding begins, and continue to do so for several days after it has been dropped.
4. The reactions vary in intensity in individual cows, but do not, in any case, much exceed those given by one per cent. of the oil, and experiment shows that this is actually the case.
5. As feeding with cotton-seed oil cake gives butter affording analytical data tending to differ from rather than approach to those given by margarine, it appears in most cases to be possible to differentiate between the cotton-seed oil reaction, due to the feeding on cotton-seed oil cake, and that produced by any considerable admixture of margarine containing cotton-seed oil with butter.



FIRST PRIZE HERD OF AYRSHIRES, ONE BULL AND FOUR HEIFERS, UNDER TWO YEARS OLD, AT CANADA CENTRAL EXHIBITION, OTTAWA, 1898; PROPERTY OF JOSEPH YUILL & SONS, CARLETON PLACE, ONTARIO.

6. The butter from the milk of cows fed on sesame oil cake gives no sesame oil reaction, even after more than two months' continuous feeding up to as large a quantity as cows will take. Similar results have been obtained by other observers abroad.

**Small vs. Large Cows.**

Professor Brandt, of Germany, conducted three experiments with light and heavy dairy cows, each lasting four weeks, the second commencing 70 days after the close of the first, and the third a year after the beginning of the first. Thirty of the heaviest milkers in the herd were separated into lots of fifteen cows each, according to live weight. The cows were kept under similar conditions as to feed and care during the trial, none being bred after the beginning of the experiment. The average weight of the heavy cows was 1,205 lbs., and of light cows, 979 lbs. The leading conclusions from the experiments are:—

- (1) The milk of the small cows is richer in fat than that of the larger ones.
- (2) Large cows eat a greater amount of feed than small cows; per 1,000 lbs. live weight, they eat less.
- (3) Small cows produce less milk than large cows, absolutely and relatively.
- (4) When in thin flesh, small cows may produce more per 1,000 lbs. live weight than large cows.
- (5) Large farrow cows are more persistent milkers; on the other hand, small cows show a greater tendency to fatten on the same feed, with a decrease in the milk flow.
- (6) The loss in selling ten of the large cows amounted to five guilder per head on the average, after having been kept nearly a year, while the loss of ten small cows was twelve guilder per head.

**GARDEN AND ORCHARD.**

**Mulching as it Enables Plants to Escape Frost.**

It is a general opinion that a heavy cover placed upon the soil about plants when the ground is frozen will retard sap flowing the following spring and thus delay the maturing of fruit. The practice, however, is often unsatisfactory, although at times much benefit has been experienced in escaping late spring frosts. Tests are reported by Prof. Bailey in his work, "The Principles of Fruit-growing," to have been conducted at Ithaca, N. Y., some years ago, which we deem wise to rehearse. The ground froze deep in December and the frost did not leave it until the middle of March. Upon the 28th of February, the snow being well settled and a foot deep in the open fields, heavy mulches of coarse manure and litter from horse stables were placed about apples, almonds, blackberries, raspberries, currants, gooseberries, grapes, etc., and strawberries were mulched later. The apple and other tree fruits were quite young, having been set out some four or five years. A deep covering was placed about each tree, some three feet or more in all directions. The small fruits were mulched heavily to the middle of the rows. A heavy wagon load of mulch was sufficient to cover about ten feet of the row four feet wide. On the 29th of March the mulches were examined, and although the frost had left the fields fully ten days before, the earth under the cover was still solidly frozen, and from six to eight inches of snow persisted. On the 13th of April there was still frost and snow under the gooseberry mulches, and yet both mulched and unmulched plants seemed to be starting alike. It was apparent that the temperature of the soil exerted no influence upon the swelling of the buds, for the buds which projected above the mulch were as forward as those upon untreated plants, while

the buds that were under the mulch upon the same twig were wholly dormant. Moreover, the protruding portions of the mulched plants maintained their forwardness and produced leaves, flowers and fruit at the same time as the contiguous plants which were not treated. Crandall currants, Juneberries, roses, grapes, and all the tree fruits behaved similarly throughout the season. The mulched blackberries, raspberries and Victoria currants seemed to be a day or two behind the others in starting, but they very soon caught up, and there was no difference in season of bloom and maturity of fruit.

With the strawberries the case was far different. General Putnam and Oregon Everbearing were mulched March 25, when the ground was com-

pletely thawed out. The mulch covered the plants and the entire space between the rows to the depth of three inches. On the 15th of May this mulch was removed. At this time the unmulched plants were in full leaf and were nearly ready to bloom. The plants under the mulch were just starting into leaf and the growth was weak and bleached. The mulch was forked off the plants and they gradually assumed a normal color and habit, and bloomed June 1st. The bloom was delayed from ten days to two weeks, according to the depth of covering. The plants did not seem to recover entirely, however, and the fruitage was somewhat lighter than on the normal plants, but it was delayed a week.

These results are not at all unexpected to the botanist, as it is well known that plants store up starchy matters in their bulbs or branches to be used in the growth of the adjacent parts in the early spring. The earliest bloom of spring is supported by this store of nutriment, rather than by food freshly appropriated from the soil. This is well illustrated by placing well-matured twigs of apple or willow in vases of water in winter, when the buds will burst and flowers will often appear.

These experiments and observations show that a mulch can retard flowers and fruit only when it covers the top of the plant as well as the soil. It is evident, too, that the covering of strawberries and other low plants, for the purpose of retarding fruit, must be practiced with caution, for a mulch of sufficient depth to measurably delay vegetation is apt to bleach and injure the young growth and to lessen the crop. Yet it can be sometimes used to good effect and fruiting can be delayed a week, perhaps even more. We must bear in mind, however, that there is danger of injuring plants by heavy mulch which is allowed to remain late in spring. If it is desired to retard flowers or fruit by mulching, the practice should not be violent and the plants should be carefully watched. We must also conclude that the practice of some orchardists in mulching to delay blooming of apple trees till danger of spring frosts are past is of little advantage.



## POULTRY.

## A Visit to English Poultry Farms.

[BY A SPECIAL CORRESPONDENT.]

In England special attention is now given to birds of practical utility for table and eggs. The best, plumpest, and hardiest chickens come from a cross between Indian Game and Dorking or Surrey and Sussex fowls. These chickens have considerable meat on the breast and little offal, but with a tendency to yellow skin, and this the breeder has to overcome by carefully selecting his breeding stock so that white-skinned and white-legged birds may be reared. White Cochins and Brahma bred fowls should be avoided, as they are poor in breast, coarse in bone, and feathered on the legs. Plymouth Rocks and Wyandottes make excellent table fowls, especially the latter, which have a fair amount of meat on legs and breast. But the

## GAME-DORKING CROSS "TAKES THE CAKE"

as the fowl for market, as they are plump and compact in form, with plenty of good breast meat and little offal. Therefore, if good results are to follow poultry-fattening, care must be taken in the initial stages "to produce birds that are plump and white in flesh, with white legs without any feathers on them," as they find a ready sale. These lines English breeders are being encouraged to follow, and at the recent Dairy Show it was evident many had learnt the lesson. Some excellent table fowl were exhibited—white in flesh, plump and compact in form, with well-formed, meaty breasts, small in bone, and without much offal.

Some time ago we drove round the famous poultry-fattening yards of Aylesbury & Hemel, Hampstead, in Buckinghamshire and Hertford, and subsequently in the picturesque Sussex village of Heathfield, near Ticehurst and Code Street. In 1897 about 1,765 tons of dead poultry were despatched from Heathfield to London, independent of large consignments to customers on the south coast. Fifty-two tons were despatched in one week, representing 29,000 birds, being the largest output of the season. But the birds are not bred in Heathfield, they are only fattened. These fatteners have no time to attend setting hens or rearing chickens. This is done for them. The majority of the fowls crammed are reared in the Emerald Isle, which possesses the best climate and pastures in the world for the purpose. Great numbers are sent in crates at a low freight, and these fowls are soon fed according to the Sussex method. But some large farmers have a staff of men who do little else than scour the country for miles round and buy up any likely birds, while cottagers in every village readily lend a hand in rearing fowls for the use of the fatterer. I have seen coops containing young chickens placed on the green patch by the side of the Queen's highway and in cosy corners in some out-of-the-way lane if the villager has no allotment or small garden attached to his cottage. At Heathfield the birds are turned out

## FAT IN ABOUT THREE WEEKS' TIME.

The food is pumped into them in the consistency of porridge, which is composed of ground oats, sour milk and fat, mixed together. Upon one farm as many as 2,000 fowls were crammed by three men in three hours, and the dexterity exhibited by these fatters is only attained by long practice. Killing is an art, and instantaneous. A fowl is caught and the man holds it firmly by the neck in one hand and by the legs in the other. By extending the bird its full length, the neck given a sudden jerk, and it was ready for the picker, who can pluck forty birds an hour. The feathers, except plumes and quills, are utilized by upholsterers for beds and pillows. Special vans for the conveyance of table poultry have been provided by the railway company, as the traffic has increased since May last by "leaps and bounds." These remarks will suffice for the Heathfield district of poultry fatteners, as I am wishful to describe

## ANOTHER FATTENING ESTABLISHMENT,

situated on the famous "Northern Heights of London," celebrated by the late Wm. Howitt.

Highgate is in North London, and famed in ancient story as the halting place of Dick Whittington, the legendary owner of a famous cat. A stone marks the spot where Whittington sat down and heard the bells of Bow church (which is in the heart of the City of London) pealing, as it were, the legend, "Turn again, Whittington, thrice Mayor of London." And half an hour's walk from this historic spot lies the Manor Park Farm, which comprises 700 acres of clay land. For rearing poultry on a large scale a clay soil is a great disadvantage, as hens grow fat and cocks get thin. The soil ought to be light and gravelly, so that the moisture can easily drain away. This farm is on the left of the Great North Road on the way to York, and is enclosed within a neat railing, and behind are green pastures as far as the eye can reach—a beautiful landscape of several miles, reaching to the famous Harrow-on-the-Hill. The farmhouse and dairy are almost hidden by fine oak trees, which give a picturesque appearance to the dwell-

ing. Manor Farm Dairy is owned by Mr. John Lane and his two sons. Mr. William Lane looks after the farm proper, and Mr. Ernest devotes his time and energies to dairying and poultry-keeping. The farm land is undulating, and all well sheltered from wind and rain by oak trees and carefully trimmed hedges of holly, hawthorn, and privet, which protect the chickens.

The fattening department is a separate and enclosed institution, about eighty feet square. On three sides are double tiers of fattening pens, which are about thirty inches from the concrete floor. The fronts of the pens are iron bars, and the bottoms are wooden spars three-quarters inch apart, and the droppings fall on the floor. In front there is a long wooden gutter, in which the food is placed before the birds are turned into the cramming room, and these troughs are turned outwards when not in use. There is accommodation for dealing with 1,000 birds, but only 500 were in process of fattening when we visited the farm. On one side is the food room, where Sussex ground oats, sour milk and fat are mixed into the consistency of porridge. Next door is the plucking and trussing room, and here an experienced poulterer teaches students the art of preparing fowls for the London market or for private customers. The cramming room is a large apartment, with tier upon tier of pens filled with birds for fattening. Close by is a small house and run for fowls off their feed, and near it is a duck-fattening house and confined run, as ducks are not crammed by the machine. About the center of the yard is a wooden house, which at one time was the incubator room, but it has now been fitted up for shaping and pressing birds for the London market. This method was introduced by Mr. C. E. Brooke, ex-master of the Poulterers' Company, one of the guilds of the City of London. The master and wardens encourage the exhibition of table poultry by offering gold and silver medals for proficiency, and a practical poulterer gives demonstrations of his art and skill each day of the Dairy Show, and also at the great meeting of the Smithfield Club in December.

The process of fattening occupies four weeks at Highgate—two weeks outside in pens, the food being run into troughs, and two weeks in the cramming room. Few pure-bred birds are used for table except Dorkings, Indian Game, Houdans, Plymouth Rocks, Wyandottes, Sussex, Surrey and Langshans. The Rocks are regarded as one of the best all-round breeds, either for confinement or liberty, and their table qualities are very good. Wyandottes are grand all-round birds, grow fairly fast, and make good table birds; in fact, they are firm favorites with fancier and farmer. The Langshan is a useful bird, both for eggs and table. The skin is white, but the flesh is not so juicy as that of Game, but for all that we have had excellent results with the breeds enumerated. The Indian Game-Dorking cross is the fowl which Messrs. Lane Brothers have brought to perfection, and with which they have won prizes at all the principal shows in the United Kingdom. There are crosses in which other fatteners excel, such as the Brahma-Dorking, Indian Game and Faverolle, Rock and Orpington, Indian Game and Sussex or Surrey, Old English Game and Dorking, Indian Game and Langshan or Rock or Orpington; and these varieties were in the prize list at the recent London Dairy Show. Of course, in a large farm "the wasters" (not up to standard) are all fattened for table; but generally speaking, cross-bred birds are more profitable at market. Mr. Dyer believes that it is best to fatten after the birds are four months old if the season is at all favorable, and in this respect the clay soil at Highgate somewhat retards operations.

Birds are selected from the numerous runs and houses, in addition to those cross-bred birds set apart for fattening. The birds are placed in an improved Sussex fattening-coop with four compartments, capable of holding five or six birds. Iron bars are used instead of wood, and on that account there is little or nothing about the coops to harbor insects. The fowls remain two weeks outside in the range of coops fixed for the purpose, then the remaining fortnight they are transferred to the cramming room to be finished off. Hearson's Crammer is the machine used. The fatter has to feel the crops of the birds daily to see that they have their proper allowance. The plan adopted here (as in Heathfield, Snonley, and Aylesbury) is for the attendant to take the bird from a pen and place it properly under his left arm, and with the other guide the tube down its throat on its passage to the crop. The food in the dish on the top of the machine is then pumped into the bird, and as soon as the crop is filled it is replaced in its pen, and so on till all the birds are fed. This process is repeated twice a day, and sometimes a fatter can feed fifty birds an hour, and with the assistance of a boy sixty have been crammed. Elsewhere crammers can feed four times that number. When the four weeks have run out, those fit for killing are handed over to the poulterer and his pupils. Pekin ducks are also fed and fattened for table, and on the Upper Farm and its pond we saw quite a host of plump water fowl.

Messrs. Lane have many varieties of pure-bred fowls, namely: Minorcas, Light Brahmas, Indian Games, Rocks, White and Black Leghorns, and Gold and Silver Wyandottes. The houses and runs are admirably kept, and Dyer was arranging the breeding pens for the season, and had dubbed

(to trim the wattles and comb) several birds, as the chickens were more hardy and strong. The cross-bred chickens have full liberty, and they scour field after field. Shelters on wheels are dotted here and there all over the farm. The Upper Farm is situated upon a hillock, and here there is a large cow shed, which is now utilized as a fowl house, and one of the outhouses is devoted to coops for setting hens. In the old cow house over 500 fowls have a roosting place in the loft, and for their convenience a ladder was at hand. All the houses and runs were visited, and many head of fowl passed in review—old and prospective winners. But Dyer does not entirely depend upon setting hens. He has fitted up a new incubator room, which has been filled with straw and double-boarded on sides and roof, so as to retain all the heat possible. When in full working order there will be a 200-egg Hearson, 100-egg Hearson, 100-egg Tomlinson, and one of Greenwood's. The rearers used are Wethneria, the Cosy Coop, Hearson, and several of Greenwood's. Hitherto Lane Brothers have been very successful with their machines, and in consequence of the large demand they have for eggs for setting and table, as well as pure-bred birds for exhibition, they have just been compelled to add two incubators to their new room. The aim at Manor Farm is to make poultry-keeping pay, and from all appearances that object has been attained. In connection with the dairy a large herd of cows is kept, and the home supply is supplemented by drafts from provincial dairy farms in order to meet the demand of the suburban branches of John Lane & Sons. W. O. London, Eng.

## Picking and Packing Fowls.

To the Editor FARMER'S ADVOCATE:

SIR,—It has been with much interest that I have read Mr. Gilbert's able articles on poultry. He has very forcibly brought forth the money-producing power of the hen in his report of 1897. After reading his method of fattening fowls, I thought perhaps your readers might be glad to know how to dress and ship poultry to our large cities. The following method has proved successful in shipping to Montreal, Boston and New York (all shipments were from Belleville): After being fattened in small yards for ten days to two weeks the fowls were fasted at least 18 hours. When ready to kill, take the bird and place the wings firmly between the knees; the body thus will be put forward; then with the left hand open the mouth and with a sharp knife make a deep incision in the roof of the mouth, immediately below the eyes; also cut the juglar by sticking just behind the ears. Commence picking (dry) at once; clean the breast and crop first, as experience has led us to believe this portion tears very easily if allowed to cool. Pull the feather the opposite way to their natural position; pick quickly, but take care not to tear the flesh. After a little experience you will not care to scald chickens for your own use, as you can have them picked before the water is scalding hot. Leave half the feathers on the neck and the outer wing point unpicked; some leave the tail feathers. After picking, wash the head clean in two waters, then hang up to cool, head downwards. Allow to cool for at least eight hours, or until the body becomes perfectly cold. Pack in boxes or barrels and cover the top with a clean piece of old linen; this covering prevents the express agent from handling the boxes roughly and also admits free circulation of air. If the lid is of boards, unless the poultry is packed tightly the expressmen will do their utmost to make jelly or some other compound of the contents of the boxes. This method will admit anyone of receiving 10 cents per pound for good chickens weighing from nine to ten pounds to the pair, but they must be fat. Do not mix fowls with light and yellow flesh in the same box, as they are unsightly and customers seldom want both colors. The feeding of yellow corn has a tendency to make the flesh a deeper yellow. W. R. GRAHAM. Hastings Co., Ont.

## Rate of Growth of Ducklings.

An experiment recently conducted at Ham-monton, New Jersey, went to show that ducklings, if properly fed and managed, should make the following gains in weight per week:

Weight at	LB.	OZ.
one week old.....	0	4
" two weeks old.....	0	9
" three weeks old.....	1	0
" four weeks old.....	1	9
" five weeks old.....	2	2
" six weeks old.....	2	11
" seven weeks old.....	3	5
" eight weeks old.....	4	0
" nine weeks old.....	4	8

## Death of a Pioneer.

Mr. Andrew F. Pettit, at the age of 90 years, died last month at the residence of his only son, Mr. W. G. Pettit, of Freeman, Ont. He was born in 1808, and in 1883 moved to the farm on which he died. When he took possession, the farm was covered with the primeval forest, which Mr. Pettit himself cleared. He was a man of quiet and retiring disposition, preferring the retirement of domestic life to public activities and honors, and was a loyal British subject, having held the rank of lieutenant in the militia during the rebellion of 1837. He was the last surviving member of a family of six, and one son and one daughter survive him.



ENTOMOLOGY.

The Rocky Mountain Locust.

BY DR. J. FLEISCHER, DOMINION ENTOMOLOGIST, OTTAWA.

During last June notices appeared in the newspapers that injury was being done by grasshoppers or locusts in southern Manitoba.



These reports naturally caused much anxiety among the old settlers who had been in the Prairie Province at the time of the serious locust depredations during 1868, 1870, 1872, 1874.

By instruction of the Hon. Sydney Fisher, and at the request of the Hon. Thomas Greenway, I visited the localities reported to be infested in the beginning of July and again in the middle of August.

The exact identification of the species was in this case a matter of no little importance, for it is well known that, although there are many kinds of locusts in the west, none of them are to be feared as crop destroyers to anything like the same extent as the above named, which has exceptional powers of flight and is gregarious in its habits.

A good use of this special knowledge was made by Mr. John Scott, who has lived a few miles south of Doloraine for many years. He noticed a swarm of the locusts alight on his farm last autumn, and this spring warned his neighbors to be on their guard and take some steps to protect their crops.

The area over which the Rocky Mountain Locust occurred in Manitoba this year was a narrow strip only a few miles in width, lying to the south of Doloraine and Boissevain, and running along the northern slope of the Turtle Mountains.

It is probable that this locust breeds regularly every year in parts of the Turtle Mountains, but it is many years since it spread from these breeding grounds north into Manitoba. It has, however, shown only too well in previous years that it is able to breed and multiply on our prairie lands when once established there.

It is conceded by all that the best remedy is the ploughing down of the eggs so deep—five or six inches is sufficient—that when the young locusts hatch in spring they may not be able to work their way up to the surface.

WHERE THE EGGS ARE LAID.

The places where the mother insects lay their eggs can be discovered only by seeing them at work, or by examining the soil carefully for the egg-pods. The time required for boring the hole and laying the complement of eggs is three or four hours.

sists of a coating of a waterproof mucous material, which is deposited at the same time as the eggs. There are in each pod about 30 eggs, and each female lays about three pods during the autumn.

The eggs are laid for the most part in stubble fields. They are very seldom laid in thick sod or in loose, newly-ploughed earth.



LOCUSTS LAYING EGGS.

roots of the grasses, and in the second case the burrows could only be made with great difficulty in the dry, powdery earth.

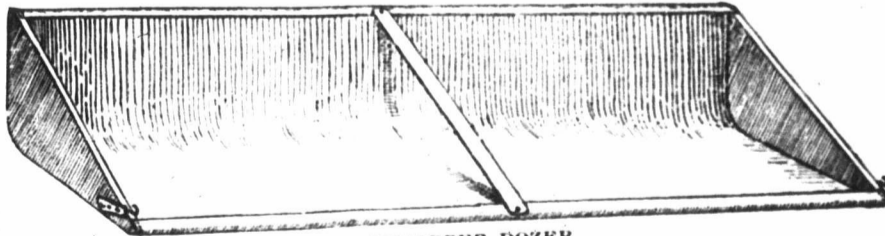
The late Dr. C. V. Riley wrote: "The eggs may be laid in almost any kind of soil, but by preference they are laid in bare sandy places, especially on high dry ground, which is tolerably compact and not loose."

Prof. Otto Luggler, State Entomologist of Minnesota, writing in July, 1889, after examining a district which had been devastated, says as to the places chosen for egg-laying: "A close inspection soon revealed the fact that fields with last year's stubble contained large numbers of eggs, whilst stubble land of the previous year and older contained none, or but very few."

From the foregoing extracts by three of the leading authorities on the subject it is evident that if farmers will attend carefully to their stubble lands, where by far the greatest proportion of the eggs are laid, there is every hope that next year there may be no trouble from locusts; but, at the same time, it must be borne in mind that unless all help, there were certainly sufficient locusts this year in the district I visited for the young to commit serious depredations next year, and to spread over a much wider area in the Province.

REMEDIES. Ploughing—The remedy above all others, as stated above, which has given satisfactory results is the ploughing down of the eggs, and although harrowing has been recommended by some, it cannot be relied on.

Other Remedies.—Should grasshoppers, notwithstanding all precautions, be found abundant, farmers may have recourse to burning, by means of strips of straw, as was done by Mr. Scott this year, or to the use of hopper-dozers or tar pans, which are implements made of sheet-iron, containing some tar or coal oil in the bottom.



GRASSHOPPER DOZER.

deep, or water and coal oil. The implement can be drawn by a boy at each end, or a horse if preferred.

A few weeks after this date many herds of cattle will present an unsightly appearance from having bare patches of skin, especially in the region of the neck. This is largely the result of the presence of small, inconspicuous lice.

There is no question as to the efficacy of ploughing. Fields lying side by side on the same ridge of land that were visited by Rocky Mountain Locusts last fall showed this point very clearly. One of the fields was left unploughed, and from this small area probably 25 bushels of grasshoppers hatched out, while in the fields that were ploughed no trace of grasshoppers could be found except as they came from unploughed fields.

So far as ploughing simply to destroy the eggs of the locusts, there is no reason why this need be done in the fall any more than in the following spring. In fact, in the localities where grasshoppers appeared this year, fields that were ploughed immediately before seeding were as free as those ploughed shortly after harvest, though the ground in both cases was undoubtedly filled with eggs.

Now, in regard to harrowing, there is no doubt that if the egg masses are brought to the surface and broken at this time of the year the vitality of the eggs will be destroyed.

To secure the best results as far as the destruction of the locusts is concerned, fall ploughing is undoubtedly the most effective method; but, if from press of other work it is impossible to plough all land which was under crop this year, much good may be done by early spring ploughing before the insects hatch or before they are large enough to move from their hatching grounds to adjacent crops.

A few weeks after this date many herds of cattle will present an unsightly appearance from having bare patches of skin, especially in the region of the neck. This is largely the result of the presence of small, inconspicuous lice.

Permit no stubble fields. They should all be ploughed, as in them most of the eggs will be deposited. A few acres of stubble land can and will breed enough locusts to endanger the crops of all the surrounding fields.



### QUESTIONS AND ANSWERS.

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

#### Legal.

##### Railway Farm Crossing.

SUBSCRIBER, P. E. I.:—"Can a railway company place the farm crossing on my farm just where they choose, or have I a right to locate it; and can I insist upon the company putting in cattle guards to prevent stock running along the railway?"

[The railway company are bound to place the crossing convenient for the farmer for the passing of his stock, wagons, etc. They are not bound to put in cattle guards. The gates when not in use are required to be kept closed by the farmer.]

##### Fire Burning Off.

SCRIBBLER, Simcoe Co., Ont.:—"My neighbor, in the month of July, makes fires for the purpose of burning off brush, stumps, etc., and the fire gets across the road and destroys my fence. Can I compel my neighbor to make good my loss?"

[A person making such fires is bound in law to take every reasonable precaution to prevent damage to another, at every time of the year, and in the dry months of summer he should be especially careful, and his precautions should be such as practically to insure against causing damage, and if every such precaution was not taken your neighbor is liable.]

##### Master and Servant.

SUBSCRIBER, Huron Co., Ont.:—"A man servant hires to do general work upon a farm, including dairy chores at a yearly wage. 1. What holidays is he entitled to, and is he bound to work on Sundays? 2. If he leaves of his own accord, without a good legal reason, can he collect from the master his wages up to the time of quitting?"

[1. A servant hired as stated is bound on all the legal holidays and on all Sundays to do the necessary chores about the place, such as feeding and attending to the stock, milking, etc., but on these days he is not bound to do ordinary farm work, aside from these works of necessity. 2. The servant having engaged to work for a year must complete his contract before he can sue for his wages, and he is not entitled to collect any arrears of wages earned if he, without a valid legal excuse, quit before completing his term as agreed.]

#### Veterinary.

##### Poll Evil.

I. H., Manitowaning, Ont.:—"I have a colt, three years old, suffering from poll evil. I would like you to give me a cure for it if you can."

[Although considered a distinct disease, it is nothing more or less than an abscess in the poll. The reason why it is difficult to cure is its being in a position that is awkward to get an opening so that the matter will run out. It depends more on the skill of the veterinary surgeon than on any remedies. Wash out with carbolic acid solution, one part of acid to four parts of glycerine and six of water. This should be syringed into the wound every day until the parts present a healthy appearance.]

DR. W. MOLE.]

##### Mud Fever—Sick Calf.

G. K., Munro, Ont.:—"I have a calf seven months old which went off its feed a month ago. I gave it a dose of salts and ginger, but it is no better. When he gets up he staggers around as though he would fall over. He has sucked a cow all the summer and has never been out of the stable."

"2. My driving horse, five years old, seems to be very much irritated along the belly, with the hair coming off in patches. I have seen cases of mud fever on the legs, but did not know whether this was the same disease or not. I have applied lard, sulphur and carbolic salve. Could you give me a better remedy?"

[1. Unless we receive more exact particulars of this case we cannot offer any advice. All that the symptoms indicate is extreme weakness, which might arise from a variety of causes. Repeat your medicine, which seems quite right and can do no harm.

2. With regard to your driving horse, we are of the opinion that you have an attack of mud fever, and your remedy should have the desired effect; if not, try the following: Liquid plumbago, 2 ozs.; olive oil, 1 pint. After applying three times, wash off with warm soapy water, dry and apply again until well.]

DR. W. MOLE.]

##### Stomach Stagers in Hogs.

D. B., Grey Co., Ont.:—"Between November 8 and 10 five of my pigs died. They seemed all right in the morning, but at feeding time at noon three of them were dead. I bled two of the pigs by slitting the ears, and I think it will fetch them around. The symptoms were very strange, and I thought they must have been poisoned. They would sit up on their rumps, champ and saliver at the mouth; would start going around, shaking their head up and down, sniffing and working their nose; some would keep travelling around all over the sty; would run against the walls as though they could

not see anything. When they died they would swell up terribly, and turn a purple color very shortly after. They got no food that they were not used to; nothing but good clean peas and water, as I was fattening them for market."

[Stomach staggers in hogs, or apoplexy, due to congestion of the brain as a result of engorgement of the stomach, is not uncommon amongst pigs, especially when they are put suddenly upon an abundance of food of a highly nutritious character. Peas when given in a raw state are often bolted, the animal does not grind down the food sufficiently, and when it arrives in the stomach swells and distends that organ to such an extent as to cause pressure on the diaphragm, congestion of the brain, apoplexy, and death. The remedy that you employed was quite right and no doubt saved their lives. In these cases death occurs so rapidly that unless you are prepared to act promptly you will often lose your animal. Prevention by feeding more often until you get them accustomed to the heavy food is the best course to pursue. To bleed a pig successfully is quite a difficult matter. We often hear of cutting off the ears and tails of pigs to make them bleed. It is much more easy to bleed at the inside of the forearm: place a ligature around the leg, and when the vein swells up strike with a sharp penknife, and after sufficient blood has been withdrawn, remove ligature, apply a piece of rag as a bandage and so stop the hemorrhage. Give a dose of purgative medicine: an ounce of powdered jalap in a trough of swill, or carbonate of magnesia may be used in the same way.]

DR. W. MOLE, M. R. C. V. S., Toronto.]

##### Warts on Cattle.

E. E., Scotland, Ont.:—"I have a steer which is about two years old. Last spring a wart came on its shoulder and soon spread down its legs with a great many little warts. I also notice that three other young cattle which pasture with him are breaking out in their bodies with the same kind of wart. What shall I do? Will it spread over all my cattle which come near him?"

[Warts are growths of the epidermis or outer skin. When large are best removed by a sharp knife. When diffused over a large surface are due to some irritant in the animal's feeding which should be changed. Give internally ounce doses of Fowler's solution of arsenic once a day for five or six weeks. Dress daily with the following ointment: Chloride of ammonia, 1 part; powdered savin, 2 parts; vaselin to form a paste to pour. We have often declared that we would not give this recipe away, as unfair use was made of it on the last occasion. DR. W. MOLE, M. R. C. V. S.]

##### Sheep Going Blind.

I. E., Brockville, Ont.:—"I have sixteen sheep, which have been running in a field of corn, and about half of them have gone blind. Upon examination I found their eyes red and inflamed, with a coating formed over the ball, but no discharge. They do not appear to suffer any pain, have good appetite, and in good health otherwise. What is the cause, and the remedy?"

[The trouble will probably have disappeared before this reaches our correspondent. It is an infectious ailment that will probably go through the whole flock, and in the course of two or three weeks work its own cure. We have seen it repeatedly run its course and disappear without any treatment, and without leaving any permanent ill effects.]

#### Miscellaneous.

##### Recognized Stud Books for Coach Horses.

J. W., Manitoba:—"The directors of our society have struck a difficulty as to what are the recognized Stud Books for coach horses. A man showed a coach stallion and produced to the judges a certificate of registration, signed, I believe, by "King Dodds." The judges held that this was not from any recognized Stud Book and refused to award him the prize. The man has entered a protest to the directors. If you would let me know what Stud Books for coach horses are recognized, especially if the one kept by Mr. King Dodds is one, you will very greatly oblige."

[There is no Coach Horse Stud Book in Canada. There is a Cleveland Bay one in Springfield, Ill., and a Yorkshire Coach Horse Stud Book in England. King Dodds' book is for trotting horses and not a coach horse book at all. The only coach horse pedigrees recognized by the Dominion Live Stock Registrar, Mr. Henry Wade, are the ones mentioned.]

##### Home Curing of Bacon.

H. H. KIRKPATRICK, Colchester Co., N. B.:—"You would confer a great favor by publishing in the next issue of the FARMER'S ADVOCATE directions by which a farmer may cure and prepare bacon for market on a limited scale. This question may have been previously answered, but as I am not a very old subscriber it would be new to me, and I suppose many others. I would like to try the experiment on one or two pigs this fall."

[There are a number of ways of curing pork, but the most favored method seems to consist in dry-salting the fresh meat on a table or bench. The half pig is cut into three pieces—the ham, side, and shoulder. With large, thick pigs, it is well to cut out the shoulder at the joint, taking out the shoulder blade. With smaller pigs up to 250 pounds the fore quarter may be left attached to the side or

severed straight across and salted separately. Now remove the ribs and rub the fleshy surface with salt-petre and then the entire surface with dry salt. Pile the pieces in tiers on a table or bench and leave for five days, then turn the entire pile, placing the upper pieces on the bottom after rubbing each piece with salt, and if any parts appear red or fresh apply a little saltpetre to these. The pile is now left for two or three weeks, rubbed with salt, turned again as before, and left for two or three weeks longer. It is well to keep it in a dark place, which preserves the clear, bright appearance. It is now ready for market, or it may be hung up in cotton bags in an airy shed, or it may be packed in dry oat hulls. Some prefer to have it smoked after it is cured when it is to be used at home, but for market the smoking may be objected to. The hams may be treated in much the same way, but pickling the hams is generally preferred. The fresh hams are placed in a pickle consisting of salt brine, to which is added ten pounds of brown sugar to five gallons of brine. At the end of four or five weeks in this pickle it is ready to be hung up in bags, or otherwise preserved from the light.]

#### VETERINARY.

##### The Tuberculin Test.

There is little question of the utility of the tuberculin test properly used in the hands of a competent operator as a diagnostic agent for tubercular troubles in cattle, but at the same time it is not infallible. During the "craze" period a good many State and other governments were foolishly led into a crusade of slaughter, costly, and in many cases, there is little doubt, needless; but one after another, wiser counsels resulted in its abandonment. In this connection the following from the London (Eng.) *Live Stock Journal* is of interest:

"Whatever may be the scientific value of tuberculin—and this is a subject on which most people will be disposed to accept the conclusions of scientists—there are many who believe that its practical value is open to serious question. It fails to pick out the animals that are far gone in tuberculosis, and which everybody would like to see destroyed, while it reveals the existence of the disease in such a minute form that a microscope has to be used in order to discover the presence of the latent taint in the carcass of the animal. Foreign countries and the colonies have all decided that pure-bred stock must be subjected to the tuberculin test on arrival, and be certified to have passed through it without reaction in the exporting country before they can be admitted, and, of course, our breeders have no choice but to comply with this stipulation if they wish to sell to the foreigner. Now it is rumored that several animals that emerged successfully from the test in this country have been detained as "suspects" when landed in South America. This must arise from one of three causes—the unreliability of the test; the unreliable conditions under which it has been applied in South America, when the animals have probably been weakened by a long sea voyage; or the difference in the kind of tuberculin used. It would be useful to know which of these supposed causes is the correct one. In any case, the incident does not tend to increase belief in the reliability of the tuberculin test for practical purposes."

Professor Bang, of Denmark, who has made a specialty of tuberculin testing, and whose method of eradicating bovine tuberculosis is well known, thinks that it is too much to claim that in 98 cases out of 100 the showing of the test is absolutely reliable. He puts the maximum at 87 per cent. Animals are destroyed which show evident clinical symptoms, the others being isolated; but farmers are not prevented from disposing of reacting cattle when fattened, which show no observable symptoms, and butter is permitted to be made from their milk. Cows with diseased udders, shown by hard swellings, etc., nasal, uterine or intestinal discharges, are considered infective and dangerous. Professor Bang does not consider that calves from tuberculous cows are predisposed to the disease any more than to broken legs or other accidents, unless exposed to contagion after birth. His plan is to remove the calves from dams immediately after birth, and feed them with milk from healthy cows, or sterilized milk. Tuberculin testing is not compulsory in Denmark, but the Government supply tuberculin and furnish competent officers to make the test free of charge. Prof. Nocard, of France, another eminent specialist on this subject, claims that in every case where the test undoubtedly indicates tuberculosis, the tubercles, though perhaps small and few, can be found in the animal if looked for with sufficient care. But it would hardly be contended that such cases would endanger the public health. In fact, Dr. Irving A. Watson, chairman of the New Hampshire State Cattle Commission, stated in a public address not long ago that a small proportion of tuberculous animals are really dangerous, and their slaughter is unnecessary, as many of them either recover under proper conditions or the disease is permanently arrested.

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



MARKETS.

FARM GOSSIP.

Duty on Yearling Cattle.

A dispatch from Detroit, Mich., says: "Collector Rich's ruling as to the duty to be imposed on cattle which were a year old last spring, was made the subject of an investigation by General Spaulding, the Assistant Secretary of the Treasury. The Department overruled on a technicality the protests of shippers affected by the decision, and has also sustained the decision on its merits. The contention of the cattle-men was based on the well-known custom of regarding yearlings up to the time when they are two years old as still yearlings. The recent confiscation of six carloads of cattle at Buffalo was based on Collector Rich's ruling."

Oxford County, Ont.

Even with all the trying wet weather the root crops have been safely harvested. The crop of turnips and mangels was especially good. I don't think I ever had better turnaips. We were in the habit of throwing them out of the wagon with the potato scoop or scoop shovel, but they were so universally large this season that we could make better time throwing them out with our hands. There were a few rotted at the top or shank—a sort of dry rot. We left a few in the field. I am not afraid of it developing where the roots are kept cool enough. In the year '79 the turnaips were similarly affected, and did not spoil in the root house. In feeding out this season I have only noticed one turnip spoiling. The rot is supposed to be due to the weather and too early sowing. We have had a few nice days, and the cattle, colts and sheep are doing nicely in the fields, the two former being fed night and morning in the stables. The apples are nearly all shipped now. They turned out a great crop, much better than could have been expected, having grown and developed very much the last two or three weeks they were on the trees. We are glad to notice that the prices are keeping up so that the dealers and shippers who have taken care in the packing and shipping will get out with a profit. The roads have been very bad, and it has been a trying time for those who have far to draw apples, milk, etc. The factories are mostly making butter, from 19 to 22 cents is being offered for November make. Cheese is also looking up, and some factories have sold their Octobers at about 9¢ cents. Live hogs have again reached 4 cents, and it is to be hoped the price will get up to 5 cents, as the farmers should have that much to make it pay. Some wheat has been shipped at 68 cents. There is still considerable plowing to do, as farmers were so much retarded by the continued wet weather, and some low lands are still too wet to plow yet. The corn crop was especially good, and all provident farmers have it husked and the stalks set up in the barns. We will soon be getting ready for the Farmers' Institute meetings. D. L.

Chatty Stock Letter from Chicago.

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

Table with columns for CATTLE, HOGS, and SHEEP, listing prices for various grades and weights. Includes sub-sections for 'Top prices' and 'Two weeks ago'.

The general fat cattle market is in good condition, but there are too many unfinished cattle being sacrificed. The first meal-fed Texas cattle of the season averaged 1,085 lbs., and sold at \$1.30; some 994-lb. distillery-fed Texas steers sold at \$1.25.

The range cattlemen have had the best year since 1884, and they are generally in happy frame of mind. Receipts and average prices of western range steers for a series of years have been as follows:

Table showing receipts and average prices of western range steers from 1881 to 1898. Columns include Season, Receipts, Top Pr., and Av. Pr.

Western range steers averaged about 30c. per 100 lbs. higher than last year. On a basis of 1,250 lbs. average weight, this amounts to \$3.75 per head.

Upon western range cows and heifers the advance was decidedly more marked, amounting to at least 50c. per 100 lbs. This was partly because there were not so many of them. This was partly because they were in a little better fix and partly on account of the war, which cleaned out the old cans and left room for new ones to be filled. Then, too, there was a small supply of corresponding grades of both native and Texas cattle.

During the past week we have received quite a number of half fat cattle, which we confidently believe would have paid the owners well to have fed 60 to 90 days longer. Cattle of this description, that is, of good quality but not well-finished, are just the kind that should be kept until fat.

The demand for feeding cattle is not so strong as it was a while ago. One reason is that they haven't the confidence to justify the late high prices, and another reason is that the strength in the grain market is deterring feeders somewhat.

Here is a board of trade view: "Iowa is sending a good many claims of hog cholera. The light weight of the present arrivals at the yards is supposed to be due to a scare over this pest, which is prevailing west. Some of the provision people

say that this cholera scare is a reason for the present big receipts. It works in a very uncertain way on the market. If the scare increases it may so swell the receipts temporarily as to break prices. It would be bullish ultimately. As a matter of fact, there doesn't seem to be nearly as much hog cholera abroad as usual, and it is not as virulent. The hog market has lately suffered quite a decline, and current prices are the lowest of the year. The slump in sheep prices has been due to large receipts and to a feeling on the part of the trade generally that prices had gotten to a dangerous point. Then, too, the advance in the price of grain made quite a difference.

MISCELLANEOUS.

Maritime Notes.

The Nova Scotia Farmers' Association, during the last two months, have held a series of Institute meetings, sixteen in number, and covering the counties of Victoria, Richmond, Guysborough, and Antigonish. The speakers were: The President of the Association—J. Rufus Starr, of Port Williams; W. W. Hubbard, editor of the Co-operative Farmer, Sussex, N. B.; F. L. Fuller, manager of the Provincial Government Farm at Truro; and P. C. Black, of Falmouth, Secretary of the Association. They report large and appreciative meetings at all points, and a general desire among the people to acquire all the information possible. These meetings, if continued, must end in lasting good. We need all the information we can get, and in no way can this information be so easily and pleasantly acquired as by listening to the address of a man who has made a success of his particular subject. One of our greatest needs is an improvement in our live stock, and this subject was gone into pretty fully by Mr. Hubbard at the evening session. His address was particularly interesting, as it was illustrated, by the aid of a magic lantern, with almost life-size portraits of many famous animals typical of the various breeds. Mr. Starr spoke solely upon fruit-growing, giving instruction upon the setting out, care and cultivation of orchards. He said that during his trip he had seen apples as fine as any ever grown in the Annapolis Valley. He thought that the reason why our apples were not generally good was that the orchards were not properly cultivated, and that with the same cultivation Annapolis Valley apples would be no better. He said the land for an orchard should be thoroughly prepared by underdraining, manuring and cultivation so that it would be dry, rich, and in fine tilth. The trees should be set out in rows 33 feet apart; large holes should be dug, enabling the roots to be well spread out; and in filling fine earth should be well worked among them with the fingers. The earth should be tramped as it was put in, except that on the top, which should be left loose. Trees should never be set in grass land or grass allowed to grow around them. For at least ten years after an orchard was set out it should be kept continually cultivated. Bare cultivation without manure would be preferable to grass with plenty of top dressing. Old orchards were sometimes seeded to grass, but much greater success attended cultivation. If stable manure or commercial fertilizers were used, root crops could be profitably grown in the orchard, but if little manure could be spared then green crops should be grown and plowed down. Potash was the constituent most particularly required in all fertilizers for use in the orchard. After the trees are well growing, their care, besides cultivation, will consist of an annual pruning. The head should be formed from five to six feet high, and afterwards all limbs should be removed which in any way interfere with another. Pruning should be done early in the spring or late in June, and it is better to remove the limbs while small than to wait until they get of large size. The pests which demand particular attention are the tent caterpillar, codling moth, and the black spot in apples and the black knot in plum trees. Caterpillars are usually killed by hand, going over the orchard several times during the summer. For the codling worm the trees were sprayed with Paris green and Bordeaux mixture, and for black spot they were sprayed with blue-stone before the leaves were out. Black knot in plum trees was cut out and the wound rubbed with turpentine or paraffin. The knot itself should always be burned.

Mr. Black thought that present methods of farming should be changed to conform with present conditions, and that while the selling of hay and other crude crops may have been all right when the land was in its virgin state, such a practice could no longer be justified. They should be fed upon the farm, thereby enabling the farmer to market them in a condensed form and at an increased value, and at the same time retain the greater part of their fertility. In restoring worn-out land, one of the quickest and best means was by the growing and plowing down of green crops, and of all crops for this purpose clover was the most important, as it possessed the power of extracting nitrogen from the air. In raising animals for beef, the best common cows of a beefy stamp should be selected, and upon them a pure-bred bull of a beef breed should be used. The calf, if possible, should be born in the fall, as there was more time during the winter to give it the required attention, and by spring it would be able to benefit by the summer pasture. As it was intended for beef, it should be kept fat from the start, and as a young animal gave better returns for the food consumed than one which had reached maturity, it should be well fed while young. For the first two

weeks the calf should be given new milk, after which time skim milk and flax seed should be substituted, and it should be taught as early as possible to eat a little clover hay and grain. It should be matured at two years old, at which time it should dress from six to eight hundred pounds. He thought that this was an ideal sheep country, and that more attention should be paid to this branch of farm stock. Sheep gave greater returns for feed and attention than any other kind of farm stock. The Shropshires made a splendid cross upon the common ewes, and they were hardy and prolific. Care and attention was necessary to profitable results; while warmth was not necessary, shelter from storms should be provided. Clover hay was one of the best foods, and turnips were almost a necessity. A good ram should always be used, and the best of the ewe lambs kept for breeding.

The Sydney Record, in a recent issue, referred to the departure of numbers of Cape Bretonians abroad, with the idea of bettering their fortunes. On one day nine young women left for Boston, Mass., and several others went the day following. Nova Scotia has been a nursery for the United States. It is a sad thing to see, year after year, the very best of our young men and women leaving the country. As soon as they are able to do a man or woman's work they are off. In very many cases the old people are left entirely alone; they receive help in the way of a little money from those who are away, but they cannot work the farm as it should be worked, and less is done upon it each year. Think what the value of their labor would be if profitably employed within the Province; what a vast addition to trade there would be in supplying their wants. Let our statesmen try and retain our own youth within the country. AGRICOLA.

Barley and Corn as Pig Foods.

An instructive pig feeding experiment was recently conducted in Germany. The objects of the experiment were to determine (1) whether feeding with barley was deleterious when given in large quantities, and (2) to compare the feeding properties of barley and corn, both given with skim milk. Eight pigs, about seven weeks old, were selected for the experiment, and they were fed as follows: During the earlier portion of the experiment the first pair were given whole barley, the second crushed barley, the third crushed corn, and the fourth crushed corn with whey. Numbers one, two, and three were also given equal quantities of potatoes; and the weight of whey given to the fourth pair was about three times the weight of potatoes given to the third pair, equal amounts of corn being given. The same quantity of skim milk was given throughout to all. At the end of nine weeks several variations were made in the quantity and kind of food given, and by about the end of four months it had been established that crushed barley had produced better results than the whole grain; also, that up to this point the crushed barley had produced better results than the crushed corn. The general result of the experiments led to the conclusion that giving barley in whole, rough grain is harmful, and that it is not advisable to feed pigs under four months too freely on maize. After that age, and when rapid fattening is desired, the corn proved itself a better food than barley.

A Carriage Team for Lord Minto.

On November 22nd, the Governor-General's A. D. C., Major Drummond, and his English coachman visited Bowmanville to inspect the first-prize carriage team, the high-steppers that won such admiration at the Canada Central Exhibition at Ottawa last month, owned by Mr. R. Beith, M. P. It was said then by competent judges that their equal could hardly be found in the Dominion. They stand 15.2, and are a very showy span of mares, sound as a bell, and keen drivers. They were held at \$1,000 and the Major bought them, subject to satisfactory inspection by a veterinary.

Jas. A. Russell, Precious Corners, Cobourg Station, G. T. R., Ont., writes: "I have made some good sales through advertising in FARMER'S ADVOCATE since I started to advertise in October last. I started in the business in 1894; have won 95 first prizes, 35 seconds, and 8 diplomas. The boars and sows that I advertise are from first-class show stock; the B. P. Rock cockerels that I advertise are choice. Visitors welcome, and met at station when notified."

It is with difficulty that Canada can retain the best in live stock, as breeders in the Old Land stop at no small offers when an animal that suits them looms into view. Among the late noted animals that have found their way back to Britain is the champion Hackney stallion of America, Royal Standard, until recently owned by Graham Bros., Claremont, Ont. He has been secured by Messrs. A. & W. Montgomery, of Scotland, whose appreciation of the highest class of horseflesh is well known to our readers.

New Zealand was one of the first countries to engage in the frozen meat trade. In 1882, 40,000 sheep were shipped from that colony, while at the present time over 2,500,000 sheep and lambs are exported annually.





## AN AMERICAN GIRL IN LONDON.

BY SARA JEANNETTE DUNCAN.

(Continued from page 542.)

"Have you—are you a professional of any kind?" inquired Miss Hippy. "Not that I object to professional ladies—they are often very pleasant. Madame Solferone resided here for several weeks while she was retrenching; but Madame Solferone was, of course, more or less an exceptional woman. She did not care—at least, while she was retrenching—for the society of other professionals, and she said that was the great advantage of my house, none of them ever would come here. Still, as I say, I have no personal objection to professionals. In fact, we have had head ladies here; and real ladies, I must say, I have generally found them. Although hands, of course, I would not take!"

"Oh!" said Miss Hippy, pitifully baffled. "Then, perhaps, you are not—a young lady! That is, of course one can see you are that; but you—you are married perhaps?"

"I am not married, madame," I said. "Have you any rooms to let?"

Miss Hippy rose ponderingly. "I might as well show you what we have," she said.

"I think," I replied, "that you might as well. Otherwise I will not detain you any longer." At which, curiously enough, all hesitation vanished from Miss Hippy's manner, and she showed me all her rooms and expatiated upon all their advantages with a single eye to persuading me to occupy one of them. "Have you any rooms, Miss Hippy," I inquired, "on the ground floor?"

"That," returned Miss Hippy, as if I had put her the only possible question she was not prepared for, "I have not. A gentleman from the West Indies, Miss Hippy went on impressively, "hardly ever without inflammatory rheumatism, which you will admit makes stairs an impossibility for him, occupies my only ground-floor bedroom—just off the dining-room."

"That is unfortunate," I said, "since I think in this house I would prefer a room on the ground floor. But if I decide to take one of the others I will let you know, Miss Hippy."

Miss Hippy's countenance fell, changed, and again became expressive of doubt—this time offensively.

"I've not asked for any references, though, of course, it is my custom—"

"You will receive references," I interrupted, "as soon as you require them. Good afternoon!" We were standing in the hall, and Miss Hippy, from force of circumstances, was obliged to unfasten the door; but I did not hear from her, as I passed out into the street, any responsive "Good afternoon!"

My third experience was quite antipodal to Miss Hippy. Her parlor was Japanese too in places, but it was mostly chipped; and it had a great many rather soiled cushions in it, quite a perceptible odor of beer and tobacco, and a pair of gentleman's worked slippers under the sofa. I waited for the lady of the house, a conscious hypocrite.

She came in at last voluminously, rather out of breath, but with great warmth of manner. "Do sit down!" she said. "Now, it does seem strange! Only last night at the table we were sayin' how much we wanted one more lady boarder! You see, I've got four young gentlemen in the city here, and of us ladies there's just four, so we sometimes get up a little dance among ourselves in the evenin's. It amuses the young people, and much better wear out carpets than pay doctor's bills, say I."

"Now, I generally play, an' that leaves only three ladies for the four gentlemen, you see! Now, isn't it a curious coincidence," she said, leaning forward with a broad confident smile, "that you should have come in to-day, just after we were sayin' how nice it would be if there were enough to get up the Lancers!"

I bowed my acknowledgements.

"You want a room for yourself, I suppose," my hostess went on, cheerfully. "My top flat, I'm sorry to say, is every bit taken. There isn't an inch of room up there, but I've got a beautiful little apartment on the ground floor you could use as a bed sittin'-room, lookin' out on what green grass we have. I'll show it to you," and she led me across the hall to a dimly mantled cupboard, the door of which she threw open.

"That," she said, "you could have for twenty-five shillin's a week. Of course, it is small, but then—so is the price!" and she smiled the cheerful, accustomed smile that went with the joke. "I've another up here," she said, leading the way to the first landing, "rather bigger—thirty shillin's. You see they're both bein' turned out at present, so it's rather unfavorable;" and the lady drew in the deep breath she had lost going up the stairs.

I could think of only one thing to say. "I believe you said your top flat was all taken," I remarked, amiably. She was such a good-natured soul, I couldn't bear to say anything that would hurt her feelings. "That is unfortunate. I particularly wanted a room in a top flat. But if I decide on one of these others I'll let you know!" There were two flats, and diametrically opposed flats, within half an hour, and I know it's excessively wrong to fib; but under the circumstances, what could you say?

"Do, miss. And, though I wouldn't for the world persuade you, I certainly hope you will, for I'm sure you'd make a very pleasant addition to our party. I'll just let you out myself." And she did.

I drove straight back to the Metropole, very thankful indeed that that was evidently the thing to do next. If there had been no evident thing to do next, I was so depressed in my mind that I think I would have taken a ticket to Liverpool that night and my passage to New York on the first steamer that was leaving. I had allowed the day's experiences, capped by my relation in the morning, to overcome my entire nerve-system, which was childish and unreasonable. I wished then, and often since, that Providence had given us a more useful kind of nerve-system on our side of the Atlantic—something constructed solidly, on the British plan; and, just as I was wishing that, there came a rap. A rap has, comparatively, no significance until it comes at your bedroom door when you are alone in a big hotel, two thousand five hundred miles from home. Then it means something. This one meant two cards on a salver and a message. One of the cards read: "Mrs. Cummers Portheris," with "Miss Purkiss" written under it in pencil; the other, "Mr. Charles Mafferton," with "2, Hertford Street, Mayfair," in one corner, and "The Isthmian Club," in the other.

"Is she there now?" I asked the servant, in acute suspense.

"No, miss! The ladies they called about 'alf past three, and we was to say that one lady was to be 'ere again to-morrow mornin' at ten, miss. The gentleman didn't leave no message."

Then my heart beat again, and joyfully, for I knew that I had missed my relation and Miss Purkiss, and that the way of escape was still open to me, although ten o'clock in the morning was rather early to be obliged to go out. I must say I

thought it extremely foolish of Miss Purkiss to have mentioned the hour. It was like a fox making an appointment with a rabbit—a highly improbable thing for the rabbit to keep. And I went down-stairs feeling quite amused and happy, and determined to stay amused and happy.

By ten o'clock next morning I was in Cockspar Street, Pall Mall, looking for the "Lady Guides Association."

Standing in the lee of a large policeman on one of your valuable iron refuges in the middle of the street, a flouped red and black parasol suddenly shut down almost in my face. The lady belonging to it leaned over her carriage and said, "How d'ye do, Miss—Dear me, how stupid I am about names! Miss Chicago-young-lady-who-ran-away-without-getting-my-address! Now I've found you, just pop in—"

"I must ask you to drive on, ma'am!" the policeman said.

"As soon as this young lady has popped in. There! Now, my dear, what did the relation say? I've been longing to know!"

And before I realized another thing I was rolling up Regent Street stately in the carriage of Mrs. Torquillin.

VI.

"Are you going there now?" Mrs. Torquillin went on. "Because I'm only out for an airing—I can drop you anywhere you like."

"Not by any means, thank you, Mrs. Torquillin," I said. "I've been there already."

Mrs. Torquillin looked at me with an extraordinary expression. On top it was conscientiously shocked, underneath it was extremely curious, amused by anticipation, and, through it all, kindly.

"You don't get on!" she said. "What did I tell you? 'Mark my words,' I said to Charlie Mafferton, 'that child knows nothing of what is ahead of her!' But pray go on—what happened?"

I went on and told Mrs. Torquillin what happened, a good deal as I told you in the last chapter, but I am afraid not so properly, because she was very much amused; and I suppose if the story of my interview with Mrs. Portheris excited any feeling in your mind it was one of sympathy for me. At least, that was what I intended. But I was so happy in Mrs. Torquillin's carriage, and so delighted to be talking to somebody I knew, that I made as funny an account of the tender greetings of my relation as I could, and it lasted all the way to the Metropole, where I was to be dropped. I referred to her always as "my relation," because Mrs. Torquillin seemed to enjoy the expression. Incidentally, too, I told her about my plans, and she was kind enough to say that if I did not find them satisfactory I must let her know, and she could send me to a person of her acquaintance where I should be "very comfy, my dear." And I believed her.

"You see," she said, "I should like to take a little interest in your plans, because you seem to be the only really American girl I've come upon in the whole course of my travels. The New York ones were all English imitations—I had no patience with them!"

"Oh!" I responded, cheerfully, "that's only on the outside, Mrs. Torquillin. If you ran down the Stars and Stripes I guess you would find them pretty American."

"Well, yes," Mrs. Torquillin admitted; "I remember that was the case."

But just then we stopped in front of the Metropole, and I begged her to come in and lunch with me.

"Dear me, child—no! I must be off," she said.

But I used all the persuasion I could, and represented how dreadfully lonely it was for me, and Mrs. Torquillin hesitated. At the moment of her hesitation there floated out from the dining-room a most appetizing suggestion of fried soles. What small matters contribute to important results! I don't know anything that I have more cause to be grateful to than this little wandering odor, for Mrs. Torquillin, encountering it, said, with some feeling:

"Poor child! I've no doubt it is lonely for you. Perhaps I really ought to cheer you up a bit. I'll come."

And Mrs. Torquillin and I pursued the wandering odor into the dining-room.

We had a particularly good lunch, and we both enjoyed it immensely, though Mrs. Torquillin made a fuss about my ordering champagne, and said it was simply ruinous, and I really ought to have somebody to look after me.

"By the way," she said, "have you seen anything of the Maffertons?"

I told her that Mr. Mafferton had left his card the afternoon before, but I was out.

"You were out?" said Mrs. Torquillin. "What a pity!"

I said no; I wasn't very sorry, because I felt so unsettled in my mind that I was sure I couldn't work myself up to an intelligent discussion of any of Mr. Mafferton's favorite subjects, and he would hardly have found much pleasure in his visit.

"Oh, I think he would!" said Mrs. Torquillin. "What on earth has 'intelligent discussion' to do with it? I know the Maffertons very well," she went on, looking at me quite sharply. "Excellent family—cousins of Lord Mafferton of Mafferton."

"Just imagine," I said, "his being cousin to a lord! And yet he's not a bit haughty. Have you ever seen the lord, Mrs. Torquillin?"

"Bless the child, yes! Gone down to dinner with him more than once. Between ourselves," said Mrs. Torquillin, confidentially, "he's an old brute—neither more or less. But one can't be rude to the man. What he'll have to say to it, heaven only knows! But Charlie is quite capable of snapping his fingers at him. Do have one of these ices."

"What has Mr. Mafferton been doing?" I asked.

"I turned around to Mrs. Torquillin. "Mrs. Torquillin," I said, "this is my relation, Mrs. Portheris. Mrs. Portheris—Mrs. Torquillin."

In America we always introduce.

But I was astonished at the change in Mrs. Torquillin. She seemed to have grown quite two inches taller, and she was regarding Mrs. Portheris through a pair of eyeglasses on a stick in the most inexplicable manner, with her mouth set very firmly indeed in a sort of contemptuous smile.

"Mrs. Cummers Portheris," she said. "Yes; I think Mrs. Cummers Portheris knows me. You did not tell me, dear, that Mrs. Portheris was your relation, but you need not fear that I shall think any the less of you for that!"

"Heppy," said Mrs. Portheris, throwing up her chin, but looking distinctly nervous, "your temper is much the same, I am so sorry to see, as it always was."

Mrs. Torquillin opened her mouth to reply, but closed it again resolutely, with an expression of infinite disdain. Then, to my surprise, she took a chair, in a way that told me distinctly of her intention not to desert me. I felt at that moment that I would have given anything to be deserted—the situation was so very embarrassing. The only thing I could think of to do was to ask Miss Purkiss if she and Mrs. Portheris wouldn't have some lunch. Miss Purkiss looked quite cheerful for a moment, and began to unbutton her glove, but her countenance fell when my unfeeling relation forbade her with a look, and said, "Thank you, no, Miss Wick. Having waited so long, we can easily manage without food a little longer. Let us get to our arrangements. Perhaps Miss Purkiss will tell Miss Wick what she has to offer her."

Mrs. Portheris was evidently trying to ignore Mrs. Torquillin, and sat offensively and sideways to her; but she could not keep the apprehension out of her eye.

"Certainly," I said, "but Miss Purkiss must have something. Tell somebody, I said to a servant who had come up to poke the fire, "to bring up some claret and crackers."

"Biscuits, child," put in Mrs. Torquillin, "is what you mean. Biscuits, the young lady means"—to the servant.

"And be sharp about it, for we want to go out immediately." Then: "May I ask what arrangements you were thinking of offering Miss Wick?" to Miss Purkiss.

Miss Purkiss began quaveringly that she had never done such a thing in her life before, but as Mrs. Portheris particularly wished it—

"For your own good, Jane," interrupted Mrs. Portheris; "entirely for your own good. I don't call that gratitude."

Miss Purkiss hastily admitted that it was for her own good, of course, and that Mrs. Portheris knew her far too well to believe for a moment that she was not grateful; but I could have a nice back bedroom on the second floor and the use of her sitting-room all day, and I being recommended by Mrs. Portheris, she wouldn't think of many extras. Well, if there were fires, lights, the use of the bath and piano, books, and friends to meals, that would be all.

"It is quite impossible!" said Mrs. Torquillin. "I'm sorry you had the trouble of coming. In the first place, I hear my young friend," with emphasis, and a cursory glance at Mrs. Portheris' chair, "would find it dull in Upper Baker Street. In the second—Mrs. Torquillin hesitated for a moment and then made the plunge—"I have taken a flat for the season, and Miss Wick is coming to me. I believe that is our little plan, my dear," with a meaning smile to me.

Then Mrs. Torquillin looked at Mrs. Portheris as if she were wondering whether there could be any discoverable reason why my relation should stay any longer. Mrs. Portheris rose, routed, but with a calm eye and a steady front.

"In that case, I hope you will be forbearing with her, Heppy!" she said. "Remember that she is a stranger to our ways of thinking and doing, and has probably never had the advantages of my bringing that you and I have. I have no doubt, however, that my nephew, Colonel Wick, has done his best for her. As you are probably aware, he is worth his million."

Mrs. Torquillin missed the sarcasm.

"Not I," she returned, coolly. "But I'm sure I'm very glad to hear it, for Miss Wick's sake. As to my temper, I've noticed that those know most about it who best deserve it. I don't think you need worry yourself about your young connection, Mrs. Cummers Portheris."

"No," said I, meekly; "I should hate to be a weight on your mind."

Mrs. Portheris took my hand in quite an affecting manner.

"Then I leave you, Miss Wick," she said, "to this lady—and to Providence."

"Between them," I said, "I ought to have a very good time."

Mrs. Portheris dropped my hand.

"I feel," she said, "that I have done my part toward you, but remember, if ever you want a home Miss Purkiss will take you in. When in doubt—"

"Play trumps!" said Mrs. Torquillin, from the window, where she stood with her back to all of us. "I always do. Is that your trap waiting outside, Mrs. Cummers Portheris?"

"It is," said my relation, betrayed into a pery. "I hope you have no objection to it?"

"Oh! none—not the least. But the horses seem very restive."

"Come, Miss Purkiss," said my relation.

"The wine and biscuits, dear love," said Miss Purkiss, "are just arriving."

But Mrs. Portheris was bowing with stately indefiniteness to Mrs. Torquillin's back.

"Come, Miss Purkiss!" she commanded again. "You can get a sandwich at the A. B. C."

And Miss Purkiss arose and followed my relation, which was the saddest thing of all.

As soon as they were well out of the room, Mrs. Torquillin turned round.

"I suppose you'll wonder about the why and wherefore of all this turn-up," she said to me, her cheeks flushed and her eyes sparkling. "It's a long story, and I'll tell you another time. But it comes to this in the end: That creature and I married into the same family. My husband and the late John Portheris—poor fellow!—were step-brothers; and that old cat had the impudence—but there's no use going into it now. All I have to say is, she generally meets her match when she meets me. I'll put up with no hanky-panky work from Mrs. Cummers Portheris, my dear—and well she knows it!"

"It was certainly nice of you to help me out of the difficulty, Mrs. Torquillin," I said, "for I'd rather go anywhere than to Miss Purkiss's, but I'm sorry you had to—"

"Tell a tarradiddle! Not a bit of it, my dear—I meant it. Two are better than one any day—I've plenty of room in my little flat, and if you like to share the expenses, I'll not object. At all events, we can but try it, and it will be showing very good feeling toward the Maffertons. I'm not a great hand for junketing, mind you; but we'll manage to amuse ourselves a little—a little giddy-goating does nobody any harm!"

Then I kissed Mrs. Torquillin, and she kissed me, and I told her how extremely obliged I was to her, and asked her if she had really considered it; and Mrs. Torquillin said, wasn't it enough that I should be left to "that woman"—meaning my relation—and that I should come next day to see how we could best arrange matters?

And while I think of it, child, here is my address," my friend continued, taking out her card-case and watching me very carefully, with a little smile about her mouth.

I looked at it. I think my embarrassment gratified her a little, for the card read, "Lady Torquillin, 102 Cadogan Mansions, S. W."

I didn't know what to say. And I had been calling a lady of title "Mrs.," all this time! Still, I reflected, she would hardly have been so nice to me if I had offended her very much, and if she had been particular about her title she could have mentioned it.

"It seems," I said, "that I have been making a mistake. I expected to make mistakes in this country, but I'm sorry I began with you."



"Nonsense, child!" she returned. "It was just my little joke—and I made Charlie Mafferton keep it. There's precious little in the handle, I assure you, except an extra half-crown in one's bills."

And Lady Torquillin gave me her hand to say good-bye.

"Good-bye," I said. "I think handles are nice, all the same."

And then—it is an uncomfortable thing to write, but it happened—I thought of something. I was determined to make no more mistakes if asking would prevent it.

"Please tell me," I said, "for, you see, I can't possibly know, am I to call you 'your ladyship' or 'my lady'?"

"Now, don't talk rubbish!" said Lady Torquillin. "You're to call me by my name. You are too quaint. Be a good child—and don't be late to-morrow."

[TO BE CONTINUED.]

Christmas at the Court of King Arthur.

BY SIR JOHN GILBERT.

Who has not heard more or less of the play of fancy around the name of King Arthur? He is one of those great figures of history that are never lost in the crowd of the past or of the present. In our youth, he is one of the Old World heroes, that give gleams of story and of interest to the dull dates and unrealized events of school histories. For middle age, thanks to Tennyson, he has become an embodied ideal of much of the spiritual struggle and highest aspiration of our own time. It is safe to prophesy that for a generation to come, till thought, or forms of thought, take new complexion from changing circumstances, the noble figure that dominates "The Idylls of the King" will dwell in men's minds as an inspiration, with guarding and redeeming force for many.

On Arthur, as on every point, secular or divine, of Old World faith or credulity, modern research has industriously used its scalpel. The clouds of legend that surround his name have formed as attractive ground for investigation as for imagination; both Milton and Wordsworth lived for a time amongst the Athenian myths, with ideas of rising some great epic to his memory, but research has accomplished little in reconstructing Arthur's mystic figure into earthly form. It is most probable that he stands as the representative of the heroic deeds of many others, besides his own, in the long struggle of the English Christian Celts against the treacherous and rapacious pagan Saxons. There appears, however, to be a real foundation for his grand figure in a ruler over the west and south of England and south of Wales, early in the sixth century. This king of Britons bore the brunt of resistance not unsuccessfully against swarming hordes that all but crushed a civilization and a nationality that were still vital enough, in what survived, to impregnate their vanquishers with a rich infusion of imaginative life. The fervid ideals that animate the old Celtic legends of those times represent ideas of character of no mean order. Amongst them the grand conceptor of the Order of the Round Table, and its yearly meeting, which is represented in our picture, is thus described by the old chronicler: "Then rose the King and spake to all the table round, and charged them to be ever true and noble knights; and do neither outrage nor murder, nor any unjust violence, and always to flee treason; also, by no means ever to be cruel, but to give mercy unto him that asked for mercy, upon pain of forfeiting the liberty of his court for evermore. Moreover, at all times, on pain of evermore, death, to give all succor unto ladies, gentlewomen, and young children, and lastly, never to take part in any wrongful quarrel for reward or payment; and to all this he swore them, knight by knight. Then he ordained that every year they should come before the king wherever he might appoint the place, and give account of all their feats, and wanderings, and adventures, of the past twelve months. And so, with prayer and blessing and high words of cheer, he instituted that most noble Order of the Round Table, whereto the best and bravest knights in all the world sought afterwards to find entrance and admission."

Sir John Gilbert has represented one of these

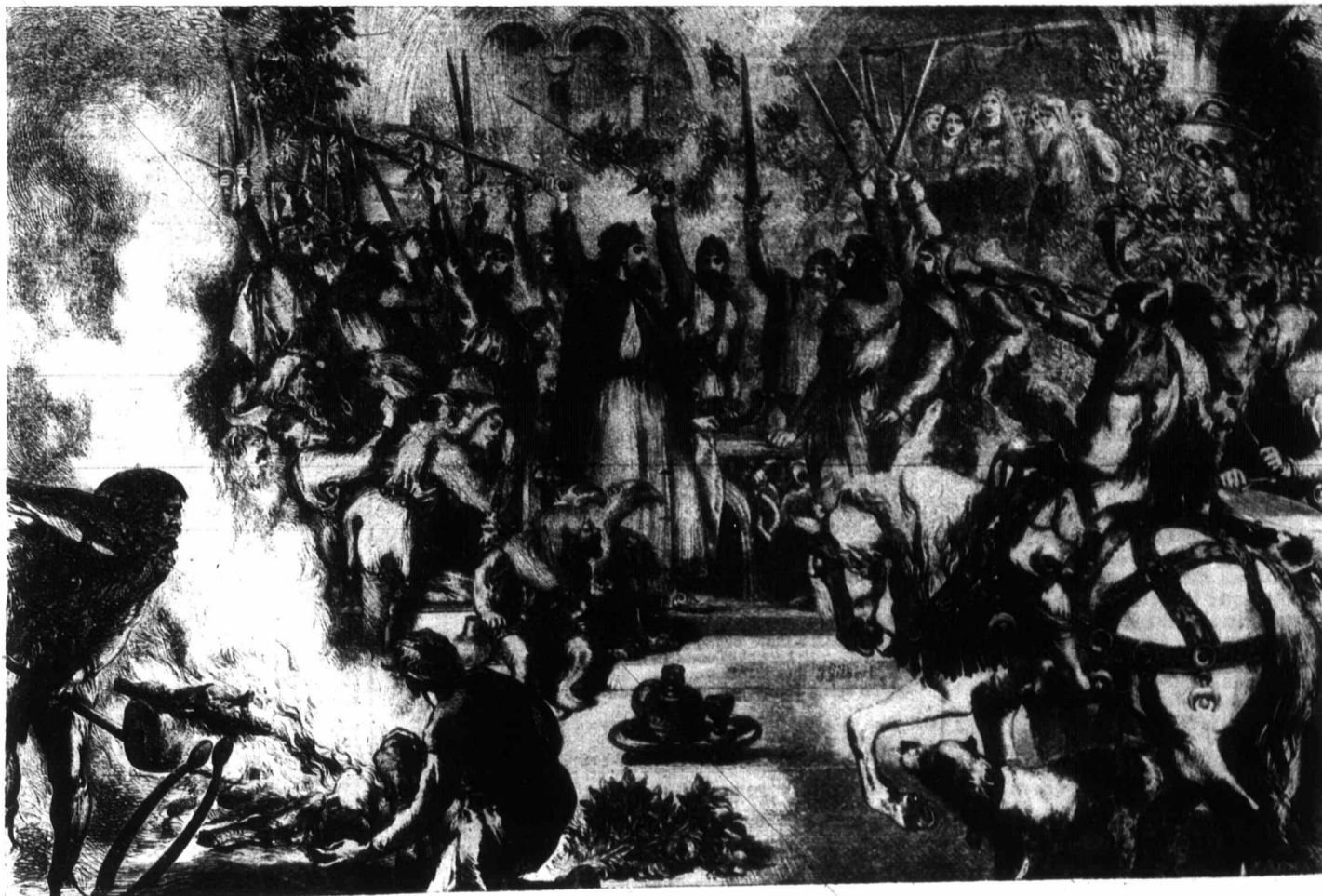
annual gatherings in our picture. The banquet has been discussed, the deeds of the year recounted, and Arthur calls on his knights to again renew the famous oath of the Round Table, on the cross hilts of the brandished swords. Mounted horsemen were not incongruous in the great halls of the Middle Ages, and the characteristic accessories of the times, dwarf, jester and hunting retainers, are seen dropping their various interests in regard to the crowning moment of the feast.

These feast times of old days, redolent of dangers and of conflict, of triumph and of strenuous purpose, have little in common with our own, and enhance by contrast our meetings of affection and complacent security. That in our meetings in time to come the sense of thankfulness for safety may become a more conscious element will not appear improbable to those who look round the world and note the threatening portents of the times, which are more frequent with great and uncontrollable contingencies than at any period in the experience of this generation.

Too Busy to Freeze.

How swiftly the glittering brook runs by,  
Pursuing its busy career,  
Reflecting the beams of the cheerful sun  
In waters transparent and clear;  
Kissing the reeds and the lowly flowers;  
Refreshing the roots of the trees;  
Happy all summer to ripple a song;  
In winter too busy to freeze.

Onward it glides, whether sunshine or storm  
Await on its vigorous way;  
And prattles of hope and sustaining love  
Whether bright or cloudy the day.



CHRISTMAS AT THE COURT OF KING ARTHUR.

Chill Winter around may his torpor fling,  
And on lazier water seize,  
But the nimble brook is too much for him,  
Being far too busy to freeze.

May we, like the brook, in our path through life,  
As active and steady pursue  
The course in which real utility lies—  
Which is lovely and useful too:  
Still nourish the needy, refresh the sad,  
And, despising indulgent ease,  
Adorn life's current with generous work,  
With love that's too busy to freeze.

When I Shall Have Time.

When I have time, so many things I'll do  
To make life happier and more fair  
For those whose lives are crowded now with care;  
I'll help to lift them from their low despair,  
When I have time.

When I have time, the friend I love so well  
Shall know no more those weary, toiling days;  
I'll lead her feet in pleasant paths always,  
And cheer her heart with words of sweetest praise,  
When I have time.

When you have time! The friend you hold so dear  
May be beyond the reach of all your sweet intent;  
May never know that you so kindly meant  
To fill her life with sweet content,  
When you had time.

Now is the time! Ah, friend, no longer wait  
To scatter loving smiles and words of cheer  
To those around whose lives are now so drear—  
They may not meet you in the coming year—  
Now is the time.

Those who love at Christmas  
Will ne'er their loving rue;  
Those who love at Christmas  
Will love the whole year through.



When Santa Claus Comes.

A good time is coming; I wish it was here!  
The very best time in the whole of the year;  
I am counting each day, on my fingers and thumbs,  
The hours that must pass before Santa Claus comes.

Good-bye for a while, then, to lessons and school;  
We can laugh, talk and sing without "breaking the rule!"  
No troublesome spelling, nor writing, nor sums,  
There's nothing but playtime when Santa Claus comes.

I suppose I shall have a new dolly, of course,  
My last one was killed by a fall from her horse;  
And for Harry and Jack there'll be trumpets and drums,  
To deafen us all with when Santa Claus comes.

I'll hang up my stocking to hold what he brings;  
I hope he will fill it with lots of nice things;  
He must know how dearly I love sugar-plums;  
I'd like a big boxful when Santa Claus comes.

Then while the big snowflakes so swiftly come down,  
And the wind whistles sharp and the branches are brown,  
I'll not mind the cold though my fingers it numbs,  
For it brings us the time when good Santa Claus comes.

MY DEAR CHILDREN,—

I want to talk seriously to you for once—all play and no work is bad for anybody—so our Corner must not be altogether devoted to fun and frolic. A little Christmas sermon won't hurt you, although, as a rule, my business is not to preach, but rather to make you turn to the "Children's Corner" the moment you get hold of this paper (or at least only second to "Uncle Tom's Department").

It is getting very near Christmas again, and although you all know that we keep that day as our Lord's Birthday, don't you think we are very apt to forget it? Is it not strange that on His Birthday we should have a present for everyone else and leave Him out altogether? Some of you have already found out the truth of His words, "It is more blessed to give than to receive." You get far more pleasure out of the presents you are making in secret for father and mother, and the rest of the family, than out of any Christmas gift you receive yourself. You tie up the interesting little packages so daintily in tissue paper, and hide them in out-of-the-way places, thinking all the time about the fun of presenting them on Christmas Day. All this is much better than selfishly looking forward to your own Christmas stocking only; but can't you go outside the home a little this year? I know children who fill a basket with good things every Christmas (mother helps, of course), and leave it, with a note from Santa Claus, outside the door of some poor neighbor on Christmas Eve. They knock at the door and then run away. You know how the Wise Men offered their birthday gifts to our dear Lord, and He has made an easy way for you to do so too, for He says: "Inasmuch as ye have done it unto one of the least of these My brethren ye have done it unto Me." Even though you have nothing valuable, like "gold, frankincense and myrrh" to offer, you need not be ashamed to bring your gifts to this great King. He has promised to accept even a cup of cold water, if given lovingly; and, let me tell you that if you want a happy Christmas, this is the surest way to find it. Won't you start at once to gather a nice heap of toys and books together—not things which are all broken to pieces and utterly worthless (remember to Whom you are giving them) and try to have them in good order, even if you have to spend some of your holiday time in mending them. Ask mother to help you with some of the clothes you have outgrown and with something



nice to eat. Don't forget the candy and popcorn for the children. If you take my advice you will be as jolly as dear old Santa Claus this year, and with good reason, for the jolliest people are the ones who go through this world trying to make other folks jolly.

Now, go to work! Don't let this sermon be wasted, will you?

With best wishes for a very glad and happy Christmas, I remain,

Yours lovingly, COUSIN DOROTHY.

P. S.—Read the "Quiet Hour" in this number.

#### Ring, Sweet Bells.

"Christmas is coming!" thinks little Tim;  
But what on the Christmas do for him?  
His home is a cellar, his daily bread  
The crumbs that remain when the rich are fed;  
No mother to kiss him when the day is done;  
No place to be glad in under the sun.

But, dear little children, you understand  
That the rich and the poor all over the land  
Have one dear Father, who watches you,  
And grieves or smiles at the things you do;  
And some of his children are poor and sad,  
And some are always joyous and glad.

Christmas will bring to some of you joys—  
Food and plenty, frolic and toys;  
Christmas to some will bring nothing at all;  
In place of laughter the tears will fall.  
Poor little Tim to your door may come;  
Your blessings are many—spare him some.

The Christmas bells will sweetly ring  
The songs that the angels love to sing—  
The song that came with the Saviour's birth:  
"Peace to good-will, and love on earth."  
Dear little children, ring, I pray,  
Sweet bells in some sad heart that day.

#### The Highest Good.

Does your soul regard earthly things as the highest, and the business which relates to them as your weightiest employment? Then is your soul like the waves of the sea, which are driven and blown by the wind; it is given up to eternal disquiet and transient change. For manifold and varied are earthly things, and whoever gives himself up to their dominion, his soul is dragged hither and thither in all directions by hope and fear, by joy and sorrow, by desire for gain and by pain at loss. And how should the grace of the Lord and his peace make their dwelling in such a disturbed soul! O, my friends, whatever earthly calling may be allotted us—however spiritual in its functions, however blessed in its effects—if its employments drive us forward in breathless haste upon life's path; if we think we can never find time to stand still and to think where we are and whither we will go, and to reflect on the heavenly and eternal concerns of our immortal souls; if prayer has lost its power and the divine word its charm for us, then we have cast away our life upon a fearful error, upon a fleeting dream; then are we, with all our apparent richness in bodily and spiritual good, really poor—very poor. We have, like Martha, much care and trouble, but the highest good, which alone gives to our life its worth and significance, is wanting.

#### The Good Old-fashioned Way.

BY MAUD MORRISON HURY.

Shut up the parlor, that's right Marinda,  
An' lock it tight, 'th its carpets so gay,  
It ain't do place t' spend Christmas,  
Them toggerys there'd be plump in the way.  
We'd a heap sight rather set in the kitchen.  
Finery 'n me didn't never agree.  
Jest t' sot along 'side a blazin' chimney  
'S a sight more hum-lik't t' ma an' me.

Yes, an' the dinin' room too, Marinda,  
You kin lock that 'long 'th the parlor, I guess,  
Things wouldn't taste no ways old-timey  
T' me an' your ma. I mus' confess  
That I couldn't begin t' eat a dinner  
That's fittin' t' eat Christmas Day  
'th all them high-falutin' notions.  
An' a mincin' long in no high-toned way.

We'll jest go out in the kitchen, daughter,  
If you ain't mindin', and spon' the day.  
We'll fetch the table 'long an' sot it,  
An' 'rauge things 'round in the good ole way.  
We'll hev Samantha an' all her younguns  
Come right 'long up from Ebenstown;  
An' brother John an' his wife, an' Florry,  
I guess they might 'bout's well come down.

An' we'll spon' Christmas all together,  
Jest as we use t' years ago.  
An' hev things plenty, an' good, an' hullsome,  
'thout no 'put on' ner show.  
We'll hev a turkey, an' ma'll stuff it  
Her self, like she allus did t' hum,  
'th sage an' stuff; an' we'll hev a puddin',  
Jest a common, good ole-fashioned plum.

An' plain smashed 'taters, an' ma's brown gravy,  
'th cookies, an' mince an' pumpkin pie,  
Them good ole-fashioned humbly dinners,  
They can't be beat nowher's says I.  
An' then in the evenin' we'll sot together,  
Ma 'th her knittin' an' me 'th my pipe.  
An' a log 'r two in the fireplace blazin',  
An' popcorn, an' apples, red an' ripe.

Popcorn an' apples, an' all the younguns  
'th sot an' eat when the lamps is lit;  
An' Joseph 'll play a tune on 'is fiddle  
By 'm-by, mebbe, to please 'em a bit;  
An' they'll play games, an' dance a leetle,  
Like es not, an' enjoy their selves;  
So put away your fancy fixin's,  
Stick 'em some'ers off on the parlor shelves.

An' all them high-falutin' city riggins,  
They don't agree 'th Christmas Day.  
We'll go down into the roomy kitchen,  
Where the hain't no du duds in the way,  
An' jest enjoy ourselves, Marinda,  
An' be es comf' table es kin be.  
A good plain countrified Christmas  
'd seem most hum-lik't t' ma an' me.

## THE QUIET HOUR.

### The Star of Bethlehem.

"Look out of the window, Dorothy dear,  
Where the wind is asleep in the snow;  
What do you see, and what do you hear?"  
"I see the stars in the sky and mere,  
And I hear the bells chime low."

"For the birth of Christ the church bells chime,  
And the stars are the angels' eyes.—  
They are out of reach, however you climb,  
But they shine the brightest at Christmas-time,  
To lead where the Christ-child lies."

"Mother has gathered the sticks and wood  
To blaze on His Birthday bright,  
If we followed the star do you think we could  
Find Jesus, and ask Him to make us good,  
And to give us a kiss for good-night?"

"Father has made the house-places gay  
With holly, and laurel, and yew,  
But what is the use—whatever you say,  
If He sleeps in a manger wrapped in hay,  
And doesn't see what we do?"

"That great gold star is the one—it grows  
As you look, and beckons to you,  
It led the Wise Men, as mother knows;  
They followed and found Him! Oh, suppose  
We followed and found him too!"

"We ought to take Him some gold and myrrh—  
And frankincense too is right.—  
We haven't those, but my coat of fur  
Will keep him warm, and so I prefer  
To carry Him that to-night."

"I'll take Him my prettiest toys," said May,  
And my book with the cross and crown,  
And both my rabbits, the buff and the gray,  
And the Christmas roses we picked to-day,  
Before the snow came down."

There were two little hearts beating fast that night,  
Two voices that joined in prayer,  
There were four little hands that held gifts tight,  
And four blue eyes with love made bright,  
And four little feet on the stair.

They pass through the crackling, frosty snow,  
Through the sleeping woods and lanes,  
Through the white white silence the soft snow,  
And the ruddy warm gleam and glow  
Through the cottage window pane.

At last they came to a wee bright light  
At the edge of the wide wild moor;  
"Oh, it must be here! Dear star, good-night!  
We will always love you, you led us right;  
This must be the stable door."

Then Dorothy opens the door, and cries,  
"He is here! Oh May, how sweet!"  
And there on his mother's lap he lies,  
A little baby with wide gray eyes,  
And little pink curling feet.

"Oh! where do you come from, you children dear,  
On Christmas night through the snow?"  
"We came by the wood and the edge of the mere,  
We followed the star, and it brought us here,  
And showed us the way to go."

"We hadn't the frankincense nor the gold,  
Nor yet any myrrh to bring;  
But we have brought Him these things we hold  
Our rabbits, our toys, and a coat for the cold,  
To wrap round your Baby King!"

The mother spoke—and her voice was low  
And soft as the voice of a dove;  
"You dear little children, Christ loves you so,  
For coming through darkness and over the snow  
To bring Him your gifts and your love."

"But kiss my baby and come away,  
And when you are safe at home  
Ask mother to tell you the truth, and say  
Whether you could find the Lord to-day  
However far you might roam."

She laid her baby down on his bed,  
And went with them over the moor,  
She held their hands and gently led,  
But never another word she said,  
Till she left them safe at their door.

Then May and Dorothy told their tale,  
And when their mother had heard  
How they crossed the wood, and the moor, and the vale,  
Alone in the snow, her dear face grew pale,  
And she kissed them without a word.

"Oh, Mother!" cried May, when the tale was done,  
"And wasn't it true at all?  
We looked for a manger, but there was none—  
Oh, wasn't the baby the Holy One,  
Who was born in a stable stall?"

"'Tis nineteen hundred years, or near,  
Since the blessed Christmas morn,  
But every day of every year  
Since then some little baby dear  
Has into this world been born."

Mother said, and sighed—but she sighed and smiled—  
"It is long since He lived among men,  
But in every little sinless child,  
By passion and wickedness undefiled,  
He lives on earth again."

—E. Nesbitt.

"It may be glorious to write  
Thoughts that shall glad the two or three  
High souls, like those far stars that come in sight  
Once in a century—  
But better far it is to speak  
One simple word which now and then  
Shall waken their free nature in the weak  
And friendless sons of men."

—James Russell Lowell.

Little Sister—What's the difference 'tween 'lectricity and lightning? Little Brother—You don't have to pay nothin' fur lightning.

The firmest friendships have been formed in mutual adversity, as iron is the most strongly united by the fiercest flame.—Colton.

There is a healthful hardness about real dignity that never dreads contact and communion with others, however humble.—Washington Irving.

## UNCLE TOM'S DEPARTMENT.

### MY DEAR NEPHEWS AND NIECES,—

"It's getting close to Christmas. There's something in the air that seems to breathe of Bethlehem and all the glory there; and sweet the bells and bugles sound through our dreams of rest—  
Ring, bells, your sweetest music! and, bugles, blow your best!"

Yes, it is getting close to Christmas. That fact is amply apparent from the air of expectancy in the faces of the little folks and the mysterious "busyness" that has taken possession of everybody, especially the deft-fingered girls; and although we pretend not to understand what it all means, we know there are many useful and dainty articles carefully stowed away, to be joyously brought forth when the day of good-will arrives.

Christmas! There is not a word in our whole vocabulary that floods us with such a host of glad memories; none but that ever-sacred name of "mother" that fills our hearts with such tenderness. Birthdays, duly celebrated, are welcome anniversaries; Easter is ever a time of joy; Halloween pranks are often long remembered; Thanksgiving has charms of its own; but Christmas is king of them all! The charming Christmas stories of Dickens, who is inimitable in his portrayal of humble life, would be sufficient to immortalize the day; but the divinely inspired "Peace on earth, good will to men" which the angels sang nearly nineteen centuries ago, and which has ever since been wafted down the aisles of time with almost all its primitive sweetness, has enthroned this festival on a love-encircled pinnacle, to which no other can ever attain.

"Good-will to men" is so necessary a part of our existence that we find it frequently spoken of in the Holy Scriptures under the name of charity. "Love is the greatest of these is charity." This does not consist in the mere giving of our goods to the poor, but in the nobler, charitable spirit that nobly glances at the multitude of our fellow-creatures who are suffering from the want of food, clothing, and shelter, and who are in need of our help.

These by emphatically saying to the gossip-monger, "I do not believe it," and although we may not realize it, we shall have weakened the venom of the malicious tale. If, perchance, there were truth in it, we shall feel no qualms of conscience, nor experience the mental pain that inevitably follows a too ready credence in an unjust accusation.

Father Faber says it is harder to have kind thoughts than to speak kind words, but if we faithfully make use of the latter, as certainly as dawn follows night will the former find a home in our hearts, and he who has only kindly thoughts of others cannot fail to be happy, and is not happiness the goal which we are all striving to reach? Faber says: "The interior beauty of a soul, through habitual kindness of thought, is greater than our words can tell. To such a man, life is a perpetual bright evening, with all things calm and fragrant and restful. All sounds are softer, as is the way of evening, and all sights are fairer, and the golden light makes our enjoyment of earth a happily pensive preparation for heaven."

If we have no gifts to offer, a hearty "Merry Christmas," a warm hand-clasp, will express our good-will, for you know,

"A smilin' face and a hearty hand  
'S a religion all folks understand."

And

"He stretches His tiny hands towards us,  
He brings us all grace;  
And look at His mother who holds Him—  
The smile on her face  
Says they welcome the humblest gifts  
In the manger we place."

"Where Love takes let Love give, and so doubt not;  
Love counts but the will,  
And the heart has its flowers of devotion  
No winter can chill;  
They who cared for 'good-will' the first Christmas  
Will care for it still."

That the festive season may bring to each of my readers a wealth of blessings and the fulfillment of their noblest aims is the Christmas greeting of—  
UNCLE TOM.

### Home Ways.

The Soldier's Mother—I got a letter from George to-day, and he is grumbling about the victuals in the army.

The Soldier's Wife—I am glad to hear that he is making himself at home.

If people would not ask questions without being ready to listen to the answer, and if the person to whom the question was addressed were allowed to answer it himself without half a dozen others pouncing at it the same moment, conversation of the present day would be greatly improved.

"This is a funny doctrine," exclaimed Brown, who had been reading of metempsychosis. "The idea of a human soul entering the body of an animal! According to this doctrine my soul may inhabit the body of a jackass!" "And why not?" asked Fogg, demurely. "It would certainly feel more at home there than anywhere else."



\$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, \$6.00 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.

Puzzles.

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

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

1.—DOUBLE DIAGONAL.

Words of nine letters. 2. Ripened. 3. Yellowish-brown boat. 4. Enjoining. 5. Insensibility. 6. Without limits. 7. Ease in performance. 8. Assurance. 9. Clearness. Diagonals—From left down, obscenity. From right down, pertaining to a division. "Dick."

2.—TRANSPOSITION.

Dogo smnraen rae dema pu fo tpeyt ssliccarfe. Yorestuo dan esinnekid liwl rneev sloe riteh rhacom, lweih lal ssuuproi ttilinmaos fo mthe rea ot eb ddeseepl. "Dick."

3.—ANAGRAM.

A note he sent to his dear one day, In language most charmingly fitting, Her answer caused him surprise and dismay, 'Twas "NOW CLEM, GET NAKED, and be fitting." "ARRY 'AWKINS.

4.—APPROPRIATE AUTHORS.

Example: Good for a watchmaker—lever. 1. Good for a brewer. 2. " explorer. 3. " farmer. 4. " provision merchant. 5. " cooking couple. 6. " judges. 7. " sweeps. 8. " fishmonger. 9. " hunter. 10. " angler. 11. " children. "ARRY 'AWKINS.

5.—HOURGLASS.

Across—1, Restricting; 2, Indicating the order of numbers; 3, A river of Russia; 4, Perfumed; 5, A vowel; 6, Purpose; 7, A family or race; 8, Pertaining to a town; 9, Accepted.

Diagonals downwards—1, A sauce; 2, An ancient prize-fighter. Centrals—All the nine letters alike. "OGMA."

6.—ACROSTIC.

(Words of the same number of letters.) 1. Hungry. 2. A member of the "Home Department." 3. Funny. 4. A dwelling. 5. A kind of salts. 6. Part of the hand. 7. A daisy. 8. A wretched money-grabber.

7.—ENIGMA.

Primals—One who was born and raised in a hovel on the slave plantations. Now he is a citizen of London, Ontario, honored and respected by us all. "OGMA." I paint without color, I fly without wings, I people the air with most fanciful things; I hear sweetest music where no sound is heard, And eloquence moves me, nor utters a word. The past and the present together I bring; The distant and the near gather under my wing; Far swifter than lightning's my wonderful flight, Through the sunshine of day, through the darkness of night; And those who would find me must find me indeed, As they narrowly scan and this poetry read. A. F. F.

8.—ENIGMA.

My first is a great light, My second is not night, My whole is blessed With peace and rest. C. B. M.

9.—TEN PHONIC AMERICAN TOWNS AND CITIES.

- 1. A girl's name, a fruit, part of the verb to be. 2. do. do. do. 3. do. a crossing. do. 4. do. a fowl. do. 5. do. a pointed stick. do. 6. A girl, a boy, a contracted goose. 7. A boy's name, an article, some crockery, a pronoun, an article. 8. Double wickedness, near, me. 9. A man's name, sick, a weight. 10. A boy's name, a conjunction, a sharp tool. H. C. G.

10.—CHARADE.

We went to walk one last in May And of children a first we met. "We have been to the brook," they had no need to say. "For their shoes and their clothes were quite wet. "And of fish and of tall pole we saw quite a first, "But only a dozen we caught; "To first them we'll try, but should they be nursed?" (Dressed was the word that he sought.) "The first then went home with the first in a dish, "To first them they tried on a coal. "But they burned their fingers and burned the fish, "And cried, "The unlucky last is whole." H. C. G.

11.—CURTAILMENT.

Astronomers can clearly prove My Whole is ever on the move. The words curtailed beyond dispute A joiner's tool will constitute. Curtailed again, and then I ween, A form or model will be seen. A. F. F.

12.—REBUS.



OBJECTS TO BE SEEN IN THIS PICTURE: 1. An account to settle. 2. Part of an army. 3. A romantic story. 4. My own dear self. 5. Part of a sentence. 6. What is unfair. 7. Source of our beginning. 8. The refuse of flax. 9. Food and lodging. 10. Explosion of a rifle. A. F. F.

Answers to November 1st Puzzles.

- 1-1. Caura; 2. Zurna; 3. Tieto; 4. Ncayale; 5. Kokaak; 6. Yellowstone; 7. Canos; 8. Assiniboine; 9. Rupert; 10. Corontyn; 11. Brazos; 12. Simpson.

2.—P e t a l

g a m e s 3.—Milk-weed. b e v e y " n e a r s 4.—The FARMER'S ADVOCATE. r o d e s 5.—G o s s i p s

6.—Chocolate.

- 7.—400, because a miss is as good as a mile. 8.—Kitchen. 9.—Stole. 10.—Beatification. 11.—Sea-man-ship. 12.—An umbrella, closed or open. 13.—All things that we love and cherish. Like ourselves, must fade and perish; Such is our rude mortal lot Love itself would, did they not. 14.—Miss Ada Armand.

SOLVERS TO NOV. 1ST PUZZLES.

ARRY 'AWKINS. ADDITIONAL SOLVERS TO OCT. 15TH PUZZLES. "Dick" and "ARRY 'AWKINS.

DEAR COUSINS,—

Having to send in work much earlier than usual, returns are not yet in, but will receive full attention later. There is not time for a chat this issue, but we'll have a long one some day. ADA A.

Anyone who is forty years old or over can surely remember "going a visiting" where the hostess kept her best tablecloth and teaspoons in the parlor cupboard. She made no pretense at concealing the bringing out of the best linen, but was more shy about the spoons, which betrayed themselves by a slight jingling, unless they were rolled in tissue paper; in any case they went out in the folds of the cloth along with the best knives, which caused their owner so much trouble to keep the ivory handles from turning yellow and the steel blades from rusting. More than likely she had a rich fruit cake stowed away in a stone jar in the further corner of the floor of the cupboard, and here strategy came in. If you were extremely polite you looked out of the window and turned the fragmentary conversation, as the hostess passed in and out of the room, to other subjects than the supper-to-be. I remember that my grandmother, with whom I made a few prim afternoon visits, was extremely polite in this direction, but I allowed my childish curiosity full play, and enjoyed in full the subtleties of preparations. I can remember that at the supper, called "tea," the tea would be very strong, and that there would be hot biscuits with a good many excuses why they were not lighter, a hot gingerbread, preserves that bit my tongue they were so sweet and perhaps had "worked" a little, and two or three kinds of cake, besides many other things. This recalls the changes of fashion in eating, as neither my mother nor myself would now serve more than one or possibly two of the dishes at an evening meal which we tasted in those days of "staying to tea," as a form of accepting hospitality.—Mrs. A. E. Whitaker in the New England Farmer.

Useful Oils.

The men and women of ancient Greece and the famous beauties of every clime always understood the use of oil in the toilet. When animal oil is used, it clogs up the pores and renders the skin coarse; but vegetable oils, such as the Greeks used, feed the skin. There are many skins that do not need lubrication after a bath; but there are many others which are benefited by the use of fine vegetable oil, such as almond cream, which furnishes food to the skin, and is a powerful aid in the fight against wrinkles.

Cocoanut oil is always good. It is agreeably fragrant, and the pores of the skin absorb it so that it leaves no trace on the clothing, as a cream made of an animal fat certainly would. There is nothing so restful after a long shopping tramp, or a walk in the fields and woodlands, as a thorough rubbing of the stiffened joints and limbs with this fragrant cocoa-butter. It is also good for a lame shoulder or a stiff neck caused by a cold, or for pains caused by bending over, writing, or sewing. For this purpose add a few drops of spirit of camphor to the cocoanut oil.

When the skin is dry, pure olive oil may be used with the best results. It should be carefully rubbed into the joints, and applied in such a manner as to leave no trace on a cambric handkerchief that is afterwards passed over the skin.

Vaseline should not be used on the skin. Because of its tendency to increase the growth of the hair, it is a valuable oil for the scalp; but for this reason it should never be used upon the face or arms. There is little doubt that the improper use of vaseline is the cause of much of the annoying superfluous hair which has in recent years made the business of operating electricians a profitable one.

Glycerine is an oil which is often irritating to the skin, though it is frequently recommended for its healing qualities. It should never be used unless it is mixed with one half its bulk of rose water. Even when diluted in this way, there are some complexions that will not bear it.

Almond cream and almond meal are always safe, and are excellent flesh foods, though more expensive than cocoanut oil and olive oil.

French elegantes use pistachio meal for the purpose of keeping their complexions soft and their muscles plump.—New York Tribune.

Eggs is Eggs.

One of the grocers receives large quantities of eggs from his rural customers in exchange for his merchandise. I never knew him to get hold of the small end of a bargain except on one occasion.

One day a meek-looking farmer came into his store and asked what he was paying for eggs.

"Twenty cents a dozen." "What do you pay for nice large eggs?" "Twenty cents."

"Do you mean to say that you pay no more for large eggs than you do for small ones?" asked the farmer with a surprised air.

"No, sir." "Do you mean to tell me that you will not pay a cent more for nice large fresh eggs than you do for little eggs?" the farmer questioned, his apparent amazement becoming interesting to the grocer, who was even then gloating over the large eggs he would soon have to tempt the palate of his critical city patrons.

"No, my friend, I can sell the small eggs for just as much money per dozen as I can get for the large ones, so of course I can pay no more for the large ones."

"Well, I don't see any justice in that sort of business," he answered in tones of abject disappointment.

He went to his wagon, however, and taking a half-bushel basket from under the seat, began his return trip, while the grocer took one good laugh at the poor man's misfortune. It was fortunate for him that he laughed just as he did, for on looking into the basket he saw it was full of the most diminutive bantam eggs; and as he counted dozen after dozen from the basket, his soul was void of mirth. His high-class city trade would never buy such eggs as those, so he shared the benefit of the experience with his poor relatives.—New England Grocer.

Beware of Misjudging.

Perhaps it were better for most of us to complain less of being misunderstood and to take more care that we do not misunderstand other people. It ought to give us pause at a time to remember that each one has a stock of cut-and-dried judgments on his neighbors, and that the chances are that most of them are quite erroneous. What our neighbor really is, we may never know; but we may be pretty certain that he is not what we have imagined and that many things we have thought of him are quite beside the mark. What he does, we have seen, but we have no idea what may have been his thoughts and contentions. The mere surface of his character may be exposed, but of the complexity within we have not the faintest idea. People crammed with self-consciousness and self-conceit are often praised as humble, while shy and reserved people are judged to be proud. Some whose whole life is one subtle, studied selfishness get the name of self-sacrifice, while other silent, heroic souls are condemned for want of humanity.—Jan Maclaren.



**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.**

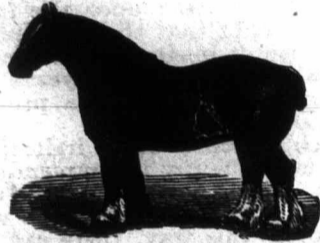
Prize lists on application.  
**JAMES MILLAR,** President.  
**JNO. McCORKINDALE,** Secretary.

All animals entered to be in the rink by 1 p. m., on Tuesday, December 6th.

**FOR SALE:  
IMPORTED and CANADIAN  
BRED**

**Glydesdale 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.

**W. D. FLATT,**  
Hamilton P.O. and Telegraph Office,



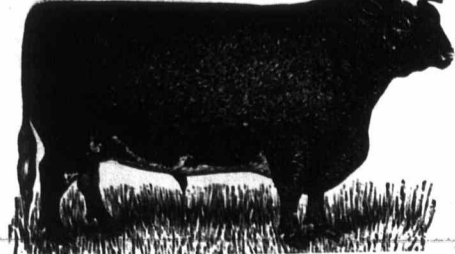
.....OFFERS FOR SALE.....

**Ten Choice Shorthorn Bulls**  
from seven to twelve months,

**Fifteen Cows and Heifers,**  
served by imported bull, Golden Fame -22056-; 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,



—OFFERS FOR SALE—

**17 FIRST-CLASS SHORTHORN BULLS**  
YOUNG

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.

**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,**  
Londesboro, Ont.

**GOSSIP.**

The President of the Guelph Fat Stock Club writes us that one of the rules of the Club relating to the coming Fat Stock Show requires that all animals entered be in the rink by 1 p. m., on Tuesday, December 6th.

Messrs. Henry Stevens & Sons, Lacona, N. Y., make a change in their advertisement of Holstein-Friesian cattle in this issue, in which they make a special offer of sixty head of registered cows, heifers and calves of richest breeding and large producing strains. Their farm is easy of access from Canada, and there is no duty and no quarantine delay in shipping under present regulations.

H. Bollert, of Cassel, Ont., writes that his Holsteins are going into their winter quarters in fine condition, and are milking well. He offers a few very richly (butter) bred bulls for sale. Individually they are all one can desire and would naturally expect from such breeding. He also has some well-bred and grandly marked H. P. Rooks. Any of this stock should make a marked improvement wherever introduced.

Mr. Robt. Miller, Brougham, Ont., writes: "In addition to the 23 Shorthorn bull calves I selected and shipped to the Cochran Ranch, Alberta, in October, I shipped, Nov. 21st, 29 Shorthorn cows, heifers and bull calves which I had assisted Thos. Andrews & Son to buy for their herd at Cambridge, Nebraska,—a very nice, straight lot of well bred cattle. Shropshires have sold well this season. Since August my sales have included 43 imp. rams, 19 imp. show ewes, 65 Canadian-bred rams, 65 yearling ewes, and a few ewe lambs. I have also helped Messrs. Harding, of Waukesha, Wis., to buy a great many good Cotswolds this season.

R. J. & A. Laurie, Woolverton, Ont., write, sending change of advertisement:—"Our fall litters of Tamworths are coming strong, and are mostly sired by the Industrial Fair winner, Sandy 3rd 639, the rest by Oak Hill Toby, a local fair prizewinner under a year. We also offer a few boars and sows, ready for breeding, of nice quality; also some good cooners and pullets of Barred Plymouth Rocks, Silver and White Wyandottes, Red Caps; also Rouen and Pekin ducks and Toulouse geese. Our stock was very successful at the shows this fall, winning prizes wherever shown.

Sittytton Hero, the fine Shorthorn bull represented in the illustration of a pair of Shorthorns in this issue from the herd of James I. Davidson & Son, of Balsam, Ontario, is a typical representative of the breed, combining size and scale with correct outline and fine quality of flesh. He was a clear winner in a strong class at the Toronto Industrial Exhibition of 1898 as a two-year-old, and was sired by Earl of March, a son of Barmpton Hero, the great old champion and sire of champions, and of imported English Lady 8th, and his dam was by imp. William Rufus, bred by E. Cruickshank and traced to Captain Rose by Champion of England. The heifer calf, which won first prize in her class at Toronto, is a daughter of Sittytton Hero and is of the famous Duchess of Gloster family, one of the most popular of the Cruickshank tribes.

Mr. W. G. Laidlaw, Ettrick Farm, Wilton Grove, Ontario, whose first prize yearling bull, Prince Frank's Son, is illustrated in this issue, has a capital herd of Jerseys, richly bred in the blood of the St. Lambert and St. Helier families and well up to the standard in points of excellence and as producers. This young bull, Prince Frank's Son, won first prize as a calf in 1897 at the Western Fair, and repeated the performance this year as a yearling in the strongest competition ever seen here. He is a model Jersey bull, but the picture does not do him justice. He has ideal dairy conformation and breed character, and great richness of color and his breeding is of the very best, his sire having twice won the championship at the Western Fair, and his dam, a pure St. Lambert, was sired by One Hundred Per Cent, and his granddam by Sweet Briar's John Bull, whose dam made a record of 22 lbs. butter in seven days.

Mr. Fred. S. Black, Amherst, N. S., owner of the first prize herd of Ayrshires open to all, and of the first prize for herd not over two years, at the New Brunswick Provincial Fair at St. John, and also the first prize young herd at the Nova Scotia Provincial Exhibition at Halifax, is an enterprising young breeder, who has shown good pick in entering the field as an exhibitor, and good judgment in his selections and breeding. The stock and show bull at the head of his herd is Matchless 2nd, winner of first prize as a yearling and sweepstakes as best bull of the breed any age at both shows above mentioned and illustrated on another page in this issue. He was sired by Matchless 1st, who is a son of Osborne, a pair of the most famous representatives of the breed, and Matchless 2nd shows his breeding in individual excellence, being true to the highest type of dairy conformation and showing the breed characteristics as nearly to perfection as they are found in one animal. He should prove an impressive sire and we predict for him a very successful career.

**IMPORTED SHORTHORNS.**  
Messrs. H. Cargill & Son, Cargill, Ont., advertise in this issue eight high-class young bulls recently imported from Scotland, of the best breeding. These have been selected in person from the best herds, and are said to be such as will do the country good. A few home-bred bulls and a number of cows and heifers are also offered. See their ad.

**CATARRH CAN BE CURED.**  
Catarrh is a kindred ailment of consumption, long considered incurable; and yet there is one remedy that will positively cure catarrh in any of its stages. For many years this remedy was used by the late Dr. Stevens, a widely noted authority on all diseases of the throat and lungs. Having tested its wonderful curative powers in thousands of cases, and desiring to relieve human suffering, I will send free of charge to all sufferers from Catarrh, Asthma, Consumption, and nervous diseases, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing, with stamp, naming this paper, W. A. Noyes, 920 Powers Block, Rochester, N. Y.

**VIM, VIGOR, VITALITY**

The man of vigor, the woman of energy, are the winners in life's race. The struggle is hard and tiresome but **DR. WARD'S BLOOD AND NERVE PILLS** will give you energy, vigor, health and strength to conquer obstacles and make life happy and healthy. Here is proof;—

Gentlemen: I have been troubled with kidney complaint for several years. I sent for a box of Dr. Ward's Blood and Nerve Pills, and they did me more good than all the doctors and medicines combined. I would have been in my grave long ago if it hadn't been for Dr. Ward's Pills cures combined. I am 70 years old, and I am sure I owe my life to this medicine.

My wife has also derived great benefit from Dr. Ward's Blood and Nerve Pills, her trouble being dyspepsia, liver complaint and a run-down system. Since using your remedy she is now enjoying the very best of health. Yours truly, James Monahan, Boatbuilder, Carleton, N. B.

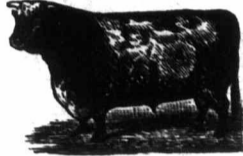
Dr. Ward's Blood and Nerve Pills are sold at 50c. per box, 5 boxes for \$2 at druggists, or mailed on receipt of price by **THE DOCTOR WARD CO., Limited, Dept. F. 71 Victoria Street, Toronto.** Book of information free.

WE ARE OFFERING FOR SALE

**8 HIGH-CLASS YOUNG IMPORTED SHORTHORN BULLS**

OF THE BEST SCOTCH BREEDING,

TOGETHER WITH A FEW HOME-BRED BULLS AND A NUMBER OF COWS and HEIFERS BOTH IMPORTED AND HOME-BRED.



CORRESPONDENCE OR A PERSONAL VISIT SOLICITED. CATALOGUES ON APPLICATION.

**H. CARGILL & SON,**

CARGILL, ONTARIO.

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

**AUCTION SALE**

—OF—

**THIRTY IMPORTED SHORTHORNS.**

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, Rosebuds, Minas, Bosses, Glaras, Gold Drops, and Violets, and other noted families. Farm twenty miles north of Toronto. Catalogues on application.

**John Smith, M. P. P.,**

**John Isaac,**

Auctioneer, BRAMPTON, ONT.

MARKHAM, ONT.

**GUERNSEYS.** The grandest 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-breds. The largest prizewinning herd in America to select from.

**DUROC-JERSEYS.** Easiest fed, easiest fattened; will do the best when fed on forage crops. Sweepstake 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.**

**SUMMER HILL HERD OF**

**Yorkshire Hogs**

LARGE, LENGTHY, ENGLISH TYPE.

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 1895, and several choice young sows bred to Look Me Over; also, young stock of both sexes; single or in pairs, not akin. We ship to order, prepay express charges. Guarantee stock as described.

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

**SHORTHORNS**

OF THE

**Grimson 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,**

GREENWOOD, ONT.

**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 100-guinea ram.

**J. T. GIBSON, Denfield, Ont.**

**Maple Lodge Stock Farm**

ESTABLISHED 1854.

**SHORTHORNS**—10 grand young bulls, from excellent milking dams; sired by the great show bull, Calthness—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 Maple Lodge, Ont. COUNTY.

**Spring Grove Stock Farm**

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by imported Blue Ribbon—17085—, and the famous Moneyfuffel Lad—20521—. High-class Shorthorns of all ages for sale. Also, prizewinning Lincolns.

Apply **T. E. ROBSON, Ilderton, Ont.**



Maple Bank Stock Farm

OFFERS 15 SHORTHORN BULLS with Scotch-topped pedigrees. Splendid reds and roans, and sired by Valkyrie 1806, and out of dams by Young Abbottsburn's Heir 1897 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 Berkshires

10-YOUNG BULLS-10 And a few heifers, by Isabella's Heir = 19550=, and richly bred on their dam's side; also a few young heifers fit for service.

JAMES DOUGLAS, -om Caledonia, Ont.

F. Bonnycastle & Sons,

CAMPBELLFORD P. O., ONT., Offer for sale the stock bull Redman = 21765 =, sired by Tothills (Imp) = 11113 =, dam Canadian Duchess of Gloster 2nd = 24849 =; also a few cows and heifers. A choice lot of Berkshire pigs from four weeks to six months old.

"MAPLE SHADE"

WE OFFER AT REASONABLE PRICES Six-Massive Shorthorn Bulls-Six FROM 7 TO 12 MONTHS OLD. FLESH, SUBSTANCE, PEDIGREE. ALL RIGHT. John Dryden, BROOKLIN, ONT.

Merton Stock Farm

YOUNG BULLS, HEIFERS, AND COWS ON HAND. David Hill, STAFFA, ONT. Prices right.

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.

SPRINGFIELD FARM

HERD OF Shorthorns, Oxfords and Berkshires. Young Bulls & Heifers on hand. Also a few choice Berkshires. CHAS. RANKIN, Wyebridge, Ont., Simcoe Co.

SHORTHORN CATTLE

Six topy 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.

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.

4 SHORTHORN BULLS

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

9 CORDS IN 10 HOURS

SAWS DOWN TREES. BY ONE MAN WITH THE FOLDING SAWING MACHINE. It saws down trees. Saws any kind of timber on any ground. One man can saw more with it than 2 in any other way. Made at Essex Centre, Ontario. No duty to pay. Write Main Office for circulars showing latest IMPROVEMENTS, and testimonials from thousands. First order requires agency. Address: FOLDING SAWING MACHINE CO., 64 S. Clinton Street, Y. R. 21, Chicago, Ill.

BRAMPTON JERSEY HERD

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

FOREST HERD OF JERSEYS

High-class individuals, rich in St. Lambert and Tormentor blood. Cows, heifers and bulls for sale. Have a number of heifers sired by Oonan's Harry Pogis, son of Ida's Stoke Pogis, sire of 28 tested daughters, and full brother in blood to Exile of St. Lambert, sire of 52. Herd close to town. Come and see, or address H. FRALEIGH, Forest, Ont.

WILLOW GROVE HERD OF JERSEYS

Offering: Eight females, to calves shortly; three bulls, out of tested cows; four heifer calves. Prices right. Come and see them. J. H. SMITH & SON, Nighfield, Ont.

BUTTONWOOD JERSEY HERD

OFFERS six richly bred young bulls from show-ring winning dams, and such sires as King of Highfield and Violet's Leo, both sweepstakes bulls. Settings from B. P. Rooks, Black Minorcas, and Grey Dorkings. Correspondence solicited. S. Wicks & Son, MOUNT DENNIS, ONT. 1-12-om Farm 7 miles from Toronto market.

Barred Plymouth Rocks

DIRECT FROM IMPORTED STOCK. A grand lot of cockerels and pullets, well barred, large, strong, robust, healthy birds. For prices write W. C. SHEARER, BRIGHT, ONTARIO.

\$700 for seven of the richest bred pure St. Lambert cows in Ontario. All daughters and G. daughters of King Hugo of St. Anees 16396 and old St. Lambert's Beauty 41069. All show animals. Address: ROCK BAILEY, Union, Ont.

GLEN ROUGE JERSEYS.

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

MAPLE CITY JERSEYS. 3 JERSEY BULLS FOR SALE 3 Another chance to procure a choice young Bull from that grand stock bull Massena's Son (17608); will be sold cheap if taken at once; also one bull two years old by Hugo Alpha of Oaklawn. W. W. EVERITT, Box 552, Chatham, Ont.

JERSEYS, AYRSHIRES, BERKSHIRES

Offering one grandly-bred Ayrshire bull calf, and a few young heifers from Sholl-bred stock. WILLIAM CLARK, MEYERSBURG, ONT.

Meadow Brook Jerseys Am offering one calf and one yearling bull, g-grandsons of old Massens, for sale at right prices if taken at once. Also a few choice females, rich in St. Lambert blood. EDGAR SILCOX, Sheddon P. O., Elgin Co.

Ingleside Herefords.

UP-TO-DATE HERD OF CANADA! Tamworths Berkshires.

Send for illustrated catalogue. Address: H. D. SMITH, Compton, Que.

GUERNSEYS

2 Choice Bull Calves... and 5 Heifers for sale... Tamworth and Berkshire Pigs. W. H. & C. H. MCNISH, LYN, ONT.

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.

NOTICES.

The enterprise of the Principals of the Federated Business Colleges, of Hamilton and Galt, has enabled the patrons of these representative business schools to enjoy the latest and best things in practical education. The most striking feature is the system of Inter-collegiate Business Practice, whereby the students of the Hamilton Business College and those of the Galt Business College transact business daily by means of the post office. C. R. McCullough is the president of the Federated Colleges.

MODERN CARRIAGE BUILDING. We recently called upon the McLaughlin Mfg. Co., of Oshawa, Ont., and were pleased to find that they were working to their full capacity of about two hundred men. They had just completed a very large addition to their already large factory, and which will give them, we understand, the greatest capacity of any Carriage Works in Canada. Their goods are shipped all over the world, and at the time of our visit they had shipments ready for New Zealand, New South Wales, and also notices of a large shipment for British Columbia and Halifax, N. S., all of which goes to show the extent of the Company's business.

ALL ABOUT PORK. The last quarterly report of the Kansas State Board of Agriculture, of which Mr. F. D. Coburn, Topeka, is the secretary, is a fine illustrated publication, devoted wholly to the subject of "Modern swine, swine-rearing, and economical and profitable pork-production, particularly under conditions existing in Kansas," which is described as a "corn orchard park with grasses." Since Canada bacon now tops the British market, a considerable proportion of the space in this report is naturally devoted to describing Canadian methods of breeding, feeding and managing pig swine, and set forth in a lengthy series of articles appearing in the FARMER'S ADVOCATE during the past season, which are reproduced in their entirety in this report.

AGRICULTURAL EXPERIMENTAL UNION. We have received the programme of the next annual meeting of the Ontario Agricultural and Experimental Union, which is to be held at the Agricultural College at Guelph. The Union will commence with a public meeting in the large convocation hall on the College grounds on the evening of December 7th. There will be six sessions in all, and the meeting will close on Friday afternoon, the 9th of December. The summary results of the field experiments conducted this year on over three thousand farms will be presented and discussed at the meeting. This, along with the reports on co-operative work in horticulture, dairying, beekeeping, soil physics, and the weeds of Ontario, should make the meeting interesting and profitable to all. Prof. C. F. Curtis, director of the Agricultural Experiment Station of Iowa, and Mrs. E. T. Rorer, principal of the Philadelphia Cooking School, have been engaged to speak at the meeting. The Guelph Fat Stock and Poultry Show and the annual meeting of the Ontario Beekeepers' Association are both to be held in Guelph on the 6th, 7th and 8th of December, and the annual meeting of the Guelph Poultry Association on Thursday of the same week.

TOP-DRESSING FOR PASTURES. In most cases stock undoubtedly prefer the herbage grown on land treated with what is known in Canada as Thomas' Phosphate. However or other phosphate, and this, it would appear to me, for the following reasons: (a) Because when the plants that form the herbage of grass land obtain a supply of suitable phosphate they are able to carry on their vital functions satisfactorily and to produce large quantities of starch and sugar, and these appeal strongly to the appetites of stock, with the consequence that such herbage is much sought after by animals. (b) Because plants that are properly nourished are more succulent than half-starved plants. (c) Because plants that stock relish are greatly stimulated in growth, and soon form a large proportion of the herbage. This, as is well known, is markedly the case with white clover. It is perfectly astonishing what wonderful results succeeded the application of Thomas' Phosphate under favorable circumstances. In the spring of 1897 I selected two three-acre plots of ground in a heavy clay field of poor pasture, and applied 10 cwt. of Thomas' Phosphate per acre to one of the plots, leaving the other untreated. Each plot was securely fenced off, and provided with water. Eight sheep were put on to each plot, and grazed for four months, being removed in the middle of October. This season the phosphated plot was so much improved that it has carried twelve sheep for four months, whereas the untreated plot is much poorer with only six sheep. In 1897 the sheep grazing the untreated ground increased in weight by 112 pounds, whereas those on the phosphated area gained 232 pounds in live weight. This year the results are still more remarkable, for whereas the sheep on the phosphated plot have put on 507 pounds of live weight, those on the herbage in its natural state have gained only 185 pounds. This shows a gain in favor of the phosphate of 444 pounds, which is equal to 146 pounds per acre. If we value this at 4d. per pound we get about 49s. At the end of the second year we have the original outlay repaid twice over, and the gains of future years will still further swell the huge profit. This is superior to gold mining. - F. Somerville, College of Science, Newcastle-on-Tyne, Oct., 1898, in Farmer's Gazette, Ireland.

GOSSIP. John Itosey, Jr., Lennoxville, Quebec, writes: "Our Shorthorn and Berkshires are doing well; there is a good demand for the former at fair prices. We have a nice lot of Berkshires, sired by Randolph (Imp. in dam) - 2871 - and Royal Clarendon - 2393 -. They are of the Ballie, (Imp.) Newport, and (Imp.) Sunrise families. W. R. Graham, Bayside, Ont., in sending his change of matter for advertisement of B. P. Rocks, B. Cochins, and Pekin ducks, states that he lately received an inquiry from a subscriber at Allanville, Ont., but as the party did not sign his name and address, could not be replied to; and this is not the first instance of the kind. Again we remind our readers when replying to advertisements to give full name and address.

FEDERATED BUSINESS COLLEGES

Hamilton Business College, HAMILTON, - ONT. C. R. McCullough, Prin.

Galt Business College, GALT, - ONT. W. Brooks, Prin.

INTERCOLLEGIATE BUSINESS PRACTICE between the students of these two Representative Business Schools. Enter either of the Federated Colleges and enjoy the best in business and shorthand instruction. Send for illustrated announcement to

C. R. McCULLOUGH, PRESIDENT, HAMILTON, ONT.

Maple Cliff Dairy and Stock Farm. Ayrshire cattle, Berkshire & Tamworth pigs. Two bull calves dropped in February. R. REID & CO., Hintonburg, Ont. One mile from Ottawa.

FAIRVIEW STOCK FARM.

Ayrshire Cattle and Berkshire Pigs. Traveller of Parkhill at the head of herd, while my herd is descended from cows purchased of Mr. David Benning; are modern in type, and are of the choicest milking strains. Write for prices of young bulls and heifers. DAVID LEITCH, Grant's Corners, Ontario. Stations-Corwall, G.T.R.; Apple Hill, C.P.R.

WM. WYLIE, Breeder of high-class AYRSHIRE. Young stock always for sale; bred from the choicest strains procurable. Breeding stock selected from the most fashionable strains and prize-winning stock of the day. Farm located at Howick, Que.

CHOICE AYRSHIRE BULLS

FROM IMPORTED STOCK. We offer Six (6) Bull Calves, for sale from 4 to 11 months old; good individuals, and from the very best milking strains obtainable in Scotland. Thos. Ballantyne & Son, "Heldpath Stock Farm," STRATFORD, ONT. Farm adjoins city, main line G. T. R.

AYRSHIRE CATTLE, BERKSHIRE PIGS

The bull TOM BROWN and the heifer WHITE FLORES, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester Sheep and Berkshire Swine. D. BENNING & SON, Glenhurst Farm, WILLIAMSTOWN, ONT.

MEADOWSIDE FARM

J. YULL & SONS, Props. Carleton Place. Breeders of high-class, deep-milking Ayrshires. Sweepstake 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.

CHOICE LOT AYRSHIRE BULL CALVES

Sired by Douglas of Loudon, bred by D. Morton & Son, Hamilton. Prices right. F. W. TAYLOR, -o WELLMAN'S CORNERS.

"Gem Holstein Herd."

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

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, 671 lbs. milk in one day and 21 lbs. butter in a week; Kaatje DeBoer, 63 lbs. milk and 3 pounds butter per day at 14 years old; Marcena, 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. G. W. CLEMONS, ST. GEORGE, ONT.

HOLIDAY OFFERING.

Will sell a few very choicely-bred Holstein bulls at a reduced price if taken before or during holidays; also, B. P. H. cockerels. For particulars write. H. BOLLERT, CARRI, ONT.



We must sell in the next 30 days, **Sixty Holstein Cows, Heifers and Calves**, of the richest and largest producing strains. Owing to lack of stabling they will be sold at greatly reduced prices. Come and make your selections, either singly or by the carload. They are served by Manor De Kol, De Kol 2nd's Butter Boy 3rd, and Mutual Friend 3rd's Paul. Our herd was first at the Trans-Mississippi Exposition. They have the largest official butter test ever made. Now is your opportunity to secure bargains in the Brookside herd. **HENRY STEVENS & SONS,** -om Lacona, N. Y.

**HOLSTEIN-FRIESIAN and TAMWORTH SWINE.**

Three choice bull calves and three heifers, one year old; also a few nice Tamworth sows and boars, three months old, by 1st prize sire and dam. Write for prices before you buy. **D. J. GIBSON,** Bowmanville, Ontario.

**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. -o **CURRIE'S CROSSING.**

**FOR SALE, 3 HERFORD BULLS**

(REGISTERED) 6, 2 and 1 year old; 951, 951, 956. No finer bred stock in Canada. **JOHN BERGIN,** Cornwall, Ont. -om

**WANTED**

For which \$1 each will be paid: Vol. I. Canadian Clydesdale Stud Book; also, Vol. I. Dominion Ayrshire Herd Book. **HENRY WADE,** PARLIAMENT BUILDINGS, TORONTO.

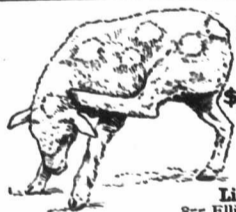
**DO YOU WANT** To increase your milk and butter yield from 10 to 25 per cent. with less feed and less trouble, besides having a better product?

**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 pail 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.



**SCABBY SHEEP. \$500 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., Buffalo, N. Y. Canadian Office: WEST CHEMICAL COMPANY, 15 Queen Street East, Toronto. -om

**Dorsets and Chesters**

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

**R. H. HARDING, THORNDALE, ONT.**

**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. -om

**SHROPSHIRE** Offering Ram and Ewe Lambs from imported sires, also a few Ewes.

**GEO. HINDMARSH,** AILSA CRAIG, ONTARIO.

**Shropshire Sheep, Chester White Hogs,**

**BRONZE TURKEYS** W. E. WRIGHT, o GLANWORTH, ONTARIO

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

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

**GOSSIP.**

Mr. W. D. Fiatt, Hamilton, Ont., reports the following recent sales from his Trout Creek herd of Shorthorns to Mr. John Ramsay, Priddie, Alberta, who is laying a good foundation for a choice herd in the Northwest: 1 bull and 5 females, the bull being the handsome and stately dark roan 10 months-old Trout Creek Hero -28132- by Duncan Stanley 16364, a son of the Dominion champion Stanley, who also sired Lord Stanley, sweepstakes winner over all beef breeds at the World's Fair at Chicago. Stanley, it will be remembered, was by Challenge, one of the best sons of the famous old Barmpton Hero, a champion in his day, and the sire of many champions. Trout Creek Hero was shown three times in Ontario, and won 1st prize each time. The females were Red Empress 3rd by Kinellar 2nd, dam by imp. Baron Lenton, grandam imp. Roan Betty; Roan Duchess 2nd by Waterloo Duke 2nd; Duchess of Lincoln 2nd by Ingram, a grandson of Sir Arthur Ingram, a champion winner at the English Royal Show; and the six months-heifer calves of the two last named cows. Mr. Ramsay is to be congratulated on securing such an excellent collection, being, as they are, high-class individuals and of rare good breeding. To Mr. E. E. Risely, Bridgport, Ont., goes the roan 10 months bull Duke of Avondale 2nd -27633-, a strong, saucy fellow by Carlisle Jr., by Prince Royal, first-prize winner at the World's Columbian Exhibition and 2 firsts in Toronto, dam Missie of Neidpath 9th, of the same family as Marengo, the champion bull of the breed at the Royal Show, England, 1888. To Mr. J. C. Fiatt, Millgrove, Ont., has been sold the cow Lowville Belle by Milton Cumberland, a son of the imp. Kinellar-bred bull The Provost, and grandson of Prince James -988-, winner of first prize and sweepstakes at Toronto Exhibition.

**BROOKBANK HOLSTEINS UNDER OFFICIAL TEST.** At the invitation of Messrs. A. & G. Rice, Currie's Crossing, Ont., we visited Brookbank Farms on Nov. 24th to witness the closing of a seven-days official test conducted on a number of cows and heifers by Mr. Wm. Equirrol, a representative of the Ontario Agricultural College Dairy School. The cows under test were Daisy Texel 2nd 44831, age 3 years and 2 months; Daisy Texel 3rd 44832, age 2 years and 30 days; Lady Pieterje's Konigse 44926, age 6 years and 10 months, and Dewdrop's Clothilde, age 2 years and 8 months. The test commenced on Nov. 17th and ended Nov. 23rd. The milk was weighed at each milking and tested by Babcock test with the following result:—

Cow.	Lbs. milk.	Lbs. fat.	Lbs. butter, 80% fat.
Daisy Texel 2nd	438.75	14.361	17.953
Lady Pieterje's Konigse	393.	13.159	16.448
Dew Drop's Clothilde	261.50	9.362	11.691
Daisy Texel 3rd	256.75	8.018	10.059

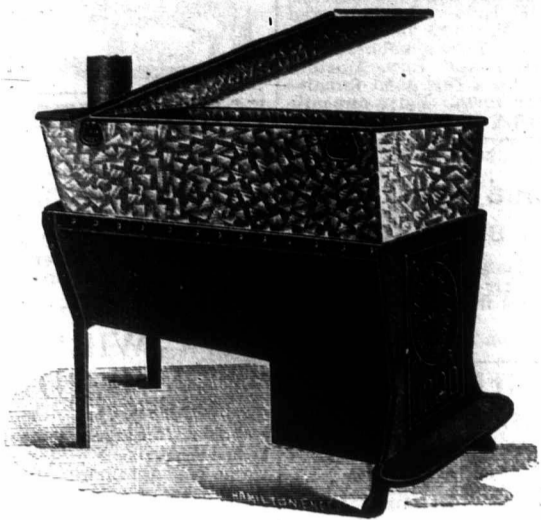
The noted cows, Calamity Jane 26292, age 7 years, and Pauline Fairmont 44831, age 3 years and 1 month, were also in the midst of a test, and gave the day previous to our visit, respectively, in 24 hours, 61 lbs. milk, containing 3.621 lbs. fat, equal to 3.28 lbs. of butter, and 35.25 lbs. of milk, containing 1.234 lbs. fat, equal to 1.542 lbs. of butter. Calamity Jane had just calved 9 days and was increasing in her milk flow, which contained about 3.80 per cent. fat. With the ration she is now getting her butter is costing about 6 cents per lb. for food. It will be remembered she was for three years the winner of the Provincial Dairy Test. She gave last year in 7 days, under official test, 560 1/2 lbs. milk, containing 21 1/2 lbs. butter, which places her among the six heaviest producers in America.

Messrs. Rice thoroughly appreciate the value of pedigrees combined with performance, but either without the other finds no place in Brookbank herd. The herd now consists of over fifty head of fancy pedigreed performers and their offspring from butter-bred bulls. Besides Calamity Jane and her offspring, we saw such noted matrons as Eunice Clay, the first Holstein to win the public test in Canada, her test record was 84 lbs. 10 oz. milk in 24 hours. Daisy Texel, a grand show cow and heavy producer, is well represented by numerous daughters and granddaughters, two of which are mentioned with records in above table. Daisy Texel 2nd previously gave in public test at 23 months old, 100 days after calving, 78 1/2 lbs. milk testing 3.3 per cent. butter-fat. Another daughter at 4 years old gave 53 lbs. of milk in one day. Winnie R. is one of the good ones which Messrs. Rice are pleased to see perpetuated in the herd. She is constructed on much the same roomy typical dairy form as Calamity Jane. She has given as high as 17,500 lbs. of milk in one year, and whenever tested showed about 3 3/8 per cent. fat. Iolins Fairmont 3rd, is the dam of Pauline Fairmont just tested. A number of other grand females might be mentioned, but they are similar in pedigree and capacity to those mentioned, and must be seen to be appreciated.

The sires of the young stock and at present heading the herd have been as carefully selected as the cows. In the stables we saw Fillmore Clothilde, Lincoln, 4 years old, a grand bull with many prizes to his credit, skin very soft and rudimentary very pronounced, and Homstead Albino De Kol, winner of first prize at Toronto, London and Ottawa, 1893, as a yearling, of distinctly dairy form and yellow skin, having for sire the great bull Pieterje Hengerveld's Paul De Kol, whose dam, Pieterje Hengerveld gave in official test over 23 lbs. in seven days at 4 years old, and her dam again, Netherland Hengerveld, has the highest official test yet made, namely, 26 lbs. 9 oz. butter in 7 days. This bull has all his immediate female relatives in advanced registry from records won in official test. Another fine bull is Calamity Jane's Paul, first prize as a calf at London and Ottawa, '98, his sire being the former stock bull Sir Paul De Kol Clothilde, whose nineteen nearest female relatives average 23 lbs. of butter per week, and include such record-breakers as Pauline Paul, De Kol Clothilde, etc., that have made the breed famous. As his name shows, he is a son of the great cow Calamity Jane, whose work in so many public and official tests shows her to be one of the greatest cows that ever lived.

**FEED BOILERS.**

Boils Quickly with Little Fuel.



Capacity of Galvanized Steel Boiler 50 Gallons.

The arrangement of the fire box forces the heat to travel over the entire surface of the boiler, heating it quickly. Steel and cast iron parts joined together in such a manner as to avoid their warping.

**THE McCLARY MANUF'G CO'Y,**

London, Toronto, Montreal, Winnipeg, and Vancouver. If your local dealer cannot supply, write our nearest house. -om



"The Scientific Compounds for Stock and Poultry."

FORMULATED BY A PHYSICIAN AND VETERINARY SURGEON.

**DR. HESS' STOCK FOOD**

For Horses, Cattle, Hogs, and Sheep; an appetizer, a fish producer, a blood purifier and tonic. It expels worms.

**DR. HESS' POULTRY PAN-A-CE-A**

Cures Diseases and Makes Hens Lay.

**Instant Louse Killer Kills Lice.**

Awarded medals at the Toronto Exhibition; medal at the Western Fair, London; first premium at Chicago Poultry Show; first premium at St. Louis Poultry Show; first premium at Rock Island Poultry Show; endorsed by the London Poultry and Pet Stock Association, St. Louis Fanciers' Association, Rock Island Poultry Association, Davenport Poultry Association, by the President of the Am. White Plymouth Rock Club. Thousands of testimonials on file. Sold by dealers generally, or address: **DR. HESS & CLARK, Ashland, O., U. S. A.** Price: Pan-a-ce-a and Louse Killer, 35c. each; Stock Food, 7 lbs., 65c.; 12 lbs., \$1.00; 35c. articles by mail 5c. extra. Send for Scientific Book on Stock and Poultry, FREE.



**There is No Doubt About the MERIT of DEHORNING** It cuts both ways, does not crush. One clip and the horns are off close. Write for circular. The Keystone Dehorner Mfg. Co., Pictou, Ont. Can.

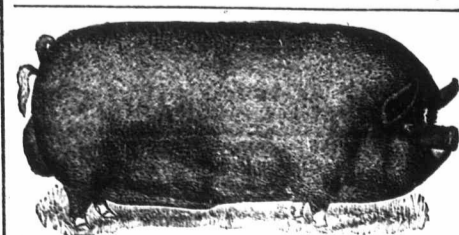
**HILL HOME FLOCK** OF **SHROPSHIRE** comprise the choicest of breeding from direct importation. Rams of all ages for sale. **D. G. GANTON,** SIMCOE COUNTY. o SAURIN P. O., ONT.

AT FAIRVIEW FARM ARE A FEW OF THE BEST **Shropshire** RAMS, RAM AND EWE LAMBS, AS WELL AS EWES THAT HAVE BEEN BRED TO NOTED PRIZEWINNING RAMS. WRITE ME FOR PRICES.

**John Campbell,** WOODVILLE, 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.

**LEICESTER RAM LAMBS** C. & E. WOOD, - FREEMAN P. O. Burlington Station. -o



A choice lot of Large English Berkshires from one to three months old; also some fine young sows ready to breed. Prices reasonable. Being moved, address all letters to **W. H. SPENCER, Guilds P. O., Ont.,** Blenheim Station, Bridgetown. -o

**Robert Miller,** STOUFFVILLE, ONT.,

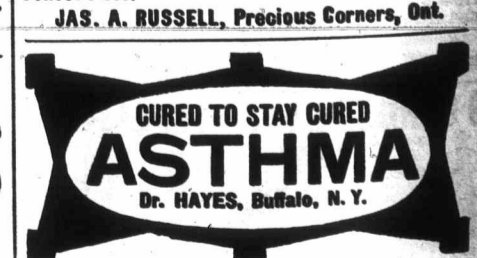
Importer and Breeder of **SHORTHORNS AND SHROPSHIRE**

Offers young bulls and heifers, rams and ewes of the most approved breeding and finest quality, at moderate prices.

Station, Telegraph, Telephone, Post Office THREE MINUTES' WALK. -om

**W. H. BEATTIE, WILTON GROVE, ONTARIO,** Offers 100 Bronze Turkeys (farmer's daughter strain); 50 White Hollands and Bremen Geese. **WON ALL 1ST PRIZES AT TORONTO, 1898.**

**WORKSHIRES AND BERKSHIRES.** Boars and sows (not akin), both breeds, ready to breed and sows safe in pig; real up-to-date bacon type, choice six-weeks-old Yorkshires. Choice B. P. Rock cockerels. Prices reasonable. **JAS. A. RUSSELL, Precious Corners, Ont.**



**CURED TO STAY CURED ASTHMA** Dr. HAYES, Buffalo, N. Y. The annual meeting of the Ontario Fruit Growers' Association will be held at St. Catharines, Dec. 1st and 2nd. Among the speakers announced are Dr. Saunders, Prof. Robertson, and Prof. Macoun, of Ottawa; Dr. Mills and Prof. Hutt, Guelph, and Mr. C. C. James, Deputy Minister of Agriculture, Toronto.



Large Yorkshires! OF HIGHEST QUALITY.



IMPORTED and Canadian boars and sows of all ages. My stock of hogs is larger and better than ever.

Large Yorkshires

The grand YEARLING BOAR, Seymour Hero, has sired several litters of sixteen each.

ALEX HUME & CO.,

Breders of Ayrshires and Yorkshires. Menie P. O., Ont.

Large White Yorkshires BRED AND FOR SALE.

Fifty August and September pigs; 30 sows and boars from 5 to 7 months old, bred from registered stock.

E. DOOL, HARTINGTON, ONT.

YORKSHIRES AND BERKSHIRES My Yorkshires were founded on the noted prize-ring producer, Maud G., and are the best lot I ever owned.

K. G. MARTIN, Marysville, 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.

BERKSHIRES FOR SALE

A FINE LOT OF BOARS AND SOWS FROM APRIL AND MAY LITTERS. ALSO OLDER STOCK AND FALL PIGS. PRICES LOW.

JOHN RACEY, Jr., Lennoxville, Que.

English Berkshires

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

H. BENNETT & SON, St. Williams, 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.

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.

MONTROSE HERD OF BERKSHIRES

Carry such blood as Baron Lee 4th and Enterprise. Young stock three months old for sale, and orders for fall litters booked now.

J. W. HARTMAN & SONS, ELM HEDGE P.O., GREY CO.

My Berkshires

are strictly up-to-date in style, length, quality and breeding. The present crop of young stock by Manor Prince are as good a lot as I ever raised. Prices right.

J. B. EWING, Dartford, Ont.

FOR SALE! ENGLISH BERKSHIRES! Six boars, 8 mos. old, and six sows, all fit for service. Prices moderate.

ROBERT VANCE & SONS, IDA, ONT.

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.

5 POLAND-CHINA BOARS

Five months old, sired by imported Corwin Ranger -1065-; d. Kent Beauty -1204-, by imp. Black Joe -708-. Sows all ages. Booking orders for fall pigs.

JOSEPH M. SMYTH, Box 619, Chatham, 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.

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Springridge Poland-Chinas

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Aged sows; young stock of both sex, two to seven months. P. B. Rocks, L. Brahmas, Rouen ducklings. Write for prices. Farm three miles east of J. W.

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are in good form this season, and offering young stock of superior quality and breeding of both sexes.

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For sale, pigs of all ages, also Barred Plymouth Rocks, White and Silver Wyandottes, Red Caps, Rouen and Pekin Ducks, and Toulouse Geese. R. J. & A. LAURIE, Wolverton, Ont.

Tamworths, Yorkshires, and Suffolks; also Poultry. My Tams have won a large share of the best prizes offered at the large and small fairs. Parkhill Mab was bred by us.

JOHN NORD & SON, Parkhill, Ont.

MENTION FARMER'S ADVOCATE

GOSSIP. MR. JOHN ISAAC'S OFFERING OF IMPORTED SHORTHORNS.

Writing of the fine collection of thirty imported Scotch-bred Shorthorns which Mr. John Isaac, of Markham, advertises to be sold to the highest bidder at his farm, on January 11th, an Aberdeen exchange says: "Mr. Isaac, who is a nephew of the late Mr. Sylvester Campbell, of Kinellar, has turned inherited his love for good cattle, and his early training in this line to good account, as will be seen from the capital selection he has bought in Aberdeenshire recently for exportation to Canada. The Kinellar Shorthorns for many years have had a great reputation in North America, and the dispersion of the herd last year caused a blank in the Aberdeenshire stocks of Shorthorns which can ill be afforded. Mr. Isaac has been able to pick up good many of the old Kinellar strains, which form the most valuable portion of the excellent draft he is to ship from Glasgow this week. The consignment includes one four-year-old cow, two three-year-old cows, eight two-year-old heifers, and eleven bull calves, two heifer calves, and eleven bull calves. The two-year-old heifers form a good collection as has gone to Canada for a number of years, there being included among them several prizewinners and some lots of the choicest breeding. From Mr. Anderson, Saphock, Mr. Isaac bought a four-year-old cow, Miretta 3rd, a deep-milking roan from an old Saphock family and by Mr. Duthie's Lord of the Meadow; and a two-year-old heifer, Fortuna 2nd, from the same family, and by Mr. Duthie's Superb. This heifer goes with a rich red colored calf at foot by Royal Mail. In the same consignment there is a well-bred one-year-old heifer, Clara 3rd, out of a dam by Mr. Duran's prize bull Sittytown 1st, her grand sire being got by the bull Mr. Anderson, Warden, which had a great showyard career in England. This is a particularly big, good, red heifer, which was a prizewinner at Inverurie, and champion at Fyvie Show. The red bull calf Sir Colin Campbell, by Royal Mail, out of the same cow as the last-mentioned heifer, is a particularly well-bred one. From Mr. Anderson, Warden, Mr. Isaac has purchased the three-year-old cow Miss Mary, which was first this year at the Blackburn Show. This is a sweet-fleshed red cow of admirable quality and full of Kinellar blood, and being in calf to the well-bred bull Star of Lancaster, she would be mated by those who appreciate blood with quality. Mr. Anderson also sold a one-year-old heifer, Milkmaid, a son of Star of Lancaster, and descended from the Heatherwick Rosebuds—a family that has bred so many good things. Mr. Isaac purchased from Mr. Green, Collyhill, a capital bred two-year-old heifer, Alice, which is a roan of the Averan family, which is rooted in the blood of the celebrated Sittytown sire, Champion of England. The next lot were obtained from Mr. Crombie, Woodland, Newmachar. They include Lady Jane, a three-year-old roan by the Sittytown sire, Goldstream, and descended from the old Danestown family, the Mary Annes of the old Kinellar family, the Mary Annes of Mr. Reid, Danestown, back to a purchase many years ago. She is a roan of rare quality and breeding, in calf to Mr. Crombie's stock bull which he purchased from Mr. Wilson, Pirriemill. Mr. Isaac also bought at Woodland a big-fleshed, nice-topped bull calf, Jubilee, by Cairnitch, and descended from the Diamond family, which has been crossed by a succession of Sittytown sires. In the herd of Mr. George Walker, Tillygreig, Mr. Isaac secured two capital bred Kinellar females. One of these is Mina Gladstone's Rose, a two-year-old by Emancipator, and tracing back to the late Mr. Campbell's noted Mina family, which have won so many prizes and bred so true to their kind. This is a nice, thick-fleshed heifer with plenty of substance, and being an early calver to the Collyville-bred sire My Lord, she should command the attention of breeders on the other side of the water. The other heifer is Red Bessie 2nd, by Emancipator, and out of Rosa Bessie, by Sittytown Sort. She is a straight good heifer, and is also from the old Kinellar blood. They were first and second in their blood at the Uday Show this year. A thick-classed heifer calf of much promise, Caroline 11th, by Mr. James Bruce's Cap-a-pie, and from the Emily family, was bought from the same dam by Mr. Isaac. She is a straight bred, along with a yearling heifer, Lady Pride, from Powburn sire G. O. T. In the well-known Scotch-bred herd of Mr. James Black, Barholm Chapel, Mr. Isaac bought a thick-fleshed, good yearling in Lustre 18th, by Mr. Marr's Captain Ripley, and out of a member of the Duke of Richmond and Gordon's crack family, the Lustre. At the Kinellar dispersion, Mr. Robertson, Suttie, bought a yearling heifer, Rose 5th, by Emancipator, and from the old family of Rosebuds, several members of which, in the hands of Mr. George Harrison and other English breeders, have had a great showyard career. Rose Blossom being one of the best-known show cows in England. This is a grand backed, handsome heifer of the very best breeding, and being in calf to the old Kinellar stock bull, Clan Alpine, which did so much good in the herd, she would make a valuable acquisition to any herd. Mr. Isaac has included her in his consignment, and a big, massive roan heifer, Jenny Lind 1st, which he bought from Mr. Grant, Pitsochie, but which was bred at Monymusk, Castle. She was first and champion Shorthorn at the Cluny Show this year, and is, it may be mentioned, in calf to the Collyville-bred bull, Archer. From Mr. John L. Reid, Crombybank, there go the red bull calf Noblemans and the roan calf Grand Prince. The former is of pure Kinellar breeding, his sire being Clan Alpine, and his dam Nonpareil Blossom, by Royal James. He is a big, thick-fleshed, promising youngster of grand color and character. From Mr. N. Reid, Feuchel, one of our oldest breeders, Mr. Isaac acquired a roan bull calf, Statesman, by Lord Granville, and from the bull calf, The Baron, by the same sire, and out of the well-bred cow Vincella 9th, by the show bull Hercules, the sire of the next dam being the champion bull Lord Chelmsford. Vincella is descended from an old Sittytown cow, Violet's Forth, by the celebrated bull Forth. This is an exception-

ally sweet calf of rare quality and promise, which would be useful in a herd of the most select breeding. From Mr. Ross, Upper Park, there was purchased the first prize heifer at Banchoy, Red Rose, a two-year-old full of Shethin breeding, through the Waterloos and the Rosemarys. Some beautifully-bred Shorthorns were bought from Mr. A. Campbell, Doystone, Kintore. The first of these is a two-year-old Clara, named Cecil, by Clan Alpine, and out of Countess, by Royal James. This is a rich-colored red, inheriting the blood of one of the most valued tribes of the late Mr. Sylvester Campbell, and going back to a dam by the great show bull Scarlet Velvet, a prizewinner this year at Blackburn, she will make a grand investment to some plucky bidder. In the same herd Mr. Isaac secured the yearling heifers Donside Beauty and Nonpareil 3rd, by Clan Alpine, and from Nonpareil Gem, by First Consul, a nice red with a lot of Cruick-shank blood in her veins; and the bull calves, Masterpiece, by Royal James; Sovereign, by Emancipator, and from the Claret cow, Donside Lillie, and Prince Alpine, by Emancipator, and out of Lady Alpine, a very old Kinellar sort, the last two being animals of more than average merit. The last of this valuable consignment, which it may be mentioned, have been all tested and found to be thoroughly sound, is a bull calf, Borneo, purchased from Mr. Meir, Shadowside, after Scottish Victor, champion bull at Uday, and out of a Lady Dorothy dam, which traces through the Tillygreig herd to that of Mr. Mitchell, Auchagathle.

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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.

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 245; out of prizewinning sows. JOHN C. NICHOL, Hubrey, Ont. Express Office: London

TAMWORTHS—THE PACKER'S CHOICE.

Sows in pig, and Sows ready to breed. Boars ready for service, and fits; head from six weeks to five months. Orders booked for fall pigs from 14 sows and 4 boars. Prices right. J. H. SIMONTON, Box 304, CHATHAM, ONT.

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A number of extra good cockerals for sale, bred from imported stock, \$1.00 and \$2.00 each. Breeding pen (4 hens and a cockerel), \$4.50; also a few pullets at \$1.50 per pair. Write for particulars, enclosing stamp if convenient. MISS P. J. COLDWELL, CONSTANCE, HURON CO., ONT.

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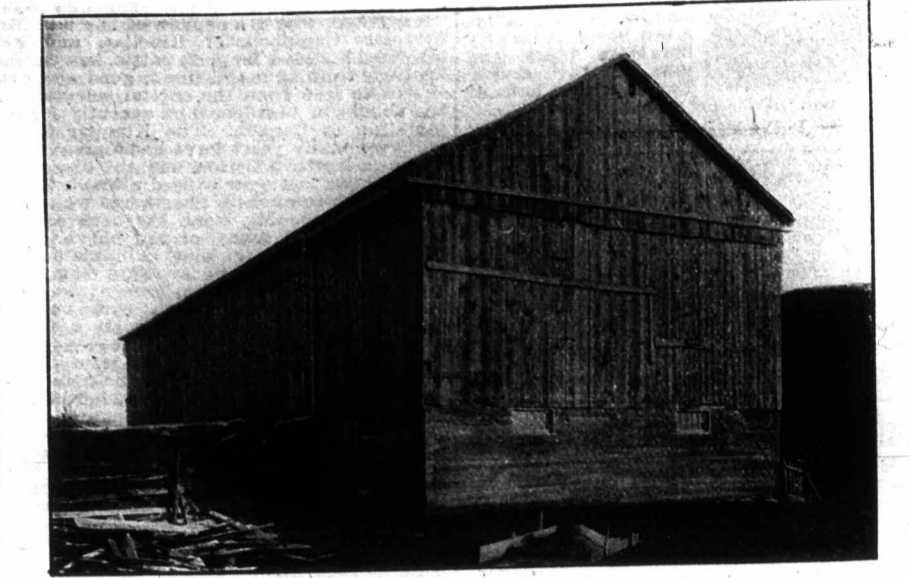
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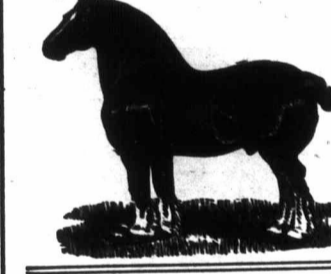
During the past summer I have built a basement under my barn, 34 x 88 x 9 feet high from bottom of foundation; footing for foundation 18 in. thick; above the footing 12 in. thick. I used six parts of gravel to one of cement. I also built a cistern under the approach to the barn 8x18x7 feet high; wall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

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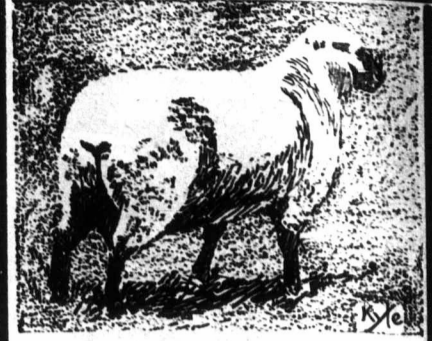
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