

**PAGES  
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# FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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## EDITORIAL.

The improvement wrought in pure-bred stock in the Argentine Republic by the use of first-class imported stock is clearly seen when eleven home-bred bulls sold a short time ago for an average of over \$3,000 apiece, while imported bulls newly arrived did not go above \$1,250, and several were unsold.

The enterprise shown by the Danes in developing their dairy export trade to Great Britain is most commendable when we consider that the area of Denmark is only 15,000 square miles, or about one-third the area of the State of Pennsylvania. It has only one large city, Copenhagen, which has 600,000 of a population. The total number of cattle kept is somewhat more than 2,000,000. The total population of the country numbers about the same as the cattle.

Buyers for the British army are paying good prices now for suitable horses. South Africa, among other places, has been visited by them, and nearly 1,000 horses have been secured, as high as \$200 being paid for some. When some army officers were here a few years ago to purchase, they were unable to get many of the right sort, and sellers complained that the prices offered were too low. Now that better prices are being given, our breeders should keep this market in view and try to get what they can out of it.

### Bacon Hogs.

In this issue appears a letter from our English correspondent which touches on several points of interest in regard to bacon pigs as viewed by one in that country. With some of his conclusions some of us may not agree, but, in view of the intense interest now being taken in this country as regards the raising of suitable pigs for the export trade, anything that tends to discussion on the subject should be welcomed.

The first point that strikes us in his letter is the bonus given by Messrs. Harris & Co., the well-known bacon-curers, Calne, Wiltshire, to pigs that come up to the standard that they require, one feature of which is that the fat on the backs of such pigs should not exceed 1½ inches in depth. This bonus question has often been discussed in our columns and elsewhere, feeders claiming that our pork-packers do not discriminate enough in the prices they pay for what are called "ideal bacon pigs." It is generally conceded that pigs of that type should be worth more than other stock, which, though young and well-fitted, yet either lack in the required length and depth or are too thick and wide on the back. The packers, we believe, are quite willing, and, in fact, do pay more for suitable pigs, but this bonus does not reach the farmer's pocket.

The trouble lies in the system of buying in vogue in this country. The drovers, who scour the country for pigs, nearly always buy them, good and indifferent, for so much a pound all round, and make no discrimination in favor of any particular type. The farmer thus reaps no advantage from raising "baconers," which, some claim, cost them a little more to raise than ordinary pigs. The drover, of course, knows what he can get for the general run of pigs, and figures thereon accordingly when he buys, while all in the bunch that are suitable for the packers will net him a higher price, which is so much extra gain to him. So long as this system of buying is carried on it is no wonder that farmers do not raise more pigs of the bacon type. The remedy would seem to lie either in co-operative factories, co-operation in shipping to the present established houses, as is done to Messrs. Harris' in England, as mentioned by our corre-

spondent, or in the packers having their own buyers stationed in different parts of the country.

What oftentimes puzzles those not in the curing business is the different names given to certain market cuts of the carcass, such as Wiltshire sides, Cumberland sides, etc. As will be seen, these local names refer to the different methods in use in certain districts in cutting up the carcass; but somewhat different styles of pigs are required for the various methods of cutting up, while the methods of curing are not in any way different. To get the famous Wiltshire sides the pigs should weigh from 180 to 200 lbs.; each side will then weigh about 72 lbs., and a ham about 10 lbs.

It will be noticed that our correspondent highly esteems thoroughbred Berkshires for bacon purposes, the large proportion of lean meat in their carcasses, and the good admixture of lean and fat, rendering them superior, in his estimation, to all other pure-breds for the bacon-curer's requirements. Next to them he places Large, Middle and Small Yorkshires, Essex, and Tamworths. His conclusions here are not quite identical with what our bacon-curers have always preached, but it must be remembered that some of the English breeds of pigs vary considerably in type from pigs of the same breeds as kept in this country.

The treatment of farrowing sows and young pigs as mentioned in the letter corresponds very closely to the best methods carried out in Canada. Great stress is properly laid on the necessity of exercise, for the want of which, combined with overfeeding, many a pig has suffered from cramps and rheumatic gout. In connection with the feeding of pigs, it is instructive to learn from the experiments carried out that pigs fed in winter required 8 per cent. more feed than those fattened in the summer time.

### The Late Mr. J. J. Colman.

British live-stock interests lost a devoted and valued adherent in the death, on Sept. 18th, of Mr. J. J. Colman, Norwich, Eng., a gentleman whose name has for many years been more particularly associated with the breeding of Southdown sheep. Some thirty years ago a flock of this breed was founded on Mr. Colman's East Lodge Farm, near Norwich, by a carefully-selected lot of typical specimens. In a very few years this flock was represented at the large shows, where they figured conspicuously among the winners. Year after year since that time up to the present has seen Mr. Colman as a successful Southdown-breeding exhibitor at the Royal Agricultural, Smithfield and other leading shows, invariably winning the highest honors. Not only in sheep breeding, but also in cattle breeding, Mr. Colman has accomplished much valuable work. In 1860 he resolved on founding a herd of Red Polled cattle. At this time this breed, which was confined to the counties of Norfolk and Suffolk, was in an uncertain state as to whether it would advance or be entirely lost. This made the founding of a herd very difficult, but nevertheless it was accomplished from cattle fairly good from a dairyman's point of view, as well as being good beef producers. In 1871 he entered the lists as an exhibitor, and was fairly successful, but after the Herd Book of the breed had been started, in 1874, Mr. Colman spared neither labor nor money to help on their improvement, and succeeded in a remarkable degree. Champion honors again and again and class prizes innumerable have gone to Mr. Colman's representatives, both as breeding and as fatted stock. Mr. Colman was also a Jersey breeder of much success. He will be long remembered for his interest in the less favored farmers by contributing heavy purses for prizes to be competed for by tenant farmers. He took lively interest in the Royal Agricultural Society, the Royal Agricultural Benevolent Institution, and other similar organizations.

### Changes in the U. S. Regulations Regarding Imported Stock.

The U. S. Treasury Department has issued new regulations governing the importation of pure-bred stock into that country. By the new rules, which are given in full in another column, no animal imported for breeding purposes is to be admitted free of duty unless the importer furnishes a certificate of the record and pedigree in the specified form given, which requires not only particulars about the sire and dam, but also of the grandsire and grandam. An affidavit is also required from the owner, agent, or importer as to the identity of the animal.

The reason given for this tightening of the reins in regard to pure-bred stock imported into the United States is that information has reached the Department of Agriculture that cross-bred animals and others with unknown pedigrees have been recorded in certain books in order to make them eligible for free entry. There is every reason to believe, however, that the real reason is the jealousy of certain American live stock associations, which has been shown on previous occasions against our Canadian breeders and records, and which has been stirred up afresh on account of the number of pure-bred stock taken from here across the line during the past few months. The regulations previously in force were, in the eyes of all fair-minded men, sufficiently strict and onerous to give the American breeder and American records every protection, and if, as is alleged, fraudulent recording has been done to secure free entry, the duty of those who discovered such frauds should have been to notify the secretary of the association with whom such fraudulent recording had been done, so that speedy punishment could have been meted out to the guilty party or parties. Speaking for our Canadian associations, we can assert that any wrong-doing of that kind, when brought to the ears of the association interested, would be promptly punished.

Attached to the circular containing the new rules is a list of American and foreign books of record, registration in which is recognized as a guarantee of purity. No Canadian records are recognized, of course, as we presume that the U. S. Secretary of Agriculture does not consider their standards as high enough, although we should be glad to see wherein they could be improved! How comes it, then, that the Department recognizes the stud books published in France for French Coachers, whose standard is certainly not a very high one.

Here is another point on which we seek enlightenment. When communications were being held with Washington with a view to getting our records recognized by the U. S. Treasury Department as sufficient authority for securing free entry of pure-bred stock across the line, one of the reasons given why the request could not be entertained was that no records would be considered except such as belonged to the country where the breed in question originated, thus cutting off every Canadian record except that for the French-Canadian cattle, called Quebec Jerseys. That this was so is the more readily remembered because shortly afterwards an American buyer bought some of these cattle and tried to get them over free of duty on the ground that they originated in Canada, but, possibly for fear of giving the other Canadian associations a lever for further use, his request was denied. Now, in looking over the list of cattle records recognized by the U. S. Secretary of Agriculture, we find that he has admitted Shorthorn records kept in France and in New Zealand. Can the Secretary explain why these two books are allowed? France and New Zealand are not the countries where Shorthorns originated. If their records are allowed, why not ours? We await a reply.

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## THE FARMER'S ADVOCATE AND HOME MAGAZINE

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THE DOMINION.

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LONDON, CANADA.

### Improvements in the Canadian Packing Company's Bacon Plant.

The Canadian Packing Company's slaughtering and bacon-curing plant, situated near London, Ont., and managed by Mr. J. H. Ginge, has recently reopened, after several weeks' shut-down while an extension of capacity was being effected and improved equipment introduced. This plant has been running several years under Danish methods, being conducted by Danish management and largely Danish expert labor. Up till the recent change the capacity has been about 1,200 hogs per week, but now we are informed as high as 4,000 per week can be handled without undue disadvantage. By the kindness of Mr. Ginge we were, with a number of others, invited to inspect the remodeled plant in operation on Oct. 11th, on which date some 1,500 hogs passed from the living state to a condition ready for the cooling rooms. The pigs were of the bacon type, averaging about 190 pounds in nice flesh. The process of killing, cleaning and dressing is of the rapid modern sort, similar to that practiced by the largest institutions, such as Armour's, of Chicago.

Among the improvements recently made, besides an increased capacity and an almost entire new interior to the buildings, is a new ammonia refrigerating plant, having a cooling capacity equal to 40 tons of ice per day. By this system the cool rooms are kept at a uniform temperature of 36° Fahr. at all seasons of the year. The hogs killed and dressed in the morning are allowed to hang in sides in an open alley till towards evening, when they have lost most of the animal heat. They are then placed in the cooling room at 36° for 24 hours, when they are ready for the curing room, kept at the same uniform low temperature. Here they are cured for some fifteen days, and then shipped in sides, packed ten in a box, to the British market.

Cleanliness and systematic conduct has had much to do with the success of Danish dairy and pork products on the British markets. This fact has been continuously recognized by the Canadian Packing Company since its inception, and to further facilitate its more perfect carrying out, their entire building has been floored with cement concrete, which extends some distance up the walls, to render cleaning an expeditious and thorough process. After each day's killing, large quantities of warm water are used to thoroughly remove objectionable matter, leaving the entire building sweet and fresh. A notable help in this direction is the daily removal from the institution of offal, which is usually manufactured into land fertilizer as a branch of such plants. This matter is all disposed off on the Asylum farm, which is in close proximity. Mr. Ginge claims a considerable advantage in thus disposing of the offal, inasmuch as the freshly opened carcasses are liable to incorporate surrounding odors. The surrounding agricultural district has a peculiar advantage in patronizing this market for their bacon hogs, as they are paid for on their merits, which are well understood and are sought to be produced.

### The Late Francis Green, Sr.

It is with regret that we have to chronicle the death of one who was very well known to many of our readers, the late Francis Green, Sr., who passed away on September 26th at the ripe old age of 82 years.

The deceased was born in Gloucestershire, England, but with his parents early moved to Carmarthenshire, South Wales. For several years he practiced law in the county town of Carmarthen, but on his sons emigrating to Canada, in 1877, he followed them with the rest of his family and settled on a farm near Oakville. At first fruit-growing was followed, but both the father's and the sons' tastes inclining to stock-breeding, importations of Shorthorns and Shire horses were made, the farm was sold and the family purchased the well-known Glen Farm, Innerkip, where they had a better scope for their breeding operations. The firm was known as Green Bros., and for several years carried on a most successful business, principally in Shorthorns and Yorkshire pigs. Early in 1892 the deceased, with all of his family except one son, returned to England, residing first of all at Hampstead, near London, but afterwards at North Finchley.

Mr. Green took a great interest in Shorthorns, and was a well-known figure at the annual meetings of the Shorthorn Breeders' Associations. He gave much of his time to assisting Mr. Henry Wade in the investigation of pedigrees during the time when changes were being made in the standard on the formation of the Dominion Shorthorn Association, and in recognition of his services he was, shortly before he left for England, presented by the breeders with a valuable gold watch, which he highly valued.

The deceased was a member of the English Church, and as a lay reader frequently conducted the services at the church he attended. Owing to his genial character he had a large number of friends, by whom he will be greatly missed. He leaves three sons and two daughters.

## STOCK.

### Indiscriminate Breeding of Swine.

The greatest drawback to Canadian success in swine-raising is indiscriminate breeding. There seems to be no idea of type fixed in the minds of our breeders. No doubt a few of our best breeders have a fixed type in mind, but the vast majority have not, and the results of wholesale indiscriminate breeding is everywhere evident. Certain individuals, learning of the prices obtained for pure-bred swine by breeders whom they know, decide to begin on their own account; they purchase a pair or trio of registered pigs, and begin breeding for sale. They have no idea of the type and standard of perfection for the breed chosen. As long as the animals are pure-bred they think that is all that is necessary. Such breeders are a great injury to the breed. The fact of having no standard of excellence and no individual association for each breed here in Canada tends not to encourage, but to permit indiscriminate breeding. Objections are made to the American plan of breeders' associations, and many of our Canadian stockmen take pride in the fact that our breeders' associations are not run by joint stock companies, as is the case in the States; but the American plan of district breed associations is, after all, the best. These American associations are composed of breeders of that particular breed. They formulate a standard of excellence for their breed. They have annual meetings to discuss points relating to their particular breed. Each member is interested in advancing the interests of their breed, whatever it may be—whether Tamworths, Poland-Chinas, Berkshires, Chesters, Duroc-Jerseys, etc., etc. Literature devoted to their special breed is distributed among the members, and each individual member becomes, as it were, an agent to advance the interests of their breed. How is it in Canada? There is but one association for all of our breeds of swine. No particular interest is taken in one breed more than in another. The different breeders have no standard of excellence for their respective breeds. All breeds are registered and recorded by the one corporation, and this corporation or association must be impartial and must not show any special partiality for any particular breed. Under this vicious system there is no means of improving and advancing the interests of any particular breed, and every latitude is given to indiscriminate breeding and to deterioration.

The evil consequences following our Canadian system could be greatly mitigated, in a term of years, by the appointment of expert judges for each individual breed. As a rule, one man is appointed to judge all breeds of swine. This man may be quite capable of discriminating between the different specimens of, say, Poland-Chinas. Probably he has bred Poland-Chinas successfully, and perhaps one other breed, say Duroc-Jerseys. He understands perfectly the type and ideal of perfection in these two breeds; but does it follow that he can honestly judge Tamworths or Yorkshires? He probably never bred Tamworths, has no conception of the ideal of perfection in this breed, and still he judges Tamworths. One man to be capable of judging intelligently and fairly the

half dozen or more breeds at a fair ground must necessarily have supernatural powers that the average judge does not possess. But he hasn't, as the awards given at our Canadian fairs prove; and our fairs, instead of being educative training schools for our breeders, where they could see for themselves the almost perfect types of the different breeds picked out, are nothing of the kind. I contend that no judge is capable of placing the awards in more than one or two breeds. He judges all of the other breeds by his conception of what a perfect pig should be in the one or two breeds he is probably capable of judging. A man who understood the points of merit in a Berkshire and Poland-China, when judging Tamworths could not understand why a pig with a long snout and a narrow back could have any merit. From such indiscriminate judging it is a wonder that indiscriminate breeding has become rampant?

As we have no breed associations here in Canada for each particular breed, and as all breeds of swine are jumbled into one homogeneous body, our only means to preserve the typical characteristics of our individual breeds, until such time as each breed will have a national association of its own to conserve and advance its interests, is to insist that each breed of swine at our fairs shall be judged by a competent breeder and judge of that particular breed, and not permit one man to judge all breeds. We do not want our Berkshires judged on Tamworths ideals, neither do we want our Tamworths judged on Berkshire ideals. By having an expert judge for each breed, the awards would be given to animals that conformed nearest to the standard of excellence for each breed. Our exhibitions will then become a strong educative factor, where fat will not take the place of quality, and where type shall be the standard of the best in each breed. Indiscriminate breeders will here have an opportunity of seeing ideals of the breeds, and will learn the truth of their calling, that if they wish to succeed as breeders of thoroughbred swine they must have a well-defined type in mind and the perfection of this type to strive for. True, the fair boards will not appoint a half dozen of judges for as many breeds of swine, but the Dominion Swine Breeders' Association, if it is to be of any practical value to Canadian swine breeders, must appoint those expert judges for each breed and be prepared to defray at least half their expenses, and their whole expense for that matter if the fair boards refuse to co-operate; and if this is not acceptable to the fair boards, let our breeders refuse to show animals at such fairs.

J. A. MACDONALD,  
Hermanville Farm, P. E. I., Canada.

### Horse Ranching in Alberta.

To the Editor FARMER'S ADVOCATE:

SIR,—The recent depression of the market values for horses seriously affected the horse-breeding interests of our Territory. Nearly all the ranchers quit breeding excepting myself and one or two others. We took advantage of the low prices and loaded up with the very best sires the country possessed, and I believe it is the best thing that ever happened to the country that the depression did come. This and the Klondyke trade have been the means of getting rid of all the cayuses and the scrub horses, and made room for the better quality of animals. Of late there are quite a number of ranchers drifting back into horse-breeding. There are still quite a number of brood mares in the country, and the people are taking a very active interest in breeding, the heavy horse being the favorite, although we are raising all kinds. For my part, I think the heavy horses are the most profitable, they require less work in handling, and do not require to be so well broken as lighter ones. I break everything at 3 years old, both mares and geldings. On my heavy mares I use the Clyde and Shire for heavy draft. The Cleveland Bay on the mares that have lots of breeding; from them I get good drivers, carriage horses and saddle horses. On good strong, rooky mares I use the trotting horse and Thoroughbred. I am always careful to get size and quality combined. A good little horse is very well as far as he goes, but if you have the size it means money, and that is what we all are after.

As to keeping stallions stabled or loose during the season, I keep mine stabled, and mate each mare as I think will best suit her. I have about 400 mares and 9 stallions, therefore it would be impossible for me to turn them loose, excepting one at a time. This I do for about two weeks after the season is over, when the mares are in the pasture.

I think best time for foals to come is in April and May, to be weaned in November. We let the foals run with our light mares until the spring, but the heavy ones we always wean and halter-break, feed them well with either green oats or oats and hay. It pays to turn them on grass in the spring fat and healthy. This means when the horse is 4 years old about 100 lbs. or 150 lbs. heavier than they would be if not fed, and it will still pay to feed them for a couple of months the following spring. I most decidedly approve of breaking every horse; they bring better prices when sold, they are easier to handle, and give us an unlimited amount of work horses, saddle horses and drivers. Some young mares get too fat and will not breed. By working them it takes off fat, and in nearly every case they commence to breed. We do all our farm work and haying with colts, which makes them more salable. The weather so far has been very favorable with us this year.

Yours truly,  
R. G. ROBINSON,  
Elbow Park Ranch, Alberta.

Raising English "Wiltshire" Bacon.

THE BONUS SYSTEM INTRODUCED—THE CURER'S IDEAL—BREEDING AND REARING—CROSS-BREEDING—SUMMER AND WINTER FEEDING COMPARED—AN ENGLISH STY DESCRIBED.

(BY OUR ENGLISH CORRESPONDENT.)

Undoubtedly the prevalence of swine fever has for some years greatly interfered with pig-rearing in Britain. The restrictions imposed are so vexatious and unequal that many farmers have been much discouraged and have given up breeding pigs altogether. Still ham and bacon are in demand and some one must supply it, be he home or foreign producer, and to encourage home production Messrs. Harris & Co., of Calne, invited breeders and feeders to send their fat pigs direct to their factory, where they are slaughtered and weighed and the current price forwarded to the owner. This plan of estimating the value of pigs according to their weight, substance and form appears to stimulate pig feeders to breed and fatten the very best pigs, as the benefit is shared by the owner with the buyer. In fact, Messrs. Harris give a bonus of 2s. 6d. on each pig which comes up to a certain standard of merit. The feeder who furnishes the best fat pigs reaps a considerable benefit, sufficient to reward him for the extra cost, care and trouble required to produce first-class bacon pigs. The quick-growing, early-maturing pig is now preferred to the little, fat, puggy pig, or the coarse, overgrown pig, which has now almost if not altogether disappeared.

Each locality feeds for its requirements, and tastes in counties differ. The "cut" of a ham or side of bacon is regulated by local custom, and this is pre-eminently the case in "Wiltshire" or "Irish." Neither does the cure differ,—only the manner of cutting. Of course, the pigs slaughtered should be of a size suited to the business in hand, and if to be cut for "Wiltshire" sides should weigh from 180 to 200 pounds. This would give a fairly sized side, about 72 pounds, without an undue proportion of fat, or a ham about ten pounds. Berkshires, Tamworths, and Yorkshires (or crosses) are well adapted for pork or bacon, but more especially for the latter. The large proportion of lean meat and the admixture of lean and fat render Berkshires superior to any other pure breed for bacon. But of late years thousands of fat pigs have been sent from the midlands and eastern counties into Wiltshire and Somerset. Not only so, but the general quality, form and size of the midland counties pig are said to be exactly such as are required in the manufacture of the most valuable bacon and hams. If this be the case, which I very much doubt, it does seem strange that the bacon-curing industry has not taken hold of the midlands, since labor is nearly as cheap there as in Wiltshire and Somerset.

THE PREFERRED BREEDS.

Various breeds are preferred in different localities, and the bacon pig of Cumberland would not be looked at in Wiltshire. The neat Berkshire, the big and small White Yorkshire, the Essex and the Tamworth, and crosses therefrom, are pigs mostly used for bacon and ham. Bacon-curers like a well-formed, compact animal, fine in bone, deep in carcass, and carrying much lean meat, as they weigh far better and are in more demand at profitable prices. Some years ago breeders of Yorkshire pigs were not slow in discovering that the easiest way of obtaining early maturity was by crossing the large, middle and small white pigs indiscriminately, or to mate a small white boar with a large white sow possessing substance and quality. Subsequently the Tamworth was taken in hand by several breeders for the purpose of crossing with fat pigs so as to please the bacon-curer. Mr. Sanders Spencer, of Holywell Manor, favors the White Yorkshire pigs—large, middle, and small, and crosses therefrom—for bacon and hams; while Mr. John T. Keddie, manager of the Model Farm at Blythwood in Essex, favors the Berkshire. Mr. Blyth, Bart., says a good word for the Berkshire. He observes: "The Improved Berkshire stands at the top of the list of all breeds for the production of the best bacon and ham and for general utility. They are short in the leg, with bone just sufficient for what is necessary and not more. In selecting them care should be taken to have plenty of long, very fine hair, which denotes fine skin and offal. Coarse hair and bristles indicate a thick skin, coarse offal, and generally a bad feeder."

BREEDING AND REARING.

"The pigs intended for breeding should not be forced young, and it is not policy to buy animals which have been prepared for exhibition with the object of breeding from them, as they invariably breed badly if at all. The breeding animals should not be forced and made fat, but kept in a good, growing condition with boiled potatoes or other roots, bran, and mixed meals, including a little bean meal. The pigs should have plenty of exercise in a nice, cool, shady field during the summer, with a shed or yard to run into, and in winter be furnished with a warm, roomy, covered yard. Young, well-grown sows are usually put to the boar about nine months old, and about a week before they are due to farrow they are put in a

quiet place away from the others, which is kept for the purpose. This place has a firm little rail all round, about nine inches high and one foot from wall. Hence, this prevents the sow getting too close to the wall when farrowing and the mother lying on the young. The straw used for bedding at this time should always be short. The young pigs are generally weaned at nine or ten weeks old, and they should have a warm, dry sty with plenty of ventilation, and above all, plenty of exercise in the stubble fields after harvest and at other times in well-sheltered yards. They should be fed with mashes of barley, maize, etc., mixed with boiled roots, and the refuse from house, garden, etc. As the age for fattening approaches they should be kept to the yards or sheds only and fed three or four times a day with skim or separated milk, if possible, mixed with pollard (shorts), barley, maize, beans, and boiled potatoes or other roots."

CROSS-BREEDING.

On the question of cross-breeding, Mr. Keddie adds: "Now, as to the most suitable cross-bred pigs, I have never had any to compare with the Berkshire boar and Tamworth sow. The Berkshire is noted for early maturity and the Tamworth for its size, quality of meat, small percentage of offal, and large portion of lean meat to fat. These advantages make them, in my opinion, very suitable breeds for crossing, but I know others entertain a different opinion. If proofs were required of the superior quality of Berkshire bacon, it is in the fact that Wiltshire smoked bacon realizes from 3d. to 1d. per pound more than Yorkshire cured. And not only on account of its delicate flavor, but because it is found to go further. Hence, 'the proof of the pudding is in the eating.'" Mr. Sanders Spencer observes: "The results from the crossing of Tamworth and Berkshire pigs affords a strong proof of the advisability of following this system. Although the present styles of Berkshire and Tamworth pigs do not possess many points in common, yet it is an admitted fact that both breeds possessed common ancestors of a similar type. A striking proof is afforded of this in that the produce of Berkshire boars and Tamworth sows, if

food, was required to produce one pound increased weight in each pig in winter than in summer. At least eight per cent. of food was saved by fattening pigs in summer as compared with winter.

SANDERS SPENCER'S BREEDING PENS.

Great differences exist in the housing of pigs, and the best, cleanest, and most comfortable sties I have seen were at the Farm Colony at Hadleigh Castle in Essex and at Mr. Salisbury Baxendale's, at Bonningtons, Ware, in Herts. But we prefer to transcribe Mr. Spencer's idea of what a sty should be. Sties for sows and young pigs should face the south or south-west, and some of the best piggeries are converted out of old-fashioned barns. The temperature is more equable, and the freedom from currents of air particularly noticeable. The majority of these barns are thatched with straw or reeds, so that they are warm in winter and cool in summer. At Holywell Manor Mr. Spencer has sties of different shapes and sizes. An old barn is converted into eight sties, a lofty shed furnishes another eight, while a second shed is fitted up with eight sties in which the sows farrow during the colder weather. As the autumn approaches the roof is crammed with wheat straw, which renders the place very warm and yet airy; the front of the shed is boarded up, in which there are two double doors and ventilators, so that the temperature can be fairly well regulated, considering that there is no means for artificially heating in severe weather. In the back part of the shed are two doors, which are set open in summer, so that a thorough draft is obtained without the occupants of the two sets of four sties being injuriously affected. Then for the young boars and growing pigs there is a row of eight sties, 10 feet by 11 feet. These face the south. At right angles with this row is another of seven sties, 9 feet by 11 feet, facing the west. These sties are all 7 feet on the side walls, have double doors and ventilation fore and aft, so that in the very coldest weather these can be closed and the sties rendered sufficiently warm, whilst in summer a current of air is obtained above the pigs. The partitions are only about 4 feet high. In the winter time some of these are extended to the roof by nailing up old bags, but in hot weather these temporary divisions are removed, and thus the whole of the sties are rendered cool and sweet. Some buildings close in the west side, so that a square some 30 yards by 25 yards is formed, in which each of the various lots of pigs are allowed to take exercise on most days for a short time, and are thus kept healthy and hardy. More pigs are injured by want of exercise than from having too much freedom. Overfeeding and the general want of exercise frequently cause little pigs to suffer from cramp or rheumatic gout. A dry lair, however, is necessary for young pigs in the autumn and winter months.

W. O. Highbury Park, N. London, Sept. 22nd, 1898.



MATCHLESS 15TH, RED, AND MILDRED 6TH, BOAR; THE PROPERTY OF J. & W. E. WATT, SALEM, ONT. THESE TWO-YEAR-OLD HEIFERS ARE BY ROYAL SAILOR (IMP), AND ARE VERY EVENLY BALANCED. MILDRED WON 1ST AT TORONTO, AND MATCHLESS 2ND, WHILE AT LONDON THEIR POSITIONS WERE REVERSED. THEY WERE ALSO PRIZE-WINNERS IN 1897.

bred together, produce pigs very similar in form and character to animals of the first cross; that is, their parents. The blood blends so much better than does that of two breeds having nothing in common, or not having comparatively recently originated from somewhat similar sources." Therefore it is deemed advisable to select for the purpose two breeds or varieties which have many qualities in common.

SUMMER FEEDING MOST PROFITABLE.

In Britain it frequently happens that the pig breeder is not the feeder or fatterer. This division of labor often causes inconvenience, especially as young pigs cannot be moved on account of special restrictions. On some farms the produce can be more profitably utilized with breeding sows and young pigs than by fattening pigs or the reverse. Again, some farmers consider it cheaper to buy store pigs than to breed them, but Mr. Spencer is not of that way of thinking. He believes in combination of the breeding and fattening processes, as a farmer is thus enabled to possess better pigs, which will fatten more readily and realize higher prices at market. Mr. Spencer says that "Dairy offals, with grass in summer and roots in winter, would keep the sows in good condition, providing a few beans or peas were given to each sow for two or three weeks prior to farrowing. The majority of really well-bred sows would become quite fresh if allowed the run of a grass field and given whey to drink. In some districts a strong objection exists against allowing pigs to feed on a pasture; but we hold to the belief that no cheaper or quicker plan can be followed to improve grass land than by grazing it with pigs which also receive additional food produced on the farm, whether it be skim or butter milk, whey or corn. Peas, beans or maize should be well soaked, or a goodly proportion of the corn will pass through the pigs undigested." Mr. Spencer relates that an attempt was made to determine the food required in summer and in winter to produce a given increase. One hundred winter and ninety-nine summer experiments were carried out. Each experiment included 25 to 30 animals, and about 5,000 were utilized. The animals ate very little more in winter than in summer, but 4.4 pounds, or nearly 1/2 pound more

The Nova Scotia Provincial Exhibition.

The directors of the Nova Scotia Provincial Exhibition, held at Halifax, Sept. 22nd to 29th, had made provision for what promised to be the most successful event of the kind ever held in the Province, and so far as the exhibits were concerned it was fully up to their expectations, the entries in live stock and agricultural and horticultural products, being large and of excellent quality; but the elements were decidedly against the management, and three solid days of rain proved a damper on their spirits and diminished the attendance to such an extent that a considerable deficit had to be faced. On the odd fine days granted the attendance was very good, being estimated at from 15,000 to 20,000. The exhibition is held under the joint auspices of the Provincial Government and the City of Halifax, a board of commissioners composed of representatives of each of these having charge of the management of the show, a fortunate arrangement, as the deficit will not seriously affect any individual. The exhibition grounds at Halifax are roomy and well planned, the main building being very large and handsome, the stock barns and sheds comfortable and well arranged, and the half-mile driving track a first-class one. The commissioners in charge of the various departments are faithful in the discharge of their duties, and all the officials courteous and attentive to the wants of exhibitors and visitors.

HORSES.

The display of horses in the harness classes was very good, the entries being numerous and the quality, in many cases, of a high order. In the breeding classes the animals were not shown in the blooming condition we are accustomed to see them brought out at the western fairs, and while there were many excellent representatives of the Shire and Clyde breeds, and some very good ones in the carriage and roadster classes, the moderate condition in which they are presented fails to inspire enthusiasm.

CATTLE.

The cattle classes, both in the beef and dairy divisions, were well filled with meritorious animals, well-fitted and exceedingly creditable to their owners. Prof. Day, of the Ontario Agricultural College, was the single judge in all the

beef breeds and beef grades, including fat cattle and working oxen; also of all the breeds of sheep and swine. The directorate, in assigning him such a colossal task, evidently regard him as a many-sided man, and probably few men in the Dominion could better fill the bill; but we submit that it is too much to expect any one man to do, and when most of the work of judging the many classes of sheep and pigs had to be done in the passageways of the sheds on account of the continuous rain, and in the shadow of a pressing crowd, which made the light insufficient, it would be little wonder if the judge himself in some cases failed to approve his own work as seen in the light of a brighter day.

The competition in the class for *Shorthorns* was practically the same as at St. John's the previous week, the herds represented being those of Messrs. Boyver, Archibald, Young, and Chase, a review of which is given in this issue, and the awards, except in two or three cases, were the same. Mr. Boyver's white bull, Silver Chief, son of Indian Chief, was again given first prize in his class and the male championship of the breed, and was followed by another good bull also (bred by Arthur Johnston), Robert the Bruce, sired by King James and out of the same dam as Silver Chief, and shown by Dunlap Bros., Middle Stewiacke, N. S. He is a bull of great scale and good quality of flesh and hair, with long, level quarters, good thighs, but a little deficient in his crops, which shows more on account of his being only in moderate condition; but he is, on the whole, an exceptionally good bull, and if brought out in good show fix another year will doubtless make a strong fight for premier place.

In the section for cows over four years, Mr. Archibald's Blush, placed second at St. John to Mr. Young's Anemone, was here given pride of place, and Mr. Young's yearling heifers were differently rated, his roan heifer left out of the list at St. John being here given second standing. Messrs. Chase's white bull calf, first as under six months at St. John, had to compete with all under a year at Halifax and was given first honors, Mr. Archibald's Duke coming in second. Boyver's two-year-old heifer Peachblow, now owned by E. & O. Chase, was again adjudged worthy of the female championship. Mr. Boyver won the first herd prize open to all, and Mr. Young, Chipman's Corners, N. S., the Dominion Shorthorn Association's prize for best bull and four females under two years.

*Herefords* were represented by the fine herd of Mr. W. W. Black, of Amherst, N. S., headed by the peerless young bull Sir Horace, which captured all the prizes entered for and made a very strong fight for the sweepstakes prize for the best herd of beef cattle any breed, coming in second to Mr. Boyver's herd of *Shorthorns*, the third prize going to Mr. Archibald's *Shorthorns*.

Senator Ferguson, of Charlottetown, showed an excellent herd of *Galloways*, typical of the breed and in creditable condition, and took out all the prizes he entered for.

*Devons* were represented by the nice little herd of C. A. Archibald, Truro, N. S.

The dairy breeds and dairy grades were judged by Mr. F. S. Peer, Mt. Morris, N. Y., who gave good satisfaction, placing the animals in each section in the order of merit according to the standard of dairy conformation and breed characteristics, to the edification of onlookers, who could, in nearly every case, see that he was keeping type in view in making the awards. In the *Ayrshire* class the St. John awards were in several cases reversed, the first prize cow at the former show being here placed third, the second prize cow, Mr. Archibald's Dolly, advanced to first place, and Mr. Parlee's cow given second prize. The Truro herd, Mr. C. A. Archibald's, was here awarded first prize, and Mr. Black's second. Mr. Black's yearling bull, Matchless 2nd, was again first in his class and winner of the sweepstakes as best bull of the breed any age. He is certainly an exceptionally good one in all that constitutes a high-class dairy bull. The special prize given by the Dominion Ayrshire Breeders' Association for the best herd of one bull and four females under two years was won by Mr. F. S. Black, Amherst, N. S., the herd being headed by Matchless 2nd. The sweepstakes for best female went to Mr. Archibald's first prize cow. Notable numbers were the first prize yearling heifer and the first prize heifer calf, shown by M. H. Parlee, Sussex, N. B., which are typical Ayrshires of high-class quality. The same exhibitor showed "Isaleigh Earl," a capital yearling bull, which he bought of Mr. J. N. Green-shields, Danville, P. Q., and won second prize in his class.

*Jerseys* were shown by J. H. Reid, Fredericton, N. B., who had the first prize bull over three years old and first prize two-year-old heifer; Geo. Weaver, who won second prize with his two-year-old bull; E. B. Elderkin & Sons, Amherst, who won first prize with their excellent bull calf, Golden Lad, who also won the male championship of the breed; Mr. J. Rufus Starr, Port William, who captured the herd prize, the female championship, first for four-year-old cow, for three-year-old cow, one-year-old heifer, and for yearling bull; the latter being an exceptionally good one and a strong claimant for the championship. The sweep-stakes heifer is an extra good one and would stand well in the best company anywhere. Mr. Elderkin had the second prize herd and the first prize heifer calf.

*Guernseys* were shown by E. R. Brow and D. McMillan, Charlottetown, P. E. I.; J. G. Rutherford, Middle Stewiacke; S. J. Moore; W. J. Veith; and the Shubenacadie and Progress Agricultural Societies. Mr. Brow won first prize and sweepstakes with his bull, first prize and sweepstakes on his imported two-year-old heifer, first on his cow Azella, and the herd prize, besides a number of other first and second awards, and made a number of very satisfactory sales. Mr. Moore had the second prize cow and second prize heifer calf.

*Holsteins* were in evidence in representatives of the herds of D. W. McKenzie, Nerepis Station, N. B.; J. E. Page & Sons, Amherst; and S. J. Dickie; the prizes being pretty well distributed, the herd prize going to Messrs. Page.

A grand lot of high-class dairy grades were shown. They were grades of Ayrshire, Jersey, Guernsey, and Holstein, and included some very superior dairy cows, the first prize in her class and sweepstakes as best in milking test

going to a magnificent Jersey grade owned by J. Rufus Starr, Port Williams. Among the prizewinners in this class were S. J. Moore, A. N. Griffin, D. McMillan, John McDonald, T. Gough, F. S. Black, and S. Dickie.

**SHEEP.**

*Leicesters* were well represented by selections from the flocks of Albert Boswell, Pownall; Wm. Clark, North Wiltshire, P. E. I.; and M. H. Parlee, Sussex, N. B.; among whom the prizes were divided, the flock prize being won by Mr. Boswell, who showed a number of very fine specimens; and Mr. Clark's flock is well up to the standard in breeding and quality.

*Ootswolds* were well shown by John Tweedie, Earnscliffe, P. E. I., whose sheep show fine quality and character.

*Lincolns* were from the flocks of F. G. Boyver, Georgetown, P. E. I., and Frank Boyver, Charlottetown, and were a very useful lot, winning all the prizes entered for.

*Oxfords* were well brought out by F. G. Boyver, D. R. McKay, F. S. Black, and E. S. Dunlap, to whom the prizes were awarded.

*Shropshires* made an excellent showing, the exhibitors being Messrs. Logan & Harris, Picton, who won the Shropshire Association's special prize for best flock of one ram and three ewe lambs, first for two-shear ram, second for shearing ram, first for two-shear ewes, and Andrew McPherson, who was placed second for a pair of shearing ewes (bred by John Campbell, Woodville) of very fine quality, and thought by most people worthy of a higher rating; Senator Ferguson, Charlottetown, who had the first prize yearling ram, an exceedingly good one, from the flock of Senator Cochrane, Hillhurst; and Albert Boswell, who won the flock prize and a large share of the best prizes besides.

*Southdowns* were shown by D. R. McKay, Hopewell, N. S., who has a number of good things, bred principally from the flock of T. C. Douglas, Galt, Ont.

*Cheviots* were well shown by Peter Adams, Plainfield, N. S., who has an excellent flock.

*Dorsets* were entered by James McDonald and Effie M. Cox, who each showed good representatives of the breed.

**SWINE.**

Excellent specimens of *Berkshires*, well up to the standard of the bacon type, were shown by J. R. Semple, Brule, N. S., who won most of the best prizes; M. H. Parlee, Sussex, N. B., who showed some very good ones; and Henry Dickie.

*Yorkshires* were well shown by J. W. Callbeck, Augustine Cove, P. E. I., who captured the best of the premiums, and whose pigs are of splendid type and quality; M. H. Parlee, Henry Archibald, J. E. Page & Son, Wm. O'Brien and Wm. Young.

*Chester Whites* were here from the herds of M. S. Bergman, C. W. Holmes and John Moore.

*Poland-Chinas* were exhibited by J. E. Page & Son and C. W. Holmes.

*Tamworths* by C. W. Holmes, E. R. Brow, W. W. Black and J. E. Page & Son.

*Duroc-Jerseys* by J. E. Baker, Amherst; J. H. Reid, John Moore and Edward Baker.

**TWENTY-FOUR HOURS' MILK TEST.**

Points were calculated on the following basis: 1 lb. milk, 1 point; 1 lb. fat, 20 points; 1 lb. solids not fat, 4 points; each 10 days of milking period after first 20 days, 1 point.

No.	Owner of Cow.	Breed.	Pts. for Fat.	Pts. for Solids not Fat.	Pts. for Lib. of Milk.	Total Pts.
1	J. R. Starr	Jersey grade	16.34	80.94	43.00	80.94
2	S. J. Moore	Guernsey grade	11.76	56.50	28.50	71.77
3	E. B. Elderkin	Jersey grade	11.76	56.50	28.50	71.77
4	J. A. McDonald	Jersey	10.19	51.50	25.40	65.57
5	J. A. McDonald	Jersey	10.19	51.50	25.40	65.57

Conducted by F. L. FULLER, Supt. Govt. Farm, Truro.

**Death of A. F. Pettit.**

Our sympathy is extended to Mr. W. G. Pettit, of Freeman, on the death of his father, Mr. A. F. Pettit, which took place on his son's farm on Sept. 13th. The deceased was born in Grimby Township, on February 21st, 1808, and in 1833 moved to the farm on which he died. Like all the early settlers, he had to get to work to clear the land of timber before he could sow a crop. The deceased, although he did not keep thoroughbreds, had a nice herd of *Shorthorn* grades, and followed mixed farming. He held the rank of lieutenant in the militia, and took part against the rebels of 1837, and was also in active service at Niagara. He leaves one son and a daughter to mourn his loss.

**New Brunswick Provincial Exhibition.**

The leading Agricultural and Industrial Show of the Province of New Brunswick, held at St. John, Sept. 18th to 23rd, was freely conceded to have been the most successful of the series held under the auspices of the Association, both in respect to attendance and the number and quality of the exhibits in all departments. The City of St. John, overlooking the Bay of Fundy and the Atlantic Ocean beyond, is beautiful for situation, having risen from the ashes of the great fire which, twenty-one years ago, swept the original out of existence, and is now one of the most substantial and prosperous cities in the Dominion. The exhibition grounds are situated conveniently to the business portion of the city and quite near the shore of the bay, but are entirely too small and cramped for the purpose, the stock stables being crowded into a narrow gore at one end, making it impossible to show the animals to advantage, and decidedly unpleasant for visitors who desire to inspect them. The main building is spacious, well lighted and comfortable, and the same may be said of the agricultural hall, but these are the only buildings on which the management can with any show of sincerity be complimented, the remainder being antiquated, inadequate, and quite behind the times. The officers are kind, courteous and obliging, and probably have done as much to make the show a success as could reasonably be expected, in view of what appears to be the fact, that the citizens take comparatively little interest in patronizing it or in strengthening the hands of the management, while the city might well supply a larger number of visitors than were present from all quarters on any day of the exhibition. There is certainly room for greater energy and push on the part of all concerned, if the show is to be made the real success which its position and importance would warrant.

The stock was admitted on all hands to be the best ever seen in the Maritime Provinces up to date, and was a decided and agreeable surprise to Western men who were present for the first time at an Eastern Province show. Those who have been visitors in former years state that the improvement in the quality of stock in the last three years is remarkable, and this advance is largely attributable to the interest excited by the increasing circulation of the *FARMER'S ADVOCATE* and other agricultural and stock papers, to the visits of enterprising farmers and breeders to the leading Ontario exhibitions, and to the good blood introduced by the purchases of high-class sires, which has shown itself in a marked degree in the superior quality of the stock brought out.

**BEEF BREEDS.**

*Shorthorns*, which were judged, as were all the beef breeds, by Mr. J. C. Snell, London, Ont., made a splendid show, there being four excellent entries for the herd prize of one bull and four females, the exhibitors being Fred G. Boyver, Georgetown, P. E. I.; C. A. Archibald, Truro, N. S.; Wm. Young, Chipman's Corners, N. S.; and E. & O. Chase, Cornwallis, N. S. Mr. Boyver carried off the 1st prize for his herd, headed by the grand white four-year-old bull Silver Chief, bred by Arthur Johnston, and sired by Indian Chief. He is a bull of great substance, smooth horn, and fine quality, and was adjudged worthy of the sweepstakes prize as the best bull of any age shown. The same exhibitor was successful in winning the sweepstakes for the best female with his 1st prize two-year-old heifer Peachblow, a red daughter of the famous old Challenge, himself a champion and the son of a champion in the best company in the leading shows of Western Canada in former years. The 2nd prize two-year-old heifer, shown by the same owner, was also sired by Challenge, both being exceedingly true specimens of the best type of the breed, the sweepstakes heifer being especially correct in form, full of quality and stamina, and one that would stand well in competition with the best in any province. Mr. Archibald had the 1st prize two-year-old bull in Dandy Jim, a smooth roan of good character and quality, bred by the Watts, of Salem, Ont., which headed his 2nd prize herd. Mr. Young won 1st honors in the section for yearling bulls with the red Nova Scotia, a lengthy, smooth, well-proportioned bull, bred by John Miller & Sons, Brougham, and the 3rd prize herd was led by this youngster. The 1st prize for bull calf went to Archibald's Duke, a handsome and well-proportioned calf, showing strong breed character; second place being given to Chase's roan Sunnyside Royal, a strong, vigorous, and well-developed calf. Chase Bros. had the 1st prize winner in the section for bull calves under six months in his beautiful white Scotia's Prince, a calf of wonderful development, full of good flesh, with the best of handling quality, and smooth in all his points. He was at the head of the 2nd prize herd of one bull and three females under two years in the competition for the Dominion Shorthorn Breeders' Association prize, the 1st prize going to Mr. Young's herd, headed by his 1st prize yearling bull.

The 1st prize cow was found in Mr. Young's Anemone, bred by John Miller & Sons, and sired by the imported champion bull, Vice-Consul, of Cruickshank's Victoria family. She is a cow of great substance, showing strong constitution in her great heart-girth and long forelegs, is deep and level and well-proportioned, having a good head, and swinging a milk vessel like a dairy cow. Mr. Archibald had a close 2nd in his Blush, bred by D. Alexander, Bridgen, a very smooth and handsome cow, and almost faultless in her conformation and quality. The 1st prize three-year-old cow was Archibald's Duchess, Mr. Young having a close 2nd in Bell Forest. The 1st and 2nd prizes, as before mentioned, went to Mr. Boyver's herd, and the same owner had the 1st prize yearling heifer, the White Odell, a blocky, well-fleshed and well-formed heifer of charming character. Mr. Young had the 2nd prize heifer in his roan Lady Cornwallis, a lengthy, level heifer, with a mossy coat, sired by Mr. Nicholson's Indian Brave; 3rd prize going to Chase's red and white entry of Watt's breeding, if we mistake not, a very smoothly formed heifer of fine handling quality. In heifer calves, Chase's entry won 1st, Young's 2nd, and Archibald's 3rd; and for heifer calves under six, the rating was Archibald 1st, Boyver 2nd, Young 3rd. The special for best bull any age, owned and entered by a New Brunswick exhibitor,

was won by Geo. A. Faucett, Upper Sackville, with 3rd Earl of Warwick, a very useful bull, bred by W. C. Edwards & Co., Rockland, Ont.

Herefords were well represented by excellent selections from the herds of H. D. Smith, Compton, Que., who was also showing two herds at London, Ont., at the same time; and of W. W. Black, Amherst, N. S.; a few entries being made by Frank E. Dickie, Canard, N. S., who won 2nd prize for bull over three years old; and R. N. Doherty, St. Nicholas River, who got 2nd prize for a yearling heifer named Mabel. The 1st prize bull over three years old was Mr. Black's Sir Horace, bought from Mr. H. D. Smith last year. He was also winner of the sweepstakes as best bull of the breed and head of the 1st prize herd, and made a grand appearance, being brought out in the pink of condition. He is a model of the modern type of beef bulls, being long, low and level, thickly covered with high-class flesh, smoothly distributed over all his parts. He has all the indications of constitutional vigor in abundance, combined with true conformation and high-class quality, and we confidently believe is second to none in the Dominion as a show bull and a sire, judging from what we have seen of his offspring, which are uniformly well up to the standard of first-class in quality and promise. Mr. Smith's yearling bull, Amos 4th of Ingleside, made a capital 1st prize winner in his class, and stood at the head of the 2nd prize herd, in which was the 1st prize cow Starlight, a remarkably smooth and well-proportioned animal; also the 2nd prize three-year-old cow, Princess Bonnie; the 1st prize two-year-old heifer, Lady Beauty, and imp. Chatterbox, the 3rd prize two-year-old. The females in Mr. Black's 1st prize herd were the 2nd prize cow Barbart, the 1st prize three-year-old cow Gratia 2nd, the 2nd prize two-year-old heifer Lady Frances, and the 1st prize yearling heifer Butterfly—a combination which would have made a close run for first place at Canada's greatest show.

Devons were shown only by C. A. Archibald, Truro, N. S., who won all the prizes he entered for.

Polled Angus.—R. H. Pope, M. P., Cookshire, Que., had the only entries in this breed. He showed a very useful herd in fair condition, headed by one of the very best bulls of the breed in the Dominion. The prizes were all awarded to Mr. Pope in so far as he had entries.

Galloways.—Senator D. Ferguson, Charlottetown, P. E. I., showed an excellent herd of Galloways in nice condition, showing uniformity of good quality and breed character. He was awarded all the prizes he entered for.

Red Polled Norfolks.—A very useful-looking herd of this breed, bred from importations made by the New Brunswick Government some years ago, was shown by G. A. Parley, Mungerville, N. B. They are good-sized and well-formed cattle, and have the appearance of being good milkers.

THE DAIRY BREEDS.

The dairy interests have made great progress in the Maritime Provinces in the last decade, and it was not surprising to see a large entry in these classes, but the quality of the stock was also of a superior class, and the competition keen in every section. Mr. Robert Reesor, Markham, Ont., was the judge, and he had no easy task to perform.

Jerseys were shown by R. H. Pope, M. P., Cookshire, Que.; Chas. Le Lacheur, Murray Harbour, P. E. I.; I. H. Reid, Fredericton, N. B.; B. V. Milledge, St. John; E. B. Elderkin & Sons, Amherst, N. S.; R. J. Melvin and A. Lordly, St. John; S. Creighton and F. E. Josselyn, Silver Falls, N. B.; W. M. Thurrot, Mungerville, N. B.; and Jas. Gilchrist, Central Norton, N. B. Mr. Pope was awarded 1st prize for bull three years and upward, and 1st for bull two years old, for cow three years old, and heifer two years old; also sweepstakes for best bull any age, and the 1st herd prize. Mr. Reid was given 2nd prize for herd, besides a goodly number of prizes in the various sections. The 3rd herd prize went to Mr. Gilchrist, who won several other prizes. Messrs. Elderkin, who showed only a few young things, and they of fine quality, was given 1st prize for yearling bull, 1st for bull calf under one year, 2nd for two-year-old bull, 1st for heifer calf under one year, and 1st for heifer calf under six months. Mr. Creighton had the 1st prize cow—a fairly good young cow—but many were of the opinion that Mr. Josselyn's aged cow, which was placed 2nd, should have been given the place of honor. She is certainly a grand specimen of the ideal dairy cow in conformation, in constitution, and all the indications of milk production.

Ayrshires.—There was a large and excellent showing in this class, the exhibitors being F. S. Black, Amherst; C. A. Archibald, Truro; I. A. Ferguson and Geo. P. Searle, Charlottetown; Wm. Donevan, Coldbrook, N. B.; M. F. Bergman, Pugwash, N. S.; S. Creighton, Silver Falls, N. B.; M. S. Parlee, Sussex, N. B.; and G. W. Fox, Lower Gagetown, N. B. Mr. Black was awarded the 1st herd prize; the sweepstakes for best bull any age, for his 1st prize yearling bull, 2nd for bull calf under one year, 1st for bull calf under six months, 1st for cow over four years, 2nd for three-year-old cow, 1st for heifer calf under six months, and 1st for herd not over two years. Mr. Archibald was placed 2nd in the herd competition, 2nd for bull over three years, 1st for bull calf under one year, 2nd for cow four years old, 1st for cow three years old, 2nd for heifer two years old, 1st for yearling heifer, 2nd for heifer calf under one year, 2nd for open herd, and 2nd for young herd not over two years. Mr. Pardee had the 3rd prize herd, 2nd prize yearling bull, 3rd prize cow four years old, 3rd prize three-year-old cow, 3rd prize two-year-old heifer, 2nd prize yearling heifer, 3rd prize heifer calf under one year, and 1st prize cow owned and entered by a New Brunswick exhibitor, there being six entries.

Holsteins were not out in large numbers, but those exhibited were of very creditable quality. Mr. D. W. McKenzie, Nerepis Station, N. B., being the principal exhibitor, winning the herd prize and sweepstakes for best bull with Klondyke. J. E. Page & Sons, Amherst, N. S., had the 1st prize bull two years old.

Guernseys were well represented by a choice lot from the herd of Mr. E. R. Brow, Eastview, Charlottetown, P. E. I., who showed some fifteen head, led by the fine bull Nereus, formerly at the head of the herd of Hon. Sydney Fisher,

which stood at the head of the 1st prize herd here, having won 1st prize in his class; 2nd prize going to Donald McMillan, for Island Conqueror. Selections from this herd have been very successful as prize-winners at Ontario and Quebec exhibitions, prominent among which was the 1st prize cow at Toronto, London, and Ottawa, 1897, in the hands of Messrs. McNish, of Lyn. Several members of the same family as this cow were on exhibition, and bear a strong family likeness to her. The Eastview contingent was brought out in fine condition, won all the prizes entered for, including the herd prize, and attracted marked attention by their rich yellow skins and the many other indications of ability to do good dairy work.

SHEEP.

The different breeds of sheep on the prize list were all represented, though not by large numbers, several classes having only one or two exhibitors, and the quality in most cases was very creditable.

Shropshires were well represented by the exhibits of Senator Ferguson and Albert Boswell, of P. E. I.; J. E. Page & Sons, Amherst, P. Q.; and Wm. Donevan; the best prizes going principally to the two first named for meritorious entries.

Leicesters were shown principally by Albert Boswell, Pownal, P. E. I.; M. H. Parlee, Sussex, N. B.; and Wm. Mullen, Westmoreland Road, who divided the prizes in the class, in which were some really good sheep fairly well fitted.

Lincolns were in the hands of F. G. Boyver and Frank Boyver, Georgetown and Charlottetown, P. E. I., who showed some fairly good specimens, the 2 shear ram shown by the former being especially worthy of notice as a typical animal of the breed.

Oxford Downs, of fairly good quality, were brought out by Fred and Frank Boyver, J. E. Page & Sons, and F. S. Black, Amherst, N. S., the prizes being equitably distributed.

Southdowns were shown by Guy Carr, Compton, Que., who had out a handsome flock in good condition, and was awarded all the prizes his entries called for. Cheviots were in evidence, representing the flocks of R. H. Pope and G. W. Beckwith, Cookshire, and Guy Carr, Compton, Que.

Cotswolds were represented by a nice exhibit from the flock of Donald Innes, Tobique River, N. B., bred from importations from Ontario, and brought out in moderate condition and showing good quality.



SOUTHDOWN RAM LAMB, ABRAHAM BEAU, BREED BY C. E. W. ADKINS, CAMBRIDGESHIRE, ENG.; IMPORTED BY JOHN JACKSON & SONS, ABINGDON, ONT., AND SOLD AT A HIGH FIGURE TO J. T. WILKINSON, CHILLIWACK, B. C.; A 1ST PRIZE WINNER AT TORONTO AND LONDON SHOWS IN 1898.

SWINE.

Most of the breeds of swine were represented by fairly good entries, competition being limited to two or three exhibitors in each class.

Berkshires were in the hands of J. R. Semple, P. E. I., and M. H. Parlee, Sussex, N. B., who exhibited up-to-date animals, many of them scoring well up to the bacon type, Mr. Semple winning the majority of the best prizes.

Yorkshires were shown by J. E. Page & Sons, Wm. Mullen, Wm. Young, M. H. Parlee, and W. Callbeck, Augusta Cove, P. E. I., the latter making a specially fine display of high-class stock, well up to the standard of the best of the breed, and brought out in the pink of condition.

Chester Whites were in the hands of M. F. Berryman, Pugwash, N. S.; J. E. Page & Sons, Amherst; W. M. Thurrot, Mungerville, N. B., and were of fairly good quality.

Duroc-Jerseys were shown by J. E. Baker, Barronsfield, N. S., who had out some of the best specimens we have seen, having evidently bred and fed them to conform to the bacon type, being lengthy, deep-sided, strong-boned, and smooth in their shoulders. His 1st prize two-year-old boar is large and smooth, and fills the bill for the trade in bacon hogs as well as any we have seen.

Tamworths were few in number and not of exceptional merit, being shown by S. Z. Dickson, St. John; J. E. Page & Sons, W. W. Black, Amherst; A. R. Wetmore, Clifton; and E. R. Brow, Charlottetown, among whom the prizes were distributed.

Live Stock at Omaha.

SIR.—A line in hurry; full report next paper. In Sherborns, Brown, Minn., and Ward, Iowa, were the principal winners; former 1st on herd and sweepstakes on bull Nominee; sweepstakes cow, Brown. Herefords a great show; best I ever saw; not yet finished being judged. The other best breeds also waiting for the judges' awards.

Sheep.—Watson and Harding principal exhibitors of Cotswolds, the former winning a fair proportion with the sheep shown at Toronto, London and Ottawa. In Lincoln, Gibson & Walker won all the firsts but one, and that Oliver captured. Shropshires.—Allen and Ballinger competitors, prizes being pretty well mixed, the former gaining most verdicts on rams, latter on ewes.

Brethour won all along the line with Yorkshires. Omaha, Neb., Oct. 12th, 1898. R. GIBSON.

FARM.

Root Harvesting at the Guelph Experimental Farm.

Time to harvest mangels and sugar beets in Central Ontario is from 15th to 25th of October, carrots from 25th to end of October, Swede turnips end of October and first week in November. We pull mangels by hand and top with knives made for the purpose out of old scythe blades cut about seven inches long, with a piece of back attached to drive into a piece of wood for a handle. Do not cut the mangel when topping, neither leave any tops on the roots, as these will soon rot and injure the roots. When the tops are dead and easily rubbed off by hand it is better to do so—the roots will keep better. When pulling and topping put four drills into one row for convenience in loading into wagons. In dry weather it is advisable to put mangels, sugar beets, and carrots in cellar same day they are pulled rather than leave them exposed over night, as only three or four degrees of frost will injure them materially for keeping.

Harvesting Swede Turnips.—The three following methods are generally adopted throughout this Province: (1st) Pulling and topping by hand and throwing into rows same as mangels. (2nd) Topping with a hoe and harrowing the turnips out. (3rd) Topping and rooting with a hoe or mattock. This last method is gaining favor, but 1st method is most satisfactory when labor is plentiful. It improves the keeping qualities of turnips to allow them to lie on the ground for a day after being pulled. A little frost will not injure them like mangels.

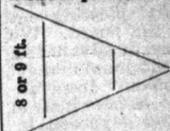
Storing Roots.—It is advisable to keep the several kinds of roots in separate compartments in the cellar for convenience in feeding, according to what is required and their keeping qualities. Swedes and carrots are better fed during the early part of winter, mangels later. Sugar beets will keep until June. A long and narrow root cellar is preferable to a square one. For ventilation have large openings in both sides near the top. Window on outside to be closed in winter. On the stable side the openings can remain open during the winter. It is advisable to have small openings near the bottom (say two- or three-inch tile in the inside wall) to cause a draft through the roots. The effect is similar to a damper of a stove. Roots will keep quite satisfactorily in pits, but are not so convenient for feeding in winter. For ventilating pits set three-inch drain tiles along top at intervals of ten or twelve feet, and two-inch tiles near the bottom will cause a current of air. The tile will require to be stopped with straw when hard freezing weather sets in. Wm. RENNIE, Farm Supt. Ontario Agricultural College, Guelph, Ont.

How We Harvest Our Root Crop.

When harvesting carrots we generally go along and pull and lay them in heaps with the roots one way, the heaps being far enough apart to allow the wagon to pass along between. The boys and girls do the topping, and a man empties the baskets, when filled, into the wagon.

The mangels we pull by hand, wring the tops off, and put four drills in a row. We never use a knife to top the mangels, as they bleed, and then there are generally dead leaves hanging down which the knife will not cut. When a person gets used to the wringing process and gets the "knack" of it he can go along pretty fast. If there is danger of frost we never leave pulled mangels out over night.

There are three different methods of harvesting turnips in vogue here. First method—A man or boy goes along with a sharp hoe between two drills and cuts the tops off from each side, so that there are two drills of tops in one row. Then a team and wagon comes along, and the tops are loaded up and drawn off. Afterwards barrows are run both ways on the turnips until all are loose. To gather them into rows, two pieces of 2x12 hardwood plank, 12 ft. long, are securely bolted and braced in the form of a snow-plow, thus:



Now hitch on the team to this "collector" and go up and down the field in an intelligent way, and you will have all the turnips lying in rows wide enough for the wagon to pass in between. It is generally necessary to weight the collector down with stones to keep the turnips from getting under.

Second method—Go along with the hoe and top as before; then have strong hawks made on the same plan as a hawk for pulling off manure, but to have two strong prongs about 2 1/2 or 3 inches apart and about 4 inches long, and to have a handle about as heavy as a fork handle attached about the same slope as a flat hoe handle. Then go along and strike this under each turnip, giving it a jerk upwards and then a pull towards you, and you have the turnip out. In this operation you have two drills together ready to throw into the wagon.

Third method—Take an old scythe and cut off about 11 1/2 inches, then cut off the blade about 3 1/2 inches, leaving the back; now take about 4 1/2 inches of an old fork handle and bore a hole in the end, just large enough for the back of the blade to be driven in tight. Now take your knife, and grasping the turnip top in the left hand, you pull it up, and cutting off the root with one sharp cut, you give a second cut and the top is severed. You take four drills along with you, and put two from each side, so that there are four drills in a row, and you can

without much trouble have eight drills of tops in a row, which do not require to be distributed before you can go on hauling in your turnips. A good man can pull half an acre per day or more. You ask which is the best way? That depends upon circumstances. The latter method makes the best job, as the turnips are not scratched or rolled in the dirt or mud if it is wet, and then the root, which is generally bitter, is cut off, and I think the turnips keep better without the roots. Where there are able men who are used to the work, I certainly prefer to pull by hand for many reasons; but where the work has to be done by small boys, perhaps the first method is the best. When the turnips are of a good size, I think, everything taken into consideration, that pulling by hand is about as quick as harrowing out, and a much better job.

As to storing roots, I always try to keep mangels, carrots, and turnips separate, if possible, so that we can get at whatever variety we want to feed, and the turnips will be all the better if kept a little cooler than the mangels; in fact, the secret of keeping roots lies in keeping the temperature of the root house down nearly to the freezing point, and getting as little earth as possible in with the roots. It is a good plan to have the trapdoor where the roots are put in near where you commence to use first, so that the earth can be taken out. The trapdoors in the floor should be left open, except in very cold weather, as well as the windows to the outside. When the very cold weather comes these are all shut, and the door communicating with the cattle left open. I don't think a root house should be more than 8 or 9 feet deep. Very few people pit roots now—it is too much work and does not pay. I think it is much more difficult to regulate the temperature in a pit than in a root house, and pitted roots are often spoiled through heating. When thinning roots, I leave them pretty far apart, so that they will have a good chance to grow large, as large turnips are generally of a better quality, are easier handled, and keep much better in the root house than small ones.

Oxford Co., Ont.

DAVID LAWRENCE.

#### The Plow and Harrow in Turnip Harvesting.

To the Editor FARMER'S ADVOCATE:

SIR,—As to the different methods of harvesting the root crop, we have never tried but one way with mangels, and that is pulling them by hand, but have tried different ways with turnips. Some years ago we invariably knocked the tops off with a hoe and used the harrows to get them out of the ground, and thought it was the best way, both for speed and efficiency. Of later years we have tried plowing them out; that is, topping two rows into one and then plowing the two rows on the tops and giving a stroke with the harrows afterwards. This method, if the weather is dry, we think better than the former, the picking being much better, as they are in rows and also all out of the ground. Last year we pulled them by hand, and although the work is a trifle hard, and perhaps a little slow for this age, we think, taking all in all, this method is the best, as we found our roots kept much better than formerly. We also found our stock did well on the tops afterwards, they being nice, clean and fresh, whereas by the other methods they are almost worse than nothing, as so much dirt is mixed up with them.

As to storing our roots, we keep our turnips and mangels in the same compartment. The mangels, as they come in first, we pile up nicely in one part of the cellar, and then let the turnips fill in around them, and have never found anything wrong in this way of storing them. In the matter of ventilation, we keep all hatchways and windows open till the hard frosts come, and open them also in mild days through the winter. W. WHITEBLAW.  
Wellington Co., Ont.

#### Harvesting Roots.

When harvesting roots our chief concern is to handle the largest quantity in the shortest time with the least labor. If the weather is favorable, we harvest mangels in the same way as turnips, viz., topping with a sharp hoe and plowing out with an iron sod plow without the board. We have found this to be a long way in advance of hand pulling. It is true that an occasional mangel will be broken by the plow; but the only disadvantage is that you have two pieces to handle instead of one. It does not (as is sometimes supposed) injure their keeping qualities. If the land is very wet and sticky, we harvest in the old-fashioned way—pulling and topping mangels by hand, and take up the turnips with a sharp hoe or mattock. When unloading we run them over a slatted screen, with the slats nailed across. We do not worry about the mangels if they do come in a little dirty; but if turnips or carrots come in wet, we are careful to move them from under the hatches as soon as possible, else they will very soon heat and rot.

We store all these in the same compartment. I know of no good reason why they should be in separate places, unless it be for convenience in feeding. The dimensions of a root cellar are, in my judgment, largely a matter of convenience, except that the depth should not very much exceed eight feet.

Ventilation is of more importance. We have found that a root cellar in the basement is very hard on the barn floor above. The moisture condensing and collecting on the joists and planks seems to rot them out very fast. It is therefore

essential to the good of the building, as well as of the roots, that the ventilation be such as to admit of as free a circulation of air as possible between the roots and the timbers above. For this reason it is better to pit a few than to fill the root cellar "chuck full." We leave the hatches and windows open as long as possible, even after the weather gets pretty cold. It takes a hard frost to freeze roots very badly in a cellar in early winter while they are ripening and throwing off moisture. I believe it would be better not to have the partition separating the root cellar from the rest of the basement come within 18 inches or 2 feet of the sill above. This, I think, with the cellar not being quite full, would improve the ventilation considerably.

In pitting we select a dry knoll in the field, scrape off a little of the loose surface soil, say about three inches deep, for a space of about five feet wide and any desired length. Then fill up with turnips. When full go along the side and fill up the depressions and level off the full places, so as to have a nice smooth side. Put on a good coating of straw and cover with five or six inches of dirt, putting in a tile every ten or twelve feet for ventilation. When the weather begins to get severe it is a good plan to throw a few loads of manure on top. It not only helps to save the roots, but makes the pit more easily uncovered by preventing the earth from freezing too hard.

Huron Co., Ont.

JOHN KETCHEN.

#### Pitting Roots.

To the Editor FARMER'S ADVOCATE:

SIR,—Last fall, in a discussion in the *ADVOCATE* re pitting of roots, it was stated that all the different methods had proved a failure at times. I will gladly give your many readers my plan, which has always proved a success, providing I pitted sound roots. Selecting a slight rise in the land, which is very flat on my farm, I mark off two light furrows ten feet apart; this is to build large roots in; it prevents them from sliding down or out. Between these two furrows I draw a deep furrow; in this I put a box tube eight inches square. The top side is slatted with edgings from a sawmill. In building the pit, every twelve feet I put in a flue or pipe eight inches square, slatted on two sides. Every night we cover up what we have done that day by putting on six inches of swamp or marsh grass and four or five inches of soil. When the pit is finished I let it remain so till I think there is danger of fall closing up, when I again put on six inches more of grass and four or five inches of soil, closing the bottom flues at the ends and filling the upright ones with sawdust well rammed down. The ventilation the roots get by this method dries them well before winter sets in, which is very important to their good keeping. I have taken out roots in such pits on 15th of June, as firm as the day they were harvested. As soon as sleighing sets in this winter I intend to draw sawdust and cover one of the pits twelve inches deep, laying on something to keep it from blowing away; and by this means I expect to take out roots in good condition through next July. I wish you every success.

JAMES H. ESDON.

Glengarry Co., Ont.

#### Mangel Harvesting.

To the Editor FARMER'S ADVOCATE:

SIR,—I raise no other roots than long red mangels. In gathering them I simply drive along the rows, pull them, twist off the tops, and throw them into the wagons. My root cellar is 26x30 and 10 feet deep. I drive over it. Have five trapdoors, one in each corner and one in center. If mangels are put in dry and clean they will keep all winter and the following summer. For ventilation I leave the windows, trapdoors and other doors open until winter sets in, then close up and have no further trouble.

In pitting mangels we cover well with straw, then put on four or five inches of earth, then after the earth gets firmer cover with horse manure. If we have not got the manure we put on a little more straw and cover the same again with earth.

Norfolk Co., Ont.

S. A. FREEMAN.

#### House the Turnips Clean and Dry.

To the Editor FARMER'S ADVOCATE:

SIR,—We have grown turnips extensively. One time they were all pulled by hand, which was a heavy job. Then we took off the tops with a hoe, and harrowed them up; and when we put them in the cellar we had a riddle about ten feet long and three feet wide, with slats in the bottom for the earth to fall through. Latterly we have used the iron plow, with the moldboard taken off and with a wing on the share (similar to the one illustrated in the *FARMER'S ADVOCATE* of October 1st, 1897, page 430). If there are many tops, it is best to turn the turnips on to the tops. The main secret of keeping turnips is to put them clean in the cellar or pit, so that they will not heat. I find that in warm weather it is best to open the windows, or ventilators in the pits, so as to prevent the roots from growing.

Ontario Co., Ont.

JAS. I. DAVIDSON.

If your neighbor has a dirty, unprofitable farm you will do him and yourself a favor by inducing him to read the *FARMER'S ADVOCATE*.

#### Visiting the O. A. C.

The annual visit of the teachers and students of the Normal School, Toronto, to the Ontario Agricultural College, Guelph, was made on October 8th, when to the number of 160 they carefully inspected the buildings, live stock, and grounds, and, doubtless, many of them came away with a clearer idea of what advanced agriculture really is than when they first set foot on the College farm. The importance of interesting the present and future teachers of the rising generation in the study of agriculture cannot be overestimated, and the Ontario Minister of Education deserves great credit for thus giving these Normal School students the opportunity of picking up information concerning agriculture, which will be of great benefit to them when they enter on their duties of instructing the youthful mind in knowledge of things pertaining to farming. Our school children cannot learn too much about it.

#### Mixed Crops.

In some parts of Minnesota there is considerable area now devoted to growing mixed crops of wheat and flax. It is claimed that larger yields of both grains are obtained when sown together than when sown separately, and that the thick growth helps to keep down weeds. The seed at the rate of one bushel wheat to one-half bushel of flax is mixed and sown with broadcast seeder, or sown in drills separately, cross-drilling the flax. The crop is allowed to stand till the flax is ripe and then cut with binder and handled in the usual way and threshed with or without screen to separate the flax from the wheat. In Southwestern Minnesota, where very considerable quantities of this mixed crop are now grown, the elevators buy the mixed grain and pay market price for each after testing the proportions.

#### DAIRY.

#### Buttermaking in Canada on the Creamery Plan.

BY F. J. SLEIGHTHOLM, SUPT. WESTERN DAIRY SCHOOL.

*The Man at the Weigh Can* must be experienced, dependable, courteous, and firm. Experienced, that he may beget confidence, may know the cause of any unusual or undesirable condition of milk, and may be able to give the remedy. Be it remembered that years do not necessarily mean experience. One year is more experience to some men than five to others. Dependable,—no careless weighing or sampling, honest with drawers and patrons, and reliable toward the management; first man on hand in the morning; and not out of sorts one morning and unduly hilarious the next. Courteous, for very patent reasons: courtesy is oil to the running gear of the patronage. Firm, though every pound of milk presented be returned and the president himself chagrined. In short, we took upon this man as holding the place of greatest responsibility in the creamery, and he should be chosen accordingly. The common practice of laking in sour milk and milk of distinctly bad flavor cannot be too strongly discountenanced. This is done to retain custom by a certain class of makers who know no better. If all factories had backbone enough to refuse milk from any patron whose product was refused at any other factory, a great stride would be made toward perfection.

*The Composite Sample* may be kept a month where a room of a temperature below 70° Fahr. is available, otherwise we would recommend bi-monthly testing. The bottles should be shaken every morning before the new sample is added, and also after its addition. Both mercuric chloride and bichromate of potash should be used in monthly samples: proportion, about 1 to 7. If sour milk be taken in it should not be sampled. Wood is better, and looks better, as a stopper than either cork or tin covers. Gum tickets, with patrons' names thereon, should be used as labels. These labels should be coated with white shellac, so that they will not wash off.

*Milk Testing*.—We give no details here as to testing milk, chiefly because space will not permit. Our purpose is, more particularly, to outline it. In the first place we firmly believe and advocate that none but men (or women) who have had thorough training in testing composite samples should be allowed to test the patrons' samples of any factory. A great number of factory operatives know all about testing milk (?) who never learned—just picked it up—and can test milk to the utter satisfaction of themselves and to the utter dissatisfaction of the patronage and complete chagrin of the management. The management and patronage of our factories should insist that the men who test the milk should be trained in our dairy schools.

A hand or steam-motor Babcock tester may be used and proper adjuncts provided. Such should include a water tank (soft water) with steam connection, a shallow pan or sink for cooling the milk samples, and a rack for handling the test bottles. If necessary to cool the samples before testing do so after the milk is in the test bottle. Such plan gives much less labor and is more convenient than cooling it in the composite sample bottle. Prepare the sample carefully and let the work throughout be done with rigid accuracy. Tests that vary more than .2 of one per cent. from the previous test should be tested a second time.

*Testing By-products*.—This part of the work should be done quite frequently in any creamery.

that a careful and intelligent oversight be had of the work. Skim milk and buttermilk should be tested in double-necked bottles. At the Western Dairy School we find the Wagner bottle the best we have yet used. About one-third more acid should be used for skim milk than for whole milk. The reading of tests of skim milk and buttermilk would indicate the actual content of fat much more accurately if the spaces on the neck of the bottle be read as one-tenth of 1 per cent. than if read as one-twentieth. Gravimetric analyses prove this. We are quite sure that when operators at factories and others tell of skim-milk tests of .06, .04, .02, and suchlike, that in nine cases out of ten the actual content of fat, if left to the work of a skilled and well-versed milk-tester, would show results very much higher. When testing cream the weigh scale and not the measure should be used.

**Patrons and Per Cent. of Fat.**—When any patron is dissatisfied he should repair to the management and not to his neighbors nor to his fellow patrons. It is to be remarked that it is very rare to receive complaint from a patron when his test goes up, but always when it is down. Surely this is peculiar! Are not mistakes as likely to result in too high a reading as too low a reading? But "the best cow is just in." Yes, and by what method has this "best cow" been determined? Usually by guess, seldom, if ever, by accurate methods. "My cows are on better pasture and the test should be up." Not necessarily, by any means. "My treatment is exactly the same as it was, and why should my test be down?" This may be difficult to explain without all the facts, or even with them, but not more difficult than if the test had been up. When a patron takes a sample of milk from the can and has it tested by the operator of a rival factory and the resulting test is higher than his previous monthly test—strange to say (?), a frequent occurrence—this is no proof that the monthly test was wrong. Indeed, such test is valueless for the purpose intended. We know there are a number of incompetent persons operating the Babcock test, and patrons have a right to make a noise, and a big noise, in such cases, but as a rule the less patrons know about milk testing the more they find fault if their test is not just to their liking. The writer strongly recommends all patrons having an interest in creamery and cheese-factory operations to attend their nearest dairy school and learn something about testing.

**Cream Separation.**—The machine is the great one matter to be considered. Some machines cannot be made to skim properly by any possible skill of operation. The writer is quite convinced that this question of skimming power is not given one-half the consideration among buyers of separators that its financial meaning warrants. Consider these figures for a moment:

A, B and C are three separators, each skimming 10,000 lbs. daily. Tests of skim milk are as follows:	
A—	07 of one per cent. fat.
B—	15 of one per cent. fat.
C—	23 of one per cent. fat.
Butter-fat. Butter.	
Daily loss—A—	7 lbs. 7.7 lbs.
B—	15 lbs. 16.5 lbs.
C—	20 lbs. 22.0 lbs.

Allowing that the work of A represents first-class skimming—and it does—then the daily loss by B=16.5-7.7=8.8 lbs. @ 17c.=\$1.49, and the daily loss by C=22.0-7.7=14.3 lbs. @ 17c.=\$2.43. To all prospective buyers these figures will pay for thought. They are the results of a personal oversight and observation. They mean something. And they are not imagination merely, but fact. They are taken from actual everyday operation of cream separators. Among other things, they mean that a factory operating machine A would make enough money in one year, over and above that possible by B, to buy the best power separator offered for sale in any Canadian supply house. But enough.

Losses in skim milk often occur through the fault of the machine not being properly set and operated. Vibration of the machine, overfeeding, speed not high enough, and in summer time "clogging," each and all tend to result in poor skimming. The first three can be rectified. When a machine "clogs" during the morning's run it should be stopped and the bowl cleaned. Carelessness in this matter means serious loss to many creameries. All careful and reliable operators will test the contents of the separator bowl to know, not guess, whether or not enough water has been run through to ensure the complete flushing out of the cream at the close of the run.

**Heating Milk.**—Milk should not be heated higher than eighty-five to ninety degrees unless a special cooler is available for cooling the cream. It may be partly heated in the receiving vat and finished in the tempering vat, which latter should be of liberal capacity. The tempering vat should be filled with water and the heat turned on before any milk is pumped in. This will make easier the cleaning of the vat, and ensure the first milk being sufficiently heated. It is known that cream separates better from milk at high temperatures than low, and many suppose that this is due to the effect of heat upon the specific gravity of the serum and the cream of the milk respectively. According to the laws of physics, however, this effect is so slight that it has little bearing on this question. The reason lies rather in the fact that the cream, or the fat, is really not heated to the temperature shown by the milk. For example, when milk heated to 157° F. is running through a separator the skim milk will show a temperature fully ten to fifteen

degrees higher than the cream. Milk heated to 157° F. in a pasteurizer, or more properly a "scald-er," will result in the delivery of a cream from the separators at about 130-135° F.

**How the Silver Medal Butter was Made.**

To the Editor FARMER'S ADVOCATE:

SIR,—At your request I send an account of how we made the butter which was awarded two first prizes and the silver medal at the Western Fair, London. At that time we milked fifteen cows, five of which were fresh milkers, the remaining ten having been giving milk from five to nine months. Some are pure-bred Jerseys, the balance are grade Jerseys of a particularly fine butter strain. Having been selecting and weeding them out for seven years, we have raised their average yearly yield of butter from 294 lbs. to 330 lbs per cow.

Their pasture was fresh, sweet natural grass, supplemented with a daily feed of white flint corn, well matured and fed in the field, in which they have an abundance of pure running water at all times.

They were milked in the stable, which is a basement one and properly ventilated, at 6.30 o'clock morning and evening. Each cow was fed daily about 5 lbs. of bran, with about 1½ oz. salt in the manger. Fresh sawdust was used in the gutters to absorb the liquids, and land plaster was also used as a deodorizer of any foul odors. The cows' udders were well brushed and washed, if necessary, to make them perfectly clean. After each cow was milked, the milk was weighed and booked on a weekly sheet. It was then immediately strained and taken to the dairy, where it was separated by means of a No. 7 Alexandra separator. Immediately after separating, the cream was cooled to a temperature of 60° F. About 10% starter was then added and again cooled to 50° F., at which temperature it was held 48 hours, at end of which time it was ready for churning. Before entering the churn it was heated to a temperature of 58° F., which brought butter in 40 minutes. The butter was gathered until the granules were about the size of wheat grains, when about half the buttermilk was drawn off and the same quantity of water added. The churn was then turned swiftly a few times. This having been drawn off, water equal to the amount of cream churned was added and the churn turned again a dozen times. After this was drawn off, it was salted while still in the churn with 1 oz. of salt to 1 lb. of butter. Having been sufficiently worked, it was put up in square prints, each weighing one pound.

Our butter is shipped weekly, while fresh, to high-class grocers in Toronto and Hamilton. They never experience any trouble in getting ready sale, as the wrappers are all stamped with our own trademark. This is a great benefit when selling to regular customers.

We have used a No. 6 Daisy churn for the past five years, and have not during that time been able to find fault. It has given satisfaction in every respect. MRS. W. C. SHEARER, Springdale Dairy Farm, Oxford Co., Ont.

**Adding Cream to Milk.**

Creameries should strongly discountenance the skimming of cream and adding it to the milk sent to the creamery. This is oftentimes done by patrons to save the cost of hauling and to increase their test. Now, as a rule, such added cream (often found in Monday morning's milk) is largely lost to the creamery, especially in hot weather. It does not become thoroughly mixed with the milk, but adheres to the vats, etc., and but serves to clog the separator. In no case need the operator expect to take all of this cream out of the milk. Such milk added cream is taken in the sample, the creamery pays for butter-fat that was never wholly recovered. When a competent man is at the weigh can no patron need expect to make any money out of this plan. F. J. SLEIGHTHOLM, Supt. Western Dairy School.

P. S.—In article on "Separator Creamery and Its Equipment," in October 1st issue, page 465, near the end of the first paragraph, in the statement "With water at 55 degrees Fahr., fully 350 inches to 400 inches of ice, etc.," the word "inches" should be "pounds."—F. J. S.

**Mr. J. A. Ruddick's Successor.**

The Governors of the School of Mining and Agriculture nominated Mr. J. W. Hart, dairy instructor of Clemson College, S. C., for superintendent of the Dairy School, to fill the vacancy caused by the resignation of Mr. Ruddick, and the Ontario Government has appointed him to the position. Mr. Hart is a Canadian and an associate of the Ontario Agricultural College.

The Lennoxville Creamery, which won first prize for its butter at Ottawa Show, is preparing an exhibit of 100 boxes of butter to be sent to South Africa, where it will be exhibited at the Cape Town Show, which will be held in December next. The president of the Quebec Cold Storage Company, Hon. R. R. Dobell, who selected the Lennoxville Creamery for this work, is paying somewhat over 21 cents per pound for the shipment.

**POULTRY.**

**Winter Quarters.**

A BRIEFLY DESCRIBED POULTRY HOUSE AND ARRANGEMENTS—LAYING IN WINTER SUPPLIES—FATTEN THE BIRDS FOR MARKET—HOW TO FATTEN THEM.

BY A. G. GILBERT, MNGR. POULTRY DEPT. EXP. FARM, OTTAWA.

It is poor economy to have a cold poultry house, particularly in those portions of the Dominion where the winters are rigorous and where artificial housing and feeding of the laying stock extend over several months. But under all conditions it will pay to have the poultry house comfortable. It must be borne in mind that the winter rations are first drawn upon to supply animal heat. It is the residue that goes into eggs. About 38 or 40 degrees will be found about the right temperature in coldest weather, just warm enough to keep the drink water, vegetables and droppings from freezing. A few degrees higher will certainly do no harm, but a high temperature is apt to encourage the lodgment of that bane of many poultry-keepers—lice. Assuredly will they make their appearance if the house is allowed to remain dirty. We are about to prepare for cold weather, and our first care is to see about proper quarters for our winter money-makers.

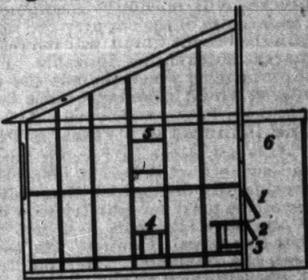
**A BRIEFLY DESCRIBED POULTRY HOUSE.**

If you have a poultry house we will presently see about getting it in order for the winter. If you have not a house we may tell you that there is no cast-iron rule to be observed in the construction of a poultry house. There are some general rules, however, that experience has taught to be good and which may be applied to large or small buildings. Your house should be divided into pens, each to hold 15 to 25 layers, allowing at the least five square feet to each bird. It should be so arranged that the cleaning of the platform, collecting of the eggs, renewing of the straw in the nest-boxes, may be conveniently and expeditiously done from the passageway. The following diagram will convey an idea of what is meant. The plan may be improved upon by having one instead of two hinged doors (1 and 2), and doing away with the sliding feed trough (3).

**WHAT THE PENS SHOULD CONTAIN.**

In each pen there should be the following furniture, viz.:

1. A narrow trough, 2½ inches wide at top, to be screwed on to side of the pen. It is for the proper feeding of soft feed and cut bone.
2. A small box, 2½ by 6 inches, divided into two parts, one for grit and the other for old mortar, oyster shells, etc., for supplying lime for shell.
3. A shallow box for holding dry earth, etc., for dust bath.
4. A fountain or pool to hold drinking water. It can be so placed that one will do for two pens.



1 and 2, Hinged Doors permitting access to nests and platform. 3, Sliding Feed Trough. 4, Side. 5, Window, if required. 6, Passageway.

On the floor of the pen should be litter in the shape of dry leaves, chaff, oat hulls, cut straw or hay, etc.; and in this litter should all the whole grain rations be thrown, so as to induce and keep up the exercise so necessary. Green stuff in the shape of cabbage, mangolds, turnips, carrots, etc., should always be in supply and may be placed in the narrow trough aforementioned. If possible, have the house so situated that the windows of the pens will face the south and be large enough to admit plenty of sunshine. If necessary, the windows can be doubled. If properly constructed there should be no necessity for artificial heating in a small house. If the house is on a large scale, furnaces specially constructed are sold for heating such buildings. The furniture should be so fastened that it can easily be removed for cleaning.

**PREPARING FOR WINTER.**

If not already done, the poultry house should at once be thoroughly cleansed and disinfected. Of course, we are not now speaking of our newly-built house. The furniture should first be removed, as also the straw in the nests and litter on the floor. The most potent destroyer of disease germs, lice, mites, etc., and perfect cleanser, is a solution of bichloride of mercury or corrosive sublimate. A druggist will give the proper proportions and directions by telling him the size of your house. Spray carefully every nook, corner and crevice. Be careful in handling the solution, for it is a deadly poison. The work should be done in the daytime, and the stock kept outside during the application. The house being now thoroughly cleansed and disinfected, see that the laying stock go into it free from lice and in robust health. It is better to kill any bird with symptoms of roup than to allow it into the winter quarters of the healthy ones. If a prolific layer or valuable breeder, keep it in a separate building until a thorough cure is effected. To rid the hens of lice, use a good insect-destroying

powder or a liquid lice killer. Use coal oil frequently about roosts, platforms and nests, so as to prevent lice from making lodgment. A little extra care and trouble at this time will be well repaid in an increased egg yield during the season of high prices.

#### LAYING IN WINTER SUPPLIES.

It is not intended at this writing to discuss winter rations or their composition, but certain essentials ought now to be stored away for winter use. One essential is dry earth for the dust baths; another, sharp gravel for grit and old mortar to supply lime for shellmaking. Preparations of grit and substances containing lime are now sold at cheap figures. It will doubtless pay the successful poultryman to procure one of the best sorts. Small potatoes, unmarketable turnips, carrots, cabbages, mangolds, etc., should all be kept for use in the poultry house. Nothing is said of clover, as it is generally in abundance in the barn. It is invaluable when cut into small pieces, steamed over night, and mixed into the morning mash, or fed alone. It is presumed the laying stock are allowed free run of the fields, and they should be allowed so to run as long as the open weather continues. As remarked in a previous article, care must be taken that the older hens do not go into winter quarters overfat. The pullets should be pushed. If the young cockerels are not disposed of, it is good policy to pen them up for ten or fifteen days and fatten them up, so as to obtain a higher figure. If the cockerels are Plymouth Rocks or Wyandottes, the increase of flesh and weight will be most gratifying.

#### HOW TO FATTEN QUICKLY.

But how are we to fatten quickly? In England and France the birds for market are penned up, and for ten days are fed from small troughs, when they are said to be "half fatted." For another ten days they are "crammed"; that is, enough food to fill their crops is forced down their throats by a machine or by hand. The fowls fatten quickly, and the flesh is superior. The birds are kept quiet and in a partially darkened apartment. But the subject will be discussed at length again. Meanwhile, our farmers will do well to pen up their cockerels, keep them secluded, and feed them on a mash made of the table and kitchen waste, mixing in all the fat. For whole grain use sound wheat, buckwheat, barley or Indian corn. FEED AND WATER REGULARLY. If convenient, mix the mash with sweet or sour milk, skim milk or buttermilk. At end of ten or fifteen days the fowls may be marketed. When more advanced in poultry-raising the "cramming" process will no doubt recommend itself. What the farmers of the country can do at once is to obtain the breeds which will make the large, heavy market chickens so desirable. I mean, of course, those farmers who have not the thoroughbreds or crosses which make large birds and good layers.

#### The Princess of Wales a Poultry Fancier.

It is not alone in rearing horses, cattle, sheep, and swine that different members of the English royal family distinguish themselves. In the matter of the prize for poultry won by the Princess of Wales at Kidlington it is not generally known that Her Royal Highness has been a bird fancier from the beginning. Her poultry establishment at Sandringham is the daintiest structure of the kind in any part of England, and is constructed on the most humane principles. It is provided with trees of many branches, and by being raised a couple of feet from the ground it becomes easy for the Princess to study the manners and customs of her pets from the recesses of a cozy chair. The occupants of the aviary are a score of pure white doves, and a background of scarlet geraniums enhances the color effect. Another cage contains a group of tiny Australian birds, which have ousted some monkeys that formerly inhabited it. The Princess' oldest bird pet is the famous Cockie, a dishevelled white cockatoo, who has a perfect mania for biting his feathers off. It is nearly a quarter of a century since this pampered favorite first entered the royal service.

#### Fattening Turkeys.

Thanksgiving Day will before long be upon us, and from this time on there will be more or less demand for turkey and cranberry sauce. Those who have raised turkeys for the market should now make preparations for feeding them up, so as to realize the best prices for them. Hitherto they have been largely, if not wholly, able to pick up their living off the stubbles, grasshoppers, crickets, and other insects which they so keenly hunt for and enjoy. But with the advent of cooler nights such fare has decreased, and from now on they must receive good food in order that they may be sent to market in the plump state necessary to secure the top prices. And here it would be well to repeat, what has been so often said before, that the birds which fetch the highest figures are medium-sized, well-fatted young hens or cocks, ranging from 9 to 12 or 13 lbs. in weight, nicely dressed and plucked. Hens are chiefly sought after in the cities, but that is, principally, because the cocks are kept so long before being marketed that they go over the weights given. Otherwise, there is not so much difference in the table qualities of young hens and cocks marketed early. Shippers of old birds, even when they are well fattened, cannot expect to realize the same prices for them as for young stock. Of course, they can be sold, but, except, perhaps, at Christmas time, or during a time

of slack supply, the difference in price between the two kinds is very considerable.

For quick fattening, it is better to pen the turkeys up, letting them out every few days for exercise. A very good feed to encourage growth and to fatten as well is boiled potatoes, mashed, mixed with meal and fed warm. The addition of milk, if possible, will greatly assist in the putting on of flesh. Whole corn should be fed at least once a day, old corn being best for the purpose; new corn having a tendency to make them scour. If the fattening process is not to be hurried, the turkeys need not be penned up so strictly, but it is well not to let their run be too large. It is better, however, as soon as they are large enough, to pen them and get them fattened for the market as quickly as possible, as food is saved thereby. Meat scraps are often fed to fattening turkeys to take the place of their natural food—insects.

## APIARY.

### How to Get Rid of Laying Workers.

In a late issue of the *American Bee Journal* Edwin Bevin claims to have discovered two alternative ways in which laying-worker colonies can be disposed of so as to get all the service out of the bees that they can render, and yet keep the number of the colonies up to what it was before.

One way is to place the hive containing the laying workers over a strong colony with a fertile queen, placing a newspaper with a small hole in it between the two hives. The bees will unite peaceably, and when considerable worker brood appears in the upper hive the hive can be placed on another stand, and the bees will rear a queen from the brood if the old queen is left in the lower hive; or a fertile queen can be introduced about three days after the removal of the hive.

The other plan involves the taking of a couple of frames of hatching brood from a hive and placing them in another hive over a strong colony, with a frame having wire-cloth nailed to both sides of it between the two hives. Then a fertile queen and her escort are released on the two combs, and in a few days there will be a nucleus strong enough to take care of the queen. This hive is then set down by the side of the hive holding the laying workers. Every two or three days a frame with its bees must be transferred from the laying-worker hive to the nucleus. By the time all but two of the frames are placed in the new hive the queen is at work there and everything is harmonious. As regards the two frames taken to form the nucleus, they can be returned to the places from which they were taken, or these places can be filled by the frames remaining unused in the laying-worker hive.

## GARDEN AND ORCHARD.

### Prince Edward Island Fruit Growers' Association Meeting.

A meeting of the Prince Edward Island Fruit Growers' Association took place on October 5th at Charlottetown. A large number of representative fruit-growers from all over the Province were present, among whom were Lieutenant-Governor Howland; Hon. Senator Ferguson, Marshfield; Rev. A. G. Burke, Alberton; Horace Hazard, President Board of Trade; Edward Bayfield, President of the Association; John Robertson, Inkerman; J. C. Clarke, Bayview; Jas. Ramsay, Hamilton; J. H. Gile, Little York; John Venson, Charlottetown; J. H. Ross, Wheatley River; Lauchlin Macdonald, Prospect Hill; A. R. Beaton, East Point; Alfred E. Dewar, Southport; Geo. Vessey, Little York; Jos. Wise, M.P.P., Milton. Edward Bayfield presided. The Secretary's report of the annual meeting held in April was read and adopted. The report of the Treasurer was also read and adopted. The amalgamation with the Western Association in July last was ratified. A small liability of the Western Association was ordered to be paid. A large number of samples of fruit were brought to the meeting and placed on exhibition. They were fine specimens and were greatly admired by all present. Messrs. John Robertson, Richard Burke, and D. A. Sharpe were appointed a committee to name certain unknown varieties. Mr. John Robertson then gave a lengthy and practical address on "Observation on the Orchard Line." The President remarked that he had, on visiting Quebec last summer, consulted with leading fruit-growers, and found them all strongly in favor of the Wealthy as a winter apple. Senator Ferguson followed in an instructive address on his observations at the Halifax Exhibition and in orchard work. The samples of Island apples shown at Halifax, he stated, were equal to the same class grown in Nova Scotia. The thanks of the Association were extended to the Provincial Government for the grant of \$150 given to the Association.

Mr. Horace Hazard was requested to give any information he could with respect to shipping fruit. Mr. Hazard said he was willing to give names of responsible dealers and rates of freight and other information in his power. The Lake Winnipeg would leave here about the end of this month. The last shipment from here was valued at \$40,000, and everything looks bright for this service. A resolution was carried, "That the

Prince Edward Island Fruit Growers' Association make a trial shipment of a hundred barrels of apples to England by the next cold storage steamer, Lake Winnipeg."

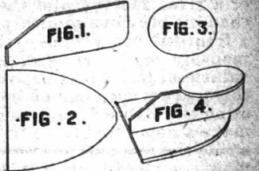
The report of the committee to name unknown varieties was received. The committee also reported as follows: "Your committee, appointed to consider and report the varieties of apples best suited for the English market, beg to suggest the following varieties and quantities: Wealthy, 25 barrels; Alexander, 25; Golden Russet, 25; 25 barrels of Kings and Ribston Pippins, in equal quantities. The above varieties we believe the best to send in cold storage as a trial shipment of 100 barrels. We would also suggest that in packing the apples the greatest care be exercised. Supervision of the packing by some careful person or persons would be absolutely necessary."

On motion of Senator Ferguson, the report was ordered to be adopted, with the following addition: "That Gravenstein and Northern Spy be added to the list of apples recommended out of which selection may be made." Senator Ferguson, Messrs. John Robertson and D. A. Sharpe were appointed to select and pack the above-named shipment. It was also agreed that the press ask persons having such named varieties for sale to correspond immediately with the above-named committee. Hermanville, P. E. I. J. A. M.

## THE HELPING HAND.

### Buggy Seat for Third Person.

WM. J. WILLIAMS, Ontario Co., Ont.—The cut represents a buggy or cutter seat for a third person and is made as follows: Take a piece of 2-inch plank, 6x18 in., and cut into shape of Fig. 1. Take a piece of 1-inch and cut as Fig. 2—14 x 16. Take another piece of 1-inch and cut like Fig. 3—8 x 10—and put together as Fig. 4. Then paint and varnish and cushion the seat. You set the seat on the buggy seat and one person sits on either side of board No. 2 and that keeps it in place, and the third person sits on the seat a little in front of the others.



## 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 our succeeding issues, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

### Veterinary.

#### Indigestion in Horse.

STAG, Westmoreland Co., New Brunswick:—"I have a horse six years old. Is always thin in flesh and is easily fatigued. When at plowing or hard work, stops very often to urinate (about six to eight times a day). As there is no veterinary surgeon within ninety miles of this, will you please advise me as to his medical treatment, and oblige?" [This horse has chronic indigestion. Have his mouth examined, and if his teeth are irregular and sharp on the edges have them filed down smooth, so that they do not lacerate his tongue and cheeks when masticating. Prepare him for a purge by giving a bran-mash diet only for 24 hours, after which give one quart raw linseed oil (pure), in which add two ounces spirits turpentine, well shaken. If he does not purge in 24 hours, give exercise until free operation of the bowels takes place. Continue light mashes for another day, when he may have about eight pounds hay, and gradually return him to his usual diet of oats, bran, and hay—the latter not over fifteen pounds per day. As a tonic give the following mixture in teaspoonful doses three times daily, in feed or on tongue: Bicarbonate of soda, nitrate of potash, and powdered gentian, of each one ounce; powdered nux vomica, one-half ounce; powdered capsicum, 2 drams; charcoal, two ounces;—all well mixed. Give the following physic in about two weeks, and continue with tonic as before: Barbadoes aloes, six drams; calomel, one dram; ginger, three drams; water, one pint. Give exercise in 24 hours if free operation of the bowels does not occur.]

#### Physic for Horse—To Destroy Lice on Pigs.

SUBSCRIBER, Simcoe Co., Ont.:—" (1) What do you consider a good purge for a horse? I have given a quart of raw linseed oil, but it had very little effect. How should a horse be treated that has been given too heavy a physic. Should a physic horse be worked? (2) What is the best remedy for lice on pigs?"

[ (1) A good horse physic drench is made as follows: Aloes, 8 drams; common soda and ginger, each one tablespoonful. Dissolve in a pint of cold water and give after one day's light feeding on bran mash. Liberal drinks of water and light exercise will hasten the action of the bowels, but the animal should not be worked for a day or two. A horse that has had too severe a purge should be kept perfectly quiet and given very little water to drink. His diet should consist largely of rather dry bran

mash. If griping occurs give ounce doses of laudanum. (2) Hog's lard and coal oil, half and half, mixed warm, and applied thoroughly, especially behind ears, around neck, and inside of legs, will destroy lice.

Worms in Lambs.

C. F. O., Prince Co., P. E. I.:—"My lambs are a poor lot this fall and I cannot tell what is the trouble with them. They had the same trouble last fall. They commence to fail when they are about three months old—that is, before they are weaned—and after I wean them they seem to go down still faster, although they have the best of fresh feed. Last fall I fed them grain, but they got poorer every day. This fall I am not feeding any grain. The symptoms are running at the eyes and mouth, holding their head down to the ground, and twitching their head and ears. They are not scoured this fall, but were last. I have noticed small white worms in their droppings, and it is also mixed with slime. Please give me a cure and also state cause, and if they are contagious or hereditary?"

[The lambs are infested with worms and require to be changed to other quarters and the place thoroughly disinfected. If this does not succeed in removing the trouble you had better discard sheep from that farm for a year, but persevere and you will soon bring about a change. A good disinfectant is a preparation known as West's Fluid, obtained from the West Chemical Co., Toronto. Get a gallon can of that and follow out their disinfecting instructions, and give each lamb half a teaspoonful of the medicine internally in half a pint of water every other day for six doses, after which put the following tonic in their feed every day in the proportion of a heaping teaspoonful to each four lambs: Powd. sulphate of iron, 4 ounces; powd. gentian and powd. ginger, each 6 ounces; nux vomica, 2 ounces; capsicum, half ounce.]

Miscellaneous.

Prickly Lettuce.

F. H. ORRIS, Middlesex Co., Ont.:—"Kindly give me the name of the enclosed weed, which I have noticed on my farm the last two years. No one around here can tell what it is."

[The specimen of weed received is the prickly lettuce (Lactuca scariola), also known as milk thistle. This is a European weed, of which the first American record was dated at Cambridge, Mass., in 1868. In 1878 it was reported from Toledo, Ohio; in 1892 the Ohio Experiment Station issued a bulletin to the farmers, warning them against it as likely



Prickly Lettuce.—a, Branch in flower; b, part of stem and two leaves; c, brown seed, showing white plume, much enlarged.

to prove one of the worst weed pests of the State. In July, 1891, Mr. J. Darness collected it along the G. W. R. at Walkerville, Ont., and in 1894 Prof. Macoun reported it on the railways at Smith's Falls and Chatham. It has since doubtless been pretty generally introduced along the railway lines; it is now in conspicuous evidence at London and Strathroy. The weed is an annual and winter annual. Every part abounds in a milky juice. The stem, nearly smooth, but bearing a few scattered prickles, grows from 2 to 5 feet high: when not crowded it may throw out a few branches. The upper quarter or third of the plant consists of a loose, much branched panicle of flowers, more conspicuous when ripe than at any other time. The flowers are small,  $\frac{1}{2}$  to  $\frac{3}{4}$  inch in diameter, pale yellow in color, and blossom, a few daily, from early in July until late in September. The diagram will show the

shape of the leaves, which are prickly along the edges and on the back of the midrib. The seeds bear a white plume like the dandelion, and readily take root in pastures and meadow lands, as well as in tilled ground. Miss Detmers, of the Ohio Station, counted 688 flowers on a single plant; these would produce on an average 12 seeds, making a total of 8,256 seeds from one plant, a fact that indicates the rapidity with which the weed is capable of multiplying. It is especially liable to be found along fence-rows, and should be cut, wherever found, with a scythe or hoe before it begins blossoming. From the description and diagrams the weed can be easily identified.]

Spavined Horse.

W. H. B., York Co., Ont.:—"Kindly advise me through your paper what is best to do with a mare eight years old which has a bone spavin. Our vet. says fire it. That seems to be cruel. Is there any other treatment which will cure it?"

[Firing and repeated blistering is as yet the surest and most successful treatment for spavin lameness; yet, many cases of obstinate spavin lameness have been overcome by the continued use of common kerosene oil (coal oil), by applying a little to the entire joint once daily for a month, washing about once a week. If you try it, kindly report results in six weeks.]

Mr. Rennie's System of Autumn Cultivation.

A reader of the FARMER'S ADVOCATE writes as follows:—"Does Mr. Rennie, of the O. A. C., plow the land deep previous to rigging it up in drills? Would it be a good plan where there is much grass or weeds to drill it up? Would such treatment not give the grass and weeds more of a chance to grow?"

[In reply to yours of yesterday, I beg to state that immediately after grain is harvested the land should be gang-plowed (shallow), then harrowed and cultivated at intervals (with wide points on cultivator) until end of October, when all grass and weeds are destroyed, then put the land up in narrow drills (22 inches) for the winter. WM. RENNIE.]

Boar's Bite.

SUBSCRIBER, Grenfell, Asa.:—"I have a four-year-old mare that was bitten by a boar in the hind part of the brisket—a gash of three inches long. Bled very much. Stopped bleeding. Called in a vet. Applied lotion three times a day after washing clean. I now wash it out with syringe, soap and water, and afterwards syringe with carbolic acid and water (25 to 1) twice a day. The wound now is very small, but still discharges bloody matter. It is now two months since it was done. I keep the mare at work, but after violent exercise discharges more. I applied poultices, when the swelling was very bad, daily, and caused it to make a discharge."

[Wounds in horses often heal up to a certain point and then stubbornly remain open, having formed what is termed a fistula. This condition is either the result of some deep-seated irritant or the formation on the surface of the wound of a certain smooth, pus-secreting membrane. If caused by an irritant, such as a foreign body, it would necessarily have to be removed before healing action could be expected. I would advise you to inject to the bottom of the wound, once a day for two or three days, the following lotion: Hydrar perchlor., one dram; acid mur., two drams; spts. meth., two ounces, water, six ounces. After this use, twice daily: Creolin, one ounce; water, one quart.]

New Trotting and Pacing Standards.

T. J. BLACK, Carleton Co., Ont.:—"A subscriber from Hazeldean wishes to know what constitutes a Standard-bred horse."

[At the last annual meeting of the American Trotting Register Association, the following rules, governing admission to standard rank, were adopted, to take effect Nov. 1st, 1898:

THE TROTTING STANDARD.—When an animal meets these requirements and is duly registered it shall be accepted as a standard-bred trotter:

1. The progeny of a registered standard trotting horse and a registered standard trotting mare.
2. A stallion sired by a registered standard trotting horse, provided his dam and grandam were sired by registered standard trotting horses, and he himself has a trotting record of 2.30, and is the sire of three trotters with records of 2.30 from different mares.
3. A mare whose sire is a registered standard trotting horse, whose dam and grandam were sired by registered standard trotting horses, provided she herself has a trotting record of 2.30 or is the dam of one trotter with a record of 2.30.
4. A mare sired by a registered standard trotting horse, provided she is the dam of two trotters with records of 2.30.
5. A mare sired by a registered standard trotting horse, provided her first, second and third dams are each sired by a registered standard trotting horse.

THE PACING STANDARD.—When an animal meets these requirements and is duly registered, it shall be accepted as a standard-bred pacer:

1. The progeny of a registered standard pacing horse and a registered standard pacing mare.
2. A stallion sired by a registered standard pacing horse, provided his dam and grandam were sired by registered standard pacing horses, and he himself has a pacing record of 2.25, and is the sire of three pacers with records of 2.25, from different mares.
3. A mare whose sire is a registered standard pacing horse and whose dam and grandam were sired by registered standard pacing horses, provided she has a pacing record of 2.25, or is the dam of one pacer with a record of 2.25.
4. A mare sired by a registered standard pacing horse, provided she is the dam of two pacers with records of 2.25.
5. A mare sired by a registered standard pacing horse, provided her first, second and third dams are each sired by a registered standard pacing horse.
6. The progeny of a registered standard trotting horse out of a registered standard pacing mare, or of a registered standard pacing horse out of a registered standard trotting mare. Any animal that cannot be registered as standard under the above rules, can be registered in the non-standard department.]

White Crested Ducks—Sick Hens.

J. A. B. S., York Co., Ont.:—"1. Can you give me any information in regard to the White Poland duck, a large top-knotted bird? 2. Our hens are dying. Sick from one to three days, get pale around the head, eat very little. Can you give a cure? They have plenty of pure water."

[1. The only duck I know of answering to the kind described is the White-crested duck of the Standard. We do not know at the moment who has them for sale. They are rather small, and little attention seems to be given to their breeding. Persons having them for sale should advertise in FARMER'S ADVOCATE columns. 2. From few particulars given it is hard to say just what is the trouble. If hens are old and are overfed the cause of death may be fatty degeneration of the liver. Again, they may have eaten some impure food or poisonous substance. If hens are young and wasted away or present an emaciated appearance the source of the trouble may be lice. Lice often make the fowls they infest so weak that the hens fall easy victims to the least ailment. Or the fowls may have roup and have died from one of its various forms. In the latter case there would be a mucous discharge from the nostrils of most offensive odor, or swelled head. Look and see. See if throat is cankered. Separate any fowls which look out of sorts and give them a liver pill for two nights or two mornings in succession. Lessen the quantity and kind of food. Give the well hens condition powders in soft food and do not overfeed them. If the hens have been overfed on soft food, it is probably the cause of the ailment. If roup is suspected give symptoms and write for particulars as to treatment. A. G. GILBERT, Poultry Manager, Dom. Expl. Farm.]

We might add to Mr. Gilbert's notes that good treatment for such cases of fowl sickness, after finding out by very careful inspection that the trouble is not lice, is to give the flock a physic after a partial fast. Mix a heaping tablespoonful of salts with a pail of soft food and allow them to take their fill. Then give a tonic known as "Pearce's Tonic Poultry Food," and sold by J. S. Pearce & Co., London, Ont. If the fowls have roup see FARMER'S ADVOCATE, May 2nd, 1898, page 213.—Ed.]

Encouraging Reports in the Northwest.

The Director of the Experimental Farms has very encouraging news from the Superintendents of the branch Experimental Farms in Manitoba and the Northwest Territories, where, notwithstanding the unfavorable weather during harvest, the grain both in quantity and quality is turning out remarkably well.

Under date of September 26th, Mr. Angus MacKay, Superintendent of the Farm at Indian Head, says: "From all parts of this district wheat is turning out even better than expected, both in yield and quality. The lowest yet reported is twenty-eight bushels per acre on stubble land, while many have over thirty bushels with same sort of farming. The crops on summer-fallowed land are going from thirty to forty-five bushels, so that taking the whole district there will be an average of from thirty to thirty-five bushels per acre."

Mr. S. A. Bedford, Superintendent of the Brandon Farm, writes in a similar encouraging strain, stating that the wheat crop in the Brandon district is proving a much better one than was anticipated.

Cement for Water Pipe.

W. A., Simcoe Co., Ont., asks if a water pipe could be constructed of cement to carry water 600 feet distant and with a fall of 15 feet, and to raise it 8 feet at the lower end (supposing a piece of iron pipe were used here)? If so, state best method of construction, thickness of cement, and proportion of cement and sand or gravel, if the pipe had a two-inch bore? Would it not be cheaper and more durable than iron piping?

[We have submitted the above question to the Estate of John Battle, manufacturers of hydraulic cement, to which they reply as below. Should any reader have had experience in constructing cement water pipe such as referred to, we would be pleased to publish what he desires to say regarding it. The Estate of John Battle writes as follows: "We would say that we have not the machinery to make the cement pipe, and to procure it would make the piping cost too much. Iron pipe would be cheaper; it can be bought for about nine cents per foot; and in our opinion will answer the purpose equally as well as pipe made of cement."

Intestinal Worms in Pigs.

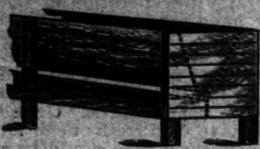
W. W., Haldimand Co., Ont.:—"Will you in your next issue inform me what to do for pigs that cough when they first get up in the morning and sometimes during day. When they have been lying down they do not cough much. They are kept in shed with small yard. They are nearly five months old and are doing well, but have coughed since they were two months old?"

[The cough pigs have would indicate the presence of intestinal worms, for which give to each pig a teaspoonful of West's Fluid every other day until four doses have been given; thoroughly disinfect the premises with the same according to their printed instruction. Their address is the West Chemical Company, Toronto.]

**The Best Sheep Rack.**

G. W. ANDERSON, Prince Edward Co., Ont.:—"I remember having received good advice from you. Would you be kind enough to publish a sketch of a good sheep rack. I have a nice flock, and must rebuild my feed places?"

[The accompanying illustration represents a sort of sheep rack that has been found very satisfactory by a number of readers of the FARMER'S ADVOCATE. It is the kind almost entirely used in the sheep pens of the Ontario Agricultural College Farm, where it also answers as partitions between different pens. It is made 3 feet wide and any length desired. The posts are 4 feet long. The dotted lines on the end indicate the shape of the receptacle for the fodder. The sides are boarded close down to within 12 to 16 inches of the bottom.



Along the center of the bottom endwise stands an 8-inch board on edge to divide one side from the other. The bottom is close, and has a 4 to 6 inch board along the outside to form a trough, in which roots, cut feed or grain can be fed. Some racks of this style have inverted V-shaped dividers instead of the 8-inch boards mentioned. The advantages of this style of rack are that there is very little chance for the sheep to waste feed, by pulling it out under their feet, if it is not given to them in too liberal quantities, and the sheep will not get the chaff into the wool on their heads and necks.

Another style of rack which the writer has found satisfactory consists of a flat bottom, 14 inches wide, fastened against the wall, and having a 4-inch ledge along the front. Running up from the front are inch staves, 2 or 3 inches wide and about 2 1/2 ft. long. These are placed sufficiently wide apart to allow the sheep to get their heads in easily, which they do, keeping them there while they are feeding. When hay is evenly strewn along this sort of rack, just what will be eaten up cleanly, there is no waste, and the wool is also kept clean. Chaff, roots, and grain can all be fed in this rack when precaution is taken to sweep out dirt that will accumulate from the hay. We will be pleased to hear from shepherds who will send us descriptions and drawings of racks other than these, which they have found satisfactory.]

**Tar Paper in Henhouse Wall.**

ARCH. DAWSON, Perth Co., Ont.:—"I have commenced building a frame henhouse. My intention is to double board it, putting tar paper in between. Is there any objection to using tar paper in a henhouse in that way, or could you recommend me a better way?"

[Regarding the use of tar paper in the wall of a henhouse, we believe there is no objection to it; in fact, the claim is made that besides having a draft-proof effect, it also has sanitary virtues by reason of the coal tar with which it is treated. Besides this, vermin will not lodge in the crevices. While two thicknesses of boards with tar paper between will keep out draft, an air space seems necessary in order to make the building frost-proof. To secure this, we cannot do better than refer to the description of Mr. Meyer's poultry house, on page 439, Sept. 15th issue, where reference is made to the perpendicular portion of the south side above the short south roof, which is built of matched lumber inside, tarred paper, then 2x4 inch studding, tarred paper, and inch lumber battened outside.]

**Apple Pomace for Cows and Pigs.**

E. C. McGRACHY, Kent Co.:—"Is apple pomace good feed for milch cows or for hogs. If so, how should it be fed, alone or with grain?"

[There is very little feeding value in apple pomace, and in no case should it be fed after it has commenced to decompose. For cows giving milk it is entirely unsuitable fed in any form, as it tends to impart an objectionable flavor to the milk. We have heard strong complaints regarding its use by cheesemakers. Its value for pig feeding would be very little, although it would serve as a sort of filling satisfier mixed with crushed grain, shorts or bran.]

**Cement Floors and Lice.**

Our Bruce Co. correspondent refers in his Farm Gossip letter to an opinion of a stock-breeder that the use of cement floors tends to prevent trouble with lice on cattle, and asks the opinions of other breeders on the subject.

**Big Shipment of Canadian Produce.**

The largest shipment of dressed meats that ever left Toronto was shipped Monday, Oct. 10th, by the Wm. Davies Co. There were 630,000 pounds of dressed meats, valued at \$64,000. The shipment was sent to Southampton. A large shipment of live stock, valued at \$13,000, was sent to Liverpool by Mr. John Gould. D. Gunn & Co. shipped also to Liverpool \$3,000 worth of eggs.

**Buffalo Markets.**

Stockers and Feeders.—The market has ruled strong and active for these, and the general quality has considerably improved. Canadians have ranged, according to quality, from \$3.70 to \$4.30. The market was irregular and uneven for lambs, and the offerings were fairly liberal, which had a tendency to lower values. Choice Canada ewe and wether lambs were in good demand, at \$5.85 to \$6; bucky, coarse grades sold at \$5.75 to \$5.80, and prices were lower at the close. Good fat ewes fetched \$4.25 to \$4.50.

**MARKETS.**

**FARM GOSSIP.**

**Bruce County, Ont.**

We have had almost perfect weather for the local fall fairs. The roads are almost all that could be desired, and at date nearly all have taken place. All that I have attended have been more or less successful, but it is a question, for the time and money expended, whether so many small shows being held is in the interests of the community generally, or would it be better only to have larger or district shows assisted by the Government. There are not many silos here, but those that have them had them filled ten days to two weeks ago. The fodder corn was rather better than usual, in so far that there were more ears of corn and they came to greater state of maturity. The potato crop will be light, but the quality is generally good. The other root crops are good. The mangels were the finest I have ever seen at the shows. Pastures are fairly good, owing to the absence of frosts so far and favorable weather for the growth of grass. We are not having as much rain as we would have liked. Threshing is progressing vigorously, and the crops are generally turning out fully up to our expectations. One farmer stated to me that he had fifty bushels of peas to the acre off ten acres. The fall wheat was sown earlier than usual, and put in in better shape, and is now looking finer than usual. In fact, if this growing weather continues much longer, many fields will have too much top by winter if we have a heavy fall of snow. The prices of grain are somewhat firmer than they were. Hay is abundant and no sale for it, except in small quantities. Lambs are selling at high prices, from 4 to five cents per lb.; there are some being fed on rape. The demand has been active and the prices good for spring stock, particularly sheep. We are commencing to pack the winter apples, about a half crop; quality good; prices range from \$1 to \$1.50 per barrel net to the grower. They are mostly bought for the British market and a few for Manitoba. A short time ago I met a first-class feeder, and he said since he had put cement floors in his stables he had not had lice or other parasites on his cattle, although previous to doing so he had been very much troubled with them, and he was anxious to know if any other feeders have had the same experience. J. T.

Bruce Co., Ont., Oct. 6th, 1898.

**Experimental Farm, Nappan, N. S.**

On a hasty visit to this farm we learn that the crops have been good on the whole, except wheat, which rusted very badly, all the varieties in the trial plots having suffered more or less, some very severely, the bald varieties less than bearded, but with all this the yields are nearly equal to those of last year. Oats on extremely poor land, which is the character of the greater part of the farm, rusted slightly and are below the average in quantity and quality. Peas ditto. Barley of 6-rowed varieties quite up to the average. Roots, corn and hay well up to the standard. Six acres clover yielded over three tons per acre first crop, and second crop is estimated as equal to one ton per acre. Potatoes in trial plots equal to average, one variety yielding at the rate of 440 bushels per acre. The season was unfavorable for corn in the early part, but rapid growth has been made in the last two months, and the crop will probably average 15 tons per acre. Some varieties are estimated at 20 tons, and in fairly advanced condition for ensilage. Turnips, mangels and carrots very good.

**Lincoln County.**

Fall wheat constitutes a somewhat larger acreage than usual, and thanks to the many showers and warm weather looks in fine condition. Corn is hardly likely to be so good a crop as in 1897. There is no rush into the silo business, though the few farmers who have them are quite satisfied that they can not only handle their corn with greater economy, but that they can keep far more stock on the same land. There is big money in a silo on even a 50-acre farm. Milch cows are somewhat scarce, good fresh animals changing hands at from \$40 to \$45. First-class cattle range from \$4.20 to \$4.50 per cwt.; butchers at \$3.50. Stockers are quite scarce. Butter, which was hardly to be bought a little while ago for 25c., is now bringing 20c. Eggs are steady at 20c. Pork has been steadily declining during the last five or six weeks, and buyers are now paying 4c., live weight. Hay is much the same, \$5 to \$5.50 per ton. It is somewhat difficult to get accurate figures as to the potato crop. They have been selling freely at 50c. a bushel, but very few farmers have commenced to dig. The acreage in this county is much the same as last year. The early plantings suffered badly during the hot weather of August and early September. Those planted later have come on wonderfully during the last month, and are still green, and I should not be surprised to see nearly as big a yield as last year. Potatoes anyway are likely to be good stock. Pretty much all the fruit, with the exception of apples and a few grapes, is gone. The peach crop was very small and good fruit brought old-time prices. Grapes have been a fairly good crop and exceptionally clean. Prices have been running low, and the uncertainty as to the result of the plebiscite kept wine men from buying and threw a great quantity of grapes on the market that would otherwise have been withheld. During the last week hundreds of tons have been bought for wine at prices ranging from \$12 to \$17 a ton. The eastern part of the county is pretty well cleaned up, and the markets are rapidly rising. The fortunate ones who still have a good part of their crop left will reap the benefit. Lincoln has been the proud possessor of a "cyclone" for a little while recently, and the county is not pining for another. Hundreds of apple and peach trees were blown out of existence, and a good deal of damage done by the hail which accompanied the storm. In a strip half a mile wide through the township of Grantham, fruit and vegetables of all kinds were injured so as to be almost unsalable. The apple crop is very small and quality poor. Buyers are paying from \$1.50 to \$1.75 for good fruit and find it hard to get. A third of a crop would be somewhere near the mark this year. Oct. 8th, 1898. M. B.

**Prince Edward Island.**

The crop is now all harvested, except a few of the potatoes and the root crop. The crop promise of the earlier part of the season has not been realized at harvest. Wheat is not half a crop, owing to rust. Oats not up to the average, the later sown having suffered seriously from blight. Potatoes are not more than half a crop. The blight struck them early in September, and in many fields the tubers are half rotten. The potatoes grown here are a late variety, and under favorable circumstances keep green till the first of October, when they are generally dug. Root crops have grown too much to top this year, and the bulbs are neither large nor shapely, but they have three weeks yet to grow and will likely come out pretty well. Corn did well till Sept. 24th, when it was killed with frost. It was, however, in the glazed stage, and will make fair silage. Grass has been good up till now, but from this on cattle will have to be stabled and fed. The dairy business is the farmer's right bower this year. The milk supply has kept up well all through this season. The cheese output will be at least 50% more than any previous year. The make of butter has also greatly increased. Several more cheese companies will put in either separators or "butter plants" this fall and continue their dairy business on through the winter. September cheese is worth about 9c.; butter, 20c. Wheat not quotable (none for sale); oats 28c.; potatoes 20c.; hay \$5; good beef 6c. dead weight; lambs 2 1/2c. live weight; hogs 4c. to 4 1/2c. We are now, for the first time in many years, placed in direct communication with the British markets, by having an ocean steamship, the "Lake Winnipeg," of the Beaver line, making regular calls at Charlottetown. As this steamer is fitted with cold storage, it will enable us to ship our dairy produce, fresh meats, bacon, poultry, fruit and eggs to the English market in the best condition. This steamer made her first trip about two weeks ago, and all her space was fully occupied with such exports as live cattle and sheep, fresh meats, bacon, fruit, poultry and eggs. The P. E. Island Fruit Growers' Association held a meeting a few days ago and decided to make a trial shipment of 100 barrels by the next steamer, to test the suitability of different kinds of Island apples for the English market. If our apples do well there it will give quite a stimulus to apple-growing here. W. S.

Oct. 7th.

**Chatty Stock Letter from Chicago.**

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

CATTLE.	Extreme Prices.	Two weeks ago.			
		1897.	1898.	1898.	1898.
1500 lbs. up.....	\$4 65 to 5 85	\$5 70	\$5 55	\$5 15	
1250 @ 1500.....	4 35 to 5 80	5 70	5 35	5 30	
1200 @ 1250.....	4 10 to 5 70	5 85	5 35	5 05	
1050 @ 1200.....	4 00 to 5 70	5 60	5 25	5 00	
900 @ 1050.....	4 00 to 5 60	5 40	5 10	4 40	
Fed Westerns.....	3 90 to 5 60	5 60	5 25	4 85	
<b>HOGS.</b>					
Mixed.....	3 45 to 4 00	4 10	4 35	3 80	
Heavy.....	3 35 to 4 00	4 07 1/2	4 35	3 35	
Light.....	3 50 to 3 95	4 07 1/2	4 40	3 20	
Pigs.....	2 25 to 3 90	3 90	4 30	3 45	
<b>SHEEP.</b>					
Native.....	2 25 to 4 60	4 75	4 35	3 50	
Western.....	3 50 to 4 40	4 45	4 10	3 60	
Texas.....	3 75 to 4 20	4 12			
Lambs.....	4 00 to 6 20	6 40	5 80	5 00	

The above prices cover a period of one week. There has been a big drop in cattle and hog prices within the past two days, cattle selling 25c. to 40c., and hogs 25c. lower than the above range. It has been many years since cattle growers have had the satisfaction of loading such excellent beef herds as are being shipped from Eastern Montana. The Montana ranchmen are not gathering their cattle very closely this fall, and a good many three-year-olds will be carried over. This is the first year on record that the cattlemen of Texas had to go to the Indian Territory for feeding cattle. Usually the tide has been strongly in the other direction. Exchanging steers constitutes a large share of the activity in the cattle trade at present. There is no stampede among people to get into breeding stock. Many of them seem to feel that by the time they could go to breeding and get stock ready to sell there would be too many others in the same fix. As a consequence there isn't as much being done toward hunting up breeding stock as might be expected from the big demand there is for stock to feed. A well-known Chicago man is just back from an inspection of the supplies of young cattle in Manitoba. He said he found a good many cattle in farmers' hands about Winnipeg. They were mostly in small bunches, and were held at about \$16 to \$20 per head for yearlings. He thought the freight, duty, etc., would make them cost about \$1 per 100 pounds more put down in Wyoming, Montana, or Nebraska. There were large herds farther westward along the C. P. R., but he argued that since a good many young cattle had already been shipped westward from Winnipeg, it would be poor policy for him to pay for bringing them back again. He was commissioned by some large cattle companies to see what he could do in the way of buying good young Canadian cattle to stock the depleted ranges on this side of the line, but the limit of his price and the depth of the early snows prevented him from doing anything upon his recent trip. He says the cattle in that country show better average breeding than the cattle in Ontario, and it looked to him as if it would be profitable business bringing them this way. Roanoke & Halligan, Toronto, sold on the Chicago market a train of Canadian stock cattle. Wm. Murley and son Charles also had a string of Canadians here. These young cattle sold at \$4 to \$4.60 for steers, and \$3.30 for heifers, the steers averaging 400 to 900 pounds, the lightest weights selling at the highest prices. A bundle of 500 stock cattle picked up from all quarters sold at an average of \$3.50 per 100 pounds, averaging about 550 pounds.

The hog market suffered quite a setback at the opening of the season for mess pork. Packers seemed determined to buy at reduced prices, and were very successful.

A lot of 1,600 Texas goats sent to Cuba to sell to the Spaniards did not find sale, and had to be returned to their native plains.

The lamb market is again on the up grade after having been quite a little lower.

Actual Chicago Union Stock Yards receipts of cattle, hogs and sheep for September, 1898, and the first nine months of the year, with comparisons:

Receipts—	Cattle.	Hogs.	Sheep.
September, 1898.....	226,176	660,019	359,698
September, 1897.....	262,772	601,127	397,100
September, 1896.....	248,244	664,095	377,698
September, 1895.....	270,795	448,284	339,282
Nine months, 1898.....	1,887,371	6,109,636	2,707,111
Same period, 1897.....	1,893,462	5,943,588	2,638,457
Same period, 1896.....	1,949,209	5,502,189	2,685,708
Same period, 1895.....	1,832,228	5,503,897	2,493,730

Toronto Markets.

The general tone of the market is weak, with apparently a tendency to lower prices on all classes of stock.

Export Cattle.—There were few export cattle offered, and prices ranged for best choice, from \$4.40 per cwt. to \$4.50; light exporters at prices ranging from \$4.00, \$4.20, and \$4.40.

Butchers' Cattle.—The prices for the best kind of butchers' cattle were firmer, the quantity not so large as the last two weeks.

Bulls are in great request for filling the Goddardham byres. Messrs. Harris purchased 200 last week at prices averaging \$3.50 per cwt. up to \$3.80 for choice 1,000-lb. animals.

Feeder.—This class of cattle is in good demand, at prices ranging from \$3.60 to \$3.75 per cwt. Weights wanted are those averaging from 900 lbs. to 1,100 lbs. each.

Stocks.—Prices for this class of cattle were lower in consequence of adverse reports as to recent sales in Buffalo.

Sheep.—Prices a little easier. Ewes sold at \$3.50 to \$3.60; bucks at \$2.75. The quality of sheep coming forward is not good enough for export.

Lambs.—Spring lambs sold at \$2.75 to \$3.50 each, or \$3.75 to \$4 per cwt.

Milk Cows.—Scarcity of dairy cows raised the price of good ones. Those on offer were of medium quality.

Hogs.—There has been a very heavy run of hogs this week, over 9,000 on offer; \$4.25 is the price for next week, with a further decline in prospect.

Dressed Hogs.—The market keeps well supplied with dressed hogs. Prices are inclined to fall; \$5 to \$5.25 per cwt.

Grain Market.—Receipts of grain on the St. Lawrence market were large—6,550 bushels. Prices of wheat are a trifle lower than a week ago.

White steady; 3,000 bushels sold as follows: White, 65c. to 66c. per bushel; Red, 64c. to 65c. per bushel; Goose, 62c. to 63c. per bushel.

Oats.—Firm; 2,000 bushels sold at 27c. to 28c. per bushel. Barley.—2,000 bushels selling at 40c. per bushel.

Good demand. Peas.—200 bushels sold at 55c. to 56c. per bushel. Hay.—About 40 loads selling at \$7.50 to \$8.50 per ton for timothy, and \$5.50 to \$6.50 for clover.

Silage.—Prices easier; 6 loads sold at \$6 per ton; bundle at \$7 to \$8.

Hides continue steady at former quotations; No. 1 green at 8c.; No. 1 steer at 9c.; No. 2 green at 7c.

Butter.—Choice dairy butter in good demand; choice creamery rolls at 30c.; creamery boxes at 18c. to 19c. per lb.

Eggs.—Best quality scarce; ordinary stock at 15c. to 16c. per doz.; choice new laid at 18c. to 20c. per doz.

Cheese.—Business in this line fairly brisk; no stocks accumulating; prices firm at 9c. per lb.

Montreal Markets.

Cattle.—There is really very little change to note in the general standing of this market for live stock.

Hides and Skins.—Market practically unchanged, with the competition in the lamb skin market keen, prices for pelts going up to 70c. and 75c. each.

Sheep and Lambs.—Receipts of sheep have not been overly abundant, and with a good demand all suitable offerings have been quickly absorbed.

Hogs.—Receipts have been liberal, and prices in consequence a shade easier, best selections making \$4.75; mixed, \$4.50 to \$4.60 per cwt. off cars.

Live Stock Shipments.—Exports were a little heavier this week than last week, the total for the two being 6,591 cattle, 4,022 sheep, and 119 horses.

British Live Stock.—The British cattle trade is weaker and prices are lower. United States are worth 5 1/2. Canadian 5 1/4. Argentine 5 1/2.

Live Stock Exports.—The live stock exports for the two weeks ending Wednesday, October 12th, as reported by R. Bickerdike, of the Live Stock Exchange, Montreal, to London, Liverpool, Manchester, Newcastle, Bristol, Glasgow, are 7,863 cattle and 2,761 sheep.



AT SATCHAWAY BAY.

The station was nothing more than a platform. As for the town, that was scarcely a village, and not even a chimney of it could be seen from the railroad.

This was a woman looking to be twenty-five. She was dressed in rather a conspicuous gown, the skirt dotted with large figures of arabesque design.

The girl and the woman looked at each other for a minute before speaking. It was inevitable that they should speak.

"It's a mite warm, isn't it?" The girl began the conversation. "Yes, I've found it so in walking," answered the woman.

"How far is it to the town from here?" "About a mile and a half. But it ain't much of a town."

"You can tell me lots I want to know, then," she began excitedly. "I'm going there for the first time, and of course I'm green."

"Not going on the train?" she exclaimed. "But you said you were going to the city."

"I am, but I'm obliged to walk. I suppose I ought to be moving on now."

"But I don't understand!" The girl's gaze was fixed on the conspicuous gown, the befeathered hat, and the high-heeled French boots.

"Suppose I tell you the whole story!" said the woman. "Oh, I wish you would! I'm sure it must be an awful interesting story."

"It's awful, I can vouch for that part of it," rejoined the other, with a sad sort of smile.

"Then you are an actress!" exclaimed the girl. Her eyes glowed with admiration.

"Yes, I am an actress; but listen. I had a good part last season and saved a little money, but in the new play there was a smaller list of roles and none for me."

"Then the woman paused an instant while a chipmunk skipped out on the end of a tie and stood regarding her with his head on one side as if listening too."

"Two nights ago," she went on, "what I feared happened. The show stranded at Allingford, our trunks were held, and the manager shipped out."

"Here," she said, pressing it on the woman, "this will pay your fare to the city. I'd saved it for mine, but I ain't going now. Yes, you must take it. What you've told me has been more than the money's worth to me, and I feel I owe it to you, so say no more about it."

The woman's further protests were lost in the shrill sound of escaping steam as the engine came to a snorting standstill just beyond the little platform.

The girl remained standing there, thoughtful, so long after it had gone that the chipmunk had begun to trot fearlessly back and forth over the ties again.

The girl caught a fleeting glimpse of him and smiled, and then looked about at the leaves, flecked with sunshine, and backed by the everlasting hills.

"A crust of bread and a corner to sleep in, A minute to smile and an hour to weep in, A pint of joy to a peck of trouble, And never a laugh but the means come double; And that is life!"

"A crust and a corner that love makes precious, With the smile to warm and the tears to refresh us; And joy seems sweeter when cares come after, And a moon is the finest of falls for laughter; And that is life!"

"Life. A crust of bread and a corner to sleep in, A minute to smile and an hour to weep in, A pint of joy to a peck of trouble, And never a laugh but the means come double; And that is life!"

"So why should we heed—as the days go by— The gloom or the light of the weather and sky Of the outside world, when we're busy all day? So happy we are, at work or at play!"

"So why should we heed—as the days go by— The gloom or the light of the weather and sky Of the outside world, when we're busy all day? So happy we are, at work or at play!"

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Meet Them Half Way.

"People have been so very kind and cordial to me," said a young lady, who had just come, a stranger, into a new place.

"I think it makes a great difference how one responds to a welcome," replied one of her newly-found friends.

Is there not a thought in this to make us reflect a little when we fancy we have been treated coolly by others?

There is many a lonely heart waiting for just such a bright smile and kind word as you know how to give.

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### The Chickens' Parade.

(Continued from page 471.)

This is some big gun amongst them, I thought; I will address his lordship. "Good evening," I said, in my politest way, "I imagine you are the chicken."

"Excuse me, sir," the little creature said, with a lordly air, "I am not a chicken—I am a fraction."

"I beg your pardon, Sir Fraction," I said. "I imagine, Sir Fraction, that you are the—person—no—the—the—"

"The Commander-in-Chief," said the Fraction, coming to my assistance.

"Thank you," I said. "Will you be so good as to command these chickens to right-about—turn—quick—march out of this room? I have had as much of their company as I desire."

"Sir," replied the Fraction, haughtily, "I do not take my instructions from you!"

Turning round and facing the main body of his troops, he cried, "Fall in!"

At the word of command the chickens on the floor ranged themselves in lines of two deep.

"Attention! Form fours!"

The movement was not done to the satisfaction of the Fraction.

"As you were!" he shouted at the top of his voice.

"Form fours! Right turn! By the right, quick march!"

The chickens marched across the room, keeping step in the grandest style.

"Right about turn," roared the Commander. The chickens turned round without breaking the line a hair's breadth.

"Halt!" cried the Commander. Instantly the moving ranks came to a dead halt. Not a single chick in the whole battalion moved a muscle an instant after that halt. The Fraction was pleased. "Front!" he said. "Stand at ease!"

"Now," said the Commander-in-Chief, proudly facing me, "what do you think of that?"

"I think," said I, "that it was a sight that would do the heart of any soldier good."

The Fraction bowed, and turning to his army cried, "Attention! Number!"

Clearly and rapidly did the chickens respond to the order.

"One, two, three, four, five, six, seven, eight, nine, ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, one hundred, two hundred, three hundred, four hundred, five hundred, six hundred, seven hundred, eight hundred, nine hundred, one thousand, two thousand, three thousand, four thousand, five thousand, six thousand."

At six thousand the numbering ceased, much to my relief.

"Our main body," said the Fraction, consists of six thousand chickens. Our reserve force number a little over a thousand."

Here he turned towards the chickens on the table, the mantelpiece, the book shelves, and called, in a powerful voice, "Reserve! Number!"

Equally smartly the reserve numbered themselves, the last number being one thousand one hundred and fifteen.

"One thousand one hundred and fifteen," the Commander said to himself; "that cannot be right. Chickens of the reserve," he spoke aloud, "a mistake has been made in the numbering. Unless the two chickens who have not numbered

do so at once you shall all have half an hour's punishment drill."

One thousand one hundred and sixteen," squeaked the chick on Philo's head.

"One thousand one hundred and seventeen," piped the youngster who had concealed himself at the back of my neck.

"Six thousand of the main body," said the Fraction, bowing politely to me, "and one thousand one hundred and seventeen of the reserve, a total of seven thousand one hundred and seventeen. Adding to this your humble servant, who is reckoned as a half, you have the grand total of seven thousand one hundred and seventeen and a half."

It was the number of eggs I had eaten.

"Are you familiar with the number? Ever met with it before?" said the Commander-in-Chief, looking knowingly at me out of his one eye. "Eh?"

"Exceedingly probable," I replied, carelessly.

"Well," said the Fraction.

"Well," I replied, "proceed."

"Impudent monster!" said he, "Apologize!"

"What! To a Fraction? Never. I defy thee and thy troops as well!"

The Commander-in-Chief was nettled. Turning quickly round, he cried in a loud voice, "Present arms!"

To my utter astonishment (for I had not the least idea the chickens were armed) each chick presented a tiny rifle of the latest and most deadly pattern.

The Fraction faced me again and repeated his former question: "Well?"

"Man," said the Commander, quite furiously for half a chicken, "six thousand loaded rifles are at this instant presented at you. I have but to give the word and you are riddled through and through with six thousand bullets."

"Well?" I said, using the Fraction's word.

"Shall I give that word?"

"Please yourself, my dear sir—do not consider me in the least; besides, you do not take your instructions from me."

The Fraction, muttering "Vengeance," turned sharply round on his one leg, and I saw plainly enough that he was about to give the word that would end my fate. "Britons never shall be slaves!" I shouted. "England expects that every man and dog this day shall do his duty! Three cheers for the roast beef of Old England! On, Stanley, on! Charge, Chester, charge! Philo for ever! God save the Queen! Hurrah!"

The Fraction waited until I had finished.

"Fire!"

A noise like the pealing of thunder followed close upon the word. I started—gasped—awoke.

The fire was out, but Philo's noble head still lay upon my knee.—Canning Williams.

### "The Young Heir."

"Tantara—tantara!" We almost seem to hear the horn which "proclaims it a hunting morning," as an old song says. This beautiful picture graphically displays a stirring scene. The hunting party has just left the beautiful park seen in the background, and all are bent on royal sport. Perhaps

this is the first time the proud father and mother have taken their handsome boy to the "meet"—but he looks quite at home on his big horse, and a thorough little gentleman in the way he lifts his hat in salute to the group of man and dogs—for the dogs evidently know him, and, I dare say, he has had many a game of romps with them. This picture is so finely drawn that the interest in the principal figures is divided with admiration for the grand old trees and rich natural surroundings of the stately ancestral home of this brave "Young Heir," who looks so full of life and hope.

Mr. Isaacstein—So you tinker young Rosenbaum means pecuniness? Rebecca Isaacstein coyly—Yes, papa; he talks nodding but nonsense.



"THE YOUNG HEIR."

"Rubbish!" I replied.

The Fraction's eyes glittered with rage. "Ready!" he cried. In less time than it takes to tell, six thousand rifle barrels were placed in position.

"Present!" Six thousand rifle barrels were directed at my head.

The Commander, as though to give me a last chance to apologize, addressed me as before: "Well?"

"Yes," I said, "I have seen the well at Carisbrooke Castle and the donkey in the wheel. It is a big donkey to work that wheel all the day long, but it is not such a big donkey as you are, Sir Fraction, if you think I am afraid of you or your fledglings."

"Well?" repeated the Fraction, angrily.

"Exactly," I replied, "the wheel is attached to a rope, and the rope to a bucket, and as the wheel goes round the bucket comes up."

"Well?"

"I think a photograph will show you more clearly what I mean." I was in the act of reaching for my album when I felt a sharp prick in my check. It was from the point of the Fraction's sword, which needle-like weapon he was now flourishing in a threatening way around his head.

"Man," hissed the Fraction, in a frenzy, "do you wish to die?"

"Well, really," I replied, "that is rather an important question to settle off-hand. I will consider the matter and let you have an answer in due course, as we say in business."

### MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES,—

It always seems rather sad to watch the first falling of the leaves, and as they flutter down, gradually forming a leafy carpet, we cannot quite stifle a sigh for the sweet summer, all too brief. It only seems the other day since we were saying, "Look how beautifully the trees are budding—it will soon be summer!" Now—how different! Still, dear girls, there is much of benefit to us in all these changes of season when we regard them as not simply Spring, Summer, Autumn, and Winter, but as symbols of God's great goodness and forethought, of how He orders all things for good and wisely ordains all these changes of season so that they work to a perfected whole for our benefit. So, although we cannot, as I say, help a sigh of regret for summer, we can try to blend our regret with thankfulness.

These falling leaves, too, bring another picture and make us think of the falling leaves amongst those dear to us. There are few homes in which there are not at some time some "falling leaves." It is a law of Nature, and, doubtless, a wise one, that age should weaken before youth, and when this happens in your homes, dear girls, a responsibility rests upon you which must not go unheeded. I don't think many of my girls need to be reminded of this, but there may be a few who sometimes get a little impatient—for who amongst us is without faults?—any duty ever seems irksome try to

remember that in caring for the weak you are doing God's own work. If we have to sometimes sacrifice self, can we not remember that these dear "falling leaves" were once young and full of health and hope, and that now, through age or sickness or sorrow, they have to depend on the care of others, for whom, perhaps, in years gone by they have in their turn sacrificed much. So, my dear girls, care well for those who are gliding away from you. You may not, perhaps, be perfectly satisfied with your efforts (few earnest people are, and this world of ours is full of disappointments), but if you have honestly tried your utmost you will surely find deep comfort in that thought when the time comes for a breeze of Heaven to come and lift your falling leaves and bear them away to rest. Your loving—  
MINNIE MAY.

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. Address all work to Miss Ada Armand, Pakenham, Ont.]

1-DIAGONAL.

Cross Words—  
1. Kind to strangers.  
2. Despotism.  
3. An adverse party.  
4. Firmness of purpose.  
5. Honour.  
6. Pleasant.  
7. Inadvertence.  
8. Simile.  
9. Methodical.  
10. Mean.  
The diagonal is a supposition. "DICK."

2-ENIGMA.

I am something with both countenance  
And hands to bless you all.  
I have good works for my company,  
Though my body's rather small.  
There's a weight upon my heart  
Which gives me great renown,  
And though I have no feet at all,  
Quite often I run down. W. S. BANKS.

3-TRANSPPOSITION.

Ehyna gtmuroi cake no toerb of eeddpa  
A rmtaer ro a vinsrae ro a drafel  
Dib each no hrteo ofr eesaaemio aial  
Lil neo samm eesahwne wgro eht iteg hure fo la.  
"THE KHAN."

4-ENIGMA.

My First denotes swiftness of motion  
Of nimble young fingers and hands;  
My Second would cause a commotion  
If seen upon Newport's soft sands;  
My whole is a time-honored guest,  
Creating mirth, laughter, and jest. A. F. F.

5-CHARADE.

My First each sage must deeply do  
Ere he can truth disclose;  
My Second flows in numbers sweet,  
But never yet in prose.  
If to my neighbors I should go  
To spend a social hour,  
My Whole would sweeten every meal  
And rob time of its power. "DICKENS."

6-NUMERICAL.

A Shakespearian Quotation.  
22, 11, 20, 4, 7, 1, 14, 19—turned about.  
15, 10, 16, 12, 25, 13—cis-mors.  
23, 9, 13, 5, 8—condition.  
2, 21, 17, 21—a married woman.  
6, 26, 3—yes. "OGMA."

7-DOUBLE ACROSTIC.

(Four-letter words.)  
Primals and finals name two naval commanders. 1. A Scotch projection of land into the sea. 2. A kind of poem describing heroic deeds. 3. An instrument of punishment, used especially in former times on board ship. 4. A name given to ships when speaking of their number. 5. The number of times the American and Spanish fleets engaged in battle in Western waters. 6. A combination of fleets. "OGMA."

8-HALF-SQUARE.

1. Having columns only in front; 2, tries; 3, drank to excess; 4, likewise; 5, a color; 6, an adverb; 7, a letter. "DICK."

9-CHARADE.

My first is under; my second is a small bag; my third is a beverage; my fourth is a pronoun of first person; my fifth is a preposition; my whole is an attestation, and also something very important in the making of a good newspaper. "DICK."

10-SQUARE WORDS.

1, illustrious; 2, a rambler; 3, to assert; 4, a female name; 5, to fear. A. F. F.

11-WORD-SUBTRACTIONS.

(Example: Take a small animal from a sea-robber and leave pastry—pl-rat-e.)

1. Take a measure of paper from asked and leave termination.
  2. Take an antique vase from to supply belongings and leave sea animals.
  3. Take part of the head from having clothing and leave part of a bird.
  4. Take certain from stored up and leave step.
  5. Take an article from a parent and leave distant.
  6. Take a girl's name from a day of pleasure and leave sanctified.
  7. Take a conjunction from a tale and leave a pen.
  8. Take a negative from glory and leave a measure of time.
  9. Take an insect from required and leave marry.
  10. Take a bird-beast from a discussion and leave an English river.
  11. Take loose from a brilliant collection and leave joyous.
  12. Take devout from defeated and leave a boy's name.
- (Initials of words subtracted give "open for solution.") "OGMA."

12-CHARADE.

The pilot warned; they heeded not,  
As by some evil genius cursed;  
They weigh the anchor, spread the sail,  
And glide before my favoring first.  
But e'er behind the ocean's rim  
The broad sun dipped, afar they spy  
The gathering cloud-rack, louder sings  
The gale; to whole is now the cry.  
Alas, 'tis vain! From certain doom  
The fated crew naught can—my last;  
For on the rocks the gallant ship  
That night a mangled wreck was cast. A. F. F.

13-HALF-SQUARE.

1, the stopper of a cannon; 2, foreigners; 3, a city in Italy; 4, a kind of turf; 5, a house of entertainment for travelers; 6, old style (abbreviated); 7, a letter. "DICK."

14.

Industrious families are often robbed of my "first,"  
Which does not quench the intruder's thirst.  
A grave ascetic of historic fame  
My "first" and "second" ate for daily meat.  
Join them: a lovely flowering tree your name;—  
A grateful shelter from the summer heat. MARCEL ROSS.

15-CHARADE.

My first is the color of the summer sky  
When winds with roses daily;  
My second, a sweet-voiced herald,  
Sends His word o'er hill and valley.  
My whole its bright face cannot hide,  
The bees and children know it;  
Tis Scotland's darling, loved alike  
By bee and child and poet. MARCEL ROSS.

Answers to September 15th Puzzles.

- 1.—Wheat-beat-eat-at-t (at tea).
- 2.—Anagram: Double Diagonal; Logogram; Conundrum; Decapitation; Acrostic (a cross tick); Kiddle; Transposition.
- 3.—Preston, Acton, Kincairdine, Elora, Napanee, Harriston, Aurora, Mount Forest, Pakenham.
- 5.—In-ian. (There being a misprint in the second last line of this puzzle which misled many, we shall not count it. "Request" should have read "be guest.")
- 4.—A n g e l o p a s c h a l  
o i l e d o h a e  
p a p e r a o o  
t a m e r T o r m e n t  
l i v i d I l i u  
t a s t e f e s t i v e
- 7.—Ladle.
- 8.—Ireland-ireland-eland-land-and-nd-d.
- 9.—M-out-real; At-l-anta; Wall-a Wall-a; New-Or-lean-s; Port-ge-la-Franke.
- 10.— s o l  
i n k  
a t e  
s o o t e m i s t  
o n t o l o g i c  
v i s c o s i t y  
a g a  
v i s  
a o t
- 11.—Coo-came-rat-ion.
- 15.—e p y  
s a l e  
p l e a  
y e a r
- 13.—Inch-Chin.
- 14.—Ma-chine.

12.—Chatahochee, Roanoke, Rio Grande, Harricanau, Caniapouca, Saskatchewan, Atahwahpishat.

SOLVERS TO SEPT. 15TH PUZZLES.  
M. R. G.; "Toledo"; H. C. G.; Lizzie Conner.  
ADDITIONAL SOLVERS TO SEPT. 1ST PUZZLES.  
Robt. J. Bryan; "Margaret"; Lizzie Conner; Jessie Hyde; Peter Hyde; "Eureka"; Maud Weld; H. C. G.; "Dick."

COURTESY CHAT.  
"Mal."—Your letter just received to-night. Thank you, you are very kind. I only wish I could. I shall certainly write you some time soon. Your puzzles are in good time.  
"Toledo."—What a fine time you are having—I almost envy you. Dear me, I'm afraid the young ladies in your country will spoil the sterner sex "if they don't watch out." Thank you for your kind wish. Write soon again.  
W. S. B.—I am glad you are again a regular reader of our paper. Indeed O—did not favor me this summer, but "all things come to him who waits." I trust we may hear from you very regularly.  
Esther.—On of course receive credit, but your work this time is too late to insert your name. But never mind that, you buy little housekeeper. I know just what it means—I've tried it. Come again whenever you can.  
H. C. G.—I had hoped for a longer note, for although too busy to respond properly, I like to hear from all my "cousins." Where are your "originals" this time?  
M. R. G.—Only it's no polite to use slang I'd say you were a—(what shall I call it?) a—"beast" to solve puzzles. All answers not being in, I cannot send returns to London until next issue.  
"The Khan."—Khan you not come more regularly? You khan puzzle some of our puzzlers very cleverly, to tell the khan-did truth.  
"Dickens."—Your puzzles are getting better all the time.  
Is A. F. F. your brother?

THE QUIET HOUR.

Individual Responsibility.

God bends from out the deep and says—  
"I gave thee the great gift of life;  
Was thou not called in many ways?  
Are not My earth and Heaven at strife?  
I gave thee of My seed to sow—  
Bringest thou Me My hundred fold?  
Can I look up with face aglow  
And answer, "Father, here is gold!"

—Lowell.

Every seed bears fruit of its own kind. Wickedness is a work that deceives its performer. It may do the harm which he intended to a neighbor, but it cannot procure the good which he intended for himself. Every man's life, and every moment of it, is a sowing. The machine is continually moving over the ground and shaking; it cannot, even for a moment, be made to stand still, so as not to sow. It is not an open question whether I shall sow or not to-day; the only question to be decided is, Shall I sow good seed or bad? Every man always is sowing for his own harvest in eternity either tares or wheat. "According as a man soweth so shall he also reap." He that sows the wind of vanity shall reap the whirlwind of wrath. Suppose a man should collect a quantity of gravel and dye it carefully so that it should resemble wheat, and sow it in his field in spring, expecting that he would reap a crop of wheat like his neighbors in harvest. The man is mad; he is a fool to think that by his silly trick he can evade the laws of nature, and mock nature's God. Yet equally foolish is the conduct, and far heavier the punishment, of

the man who sows wickedness now and expects to reap safety at last. Sin is not only profitless and disastrous; it is eminently a deceitful work. Men do not of set purpose cast themselves away. Sin cheats a sinner out of his soul. The devil, man's great adversary, acts by deceiving. He is a liar from the beginning.

The same law sparkles brightly in the counterpart: "To him that soweth righteousness shall be a sure reward." The reward is sure, because it comes in the way of natural law. The reward follows righteousness as fruit follows the seed. The only righteous man that ever lived, the Righteous One, sowed in this desert world—sowed in tears; but He sowed righteousness. Out of that sowing a great increase has already sprung, and a greater is coming. From that handful on the mountain top a harvest shall spring like Lebanon. Behold the husbandman returning home with joy, bringing his sheaves with him. To His members in their own place the same law holds good. Sowing righteousness is never, and nowhere, lost labor. Every act done by God's grace, and at His bidding, is living and fruitful. It may appear to go out of sight, like seed beneath the furrow; but it will rise again. Sow on, Christians. Sight will not follow the seed far; but when sight fails sow in faith, and you will reap in joy soon. More of the Word of God is scattered over the world in our day than at any previous period of the Christian dispensation. The result, though unseen, is not doubtful. In grace, as in nature, things proceed by law, and the ultimate result is sure. W. ARNOZ.

God Knows Best.

Sometime when all life's lessons have been learned  
And sun and stars forever more have set  
The things which our weak judgments here have spurned,  
How when we called He heeded not our cry  
Will flash before us out of life's dark night,  
As stars shine most in deeper tints of blue,  
And we shall see how all God's plans were right,  
And how what seemed reproof was love most true.  
And we shall see how while we frown and sigh,  
God's plans go on as best for you and me,  
How when we called He heeded not our cry  
Because His wisdom to the end could see,  
And even as prudent parents disallow  
Too much sweet to craving babyhood,  
So God, perhaps, is keeping from us now  
Life's sweetest things because it seemeth good.  
And if some time, co-mingled with life's wine,  
We find the wormwood and rebel and shrink,  
Be sure a wiser hand than yours or mine  
Pours out this portion for our lips to drink,  
And if someone we love is lying low,  
Where human kisses cannot reach the face,  
O, do not blame the loving Father so,  
But wear your sorrow with obedient grace.  
And you will shortly know that lengthened breath  
Is not the sweetest gift God gives His friend,  
And that sometimes the able pall of death  
Consoles the fairest boon His love can send.  
If we could push ajar the gates of life  
And stand within, and all God's workings see,  
We could interpret all this doubt and strife,  
And for each mystery could find a key.  
But not to-day. Then be content poor heart,  
God's plans, like lilies, pure and white unfold,  
We must not tear the close-shut leaves apart,  
Time will reveal the calyxes of gold.  
And if through patient toil we reach the land  
Where tired feet with sandals loose, may rest,  
When we shall clearly know and understand  
I think that we will say—"God knew the best."

The shock of death ever and anon brings us back to the only ground of reality, to a sense of the flux of all human conditions, the incessant change that converts solidest seeming things into mist wreath and dewdrop, into fitting cloud shadow and withering herb. But the song is eternal, one with consciousness. It lives in us while memory holds its seat—the sweet, sad song made in the night of our desolation; the nightingale strain we first heard pulsing through the dark hours of hopeless grief. In the place of our sorrow lives at last the thrilling song sent to us as an earnest of the permanency of love, the hope of future meeting somewhere in God's boundless universe. It holds in itself the essence of promise in place of possession, the essence of those words, "Peace! be still!" Stop your raving and your resistance, poor bruised heart! Just rest on the Divine arm, be guided by the Divine hand. And of those other words, it holds the meaning and the essence—"Thy will be done!" It fills the void in the soul with birdlike flutterings of hope and promise. It croons to us when we pine for the touch of the vanished hand, the dear last presence of friend and housemate. All of immortality is pulsing in this song of the night, when faith spreads her wings and rises like the meadow lark into heaven; and then as grief is ever more and more sublimated, the throbbings of the song become constant in us, and we are soothed to rest, and weep no more with that desolating sense of loss and loneliness. But we can never convey this little song to another; each must hear it for himself. We can never explain nor prove its truth to the sceptical or unbelieving. It cannot be reduced to syllogisms, or worked out to a logical conclusion. We can only hint of it vaguely to those who have had a like experience. There are people who would think it all moonshine and nonsense. We are very sorry for them, but we cannot help them. We can only pray that in some dark hour they too may hear its throbbing melody—the little song whose substance is faith, whose refrain is assurance of the Divine competency and goodness. They must be broken on the wheel of loss, their pride of life and self-importance destroyed by blows of the mysterious powers above us, before the song will come to them, breathing peace and hope and trust and perfect submission.

# THE SATURDAY EVENING POST

The Oldest Paper in America  
FOUNDED A. D. 1728  
BENJAMIN FRANKLIN

A high-grade illustrated weekly magazine, equal in tone and character to the best of the monthlies. In addition to the best original matter obtainable, the Post will present each week the best in the newspapers, periodicals and books of the world. It will aim to be to contemporary literature what a Salon exhibit is to art, bringing together the choicest bits of literature from all modern sources and giving them a deserved place together, 'on the line.' We have the literary resources of the world to draw upon. The best writers of the world are practically a retained corps of contributors. It would be impossible for any magazine, no matter how boundless its wealth, to obtain, as original matter, the wealth of literature we have to offer weekly. The handsome illustrations in the Post are original.



To introduce it into your family, it will be mailed every week from now to January 1, 1899, on receipt of

## ONLY TEN CENTS,

Silver or  
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THE CURTIS PUBLISHING COMPANY, Philadelphia

### Shorthorns & Clydesdales

Having recently made a large importation of Shorthorn cattle from Aberdeenshire, Scotland, I will call a public auction sale early in January, at which I will dispose of as good a lot of stock as ever passed under the hammer on this continent. Watch future numbers of the FARMER'S ADVOCATE for my special announcement, and gossip, giving full particulars, etc.

JOHN ISAAC, Markham, Ont.

J. M. GARHOUSE, HIGHFIELD P. O.,  
ONTARIO,

BREEDER OF

### SHIRES, SHORTHORNS AND LEICESTERS,

Offers for sale: 1 yearling stallion, dam sweepstakes mare; also, young bulls, a few cows and calves; Leicester rams and ewes of the choicest breeding and quality.

"The best is none too good," is our motto.  
Malton Station (3 miles) and telegraph office.

### LIVE STOCK AUCTION SALES

Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: Hon. Thomas Ballantyne, Stratford, Ont.; John I. Hobson, Guelph; Hon. M. H. Cochrane, Compton, P. Q.; or this office.  
JOHN SMITH, o BRAMPTON.

### CLYDESDALES



QUEEN.  
Calves. Write for prices or come and see

D. & O. SORBY,  
GUELPH, ONT.

FOR SALE, THE IMP.

Clydesdale Stallion, MacQuaker

Foaled June 18th, 1892. Imported 1895.  
Sired by MacGregor. Terms very reasonable.

HARRY STORY, o PICTON, ONTARIO.

### Maple Lodge Stock Farm

ESTABLISHED 1854.

SHORTHORNS 10 grand young bulls, from excellent milking dams, and sired by the great show bull, Caithness -22065-

LEICESTERS A splendid lot of ram lambs 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 '96, '96, '97. We import and breed the best and have them for sale.

A. W. SMITH,  
Middlesex Co. -om MAPLE LODGE, ONT.

### SHORTHORNS AND LEICESTERS!

AM OFFERING

#### 4 SPLENDID YOUNG BULLS

Two descended from Waterloo Daisy (World's Fair dairy test), balance Missie and Lady Jane strain, and by Keneller of York; as well as a few cows and heifers equally well bred. Also 15 RAM and 15 EWES LAMBS by a Maple Lodge bred sire and registered.

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

SUNNYSIDE HERD OF SHORTHORNS. FOR SALE 7 choice young Bulls from 4 to 9 months old. JAS. GIBB, Brockdale, Ont.

FOR SALE:  
IMPORTED and CANADIAN  
BRED

### Clydesdale Stallions

from one to four years old. Also



### Several Three-year-old Fillies,

all registered and warranted sound. Inspection invited.

ROBT. DAVIES,

Thorncliffe Stock Farm, TORONTO.

W. D. FLATT,

Hamilton P.O. and Telegraph Office,



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

### Ten Choice Shorthorn Bulls

from four to nine months,

### Fifteen Cows and Heifers,

served by imported bull, Golden Fame -26055-; 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—

### FORTY PURE-BRED SHORTHORN HEIFERS AND COWS,

Good as we have ever had. Also a

### FEW YOUNG BULLS

### Berkshires OF CHOICEST BREEDING AND QUALITY FOR SALE

Send for Catalogue and prices. "No business, no harm," is our motto. Claremont Station, C. P. R.; Pickering Station, G. T. R.

### FOR SALE! Good Young Cows

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

H. CARGILL & SON,

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

### Maple Bank Stock Farm

—OFFERS—

### 15 SHORTHORN BULLS

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

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

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

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

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



W. C. EDWARDS AND COMPANY, IMPORTERS AND BREEDERS

Laurentian Stock and Dairy Farm, NORTH NATION MILLS, P. O.

Shropshires and Scotch Shorthorns.

The imported Missie bull, Scottish Knight, at head of herd, assisted by British Knight. Special bargains in young bulls, young cows and heifers of the best of breeding.

Private Sale of Thoroughbred Durham Cattle.

Owing to a change in their business, the farm having been rented for the past five years, JOHN MORGAN & SONS, of Kerwood, Ont., have decided to offer by private sale, for the next three months at Special Rates, the following desirable animals:

GUERNSEYS AND CHESTER WHITES. THE FOLLOWING STOCK FOR SALE: GUERNSEYS - Two year-old bull, winner of six first, two medals, and diploma; two bull calves.



A full circle press shown telescoped for the road. We have been manufacturing them for two years, and have sold them from the Northwest Territories to Prince Edward Island.

MATTHEW MOODY & SONS, TERREBONNE, QUE.

Spring Grove Stock Farm 2 Shorthorn Bulls 2 Of Canadian Duches of Gloucester and Lavender breeding, from imported sires.

SHORTHORN CATTLE Six topdy Scotch-bred young bulls; most of them fit to head first-class herds, and a number of good females for sale.

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.

FOR SALE - A few choice SHORTHORN Heifers; also some young BERKSHIRE Pigs of both sexes, sired by the late J. G. Snell's Victor and Gentry hogs.

NOTICES.

The Windsor Salt Co., Limited, Windsor, Ont., informs us that the three gold medals offered by them at the Toronto, Western, and St. John, N. B., exhibitions, for the best exhibit of cheese, were awarded to the following exhibitors, who used Windsor Salt: - Toronto, A. F. Clark, used Western, Murdoch Morrison, Harrison, Poole; Western, Murdoch Morrison, Harrison, Poole; St. John, Alberton Dairying Association, Alberton, P. E. I. No restrictions whatever were made as to any particular brand of salt being used.

HAMILTON BUSINESS COLLEGE. We are in receipt of the 16th annual announcement of the Hamilton Business College, which is located in the Y. M. C. A. Building, Hamilton, Ont. This college has had a very successful career, and the course of instruction pursued covers everything that is requisite for anyone who intends entering on a business career.

ECONOMIC FARMING. T. C. Wallace (Wallace & Fraser), Toronto, writes us as follows: "The alarmist utterances of Sir Wm. Crookes, in reference to the world's food supply, suggesting a coming state of starvation through the loss of fixed nitrogen by the earth, suggests a train of thought worth noting. The clover and phosphate theory (now indeed a reality), in combination with the nitrogen-gathering principle of the legumes, is well established now that we are able to say so.

Maple Hill Holstein-Friesians (THE GOLD MEDAL HERD OF 1897). SERVICE BULLS: DeKol 2nd's Paul DeKol Duke (Imp.), Sir Pledge DeKol (Imp.). Can spare a few young things of both sexes from strictly first-class cows of DeKol, Impress Josephine Meckthilde, and other famous butter families.

Gossip. We are indebted to Mr. C. R. Thomas, Independence, Mo., secretary of the Association, for a copy of Vol. XVIII of the American Hereford Record. It contains a number of excellent illustrations of prize-winning stock.

The Cleveland Horse Show, to be held at the Central Armory, Cleveland, Nov. 8th to 15th, inclusive, promises to be a brilliant success, as the secretary, C. A. Oils, Jr., and the various other officers are spending no pains to bring it to a successful issue.

8-SHORTHORN BULLS-8 Reds and roans, by St. Louis (a Morton-bred bull), and from out best cows reserved from sale. Also a few females of all ages. FITZGERALD BROS., Mt. St. Louis, Ont.

A FARMER'S SON!

Needs a business education in order to successfully manage the business affairs of the farm. A training in commercial subjects in the

Hamilton Business College

will prove the very best kind of education that a progressive farmer can have. Circulars upon application to

ASHTON FRONTVIEW FARM A. J. WATSON, GASTRIDER, Ont. Shorthorn heifers, by Statesman; and Berkshires 8 weeks old, by Baron Lee; also one Baron Lee bear 15 months old.

SHORTHORN FEMALES

From Clarinda and Nellie females and sired by the royally-bred Earl Warwick Bull.

4 SHORTHORN BULLS

from 6 to 18 months, by Hivrah's Baroness and from Viola bred dams.

HAWTHORN HERD

OF DEEP-MILKING SHORTHORNS. For sale: 4 young bulls of the choicest breeding and good quality, and from A 1 dairy cows.

6 Shorthorn Bulls

from 6 to 18 months old, of choice breeding. Apply to J. R. McALLUM, Iron Station, Elgin County, Ont.

"Gem Holstein Herd."

STOCK FOR SALE! We only keep and breed registered Holstein-Friesians. We have a number of choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell you at more of a loss on reasonable terms. Correspondence solicited.

Maple Hill Holstein-Friesians

DeKol 2nd's Paul DeKol Duke (Imp.), Sir Pledge DeKol (Imp.).

HOLSTEINS FOR SALE

Do you want the blood of DeKol and of Holstein-Bongorfeld? These two cows have produced more butter in seven days than any other two cows that have been carefully tested. Their daughters are large producers.

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.

HOLSTEIN-FRIESIANS

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

2 HOLSTEIN BULLS 2

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

4--JERSEY BULLS--4

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

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

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

CHOICE AYRSHIRES and POULTRY for sale!

A number of fine Ayshire Bulls... JAS. McCORMACK & SONS, Rockton, Ontario.



FOR SALE. The celebrated stock bull, Uncle Sam of Trout River... W. F. STEPHEN, Trout River, Que.

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

CHOICE AYRSHIRE BULLS FROM IMPORTED STOCK. We offer Six (6) Bull Calves, from 4 to 11 months old; good individuals, and from the very best milking strains obtainable in Scotland.

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

MEADOWSIDE FARM J. YULL & SONS, Props. Carleton Place. Breeders of high-class, deep-milking Ayshire, Sweepstake young herd at Ottawa.

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

Ingleside Herefords. UP-TO-DATE HERD OF CANADA! Tamworths Berkshires. Send for illustrated catalogue.

E. D. SMITH, Compton, Que.

ONE FIRST PRIZE BULL. A. J. C. C. Sire King of Highfield, winner of 1st prize over all Canada; dam, St. Lambert's Kathleen, made 21 lbs. 24 ozs. of butter in 7 days; dam of King of Highfield, Signal Rosa May (22 lbs. 4 ozs. of butter in 7 days, and 1st prize over all Canada 4 times), also dam of Unoma May (26 lbs. 4 ozs. of butter in 7 days, and 64 lbs. of milk a day).

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

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, 17-7-0 Alva Farm, Knowlton, P. Q.

EASTVIEW GUERNSEYS. A few Bull Calves out of full sisters of "Ada of Eastview." H. R. BROW, EASTVIEW FARM, CHARLOTTETOWN, P. E. I. MENTION FARMER'S ADVOCATE

GOSSIP.

The Standard Poland-China Record has now reached its 12th volume, a copy of which is just to hand from the secretary, Mr. Geo. F. Woodworth, Marysville, Mo.

The regular annual meeting of the members of the Aberdeen-Angus Breeders' Association will be held at the Leiland Hotel, Chicago, Ill., on Wednesday, November 9, 1896, at 7:30 p. m.

Vol. XIV. of the Dominion Shorthorn Herd Book has just been issued by the secretary, Henry Wade, Toronto, and is, like the preceding volumes, neatly printed and got up. It contains list of premiums won by Shorthorns at Toronto, and the winners of the special prizes given by the Association at various fairs in 1897. The pedigrees contained are of bulls Nos. 23864-28065, and cows Nos. 29201-31147.

A. C. Hallman, New Dundee, Ont., writes: "Stock doing well. My imported stock is doing grand. My other breeding stock never was in better trim. My fall litters are coming strong, and adapting to the present times. I will be able to supply the public with just what they want. Trade never was better. The business done at Toronto Industrial was beyond expectations. A visit to my herd will convince anybody that I have the proper Tamworths for the bacon trade, good length, with nice finish and lots of bone. My Holsteins are doing fine, have some 30 head of all ages of best strains."

Dehorning cattle has become a general practice, and numerous devices have been presented and the recognition of cattlemen for that purpose. Among the original inventions of a practical nature is that of the Keystone Dehorning Clipper (having a V-shaped blade), patented and manufactured by A. C. Brosius, of Cochransville, Pa. The advantages of this blade have been so plainly recognized by others manufacturing clippers that they are very desirous of evading the patent and adapting it, and up to the present time Mr. Brosius has had to close up four different establishments that were infringing on his patent.

Wm. Grainger & Son, London, Ont., writes: "In sending a change of advertisement would say that the young bulls we offer for sale are an exceedingly good lot, reds and roans. Two of them are grandsons of 2nd Fair Maid of Hullett - 9017, the Chicago dairy cow, with a record of 52 lbs. of milk and over 2 1/2 lbs. of butter in one day; and their dams are also grand dairy cows. They are big, lusty fellows and will make bulls fit to head any herd. They are got by the pure-bred Cruickshank bull, Beau Ideal - 2254, by imp. Sittyt Stamp. We have got our barns all completed, and will be in better shape than ever to supply our numerous customers."

Messrs. Wm. Butler & Son, Dereham Centre, whose advertisement commences in this issue, writes: "We have had the most successful season at the fairs that we ever had. Our prizes have been more than 50% in advance of any previous year. We claim the largest and most successful prizewinning herd of Chester Whites in America. Out of 35 first prizes offered for Chesters at Toronto, London, Ottawa and Quebec, our herd won 34, and the remaining one was won by a pig bred by us. In breeding Chesters we have tried to get as much length and depth with as much quality and finish as possible, and we think that our efforts have met with general approval, for we sold at the Toronto exhibition one of our young boars to G. Danbrook of Woodstock for \$100, and 1 of our sows to G. A. Runoiman, of Warkworth, for \$75. Our herd is headed by Frisker 3rd, the best-bred boar in America, his sire and dam having won the sweepstakes in Chicago. He is assisted by Cuban Boy, an imported pig that won first at Toledo last year. We are booking orders for spring pigs from these boars now. Our Duroc herd was never in better shape. We have been very successful in the showing with them this fall, having won the sweepstakes for herd at Toronto. An imported boar, bred by J. M. Stonebraker, which won first at Toronto in 1897 and 1898, heads our herd. We have made several sales this year, and the breed seems to be coming popular in the East as well as the West. We have taken great pains in selecting lengthy sows for breeders, and now have a class that is well-adapted for the present requirements. Where feed is dear, as in Quebec, and where profitable pork production is the aim, they will always be in demand. Our entire Duroc herd is for sale at a bargain, as we do not wish to carry more than one breed. We purchase the entire Tamworth herd of H. George & Sons, and as we do not wish to keep this kind, will sell the remainder at once. They include some noted winners."

BRITISH ADVERTISEMENTS.

HAMPSHIRE DOWN SHEEP. Splendid mutton, good wool, great weight. This highly valuable

ENGLISH BREED OF SHEEP is unrivaled in its rapid and

WONDERFULLY EARLY MATURITY, Possessing, too, a hardness of constitution adapted to all climates, whilst in the quality of

MUTTON AND LARGE PROPORTION OF LEAN MEAT, IT IS UNSURPASSED.

At the great Smithfield Club Show in London, December, 1897, Hampshire Down sheep held their own, the class for wether lambs with 20 entries exceeding in numbers that of any other breed, whilst a pen of wethers stood reserve for the champion plate for the best short-wooled sheep in the show. A Hampshire Down also again took first prize in the dead carcass competition against all other short-wooled breeds.

JAMES E. RAWLENCE, Secretary, Hampshire Down Sheep Breeders' Association, Salisbury, England.

J. E. CASSWELL, Laughton, Folkingham, Lincs., breeder of Lincoln Long-wool Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 20 rams at the "Annual Lincoln Ram Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hogs and shearings for sale, also Shire horses, Shorthorns, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingham, G. N. E.

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., Bldg. Buffalo, N. Y.

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

FOR SALE! A NUMBER OF CHOICE, WELL COVERED SHROPSHIRE LAMBS OF BOTH SEXES. PRICES RIGHT.

D. H. KETCHESON, Hoard's Station, G.T.R. - MENIE, ONTARIO.

Shropshire Sheep AND Chester White Hogs

W. E. WRIGHT, o GLANWORTH, ONTARIO. W. S. HAWKSHAW & SONS, Glanworth, Ont.

Shropshire sheep and Tamworth swine. Quality assured. Write for particulars.

PINE RIDGE STOCK FARM. We are offering twenty registered Shropshire ram and ewe lambs, weighing 100 lbs., at \$10 each. Yorkshire and Berkshire boars and sows, three to six months old, from \$7 to \$15.

W. R. BOWMAN, Mount Forest, Ont. Shropshire Rams bred direct from imported stock, extra well covered.

ROWAT BROS., o HILLSDALE, ONT. J. P. PHIN, THE GRANGE, HESPELER, ONT. Breeding and Importing SHROPSHIRE SHEEP, a specialty.

FARMERS' EXCURSION TO NORTHERN MICHIGAN.

A LARGE TRACT OF CHOICE HARDWOOD LANDS TO CHOOSE FROM AT PRICES RANGING FROM \$1.00 TO \$5.00 PER ACRE, ON EASY TERMS OF PAYMENT, WITH A DISCOUNT OF 5% FOR CASH.

An Excursion to inspect this valuable tract of Farming Lands will leave the following places, via DETROIT & CLEVELAND NAVIGATION CO.'S BOAT: CLEVELAND, Thursday, OCTOBER 27, 10.15 P. M. TOLEDO, " " 27, 4.30 P. M. DETROIT, Friday, " " 28, 9.30 A. M. PORT HURON, " " 28, 2.45 P. M.

The Fare will be: From Cleveland, first-class, \$3.50; second-class, \$3. Toledo \$3 and \$2.50. Detroit and Port Huron, \$2 and \$1.50. Return Trip for parties of ten or more: Cleveland, \$4; Toledo, \$3.50; Detroit and Port Huron, \$2.50. Return Trip for single tickets: Cleveland, \$5.50; Toledo, \$5; Detroit and Port Huron, \$3.50.

THOSE WANTING TO SECURE A GOOD, CHEAP HOME will do well to take advantage of this excursion and see the lands for themselves. I will accompany the party myself, and personally look after their welfare. Upon arrival at Oscoda, the party will be taken over the land and return free of charge. All further information call on or write

A. R. CODE, Colonizing Agent, DETROIT & MACKINAC RY. 1103 Majestic Building, DETROIT, MICH. AU SABLE & NORTHWESTERN RY.

Ottawa Fair Prize List.

HORSES. THOROUGHBREDS.—Stallion, four years old—1 and 2 Ottawa Live Stock Improvement Co., Rockland; 3 A. J. Hassard, Millbrook. Stallion, any age—1 Ottawa Live Stock Improvement Co. Stallion, with improvement of—1 Ottawa Live Stock Improvement Co. Stallion; two years and over—1 Ottawa Live Stock Improvement Co.

CARRIAGE HORSES.—Stallion, four years old—1 J. J. Anderson, Dominionville; 2 A. A. Blyth, Ottawa; 3 Hornby Bros, Ottawa. Stallion, three years old—1 J. J. Wilson, Fitzroy; 2 Thos. Butler, Ottawa. Yearling stallion—1 John Kennedy, Billings' Bridge. Stallion, any age—1 J. J. Anderson, Brood mare, with foal—1 and 2 W. C. Edwards, Rockland; 3 Reid & Co, Hintonburg. Foal—1 and 2 W. C. Edwards. Two-year-old gelding or filly—1 John Kennedy; 2 and 3 W. C. Edwards. Pair-matched carriage horses—1 and 3 Crow & Murray, Toronto; 2 Robt. Beith, Bowmanville. Yearling, gelding or filly—1 Baptiste Aubin, Ironsides; 2 W. C. Edwards; 3 Robt. Beith, Rockland. Single carriage horse—1 Robt. Beith; 2 and 3 Crow & Murray. Pair-matched carriage horses (special)—1 Crow & Murray. Mare, any age—1 Robt. Beith. Pair-matched horses (high-steppers)—1 Robt. Beith; 2 Crow & Murray; 3 Anglo-Saxon Tea Co., Ottawa. Pair of matched high-steppers (special)—1 Robt. Beith. Single horse (high-stepper)—1 and 3 Crow & Murray; 2 Robt. Beith. Four-in-hand team—1 Robt. Beith. Tandem—1 Crow & Murray; 2 Robt. Beith.

STANDARD-BREDS.—Stallion, four years old—1 Graham Bros, Claremont; 2 A. J. Mackie, Pembroke; 3 J. M. Morgan, Ottawa. Stallion, two years old—1 A. Pettipiece, Ottawa. Stallion, any age—1 Graham Bros. Two-year-old filly—1 E. S. Gunn, Ottawa. Special for standard-bred stallion—1 Graham Bros.

ROADSTERS.—Stallion, four years old—1 Graham Bros, Claremont; 2 Alex Clarke, Brimston's Corners. Stallion, three years old (driven)—1 F. Brunet, Moose Creek. Stallion, any age—1 Graham Bros, Filly, three years old—1 George Robb, Gattineau Point; 2 J. W. Slack, Merivale; 3 G. Stechen, Shead's Mills. Filly, two years old—1 C. McMorro, Ottawa; 2 J. C. Robb, Gattineau Point. Filly, one year old—1 W. J. Croft, Shead's Mills; 2 Jas. Calder, North Gower. Foal—1 M. Quinn, Rockland; 2 and 3 W. C. Edwards, Rockland. Mare, any age—1 C. McMorro. Pair roadsters, three years old—1 H. H. Johnston, Castleford; 2 John Hutton, Ottawa; 3 W. Cunningham, Ottawa. Single roadster—1 Crow & Murray, Toronto; 2 Max Beauvais, Ottawa; 3 John Hutton. Special for best pair of roadsters—1 H. H. Johnston.

HACKNEYS.—Stallion, four years old—1 and 2 Graham Bros, Claremont; 3 J. A. Latour, St. John, Que. Stallion, three years old—1 Robt. Beith, Bowmanville. Stallion, two years old—1 Ottawa Live Stock Improvement Co., Rockland. Yearling stallion—1 Robt. Beith, Filly, three years old—1 Robt. Beith. Filly, two years old—1 Robt. Beith. Yearling filly—1 Robt. Beith. Brood mare with foal—1 and 2 Robt. Beith. Mare, any age—1 Robt. Beith. Gold medal for stallion—Graham Bros.

SADDLE HORSES AND HUNTERS.—Saddle horse—1 and 3 Geo. Pepper, Toronto; 2 Robt. Beith, Bowmanville. Hunter, heavy weight—1, 2 and 3 Geo. Pepper. Hunter, light weight—1 and 2 Geo. Pepper; 3 W. Cunningham, Ottawa. Three-year-old gelding or filly—1 and 3 Geo. Pepper; 2 A. J. Hassard, Millbrook. Two-year-old gelding or filly—1 Thos. Fairbairn, Ottawa; 2 and 3 W. C. Edwards, Rockland. Yearling gelding or filly—1 W. C. Edwards. Gold medal for heavy weight hunter—Geo. Pepper.

PONIES.—Pair in harness—1 Anglo-Saxon Tea Co., Ottawa. Single in harness—1 Anglo-Saxon Tea Co.; 2 W. Cunningham, Ottawa. Pair under 12 hands in harness—1 Geo. Carlie, Morewood; 2 A. M. McKay, Winchester; 3 J. A. McCallister, Toronto. Single under 12 hands—1 J. Landry, Ottawa; 2 H. S. Conn, Ottawa; 3 J. A. McCallister. Brood mare with foal—1 J. A. McCallister.

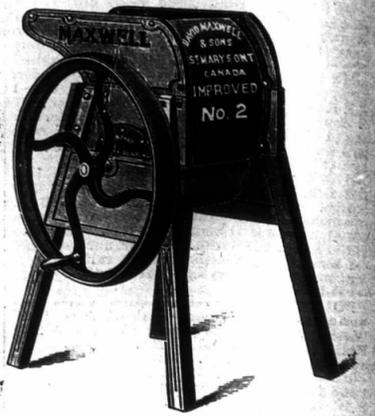
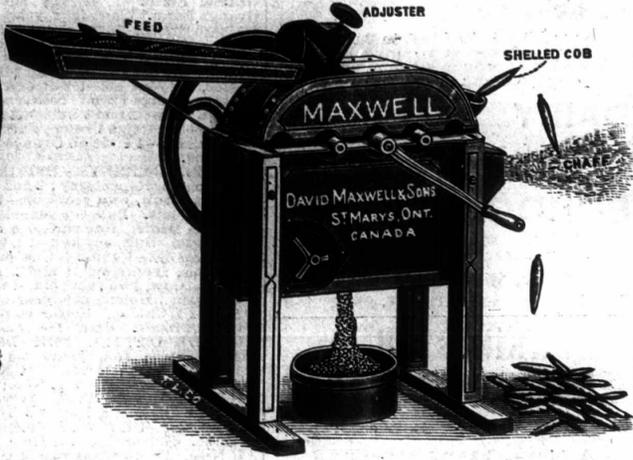
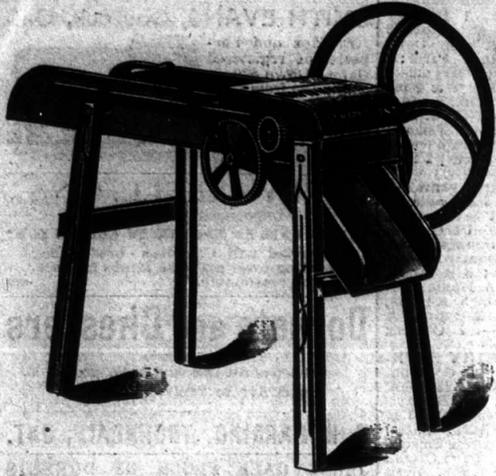
GENERAL PURPOSE.—Stallion, three years old—1 R. W. Wilson, Manotick; 2 E. W. Clarke, Ottawa; 3 J. J. Anderson, Dominionville. Brood mare with foal—1 L. Kellogg, Gattineau Point; 2 J. Hardy, Bowesville; 3 M. Sharpley, Templeton. Three-year-old gelding or filly—1 and 2 Jas. McGee, North Gower; 3 W. R. McClatchie, Gattineau Point. Foal—1 A. Sharpley, Templeton; 2 M. Sharpley; 3 J. Hardy. Two-year-old gelding or filly—1 A. J. Hassard, Millbrook; 2 J. Langford, Ironsides; 3 J. W. Strong, Hull. Yearling gelding or filly—1 C. W. Barber, Gattineau Point. Best team—1 W. R. McClatchie; 2 Adam Scharf, Cummings Bridge; 3 R. W. Wilson. Mare, any age—1 A. Stanley, Hawthorne. Gold medal for best team—Jas. McGee, North Gower.

HEAVY DRAFT (LOCAL CLASS).—1 W. Allen, Aylmer; 2 J. G. Clarke, Ottawa; 3 S. Stewart, Aylmer; 4 R. Sparks, Vars. (IMPORTED).—Aged stallion—1 Graham Bros, Claremont; 2 and 3 Robt. Ness, Howick; 3 L. B. Bowles, Springville. Stallion, three years old—1 R. Ness. Stallion, one year old—1 W. C. Edwards, Rockland; 2 and 3 R. Ness. Gold medal for stallion—Graham Bros. Brood mare with foal—1 Graham Bros; 2 R. Ness. Filly, three years old—1 R. Ness. Filly, two years old—1 R. Ness. Yearling filly or gelding—1 Graham Bros; 2 R. Ness. Foal—1 E. W. Clarke, Ottawa; 2 R. Ness. Mare, any age—1 W. R. McClatchie. Stallion, four years of his get—1 R. Ness.

CANADIAN-BRED.—Stallion, three years old—1 A. Spratt, Johnston's Corners; 2 M. J. Muldoon, Fallowfield; 3 J. McSorley, Merivale; 4 E. W. Cunningham, Ottawa. Stallion, two years old—1 Graham Bros. Yearling stallion—1 J. Callender, North Gower; 2 A. Scharf, Cummings Bridge. Brood mare with foal—1 A. Scharf; 2 J. H. Armstrong, Kinburn; 3 E. W. Clarke, Ottawa; 4 A. Moffatt, Harbord. Three-year-old filly—1 C. W. Barber, Gattineau Point; 2 Wm. Heney, Ottawa; 3 A. Spratt; 4 J. G. Clarke, Ottawa. Two-year-old filly or gelding—1 Richardson, Billings' Bridge; 2 Alex Green, LeRim; 3 A. Scharf. Yearling filly or gelding—1 Graham Bros; 2 F. Richardson. Foal—1 E. W. Clarke; 2 A. Moffatt; 3 J. H. Armstrong. Heavy team—1 E. W. Clarke; 2 M. Boyd, Manotick. Mare, any age—1 C. W. Barber. Gold medal for best Dominion-bred stallion—Graham Bros.

(Continued on page 499.)





**David Maxwell & Sons** Manufacturers  
St. Mary's, Ontario, Canada,

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

SEND FOR CATALOGUE.

**GOSSIP.**

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

Mr. Arthur Johnston, of Greenwood, has recently returned from Scotland, where he has made some important purchases of Clydesdales and Shorthorns. The Clydesdales include Balmie Marquis Vol. 21, a prize winner at the Royal Northern Society's show the present year. He is a capital young stallion, bred by W. H. Lumden, Esq., of Balmie, Aberdeenshire, and sired by his well-known stud horse, Royalist (6242), a son of the famous Darnley (222), and out of a Princess of Wales (673) mare. The dam of Balmie Marquis was sired by Mains of Aries (10379), a son of the great Prince of Wales (673), and out of a Darnley (222) mare. His grandam, Lady Marjorie Erskine (758), was sired by Mr. Crawford's Lord Erskine (1744). Then follows Dunmore Prince Charlie (634), and Keen's Prince Charlie (629), etc. The dam of Balmie Marquis, My Lady (12542), won first prize at Glasgow, and first at Aberdeen, for her owner. The Shorthorns, of which there are eleven—four very choice young bulls and seven females—are of the finest breeding. They include members of the following well-known families: Cruickshank Braw with Buds, Kinellar Golden Drops, Upper Mill Princess Royals, Crocus Rosemarys, Mysias, and others of equal fame. They will be due to leave quarantine in December.

**B. BIRDSALL & SON'S SHORTHORNS, JERSEYS, OXFORDS, AND CHESTERS.**

Mr. Birdsall's farm, Birdsall, Ont., is always a pleasant place to visit, being so beautifully situated on the shore of Rice Lake, which gives a pleasing appearance to the adjoining pastures, which so admirably adapt this large tract of land to stock-rearing, and we would conclude that from the excellent condition in which we found his stock, they did not suffer from the severe drought so generally experienced through the greater part of this Province so long the past summer. Since our last visit to the farm the young Shorthorn stock bull Mildred's Royal Ghost 25070, by Royal Ghost 19998, by Indian Chief, dam Mildred 6th 28898, was placed at the head of the herd, from his breeder, Mr. E. R. Sangster, Lancaster, and of him we would consider, from his type and gilt-edge breeding, the firm have made no mistake in his purchase. He was never put in high flesh for show purposes, but is a thick, growthy fellow, of solid color, possessing deep fleshing substance, and evenly made. At present the firm have on hand for disposal a few good young bulls from such cows as Arkell's Daisy, Bell and Ury, cows possessing individuality and rugged constitution, with the amount of uniformity necessary to command a good place among this highly popular and useful breed.

The Jersey herd, although not numerous, contains some good individuals, headed by the splendidly formed dairy bull, Regal St. Lambert 41436, by Canada's Sir George 18290, and out of Muriel of St. Lambert 34732. He was purchased from Mrs. Jones, his breeder, when a calf, and of him we heard her personally remark he should make one of the best sires in the breed, and, from the stock we saw by him, he has in no way betrayed the confidence invested in him. In short, he is a true type of a dairy bull, of solid color and very handsome, covered by a very richly-colored, velvety skin. Having a promising calf by him and out of Low Britants, to take his place, Mr. Birdsall has decided to dispose of him, and parties requiring a dairy sire will do well to investigate. Among the herd we saw some very handsome and promising young females, even in type, quality and color.

An important addition has recently been made to the Oxford flock, in the importation of a splendid young ram from the pens of Mr. Wm. Arkell, Kempford Farm, Fairford, Eng., whose lambs won the highest honors at the late Royal, and in this purchase we would consider Mr. Birdsall has made a wise selection, as we are inclined to believe the sheep business with them is becoming of greater importance each year. They are always ready to dispose of any stock they have on hand, believing that practical stock-raising is the only profitable system to adopt. The firm are also active in pig-rearing, and some good Chester brood sows are constantly kept on hand, from which purchasers may feel perfectly safe in buying through correspondence, without fear of disappointment, as fair dealing is the motto strictly observed in Mr. Birdsall's transactions.

**AUTUMN OFFERING.**

**50 HEAD OF YORKSHIRE** Boars and Sows from six weeks to six months. Good quality. Also some lengthy Berkshires boars and sows, fit for service. Two Shorthorn bulls, 10 months old. Write for prices.  
**H. J. DAVIS, Woodstock, Ont.**

I HAVE NOW A CHOICE LOT OF **BERKSHIRES** 7 months old, of both sexes, that I will dispose of. Remember, these pigs are prizewinners. Write for price, also for my new catalogue.  
**CHRIS. FAHNER, CREDITON, ONT.**

**English Berkshires** One boar 18 mos. old, bred by J. G. Snell, at a bargain. Several boars fit for service; sows ready to breed; young pigs of either sex; B. P. Rook cockerels. Write for prices.  
**M. BENNETT & SON, St. Williams, Ont.**

**ENGLISH BERKSHIRES AND CHESTER WHITES.** Young boars fit for service; sows ready to breed. Also young stock of either sex ready to ship.  
**CAMPBELL & MARTINSON, Near Lewisville, G.T.R. - Northwood, Ont.**

**English Berkshires.** Herd headed by three first-prize boars. Large size, strong bone, fine quality, and a choice lot of breeding sows. Orders booked for spring pigs.  
**GEORGE GREEN, Fairview P.O., Ontario. - Stratford Station and Telegraph Office.**

**ROSE HILL FARM.** **JAMES DORRANCE, SEAFORTH, ONT., - BREEDER OF -**

**REGISTERED - BERKSHIRES** Of the most approved type. Choice young stock always for sale. Write at once and secure a bargain. 12-2-y-om

**BERKSHIRES, BERKSHIRES, BERKSHIRES** My herd contains such blood as Baron Lee, Varna Duke, and other imported strains, with the celebrated sire, First Prize, at the head. 2-2-y-0 **WM. McALLISTER, VARNA, ONT.**

**BERKSHIRES** In my herd there is such blood as Baron Lee, Dorset Chieftain, and Windsor Supreme, and other noted strains. **GEO. N. HARRIS, LYNDEN, ONT.**

**E. D. GEORGE** PUTNAM, ONT. Importer and Breeder of Ohio Improved Chester White Swine. The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 14-2-y-0

**R. J. McNEIL, Ormstown, Que.,** breeder of registered Berkshires. Young stock always for sale at reasonable prices.

**GOSSIP.**

Among the records which have reached us lately is Vol. XII. of the American Shropshire Sheep Record, which is uniform in style and size with the preceding volumes. It contains the pedigree of a great number of sheep bred by Canadian Shropshire breeders.

**JOHN HORD & SON'S TAMWORTHS AND YORKSHIRES.**

Among the prominent winning exhibitors of pigs at the late fairs, Toronto and London, may have been noticed the firm of John Hord & Son, whose extensive farming operations are centered near the pleasant village of Parkhill, in Huron County. The firm have been long and favorably known as Yorkshire and Suffolk breeders, as well as extensive poultry fanciers, and since the first introduction of the Tamworth the firm were so favorably impressed with the breed that they have firmly associated themselves with the breeders and stand high in their ranks. Their present herd now approaches 90 head, and among them today is to be found some of the noted ones, viz., the old sow, Middleton Mimulus, of showing fame, as well as the splendidly formed and successful matron, O. A. C. 110, which captured, among other prizes, the best honors for sow and four of her family at the late London fair. Several other worthy ones may be seen, including a full sister to the successful and famous Parkhill Mab, whose origin also traces to Mr. Hord's farm. The young stock now on hand were sired by O. A. C. 115-439, by Woodland's Duke 196, and out of Maple Queen, an animal which we were creditably informed would have stood an excellent chance of standing high in the premium honors at Toronto, but he unfortunately died on his way during the very hot weather. He possessed a great wealth of quality, with grand length and depth, and from him we saw some splendid young stock.

In Yorkshires the firm have done their utmost to keep in line with the demand of the times, and all along have not only succeeded in winning many prominent places in the large showings, but have supplied many prizewinners to other parts of the Ontario Agricultural College purchasing two of their sires from this firm. A good number is always kept on hand from which to select. Suffolks are also given special attention, and Mr. Hord informs us that he finds a large steady demand for this breed, and that they endeavor to keep as typical a lot on hand as is possible to produce. Many of the leading breeds of poultry are constantly kept on hand, which are held for disposal at all times, as well as eggs for hatching in the proper season, at reasonable prices.

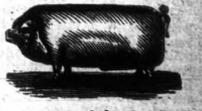
**JAB. A. RUSSELL'S YORKSHIRES AND BERKSHIRES.**

Mr. Jas. A. Russell's farm at Precious Corners, Ont., some four miles north of Cobourg station, has been the scene of successful operations in hog-rearing for some time, Yorkshires and Berkshires being the chosen breeds. At the head of the Berkshire herd we found a well-formed yearling boar, Dandy 2nd 4821, by Dandy 4129, and out of Lady Preston 4027, a pig of good quality and length, with a good coat and splendidly marked. Among the matrons is Oxford Maid 3227, by Varna Duke 3171, and out of Oxford Girl 2373, a sow possessing good quality, with sufficient size and bone, well marked, and a successful breeder, her stock having the length we like to see, and are very uniform in quality. Lately added to the herd is a young up-to-date boar, purchased from Mr. Geo. Green, Fairview, from which much is expected, and which will unquestionably maintain the present standing of the herd.

Among the Yorkshires we saw the yearling sow, Daisy 3rd 2706, by Precious Peel 2380, and out of Daisy 2388, by Hasket, a sow possessing much of the type and quality of her grand sire and family. She is due to farrow, Oct. 15th. Her dam landed many high honors at Toronto, in the hands of Mr. R. G. Martin, Marysville. Her daughter now on hand promises to make a show sow of high merit, and is being bred to a Honey-bred boar. The stock boar, Perfection 2643, by Lord Grey, and out of Lady Reid 833 (with a good pedigree all through) is a year past, and possesses the right sort of quality for a sire getting strong, vigorous stock.

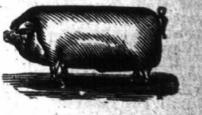
Mr. Russell is seldom without stock of some age to dispose of, and intending purchasers of the above breeds will do well to watch his advertising space in the FARMER'S ADVOCATE columns in the future.

**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



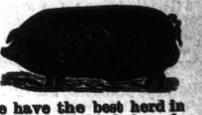
sweepstakes herd at the leading exhibitions of Ontario and Quebec in 1897. We pay express charges to your station, and guarantee the safe arrival of all stock shipped. Pairs furnished not a skin. Drop a card before buying elsewhere.  
**M. GEORGE & SONS, Grafton P. O., Ont.**

**CHESTER WHITE BOARS** and Sows, 4 to 8 months, that are **BRED FORMED PRICED } RIGHT.**  
**Henry Herron, Avon P. O., Ont.**



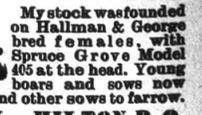
IF YOU WANT **CHESTER WHITES** Write me for particulars. The imported sires, John A. 751 and Nonsuch 910, at head of herd.  
**JOS. CAIRNS, LAMBTON CO. - O. CAMLACHIE P. O.**

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



**Oxford Herd of Winning Poland-Chinas.** Having won the herd prizes at Toronto, London, Ottawa, and Bradford Fat Stock Show, we feel justified in stating that we are in a position to offer you what you may seek for from gilt-edge prize-winning stock.  
**W. & H. JONES, OXFORD CO. - MT. ELGIN.**

**TAMWORTHS** My stock was founded on Hallman & George bred females, with Spruce Grove Model 465 at the head. Young boars and sows now ready for shipment, and other sows to farrow.  
**R. O. MORROW, - HILTON P. O. NORTHUMBERLAND CO.**



**Spring Brook Holsteins and Tamworths.** One yearling boar; 3 six-months' boars ready for service, sired by Imp. Nimrod; and a few young sows. Am looking orders for fall litters; have good ones; prices reasonable. A few calves for sale.  
**A. C. HALLMAN, WATERLOO CO. NEW DUNDEE, ONT.**



**OAK HILL HERD OF TAMWORTHS.** For sale—young boars and sows, 3 and 4 months old, by Sandy 3rd and Nimrod and out of prizewinning dams; also young pigs. Prices reasonable.  
**R. J. & A. LAURIE, - WOLVERTON, ONT. MENTION FARMER'S ADVOCATE**

Western Fair Prize List.

HORSES. THOROUGHBRED.—Stallion, four years and up—1 O'Neil & Co, London; 2 W Thompson, Orkney. Stallion, four years and up, to produce saddle and hunters—1 R Jolly, Mossley. Stallion, two years old—1 John Dymont, Orkney. Stallion, any age, O'Neil & Co, London. Filly, three years old, John Dymont.

HACKNEYS.—Stallion, three years old and upwards—1 Aboy Sinclair, Aylmer. Stallion, two years old and under—1 D & O Sorby, Guelph. Brood mare—1 D & O Sorby, Filly or gelding, two years old—1 Chas W Glasgow, Fingal. Filly or gelding, one year old—1 Wm Hayden, 8 London.

COACH AND CARRIAGE HORSES.—Stallion, four years old and upwards—1 John Longfield, Crampton; 2 O B Wilson, Holmesville; 3 Jas McCartney, Thamesford. Stallion, three years old—1 A Parker, Sparta. Stallion, two years old—1 W H Guest, Ballymose. Stallion, yearling—1 S J Prouse, Ingersoll. Stallion, of any age—Diploma. John Longfield. Brood mare, with foal by side, or evidence she had a foal in 1897—1 W H Guest; 2 J W Haskett, Birt; 3 J W Nichol, Iderton. Gelding or filly, three years old—1 Wm Berry, Brucefield; 2 three years old—1 Wm Charlton, Springfield. Gelding or filly, two years old—1 J McRoberts, Longwood; 2 Hoary Nichol, Iderton; 3 J W Haskett, Gelding or filly, yearling—1 Henry Nichol; 2 Thos McComb, Masonville. Foal of 1898—1 John Nichol, Iderton; 2 John McCartney; 3 J W Haskett. Pair of matched carriage horses, geldings or mares, in harness, 16 hands and over—1 P Farrell, Woodstock; 2 W Hogg & Son, Thamesford; 3 J E Fordon, Beachville. Pair matched carriage horses, geldings or mares, in harness, 15 hands and under—1 Wm Collins, London; 2 Jas McCartney, Lambeth. Farlane, Falkirk; 3 Geo A Routledge, Lambeth. Single carriage horse, gelding or mare, in harness, 16 hands and over—1 Adam Beck, London; 2 Wm Collins; 3 Robt Fulton, Aylmer. Single carriage horse, gelding or mare, in harness, 15 hands and under—1 S Dilton Smith, Mitchell; 2 J McCartney; 3 W F Hill, Strathroy. Mare, any age—1 and diploma, A Dalton Smith.

ROADSTERS.—Stallion, four years old and upwards, in harness—1 O A Coates, Bothwell; 2 O P G-ary, St Thomas; 3 Jas McCartney, Thamesford. Stallion, three years old—1 J C Dietrich, Galt; 2 Thos Weir, Kingarf. Stallion, two years old—1 T Scott, Iderton; 2 Robt Sutherland, Rayside. Stallion, yearling—1 R F Avery, Bothwell. Stallion, of any age—Diploma, O A Coates. Brood mare, with foal by side, or evidence she had a foal in 1898—1 G F McLurg, Falding; 2 O A Coates; 3 G F McLurg, Falding. Gelding or filly, three years old—1 H McLurg; 2 G A Routledge; 3 J C Dietrich. Gelding or filly, two years old—1 H McLurg; 2 Geo W Kennedy, Iderton; 3 Jas Colquhoun, Mitchell. Gelding or filly, yearling—1 G W Kennedy; 2 John Aokland, DeLaware. Foal of 1898—1 Jas McCartney; 2 H McLurg; 3 K H Smith, Ettrick. Pair of roadsters, geldings or mares, in harness—1 J O Dietrich; 2 J W Norton, Aylmer; 3 A A Leslie, Aylmer. Single roadster, gelding or mare, in harness—1 G A Routledge; 2 Geo Hendry, St Mary's; 3 Geo W Kennedy. Mare, any age—1 Geo W Kennedy.

SADDLE HORSES AND HUNTERS.—Saddle horse, gelding or mare—1 Adam Beck, Filly or gelding, three years old, not thoroughbred, but sired by thoroughbred—3 F Elliott, Pond Mills. Filly or gelding, two years old, not thoroughbred, but sired by thoroughbred horse—1 Thos McComb, Masonville; 2 Ed Edwards, London. Hunter, heavy-weight, carrying 180 lbs, to give exhibitions over jumps—1 and 2 Adam Beck, London. Hunter, light-weight, carrying 150 lbs, to give exhibitions over jumps—1, 2 and 3 Adam Beck.

HIGH-STEPPERS.—Gelding or mare, in harness, 15 hands and over, must be driven to dog-cart or gig—1 O'Neil & Co, London; 2 Wm Collins, London; 3 J A Letroy, London.

GLYDESDALES (REGISTERED)—Stallion, four years old and upwards—1 and 3 D & O Sorby, Guelph; 2 Robt Davies, Toronto. Stallion, three years old—1 and 2 Jas Henderson, Balton; 3 Robt Davies. Stallion, two years old—1 Innes & Horton, Clinton; 2 Robt Davies; 3 W M Faulds, Muncy. Stallion, yearling—1 Robt Davies; 2 D & O Sorby; 3 S J Prouse, Ingersoll. Stallion, any year—Diploma, Jas Ingersoll. Brood mare, with foal by side, or evidence she had a foal in 1898—1, 2 and 3 D & O Sorby, Filly, three years old—1 and 2 D & O Sorby. Filly, two years old—1 D & O Sorby. Filly, yearling—1 D & O Sorby. Team, 1 Robt Davies; 2 and 3 D & O Sorby. Team, geldings or mares, in harness—1 D & O Sorby. Mare, any age—Diploma, D & O Sorby.

ENGLISH SHIRE HORSES (REGISTERED)—Stallion, two years old and under—1 Diploma, Thos McMichael. HEAVY DRAFT HORSES.—Stallion, four years old and upward—1 R Alexander, Forest; 2 Albert West, Woodstock. Stallion, two years old—1 J R Essey, Exeter; 2 Thos McMichael, Seaforth. Stallion, yearling—1 S J Prouse, Ingersoll; 2 W W Fisher, Benmiller; 3 W H Kay, Farquhar. Stallion, any age—1 H Kay, Farquhar. Stallion, any age—1 H Kay, Farquhar. Brood mare, with foal by side, or evidence she had a foal in 1898—1 H Kay, Farquhar; 2 D J Loutitt, Anstoville; 3 Geo Dale, Clinton. Filly, two years old—1 H Kay, Farquhar; 2 D J Loutitt, Anstoville; 3 Geo Dale, Clinton. Filly, yearling—1 H Kay, Farquhar; 2 D J Loutitt, Anstoville; 3 Geo Dale, Clinton. Team, geldings or mares, in harness—1 H Kay, Farquhar; 2 D J Loutitt, Anstoville; 3 Geo Dale, Clinton. Team, any year—1 H Kay, Farquhar; 2 D J Loutitt, Anstoville; 3 Geo Dale, Clinton. Team, any year—1 H Kay, Farquhar; 2 D J Loutitt, Anstoville; 3 Geo Dale, Clinton.

AGRICULTURAL HORSES.—Team, geldings or mares, in harness—1 Wm Ray, Ridgeway; 2 Wm Ewing, Petrolia. Brood mare, with foal by side, or evidence she had a foal in 1898—1 W H Kay, Farquhar; 2 R Shaw, Wood, London. Gelding or filly, three years old—1 and 2 B Mathews, Denfield. Gelding or filly, two years old—1 D Stinton, Springfield; 2 Neil Campbell, Belmont. Gelding or filly, one year old—1 D Stinton, Springfield; 2 W Fisher, Benmiller. Foal of 1898—1 R Shaw, Wood; 2 John O'Brien, London.

GENERAL PURPOSE HORSES.—Team, gelding or mares, in harness—1 Malcolm Campbell, Ridgeway; 2 Alex Johnston, S London.

WATCH REPAIRING.

A great many persons may not be within convenient distance of a watchmaker, and for their special benefit we have established a Watch Repairing Department. If you have a watch (of any make) that needs cleaning, or has a broken main-spring, or from any other cause the watch needs repairing, then we are prepared to repair it in a first-class manner. The man whom we employ for this work is engaged constantly in repairing watches, and is a superior mechanic. We cannot say what the cost of such repairs will be until we see the watch, but we guarantee to do a good job, and to do it at a reasonable cost.

Send the watch to us by registered mail, putting your name and address on the parcel, so that we may know from whom it comes, and along with the watch send us \$2. Then write us a letter saying that you have sent a watch to us, and also say what you think it requires. Don't send your letter in with the watch, as it is against the rules of the post office. Only put your name and address on the parcel. We will repair your watch as reasonably as we can, and return the change to you with the watch (per registered mail) in due time. Very few watches will require \$2 to repair them, but we have fixed on that amount to send to us to make sure, and, besides, the return postage, which is about 15c, will also be taken out of the \$2. No matter in what part of Canada you live, send your watch by registered mail as above. It will be promptly repaired and returned to you. Address: Letter Order Department of STANLEY MILLS & CO., Hamilton, Ont.



PONIES.—Pony, in single harness, 14 hands and under—1 Bert Thompson, London; 2 O H Anderson, London. Pony pair in harness—1 John Walker, London; 2 John Sandick, Ingersoll.

CATTLE. DURHAMS.—Bull, three years old and upwards—1 T E Robson, Ingersoll; 2 R & S Nicholson, Syvan; 3 Wm Senior, Sunderland. Bull, two years old—1 J & W Watt, Salem; 2 J Fried & Son, Roseville; 3 H K Fairbairn, Theoford. Bull, one year old—1 Jas Rennie, Wick; 2 T Douglas & Son, Strathroy. Bull calf, under one year—1 and 2 J & W Watt; 3 Gibson & Walker, Iderton. Bull, any age—1 T E Robson. Cow, four years old and upwards—1 T E Robson, three years old—1 T E Robson; 2 and 3 R & S Nicholson. Heifer, two years old—1 and 2 J & W Watt; 3 T E Robson. Heifer, one year old—1 and 2 J & W Watt. Heifer, under one year—1 T E Robson; 2 and 3 J & W Watt. Female, any age—1 T E Robson. Herd of one bull and four females over one year—1 and 2 J & W Watt. T E Robson. Herd of four calves, owned and bred by exhibitor—Diploma, J & W Watt.

SPRUAL.—Best herd of young Shorthorn cattle, consisting of one bull and four females, under two years of age, to be owned by exhibitor, and to be recorded in the Dominion Shorthorn Herd Book—1 J & W Watt. Bull Shorthorn Herd Book—1 J & W Watt. Bull calf, dropped after 1st February, 1898—1 W Hogg & Son, Thamesford. Heifer calf, dropped after 1st February, 1898—1 T E Robson.

FAT CATTLE, ANY BREED.—Ox or steer, two years old and under three—1 Matt Wilson, Fergus; 2 and 3 Jas Leask, Greenbank. Ox or steer, one year old and under two—1 W Hall, Washington; 2 Jas Oke, Alvington; 3 Jas Leask. Cow or heifer, four years or under—1 Fried & Son, Roseville; 2 Matt Wilson; 3 Jas Leask. Steer calf, under one year—1 Jas Leask; 2 J Fried.

GRADE CATTLE.—Cow, three years old and upwards—1 and 2 Jas Leask, Greenbank; 3 Jas Oke, Alvington. Heifer, two years old—1 and 2 Jas Leask; 2 J Fried & Son, Roseville. Heifer, one year old—1 J Fried & Son; 2 Jas Oke; 3 Jas Leask. Heifer calf, under one year—1 and 2 Jas Leask; 3 Jas Oke. Female, any age—Diploma, Jas Leask.

JERSEYS.—Bull, three years old and upwards—1 R B Smith, Arsons; 2 John Kenward, Woodstock; 3 P H Lawson, Nilestown. Bull, two years old—1 D G Hamner & Son, Mount Vernon; 2 J Trout, London West; 3 W E H Massey, Toronto. Bull, one year old—1 W G Laidlaw, Hills Grove; 2 B Smith, Hillfield. Bull calf, under one year—1 and 2 Miller & Sibley; 3 W E H Massey. Bull, of any age—Diploma, D G Hamner, Cow, four years old and upwards—1 R Davies, Toronto; 2 and 3 W E H Massey. Cow, three years old—1 and 2 Miller & Sibley; 3 W E H Massey. Heifer, two years old—1 and 2 Miller & Sibley; 3 O'Brien, London. Heifer, one year old—1 and 2 Miller & Sibley; 3 W E H Massey. Heifer calf, under one year—1 and 2 Miller & Sibley; 3 W E H Massey. Female, any age—Diploma, W G Laidlaw. Female, any age—Diploma, W E H Massey. Herd of one bull and four females over one year—Silver medal, W E H Massey. Herd of four calves, owned and bred by exhibitor—Diploma, Miller & Sibley.

AYRSHIRES.—Bull, three years old and upwards—1 Robt Davies, Toronto; 2 R Reford, St Anne de Bellevue, Que. Bull, two years old—1 R Reford, St Anne de Bellevue, Que; 2 N Diment, Barrie; 3 W Stewart & Son, Menie. Bull, one year old—1 W Stewart & Son; 2 Robt Davies; 3 Kains Bros, Byron. Bull calf, under one year—1 R Reford; 2 and 3 W Stewart & Son. Bull, of any age—Diploma, Robt Reford. Cow, four years old and upwards—1 W Stewart & Son; 2 R Reford; 3 Robt Davies. Cow, three years old—1 and 2 W Stewart & Son; 3 N Diment. Heifer, two years old—1 W Stewart & Son; 2 and 3 R Reford. Heifer, one year old—1 and 2 R Reford; 3 W Stewart & Son. Heifer calf, under one year—1 and 2 R Reford; 3 W Stewart & Son. Diploma, W Stewart & Son. Herd of one bull and four females, over one year—1 R Reford; 2 W Stewart & Son; 3 N Diment. Herd of four calves, owned and bred by exhibitor—Diploma, R Reford. Bull calf, under six months—1 Kains Bros. Heifer calf, under six months—1 Elgin Marsh & Son, Gladstone.

GUERNSEYS.—Bull, three years old and upwards—1 W Butler & Son, Dorham Centre. Bull, two years old—1 and 2 W Butler & Son. Bull calf, under one year—1 and 2 W Butler & Son. Cow, four years old and upwards—1 and 2 W Butler & Son. Cow, three years old—1 and 2 W Butler & Son. Heifer, two years old—1 and 2 W Butler & Son. Heifer, one year old—1 W Butler & Son. Heifer calf, under one year—1 and 2 W Butler & Son. Female, any age—1 W Butler & Son. Herd of one bull and four females over one year—Silver medal, W Butler & Son.

HOLSTEINS.—Bull, three years old and upwards—1 G W Clemons, St George; 2 A & G Rice, Currie's Crossing. Bull, two years old—1 G W Clemons. Bull, one year old—1 and 2 A & G Rice; 2 G W Clemons. Bull calf, under one year—1 and 2 A & G Rice; 3 G W Clemons. Cow, four years old and upwards—1 and 2 A & G Rice; 2 G W Clemons. Cow, three years old—1 and 2 A & G Rice. Heifer, two years old—1 G W Clemons; 2 A & G Rice. Heifer, one year old—1 A & G Rice; 2 G W Clemons. Heifer calf, under one year—1 G W Clemons. Female, any age—1 G W Clemons; 2 A & G Rice. Herd of one age—1 Diploma, G W Clemons. Herd of one age—1 Diploma, G W Clemons. Herd of four calves, over one year—Silver medal, G W Clemons. Herd of four calves, owned and bred by exhibitor—Diploma, A & G Rice.

HEREFORDS.—Bull, three years old and upwards—1 H D Smith, Compton; 2 F W Stone Est, Guelph; 3 W McDonald, Toronto. Bull, two years old—1 and 2 F W Stone Est. Bull, one year old—1 H D Smith; 2 M H O'Neil, Southgate; 3 W McDonald. Bull calf, under one year—1 and 2 F W Stone Est; 3 M H O'Neil. Bull, of any age—1 H D Smith. Cow, four years old and upwards—1 and 2 H D Smith; 3 F W Stone Est. Cow, three years old—1 and 2 H D Smith; 3 F W Stone Est. Heifer, two years old—1 and 2 H D Smith; 3 F W Stone Est. Heifer, one year old—1 and 2 F W Stone Est.

MICA Axle Grease. It's easy to haul a big load up a big hill if you grease the wagon wheels with MICA Axle Grease. Get a box and learn why it's the best grease ever put on an axle. Sold everywhere.

Harding's Sanitary Iron Hog Trough. IS INDESTRUCTIBLE, PORTABLE, SANITARY, CHEAP, and answers all requirements of a desirable Hog Trough. One price only, 60 cents per foot. VOKES HARDWARE CO., Limited, 111 Yonge St., Toronto.

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TAMWORTHS—THE PACKER'S CHOICE. Sows in pig, and Sows ready to breed, Boars ready for service, and fifty head from six weeks to five months. Orders booked for fall pigs from 14 sows and 4 boars. Prices right. om J. H. SIMONTON, Box 304, CHATHAM, ONT.

ELMDALE HERD OF TAMWORTHS. Offers 4 splendid young boars and half a dozen sows, 6 months old, by Amber Luther 245, and out of prize-winning dams. Also booking orders for fall litter. JOHN C. NICHOL, Hubrey, Ont.

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The business training given at this College is Specific and Thorough—none more so. DEPARTMENT I.—Comprises Bookkeeping—double and single entry—in its various applications, Business Papers and Customs, Calculations, Business Writing, Business History and Geography. Every young man who takes this course will better understand the economics of his chosen business, how to make money in that business and how to increase it. He will be qualified to transact business at home, on the market, at the factory board, the bank or loan company, and in any municipal office to which he may be elected. The other College Departments are: II. SHORTHAND AND TYPEWRITING—Office and Court Work. III. CIVIL SERVICE QUALIFICATIONS—In dexting, Precis Writing, Statistics, English and French Options. This College is OPEN THROUGHOUT THE YEAR. Students may enter at any time. J. FRITH JEFFERS, M. A., Principal. Write for Calendar. Be careful to address in full BELLEVILLE BUSINESS COLLEGE, BELLEVILLE, ONT.

Poultrymen!

As per previous announcements, we hereby offer the following SPECIAL PRIZES To be competed for at the Ontario Poultry Association's show at Toronto in January next, by birds got into condition on our "Tonic Poultry Food"

These SPECIAL PRIZES to consist of \$5.00 worth of goods to be chosen from our Price List by owner of best 1898 bird in each of the following classes: ASIATICS, HAMBURGS, ENGLISH, MEDITERRANEANS, FRENCH, POLISH, AMERICANS, BANTAMS, GAMES, ANY OTHER STANDARD VARIETY.

Write for Circular, Rules, Price List, etc., to JOHN S. PEARCE & CO., THE CANADIAN POULTRY SUPPLY HOUSE, LONDON, ONT.

POULTRY!

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

BARRED PLYMOUTH ROCKS! Young stock for sale at reasonable prices. One two-year-old imported Feltch cock and two yearling cocks, all of exceptional quality. Also a fine pair of Pekin ducks (yearlings)—grand show birds. Write for particulars to MISS P. J. COLDWELL, Constance, Huron Co., Ont.

BARRED and WHITE P. ROCKS and WHITE WYANDOTTES.—In order to reduce our stock of above we will sell at \$4 per trio, all of which are bred from our winners; also some fine pairs of Cayuga and Rouen Ducks. Satisfaction guaranteed. GEO. BOGUE, Box 123, o Strathroy, Ont.

BRONZE TURKEYS FOR SALE. To make room will sell up to 15th Nov. next, first-class Bronze Turkeys (hatch of 1898) at \$4.50 per pair. Can furnish them not skin. o JAMES TOLTON, Walkerton, Ont.

Silver and Golden Wyandottes From imported stock and prize-winners at Boston and Madison Square. Pekin ducks. JAS. LENTON, Park Farm, OSHAWA

BARRED PLYMOUTH ROCK COCKERELS of Shoemaker strain. Also a few Bantam-bred Indian Games. o E. GIBB & SONS, HALDIMAND CO. FISHERVILLE, ONT.

FOR SALE AT REASONABLE PRICES—12 Buff Cochins Cockerels, 12 Barred Plymouth Rock Cockerels, 12 White Leghorn Cockerels, 20 Pekin Ducks. All are selected birds, and will be sold cheap. We also offer a fine litter of Tamworth swine. W. R. GRAHAM, Rayside, Ontario.

Poultry. L. and D. Brahmas, B. and W. Black Minorcas, Indian Game and Red Caps. Young stock and eggs from above breeds. Eggs, \$1.25 for 12; \$2 for 25. Satisfaction guaranteed. JACOB B. SNIDER, German Mills.

Poland-China, Duroc-Jersey, Tamworth Swine. Oxford Sheep, Collie Dogs, Pekin Ducks, White Holland and Bronze Turkeys. A. ELLIOTT, o POND MILLS P. O., ONT.

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

WESTERN FAIR PRIZE LIST—(Continued). H D Smith; S F W Stone Est. Heifer calf, under one year—1 F W Stone Est; 2 H D Smith. Female, any age—1 H D Smith. Herd of one bull and four females over one year—1 H D Smith.

POLLED ANGUS.—Bull, three years old and upwards—1 W H Hall, Washington; 2 H Jones, White Oak. Bull, two years old—1 W Stewart & Son, Lucasville; 2 W W Fisher, Ben Miller. Bull, one year old—1 W Hall. Bull calf, under one year—1 H Jones; 2 and 3 W Hall. Bull, of any age—1 W Hall. Cow, four years old and upwards—1 and 2 W Hall; 3 W Stewart & Son. Cow, three years old—1 and 2 W Hall; 3 W Stewart & Son. Heifer, two years old—1, 2 and 3 W Stewart & Son. Heifer, one year old—1 and 3 W Hall; 2 H Jones. Heifer calf, under one year—1 and 3 W Hall; 2 W Stewart & Son. Female, any age—Diploma, W Hall. Herd of one bull and four females over one year—Silver medal, W Hall. Herd of four calves, owned and bred by exhibitor—Diploma, W Hall.

GALLOWAYS.—Bull, three years old and upwards—1 A M & Robt Shaw, Brantford; 2 D McCrae, Guelph. Bull, two years old—1 D McCrae. Bull, one year—1 T Lloyd Jones & Son, Burford; 2 D McCrae. Bull calf, under one year—1 and 3 D McCrae; 2 A M & R Shaw. Bull of any age—Diploma, A M & R Shaw. Cow, four years old and upwards—1 and 2 D McCrae; 2 A M & R Shaw. Cow, three years old—1 and 2 D McCrae. Heifer, two years old—1 and 3 D McCrae; 2 A M & R Shaw. Heifer, one year old—1 D McCrae; 2 T Lloyd Jones & Son; 3 A M & Robt Shaw. Heifer calf, under one year—1 and 2 D McCrae; 3 A M & R Shaw. Female, any age—1 and diploma, D McCrae. Herd of one bull and four females over one year—Silver medal, D McCrae. Herd of four calves, owned and bred by exhibitor—Diploma, D McCrae.

SHEEP. SHROPSHIRE DOWNS.—Ram, two shears and over—1 J Campbell, Woodville; 2 and 3 D G Hamner & Son, Mt Vernon. Ram, shearing—1 and 3 J Campbell; 2 D G Hamner & Son. Ram lamb—1 and 3 D G Hamner & Son; 2 J Campbell. Ram, any age—1 and diploma, J Campbell. Two ewes, two shears and over—1 and 2 J Campbell; 2 D G Hamner & Son. Two shearing ewes and 2 J Campbell; 2 D G Hamner & Son. Two ewe lambs—1 D G Hamner & Son; 2 and 3 J Campbell. Ewe, any age—Diploma, J Campbell. Pen of five yearlings—1 J Campbell. Pen of five lambs—1 D G Hamner & Son. One ram, two aged ewes, two shearing ewes and two ewe lambs—Diploma, J Campbell. Flock, ram and three ewes, one year and over—1 D G Hamner & Son.

OXFORDSHIRE DOWNS.—Ram, two shears and over—1 R J Hine, Dutton; 2 and 3 Smith Evans, Guelph. Ram, shearing—1 R J Hine; 2 J H Jull, Mt Vernon; 3 Smith Evans. Ram lamb—1 Smith Evans; 2 J H Jull; 3 R J Hine. Ram, any age—Diploma, Smith Evans. Two ewes, two shears and over—1 J H Jull; 2 and 3 Smith Evans. Two shearing ewes—1 R J Hine; 2 Smith Evans; 3 J H Jull. Two ewe lambs—1 J H Jull; 2 Smith Evans; 3 R J Hine. Ewe, any age—Diploma, J H Jull. Pen of five yearlings—1 R J Hine; 2 J H Jull. Pen of five lambs—1 J H Jull. One ram, two aged ewes, two shearing ewes and two ewe lambs—Diploma, J H Jull.

DORSET HORNED SHEEP.—Ram, two shears and over—1 and 2 R H Harding, Thornedale; 3 Wm E Wright, Glanworth. Ram, shearing—1 and 2 R H Harding; 3 Wm E Wright. Ram lamb—1 and 2 R H Harding; 3 Wm E Wright. Ram, any age—Diploma, R H Harding. Two ewes, two shears and over—1 and 2 R H Harding; 3 Wm E Wright. Two shearing ewes—1 and 2 R H Harding; 3 Wm E Wright. Two ewe lambs—1 and 2 R H Harding; 3 Wm E Wright. Ewe, any age—Diploma, R H Harding. Pen of five yearlings—1 R H Harding. Pen of five lambs—1 R H Harding. One ram, two aged ewes, two shearing ewes and two ewe lambs—Diploma, R H Harding.

SOUTHDOWNS.—Ram, two shears and over—1 and 2 John Jackson & Son, Abingdon; 3 W & G L Telfer, Paris. Ram, shearing—1, 2 and 3 John Jackson & Son. Ram lamb—1 and 2 John Jackson & Son; 3 W & G L Telfer. Ram, any age—Diploma, John Jackson & Son. Two ewes, two shears and over—1 and 2 John Jackson & Son; 2 W & G L Telfer. Two shearing ewes—1 John Jackson & Son; 2 W & G L Telfer. Two ewe lambs—1 and 2 John Jackson & Son; 3 W & G L Telfer. Ewe, any age—Diploma, John Jackson & Son. Pen of five yearlings—1 John Jackson & Son. Pen of five lambs—1 John Jackson & Son. One ram, two aged ewes, two shearing ewes and two ewe lambs—Diploma, John Jackson & Son.

LEICESTERS.—Ram, two shears and over—1 and 3 A W Smith, Maple Lodge; 2 John Kelly, Shakespeare. Ram, shearing—1 John Kelly; 2 and 3 A W Smith. Ram lamb—1 and 3 John Kelly; 2 A W Smith. Ram, any age—Diploma, John Kelly. Two ewes, two shears and over—1 and 3 A W Smith; 2 John Kelly. Two shearing ewes—1 and 3 A W Smith; 2 John Kelly. Two ewe lambs—1 and 2 John Kelly; 3 A W Smith. Ewe, any age—Diploma, John Kelly. Pen of five yearlings—1 A W Smith. Pen of five lambs—Diploma, John Kelly. One ram, two aged ewes, two shearing ewes and two ewe lambs—Diploma, A W Smith.

LINCOLNS.—Ram, two shears and over—1 and 2 Wm Oliver, Avonbank; 3 Gibson & Walker, Iderton. Ram, shearing—1 and 2 Gibson & Walker; 3 Wm Oliver. Ram lamb—1 and 3 Gibson & Walker; 2 Wm Oliver. Ram, any age—Diploma, Gibson & Walker. Two ewes, two shears and over—1 Wm Oliver; 2 and 3 Gibson & Walker. Two shearing ewes—1 and 3 Gibson & Walker; 2 Wm Oliver. Two ewe lambs—1 and 3 Wm Oliver; 2 Gibson & Walker. Ewe, any age—Diploma, Gibson & Walker. Pen of five yearlings—1 Gibson & Walker. Pen of five lambs—1 Gibson & Walker. One ram, two aged ewes, two shearing ewes and two ewe lambs—Diploma, Gibson & Walker.

COTSWOLDS.—Ram, two shears and over—1 Geo Allen, Oriol; 2 and 3 John Park & Son, Burgessville. Ram, shearing—1 John Park & Son; 2 Geo Allen; 3 A J Watson, Castlederg. Ram lamb—1, 2 and 3 A J Watson. Ram, any age—Diploma, A J Watson. Two ewes, two shears and over—1 A J Watson; 2 and 3 John Park & Son. Two shearing ewes—1 A J Watson; 2 John Park & Son; 3 Geo Allen. Two ewe lambs—1 and 3 A J Watson; 2 John Park & Son. Ewe, any age—Diploma, A J Watson.

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Talbotville, Elgin Co., Dec. 22nd, 1897.

State of John Battle, Thorold, Ont.:

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

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

The total cost of gravel and cement for the above work was \$106. The work was done under the direction of your Mr. Norval Hagar, who very courteously showed me how to do the work free of all charge, an advantage which I appreciate very much, as I consider him thoroughly master of the business.

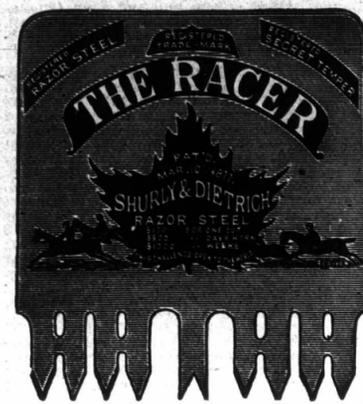
I also put a floor into my cow stable, 32 x 67, 4 inches thick, in which I used 27 barrels of Thorold Cement. I used six parts gravel to one of cement, except one inch on the surface, which was three parts gravel to one of cement. The floor is as hard as a stone. I consider both wall and floor better than I could have made of any other material, and much cheaper.

Yours truly, GEO. AXFORD.

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This secret process of temper is known and used only by ourselves. These Saws are elliptic ground thin back, requiring less set than any Saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good ask your merchant to let you take them both home, and try them and keep the one you like best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

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Of rare Butter quality, at reasonable prices, and Express paid by me to any reasonable distance.

- 1 BULL, 14 months, solid color, a perfect picture, \$85 00
- 2 YOUNGER BULLS, solid colors, \$40 to 75 00
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- 1 HEIFER, 14 months old, solid color, 100 00
- 1 HEIFER, 9 months old, solid light fawn, 55 00

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Pen of five yearlings—1 John Park & Son. Pen of five lambs—1 A J Watson. One ram, two aged ewes, two shearing ewes and two lambs—Diploma, A J Watson. Flock, one ewe, one ram, one yearling ewe, one ewe lamb—1 A J Watson. Pen, four lambs, two rams, two ewes—1 John Park & Son.

FAT SHEEP (not entered in any other class)—Two fat wethers, any age—1 W & G L Telfer, Paris; 2 J Campbell, Woodville. Two fat ewes, any age—1 A J Watson, Castlederg; 2 W E Wright, Glanworth. Six fat sheep for shipping—1 D G Hamner & Sons, Mt Vernon.

SWINE. YORKSHIRES.—Boar, one year and over—1 and 2 J E Brothour, Burford. Boar, six months to one year—1 and 2 J E Brothour; 3 H J Davis, Woodstock. Boar, under six months—1 and 2 J E Brothour; 3 H J Davis. Boar and three sows, any age—1 and 2 J E Brothour. Sow, breeding, one year and over—1, 2 and 3 J E Brothour. Sow, six months to one year—1, 2 and 3 J E Brothour. Sow, under six months—1 and 2 J E Brothour; 3 John Hord & Son, Parkhill. Sow and four of her offspring, all owned and offspring bred by exhibitor—Bronze medal, J E Brothour.

CHESTER WHITES.—Boar, one year and over—1 and 2 W Butler & Son, Dereham Centre; 3 W E Wright, Glanworth. Boar, six months to one year—1 and 3 W Butler & Son; 2 W E Wright. Boar, under six months—1 W E Wright; 2 and 3 W Butler & Son. Sow, breeding, one year and over—1 and 2 W Butler & Son. Sow, six months to one year—1 and 2 W Butler & Son; 3 John Aokland, Delaware. Sow, under six months—1 and 2 W Butler & Son; 3 W E Wright.

POLAND-CHINAS.—Boar, one year and over—1 Henry Park, Norwich. Boar, six months to one year—1 W & H Jones, Mt Egin; 2 Henry Park. Boar, under six months—1 W & H Jones; 2 Henry Park. Boar and three sows, any age—Bronze medal, W & H Jones. Sow, breeding, one year and over—1 W & H Jones; 2 Henry Park. Sow, six months to one year—1 W & H Jones. Sow, under six months—1 and 2 W & H Jones; 3 Henry Park.

IMPROVED BERKSHIRES.—Boar, one year old and over—1 and 2 Geo Green, Fairview; 3 Wm McAllister, Varna. Boar, six months to one year—1, 2 and 3 Geo Green. Boar, under six months—1 T A Cox, Brantford; 2 Geo Green; 3 Wm McAllister. Boar and three sows, any age—Bronze medal, Geo Green. Sow, breeding, one year and over—1 Geo Green; 2 Jas McEwan, Kirtok; 3 Wm McAllister. Sow, six months to one year—1 and 2 Geo Green; 3 Jas Quire, Delaware. Sow, under six months—1 and 2 Geo Green; 3 T A Cox. Sow and four of her offspring, all owned and offspring bred by exhibitor—Bronze medal, Geo Green.

TAMWORTH.—Boar, one year and over—1 John C Nichol, Hubrey; 2 and 3 Norman M Blain, St George. Boar, six months to one year—1 A Elliott & Son, Galt; 2 Norman M Blain; 3 John C Nichol. Boar, under six months—1 and 3 John C Nichol; 2 Norman M Blain. Boar and three sows, any age—Bronze medal, John C Nichol. Sow, breeding, one year and over—1 and 2 John C Nichol; 3 John Hord & Son, Parkhill. Sow, six months to one year—1 Norman M Blain; 2 Chris Fahner, Crediton; 3 John C Nichol. Sow, under six months—1 and 2 John C Nichol; 3 Norman M Blain. Sow and four of her offspring, all owned and offspring bred by exhibitor—Bronze medal, John Hord & Son.

DUROC-JERSEY REDS.—Boar, one year and over—1 Tape Bros, Ridgetown; 2 W W Fisher, Ben Miller. Boar, six months to one year—1 Tape Bros. Boar, under six months—1 and 3 W W Fisher; 2 Tape Bros. Boar and three sows, any age—Bronze medal, Tape Bros. Sow, breeding, one year and over—1, 2 and 3 Tape Bros. Sow, six months to one year—1 and 2 Tape Bros. Sow, under six months—1, 2 and 3 Tape Bros. Sow and four of her offspring, all owned and offspring bred by exhibitor—Bronze medal, Tape Bros.

SUFFOLKS.—Boar, one year and over—1 John Hord & Son, Parkhill. Boar, six months to one year—1 and 2 John Hord & Son. Boar, under six months—1 and 2 John Hord & Son. Boar and three sows, any age—Bronze medal, John Hord & Son. Sow, breeding, one year and over—1 and 2 John Hord & Son. Sow, six months to one year—1 and 2 John Hord & Son. Sow, under six months—1 and 2 John Hord & Son. Sow and four of her offspring, all owned and offspring bred by exhibitor—Bronze medal, John Hord & Son.

## GOSSIP.

Vol. 42 of the American Shorthorn Herd Book has been received at this office from the Secretary, Mr. J. H. Pickrel. It carries the number of bulls up to 129,990 now on record. Many turkey breeders who advertised birds or eggs for sale last spring received more orders than they could supply. It will therefore be wise on the part of as many as can to take time by the forelock and secure some of those advertised by James Tolton, Walkerton, in this issue.

Mr. Jas. H. Esdon, Curry Hill, Ont., writes:—"Among recent deliveries at Bainsville Station for myself were three head of Ayrshires from the noted herd of R. Reford, of St. Anne's. Also three head of Berkshire pigs from noted western breeders. Only the best pigs return a dividend."

Mr. W. D. Flatt, of Hamilton, Ont., recently sold a contingent of ten Shorthorns from the "Trout Creek" herd to Mr. D. L. Halstead, of Rensselaer, Indiana, and they have since gone to their new home. At their head was the fine young red and white bull, Gold Stick = 26946-, by Defiance = 23387-, a Golden Drop bull, out of Daisy of Strathallan 11th = 27589-. He was calved Dec. 2nd, 1897. The females accompanying him were as follows: Daisy of Strathallan 11th, by Mine Chief; May Queen (Vol. XV.), by imported Kinellar Sort; May Beauty = 27943-, by Alexander; Strawberry 11th (Vol. XV.), by Alexander; Ury Anne 2nd = 26111-, by Ranger; Strawberry 10th (Vol. XV.), by Kinellar Sort; Joan 8th = 23384-, by The Premier; Beatrice Macduff 2nd = 23380-, by Ada's Lad; and Dolly's Pride (Vol. XV.), by Kinellar Sort. This strong reinforcement will add very materially to the existing Halstead herd, laying the foundation for more extended breeding operations.