

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE

Vol. XXXIV. LONDON, ONTARIO. MAY 1, 1899. WINNIPEG, MANITOBA. No. 477

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AND HOME MAGAZINE

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

VOL. XXXIV.

LONDON, ONT., AND WINNIPEG, MAN., MAY 1, 1899.

No. 477

EDITORIAL.

Two Noteworthy Reports.

Literature on the subject of bovine tuberculosis and the tuberculin test continues to abound, but if we read aright the signs of the times it has passed the "boom" or alarmist stage, and is upon the wane. Two of the latest contributions are a bulletin by Prof. H. W. Conn, Ph.D., issued by the Storrs Experiment Station, Connecticut, and a report by Prof. McFadyean, of the Royal Veterinary College of England, published in the "Journal of the Royal Agricultural Society." These documents may fairly be taken to represent the advanced professional view of the situation. Prof. McFadyean's paper is based upon experiments conducted with the test. At the outset he concedes that the test is not infallible, as might be said of most things with which man has to do. The first of the causes why tuberculin may occasionally prove unreliable even in skilled hands is in the nature of the substance itself. He says that tuberculin is not a substance of definite chemical composition and strength. Its efficacy depends upon certain substances of ill-defined chemical composition which are added to the liquid in which the bacilli are cultivated by their own vital activity. Tuberculin is weak or strong according as it is richer or poorer in those substances, and he acknowledges that by using a sufficiently large quantity of tuberculin one may cause the temperature to rise in an animal that is free from tuberculosis, and a rise in temperature may fail to follow, even in a tuberculous subject, from the use of too small a dose or from the tuberculin being weak on account of some error in its manufacture. Still he thinks the risks of miscarriage are inconsiderable if the tuberculin is got from a trustworthy source; and there is a wide margin between the quantity that will excite a reaction in a tuberculous animal and the quantity that will cause a rise of temperature in a healthy one. But the Professor is compelled to state that which to us seems a serious admission, that the temperature of the animal may rise from some cause quite unconnected with the injection of the tuberculin, and the only safeguard is to note the manner of the rise as well as the extent of ascent. A sudden rise followed by a sudden descent is not proof that the animal is tuberculous, but a steady and gradual rise, followed by an equally steady and gradual descent, does afford such proof. The former indicates that the rise is due to some local or accidental disturbance. He also points out that the test is not to be relied upon when used under exciting conditions, as in the market or slaughter house. It follows obviously that providing in the first place reliable tuberculin be secured, then only men of skill who are thoroughly experienced in the application of the test should be permitted to apply it. This fully sustains the position strongly contended for in the FARMER'S ADVOCATE, and indicates that great mischief might be done by allowing every "Tom, Dick and Harry" to apply the test or to permit local authorities, such as boards of health or medical health officers, to condemn cattle to slaughter on the amateur diagnosis of some chance veterinary surgeon. On the whole, Prof. McFadyean's report tends to unsettle faith in tuberculin as a sure test in general veterinary practice or connected with measures for the promotion of public health.

Prof. Conn's report gives the result of a year's special study by the author, of bovine tuberculosis in England, Holland, Denmark, Germany, Switzerland, and Italy. He found the disease much less prevalent in southern than in northern countries, for the reason that in the former the cattle are less confined and roam the greater part of the time in the open air. Here at once is a strong argument for better ventilation, greater cleanliness, and more sunlight in all northern stables—in short, rational methods in cow management. He reports

that tuberculosis is much more general among the cattle of northern Europe than was commonly supposed, and appears to be increasing, particularly in Denmark, which is almost entirely given over to dairying and where about half the cattle are said to be tuberculous. The apparent increase is probably due to the recent use of the tuberculin test and slaughter house examinations, and is probably not as real or serious as it seems. One would naturally suppose that the cattle of the country would present some striking evidences or results of the disorder, but, strange to say, Prof. Conn's bulletin mentions nothing of the kind. On the other hand, we know that Denmark has built up an annual \$30,000,000 butter trade in Britain, practically capturing that market against the world, besides sending in over \$13,500,000 worth of bacon, largely the produce of dairy by-products. Evidently tuberculosis has not seriously impaired the usefulness even of the Danish dairy cow.

Prof. Conn concedes that the passage of tuberculosis from man to animal or from animal to man is not a common method of dissemination; and states further, that while bovine tuberculosis has apparently increased many fold during the past fifty years, human tuberculosis has diminished nearly fifty per cent. This indicates that tuberculosis in cattle is not the menace to human health that has been commonly supposed. Of the tuberculin test Prof. Conn says:

"Nothing has been taught more conclusively as the result of the last five years' study than that there is no necessity, from the standpoint of public health, nor of the health of the herd, that every animal reacting to tuberculin should be slaughtered. Many of these animals have the disease in such an incipient stage that recovery may take place. Many of the animals which have been shown by experiment to be tuberculous are still capable of many years' active, useful service in the dairy, and the slaughtering of all animals reacting from the disease is extremely wasteful and unnecessary."

Where the disease is suspected he recommends the use of the test and the rigid isolation of any reacting animals from the rest of the herd, which would necessitate carefully separated compartments and pasture lots if in summer the animals are to graze. The calves of infected cows are to be reared on boiled milk, and the healthy herd guarded strictly from any infection from without. This all involves a rather serious undertaking for the American dairy farmer and stockman.

Fodder Crops.

The raising and feeding of live stock has become so large and essential a part of the work of Canadian farmers, especially in the older provinces, that they find one of their principal studies to be the cheapest and most economical means of producing and providing not only the necessary winter supply of fodder to keep their animals thriving and doing good work during the months in which they are stabled, but also to supplement the pastures which are liable to fail during the late summer months, owing to protracted drouths which generally fall to the lot of limited districts, if not to large areas. It is only in exceptional years that in most sections of the country pastures remain fresh and sufficient through all the summer months to keep the stock improving, or even to enable them to hold their own, while frequently heavy loss is sustained owing to the falling off in the milk supply in the case of dairy cows, and of flesh in the case of beef cattle. This difficulty has been aggravated in late years by the prevalence of the hornfly, which heavily handicaps cattle stock in the production of flesh and milk, and renders it almost imperative in order to securing good results that the animals be stabled during part of the day in midsummer and fed with fodder of some sort. To meet this contingency to advantage, it is necessary to make provision for the growth of some green crops for soiling purposes,

and this can perhaps in most cases best be done by sowing vetches and mixed grain at different periods, to be cut green and carted to the stables. This will fill the bill until corn is far enough advanced in growth to take its place. Fortunate is the stockman who has a sufficient supply of ensilage to carry his stock through the winter and a reserve fund for the summer months. This is, no doubt, the cheapest and most convenient manner of meeting the situation, because the supply is close to the cattle stables, and can be fed out with little loss of time even in the busiest season.

We are firmly convinced, from experience and observation, that corn and the silo are bound to solve the problem of economical stock-feeding more satisfactorily than any other means can do. There is certainly no other crop of which so great a bulk and weight of wholesome food can be grown upon the same acreage, and we are perhaps safe in saying none more sure to grow and produce a profitable crop in the average of years. Its cultivation leaves the land clean and in good condition for future crops, and it requires no special skill to grow it successfully. From ten to twenty tons per acre of succulent food, together with a good percentage of nearly if not quite ripened grain of high nutritive value, represents a crop which is readily attainable, and which the Canadian farmer and stock-feeder cannot afford to despise or reject. We are thoroughly persuaded that the silo has come to stay, and from an extended observation we are confident that it is growing in favor with those who have had experience with it, and will be more generally adopted by farmers and feeders as the years go by. To those who have no silo, our advice is, sow and cultivate corn on the plan outlined in other columns in this issue, and prepare for building a silo during the present summer or autumn. A stave silo of 100 tons capacity can be built for \$100, or less, and smaller ones in proportion, and if a more enduring structure is preferred, cement concrete fills the bill. It is worthy of consideration whether two small silos are not more desirable than one large one, especially where the number of animals kept is not large, and the object is to keep part of it over for summer feeding. In this case the smaller circumference leaves less surface exposed to the air, which is a decided advantage when small quantities are being fed daily and during warm weather. While we have no desire to see less attention given to the growing of roots and clover, which are among the most valuable stock foods, yet we all know that these crops are liable to fail in some years, and we vote for corn, not as a substitute for roots or clover, but as an invaluable supplementary fodder crop, and one which we hope to see more largely and more generally cultivated.

The Prospects for Wheat.

The series of brief reports on the condition and prospects of the fall wheat crop in many sections of Ontario, published elsewhere in this issue, show that while in some districts, as was feared, the crop has suffered severely from the very erratic character of the winter it has just passed through, and in a few counties has been declared a partial if not a complete failure, yet in many others its condition is reported as very favorable and the prospect at this date quite satisfactory. In some counties the scarcity of snow on the fields during the excessively hard freezing weather experienced in February exposed the crop to exceptionally severe conditions, which may well account for its unsatisfactory appearance; but it is gratifying to find that on the whole the prospect is brighter than was generally anticipated. In the northern counties, where the snow remained steadily upon the ground throughout the winter, the condition of the wheat is all that could be desired, and the unusual character of the month of April this year—the complete absence of alternate freezing and thawing which in most years is associated with that month—has been exceedingly favorable, and if the present warm temperature continues, and occasional showers of rain are vouchsafed, the indications are that the wheat crop of the Province will be quite up to the average.

THE FARMER'S ADVOCATE
AND HOME MAGAZINE.
THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED BY
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, ONTARIO AND WINNIPEG, MANITOBA.

LONDON, ENGLAND, OFFICE:
W. W. CHAPMAN, Agent, Fitzalan House,
Strand, London, W. C., England.

JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published on the first and fifteenth of each month.
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STOCK.

The Honor Roll Held Over.

Owing to the length of our report of the Canadian Horse Show and the large number of illustrations accompanying it, we have reluctantly been compelled to hold over for our next issue the concluding instalment of Mr. Gibson's interesting article on the Honor Roll of the Royal Show. Knowing the keen interest evinced by a large section of our readers in this subject, we regret the necessity for this delay, but we trust that the seasonableness of the Horse Show article will be recognized as a sufficient reason for giving that subject precedence at this time.

To Make the Ewe Own a Lamb.

To the Editor FARMER'S ADVOCATE:
I notice in your issue of April 1st an inquiry from a subscriber about the best way of having ewes take up with their lambs. I had a young ewe lamb last week that rejected her lamb from the first. She had a very poor show for milk, which is generally given as the reason for being unmotherly, and I think correctly so. She would run at the lamb every time it attempted to get up, and would send it across the pen. She never licked it over. I closed up the end of a vacant horse stall and put them in it. I drove a steeple with a ring in it into the plank of the partition a foot from the ground, put a strap through the ring and around the ewe's neck so that she could neither go back, forward or sideways. I stood beside her eight or ten times that day and let the lamb suck both sides of her udder, and fed the ewe slop five times that day, and as often the next, consisting of bran, ground oats, with a plentiful sprinkling of salt in to make her thirsty. She was all right at noon of the second day, and was milking enough to keep the lamb quiet. If the ewe will milk well she will generally take to the lamb. In the case of the ewe disowning one of her lambs after a day or so, it is likewise due to failing in milk. Rubbing the milk of the ewe well into the back and sides of the lamb is recommended. In all cases of indifference, feeding for milk is an essential for inducing greater motherliness.
Peterboro Co., Ont.

J. MCCABE.

The Canadian Horse Show.

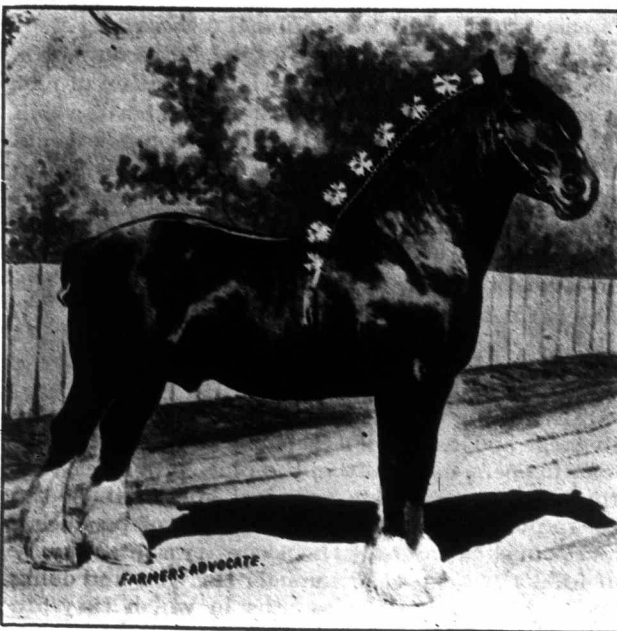
OPENING ADDRESS BY THE EARL OF MINTO—SOME SUGGESTIONS—THE CLASSES REVIEWED.

The fifth annual Canadian Horse Show, which was held in the spacious and well-fitted Armories, Toronto, on April 13th, 14th and 15th, was by all odds the most successful event of its kind ever held in Canada. It will be remembered that last year the show was run in conjunction with a military tournament, which together occupied four days of three sessions each. This year the three sessions of each of the three days were filled with interesting competitions of horses and horsemanship, except the pleasing feature of the musical ride, which took place during fifteen minutes of each evening's programme, which invariably lasted till near midnight. An exhibition of the best in Canadian equine form and finish is fittingly a society event, which, indeed, the show was this year in perhaps a greater degree than ever before. The interest of this fea-



LYON MACGREGOR (Imp.) [2308].
Sweetstakes and First-prize 3-year-old Clydesdale Stallion.
OWNED BY ROBT. DAVIES, TORONTO.

ture was no doubt increased by reason of the presence of the Earl and Countess of Minto, who set the affair in motion and occupied one of the boxes during most of the afternoons and evenings. In reply to an address presented to the Governor-General and his excellent lady, the Earl expressed his pleasure at being present, not only to see the grand exhibition of horses, but also to make the acquaintance of the breeders and exhibitors. He expressed his confidence that the organizers of such a show have in view more than the mere success of big attendances and financial successes. "What they are aiming at," continued the Earl, "is the production of a superior class of horses, with a view to the opening up not only of the British market, but the markets of other countries. In my opinion



YOUNG DUKE OF FIFE (Imp.) [2463].
First-prize Clydesdale Stallion. Foaled in 1892.
OWNED BY GRAHAM BROS., CLAREMONT, ONT.

the future looks prosperous for this trade. Where I live in the south of Scotland, a large number of Canadian horses are being bought. I know personally of one gentleman at Dumfries, and have been told of others in the City of Glasgow, who are dealing largely in Canadian horses. For my own part, I have had several opportunities of sitting behind Canadian horses, and have always found them good horses, showing excellent quality and speed. There is an inclination on the part of the gentlemen in England to buy Canadian horses for smart carriage work. I know of several friends of mine who have done so. They are no doubt influenced a good deal by the tremendously high prices the London dealers ask for carriage horses. Still, it is also fair to say that the general soundness and excellence of imported Canadian horses has also a good deal to do with it.

"In this connection, I would impress upon Canadians engaged in the trade the necessity of careful judgment in the importing of horses. What you have chiefly to consider is the source of production, the manner in which these horses are bred, and remembering that, you may accomplish a great deal. It is my opinion that a great deal might be accomplished by instructing the farmers as to the proper manner of rearing and breeding horses, because if you have good stallions it does not do to neglect the importance of having good mares."

Continuing, he remarked: "I have one more word of advice to Canadian breeders. They make a great mistake in docking horses intended for the British and other markets. Personally I do not object to docking. Very often it improves a horse in appearance which is intended for sporting or hunting. From a breeder's or the first seller's point of view it is entirely wrong. It closes two markets to him, namely, the military and the carriage horse markets. Persons do not care to buy docked horses for smart carriage purposes. To the first sellers or breeders it is, therefore, a mistake to dock horses. If the purchasers choose to dock them, well and good." After a few further remarks, His Excellency declared the great show open.

The success of the show in the matter of exhibits was highly satisfactory. The entries exceeded those of the shows of '97 and '98 by upwards of one hundred, and the average quality of the exhibits showed a marked improvement. The absence of Mr. J. S. Bratton's entries of harness and saddle stock from East St. Louis, Mo., and of Mr. Alex. Galbraith's draft numbers from Janesville, Wis., was deeply regretted, as some toppers were expected from amongst them. Good as they might have been, they would have had no walkover with the excellent horses that appeared in the classes where they had entered. In the saddle and harness classes especially there was decided improvement, both in numbers, merit of entries, and in fitting. The draft classes, too, showed improvement, but not more so than the improved condition of the heavy horse trade would warrant. It was a matter for regret from a farmer's standpoint that the rule of last year, to have all the draft classes shown during the first session, was departed from, as was done this year by continuing the Clydesdale competitions up till Saturday afternoon. This made it necessary for many farmers to remain in the city three days in order to see their favorites shown. The advantage of spreading out these classes cannot be very great, since the city visitors usually take more interest in other classes of horses. We heard considerable complaint from country people upon this score, and we see no reason why the rule of showing all draft classes on the first day, as was done last year, should not be adhered to. If this were continued a few years, so that farmers could depend upon seeing all the heavy classes shown by attending one day or even up till noon of the second day, we feel safe in predicting that many more outsiders would avail themselves of the opportunity of visiting the show, and, when there, no doubt many would remain over during a longer period. It seems to us of very great importance that as much as possible should be done to bring the breeders of horses to this show, where they can see the best types side by side with those of less merit, and thereby learn that it is unprofitable to produce indifferent horses, and that it is profitable to rear those of the desirable classes.

Clydesdales.—Year after year in the past we were accustomed to see numbers of the same horses shown, but at the show of 1890 the entries, with few exceptions, were largely a new lot. This, we take it, is a result of a much livelier movement in horse business. In the class for stallions foaled previous to Jan. 1st, 1890, five good horses were forward. Mr. Galbraith had made three entries here, and their absence caused much disappointment. Graham Bros., Claremont, Ont., were out with Young Duke of Fife (10300), by Orlando (8002), and Macarlie 8782, by MacClaskie. The former was imported in Sept., '98, from Scotland by Joseph Robbie, Edinburgh. He is seven years old, and therefore not just as fresh as he has been, but he stands on a set of limbs of good wearing quality, perhaps a trifle wide apart in front, but a good mover and nicely topped. The illustration we publish well represents him standing, although it to some extent magnifies his head, which is of good form and well carried. Macarlie, foaled in '93, is a right flash, catchy chestnut, with white mane and tail. He was quite a favorite with many outside the ring, and had he a bit more depth of body and quantity of bone he would have gone to the front. He is a grand goer and evenly turned throughout. He was bred by L. B. Goodrich, State Centre, Iowa, and imported by Graham Bros. a short time ago. A little more time in their excellent care would have settled him down wonderfully into show form. The two we have mentioned and Gay Prince (2470), shown by T. H. Hassard, Millbrook, Ont., were strong rivals; in fact, there would have been little cause for complaint had any one of them been granted the coveted position. Gay Prince, by Prince Alexander, was bred by Wm. Renwick, Meadowfield, Scotland, and foaled in 1895. He is of the same general pattern as Young Duke of Fife, with perhaps a bit more body, and is quite a flash goer. He is one of the honest, substantial sort, that should leave behind him a useful, good-limbed lot of progeny. John Bell, Amber, Ont., and Alex. Doherty, Ellesmere, Ont., showed respectively Honour Bound (imp.) [2115], by Sir Maurice, and Macqueen [2218], by Queen's Own. The former is of the deep cart sort, while the latter, although of nice

form, needs some time to widen him out. The judges, E. W. Charlton, Duncrief, and Geo. Gray, Newcastle, took a long time to decide where to place the awards, which were finally given in the order we have mentioned the horses.

Of the nine entries of three-year-olds, just three colts came into the arena—Robt. Davies' (Toronto) Lyon Macgregor [2308], John Davidson's (Ashburn) Prince of Kinellar [2475], and Alex. Doherty's Prince of Blantyre [2339]. The first named (by Macgregor) has been looked upon by horsemen as a coming horse ever since he landed from Scotland as a yearling. The illustration we publish of him falls short of doing him justice, as it fails to bring out his snap and style. He is a big fellow and even throughout, with limbs, pasterns and feet of the



LORD ROSEBERRY (Imp.) [1307].
Sweepstakes and First-prize Hackney Stallion.
OWNED BY GRAHAM BROS., CLAREMONT, ONT.

correct type. Prince of Kinellar is also a Scotchman, sired by that noted horse Prince of Erskine (1847), by Prince of Albion, whose dam was by Darnley (222). He is a very neat horse, with capital underpinning, and much the best mover in the class. Prince of Blantyre is by Prince of Quality and out of Miss Fleming. He is of the big, drafty sort, and came out in capital flesh. He is quite a good colt throughout while standing or at the walk, but his action at a faster gait was not up to the others. The awards were not easily placed, but finally settled in the order mentioned, the Macgregor colt afterwards winning the sweepstakes award with a narrow majority over Young Duke of Fife.

Five two-year-olds made a very fine showing, composed of two Canadians, two bred in Scotland, and one bred by N. P. Clark, St. Cloud, Minn. Robt. Davies' Prince of the Glen, by Prince of Quality and out of Edith, was a good foal, and he has lost no time since. He carries a great body and quite good bone, as might well be expected from his breeding, but he had lost much of his feather, which came nearly losing him 1st place, which he won. He moves well for a horse so highly fitted, but some of the others rather surpassed him at the ground. A flashy chestnut shown by Graham Bros. claimed next honors. He was bred by Wm. Rolph, Markham, and was sired by Macquaker. He is a catchy fellow, with quite good ends and underpinning, and moves well. Robt. Davies' imported Baron's Model, by Baron's Pride, put up the best showing of action in the class, and is of quite good Clyde stamp throughout. He won 3rd award. John Bell, Amber, showed Royal Huntly, an honest, good stamp, got by Moncrieff Marquis and bred by Jas. Merson, Huntly, Scotland. He is a good-limbed, strong colt that will need a little time to mature him. An aristocratic fellow and as nice a colt as any was St. Patrick, by Prince Patrick and out of Miss Stanley, both of Columbian renown. He is a flash colt with ideal foundation, but needs size.

Just three Canadian-bred Clydesdales were out—a fair lot of good working type. Sir Julian, by Sir Henry Fielding, was rather easily the winner, being of good size, of draft conformation, and nicely limbed. West York Stamp, by Westfield Stamp (shown by Amos Agar, Nashville), and Amber Boy, by Red Wattie (shown by W. J. Howard, Dollar), were useful horses, but showed the lack of Scottish dams in type.

A right noble class of five mares represented all the Clydesdale females shown on the halter. Rose of Blanchard [2462], by Rakerfield, and shown by Geo. Moore, Waterloo, is of the thick, substantial type and well furnished. She was also shown in the pair that won 1st for draft pair of mares or geldings. She is represented in our illustration of that team. Robt. Davies' Nellie has often been a winner. She stood 2nd here, after considerable examination and comparison by the judges. She came to the show with a full udder, having left her foal at home. D. & O. Sorby's Sonsie Lass and Starlight are hard to fault, but could only reach 3rd and 4th places. Sunbeam and Starlight won 2nd in pair. Pairs by Clydesdale sires were three strong entries—Messrs. Sorby's Diana McKay and Sonsie Lass, Robt. Davies' Nelly and Edith, and Enterprise and True Love, also from the latter's farm. They won as mentioned.

Shires.—The best class of stallions of this breed we have ever seen shown in Canada faced the judges,

R. Gibson, Delaware, and Frank Mitchell, Pawtucket, R. I. Two newcomers, Mawdsley (imp.) [279], by London, and owned by Colborne Shire Horse Association, a stylish chestnut, and Bahallon Vulcan (imp.) [274], by Vulcan, and shown by Morris, Stone & Wellington, who also showed Pride of Hatfield, a former victor, winning 4th with him on this occasion. The good and well-known Bravo II., formerly owned by Horace N. Crossley and now owned by Thos. Skinner, Mitchell, stood 3rd, while two other very good imported numbers were unplaced. Mr. Crossley's three-year-old Rosseau Royal Albert [271] was alone. He is a massive fellow and has thickened wonderfully since his appearance at the Toronto Industrial in '98. A plain but useful pair of mares were shown by Wm. Hendrie Co., Toronto: Brunette, by Sampson, beating Lorne Belle, by Darnley.

Thoroughbreds were judged by Prof. Hugo Reid, V. S., Guelph, and T. D. Hodgins, M. P. F., London. The class for mature stallions contained nothing new, but for all a half dozen right good ones of the racing type. King Bob, exhibited by W. J. Thompson, Orkney, has done a deal of successful turf work and still looks fresh, at the age of sixteen. He won 1st over the sprightly Terremont, by Dandy Dinmont, and shown by A. Frank & Sons, The Grange, Tyrone, also an old horse, by Mortimer, and shown by Thos. Skinner, won 3rd. Two two-year-olds and one three-year-old were out—a racy lot, with too little weight.

Thoroughbred stallions qualified to improve the breed of saddle horses and hunters always present some worthy animals of useful size, good all-round action, and fair to look upon. Wiley Buckles, owned by Quinn Bros., Brampton, and who secured the 1st award, has few, if any, superiors as an individual of this class and as a sire of winners. He has gone to the front six times when shown with good ones, beating the winners at the World's Columbian and the New York Horse Show. Wm. Hendrie's Othmar, the champion of last year, stood 2nd, and Graham Bros. Godard 3rd. The class for fillies or geldings by Thoroughbred sire was slimly filled.

Carriage or Coach stallions had four of good type, and better action than usually appears in this class. The former winner, the German Coach, Graf Bremer, shown by Jas. McCartney, Thamesford, is very breezy and a great actor. His victory was popular, although General Watson, shown by John Rodgers, Emery, and Young Duke of Cleveland, shown by J. Mannel, Toronto, are quite good animals. Candidate 2nd, by Candidate, was the only three-year-old stallion of this breed shown. He is owned by Amos Agar, Nashville.

Standard-bred Roadster Stallions were rather a better looking lot than usually appears, while among them were a few fast ones. Graham Bros., Claremont, showed Reflector, a very handsome dark bay side-wheeler, bred in Kentucky. He is sired by Duplex, and has a mark of 2.073. The illustration we give of him in this issue is very natural. The rapid and useful trotting Altoneer, by Sphinx, stood 2nd, and Alcyonium Boy, by Alcyonium, won 3rd. Just two three-year-olds were shown.

Hackneys.—Messrs. Sorby's well-known chestnut, Square Shot; H. N. Crossley's roan, Rosseau Performer; and a newcomer to the showing, Lord Roseberry, owned by Graham Bros., competed in the mature stallion class, over 15 hands 2 inches. The last named is a model of the breed and a wonderful goer, and not only that, but he is a very impressive sire, having sired the noted Blucher that swept all before him in Canada and at several of the great American horse shows last year, and many other good ones. Lord Roseberry won 1st, Rosseau Performer 2nd, and Square Shot 3rd. Stallions up to 15 hands 2 inches had out Beith's Squire Rickell, by Cadet; Hillhurst Sensation, by Hayton Shales, and shown by A. Yeager, Simcoe; and Moorland (imp.), shown by Thos. Irving, Winchester. Beith's entry is a wonderfully snappy, high-acting, breezy fellow, much like his noted sire. He was an easy winner and chased Lord Roseberry close for champion honors. Mr. Yeager's entry is quite of the cob pattern and a good all-round actor. He came ahead of the rapid and high going imported horse that sags a little in the back. Messrs. Sorby's very good two-year-old, Woodland's Performer, from Barthorpe Performer and Miss Baker, will always command respect so long as he stays up to his present standard. He has size, grace, and action—in fact, he is one of the most likely young Hackneys in Canada. He competed with Mr. Crossley's fine and breezy two-year-old, Rosseau Swell, and yearling, Rosseau St. George.

A chestnut daughter of the late Banquo won in females over Rosseau Jewel, by Rosseau Performer, and Miss Roberta, by the same sire. The well-known and often victorious Jessica, by Jubilee Chief, won for her owner, Robt. Beith, M. P., Bowmanville, the Hackney female sweepstakes award, as well as first for high-stepper by a Hackney sire, and English silver medal for best Hackney mare by an imported sire and out of an imported dam. She is a hard mare to beat in harness or on the line. Crow & Murray won second for the get of a Hackney stallion with Glenalda, by Lord Roseberry, and also won second on her team mate, Glenaldyne, by Lightning, for high-stepper by a Hackney sire, in harness, in a class of eight good ones. E. B. Clancy, Toronto, won 3rd on Miss Grace, by Lightning.

Horses in Harness.—All the single and double harness classes show improvement year by year.

The single class not exceeding 15 hands 2 inches had over thirty entries, but the half dozen entries made by J. S. Bratten, St. Louis, did not present themselves before the judges, Arson Moulton, Batavia, N. Y., and F. C. Hutton, V. S., Welland. The horses were judged on their conformation, quality, style and action, and very few of the entries lacked a fair share of these virtues. They were a trappy lot of bang tails, brought out in perfection of fitting, dress and equipment. Messrs. Crow & Murray won with the chestnut Golden, followed by Adam Beck's Rarebit, a handsome little horse that gets his knees well up to his chin at every step. In the larger single class of 15, Crow & Murray won 1st and 2nd on The General and Glenalda, both of which are illustrated in this issue. The same firm won 1st on pair not exceeding 15 hands 2 inches, and also on pair over that height. In the latter class Beith's Bianco, by Ottawa, and Jessica, won 2nd, and S. F. McKinnon, Toronto, 3rd. This class, perhaps more than any other, shows great improvement. A few years ago very good small horses were shown in harness, but the large ones were generally ill matched, coarse, and poor actors, while to-day we see them with as much quality and action as the smaller ones. The exhibit of tandems was rather small, although some sixteen entries were made. Here again Messrs. Crow & Murray's Glenalda and Glenaldyne won 1st, followed by W. H. Smith's Marie and Grace Darling, and J. Ross Robertson's Sir Wilfred and Harry O.

Roadsters, standard or non-standard, in single, also in double, harness, had entries of 12 and 6, respectively. Among them were a number of smart, well-bred horses, of good character. In the single class J. J. Burns, Toronto, won on the three-year-old gelding, Excellence, a rapid, breezy fellow, a little fine for single work. J. C. Deitrich, Galt, came 2nd on Frank, the mate to Lucy, which pair won 1st, and are illustrated in this issue. They well represent what is wanted in this class of horse.

Saddle Horse classes have made great strides, as have also the hunters, since the Canadian Horse Show has been an annual event. The classes have grown and the entries show a deal of uniformity in gaits and breed characteristics. In several of the sections the entries ran over thirty, and there were very few weeds amongst them. The first class called was for a combination saddle and harness horse, and we illustrate the winner, Bamboo, owned by Mr. L. Meredith, London, in this issue. He is quite of the saddle type, well gaited, both in harness and under saddle, and a nice horse to look at on the halter. He stands full 16 hands and is quite a jumper. This horse also won 2nd in the saddle class over 15 hands 2 inches, being beaten by a breezy son of Wiley Buckles, shown by A. Curzon, Guelph. In all the saddle classes horses of the Thoroughbred type were most in favor with the judges, Major-General Hutton, Ottawa, and Trumbell Cary, Batavia, N. Y.



SQUIRE RICKELL BY CADET.
First-prize Hackney Stallion.
OWNED BY ROBT. BEITH, M. P.

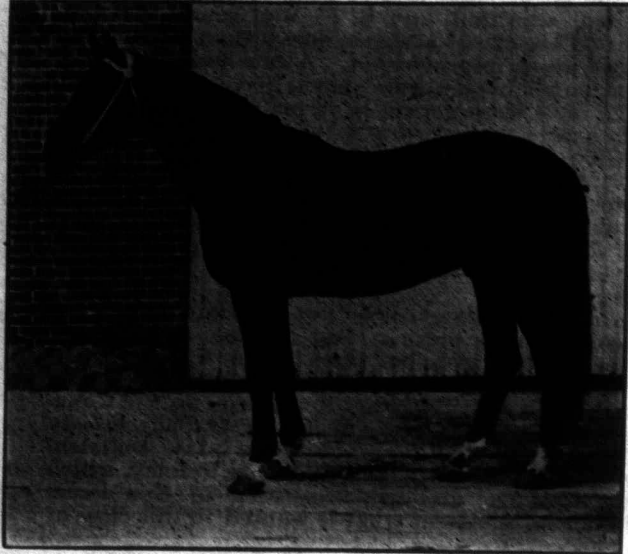
Fasting Capacities of Different Animals.

Regarding the fasting capacities of animals, the horse is perhaps the one of all others that succumbs most speedily to starvation, cattle being more tenacious of life; whilst it appears that carnivorous animals are able to fast for a longer period with impunity than those which live on herbs and cereals. Cases, however, innumerable have occurred in which animals in a state of destitution have succeeded in sustaining life by eating substances of quite a different nature to their usual food. For instance, a horse has been known to keep itself alive upon fish, whilst birds have devoured flesh with benefit to themselves when pressed by hunger; though whether the statement made by Blaine, which tells of sheep which have been buried under snow deriving nourishment from their own wool or from that of their fellow captives, is a matter upon which it would be unwise to speak decidedly, especially as the dangers of balling would have to be reckoned with.—L. S. Journal.

Our Scottish Letter.

AGRICULTURAL EDUCATION — SPRING SHOWS.

The spring season of 1899 will be remembered as one of the worst, or, as we say, most backward, on record. The weather has been characterized by a prolonged and unvarying succession of wintry gales of unusual violence, accompanied by a very heavy rainfall, consequently, although this is the end of the first week in April, there has practically been no seed time. In the south of England and also in Ireland, from all accounts, less humid weather has prevailed, but the Scottish farmer has been having quite a bad time of it. Even on the principle that there has been quite enough rain, and that the clouds cannot always empty themselves on an unoffending earth, the Scottish farmer hopes for a change.



WILEY BUCKLES.

(Thoroughbred.) Winner of First Prize as Stallion suitable to sire Saddle Horses and Hunters.
OWNED BY QUINN BROS., BRAMPTON, ONT.

With the return of spring comes the return of Mr. R. J. Drummond, the chief of the Scottish Dairy Institute, from Canada. Mr. Drummond begins this season with a larger crowd of pupils than ever, and how he is going to get through the season with the limited accommodation at his disposal is one of the things which only a master like himself can understand. Happily there is a prospect of better arrangements for agricultural education being devised before many years are over. Scotland has been singularly unwilling to embark on any enterprise having as its object the furtherance of technical education in agriculture, but now at length that is in the way of being rectified. A scheme has been approved by the Government, and secured the support of Ayrshire County Council, as well as the County Councils of Dumfries, Galloway, Renfrew, Dumbarton, Sterling, and Lanark, for the erection of an agricultural college with farm at Kilmarnock. The scheme includes the incorporation of the Scottish Dairy Institute and the Agricultural Department of the Glasgow Technical College in the new institution, and it will be affiliated with the University of Glasgow. When fully developed and in working order this college will be one of the best agricultural training schools in Great Britain, if not in the world, and now that the work has been taken in hand it is to be hoped success may crown the efforts of its promoters.

The very perfection of Scottish agriculture has been one cause of the apathy with which schemes for advancing agricultural education have been received. In no country in the world is a higher general average of agriculture reached than in Scotland, and the issue is seen in the fertility of many hills and moorlands, which in other parts of the world would be left in a state of nature. This is conspicuously seen in the counties of Peebles and Selkirk, where mountains are under arable culture, which a century ago were moorland. The altered fiscal conditions of our time, the keenness of competition from abroad, and the consequent low prices of produce have rendered a continuance of the policy of "breaking" rough land unprofitable, and only in very rare instances does one hear of such work being now undertaken. In Ayrshire an interesting movement is in vogue for the conversion of rough boggy land into timothy meadows. This seems a very sensible policy, and the account of two cases of reclamation embodied in the "Transactions" of the Highland and Agricultural Society for this year will doubtless stimulate others to follow the example of the farmers who tell the story. Several well-informed agriculturists argue that the dairying of the future will be "dairying without roots," and whether that be so or not, it can only be by the extension of the system of laying down land in timothy meadows.

Another effect of the altered fiscal conditions has been to excite unusual activity in the analysis of systems of manuring. On the virgin soils of the Northwest the farmer can afford to despise the value of manure, but in an old country it would not be far amiss to say that the whole science of agriculture consists in a knowledge of the economies of manuring. Notable experiments are being carried out by individual farmers at centers all over the country under the control and supervision of the Glasgow and West of Scotland Technical College,

and it is a tribute to the efficiency of the staff of this College, under Professor Wright, that they are now being asked to undertake experiment work as far east as East Lothian, and as far north as Perth and Fife, while the whole of the west and southwest of Scotland is being laid under contribution by them. Similar work is being done by Dr. Somerville in connection with the Durham College of Science in the north of England, and there is every prospect that the Yorkshire College, now under the superintendence and control of one of Professor Wright's first assistants, Professor Campbell, will soon be abreast of all the others. The most valuable work in respect of suggestiveness so far has been done by the Durham College, but Glasgow has been a close second. The general result of all this experimental work has been to teach farmers how to manure economically, to show them by ocular demonstration how money may be saved, and also how money may be lost. The value of this experiment work was long viewed with scepticism, but a change is coming over the mind of the average farmer: he is reading more, observing more closely, and generally understands better what farming economically means. It is quite impossible to give a resume of all the experiment work done during the past six years, but the full accounts published amply illustrate its significance. These reports are not circulated broadcast at the expense of the Government, but have to be asked for, and when somewhere about 3,000 of last year's report from the Durham College have had to be issued in this way, the proof is conclusive that advanced as the agriculture of Great Britain has been it has not yet reached its terminus.

The agricultural and commercial world here is at present somewhat agitated over the proposals contained in the Food and Drugs (amendment) Bill, promoted by Government this session. The object of the Bill is to protect the consumer, but its opponents allege that it is designed to protect the farmer. No doubt if the frauds aimed at are put down genuine agricultural produce will be in better demand. But this is not the primary object of the Bill, and it is significant that amongst its keenest supporters are wholesale butter merchants in London. The Bill is received with general favor, but one omission in it excites strong animadversion. Mr. Long has not embodied in it any prohibition of the artificial coloring of margarine to resemble butter, and he refuses to accept any amendment having this as its object. His attitude of antagonism is all the more remarkable from the fact that the Select Committee, who enquired into the subject, strongly recommended that this prohibition should find a place in the measure. It is argued that margarine is a perfectly wholesome and honest product, and it should no more be made penal to color it than to color butter or cheese. Further, it is argued that to prohibit the coloring of margarine would destroy the trade in margarine. Opponents of coloring regard this as tantamount to an admission that margarine can only be sold profitably when made to resemble butter, and, therefore, that its sale deserves to be stopped. To the ordinary intelligence this appeals as strong reasoning, and the Central Chambers of Agriculture has made a strong remonstrance to Mr. Long on the subject. Whether he will lend an ear to their entreaty seems at present to be doubtful, but possibly wiser counsels may prevail amongst his advisers. It is understood that the coloring of margarine to resemble butter is forbidden in continental countries, and these only manufacture the colored article for the benefit of the unsophisticated British workingman and his wife. Whether these worthy persons will allow themselves to be fooled much longer by the astute foreigner remains to be seen.

SPRING SHOWS.

The show season has fairly commenced, and at Castle Douglas yesterday there was a capital display of Clydesdale horses and Galloway and Ayrshire cattle. In the horse section there was again an unbroken succession of victories for the produce of the Messrs. Montgomery's Baron's Pride 9122. The first prize females in every class but one were got by him, as was also the first prize yearling colt. Besides these, the second prize three-year-old filly, the second and third yearling fillies, the second two-year-old colt, and the second and third yearling colts were by him; in fact, the show was practically a Baron's Pride exhibition. The best animal in the field not got by him was the champion male, a two-year-old entire colt, got by Macgregor 1487, and owned by Messrs. Montgomery. This is a horse of remarkable weight and substance, with excellent feet and legs. He was bred by Mr. Robert Frederick, Drumflower, and has been named after his farm. It is some time since a horse of equal weight and substance, with quality, has appeared. Two English exhibitors have got hold of several of the choicest of the Baron's Pride females. Mr. Herbert Webster, Morton House, Fence Houses, and Mr. Thomas Smith, Blacon Point, Chester. The latter owns the champion mare, Empress, first prize three-year-old, and Jeanie Deans, first prize two-year-old; and the former owns Lady Douglas, the first prize brood mare, and Lady Victoria, the second prize three-year-old, a massive, bonnie animal, like a breeding mare. Mr. Alexander Guild owns the first yearling—an attractive, showy youngster. He also owns the unbeaten yearling of 1898, Maid of Athens, a filly with beautiful fore feet and pasterns, which will not likely be shown until the H. & A. S. Show at Edinburgh. "SCOTLAND YET."

How Shall We Produce the Ideal Bacon Hog?

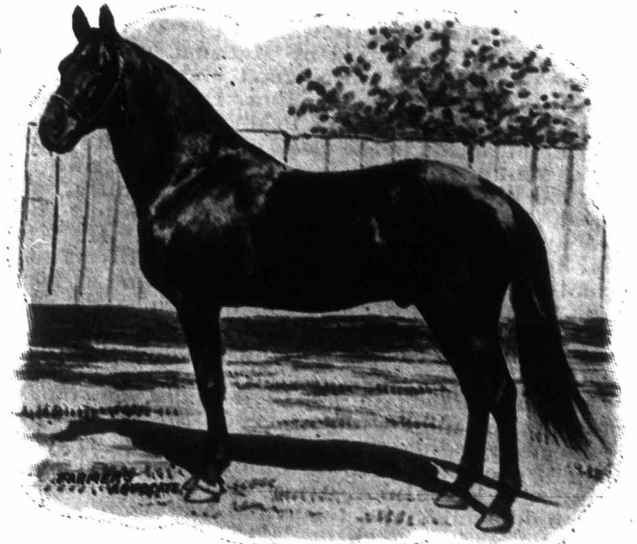
To the Editor FARMER'S ADVOCATE:

My copy of the FARMER'S ADVOCATE of the date March 1st went astray or went down in one of those fearful gales experienced during the last month on the Atlantic, so that I had to write to a friend to loan me his copy, as to miss one of the series of your interesting journal is very like missing the tawny old port after a good dinner with a few sympathetic friends who are enthusiastic stock breeders. It is not alone the delights of absorbing the contents of the journal or of the decanter, but taking these into one's self invariably leads up to animated and interesting conversation, mellowed and soothed by the benign influence of port and paper.

About the first thing which attracted my notice was the heading of a letter like unto that at the top of this scrawl. "Now," said I to myself, "we shall learn something of value. The writer must know something considerable of the subject, or he would never have asked a question for himself to answer." But once again had we a proof of that saying of some wise man, if not of Solomon, "Blessed is he that expects little and gets much," or of the reverse if that holds good. It is true that Messrs. R. L. Jarvis & Bros. appear to possess one of the most important of qualities for a writer to the press; that is, they confess that they have had no experience of the Yorkshire hog, and therefore, being entirely ignorant, they rightly, and with every confidence begotten of ignorance, proceed to give the most confident opinions about their qualities. The mere fact that they have drawn very largely on their fertile imaginations rather gives piquancy to their lecture. However, to all thinking and practical men this is somewhat of a drawback, save that it increases the desire to learn some facts concerning the subject, and that it enhances in their opinion the many latent lessons within the lines, "F—s rush in where angels fear to tread."

It is true that Messrs. J. & Bros. have had an immense experience, in that they have bred a few pigs each year for eight or ten years, and have tried all the most prominent breeds, viz., Berkshires, Poland-Chinas, Chester Whites, Tamworths, and lastly, the Duroc-Jersey. They have also fattened some fifty to a hundred pigs a year, or just about as many as a friend of mine in Sweden disposes of each week for several weeks in the year. He has gone one better than Messrs. J. & Bros., as he has tried even the Large White pig, therefore he knows a little about it. Some five years since he wrote to me that he had just won nineteen prizes and had a gold medal presented to him for his fine collection of pigs, and had been specially complimented by the king.

Now, let us compare Messrs. J. & Bros.' bold assertions and my friend's facts. The former write that "Yorkshires are the most apt to produce soft bacon," that "they are a large, coarse hog and re-



REFLECTOR 2.071.

First-prize Standard-bred Stallion.

OWNED BY GRAHAM BROS.

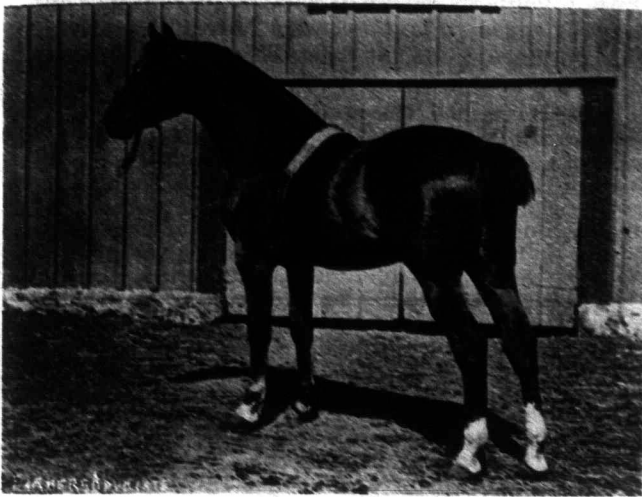
quire a longer time to ripen," that they "find it impossible to produce a good firm bacon in less than eight or ten months with Yorkshires," but that "Berkshires will make finer bacon at five months." Let us give my friend's facts: The Yorkshires do not produce soft bacon if fed properly and killed at six to seven months old; that they are not a large, coarse hog if properly bred; that he always sells them off for baconers before they are eight months old, and that no other breed of pigs will produce such fine bacon in so short a time with so little food. This is not the experience of a few days with a few pigs, but he has fattened the produce of sixty to seventy sows for many years, and has tried all the breeds of pigs, and now keeps nothing but Large Whites, which of course are the best in the world. St. Ives, England. SANDERS SPENCER.

Washing and Shearing Sheep.

BY J. M'CAIG, PETERBORO.

Washing.—Washing and shearing time is approaching, and shepherds are looking forward to their customary routine for the season. In most cases this consists of a drive of the combined flocks for half a mile or a mile, along a dusty road, by two or three neighbors, with all hands on deck, each carrying an extra pair of trousers and pair of old boots.

The benefits of sheep-washing are generally understood to be that it prevents the useless transportation of large quantities of dirt with the wool, and that it raises the value of the wool in the mar-



WOODLANDS PERFORMER—63—
First-prize Two-year-old Hackney Stallion.
OWNED BY D. & O. SORBY, GUELPH, ONT.

ket. It is thought, too, that by washing all wools are on the same footing, while the indiscriminate deduction of one-third of weight or price in the case of unwashed wools is unjust, as all are not alike dirty or yolk. In the case of the last argument it should be remembered that all washed wools are not alike clean, much passing for washed wool that has not been half washed. The transportation of considerable quantities of dirt must be paid for by someone, and it is as likely to be paid for by the farmer as by anyone else. With regard to the question of the market value of washed as against unwashed wool, it may be safely conjectured that the loss in price is nearly compensated by the gain in weight. In any case the price of wool in Canada is so low to what it formerly was that the difference is inconsiderable.

The advantages of not washing, on the other hand, are considerable, and relate principally to the meat side of sheep husbandry—the more important side in Canada, as our sheep are practically all of the mutton breeds. Sheep-washing cannot safely be done in our running creeks until near the end of June. This means a great discomfort to the sheep. It has been demonstrated by careful experiment that sheep feed better after the removal of the fleece in early spring than they do with it on. This applies particularly to the case of yearling wethers or ewes to be sold early in the spring, but applies to some extent to all sheep indiscriminately. At whatever time shearing takes place, it of course means a more or less violent change, as it means the exchange of the whole fleece for practically no wool at all. Our excessive climate, however, seems to accord well with this. The season of spring is a change from cold to sudden warmth, and it would seem more natural to take the fleece off the sheep as soon as the temperature admits of vegetable growth rather than leave the animal to carry it during six weeks more of increasingly hot weather.

It is certainly true that sheep are more impatient of heat than of cold. They have a peculiarly unsensitive skin. The yolk secretion lying next the skin about the roots of the wool, together with the wool itself, prevents the escape of animal heat from the body. For this reason sheep show total indifference to cold or frost. This quality of impervious skin, however, causes the sheep to suffer from heat. A sheep can sweat very little unless yolk be considered as a kind of sweat, and as a consequence its lung action becomes highly excited in hot weather. As far as warmth is concerned, then, sheep do not require much artificial protection at any time, but in warm weather they do require relief from heat. It is within the observation of all that none of the domestic animals avoid the heat as sheep do. Almost all spring and summer they seldom graze after half-past seven in the morning or before four or five o'clock in the evening, and they seek such places to lie in as the sun never reaches, under old barns being favorite places. Everything seems to favor earlier clipping. Wool is a wholly

subordinate side of sheep husbandry. Wool is only wool in this country, without consideration of grade or quality. The difference in returns between unwashed and washed wools is scarcely a consideration beside the question of the well-doing of both wethers and ewes with regard to flesh. Easter is nearer the natural time than June 1st is, and earlier is perhaps better for sheep that are to be sold at the opening of the grass season, always provided that the sheep have plenty of dry, warm litter, such as wheat straw, and are protected from drafts. Shearing of suckling ewes may check the flow of milk for a day or two, but the subsequent thriving of the ewe is of more than counterbalancing advantage. A ewe should not be shorn until five or six days after lambing, and then she should be hearty, not weak or sick. If they are handled carefully they may be shorn before lambing. If ticks abound, early shearing is an act of mercy, provided the lambs are dipped a few days after, which they certainly should be.

Shearing.—Shearing is an operation that cannot very well be learned from print. The experienced shepherd needs no hints; the novice can best learn to do by doing. A few hints for the beginner will not be out of place, because it is as important in this as in any other matter to begin right. Carelessness in details is of considerable importance. If shearing is to be done while sheep are on the grass, too many should not be put in a small pen at once, as they will soon dirty it and themselves; half a day's shearing is enough to provide for at a time. They are better to be not too full of grass for cleanliness sake, neither too hollow, as they shear better moderately full than empty. It is not necessary, whether sheared in March or May, that both sheep and shepherd should have the discomfort of a plank floor to rest on. If the light is good, one of the pens is a good place, as it generally contains a cushion of six or eight inches of waste fodder, which is likewise dry. Over this a piece of canvas or old carpet about twelve feet square should be spread, and fastened at the sides and corners. Sheep are more easily handled on the ground than on a bench, and the bench is not much of a saving on the back. It is much more encouraging for two to shear together than for one to work alone. Two pairs of shears are necessary: an inferior pair, not too large, for trimming off waste and dirt, and a larger pair for shearing. The shears should be kept in good shape by using an oilstone.

There are three stages in the clipping of a sheep. In the first the operator sets the sheep on its rump, and after clearing the fleece and hoofs of dirt, straw, etc., clips the wool from under the throat and down the neck to the breast. It is generally as easy to clip all around the neck down to the shoulders in this position as to do it with the sides. The breast is then cleared down to the belly, after which the shearer passes his left arm over the fore legs and lets the sheep down to a more sloping position over his left knee while he shears across the whole of the belly, over the scrobim or udder, inside of the thighs, and down to the tail on both sides. The breast and belly generally have to be done with short clips with the point of the shears. The left palm should keep the skin of the belly fairly tight, as it is apt to wrinkle. Care should be taken not to injure the teats of the ewes. Young ewes generally have heavy wool and small teats, and it is easy to injure them. The second stage consists of clearing the left side of the ewe, which is done by clipping from the belly to the backbone, following the direction of the ribs. This direction is easier than clipping broadside, as the wool creases in this direction, so that it is easy to raise the wool as it is cut in order to see where next to cut. The first half of the left side is clipped with the shoulder of the sheep resting on the knees of the shearer, and the last half by having the sheep laid out flat on its right side. The third stage is the shearing of the right side, which is a continuation of the circular clip begun on the other side, and proceeds from the backbone to the belly with one change of position, as in the case of the other side. When the sheep is completed these circular marks are generally distinguishable; they rather improve than spoil the appearance of the sheep. The test of good shearing is not alone the condition of the sheep, but the condition of the fleece. Neither the sheep nor the fleece should be mutilated. The sheep is generally injured by keeping the points of the shears close to the skin. They should be kept elevated considerably at the points and the middle of the shears or broader part kept close to the skin. To keep from spoiling the fleece the points of the shears should not be brought together while raised from the skin, as the wool will be left long there and will undergo a second cutting, so that the fleece will be destroyed by double cutting. The shears should take only a narrow strip and should take only short clips, the points of the shears not coming closer than an inch apart. A creditable job is of more importance than great speed. If a man does from fifteen to twenty a day he is doing all that the size of our flocks in Ontario demands. The new shearing machines promise to revolutionize sheep shearing even with our small flocks, as there are doubtless many breeders even in Ontario who would be glad to pay the price of one of these machines for the sake of a nice even, close job, with no danger of cutting the sheep.

It is a barbarous and unnecessary plan to tie the legs of the sheep while being sheared. As the sheep neath the shearer is dumb, so it is generally still if the shearer keeps going. The operation of shearing seems to keep the sheep occupied. A sheep generally does not kick much under a dex-

terous shearer, as he generally keeps it in a comfortable position and takes up its attention by keeping the shears going. Care should be taken to keep the fleece intact so that it will roll up neatly. For this reason care should be taken in turning the sheep and in keeping the fleece away from its feet. Tag locks that have not been previously removed should be cut off the fleece. Greasy wool or merely discolored wool goes in with the fleece. In rolling the fleece, begin at the rump, with sheared side on the floor, throw in the sides until the bundle is about eighteen inches wide, roll tightly and bind with twisted neck wool. Sometimes excessive foulness between the rump and udder causes slight putrefaction of the skin of the udder or parts higher up. This should be washed a few times with warm water and carbolic soap or washed clean and marshmallow ointment applied. Pine tar should be applied to cuts made by the shears and to the noses of the sheep. In cases of early shearing it is a good preventive of snuffles, one of the chief dangers of too early shearing. It acts as an antiseptic on the throat when licked and swallowed. In cases of later shearing it wards off attacks of the gadfly, but must be renewed every ten days or two weeks for this purpose.

A Romance with Honor.

A touch of romance is added to the story of Charles Colling's visit to Robert Bakewell in the year 1782 by Mr. C. J. Bates, in his special article on "The Brothers Colling," which heads the newly-issued number of the Journal of the Royal Agricultural Society of England. On the authority of a niece of Mrs. Charles Colling (Mrs. Copeland, who died so recently as in January last, at the village of Staindrop), Mr. Bates says that Charles Colling "first saw the pretty face of Mary Colpitts" at Richmond, Yorkshire, when she, the eldest of eight daughters in a family of eleven, was at a boarding-school in that town. The young lady's father, agent of the Streatlam estates, lost his stewardship in consequence of his refusal to tolerate certain stated things repugnant to his conscience, and retired to his own small property at Cockfield. The narrative continues: "A match with one of his eight daughters thus lost the little it had to recommend it from a worldly point of view. Charles Colling must have been spending very freely; his father's circumstances were becoming embarrassed. It is, therefore, in every way probable that it was with a view to remove his son from this matrimonial danger that the old man listened to the advice of his good friends the Culleys, and sent him to Leicestershire in 1782 to spend some time with Bakewell." The lessons learnt by Charles Colling during his stay at Dishley are then discussed by Mr. Bates, and their immense results in the improvement of the Shorthorn; but there was another, and for the destiny of the Shorthorn, perhaps, a scarcely less important issue of that visit. As Mr. Bates tells it, "Absence, in Charles Colling's case, seems to have made the heart grow fonder. On his speedy return home he became definitely engaged to Mary Colpitts;" and later we read, "On July 23rd, 1783, Charles Colling was wedded to



THE GENERAL.
Winner of First Prize, over 15 hands 2 inches.
OWNED BY CROW & MURRAY, TORONTO.

Mary Colpitts before the three lancet windows of the little old church of Cockfield." Mrs. Charles Colling, it is scarcely necessary here to repeat, identified herself so completely with her husband in his tastes and pursuits, and possessed so much tact and sound judgment, coupled with enterprise, as to give him most effective assistance in his work as the leading improver of the Shorthorn breed. One special occasion, a very critical one in Shorthorn history, may be mentioned. It was on the 30th of September, 1786, when, with his wife, he rode to Eryholme to see Mr. Maynard's herd, and under circumstances which have been several times told, in which Mrs. Charles Colling's more enterprising spirit and her persuasive powers secured for him the cow Favourite, renamed Lady Maynard, whose grandson, Favourite 252, became the progenitor of the whole of the pedigree Shorthorn race. — W. Housman, in London Live Stock Journal.

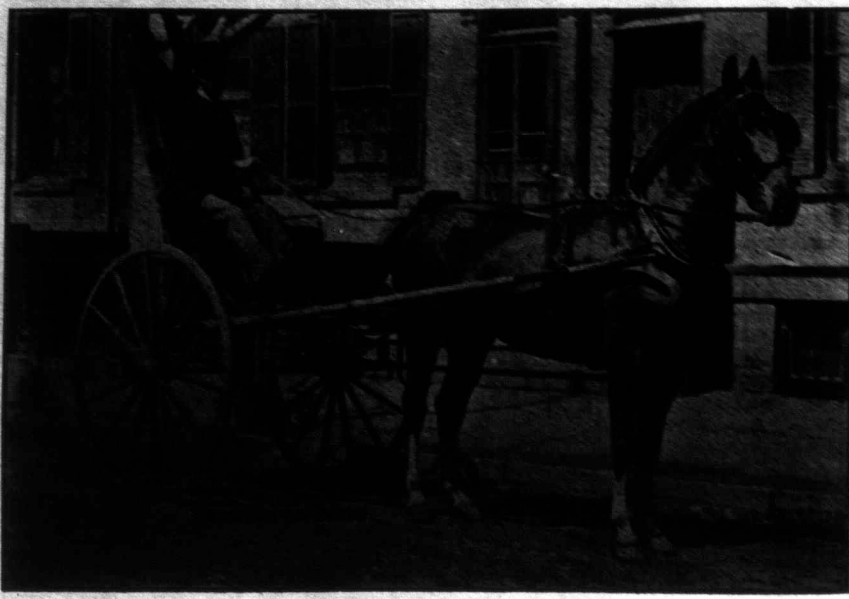
FARM.

The Economical Production of Feed and the Feeding of Cattle.

To the Editor FARMER'S ADVOCATE:

SIR,—It is the intention of the writer to describe methods of producing food for cattle, and a system of feeding which the average farmer could adopt without much expense, and which would increase the number of cattle that could be raised and fattened materially.

In the first place the writer's experience goes to show that the corn plant is the cheapest cattle food that can be grown, and that when it is cut up at the glazing stage and preserved in a silo it will yield a



HACKNEY MARE, JESSICA.
Winner of Female Hackney Sweepstakes, Sweepstakes for English Medal, and First Prize for High-stepping Mare or Gelding.
OWNED BY ROBT. BEITH, M. P.

greater quantity of good food for cattle per acre than any other crop now in use. On average land twenty tons per acre can be grown, the corn being planted in rows about three feet apart, and the kernels eight inches apart in the rows. Frequent shallow cultivation is important, and should be continued until the corn is five or six feet high, using a single horse scuffer, and in dry weather this becomes more important and helps the growth of the corn greatly.

There are many varieties which mature sufficiently, and any good seedsman can recommend a number of different kinds of corn which have been well tried and proved. It is better to secure those kinds which mature early and have good ears, and plenty of them, as the grain in the ears saves feeding so much meal as would otherwise be required to fatten cattle.

Twenty-five pounds of corn ensilage per head per day, mixed with an equal bulk of chopped hay and straw, half of each, and one peck of pulped roots, turnips or mangels, make an excellent ration for an average cow or steer, with chop or meal, mixed oats and barley, or other grain of that kind to the extent of from three to twelve pounds per day, depending on size of the animal and the nearness to finishing for market, feeding a light meal ration at first, and gradually increasing it and increasing the proportion of hay when hay is cheap and plenty of it on hand. This ration is for fattening cattle, and exact quantities of food per head cannot be properly given, as the judgment of the feeder must be used, and on his observation of how much each animal can eat up clean, and on the moderate increase of the chopped grain or meal, so that he will give only what the animal can profitably take, the success of the enterprise largely depends.

It should be always remembered that the rough feeds—corn, straw, and hay—are cheaply produced, and being plain and not rich food, all the animals will eat up clean will do them no harm; while an excess of meal may stall them or get them off their feed; also that the greater the proportion of rough, cheap fodder eaten by the cattle, the greater the profit by obtaining increased weight at the least possible cost.

The raising of clover to be fed on the farm, I would place next in importance to the corn, and perhaps it should be placed first, as the benefit to the land from the nitrogen gathered from the air and stored in the roots and in the plant itself is very great. Good clover hay, with well-ripened and well-preserved corn ensilage, makes a complete ration, containing all the elements required for growth of cattle, and for the ordinary breeding stock or for running light cattle through the winter, clover hay and ensilage are sufficient, though the addition of roots is undoubtedly of advantage, especially when pulped and mixed with cut hay and ensilage, the roots being so well liked by cattle that by mixing them with the other rough feed they will eat more of it, and while roots contain a very large percentage of water, yet the dry matter in them is very digestible, and is assimilated by the cattle with very little loss passing through into the manure.

The writer has applied the system of using cut hay, ensilage and pulped roots for stockers bought cheaply in the fall, dehorning them, and having them run loose in a big shed. Thirty-five head have been turned in and fed this mixture in a long trough with no meal, and for three seasons it has proved a success and very profitable. The intention was each year to finish these cattle on the grass in summer, but before spring they have every year improved so much that a little meal, about a pound per head per day, was added for a month or six weeks, and then they were sold at a good profit without holding them as long as intended.

Undoubtedly the aim should be for the average farmer of Ontario to raise all the food for cattle that he requires, or as near it as possible, and to feed what he raises on his farm, producing beef and hog products, butter and cheese, and by feeding what he raises on his land and returning the manure, the fertility of the land will be kept up, while obtaining a profit from it to a greater extent than can be derived in any other way; and while grain for sale may be produced, and in many cases the circumstances of individuals require that they should do so, yet it must be remembered that when the grain is sold and taken off in that way fertility is removed, and the farm is left with that much less plant food, a great part of which would have remained in the manure returned to the land when the grain was fed on the farm. SUBSCRIBER.

My Experience in Prize Potato Culture.

The value of the potato as an article of food, and the wide difference between a heavy crop of handsome tubers and the many small and deformed samples too often seen in the general market, which are neither a profit or a credit to the producer, and a source of annoyance to the cook and disappointment to the consumer, has induced me to place before the public my method of culture, which has gained for me the highest awards at the principal exhibitions, including six silver medals at Toronto in succession, and produced a yield of 400 bushels per acre of potatoes, handsome in appearance and perfect in quality; and if the thousands of readers of this valuable distributor of reliable information who are engaged in the peaceful art of agriculture in every province and district of this vast Dominion receive a benefit therefrom, I, their humble servant, will be amply rewarded.

The soil best adapted for potatoes is a sandy loam, with a gentle slope to the south or east, with a good natural drainage, but as we cannot always choose location or soil, we endeavor by tilling, manuring, and by exposing the soil to the pulverizing influence of the atmosphere to improve its texture, and thereby its fertility. I have obtained the best results from planting after peas, having been sod the previous season, or plowing under a second growth of clover. Carefully avoid planting potatoes on land where a series of grain crops have succeeded each other—especially wheat or oats. If pea stubble is used spread evenly in the fall thirty loads of good barnyard manure to the acre; plow two inches deeper than old furrows; gather lands up in center, opening up all water furrows to drain all surface water during winter. If clover sod is used turn down with a light furrow when full grown, but before clover gets hard spread evenly fifteen loads of good barnyard manure per acre; in this case, manuring may be done any time before winter. If manure cannot be had in the fall, spring manuring will answer admirably. Do not fear scab if fresh land is used as directed. About May 10th give turn with spring-tooth or disk harrow; then cross plow, harrow again, plow again, and finish with light harrow. By this process, the manure is thoroughly incorporated with the soil, which is now deep and mellow and in good condition to receive the seed. In planting, take a common plow with a light marker attached, begin on one side of piece, throwing out furrows right and left, thirty inches apart for Early Dwarf varieties and thirty-three inches for main crop or late varieties; plant sets one foot apart in rows, covering from three to four inches deep. In covering, I use a homemade invention, something like a snowplow with handles, drawn by one horse, and fitted with a cultivator share in center, which leaves a shallow furrow between the rows, the rows being opened with a single plow and thrown right and left. A single

turn covers two rows and leaves a furrow to drain surface water, as we generally get heavy rains at this season, which if allowed to stand on land would destroy the seed. For planting, select well-shaped, large, but not overgrown or deformed tubers—as like begets like; cut to single eye sets, and plant as soon as convenient after being cut. Sprinkle with land plaster, which will prevent pieces from adhering to each other, or heating, if not immediately planted. There is no crop that is so much benefited by the introduction of fresh new seed as the potato. It seems to take on new life and flourish wonderfully if the change is to well-selected stock grown as far north as the variety will mature. This is a point on which the most prominent authorities of the present day universally agree. Plant between May 10th and 20th. It is not uncommon, at least in northern Ontario, to get a few light frosts about June 1st. By planting at date named, the young plants will invariably escape injury, and at the same time have the full advantage of June and July—the period when potatoes do nearly all their growing. As soon as the young plants are three inches high start the cultivator, running within three inches on either side of rows; then hand-hoe carefully among the plants—no implement yet invented can take its place at this particular period. Continue running cultivator every week for five weeks, then hill up, using only the cultivator with mouldboards attached, which leaves broad, low ridges inclining inward at top, thus diverting rains to roots of plants, and forming a large, loose bank for the young tubers. Avoid using a plow to hill up with, as it leaves ridges too high and narrow and buries the young tubers now forming too deep, for well-formed tubers invariably lie near the surface. Never dig potatoes intended for spring and winter use until the tops die down. As to varieties for early marketing, I would recommend the following varieties in the order named: First—Early Ohio, Burpee's Extra Early, Early Norther; for second early and main crop—Rose of the North, Burnaby King, Pearl of Savoy; and for late keeping and large crop—American Wonder, Empire State. These have all done well here, but other kinds may suit other localities. I have tried all new varieties for the past ten years, besides growing seedlings, some of which promise to be better than anything yet introduced. Keep young plants free from bugs, for potatoes do not thrive without their leaves. Would be pleased to hear through the ADVOCATE at harvest time how its readers have succeeded, varieties grown and yields produced. WM. NAISMITH.

Simcoe Co., Ont.

Chaffing Straw While Threshing.

To the Editor FARMER'S ADVOCATE:

SIR,—In the letter over my name in the issue of April 15th, on "Cutting and Threshing in One Operation," it was a slight mistake on your part to have changed the wording, although you meant well. The common straw-cutting box (not "ensi-



PAIR OF CARRIAGE HORSES.

EXHIBITED BY ROBERT BEITH, M. P., BOWMANVILLE, ONT.

lage cutters," which are always understood by farmers to be the cylinder cutter) answers the purpose well. The ensilage cutters takes too much power to drive, although they might be a success if driven by a 16 or 18 horse power engine. A 12 or 14 horse power will drive the other style cutting box and thresher. Again, possibly it is wise to have two sets of knives, but really not at all for the purpose of replacing the dull knives, for two knives can be sharpened on the box while you are changing one. Possibly it would be wise to put on fresh ground knives every morning. I should have said that \$12 is the charge here while the days are long, but \$10 is charged in the winter time.

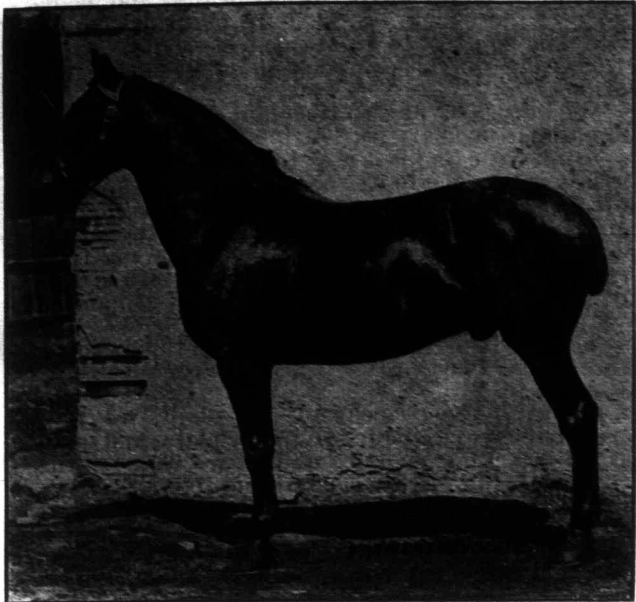
Middlesex Co., Ont.

JOHN B. SHIPLEY.

Corn Culture.

PREPARING THE LAND—PLANTING THE CROP—VARIETIES—AFTER CULTIVATION.

We give Americans credit for leading us in some lines, especially in taking up good ideas readily. In the matter of growing corn, they have in some of the Western States (principally Iowa, Nebraska, Illinois, Montana, and Kansas) for years found it to be one of the chief crops. True, these States have a soil and climate particularly suited to this crop, which is of great advantage to them, so much so, indeed, that of all crops grown in some of these States, corn is claimed to be king. During the last ten years, we in parts of Canada at least are beginning to place the corn crop well up amongst others in rank of importance, especially in sections where stock-raising and dairying are the leading branches



HIGH-STEPPER, HAVELOCK.

Winner in Tandem and in Pair not exceeding 15 hands 2 inches. EXHIBITED BY CROW & MURRAY, TORONTO.

of agriculture. We are forced to the opinion that a stock or dairy farmer in a section suitable to corn-growing who does not grow a considerable acreage of corn and put it in a silo is either a very conservative, good farmer, or else he is unprogressive. While we may not be able to grow enormous yields with the same ease as our American friends, we can, by careful selection of varieties and proper cultivation, get a very profitable crop for ensilage purposes, and well worth the effort. In the co-operative experiments with different varieties of corn grown over Ontario last year by the members of the Experimental Union, the yields of the five best sorts averaged from 10 tons to 14.6 tons per acre, from 2.7 to 3.1 tons of which were ears. These were averages obtained on a very large number of farms, while over 20 tons of crop containing 4 tons of ears is not too much to expect where conditions of soil and climate are at all favorable and the best sorts of corn are grown and proper cultivation given. While bulk of crop, and especially weight of ears, is very important, it is of first consideration to grow a sort that will mature well before severe fall frosts come. For this reason, also, it is well to get a portion of the crop, at least, in as early after the tenth of May as the ground can be gotten in good shape and there is warmth in the soil, although corn planted two weeks later may produce almost as heavily.

It has come to be generally considered that a clover sod, plowed in the fall and given a coat of barnyard manure during the winter or spring, is perhaps the best place to grow corn, for the reason that the land is rich in nitrogen and other necessary elements, very friable, and by reason of the decomposition of the manure is at a higher temperature early in the season, just when the young plants need a push forward. Where the manure is not too long to admit of it, surface cultivation in spring is now generally considered preferable to plowing, as soil moisture is thus better retained. In whatever land it is sown it responds well to manure, and it is labor well spent to make generous preparation for the seeding. There are different methods of planting the corn crop, but the two principal ones are sowing in rows and planting in squares or check rows. While one usually finds enough to do without much experimental work, it is worth while to plant portions of the field in different ways and with different varieties, although a few rows of new sorts will usually suffice to indicate their respective merits to the farmer who grows them. Last year the writer sowed five acres of Improved Leaming with the grain drill, in rows three feet apart, and thirty pounds to the acre; and five acres with an American check-rowing planter, about fifteen pounds to the acre. Without weighing the crop, we decided that the check-rowed corn was the more valuable for the silo, as it grew larger stalks and better ears. It also afforded the advantage of allowing the land to be cultivated both ways, which made hand-hoeing almost unnecessary. The check-rowed corn allows the sun better access to the roots of the plants, which is of great advantage to this crop, which belongs naturally to a southern climate.

In the preparation of ground for planting, one

can hardly take too much pains. The more thorough before planting, the less work will be required afterwards. The great thing is to get the ground in perfect tilth, and to accomplish this the land should not be gone onto until it is in a condition dry enough to work nicely. If the land is to be plowed and it can be done a week or ten days before planting time and well harrowed, it will afford the weeds a chance to start, so that they can be destroyed by cultivation before the corn is planted. If it is decided not to plow, but to give surface cultivation only, it is well that harrowing and cultivation be attended to a week or two before planting-time, for the purpose of starting weed seeds. Where the crows give trouble by digging or pulling up the young corn, it should be planted deeper, and if the grain is moistened with strong tarry water before planting, it will serve as a repellent to the robbers. It is very important that some precaution of this sort be taken, especially where the corn is check-rowed or in hills, as a blank hill means a good deal of waste space. For the same reason one should be very careful to use only first-class tested seed, of the varieties we are sure do well in the district. In the southern portion of Ontario, Mammoth Cuban and other large varieties do well, but in more northerly districts only early sorts should be sown. Such as Compton's Early, Early Butler, Angel of Midnight and Longfellow are fairly sure to give satisfaction. If it is preferred to sow the seed with the grain drill, stop all the seed spouts but two, if it is a ten-hoe drill, leaving the third one from each end open for sowing. Also leave the outside hoes on to mark for wheel in return, running the wheel in the outside hoe-mark, the same as if sowing other grain. The corn will then be in drills about three feet apart. Set the indicator to sow twelve pecks on the large pea scale, and it will sow about one-half bushel of corn to the acre. If it all grows and none is taken by the crows or blackbirds, it will be too thick for best crop, but some of it can be chopped out with the hoes, if thought desirable. We find the best corn-growers, both in Canada and the Western States, harrow the land several times after the seed is sown before it comes up. This keeps it mellow and moist, kills the young weeds, and the plants soon begin to show up very encouragingly. A rather fine-toothed harrow is best, as it cuts up the surface more thoroughly. The new "weeder" is a grand implement in a corn field at this stage of the growth, as it can be used every few days with good effect and without fear of injuring the corn until the plants are about a foot high. By this time the weeds should be fairly well destroyed, but cultivation should not yet cease. The riding cultivators, arranged to straddle the rows, now make good work easy and thorough, but the effect can be accomplished by a walking scuffler (of which there are good sorts on the market) very satisfactorily. The thing is to keep the surface stirred well as late in the season as one can drive between the rows. Rather deep cultivation may be done at first, but the corn roots run out very rapidly, and unless the cultivation is shallow from this time forward, very harmful root-pruning will be sure to result.

Trouble with Water Pipe Overcome.

To the Editor FARMER'S ADVOCATE:

SIR,—In reply to a question in your April 1st issue (page 183) by L. A. B., of Ontario Co., regarding his trouble with a water pipe, I would say that I think the reply by Prof. Reynolds will not help him out of his difficulty. I had an experience of the same kind, and it took me nearly two years before I got mine to run. Putting in a larger pipe I consider is a useless expense. I did the very same thing. I first had a 3/4 pipe and it stopped running. I then took it up and put in 1 1/4-inch pipe, and reduced it to 3/4 at the outlet. It stopped again. I then took it up and put in a 2-inch pipe at the spring and reduced it to 1/2 inch pipe at the outlet, with no better success, and the distance was only 200 yards. I was one day conversing with a civil engineer and the subject turned to running water, and I told him my trouble. He told me to tap the pipe about half way to the outlet, and put in an air pipe to let the air out of the pipe, and it would run. I did so, and it has now been running constantly ever since. I did this in the beginning of September last, and have had no trouble since. My pipes used to stop up with a mossy kind of substance, which looked like iron rust. I think if L. A. B. will leave his 3/4 pipe down and put in two air pipes, say one near the spring and the other about two-thirds of the way to the outlet, that he will have no more trouble. One-quarter-inch pipe would do for the air pipes. It will be necessary to clean out the pipe, with a force pump and a barrel of water, from the outlet to insure a good clean start. GEO. CARLAW.

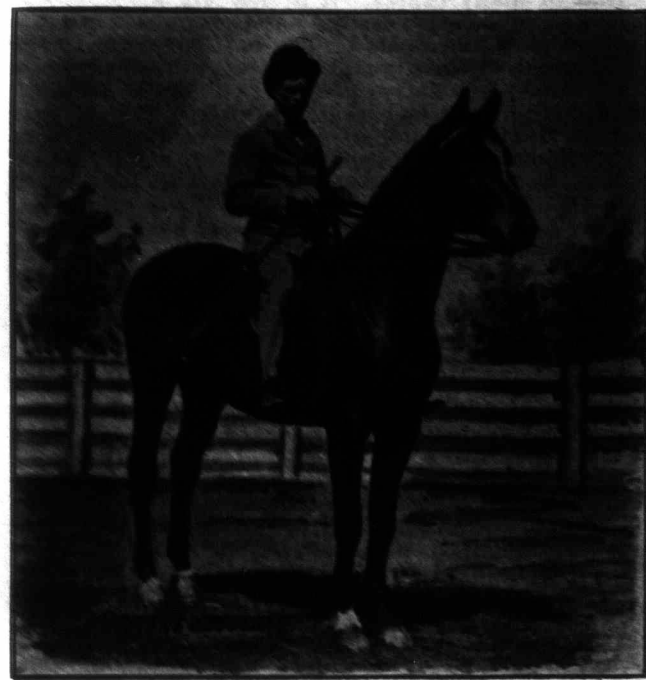
Northumberland Co., Ont.

The prize list for the Toronto Industrial Fair this year for the potato exhibit has undergone quite a change from previous years. Prizes are offered this year for the different types, such as Rose type, to include the five or six varieties of that type; the Hebron type, Ohio type, Bell type, Long White type, Oblong or Medium White type, Round White type, and any other variety not named. Each type includes from three to six varieties. Half-bushel of each variety to be shown to compete for the prizes.

Suggestions for Arbor Day.

Since the establishment of an annual arbor day for public schools very many country school grounds have been materially brightened and improved. That there has been, and still is, need for improvement there is no room for controversy. The training for life begins in the home and is fostered in the school. It is, therefore, of great importance that the surroundings of the place where so much of a growing child's early life is spent be attractive and comfortable. We have all seen many rural school grounds that are bare, harsh, cheerless, and even immodest, with their outhouses not far apart and unhidden from view. Children may be compelled to attend such schools, but they cannot be forced to enjoy it. They like it only when it is worth liking, and when they like it they make the best sort of advancement. While much has been done by teachers and pupils on arbor days during recent years, the work has generally been of a minor and detailed sort, such as planting flowers and cleaning up the yard, which would do well as finishing touches to a more general system of improvement under the supervision of the trustees.

What is really needed is a general reform, headed by an energetic member of the school board, who can get the co-operation of the most influential men of the section. With some organized effort a good meeting may be called to arrange for a "bee" to improve the grounds, when a general but definite plan can be worked out. Many school grounds are too small, and when this is felt it should not tax a section very heavily to buy half an acre of adjoining land in order to have it right to commence with. Even though this is not done the chances are the fences need repairing, rebuilding or removing altogether. The old, plain, close board fence is a very bare and unattractive enclosure, which, if hidden by trees or overgrown with vines, would present a pleasing appearance. A neat, painted paling fence would, however, answer all the requirements of separation from the outside without marring the appearance of the grounds. During the "bee" of one day the fencing could be attended to by one man and some helpers, others could level the ground if necessary, sow grass seed, and prepare the soil by plowing, harrowing and manuring for a belt of trees and shrubs, which could be secured by another set of men in a neighboring grove or a nursery if thought wise. A stiff row of trees similar to the ordinary roadside maples is not enough. The plantation should be more of a belt of graceful irregularity, so that the ground would in a few years be set off from the bare fields, while the center of the yard would still remain open for sports. The idea should be to have the place picturesque and cosy, more like a picnic grounds than a repulsive, cheerless stock yard. It would require a landscape gardener to do the laying out properly, but almost any



HEATHERBLOOM.

Prize-winner over Hurdles. EXHIBITED BY CROW & MURRAY, TORONTO.

farmer who possesses an attractive lawn at home could well be depended upon to plan the improvements. The outhouses, bare corners of the school, and such other objects that would be better hidden could be easily secluded by evergreens, vines or the like. If a well-planned day's work by a fair representation of the section were carried into effect for each of two or three successive years, we have no hesitation in believing that the generations that would attend that school in future would reap untold advantage, while those who did the work would feel repaid a hundred-fold for the labor of love every time they chanced to see the ever-improving condition of the plantation. There would then be some encouragement to the teachers in future to do their part towards Arbor Day exercises, or general floral or shrub decorations.

The Silo and Ensilage—Its Value and Its Chief Objections.

BY G. C. CASTON.

"Corn and the Silo" is still a live subject at Farmers' Institute meetings, although it has been discussed more than any other subject perhaps. Though nearly all feeders and dairymen grow and feed more or less corn, there are comparatively few who have silos. You ask the opinion of many of our most successful feeders who have had experience with ensilage, and the answer is almost invariably that they would not be without the silo on any account. Most of them will tell you, dairymen especially, that they could not make their business pay without the silo. The question arises here,



FIRST-PRIZE ROADSTER PAIR, FRANK AND LUCY.
OWNED BY J. C. DEITRICH, GALT, ONT.

Why should anyone hesitate about using them? Formerly the question of expense was a formidable one, especially in localities where lumber was scarce and dear, and the building had to be quite an elaborate affair, involving a lot of studding, 2x10, several thicknesses of boards and tar paper, and dressed lumber for the inside. But the stone or hoop silo has to a great extent taken the lead as a cheap and, as it is not inaptly called, the poor man's silo, and it serves the purpose even more successfully than the more elaborate old-fashioned square structure. In fact, I believe from my own experience and that of others that there is less waste with the round silo than there is with the square. I think it is decidedly preferable to any except the concrete, which, though very expensive, is an everlasting affair.

With regard to my own experience: I only keep a small herd of cattle. I tried the fodder corn for awhile, and my experience was like that of many others. If it was left out in stooks it got so weather-beaten on the outside that a large part was wasted. The bottoms froze to the ground, and the squirrels ate the grain off the cobs. If stored away it required a vast deal of room to cure it in, as it had to stand upright and so as to get a free circulation of air, or it would mould at the joints, and the squirrels and rats ate the grain just the same. It had to be run through the cutting box as wanted. If a pile were cut ahead, even when mixed with dry cut straw, it would heat and spoil. So I resolved to build a small silo. In order to get it inside a small barn, I had to put it five feet in the ground, but I wanted to have it under cover. A round hole was dug and built around with stone up to the level of the ground. The stone wall was plastered smooth and the staves set up flush with the smooth surface of the wall, with a collar of stone around the outside of them to keep the staves in place. This serves in place of a bottom hoop. The staves are sixteen feet high, thus making the silo twenty-one feet deep. It is nine feet in diameter, having four hoops of five-eighths-inch iron. The staves are of hemlock, 2x6, and cost here \$6.50 per M.; the iron cost \$5.40, and the whole structure cost, including labor, \$26.

Now, as to the results. I grew three acres of corn (Leaming variety) in drills forty inches apart. I cut several loads for green fodder in early fall, and afterwards filled the silo, and had some left, which was fed before starting to feed the ensilage. The corn got slightly frosted before being cut. I had intended to wet it with the spray pump as I put it in the silo, but a heavy shower of rain saved the trouble, wetting the piles thoroughly, and it went into the silo wringing wet. The ensilage was first-class, only a few inches on the top spoiled. The milk cows get forty pounds a day, young animals twenty to twenty-five pounds. I have fed some to horses and sheep, and I will have some left for summer use, when the pastures fail.

There is nothing new in this experience. This producing of a large amount of cheap, succulent, bulky food off a small area of land has been done on hundreds of farms, and on a much larger scale, all over the Province. Practical men, who have had years of experience in growing and ensiling corn, have told me that they would build a silo if only for one crop. Then why should anyone hesitate about building a silo, especially those whose land is light and sandy? They of all men should have them, and more especially in view of the fact

that we are in this Province subjected to such severe drouths, which shorten the crops of fodder to a serious extent. But it is a very dry season that you cannot raise a good crop of corn by cultivating it well and regularly. And with a good crop of corn well ensiled a farmer should be able to keep fifty per cent. more cattle than he could on the same farm without it. Many successful dairymen are now using it for summer feed when the pastures fail. It is very convenient and easy to feed, and with the addition of a little bran will keep up the flow of milk, which means dollars to the dairyman.

And now, having said so much in favor of ensilage, let us consider what are the objections that are raised against it. It is said to be a very exhausting crop on the land. Well, anything that will turn out from fifteen to thirty tons of food from an acre must certainly take something from the soil. But is corn really an exhausting crop? It takes a part of its constituents from the air, and I have proved that a good crop can be grown on a good clover sod, turned under early in fall and well surface-worked, without any manure; and that after the corn you can get a good crop of grain and a catch of clover, providing you surface-work the land instead of plowing it, using a roller in spring to crush down the corn stubble. I fancy there are other crops that are more exhausting than corn that are not half as profitable.

Again, its composition shows it to contain eighty to ninety per cent. of water. So do our root crops, yet Old Country farmers fatten stock with them. So do our grasses, and yet they are the natural food of our animals. It is not a balanced ration—neither is

any other cheap bulky food. But there is yet one objection, and to my mind the only feasible or reasonable objection, to the use of ensilage, and that is that the saccharine juice of the stalk is, by the process of fermentation which it undergoes in the silo, turned to acid. Of course, there are degrees of acidity, according to the state of maturity of the corn. That is, corn cut just at the right time—the firm dough state, for instance—will have less acidity than that cut at an earlier stage. Yet in all ensilage I have seen, and I have seen hundreds of samples, the sweet juice was turned to acid. This is the reason it cannot be fed alone with perfect safety for any length of time. And just here the question arises, Can this change be prevented? I am under the impression that it can, and hope before another year rolls round to be able to test the matter. My idea is to apply live steam to destroy the germs of fermentation. If this is done no change can occur if the air is kept out. I don't see why the contents of the silo cannot be cooked and canned immediately after the filling by the application of live steam, on the same principle that fruit is canned and unfermented wine is made. The problems to be solved are the even distribution of the steam and the exclusion of air.

Some silo enthusiasts say, "It's all right; this acidity helps digestion." But I would point out that there is no acidity in the natural food of the animal. The sweetest grass is always cropped close, while the sour swamp or sedge grass is never touched, except under pressure of hunger. And if the corn plant can be kept in its natural state, or as near to it as possible, without chemical change, it would be a great step in advance, and the only reasonable objection to the use of ensilage would be removed. The ensiling of corn would be extended to northern districts where the seasons are short, for if this process can be accomplished corn can be ensiled even if not matured to the dough or glazing stage.

I have tried here to present the arguments for and against the silo, and hope that others may take it up and discuss it. In the meantime I would say: Don't hesitate to build a silo. As a bulky food or part ration ensilage is the cheapest. Plant the kind of corn that will mature best in your locality. Plant it by the 10th of May. Better to risk a frost in spring than in the fall. Cultivate it well and put it in a silo. You will not regret it.

The month of April, 1899, has made a record as being exceptionally fine and warm. We seem to have jumped from winter into summer, with the usual spring left out. In consequence, what at one time looked like a late spring has turned out to be an unusually early one, in so far as early vegetation is concerned, as the leaves of the forest trees were nearly half formed in the last days of April.

Pea Growing in Ontario.

Pea-growing appears to be somewhat of a failure with many farmers in Ontario, especially the last few years. Why this should be is not altogether apparent, but such being the case, we must look for the causes and endeavor to remedy them. We as farmers, whether stock-breeders, stock-fatteners or grain-growers, cannot afford to lose our pea crop.

In the first place, the pea plant is one of those plants having the power to gather free nitrogen from the atmosphere, not only to feed itself, but to leave the soil richer in that constituent after the crop is harvested, and especially so when the crop is taken off by our modern pea harvester, leaving the roots and lower portion of the vines with the soil. The pea crop not only adds nitrogen to the soil, which is one of the most important manurial constituents, but it has a strong tendency to leave the soil in better shape mechanically, and is because of these facts a most desirable crop to follow with fall wheat. In the second place, peas are of great value in the composition of economic feed rations.

We must look first to the plant itself, and study its peculiar needs.

First.—We find it is a nitrogenous plant, storing up much nitrogen in its seed; it will therefore need soil containing much nitrogen. But, having the power to gather free nitrogen from the atmosphere, it will not be so exhaustive on the soil.

Second.—It is a plant that needs warmth in order to develop its power to assimilate nitrogen and develop a healthy plant.

Third.—It needs moisture, being a rapid grower. And in the fourth place it needs care and prompt attention.

Knowing these needs of our plant, we must adapt ourselves and our soil to our plant, and guard off all attacking enemies as best we can. Nature will then bring forth a profitable crop.

But there are many varieties of peas, and they have not all the same habit of growth, and do not all require the same care and management. We must, therefore, select those varieties most adapted to our circumstances. Some varieties, especially the earlier and short-vined varieties, require very rich, loamy soil, well drained, and by no means swampy. Later and longer-vined varieties will do nicely on lighter soil, and not necessarily so rich.

Now we will select the variety that is most adapted to our soil and circumstances. We find we have a good piece of clover sod with plenty of after-growth; the soil is a rich clay loam and well drained, sloping a little to the south. We plow this early in the fall, and cultivate the surface well and allow it to stand thus until the following spring; we then cultivate a good seed-bed and sow our own seed as soon as the weather and soil have become dry and warm. We will put in here our early fancy varieties, and after the peas have grown nicely above ground, we will go through them with the light "Breed's weeder" or some similar weeder, which will destroy many of the young germinating weeds and will make a mulch of fine surface soil which will prevent the escape of much of the soil moisture. This process may be repeated as often as the peas will permit.

Or we may not have the clover sod just mentioned. In that case, we may take timothy sod and work it the same way in the fall, and top dress it with a light coat of barnyard manure, and work it in with a disk harrow or some suitable machine.



SWEEPSTAKES DRAFT PAIR.
Rose of Blanchard [2462], on near side, won the mare Clydesdale Sweepstakes award.
OWNED BY GEORGE MOORE, WATERLOO, ONT.

Oat stubble or root land may be treated in the same manner with good results. But in all cases the soil must be warm and free from a damp, cold bottom and surface water.

Great care should always be taken to select the best seed. The time of sowing may be varied somewhat, and thus evade the ravages of the pea bug.

The method of sowing does not matter so much, providing we cover all the peas and not too deep; the spout drill answers the purpose very well.

The quantity of seed per acre depends on the variety and size of the grain and method of seeding. Small peas, such as the Golden Vine, 2½ bushels per acre, sown with a spout drill, is quite plenty; if

sown broadcast, a peck or so more might be better. Large peas, such as the "Black-eyed Marrowfat," 4 to 4½ bushels per acre may be sown with good results; medium varieties, about 3 to 3½ bushels per acre. We would not recommend any particular varieties; we would select those most adapted to our soil, and which have succeeded best in the neighborhood on similar soil. And now, after all our trouble and care, our crop may be destroyed by insect foes; perhaps the worst of these is the "pea bug" (*Bruchus pisi*). This insect is well known to most pea-growers. The pea bug is quite different in its life-history from that of the common pea weevil, which simply injures a portion of the surface of the pea. *Bruchus pisi*, the adult beetle, deposits its little yellow eggs on the outside of the young pod early in the season. On hatching, the young larvae

inches for concrete floor—this is plenty thick enough. Put in the floors the same as I mentioned in my former letters on "How to Make Concrete Floors": The rough concrete 6 or 7 to 1 of cement, add the stone, then the last coat 3 to 1 of cement. By using a straightedge on these pins the floor can be made to a true grade. By having the floor raised enough so as to allow room for a gutter four inches deep and three or four feet square at the outlet, and the tile at bottom of this gutter to carry off the water, the floors will then always be dry.

After the floors are completed make a box of 2 x 6, and 14 inches wide on inside and the length required for trough. This box is to have no bottom. Place this box where trough is required. Now take a 2x4 and nail boards 6 in. wide on the edge of this scantling, and two inches wider at top. Place this core in center of box, so as to have an equal distance all around between box and this core; nail strips across both box and cone to keep them to their place. The top of the box next the pigs should have a small beveled strip nailed on inside, so as to leave a chamfered edge to trough when completed. Now make the concrete, one of screened gravel to one of cement, and quite stiff. Never put it in over 1½ inches at a time, and ram it firmly but gently between the core and box till it is filled. In four or five hours lift this core out and take the box apart, and you have a trough 6 inches wide at the bottom and 8 at top, and 6 inches deep, and if care is taken in the mixing and ramming of the floor and trough they will last for generations. In putting in these troughs never use any sand, always use gravel.

By taking a 2 x 6 x 3 feet long, and ripping it in two, so as it will be 6 inches wide at one end and running to a point at the other, and nailing them to the partition between pen and feed alley, with the big end down, and 14 inches apart over the trough, and nailing a 2 x 3 half way up lengthways between these uprights, so as to keep the pigs from pushing them off, every pig will be in a stall by himself so to speak, and will not run the whole length of trough while eating.

The partition between pen and feed alley can be made to swing so as to allow trough in feed alley till feed is put in, and by pulling a slide it will swing back to its place again. NORVAL B. HAGAR. Welland Co., Ont.

Artificial Fertilizers.

To the Editor FARMER'S ADVOCATE: SIR,—I have been watching with much interest the discussion through your columns on the use of artificial manure, but don't think the writers have made it very plain, as they did not say what kinds they used. Last spring I used an old timothy sod, which I calculated was in poor condition, and as soon as I commenced harrowing I sowed broadcast 200 pounds of bone and potash to the acre, leaving three rows the length of the field, and could see no difference until husking, and then found more short, soft corn in those three rows than in all the rest of the field. The field, five acres, turned 145 bushels of ears to the acre. The soil was heavy sand loam. I tried the same on three acres fall wheat last fall; will know results after harvest. The half ton of bone and potash cost \$22.50. Elgin Co., Ont. JAS. TODD.

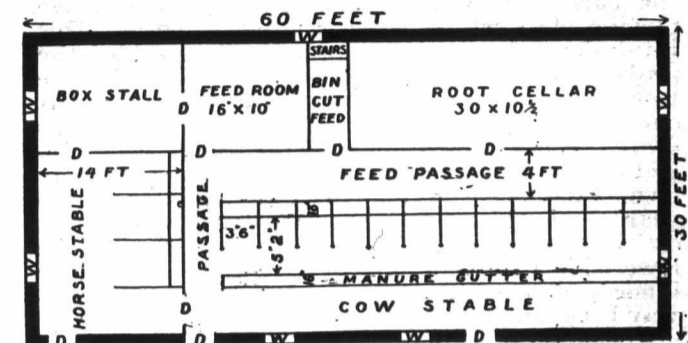
Testimonials.

- Joseph Martin, Wolseley, Assa.:—"I must say the more I read the ADVOCATE, the better I like it."
- J. E. Littlehales, Saltcoats, Assa.:—"I am much pleased with the paper." March 26, 1899.
- George R. Thair, Glenboro, Man.:—"I do not see how I could do without the FARMER'S ADVOCATE." February 28, 1899.
- Walter Jackson, Holmfild, Man.:—"I am very well pleased with the FARMER'S ADVOCATE, and find it a very valuable magazine." March 3, 1899.
- Philip R. C. Pratt, Sunnymead, Assa.:—"I may take this opportunity for saying that I think your paper excellent, having taken it for nearly eight years." March 10, 1899.
- T. McRae, Brandon, Man.:—"I wish you all success in all the ways you are working to help the farmers in their places." March 20, 1899.
- Edwin Lister, Kenlis, Assa.:—"I have taken your paper seven years, and it is improving all the time. No farmer should be without it." March 13, 1899.
- John Nichols, editor of the Sun, Grenfell, Assa.:—"Allow me to congratulate you on the FARMER'S ADVOCATE. It is a growing power among the farming community, and full of practical up-to-date information on agricultural topics." February 25, 1899.
- Harold D. Buchanan, Cottonwood, Assa.:—"Without the FARMER'S ADVOCATE a man might as well quit farming, unless he is content to learn farming by the hard school of his own experience. I therefore enclose you \$1.00, asking you to be pleased to continue your paper, with which I am more than satisfied." March, 1899.
- John George, Miami, Man.:—"Permit me to say that I am very much pleased with the engravings that you sent as premiums. They are very becoming, and when framed and hung up will beautify a farmer's home very much. But while farmers might get along without these beautiful pictures, I don't think they can get along as they should without a copy of the FARMER'S ADVOCATE every two weeks." April 6, 1899.

Basement Plan for Small Barn.

To the Editor FARMER'S ADVOCATE:

SIR,—In April 1st number, Enquirer, Buffalo, N. Y., asks for barn plan 36 x 54. Mine is 30 x 60, so I will send you plan of it. It has stone wall under barn and Queenston cement floor in cow stable. The stalls are 3 ft. 6 in. wide, 5 ft. 2 in. from manger to drop. My cows are Jerseys. For Durhams would want to be 6 in. longer. The mangers are 18 in. wide and manure gutter 16 in. wide. Ontario Co., Ont. GEORGE HEDGES.



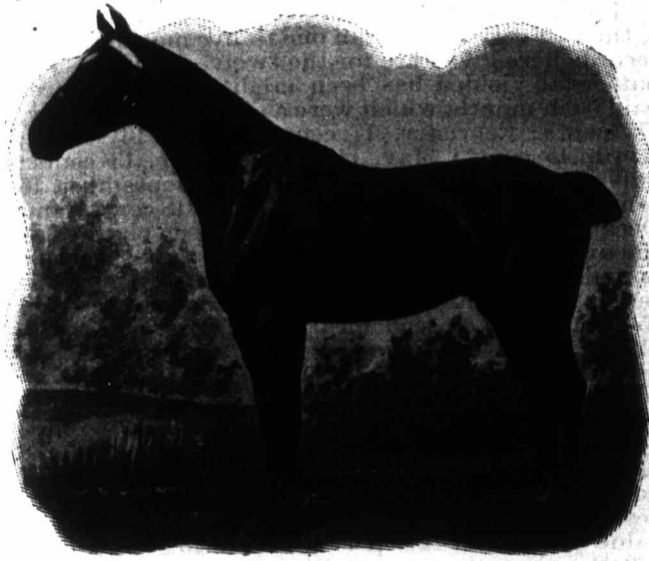
BASEMENT PLAN OF BARN, 30 X 60 FEET, OWNED BY GEORGE HEDGES, ONTARIO CO., ONT.

[NOTE.—If this plan were extended six feet wider the space could be well used by making the root house wider and shorter, which would allow space for a large box stall or several single stalls. At the horse stable end more stalls could be put in, and if desired a silo may be built adjoining the feed room.—Ed. F. A.]

Protection of Sheep from Dogs.

The Revised Statutes of Ontario, 1897, Chapter 271, Section 9, reads as follows:

- 9. Any person may kill,
 - (a) Any dog which he sees pursuing, worrying or wounding any sheep or lamb; or,
 - (b) Any dog without lawful permission in any enclosed field on any farm which the owner or occupant thereof or his servant finds giving tongue and terrifying any sheep or lamb on such farm; or,
 - (c) Any dog which any person finds straying between sunset and sunrise on any farm whereon any sheep or lambs are kept;
 But no dog so straying which belongs to or is kept or harbored by the occupant of any premises next adjoining said farm or next adjoining that part of any highway or lane which abuts on said farm, nor any dog so straying either when securely muzzled or when accompanied by or being within reasonable call or control of any person owning or possessing or having the charge or care of said dog, shall be so killed unless there is reasonable apprehension that such dog if not killed is likely to pursue, worry, wound or terrify sheep or lambs then on the said farm. 56 V., c. 46, s. 2.



BAMBOO. First-prize combination Harness and Saddle Horse, and First-prize Saddle Horse over 15 hands 2 inches. OWNED BY L. MEREDITH, LONDON, ONT.

Green Manuring.

Green manuring may be the means of cleansing the field from weeds, for which purpose, of course, only the crops of the most rapid growth are useful. It increases the store of organic matter in the soil, and so furnishes the conditions favorable for the multiplication of earthworms, and these, as Darwin has pointed out, by their activities improve the soil in many ways, most important among which are better aeration, bringing of the finer materials to the top, pulverization and increased solubility of its constituents.

"There is no unbelief. Whoever plants a seed beneath the sod, And waits to see it push away the clod, He trusts in God."



DIANA MCKAY [2314] AND SONISIE LASS [2313]. Sweepstakes Clydesdale Pair. OWNED BY D. & O. SORBY, GUELPH, ONT.

bore through the pod into the pea and feed there during the larval stage, eating away the substance of the grain to almost the outer edge, leaving a thin covering, and seldom, if ever, attack the germ. Hence, bug-eaten peas will grow, but are deprived of much of their nourishment, and produce a less healthy plant. The larvae pupate in the pea and emerge, some that fall, and some or most of them emerge the following spring.

These bugs can be destroyed, as many as remain with the grain; but those that escape from the grain are gone from our reach. We may escape their ravages to a certain extent by sowing a portion of our crop early. The bugs will be attracted to this before our later sown crop, and better, a later variety also will be ready for them. The early sown portion should be plowed under as soon as the pods are well formed and before they ripen. We will then destroy all the young larvae and many of the old bugs will die, having done their life's work. Our later sown crop will then be saved from the bugs—sometimes almost entirely. This is, perhaps, the best preventive measure we can adopt. Seed peas should be treated by some such methods as the following: We place our seed in air-tight boxes or barrels, and set a dish containing bisulphide of carbon on the peas, using about 1 oz. to 1 bush. of peas, cover up tightly, and allow to stand for about three days; the heavy, poisonous fumes penetrate all through the grain, and it is sure death to all insect life. Benzine, gasoline or coal oil may be used by mixing through the peas.

Another very effective method is to thresh the grain early after harvest, and subject the seed to water heated to 145° or 150° Fahr. This will completely destroy all the larvae or bugs and not injure the germinating qualities of the grain.

We may destroy a great many bugs by adopting these measures, but that is not enough. Farmers should co-operate in this matter in order to ensure complete success. A. H. CHRISTIAN. Ontario Co., Ont.

How to Build Concrete Hog Pens, Floors and Troughs.

To the Editor FARMER'S ADVOCATE:

SIR,—In building hog pens of concrete, the walls are built the same as described in one of my former letters on how to build walls. But as a usual thing the walls are only eight inches thick, which, I think, is sufficient.

In putting in floors for hog pens care should be taken to have a good grade to the floors, for the only objection I ever met with yet was that they were too wet, and where that was the case I always found that the floor was put in on the level, and as there was no chance for the water to get away—no soakage like a wooden floor—and if the pen was not cleaned every day the floors would be wet.

In order to lay a pigpen floor, drive a pin in the ground at each corner of pen where trough is to be, these pins to be on the level; drive two more pins at the opposite corners, and four inches lower than the first ones; then another two inches lower than these and next the tile which is built through the wall to allow the liquid manure to run through. The ground should be graded so as to allow four

Rule for Laying Out Gambrel Roof Barn.

To the Editor FARMER'S ADVOCATE:

SIR,—Below find my rule and draft for gambrel roof barn. Measure in from outside of barn, on the big beam, one-sixth of the width of the barn; then make length of gambrel roof post one-third of the width of barn and set above the main plate. Having done this on both sides, $\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$, we have two-thirds of width of barn left. Now measure in from outside of gambrel post one-third of the width of the barn to the center, and make this peak of the barn one-sixth of the width of barn above purline plate which rests on gambrel posts. This being down to the lower rafter will be added the projection below for the eaves. I think I have worded this so that any farmer by starting a draft one inch for one foot of his barn can make his draft. This rule will adapt itself to any size barn, and the barn will be all right. This is a rule of my own. I have been giving it to carpenters for twelve years, and when followed it always gives perfect satisfaction. The uppermost tie girth can be lowered if a horse fork is desired to be used. The inner bents need have only one tie girth about midway between main cross-beam and peak of barn.

Allegheny Co., N. Y.

W. H. NORTON.

DAIRY.**Milking Scrub Cows.**

A TEST AT KANSAS EXPERIMENT STATION.

From January 1st to April 15th, 1908, the College bought thirty head of common scrub cows, with the object of testing the value for the dairy of this class of cows when properly handled. These cows were delivered at Manhattan at an average of \$21 each, were selected by a farmer who was not a dairyman, and in quality were below the average cows of the State. The cows were shipped 100 miles in midwinter, the excitement and weather causing a serious drop in the milk yield of those that had calved. The first week the average daily milk yield per cow was 15½ pounds, the second week 21 pounds. At the start the cows were fed alfalfa hay and a mixture of two-thirds bran and one-third old-process linseed meal, a ration rich in protein, designed to stimulate the milk flow and to partially overcome the effects from shipping. As soon as the cows were brought to a fair milk flow they were put on a ration of alfalfa hay and Kaffir corn grain. This ration produced the greatest flow of milk with butter-fat at least cost. The daily grain ration averaged about eight pounds per cow while on dry feed. While on pasture the daily grain ration averaged three pounds of a mixture of four parts corn meal and one part of bran. Alfalfa hay was also kept in a rack where the cows could eat it at will when they were brought in at milking time. The yield held up well through the fall drouth. For a short time green Kaffir corn was fed with the pasture, and the cows were pastured on wheat in the fall until the ground became frozen.

Twelve cows were fresh when received, January 5, the rest calving in from one to five months. The records here given are for the twelve for 1908. The butter-fat yielded has been credited at the prices paid each month, which were as follows: January, 17½ cents; February, 17 cents; March, 16½ cents; April, 15 cents; May, 14½ cents; June, 13 cents; July, 13½ cents; August, 15½ cents; September, 16 cents; October, 18 cents; November, 18 cents; and December, 17 cents. The feed has been charged at the average retail price for the year: Cost per 100 pounds: corn meal, 55 cents; Kaffir corn meal, 55 cents; linseed meal, \$1.25; soy bean meal, \$1; bran, 55 cents; cotton-seed meal, \$1. Cost per ton—alfalfa hay, \$4; corn ensilage, \$1. Pasture, 75 cent per month.

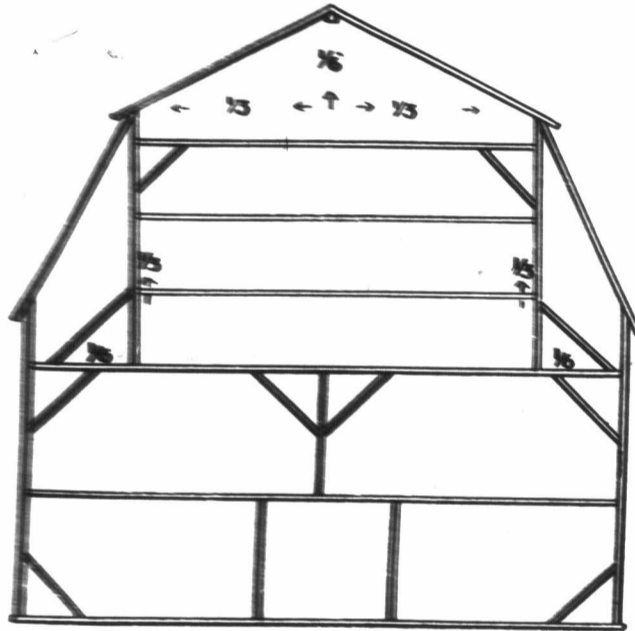
Results.—Average yield of milk per cow, 3,766 pounds; best cow, 9,116 pounds; poorest cow, 3,383 pounds. Average yield of butter-fat per cow, 288 pounds; best cow, 383.7 pounds; poorest cow, 135.7 pounds. Average cost of feed per cow, \$29.29; best cow, \$32.80; poorest cow, \$26.75. Average value of butter-fat per cow, \$37.75; best cow, \$60.88; poorest cow, \$21.39. Average value per cow of skim milk at 15 cents per 100 pounds, \$7.69; best cow, \$12.29; poorest cow, \$4.83. Average income per cow from butter-fat and skim milk, \$45.44; best cow, \$73.17; poorest cow, \$26.22. Average receipts per cow less cost of feed, \$16.25; best cow, \$40.37; poorest cow, receipts 13 cents less than cost of feed. Average cost of butter-fat per pound, 12.2 cents; from best cow, 8.5 cents; from poorest cow, 19.7 cents. The average price received for butter-fat for the year was 13.8 cents. To the receipts given above should be added the value of the calf at birth.

This test shows the difference in value between different cows with feed and care alike. The year's record of our best scrub cow (9,116 pounds of milk; 383.7 pounds butter-fat, equal to 451 pounds butter; value of products, \$73.17; returns less feed, \$40.37) is one that many a pedigree dairy cow would be proud of. This cow is of mongrel breeding, but has a pronounced dairy form. The poorest cow's farm is a good beef type, and her yield of 3,383 pounds of milk and 135.7 pounds butter-fat was worth 43 cents less than the feed she ate. Is stronger argument needed to induce dairymen to cull their herds and keep only the best?

Needs in the Cheese Industry—Some Suggestions for Its Improvement.

The first and the foundation need is a better educated patron. Without the patron properly in line—properly educated in the matter of caring for cows and milk, educated to cleanliness in milking and handling, cleanliness in regard to the cans it is kept and carried in, cleanliness in the matter of surroundings, so that bad flavors may be avoided—we need never expect to take the highest and most profitable place in British markets. There are many careful patrons of our factories here, but there are also very many careless ones. The chief aim of the careless patron seems to be to get as much into the factory as possible, regardless of quality. They do not stop to consider that they are robbing the patron who sends clean milk of much of the profit he is legitimately entitled to, and that they are also robbing themselves by lowering the quality of the cheese. When will all patrons be taught to know that the highest-price cheese can only be made from clean-flavored milk, from cows that are cleanly fed and kept? He will know when he wakes up to study dairying and turns his attention to reading the agricultural and dairy papers. Our patrons want to be shown that it would be greatly to their profit to do their utmost to help make cheese for which the English consumer is willing to give twenty shillings per cwt. more than he is willing to give for ours now.

Another crying need is better management of our companies. The average director is not selected on account of his knowledge of dairying, but rather because of his ability to make a hard bargain, and his first idea is that the factory must be run cheaply. In engaging a cheesemaker he gets the cheap man, and it never dawns on him that the \$40 or \$50 man will cost the company more in most every case than the \$60 or \$70 man, besides damaging the reputation of the factory. But you cannot expect the directors to be any better or more intel-



ligent than the patrons that put them in their position. In a factory that has very frequently come under the observation of the writer, it is no uncommon thing to see the cheesemaker going about his work smoking, and some of his assistants doing the same, while visitors often indulge in a friendly smoke too. When the cheesemaker was remonstrated with by a sensible patron, his answer was that "The directors always allow it here." Outside this factory is a dilapidated whey tank that always leaks, and from which flows a trickling stream of putred whey all summer. Then, under the factory is another leak in the whey spout, where you will generally find a pig or two wallowing, and from which there goes forth an abominable stench, some of which, no doubt, finds its way into the factory. This is no fanciful picture, but a description that is true of more than one of our factories, and many patrons expect that good cheese will be made from their milk in such microbe-breeding establishments as this. Ignorance in this case is not bliss. It is criminal.

Now, after what I have said, you will agree with me that inspection is one of our greatest needs just now. Of course, the most of our factories have good makers, and are carefully and cleanly managed, and the managers of these do not see the same necessity for inspection. But it is greatly in their interests to have it too, because these badly conducted factories will give P. E. Island cheese an unenviable reputation that will be against the interests of every dairymen on the Island. The only way to get an idea into some people's head is through their pockets, and an inspector that would mercilessly grade down cheese that he finds inferior would have a greater educating effect on the careless patron and manager than columns of dairy literature that they never see or read.

An instructor is another great need in order that we might have uniformly good cheese made at all the factories. The makers would welcome his visits, and by benefiting by his instructions would be brought more in touch with one another's methods. After this we want better curing rooms: rooms that can be kept at a temperature of 60° Fahr., to give us the flavor the British people de-

mand and which they are willing to pay for. Prof. Robertson told us that we must get English climate into our curing rooms to compete successfully with English cheesemakers.

The last need of our cheese business that I will mention now is a "Cheese Board," where buyer and seller can meet, and to which buyers will be attracted from abroad, giving us healthy competition in marketing our produce. Our output of cheese from 34 factories last year amounted to about 560 tons, and it will likely be greater this year. Such a growing business is surely worth our careful study and best possible management.

P. E. Island.

W. S.

[NOTE.—P. E. Island is not the only portion of America where dairymen live. There is great need of a general awakening among patrons and factory-men in the more westerly Provinces of Canada.—Ed. F. A.]

Homemade Cheese Starter.

Among the reports published by the Highland and Agricultural Society is an interesting one describing the results of the two years' bacteriological research which has been conducted on behalf of the Society by Professor Campbell, of the Yorkshire College, Leeds, in order to discover the work of bacteria in the manufacture and ripening of cheese. The most practically useful result is that farmers can themselves prepare a pure culture at home, and one equal to any of the "starters" sent out from the laboratory. The method is as follows:

In order to prepare a homemade starter the dairymen has to secure two enamelled pails provided with covers. In the one he pours fresh skimmed milk, and then sets it in a fairly warm place, so that in about twenty-four hours the milk will be both sour and thick. When this has occurred he skims off the surface, breaks up the center of the mass, and takes out about half a pint. This he adds to skimmed milk which has previously been scalded to 155 to 160 deg. Fahr., and subsequently cooled to about 65 or 70 deg. Fahr. On the following morning this should also be sour and thick or the temperature of setting has been too low. Again the surface is skimmed, and half a pint extracted as before, which in turn is added to a third quantity of scalded milk. The temperature at which the second and all succeeding starters are made up must be determined by each worker for himself: it will depend upon the temperature of the room where the pail is kept during the night. On the third day the starter produced in this way, if of a creamy consistence, may be used for making the cheese, a portion, however, being retained to prepare a starter for the following day. This process may be repeated day after day, and if performed in a careful and cleanly manner it will go on throughout the season giving good results.

Another Canadian Dairyman Goes to New Zealand.

Mr. John A. Kinsella, who for the past three years has been superintendent of the Northwest Government Creameries, has accepted the position of Assistant Dairy Commissioner of New Zealand. It will be remembered that Mr. J. A. Ruddick, formerly superintendent of the Kingston Dairy School, was last year appointed Dairy Commissioner of New Zealand, and Mr. Kinsella goes to assist him in building up the dairy industry of that country. The vacancy caused by Mr. Kinsella's departure from the Northwest is to be filled by Mr. J. W. Mitchell, B.A., of Ontario Agricultural College Dairy School staff.

Dairy School Closing—A Correction.

To the Editor FARMER'S ADVOCATE:

SIR,—I beg leave to call your attention to article headed "Ontario Agricultural College Dairy School Closing" in issue of April 15, which is misleading, as the number given of those who "passed" are the numbers who took Honors in each department. First-class honors means 75 per cent. and over; second-class honors, 60 to 75 per cent.; "passes," 40 to 60 per cent. The phrase "in outside lectures six escaped being plucked" is quite unfair to the class, as six obtained honors—i. e., 60 per cent. and over—in subjects which were very difficult for the majority of the class.

H. H. DEAN.

Clean Up the Factory.

THE FARMER'S ADVOCATE has no apologies to make for careless or ill-informed creamery and cheese factory patrons, but our staff, in their observations about the country, find that they are not the only sinners. The patron is sometimes made a scapegoat for a penurious or slovenly maker or factory company. At this season every factory should be thoroughly "house-cleaned"—make room, curing room, drains, underneath the floors, and the whey tanks. Some of the latter were left with half a foot of rotten sediment from last year, and instead of being emptied, cleansed, and disinfected, fresh whey is run in, and the rank and fetid mixture goes home to the patron, bad enough to poison his hogs, and make it almost impossible for the housewife to purify the cans for the next batch of milk. Under such conditions tainted milk is a natural result. We trust these cases are exceptional, and that they will at once be remedied. The tank should be emptied and flushed out once every week. The advice given last season in these columns regarding improved curing rooms is being heeded in many cases.

GARDEN AND ORCHARD.

The Tuberose—Its Culture.

"There is to me
A daintiness about these early flowers
That touches me like poetry."

The tuberose is one of the most beautiful of our summer-flowering bulbs, and yet it is very seldom seen even in the collections of our most ardent floriculturists. Such a state of affairs should not exist, for its tall spike of flowers of purest whiteness and waxy texture, emitting, as they do, their unrivalled fragrance, makes it a universal favorite. This beautiful flower was brought from Mexico a good many years ago. It was then introduced in a single form, and from that has sprung our beautiful double and other varieties in cultivation.

It is a belief among very many lovers of floriculture that to bring this flower to perfection is a difficult task for the amateur, and no doubt this is the reason of its scarcity. Many think that it must have a place in a greenhouse and that the professional florist only can hope for success with it. This is not a fact, however, and tuberose are more easily grown than is generally supposed.

If grown out of doors in beds, the bulb should be planted in a deep, very rich, sandy soil, and in a warm location. The bulbs should be planted four inches deep and a foot apart, and have thorough cultivation and an abundance of water. In this way they will do well. The best way, however, to grow tuberose out-of-doors is to grow them in boxes. The grower then has them more under control, can water them more thoroughly, and in many ways see after their needs better.

In the first place, it is important that fine large bulbs are procured if the greatest success is expected. In many instances small bulbs do not bloom at all and one's labor is entirely lost. From these large bulbs take off all the small bulblets, as they will not increase the beauty of the plant in the least, for they will not produce spikes, and will only be taking strength from the soil that should be going to the large one. Now take neat boxes, paint them if you so desire, and have them about 12x20 inches, and about twelve inches deep. Such a box would hold six large bulbs. After boring several holes in the bottom, to allow perfect drainage, for the soil must not be allowed to become sour, fill it two-thirds full of a compost made up of two parts well-rotted cow manure, one part of rich, sandy loam, and one part leaf mold, if procurable, all well incorporated. Set in the bulbs and then fill to top of box with same compost, packing firmly. Then give the contents of the box a thorough soaking.

This work should be done during the last week in May or the first week in June. There is no use of doing it earlier, as the tuberose loves heat and will make no material advancement until the weather becomes very warm and settled. It is a custom with many to start this bulb in pots in the house. Such a course is not worthy of commendation, for, if anything, the growth will be checked instead of hastened.

After getting the bulbs boxed, select a warm situation, on the south side of a building, in which to place the boxes, where they can get all the sun and escape cold north winds. Throughout the season give them an abundance of water every night, and your efforts will be crowned with success. When once started they will grow rapidly. When blooming time comes, the boxes may be set in any place for exhibition. In the past I have been extremely successful in growing tuberose in this manner.

The Excelsior Pearl is the best variety to use. This is a dwarf, double variety, and one single flower from a spike will scent a large room. The single variegated-leaved variety is quite popular also. Tuberose bulbs after blooming are useless, as most varieties bloom but once. The small bulbs that grow on the large one may be preserved and grown to blooming size. When they are in bloom, do not allow the spikes to be rubbed together by the winds blowing, as they would soon be ruined.

There is no reason why every lover of flowers should not succeed with the tuberose.

Wentworth Co., Ont.

HORTICULTURIST.

Trimming the Evergreen.

BY GEORGE W. STRAND, SECRETARY MINNESOTA FORESTRY ASSOCIATION.

The main objection raised to the pruning of evergreens lies in the fact that there is a continual exudation of resin from the wound. Where grown for timber or hedge purposes, pruning is without doubt beneficial and necessary; but otherwise, as ornamentals or for shelter belts, their natural form, with low, spreading branches and towering tops, is by far the most pleasing and desirable.

In hedge-planting, where the prime object is a screen or border and not for the exclusion of stock, one of the most beautiful trees that can be used is our common arbor vitae or white cedar. Its beauty as such largely depends on the skill exercised in pruning. Mr. Gardner, of Iowa, a well-known authority on the growing of evergreens, offers the following suggestions on the shaping of conifers: "They can be made to grow in any required shape. Suppose the spruces or pines or arbor vitae are two or three feet high and you wish to grow them in symmetrical cone shape. When the new shoots have about obtained their full length the latter part of June or early July, cut all the new growth back

to one inch for even balance all round. Do not cut the leader. During the remainder of the season, buds will form on the stubs of new growth. Buds will also appear bursting through the bark on the one-year-old wood, and frequently from the two-year-old. But for the cutting-back of the shoots these buds would forever remain dormant. If the trees are of considerable size—say five to eight feet—and have never been pruned, then, early in the spring, cut off all branches that hang over a lower branch. Make the lower branches the longest, and each succeeding set as you go up should be shortened in. At the proper time, when the tree has completed its new growth, cut it back, as in the first case, to about one inch, where it is desirable to do so, to fill up a space, for instance. If you wish to dwarf a tree and keep it for many years about the same height, then, when you are cutting the new growth back in the latter part of June, cut the leader back also. This clipping-back the new growth must be repeated year after year for best results. The longer it is kept up the more dense the foliage of the tree will be. The cutting-back of the new growth is best done with a pair of hedge shears, blades about eight inches in length, such as nurserymen generally use."

Reasons of Failure in Spraying.

Although the majority of orchardists in the really fruit-growing sections that have in the past resorted to scientific spraying as a means of protecting their plantations against the ravages of insect pests, and for the purpose of combating all forms of fungous diseases, have been very successful in their efforts, there are still some that have carried on the work who have experienced little or no benefit therefrom. The overwhelming experience of the past few years makes it almost unnecessary to state that the reason of this is not that there is no efficacy in the work, but that the work has not been properly carried on.

There are several reasons why spraying has proved a failure in some instances in the past, the principal ones being: (a) The use of the wrong mixtures; (b) uneven distribution; (c) applications made at improper time; (d) lack of thoroughness in work.

In the various papers that have in the past devoted space to the subject of horticulture there have been many formulas printed, some being correct, and others again have been decidedly wrong. When we consider the success that has attended the efforts of the Government in experimental spraying, we would naturally conclude that the solution used was a proper one, or nearly so. The use of the same has also been advised by most State experimental stations. This formula is for eating insects:

Paris green..... 4 oss.
Water..... 40 gls.

To combat fungous diseases:

Copper sulphate..... 4 lbs.
Fresh lime..... 4 lbs.
Water..... 40 gls.

But the fruit-grower is pleased that it is not necessary to go over the orchard twice, once with each solution, but the insects are fought at the same time the fungus is combated with the combined solutions:

Paris green..... 4 oss.
Copper sulphate..... 4 lbs.
Fresh lime..... 4 lbs.
Water..... 40 gals.

That this solution may be evenly distributed the ingredients must be thoroughly dissolved and kept agitated. It is a mistaken idea with many farmers, and not a few fruit-growers, that as long as the Paris green and water meet in the barrel everything will turn out satisfactorily, and accordingly the poison is weighed (or, what is a very bad practice, measured) out, and then it is thrown into the barrel. This is a lazy man's method, and worthy of nothing but severe condemnation, as much of the Paris green would float on the water and never dissolve, and as a result the insects would sustain no injury. To properly dissolve the Paris green it should be put in a cup or bowl and a few drops of water added. Then stir until the water is taken up, and again add a few more drops. Keep this up until you have a thin paste, which will be but a short time, and every particle of the poison will be thoroughly dissolved. Then put it in the barrel of water. To dissolve the copper sulphate it should be put in a coarse cloth or lino and suspended in hot water. Keep it hot, and it will take but a few minutes to get it ready. Be sure it is dissolved in a wooden receptacle, as the sulphate would ruin any vessel made of metal. When these ingredients are thoroughly dissolved and lime is slacked, all are mixed, passed through a screen into the barrel and kept thoroughly agitated, and even distribution of the poison is assured.

As to the time of spraying the grower should give considerable thought. Many insect eggs hatch before the buds burst, and the young feed upon the swelling buds. As these worms are more easily killed when small than when they have attained full growth, it is advisable to give one or two applications before blooming time. This is also the best time to combat fungus. Then to be effective against the codling moth, the apple's worst insect enemy, the applications should be made immediately after the bloom has all fallen, and then again ten or twelve days later, and before the calyx-cavity has closed up, as it is in this cavity the poison should be placed. Care should also be exercised to select a time when the air is quite still, and

when appearances point to at least two or three fine days to follow, and spray with the greatest care.

But of all the reasons of failure in spraying the last mentioned—"lack of thoroughness in work"—is the one most prevalent. Some men appear to think that as long as the solution is thrown at the tree the work is done, but it must be remembered that "whatever is worth doing is worth doing well." Every part of the tree should be covered, from the point where the trunk meets the soil to the tips of the highest limbs. The trees should not be drenched, but sprayed. If one holds a piece of glass over the mouth of a teakettle it would soon become covered with what appears like a heavy fog or dew. Hold it a few seconds longer and the dew will begin to drop off. Just so will the solution act upon the leaves of a tree. When the leaves and branches become coated with the spray the tree should be left, as but a very little more will cause the solution to begin to drip; it will then run to the edges of the leaves and drop off, and they will have had simply a wash, and the insects will eat away unharmed. That this can be done successfully the spray must be broken up into very fine particles. To thoroughly spray trees it is necessary to have a good spraying outfit. The pump must have great power, the hose and extension must be of good length, and the nozzles must break the spray into very minute particles.

With the exercising of more care in the preparation of solutions and applying the same, better results would follow, and many who now condemn spraying would be loud in its praise.

Fruitland, Ont.

JOHN B. PETTIT.

The Fumigation Regulations.

To the Editor FARMER'S ADVOCATE:

SIR,—In the FARMER'S ADVOCATE for April 15, p. 218, I notice an article entitled "Vexatious Government Regulations." The article has evidently been written without a full understanding or knowledge of the facts in connection with the case, and I therefore take the liberty of sending you the following statement:

On February 1st the Legislature was convened, and in the Speech from the Throne it was stated that further legislation dealing with the San José scale would be introduced. On February 15th a bill was introduced by the Minister of Agriculture and its scope was explained, the main facts of the case being reported in the daily papers. On March 7th the second reading took place, when the Minister gave a further and fuller explanation, and some discussion arose. On March 28th the third and final reading took place. On April 1st the bill was approved by the Lieutenant-Governor, and became law only on that date. This was Saturday, and Monday, April 3rd, was Easter Monday, a holiday. On April 5th the regulations were mailed to all nurserymen, whose addresses we had secured through the San José scale inspectors. The Minister at once made arrangements to send out inspectors to the various nurserymen, and also to supply them with the chemicals direct at cost price. Suggestions were also mailed to the nurserymen, instructing them how to construct their fumigation houses or boxes, so as to have them ready when the inspector arrived. Since the one consideration was to have the box or house air-tight, and since the construction of the same would take only a day or two at the outside, there was no reason why every nurseryman should not have his box or house ready when the inspector arrived. Where this had been done, the inspector at once gave permission to the nurserymen to begin fumigation. We sent out four inspectors to different parts of the Province, not waiting for applications, but, in order to save time, sending word that they were on the way. We had not then, nor have we had since, any information that the stock had been in any way delayed. We have found the nurserymen accepting this statutory requirement, and following out these regulations in a most hearty and satisfactory manner. Two or three nurserymen expressed to us their fear that they might be delayed, but since the regulations and inspection followed right on the heels of the bill becoming law, there has been no complaint made since.

Several nurserymen have referred to the inspector's certificate, to which you also refer. Some think that the granting of this certificate relieved those receiving it from fumigation. The certificate was not to the effect that the stock was free from scale; it simply stated that as a result of examination the inspector did not find any scale on the stock at the date of the giving of the certificate.

I need not point out to you how successful this scale is in avoiding the observation of even the most careful scrutiny. It was thought advisable for many reasons, which need not be given here, to require all nursery stock to be fumigated, so that all kinds of insect pests might be absolutely destroyed and the stock sent out should be perfectly clean.

Those who have investigated the enormous ravages of the San José scale in the United States, and who appreciate the greatness of the danger threatening our Canadian fruit-growers, are quite convinced that the most stringent and radical measures were absolutely necessary to save the Canadian fruit-growing industry. Whether this will be done remains yet to be seen, but we believe that action has been taken in time. I think you will conclude, if you look into the matter very carefully, that it was necessary to take action this year along the line

that has been done, but nothing could be done until the statute became law; the action then taken could not have been hurried more than it was.

Some nurserymen, we believe, kept careful watch of the proceedings of the Ontario Legislature, and as soon as the bill was introduced into the House began to make preparations. If they were ready before some of the others, it was simply because they were keeping track of the legislation proposed, and not because they got any special information from this Department. Yours very truly,
C. C. JAMES,
Deputy Minister of Agriculture.

ENTOMOLOGY.

The Worst Insect Injuries to Farm and Garden Crops During 1898.

BY DR. J. FLETCHER, OTTAWA.

It is always useful to look back over past experience to see what lessons can be learnt for future guidance. This is very true with regard to the insects which attack our crops to such a serious extent every year. There is hardly a year passes which is not characterized by some new or special outbreak, the effects of which are felt for two or more seasons, and the grower of farm or garden crops who is widest awake profits much by keeping himself informed as to the various enemies which have occurred or are likely to appear on his crops, and as to the latest discoveries in the way of remedies.

Every province of the Dominion has recently suffered to a considerable extent from insect injuries. Perhaps the most serious of these were by:

1. The Pernicious or San José scale (*Aspidiotus perniciosus*, Comstock), which has attracted so much attention in the Province of Ontario, where strenuous efforts have been put forth by the Provincial Government to stamp out this dread enemy. The whole of Canada is to be congratulated on the wise and efficient manner in which this work has been carried out. Unfortunately, some even of those directly interested do not yet appreciate the magnitude of the calamity which will fall upon the whole of the fruit-growing districts of the country, where this scale is able to propagate, if it is not controlled. This is a matter which affects not only the comparatively few who own fruit trees in the districts where the scale is known to occur, but every business man and every citizen interested in the welfare of Canada. Frequent inquiries are made as to the best remedies for the San José scale. For several reasons, I consider the plan adopted by the Ontario Government of insisting on the destruction of all infested trees as the only one which was safe and advisable under the circumstances. The San José scale must still be acknowledged to be the worst pest which entomologists have ever had to fight against. It is so inconspicuous that it would certainly be overlooked by most people even on badly-infested trees. It is so difficult to destroy that the ordinary fruit-grower would not exercise the necessary care to destroy it thoroughly on all his trees, even if he possessed the skill and if we had a perfectly reliable practical remedy, which I maintain is not yet the case. The remedy which has given the best results is fumigation with hydrocyanic acid gas, an operation requiring skill, care, and great thoroughness to secure success, and the use of some of the most poisonous substances known. Moreover, even in the hands of the most experienced there have been sufficient failures to show that the prosperity of the whole country must not be left at the mercy of the assumption that the ordinary fruit-grower could and would use this remedy properly. Splendid work has been done by the inspectors in hunting out the scale, and if the owners of trees infested, or liable to be infested from the trees of their neighbors, could only be made to understand the gravity of the case and would all help in this matter by reporting promptly every occurrence of the scale, I feel convinced that this enemy could be stamped out.

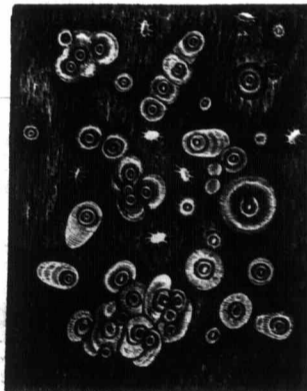
2. The Rocky Mountain Locust (*Melanoplus spretus*, Uhler).—Considerable injury was done in Southern Manitoba last summer by the Rocky Mountain or Hateful locust, an enemy which will long be remembered in the West from the extent of its ravages in 1868 and the early seventies. The remedies which experience has taught are effective are: (1) The plowing down of the eggs in autumn or before the young hatch the following spring. This has been practiced most successfully in Minnesota and the Dakotas. (2) The burning of the young locusts as soon as they hatch, by spreading rows of dry straw across areas where they are numerous. The young grasshoppers gather into these shelters at night in large numbers, and myriads of them can be killed by firing the straw after night-fall. (3) The use of hopper-dozers or tar-pans. These are light implements eight or ten feet in length, turned up one inch in front and one foot behind, leaving the bottom two feet wide. The sides may be made of wood, with hooks in front at both ends for the attachment of ropes. Into this a layer of coal tar or water and coal oil is placed, and the implement can be drawn over land where the insects are numerous by a boy at each end, or by a horse, and thousands of the young locusts will be destroyed. All land which was under crop in the parts of Southern Manitoba which were infested last year, which were not plowed last autumn, should this year be plowed without fail before the first of June. A full account of this outbreak of

locusts in Manitoba appeared in the FARMER'S ADVOCATE for Oct. 5th, 1898.

3. THE WHEAT MIDGE OR WEEVIL (*Diploris tritici*, Kirby).—This enemy of wheat, which of late years has been heard little of, was the cause of considerable loss during the season of 1896 in the Niagara Peninsula, attacking particularly, fall wheats. Spring wheats, such as Goose or White Fyfe, were little or not at all affected. Injury by this insect was also reported from Nova Scotia and Prince Edward Island. The remedies for the wheat midge are the careful destruction of all rubbish or screenings from the threshing machines, and the plowing down deeply of stubble where the crop has been attacked as soon as possible after the crop is carried.

4. GREEN FRUIT-WORMS (*Xylina*).—In addition to the San José scale, several other pests reduced the profits of the fruit-grower. An unusual outbreak was by caterpillars of the Grey-pinion Moths, known as green fruit-worms. These were abundant and troublesome in the Niagara Peninsula, injuring apples and pears by eating large, irregular holes in the sides of the young fruit. The same caterpillars, but possibly of a different species, stripped maple trees of their leaves both at Niagara and in the Ottawa district. The only remedy which can be recommended is the spraying of all fruit trees very early in the season with arsenical spray, but as the caterpillars seem especially attracted to the fruit as soon as this forms, efforts should be made to check them as early as possible. When the foliage of maple trees is attacked, it is also well to spray early, so as to destroy the caterpillars before they have done much harm. The codling moth, plum curculio, and oyster-shell bark-louse all claimed their share and were the cause of much loss in the older provinces. In British Columbia much harm was done by the woolly aphis and apple aphis, as is there frequently the case, as well as by two special enemies which for the present have not attracted attention as serious pests of fruit crops in the Eastern Provinces. These are the apple fruit-miner (*Argyresthia conjugella*, Z.), and the lesser apple-worm (*Grapholitha prunivora*, Walsh).

5. TENT CATERPILLARS (*Clisiocampa*).—These common pests, which were very prevalent in almost every province of the Dominion last year, and which, judging from the numbers of eggs on trees in the districts where they occurred, promise to be



SAN JOSÉ SCALE.

enormously abundant again this year, have been treated of in a late number of the FARMER'S ADVOCATE. The remedies are the collection of the egg-masses, the destruction of the young colonies soon after they hatch from the egg (this is from April 20th to May 1st in this part of Canada), and the spraying of infested trees with Paris green and other poisons.

VETERINARY.

Black Leg or Anthrax.

To the Editor FARMER'S ADVOCATE:

I am glad to have the opportunity of still further differentiating to Dr. Mole the clinical symptoms of anthrax and black quarter. He evidently knows very little of either disease, and in all probability bases his knowledge of veterinary science on ideas long ago abandoned. He uses the term anthracoid, a term used long ago, when speaking of such fatal diseases as hog cholera, rinderpest, Texas fever, anthrax and black quarter, by writers who were ignorant of their true nature or pathology.

In the *Journal of Comparative Medicine and Pathology* for June, 1898, Prof. McFadyean, in an article on black quarter, says: "In this country [meaning Great Britain] long before the discovery of their infective organisms, anthrax and quarter evil were recognized as diseases so different as to merit different names." He also says the "two diseases have scarcely a feature in common, and in face of this fact one cannot help being struck with the curious perversity of reasoning which led the older veterinary authors to regard them as manifestations of the same morbid condition." In describing the symptoms of black quarter he says: "There are few diseases in which the clinical picture is more characteristic than in black quarter."

Post-mortem lesions: "The blood in black quarter always forms a good firm clot, this being one of the many striking differences between this disease and anthrax." "The thoracic and abdominal viscera seldom show any alteration of structure, and, in contrast to anthrax, the spleen is nearly always normal in volume and consistence. Moderate quantities of blood-

stained watery exudate may be present in the great serous sacs." "When the autopsy is made soon after death, the escaping gas, the inflammatory oedema, and the muscular tissues are entirely free from putrefactive odor. On the other hand, the tissues of the tumor have a characteristic sour odor recalling that of slightly rancid butter." These extracts are from the pen of a teacher and pathologist of wide experience in Great Britain.

Black quarter may also easily be distinguished from anthrax by inoculating simultaneously a rabbit and a guinea pig. If only the latter dies, it is a case of black quarter; if both animals die, it is anthrax, the rabbit being naturally refractory to black quarter.

Further differential symptoms are found in Friedburger and Frohner's "Pathology and Therapeutics of Domestic Animals," one of the leading works on veterinary medicine, and in other modern works by standard authorities.

Yorkton, N.-W.T. THOS. V. SIMPSON, V.S.

APIARY.

Union Beekeepers' Convention.

(Continued from page 216.)

SEASONABLE MATTER.

Should supers be put on the hives before or after swarming; if before, under what conditions?

In reply to this question it was generally conceded by those who expressed themselves that the supers should be put on as soon as the combs commenced to whiten out on top. This may occur in fruit bloom, but it is not likely to show on all the hives at once, so that it is necessary to examine the hives frequently and put on the supers as needed. One member puts on the supers when the bees commence to hang out around the entrance, which shows they need more room. Some favored putting on shallow supers so as not to give too much room, but when the comb shows white on top and bees appear too crowded they should have a regular sized super. Mr. Holtermann objected to shallow supers on the ground that it is not well to have odd sizes of frames. His plan is to put on a less number of frames, contracted by a division board and a quilt on each side. They should be placed over the center of the brood chamber. Four such combs give the same capacity as eight shallow combs. If these have a quilt and a cushion put over them they can be placed anywhere and given to any kind of colony. By putting the supers on early, swarming can be largely held in check until the time for swarming arrives. Early swarms are gotten at the expense of strength, but too late swarms are of little value.

How can the flow from early blossoms giving inferior honey be utilized to draw out foundation?

Mr. Jas. Armstrong, Cheapside, Ont., said: "If the flow of blossom honey and inferior honey comes on together, I put on a super and take a few frames from below with some honey in them and place them in the super; then put on a couple of foundations alternately, about two sheets of foundation in full frames and two full frames of honey in the center, and a division board on each side. The bees will start to draw out the foundation and at the same time store a certain amount of this undesirable honey. Some of this honey may be used later to stimulate weaker colonies, and empty combs may be put in their place." Mr. Holtermann disagreed with Mr. Armstrong on some points, and reviewed his way of getting combs drawn out at this season. He takes combs containing brood from the brood chamber, placing them in the super so as to draw up the bees. He has found that if the bees have partially filled combs they will work on them rather than on foundation. If they have a comb of brood to draw them up and nothing else except foundation they will have to work on it or nothing. As soon as the bees draw out the foundation and begin to store honey he removes the new combs and puts others in their place. The bees will then readily go up and work. Mr. Holtermann always gives the bees free range in the upper story till the clover honey flow commences. If at that time there is brood in the super it is removed to a suitable place. Mr. Alpaugh, the chairman, raised an objection to allowing the queen to go into the super on the ground that pollen is liable to be stored there which will injure the honey.

Should queen excluders be put between brood chamber and super before clover honey flow commences?

Most of the members put on the excluders at the same time as the supers go on so as to avoid egg laying above and the deposit of pollen. Mr. Miller, of London, does not use the excluders until white honey flow commences. He believes in allowing the queen plenty of room above. He gets more brood in this way, and that is what he wants. He sometimes leaves the supers right there until the bees swarm, then put on the excluders on top and allow the brood to be removed; then divide off the brood comb from the other.

How can the beekeepers best manage to prevent the mixing of dark and first-class honey, either comb or extracted?

While the berry blossom honey is a trifle darker than clover, it mixes with it very well without injury. It was claimed that there is a great deal of honey spoiled by allowing either early honey or late honey to mix with that of good quality. The best plan is to watch the new comb, and as soon as

the bees stop bringing in dark honey change the combs. Sometimes when the brood chamber is badly crowded when the sections are put on the bees will carry up some of the dark honey. To prevent this have as much as possible of this honey converted into brood or take out some of the full frames and give them to colonies that need them. Sometimes parts of the comb will contain dark honey and part light. Now, when extracting one can uncap the light honey and extract it, then uncap the dark and do likewise, and thus keep them separate. When it is somewhat mixed in comb sections the best way is to sell it locally for what can be got for it.

In the production of extracted honey, what is the best method of increasing the number of drawn-out combs?

Mr. Fleming, of Michigan, considered that during the fall flow is the best time to have combs drawn out. In the spring the old combs are easier to handle and the best for extracting. It is not well to allow weak colonies to build combs. Make the strong ones build for the others from starters or foundations. It is supposed by some that combs filled with buckwheat honey will tend to color the white honey the following spring, but if the bees are allowed to clean out the dark combs thoroughly after being extracted, the light honey extracted from them the following season will be all right.

POULTRY.

A New Poultry Manager at Guelph.

Since the poultry department was introduced in connection with the Ontario Agricultural College it has been managed by Mr. L. G. Jarvis, the noted judge of pure-bred fowls. Recently his resignation has been accepted, and Mr. W. R. Graham, B. S. A., has been appointed to succeed him. Mr. Graham is no stranger to our readers, as eminently practical matter from his pen has frequently been published in our columns. He is a graduate of 1894 class of the Ontario Agricultural College, and has since then been engaged in extensive poultry-raising, a taste for which showed itself in his early years, when he preferred engaging himself among the chickens to any other pleasure. After his graduation Mr. Graham worked a few months on his farm near Belleville and then spent a year on one of the largest and best-conducted duck farms in America, that of Mr. James Rankin, in Massachusetts, where 10,000 ducks are raised annually, besides large numbers of eggs sold for hatching. Light Brahma and Barred Plymouth Rock fowls are also kept, and used for broilers and winter eggs for the Boston market. Since Mr. Graham returned to his farm from Mr. Rankin's he has given his time largely to poultry farming, hatching some 1,500 chickens and a few hundred ducks in a season. Mr. Graham is eminently practical and full of energy, and we predict for him success in his new departure. We might add that he is a brother to Mr. R. J. Graham, Belleville, who was for years the successful secretary of the Ontario Creamery Association.

Turkeys.

TESTING THE EGGS—FOOD FOR FOUTLS—ENEMIES.

As a rule turkey eggs are strongly fertile, and it is no uncommon occurrence to have the entire nestful of eggs transformed into lively young turks. In a great many yards, last year proved an exception to this rule. Some did not succeed in getting a single bird, others only a very small percentage. We had out of two hundred or more eggs only about sixty young turkeys. I am not prepared to give the different causes, nor to suggest an unailing remedy, nor shall I set it down as "bad luck." Some breeders succeeded in getting the usual large hatches. Some of those who conduct large poultry plants, and who write about it, maintain that all infertile eggs should be removed by testing on the sixth and fourteenth days. I sometimes think we have better hatches when we let the hen manage her own affairs and leave the eggs undisturbed, but when it is a difficult matter to get hens to sit we can economize time and hens by testing the eggs. The manufacturers of incubators, etc., usually sell egg testers separately, and these are very convenient. There are many homemade egg testers. They are all manufactured so as to give a strong light, usually from a lamp, shining through the egg. The egg must be surrounded by some opaque material. Even a board with a knot hole in it set up before a bright light will answer the purpose. On the egg being placed before the hole it will show, if fertile, a small dark spot with red veins branching from it. If infertile no spot is seen and the egg is clear like a new laid egg. I would recommend when testing gentle handling and no exposure to drafts, and as quickly return as possible to the nest. Very often there will be enough tested out so that one or two hens will cover the remainder. The eggs that have been removed will be found quite good and are perfectly fit for food, though sometimes one does not like the idea of eating an egg that a hen has covered for six days. I usually save them and make a custard

for the young turkeys. I have no special recipe for this custard, excepting that I use eggs and milk only and cook them together. I never use spices, as pepper, ginger, etc., for poultry. I sometimes add some chopped onion tops. A variety of food is all the poultry require in the way of spice. This year I intend to try rolled oats for a beginning, as I have had excellent success raising chickens, their principal diet for several days consisting of rolled oats, raw and dry, and for drink, skim milk. If I find the turkeys like rolled oats I shall notify you. The Scotchman is supposed to gain size and muscle on oatmeal and milk. Why should not this food be good to promote growth and muscle—and that is what we are after—in turkeys? But to prevent them becoming tired of one food we shall vary it by giving the custard, and as they get older a porridge made with half corn meal and half bran, or probably of pea and oat chop. I find they will eat almost any kind of porridge. I simply pour boiling water on the meal and stir it, using only water enough to scald the meal. I do not want it sloppy, preferring it crumbly. I tried some crushed beans in the porridge one year, but they would always discard the beans, so I concluded beans would not be good for them. One of my neighbors succeeds in raising nearly all turkeys hatched, and I understand she feeds shorts moistened with cold water as the principal food. I believe it is not so much what we feed, but how, when and where that helps us to make a success with turkey raising. In my last I spoke of the roomy coop and pen. This pen should surround them for a week or until they begin to jump out, when it may be removed; but I find it best at this season of the year to keep the turkey confined in the coop until the young ones are at least three weeks old, moving it every day, and longer if there is clover or grain fields near. Had she only the short grass of a fenced orchard they might be allowed to wander at will after the first three days; but if allowed to roam

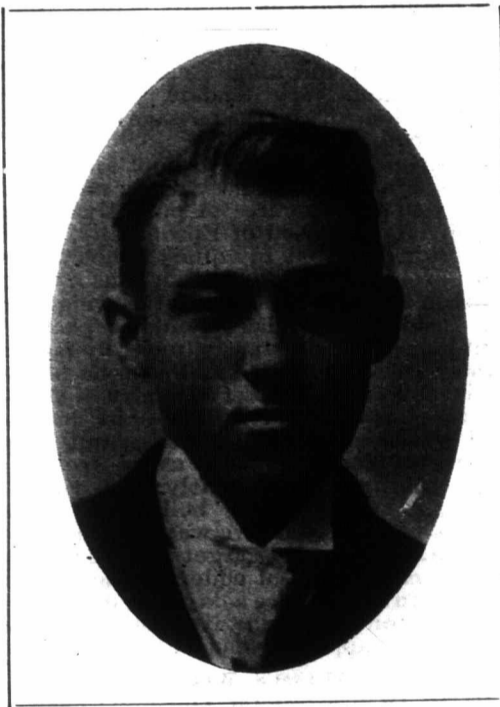
the pest. I have raised some flocks which were entirely free from lice, but with all this care one cannot make a mistake in examining the young birds every few days—on the heads, between the flight feathers of the wings, around the vent and tail, and by the sides of the crop. If any lice are found the whole flock may be attended to. I use insect powder wherever the lice are to be seen. Some claim it is too strong for turkeys, and use butter instead, and some rub them all over with a brush oiled with coal oil. Any of these will kill the lice. But always bear in mind that it is a very easy matter for them to get a fresh start, and this treatment will have to be repeated. After the feathers on the backs of young turkeys appear they can generally fight the lice, the dampness, and disease, though I have heard of large numbers of turkeys dying when pretty well grown from no apparent cause, though in some cases the cause was found to be very large lice. One of ours began to droop last fall. No attention was paid to it for some time, until the others grew so much larger. It was always hungry, but could not always get enough to eat, as all the flock usually dislike the weakling. However, it got so thin and weak that it became necessary to kill or cure. I did not think of lice on a grown-up turkey, but it was really covered with them. I hung it up, head down, and powdered every part of it, even to the outermost feathers on the legs. The lice appeared to travel ahead of the duster, for there were always scores of them in sight. However, I put it away from the flock and gave it food and water. It never required another application of powder, and though it remained small and weak for a long time, it now presents a very creditable appearance. I am at a loss to understand why one or two in a flock should be attacked and the others escape, but there are still a few things to learn.

Rats, too, are a constant danger until the turkeys are old enough to roost in trees. While they are young it is best to shut them in rat-proof coops every night, though it is seldom they are disturbed if some distance from buildings or if under the old turkey in the open air, but this plan is objectionable on account of the danger from wandering in the wet grass early in the morning, and where hawks and foxes are plentiful the early bird is in danger of being caught. I have enumerated most of the difficulties and stumbling-blocks ahead of the would-be turkey raiser, and yet they are all crowded into the short space of five or six weeks. After that time all the care required is to throw them a little food when they come home to roost, and if you are an early bird you may be out in time to give them a little more before they start out in the morning.

A large flock running together with two or three old females and a male bird is the best protection from hawks. All late turkeys should be allowed to run with their mothers; they are sure to do well. We have now young hens weighing over ten pounds. The eggs from which they were hatched were laid in wheat shocks. The turkeys received no attention until they joined the other flocks, when they were fed in the common poultry yard. It is a great saving of labor to have the poultry trained to come when called. While they are still penned I begin calling them every time I go with food. They soon learn to answer and to come as far as possible to meet me. Then when they are allowed their liberty, in the early evening I call them and soon hear their answering calls, when I feed them and coop them for the night.

Middlesex Co., Ont.

GYRA.



W. R. GRAHAM, B. S. A.,
SUPT. POULTRY DEPT., O. A. COLLEGE, GUELPH.

through wheat and heavy clover, the largest and strongest may reach maturity, but the smaller ones will die from starvation, chill, or exhaustion. Last year I made the mistake of allowing them to enter a field of very heavy clover, with the above result. Had I kept the turkey mothers in coops the young would have gone only short distances into the clover.

It is recommended to give all food in shallow pans, these to be gathered up and washed after each meal. I find it less work to let them eat directly from my hands. I sit in the middle of the pen and they all come, and I stay till I see each one has had some food, when I go to the next pen. Some turkey raisers warn us about the danger from over-feeding. They say, "Feed often and but a little at a time. Over-feeding induces bowel disease, etc." I find turkeys are very light eaters, and they will take only a little at a time, when they start off on a hunt for flies. However, if I find they show signs of greediness I shall consider it my duty to inform them that they have had enough for one meal. As a special treat I sometimes give them curd made from sour milk and occasionally a little sour milk or buttermilk to drink. Much of the latter will be found too relaxing. All the coals they will eat is the best tonic and disease preventive.

A special chapter on the subject of lice might be written, for of all the deaths in turkeydom it would be under rather than over the average to say that nine out of every ten are caused originally by lice. Someone has said: "Eternal vigilance is the price of liberty!" Eternal vigilance may keep the turkeys free from parasites. In this, as in all things, "prevention is better than cure," and by a thorough dusting of the old birds with insect powder, a liberal supply of dust for the bath—some recommend mixing insect powder with the dust, and the coops at some distance from the poultry runs—the young turkeys may never know

Care of Ducklings for Early Market.

Ducks' eggs take 28 days to hatch, and may be set in the same manner as hens' eggs. They should be given to a hen, as it is wasting time to let a duck sit before she begins to molt. She is easily cured of broodiness if shut off the nest. Ducklings, when hatched, do best on oatmeal sprinkled with water. Hard-boiled egg and bread crumbs may also be used. After three days they may have any sort of meal. Biscuit meal is a very good food for getting them on. Feed them well about four times a day until they are four weeks old, and if the weather is fine they may have their liberty. (Ducklings must not be allowed to get wet.) After that time shut them up, and feed them liberally three times a day on barley meal, with fat or meat mixed in it. They must have a good supply of green food, and grit must not be forgotten. Give them water at their meals, but do not let them have an unlimited supply by them. Never let them go into a pond.

The ducklings must not be kept after they are ten weeks old. The forward ones should be ready to kill at eight weeks. They begin to molt at eleven weeks old, when they lose condition, and cannot be got ready for market until they are about eighteen weeks old, which means a loss of time and money to the breeder.

Ducks are very careless about their eggs, and drop them anywhere, often in water. They usually lay early, and should be shut up after their morning meal until they have laid. It is wise not to allow more than three ducks to a drake, especially if there is no pond. It is only possible in a short paper to sketch out the general lines of duck-keeping. The foregoing is the manner in which the writer has kept ducks most successfully for a long time, and if these simple rules are carried out ducks may be kept most profitably, with a very small amount of trouble and expense.—Mary Borton.

QUESTIONS AND ANSWERS.

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

Legal.

WATERCOURSE.

SUBSCRIBER, Peel Co., Ont.:—"My neighbor has filled in a creek which is the natural watercourse, and the water thus diverted causes me considerable injury. Can I compel him to remove his obstructions in the creek so as to let the water get away?"

[Yes, you can; and he is liable for damages. You should consult a lawyer.]

LANDLORD AND TENANT.

"(1) The tenant by the terms of his lease agrees to put the manure out on the fields, but he fails to do so. How is landlord to compel him to do so? (2) Tenant cuts down green timber on the farm contrary to express agreement in the lease. What is landlord's remedy?"

[(1) Landlord should notify tenant of his default and require the work done, and landlord could bring an action to compel performance of the work and for damages, and, if necessary, for cancellation of the lease. (2) If there is such an amount cut as to be of appreciable damage an action will lie and damages would be awarded, and a court would at once grant an injunction restraining further cutting of timber.]

LINE FENCES.

SUBSCRIBER, Elgin Co.:—"A is the owner of the north half of a lot and B is the owner of the south half of the lot, and each lives upon his own lot and has small portion of the front cleared, which is being worked, but the greater part of the farm is in solid bush and there is no line fence between them, nor are there line fences on the side of the farms. B proposes to fence in his woods. Can he compel A to build half the line fence between them?"

[The law compels the owners of occupied adjoining lands to erect fences, etc. We do not think from your statement that the rear portion of these farms can be said to be occupied adjoining lands, and therefore one neighbor could not compel the other to maintain a line fence.]

TRESPASSER—HUNTING GAME.

"A young man in this neighborhood persistently travels through my bush hunting game, and he cuts down trees where he finds any game, and he pays no attention to my warning him not to cut down trees. What is my remedy?"

[A civil action for damages could be brought, but probably the more effective course would be to lay an information on a charge under the criminal code for destruction of property and have the offender punished.]

AGREEMENT RE PURCHASE OF COW.

SUBSCRIBER, Algoma, Ont.:—"A, by a verbal agreement, agrees to purchase a cow from B for twenty dollars. The agreement is made in the presence of two witnesses. The agreement was that the cow should be taken away by A any time within three weeks. Subsequently, about ten days afterwards, A went for the cow, but B had sold her to another party. What is A's remedy? Is such a verbal agreement enforceable?"

[Yes, the agreement being for the purchase of an article for less than forty dollars is binding in law, providing you can prove it sufficiently. A's remedy is for damages which he has sustained, which damages would be the difference between the twenty dollars and what he could replace an equally valuable cow for.]

LINE FENCES.

SUBSCRIBER, Russell Co., Ont.:—"Will you kindly inform me what steps are necessary to take to put the line fence between my farm and my neighbor's upon its true line. It is on me about two rods, and I have asked my neighbor to join me in the expense of having a surveyor fix the true line, and he claims that I cannot compel him to move the fence, and he will do nothing. Must I pay the surveyor to do the work out of my own pocket? The fence has been standing now about eight years."

[If you allow the fence to remain for ten years, your neighbor will become the owner of that part of your farm which he has fenced in by title of possession. In order to have the fence put on the true line and to recover possession of that part of your farm which your neighbor occupies, you will require to bring an action in the High Court to recover possession of the land in dispute, and your costs of having a surveyor ascertain the true line would be costs in the action, which you should recover from the defendant.]

WAGES.

SUBSCRIBER, York Co., Ont.:—"What is legally due a farmer's son who works on a farm at home till he is thirty years of age, there being no agreement that he should be paid wages?"

[The son cannot recover wages under such circumstances.]

Veterinary.

TWIN CALVES.

J. C., Wellington Co., Ont.:—"I have a valuable cow that dropped twin calves this spring—one of each sex. The heifer died. Will the bull be less likely to breed on account of being a twin?"

[When a bull and a heifer are twinned the heifer is called a free-martin, and it is very rarely that she breeds, but the bull in such case is as likely to prove a sure getter as if he had not been a twin.]

YOUNG PIGS WITH THUMPS.

R. W. WHITLOCK, Charlotte Co., N. B.:—"I have a litter of nice, fine little pigs, three weeks old, and all are extra size, being larger than pigs in next pen that are four weeks old, but two of them act a little strange. They stand at times with their heads down, and their flanks pant like a horse with the heaves; they make no noise with their breath, and seem well and active. What is the trouble, and what is the treatment?"

[The little pigs have "thumps," a disorder due to receiving too much rich milk and too little exercise, providing them more blood than their organs can deal with. Good treatment is to decrease the sow's feed and gradually allow more exercise. If they were turned out suddenly while in that condition, the violent exertion would probably result in the death of several of the pigs from heart failure.]

TREATMENT FOR GARGET.

A. D. SILLS, Lennox Co., Ont.:—"Will you please publish a cure for caked bag in a cow, in your valuable paper?"

[Garget, or inflammation of the udder, usually takes place at calving time in cows that are heavy milkers and those that have been highly fed. It may be caused at other times by chills or injury, indigestion or irregular milking. It may be confined to one or more quarters, or the entire gland may be involved. An affected cow usually walks stiff and lame, with a straddling action. She also presents fever symptoms, such as dry, hot nose, and heavy breathing. The secretion of milk may become impaired and almost cease. The udder is swollen, hot and very tender. The bowels are usually constipated, and the passage of urine scanty and highly colored.

The treatment should be prompt and energetic, as the longer a case is neglected the more difficult it becomes to effect a cure. A purgative should at once be given, composed of Epsom salts, 2 pounds; ginger, ½ oz.; dissolved in a quart of hot water, and give in a drench when cool. A suspensory bandage should then be used to support the weight of the udder. Inside the bandage should be packed bran or spent hops, kept constantly moist by pouring on hot water in which the hand can be borne. If rigors or shivers are observed, give a few doses of tincture aconite, ten drops in half a cup of cold water every four hours, and keep the cow warmly blanketed and away from drafts. Milk out the udder frequently, and rub it well with goose oil, lard or belladonna liniment. Feed laxative food, and give water with chill taken off. If the symptoms of garget are not present and it is only a case of caked udder, bathe with warm water half an hour twice a day, rub dry, and apply belladonna liniment, and give potash powders in feed, for which apply to your V. S.]

FISTULOUS WITHERS.

T. W. B., Wentworth Co., Ont.:—"I have a mare that had a fistula on each shoulder last July. Under doctor's treatment they healed in about six months. Now one of them has broken out again. I have not worked her since last July, nor has she been thriving since. Is it permanently curable, and what treatment would you recommend?"

[Fistulous withers occur as a result of an injury, which having been received, inflammation becomes established in the soft tissues in the region of the withers and runs on to suppuration, the neighboring structures gradually becoming affected. After pus is formed it might burrow down even to the shoulder blade, and in some cases extend behind it. It is caused by an injury, and not infrequently by a badly-fitting saddle. If the case be treated in the early stages before the formation of pus, the inflammatory action may occasionally be arrested by cold applications; but when the swelling is great, the parts hot and tender, and it is evident that pus has formed, the parts should be poulticed for a day or two, then opened freely with the knife, after which the free use of poultices and warm fomentations should be continued, when, if not too far gone, and the bones are not involved, a cure will usually result. If the case is of long standing, and pipes or sinuses have formed, they should be freely laid open and given a dependent outlet. If the fistula is outside of the shoulder-blade or scapula, a permanent opening may be made by inserting a seton. If the disease is situated behind the scapula, it is very difficult to effect a cure, particularly if the spines of the backbone are involved. The knife is the sheet anchor in the treatment, and should be used freely to lay the diseased structures open to the bottom. If the bones are diseased, they must be well scraped with a bone spoon. If any portions of the bone are decayed, it may be necessary to use the forceps to remove the necrosed structures. Remove any detached pieces of bone, and treat as an ordinary wound, by keeping clean and applying antiseptic lotions, such as 1 part of carbolic acid to 40 of water; or creoline, 1½ oz. to a pint of water; or corrosive sublimate, 15 to 20 grains to an oz. of water. Feed laxative food, and keep the blood right.]

WORMS IN HORSE.

J. R. A., Halifax Co., N. S.:—"Will you kindly tell me what to do for my horse? He has been out of condition for the last six months, hair standing and dull. He passes a great many white worms about an inch long—as many as four or five each passage—and is very restless at night, standing a good deal; always hungry, but no amount of feed seems to do him good. He weighs about thirteen hundred."

[The horse has, evidently, pinworms, which only affect the rectum or back bowel, since they are only about an inch long. This sort is sharp at one end. A horse that has them will usually rub his tail, and show whitish, slimy material beneath it. Give a physic of bitter aloes, 8 drams; common soda, 1 teaspoonful; and ginger, 1 teaspoonful; in a pint of warm water. After this, remove the contents of the rectum by hand and inject a decoction of quassia chips made by boiling down half a gallon of the chips. Strain off and inject once a week or oftener after removing the contents of the rectum. Use a long, pointed syringe, and retain the decoction in the rectum half an hour by holding down the tail. For long round worms the treatment should be raw linseed oil, one-half pint, with one ounce spirits of turpentine, given once a week. Also give a teaspoonful of sulphate of iron in feed twice a day.]

Miscellaneous.

FREIGHT CHARGES ON STOCK TO P. E. ISLAND.

READER:—"Please inform me what would be the freight charges on a cow and calf from Toronto to Summerside, P. E. Island, and at whose risk would they be shipped?"

[The animals would be at the risk of the buyer unless the seller agrees to assume it, as the railroad companies do not hold themselves responsible for the safety of freight of that class. We have been informed by the Secretary of the Dominion Cattle Breeders' Association that the rate from Toronto to Pictou, N. S., is 72c a hundred, weight 2,500, in case the calf is under six months old. This will amount to \$18. From Pictou to Georgetown on the ferry, \$3.50. From Georgetown, P. E. I., to Summerside, P. E. I., 25c a hundred, estimated weight 2,500=\$6.25; making a total for freight charges of \$27.75.]

FOUNDATION FOR DRIVING HOUSE.

J. T. LAWSON, Grey Co., Ont.:—"Can you or any of your subscribers inform me the best way of laying the foundation of a driving house? Some dig a trench about 1 foot 6 inches deep, put stones in about 6 inches, put the sill in, and level up."

[We would suggest that a trench be dug about two feet deep, and a dry stone wall built up to within six inches of the surface, and a mason wall be build on that at least one foot above ground. This will make a secure foundation and preserve the sill laid upon it from rotting. If some reader can suggest a better plan, we will be pleased to hear of it for the benefit of others.]

GRASS PEAS AND GOLDEN VINE PEAS COMPARED.

J. W. KELLY, Norfolk Co., Ont.:—"Would like to know through Questions and Answers how Grass peas and Golden Vine peas would compare in feeding value?"

[I think Grass peas would not vary to any great extent from the Golden Vine in chemical composition. It is a very hard pea, and would need grinding to give the best results. It is entirely weevil-proof, but is not a large yielder of grain. We have used it both at this place and in connection with our co-operative experiments for green fodder, and find it to be a good yielder of green fodder which is relished by live stock. C. A. ZAVITZ, Experimentalist.]

CLIPPING HORSES IN SPRING.

SUBSCRIBER, York Co., Ont.:—" (1) Please give your opinion of clipping the bodies of farm horses before spring seeding. (2) Do you think subsoiling would be any benefit on stiff-clay, hilly land? (3) Which do you consider the best plowing for clay land, a narrow furrow well turned, leaving deep seam, or a thin, flat furrow? (4) Can you or any of your numerous readers tell what it will cost to build an aerial tramway, to carry 500 lbs., by the foot or rod?"

[(1) We have no hesitation in recommending the clipping of farm teams in spring, especially those that do not shed their coats till rather late in the season. We have practiced it on all but in-foal mares for several years, and we consider we get more work out of the horses for the same feed, with more comfort to the animals. It also requires less work to groom the horses well night and morning. (2) We are not prepared to pronounce with authority upon subsoiling hilly clay land. It would not be a difficult, expensive or risky undertaking to subsoil a few lands and note the results as compared with adjoining lands not subsoiled. We would like to hear the results of the trial. We would also be pleased to hear from some of our clay-farm readers on this subject. (3) We would much prefer the narrow furrow in fall, but in spring we do not believe it would be any advantage, since the pulverizing machinery of the present day will make a good seed-bed in either case. (4) We require more information as to the position of the tramway, its height, purpose, material, etc., before we can intelligently figure on the cost of construction.]

RAPE AND TARES FOR PASTURE - OATS AND PEAS FOR HAY.

W. J. C., Simcoe Co., Ont.:—"I have a field of clover that I took seed off last year. The clover has been winter-killed. I am intending sowing rape to take place of clover for pasture for pigs and young cattle. The soil is heavy clay. Will rape grow well in it? What cultivation should I give the ground? Should I sow in drills or broadcast? How much seed per acre each way? How early can I sow it? How long till it will be fit for pasture? Is it equal to clover? Would it be safe to put calves or cattle in it at night without danger of bloating? How much ground would be required for fifty pigs? When should second plot be sowed so as to be ready when first is done?"

"2. Would peas and oats do for hay? What proportions should they be, and how much seed per acre? What time should they be cut? Would it require longer curing than the other hay?"

[1. While rape is capital feed for cattle and sheep, and is frequently recommended for pigs, we do not consider it as good for pigs as green tares. Pigs will eat the rape if they cannot do better, but they do not seem to relish it like clover or tares. If the field can be conveniently fenced, we would suggest sowing say five or six acres of it to tares or vetches and red clover seed, six pecks of the former and six pound of the latter per acre. A good seed-bed should be prepared as for grain, and the vetch seed sown with drill, and clover broadcast. When the vetches are ten to twelve inches high the pigs may be turned in. The vetches will keep on growing as fast as pastured off until late in the season, when the clover will have attained to a size fit for good pasture. The field would then be well seeded for the following year. Rape will grow well on clay land if it is fairly rich and in a good state of cultivation. We would recommend that the same preparation be given the land as for turnips, mangels or potatoes. On clay land it would be well to sow the rape seed in drills, about two pounds per acre, so that the field can be cultivated frequently while the crop is growing. If the rape is to be sown broadcast, from three to four pounds of seed per acre should be used. Rape sown in May should be fit to pasture before the 1st of August. Rape may be sown up till July 10th for fall pasture. After stock have become accustomed to rape, there is very little danger of bloating if they are allowed access to it at all times, except when it is frosted. Rape is almost if not quite equal to clover for young cattle.

2. Peas, one bushel, and oats, six pecks, mixed together and sown per acre gives an abundant crop to cut for hay. It should be cut very soon after the oats head out. If left later the butts of the oats get coarse. Hay made from peas and oats would require slightly more making than clover and timothy, but with a tedder and good weather good hay can be easily made.]

PLAN OF A FARM REFRIGERATOR WANTED.

A. McLEAN, Bruce Co., Ont.:—"Having put up some ice last winter, I think I shall try to make a refrigerator for the farm use this summer. I should be much obliged if you could give me a good plan for a refrigerator, or if some of the readers of the ADVOCATE would do the same. I should like to have one that would hold from six to eight deep milk-cans at the bottom, and space enough for beef, butter, and ice at the top?"

[Surely some of our thousands of subscribers can describe a refrigerator such as Mr. McLean desires to build. We would gladly give publicity to such a plan for the benefit of our readers generally. In a general way we may state that a refrigerator usually comprises a large cupboard, or room made with double hollow walls, thoroughly insulated or air-tight. This has a space above for ice, held in a rack or pan, having pipes to carry away the water. The doors should be double, fit tightly, and have enough space between them that when going in or out of the refrigerator only one need be open at once. Another plan that we would suggest would be, instead of keeping the ice in a tray or rack above, use an ice cylinder of galvanized iron, one foot in diameter, and extending from the floor to five feet high. This should be filled each day with chopped ice, and if salt were added it would keep the temperature much lower, but would thaw the ice correspondingly faster. A single very thick door, fitting like a safe door, would answer well. An illustrated description of a refrigerator in use by some of our readers would be of interest to many.]

INFORMATION ABOUT GEESSE.

D. H. K., Queen's Co., P. E. I.:—"In your issue of March 1st, about geese, you advise a correspondent to test eggs on the seventh day for infertile ones. 1. Kindly explain how this test is applied. 2. What is the best feed for young goslings? 3. What variety of grass is best adapted for pasturing geese? 4. Is there a breed of geese known as the 'China-Kong'? If so, please describe them?"

[1. To test eggs after they have been incubated for a week, make a tube of stiff paper from eight to ten inches long. Examine each egg by holding it against one end of this tube, in front of a good strong light at night, while you look through the other end. Every fertile egg will show a dark spot with veins running out from it. The dark spot does not look unlike a spider. Every infertile egg will look just like a fresh egg.

2. The most successful way to raise geese is to use two or over two year old geese with young ganders. The first eggs they lay are seldom fertile.

If you wish to obtain as many eggs as possible use hens as sitters. When a goose becomes broody, confine her away from her nest for a few days, when she will soon lay again. Good comfortable nests should be provided, and all eggs gathered so as not to become chilled. After the young goslings are hatched, put them in a nice grass run, and confine the hen in a coop. Feed them moistened corn-meal, ground wheat, middlings, or any kind of ground grain, and give them all the grass they will eat. As soon as the hen begins to lay, remove her altogether. Protect the goslings from the sun and see that they have plenty of green grass.

In winter feed the old geese a mixture of ground grains, beef scraps, and boiled potatoes or turnips in the morning, and grain in the evening.

3. Geese prefer to roam along a creek where there is natural grass, or they will do equally well in marshy land with access to a tame grass (say clover) pasture.

4. We know of no such geese as "China-Kong." RUSSIAN MULBERRY AND ENGLISH FILBERT NOT BEARING.

WM. FERGUSON, York Co., Ont.:—"I have a Russian mulberry that blossoms profusely every spring, but has not had any fruit. The blossoms all fall off. It is a good thrifty tree and planted on south side of bush (forest). Also an English filbert, which blossoms every fall and falls off in the spring. If you or any of your readers will tell me what to do with the above you will greatly oblige."

[In reply to your correspondent's query regarding Russian mulberry and English filbert, I beg to state as follows:

Russian mulberry.—The blossoms of the Russian mulberry are not perfect—that is, one tree bears male and another female flowers—and unless your correspondent has trees bearing each of these kinds of flowers, and near enough to be readily fertilized by wind and insects, he will not get any fruit.

English filbert.—The blossoms of the filbert are also not perfect, but the male and female flowers are borne on the same bush. Although the male catkins are formed in the autumn, they do not shed their pollen until spring. In Ontario the male flowers often open and shed their pollen before the female flowers are open and ready to receive it. The result is that the female flowers are not fertilized and no nuts are formed. By saving the pollen and applying it to the female flowers when they are open it is possible to fertilize them, and nuts will thus be produced. W. T. MACCOUN, Experimental Farm, Ottawa. Horticulturist.]

PLAN OF CORN MARKER.

J. A. S., York Co., Ont.:—"May I trouble you for a plan of a corn marker? We have thought of planting our corn in squares."

[Fig. 1. represents a convenient corn marker, and one that is easily made. The figure and description were sent us by J. W. Lamb, of Bruce County, and described in the FARMER'S ADVOCATE, April 15th,

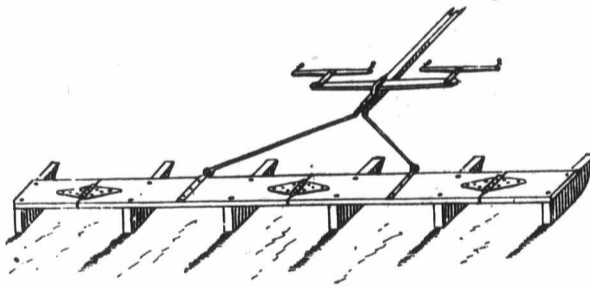


FIG. 1.

1896. The top plank is 15 feet long, 10 inches wide, and 2 inches thick. The runners are 18 inches long and sloped in front so as to run easy. They are fastened to the top plank 3 feet apart with 4-inch wood screws. Eighteen inches from each end the plank is cut with saw, and strong strap hinges screwed on. A hinge is also placed in center, as shown, so as to make the marker adapt itself to uneven ground. The ends can be folded over for turning. The tongue may be put on as shown in cut or be fastened to rollers connecting the 2nd and 3rd runners from either end.]

SMUT ON CORN.

JAS. TODD, Elgin Co., Ont.:—"I would like to hear through your columns of something to prevent smut on corn? I am very much pleased with your paper, and think it is a dollar well invested."

[Although corn smut usually infests the ears of the plant, it is occasionally found upon tassel, stem, and leaves. It is not an easy matter to prevent it when once it has shown itself in former years, as it may exist in the soil from year to year and infect succeeding crops. The spores, although so small that it would require 25,000 of them laid in a straight line to measure an inch, grow into the corn plant, pushing the mycelium through the tissue of the stem, and finally developing extensively by means of many branches in the ear or tassel. While spores adhering to the kernels of corn and planted with them may infect the resulting plant, it is just as likely to be propagated from smut lying in the ground from previous year, or from smut mixed with manure from the yard. These modes of infection indicate that corn should not be planted on the same ground year after year. Manure that has had any chance of being infected with smut should not be used, and the seed corn should be dipped into water at 132° Fahr. It should not remain longer than half a minute, and the temperature should not be allowed lower than 132° or higher than 135°.

TROUBLE IN GETTING A CLOVER CATCH.

A. BLOOMFIELD, Middlesex Co., Ont.:—"Kindly advise me as to the best kind of fertilizer for a heavy clay soil with very heavy subsoil, under-drained with tile, now sown with oats and clover seed. I have had trouble with clover in getting a standing catch. What is the matter with my land, and what kind of fertilizer, if there is such a thing to be got, would benefit me in getting clover to grow? Please give probable cost per acre, and quantity necessary for an acre. I like your paper very much—would not be without it."

[We judge the difficulty to get a catch of clover is largely due to a faulty mechanical condition of the soil rather than a need of fertility, although the latter may be lacking as well. If the clover catch is of the greatest consideration, we would suggest a heavy coating of barnyard manure, followed by a hoed crop, and the next spring sow clover without a grain crop. Oats generally make such rank growth as to shade the ground too much and smother the young clover plants. If this is not practicable under the existing conditions, it would be well to apply a coating of lime (from 30 to 40 bushels per acre) and grow a green crop of buck-wheat or oats to be plowed down. There should be no difficulty to get a catch of clover the following year, especially if the clover is sown alone, or if seeded with oats, wheat or barley sown quite thinly. We have not had sufficient experience with any fertilizer to guarantee a stand of clover on the present seeded oat crop. The lime will render the clay soil more friable. It will also decompose the minerals containing plant food and dissolve the organic matter so that all conditions to get a clover catch would be improved.

MARKETS.

FARM GOSSIP.

The Outlook for Fall Wheat and Clover.

The very severe frost of the past winter created grave doubts in the minds of many farmers as to the safety of the winter wheat and new clover meadows. In order to arrive at the condition of these important crops, so far as that can be told at the present time, we have received information from many of the wheat-growing counties, as follows:

LAMBTON.

Winter wheat is looking exceeding well in our immediate district—along the banks of the Sydenham River. In most other localities which have come under our observation prospects are very poor, and many farmers are rescinding the land to spring crops. On a recent trip from Alvinston to London our attention was particularly drawn to the poor condition of both winter wheat and clover, the latter being very badly heaved. Some fields were noticed which, although not heaved, still appeared to be killed outright. Rain is needed very badly, none having fallen for many weeks. A good warm shower would, no doubt, improve the outlook very much. ELLIS F. AUGUSTINE.

MIDDLESEX.

The winter wheat has suffered severely. Indications are about 70 per cent. of an average crop. Young clover appears to be all right. A. B. SCOTT.

The winter wheat in our neighborhood that was sown late or on poor ground is badly damaged. The new clover has heaved in some places, but, I think, will be a fair catch. R. NICHOLSON.

ELGIN.

Wheat is looking very bad; some plowing up, and prospects are poor. Of young clover, I had 40 acres sown last spring, and not more than 13 acres will stand, and not more than half a crop at that. My Gold Coin and Paramount wheat seems to be standing fairly well. Worst winter I have seen for 25 years for wheat and clover. T. H. MACKNOFF.

ESSEX.

The wheat outlook is very blue. I think fully from one-third to one-half in this vicinity will be plowed up. I was away yesterday and found some plowing all they had—from 30 to 60 acres each. That which was largest and best in the fall has suffered most. Late sown seems to have come through best. It all looked bright when winter broke, but the cold, dry weather following, with frost at bottom, has finished what the winter did not. W. G. BALDWIN.

BRANT.

The new clover looks well. It is rather early yet to judge of the fall wheat, but it looks now as if it might be a fair average crop. E. F. COWAN.

Winter wheat looks very poor, being in a weak state, and if the dry weather continues will not be half a crop. Fields that have been sheltered from the cold winds have come through apparently all right, but on the whole we are not looking for more than a half crop, if that much. It is much the same over all this district. Clover is badly heaved in exposed places, but cannot tell to what extent as yet. TELFER BROS.

WENTWORTH.

Winter wheat.—A few pieces look well, but most of it is very patchy; some very poor—killed in the ground (not heaved out at all); very early sown is worst; some kinds worse than others in same fields side by side: Golden Chaff and Red Clawson—Golden Chaff very much the better. New clover.—Generally a thin catch—has suffered considerably by heaving. Once-cut clover has come out better than usual. It's all right. JOHN JACKSON.

Fall wheat has been badly killed in this vicinity—worst on light lands. Will not be more than half a crop, from present appearance. Young clover has generally come through in fair condition. R. S. STEVENSON.

BRUCE.

Winter wheat has come out very satisfactorily in this section. I should judge that at least 80 per cent. of the fields should give a full crop. There is very little winter-killed, even along the fences; but wireworm seems to have injured the crop in a few cases. Clover is not so promising. There was a very thin catch of clover in this section last year, and there are many bare places this spring. The young plants have wintered well, and where there is an even catch they are doing nicely. I should judge that not more than 50 per cent. of the acreage will yield a full crop. JAS. B. MUIR.

WATERLOO.

The wheat is scarcely up to the average in our locality. Fields lying to the east and south are all right. There will be some plowed up, however. The clover is generally pretty safe; very little, we believe, winter-killed, unless it be on heavy land. JOHN TAYLOR, JR.

WELLINGTON.

Prospects for winter wheat and new clover fair. JAS. BOWMAN.

There is a large acreage in fall wheat here, and on the whole it is very good. There are but very few fields killed and that on poor land. Most fields show no bare spots whatever. Clover has been frozen down to the ground, but not heaved much, and is alive and coming all right. Prospects never better. GEO. HICK.

Wheat looked very promising up to four or five days ago, when it suddenly died off, and many fields will now have to be plowed down, and the best fields will be spotty. At best it will only be a half crop. Clover is splendid—not a plant injured, and with at all favorable weather must yield a heavy crop. H. BOLLERT.

YORK.

The winter wheat is quite a bit damaged. Some fields are nearly all killed, while another alongside is not much hurt. I think it will be less than half a crop. There is very little new clover; it failed to grow last year owing to drought. JOHN MILLER.

PETERBOROUGH.

Prospects for fall wheat and new clover are very poor in this district. Many people are plowing all their fall wheat up. Present prospects are that wheat and clover will not average a third of a crop. Favorable weather may make some change for the better. F. BONNYCASTLE.

Fully 50 per cent. of the winter wheat in this section is being plowed up and about half of the remainder is very patchy. It is, I think, the most complete kill-out in the last twenty years. All varieties seem to have suffered about alike. As to clover, it seems to have stood the winter better; only a small percentage is killed out, and what is living is now looking well. J. SMITHSON.

NORTHUMBERLAND.

The winter wheat in this county—East Northumberland—is fully 50 per cent. winter-killed, and will be resown with spring grain. The clover—both new and old seeding—is fully 70 per cent. winter-killed. J. B. STONE.

PRINCE EDWARD.

The wheat seems to have suffered more than the clover in this district. In some instances the wheat is in splendid condition and on next farm almost entirely gone. Clover is in most cases fair to extra—that is, from present appearances; but the larger part of wheat acreage was killed by the severe freezing. W. C. HUFF.

ONTARIO, N.

I am pleased to say that both the winter wheat and young clover look very well in this part of the country. The snow remains on it until after the heavy frosts in spring. M. CLIPSHAM.

The prospects for fall wheat are poor. There was a lot of wheat sown in this section—nearly all will be plowed up. In regard to seeds, I think they will be a failure in a great many places. JOHN F. MALYON.

Oxford County.

One of the peculiar features of this spring season with us has been the length of time that it has taken the frost to get out of the ground; in fact, I don't think that it is all out yet. We have had no rain to speak of, and the frost was very deep down in the ground, and without rain it comes out very unevenly, and whenever there is any frost left the top soil does not dry. The north and south roads have been very bad, almost impassable for loads. Very little seeding has been done here yet. Farmers generally are busy plowing and fencing. Cows are doing pretty well. Butter was down and cheese up, so our penny wise and pound foolish farmers would have our maker to stop making butter and commence making cheese. So we are now making fodder cheese, which the British people do not want, and of course it will be a drug on the market and keep the price downwards. Fall wheat generally looks pretty well, although a little brown in places, yet the roots appear to be all right. There is very little spring wheat sown here. Fall wheat, oats, barley and peas are our principal grains. Live hogs are selling at \$4.10, with the tendency upward. The beef cattle are mostly all cleared out. Quite a few ewes have come in and lambs are doing fairly well. Some of our breeders of thoroughbred stock have sold out pretty well, mostly for shipment to Manitoba, at good prices. Potatoes are selling at about 90c. per bag. A great many were frozen in pits, and even in cellars quite a few were touched with the frost. Hay has got to be a little dearer, but very few of our farmers raise hay for sale. Generally enough is sold here to supply the purely local demand, and very seldom any is taken to the neighboring towns for sale. We don't think that it pays to sell hay at less than \$10 to \$12 per ton. In fact, our best farmers do not sell either hay, oats, barley or peas, but feed them all out, and often buy corn and bran. Only wheat, milk, cattle and hogs are sold to make up the needed finances. D. L. April 24th, 1899.

Prince Edward Island.

Spring is coming in very slowly. Our coast is still ice-bound, so are our bays and rivers. From present appearances we are not likely to begin seeding for two or three weeks. Clover is winter-killed in some places, but we think will come out pretty well. Stock has been well wintered and is healthy, and our big crop of clover and roots has resulted in larger and richer manure piles than we have had for many years. Some cheese factories will begin work about May 15th, but the bulk of them will not commence till June 1st. Dairying is still on the increase, especially buttermaking. Many of the cheese factories will shorten their season by making butter in May and part of June, and again in October. We are likely to have an inspector employed by the dairy stations this year, and a move to establish a cheese board promises to be successful. Benjamin Hertz is about disposing of his big herd of Jerseys and Guernseys. He has a dispersion sale advertised for May 10th. Many of your readers may not be aware that most of the herd was purchased from Mrs. E. M. Jones. This will be a good chance for Island dairymen to get some good blood into their herds. A milk-condensing factory is one of the new industries talked of for Charlottetown, and E. R. Brown, the famous Guernsey breeder, is said to be one of the promoters. Heavy horses are scarce on the Island. Our largest horse dealer has made a second trip to Montreal this season for heavy drafts for the St. John market. P. E. Island farmers have not been raising many horses of any kind during the last four or five years. There are a good many fat cattle offering just now, the best quality, up to and over 1,200 pounds, being 3c. for May delivery. Smaller beefs sell at 4c. to 4½c. There will be very little oats or potatoes shipped from here this spring—they will all be fed to stock. Oats are worth 36c., potatoes about 40c. The greater part of the wheat sown here this spring will be from Manitoba and the Northwest. We are in hopes that this change of seed will greatly improve the yield. Special legislation is promised in the speech at the opening of the Provincial Legislature for the encouragement of the farmers and horticulturalists. Considerable interest is being taken in the "chicken-fattening station" to be established here this summer. The agricultural "illustration stations" will not be in operation this year. Horticulture is receiving much attention here this spring. Many will add to their orchards, and new ones will be set out. The Fruit-growers' Association is sending expert grafters through the country to top-graft the old orchards with the best varieties of apples. W. S. April 20th.

East York.

There is very little grain sown yet in this locality, only a few fields that are high and well drained. All claim that they never saw the land so long drying. Despite our fears about the condition of the fall wheat and clover, the present prospects seem to be that both will come out all right, and, with the exception of a few fields that were pastured last fall and some that were very much exposed, it is looking well.

The roads have been very bad this spring, in consequence hay has been selling higher lately—timothy \$9 to \$12 and clover \$7 to \$9—on Toronto market. Oats also are selling well, at \$7. There has been a good demand for seed peas that are free of bugs, and it is very difficult to get a good sample.

Cattle are a little weaker in price just now on account of the drop in the British market, but it is expected that the demand will be better when shipping commences. Nearly all of the distillery-fed cattle are in the sheds yet. The large number fed at the Toronto sheds furnish a good market for clover hay. Some farmers have sold their cattle at 5c., and as high as 5½c. for May delivery. Spring lambs are bringing from \$3 to \$5 each; yearling lamb, 5c. to 10c. per lb., dressed; pork, 5½c. per cwt.

On account of the higher prices for stock and grain, dealers are paying more for milk this summer. It is sold by the can, which contains 8 gallons. Farmers are receiving 70c. to 75c. per can, the dealer drawing it from the farm, the seller agreeing to supply so many cans for 6 months, commencing the 1st of May at the above price. This is the most important industry on many farms near the city, many selling from \$1,000 to \$1,200 worth in the year. To sell this amount they supply from three to four cans per day, and keep from 12 to 15 cows in full milk. Some dairymen do not breed their cows, thus getting a larger flow of milk. They then sell them for beef. Others keep the best cows from year to year. Nearly all of them are the Short-horn grade; in fact, very few of the other breeds are found in the milkmen's stables, and the cow that will milk well for 9 to 10 months and then be in good condition for the butcher seems to be the favorite stamp in this locality. S. Y. C. April 25th, 1899.

Toronto Markets.

Trade at the Western Cattle Market was slow, although the whole of the pens were cleared by noon. Navigation will open on the St. Lawrence the first week in May, when two steamships are booked for cattle from Montreal. The receipts at the Western Cattle Market for the week ending April 25th were: Cattle, 1,958; sheep and lambs, 500; hogs, 9,020.

The sub-committee of the City Council appointed to inspect the cattle market met last Tuesday, interviewed a number of local and outside dealers, and whilst the expressed opinion of the dealers was to retain the present site, the interested aldermen favored removal to the Dundas Bridges at West Toronto. Export Cattle.—The bulk of fat cattle offered were exporters, and cables report better returns than for the last two weeks. Many of the dealers in export cattle are wanting space, with a large number of cattle awaiting shipment. This has a tendency to make trade a little slow, for unless they can purchase them at a price to hold they are not willing to do business. Choice, heavy loads of exporters sold at \$4.80 to \$5 per cwt.; only a few choice beefs reaching the latter prices. Light and medium exporters were fully 20c. lower, selling at \$4.40 to \$4.50 per cwt. Mr. Joseph Gould bought 80 head of exporters at \$4.75 to \$5 per cwt. Mr. John Stolt, of Listowel, had two loads of export cattle average 1,350 lbs., as good level cattle as seen lately on this market; they fetched \$5 per cwt. Mr. Ironsides bought three loads of exporters at \$5 per cwt.—the choice of the day's market. Mr. Wm. Murby bought two loads of cattle weighing 1,300 lbs., at \$5 per cwt.

Butchers' Cattle.—The best butchers' cattle—equal in quality to exporters—not so heavy, weighing an average of 1,000 lbs. each were sold at \$4.37½ to \$4.50, only a few cases at \$4.55 per cwt. This is about 10c. per cwt. lower than two weeks ago.

Bulls.—Inferior stock bulls sold at \$2.50 per cwt. Bulls suitable for the byres are worth from \$3 to \$3.50 per cwt., a few wanted to fill vacancies. Some good export bulls found ready sale at \$4 per cwt.

Stockers.—Buffalo stockers in good demand, with prices firmer, at \$3.90 to \$4.00 per cwt. The drovers report that this class of cattle have been cleared out of the country, and that the trade is about finished.

Feeders.—Well-bred steers, from 1,000 to 1,100 lbs. average, in good demand; there was good trading done in this line; all on offer sold at \$4.25 to \$4.40 per cwt.

Sheep.—The run of sheep light—only 100 on offer; ewes sold at \$3.50 to \$3.75, and bucks at \$3 per cwt. Good export sheep in demand and wanted at advanced prices.

Lambs.—A new division has lately been called for yearlings and spring lambs. For first-class, grain-fed yearlings, weighing from 100 to 110 lbs. each, \$5.50; in one or two instances, \$5.60 per cwt. Common barnyard lambs sold at \$4 to \$4.50 per cwt.; spring lambs sold at from \$2 to \$5 per head.

Calves sold down to any price; about 60 on offer; the lowest point \$3, the highest \$8 per head. We must again call the attention of farmers to taking better care of their calves. They will be worth money next year.

Milk Cows.—Only very few good cows on offer; eight springers and milkers sold at from \$25 to \$45 per head. Mr. P. Holland bought the best cow on the market at \$47.

Hogs.—We are almost afraid to forecast the market, as the next two weeks the price will fall and go higher. We look for \$4.60 for best selects, with thick-fat and light at \$4 per cwt. The Old Country market is firmer, but most of packers' cellars are full and well stocked, so that they must realize before Mr. I. Gould sold 30 hogs, 148 lbs. average, at \$4.25 per cwt. Thick-fat, \$3.75; sows at \$3; a few stags at \$2.

Grain Markets.—The wheat market have been dull this week and closed steady. The grain movement is light and likely to be until the opening of navigation. No white wheat on offer; quoted at 7½c. per bushel; 300 bushels of goose sold at 65½c. per bushel.

Brans.—City mills sell bran at \$14.50 per ton, and shorts at \$15.50, f.o.b. Toronto.

Dressed Beef.—Beef fore quarters, \$4.50 per cwt. Beef hind quarters at from \$7.50 to \$8.50 per cwt. Lamb, 8c. per lb. Mutton carcass at from \$6 to \$7.

Dressed Hogs.—Very limited supply by farmers; prices firmer, at \$5.25 to \$5.50 per cwt. Heavy fat at \$5 to \$5.15 per cwt. There is a fair distributive movement, especially to North Bay and Sudbury on northern points.

Butter.—The receipts of large rolls liberal; market steady for all choice stocks at from 12c. to 13c. per lb.; dairy rolls are quoted at the same figure; creamery is quoted at 10c. to 20c. lb.

Eggs.—The offerings are not large—farmers too busy; bad roads in the country restrict travel; none coming from western points. This market steady. Eggs scarce and wanted at from 11½c. to 12c. doz.; warranted new laid, 13c. was asked and paid.

Hay.—Market steady; supply limited. Timothy sold at \$10 to \$11 per ton, and clover or mixed hay at from \$7 to \$9 per ton; baled hay, in car lots, at \$7 to \$7.50; short supply.

Straw.—Only one load on offer at \$7 per ton. Baled straw, car lots, at \$4 to \$4.50 per ton; scarce, and wanted.

Hides.—There is no change in the hide and skin market. No. 1 green, steer, 8½c. per lb.; No. 1 cured, 8½c. per lb.; calf skins, No. 1, 10c. per lb.; sheepskins, each, 90c.

Wool.—Unwashed, 15c. per lb.; pulled super, 15c. per lb.

Horse Market.

The trade in horses at Mr. H. Smith's, Grand's Repository, Adelaide street, Toronto, has been very brisk—two sales per week, with eager competition for all classes of horses. Fifty first-class draft and general purpose horses, weighing 1,250 lbs. to 1,675 lbs., fetched from \$100 to \$170 each. A pair of gray horses, well matched, 2,500 lbs., fetched \$350 the two. A pair of bay heavy draft, mare and gelding, weighing about 2,950 lbs., were sold at public sale for \$350, but we understand that they were sold for sale was to keep faith with the public; and sold to the highest bidder. Heavy draft horses suitable for city purposes in demand.

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Top Prices		
		Two weeks ago.	1898	1897
Beef cattle.				
1500 lbs. up.....	\$4 80 to \$5 70	\$5 75	\$5 40	\$6 35
1350 to 1500 lbs.....	4 35 " 5 85	5 75	5 25	5 50
1200 to 1350 lbs.....	4 20 " 5 50	5 70	5 25	5 25
1050 to 1200 lbs.....	4 00 " 5 25	5 35	5 00	5 00
900 to 1050 lbs.....	3 90 " 5 10	5 25	4 90	4 85
Fed Westerns.....	3 90 " 5 40	5 50	4 90	4 90
Stillers.....	3 90 " 4 60	4 60	4 65	4 85
Stockers and feeders.	3 50 " 4 90	5 05	5 00	4 50
Hogs.				
Mixed.....	3 60 " 4 02½	3 92½	3 97	4 22
Heavy.....	3 50 " 4 05	3 97½	4 00	4 22
Light.....	3 55 " 3 95	3 87	3 85	4 25
Pigs.....	3 20 " 3 85	3 77½	3 90	4 15
Sheep.				
Natives.....	3 00 " 5 00	5 10	4 75	5 00
Western.....	4 40 " 4 85	5 00	4 70	5 25
Yearlings.....	4 80 " 5 00	5 10	4 85	5 50
Lambs.....	4 00 " 5 90	5 90	5 65	5 90
Spring Lambs.....	7 00 " 10 00	10 00	7 00

Cattle losses in the western range country amount to an average of fully 10 and 15 per cent. This, considering the small number of cattle on the ranges, will be felt severely by the ranchmen. Indications point to a small calf crop, a late beef season and light shipments of beefs.

An experienced firm of cattle salesmen say: "It is the time of year when buyers begin to show a preference for choice heavy weights, and as there are quite a good many heavy cattle that have been held for better prices, we think there will be enough heavy cattle to amply supply the demand for the next few weeks."

A Chicago commission firm recently caught a crooked cattle-man, who fraudulently sold mortgaged cattle, after a chase of over 15,000 miles, which extended over Mexico, thence to Havana, Cuba, back to Mexico; from there to Los Angeles, San Francisco, Denver, Washington, D. C., New York, and from there back to California, where he was finally overtaken.

Cuba promises to be a great field for Canadian and United States stock-men, as soon as the farmers can get a little money ahead from their crops.

A well-known hog-man says: "The quality of hogs does not indicate a long continuation of the present shortage in receipts, yet I believe last year's receipts will not be equalled any time this season. Prospects favor strong prices next week." Heavy hogs sold at \$4.15, or as high as any time since last July. Last September that figure was obtained, with \$4.17, the highest last July. The top last April was \$4.15, while last May they reached \$4.50, the highest during 1898. Hog receipts at four principal points for April are the highest since 1895. The April run at Chicago is the smallest for any month since August, 1896, and the smallest April receipts since 1895, being about 500,000, against 722,229 last month, 1,022,746 last December, and 679,311 for April, 1898. Receipts a year ago in April were the largest on record for April.

Dealers claim that buyers are discriminating against big, heavy lambs, and they are worth at present very little more than good handy weight sheep. The sheep are rapidly taking up the ranges left vacant by the depletion of western range herds. The sheep-men will profit much by this expansion of feeding space, especially in a season when the grass crop is short.

Great changes are going on in stock-raising in the south-west. That so many Texas stockmen are arranging for the production of feed stuffs, and that Texas farmers are planting more feed crops and becoming more interested in live stock, is one of the most hopeful indications of the prosperity of the two great Texas industries.

The tendency is towards combinations in all lines, and the extent to which the big concerns are doing all their own work is astonishing. One of the big Chicago packers now has one of the largest and most complete printing establishments in the country. He had work enough of his own to justify a plant, and then he made it big enough to do the work for his neighbors and to compete for large Government contracts. These people own cattle ranches, farms, packing houses, stock yards, railroads, refrigerator lines, live stock car lines and many other enterprises.

The report that the packers are going into the hide-tanning business is not confirmed.

Heavy, soaking rains have fallen in Southern Texas, greatly to the relief of stockmen, with whom the situation was growing serious.

For several years the cattle industry has been on the wane on the western ranges, chiefly because the young stock have not been available to replace those matured and sent to market.

Montreal Markets.

Cattle.—The break in the price of cattle on this market has not been of long duration, as at time of writing the value of best beefs has risen to 5½c. per lb. This does not, however, indicate the nature of the market for the past two weeks by any means, for it has been decidedly the reverse. "Choppy" has been the term more applicable to the trade done, for notwithstanding that receipts have been low—lower, in fact, than I ever remember them to have been—the demand from butchers has been so curtailed by the high prices of necessity charged consumers that it has lessened the consumptive demand very materially. So high is beef that butchers have pushed to the extreme their sales of small meats, especially of pork and veal, and this is having the natural tendency to limit the demand for beef cattle for local consumption. Choice beefs, as sold yesterday (April 24), show a gain over the preceding market (Thursday) of a half cent—not altogether, of course, due to the better trade, but fully a quarter cent, the other quarter being doubtless due to a run of better cattle on the market. Yesterday choice beefs sold at 5½c. per lb.; good at 4½c. to 5c.; common to medium from 3c. to 4½c. per lb.

Sheep and Lambs.—Offerings of this class of stock are extremely light, and sales are quickly effected on all that are in. Old sheep, cash, at 4c. to 4½c. per lb.; yearling lambs, 5c. to 5½c., and spring lambs from \$2 to \$5 each, according to size and quality.

Calves.—Receipts continue to increase in numbers, but the quality is not by any means improving, and sales have the wide range of \$1.50 to \$12 each.

Live Hogs.—Receipts of hogs are not up to requirements; for instance, only ninety being in on yesterday's market, for which 4½c. per lb. was paid off cars.

Hides and Skins.—No change in this market, offerings being absorbed as soon as offered at previous quotations: Green salted hides—No. 1, 8½c.; No. 2, 7½c.; No. 3, 6½c. per lb. Calf skins—No. 1, 10c.; No. 2, 8c. Lamb clips, 10c. each. Lamb skins, 75c. to 80c. each.

British Markets.

London advices just received note a still further advance in the price of choice steers, withal the market was otherwise slow; best States steers advancing ¼c. per lb., to 13c. per lb. Argentine stock was, however, decidedly the reverse, dropping back ¾c. per lb., as compared with the prices obtained on Monday last, selling at 11½c. per lb. for the best. Sheep were also decidedly weaker, declining ¼c. per lb. on choice wethers, to 11c.

Liverpool was dull and prices easier. Best States selling at 11½c. to 12c.; best Canadians 11½c. to 11½c. per lb. Canadian lambs were very much firmer, advancing ¼ of a cent, to 15½c. per lb. All above quotations are for dressed meat, sinking the offal.



AN UNWILLING GUEST.

BY MARY E. WILKINS.

"I've been lookin' in the pantry, an' you 'ain't got a bit of cake in the house. I'm goin' to work an' make you a good loaf of cup-cake before I go home."

"Oh! I wouldn't, Mis' Steele; it'll be too much work."

"Work! I guess I ain't quite so feeble but I can make a loaf of cup-cake."

"You've got on your nice silk dress."

"H'm! I ain't afraid of this old silk. Where's the eggs?"

"There ain't a bit of need of our havin' any cake—Lawson an' me don't eat much cake, anyway. Besides, he can make it."

"Guess he ain't much time to make cake whilst he's plantin' here's the basket, but there ain't any eggs in it. Don't you s'pose I could find some out in the barn?"

"You don't want to go huntin' round in the barn with that good dress on."

"Guess I sha'n't hurt it any."

Mrs. Steele stalked out of the room, the little basket dangling from her hand. Her black silk dress rattled, and her new, shiny shoes creaked. She had on some jingling chains and bracelets, and long gold ear-rings with little balls attached, which swung and bobbed and tinkled as she walked.

Susan Lawson, at the window, could not see her, as she was faced the other way, but she listened to the noise of her departure. She heard two doors slam, and the creaking steps very faint in the distance.

"Oh dear!" said she. She pressed her lips together and leaned her head back. The clock ticked loud; a sunbeam, with a broad slant of dancing notes in it, streamed in the window. Susan's old face looked like porcelain in the strong light, which seemed to almost shine through it. Her skin was thin and clear, and stretched tightly over the delicate face bones. There was a faint pink on the cheeks.

"Oh dear!" she said the second time, when she heard the creaking footsteps nearer and louder. "Did you find the eggs?" asked she meekly when the door opened.

"Yes, I found the eggs, an' I found somethin' else. For pity's sake, Susan, what does Lawson mean by havin' so many cats in that barn?"

"I know it. I've said all I could to have him get rid of some of 'em."

"Well, I guess I'd say, an' keep a-sayin', till he did. I don't believe I'm stretchin' it a mite when I say I saw fifty out there just now. I hadn't any more'n shut the sink-room door before the evilest-lookin' black cat I ever saw popped its head out of a hole in the wall. Then I went a few steps further, an' two or three scud like a whirlwind right under my feet. Much as half a dozen flew out of one corner when I went in to look for eggs. I declare I thought they'd scratch my eyes out; I was actually afraid of 'em. They were as black as minks, and they had the greenest eyes! The barn's alive with 'em. I don't see what Lawson's thinkin' of."

"I know there's a lot; there was the last of my bein' about, when I used to go out there, an' I s'pose there's more now."

"Why don't Lawson kill some of 'em?"

"I've talked to him about it till I've got tired of it. Two years ago he did get so far's to load the gun one afternoon an' go out in the barn. But I listened, an' it didn't go off. I guess he was kinder afraid, on't; to tell the truth, he don't know much about firearms."

"Well, if I was a man an' couldn't fire a gun I wouldn't tell of it. I'd risk it but I could shoot some of them cats. I guess my barn wouldn't be overrun with 'em if I knew it."

Mrs. Steele carried the eggs into the pantry. Then she came back with a resolute look on her large face, with its beetling nose.

"Where is that gun?" asked she.

"O Mis' Steele, you don't."

"I ain't goin' to have you so overrun with cats if I can help it. If Lawson can't fire a gun, I can. The amount of it is, if one cat's killed the rest'll leave, and I'll risk it but I can hit one. I ain't afraid to try, anyhow. Where's the gun?"

Susan turned white. "O Mis' Steele, don't!"

"Where's the gun?"

"You'll get killed. Oh, you will, you will! Don't—please don't."

"Get killed! I should laugh. What do you s'pose I'm goin' to do—point it at myself instead of the cat? Where is it?"

Mrs. Steele stood in front of the other woman, her large, short-waisted figure, in its smooth, shiny black silk, thrown short majestically on her heels, and looked at her imperiously.

Susan felt as if her answer were a thread and Mrs. Steele had a firm clutch on it and was pulling it surely out of her soul. She had to let it go.

"It's in the back chamber," said she. "Oh, don't!"

"You just sit still, an' not worry."

Susan gripped the arms of her chair with her little bony hands and sat listening. She heard the footsteps on the back stairs, ascending and descending; then, after an interval of agonized suspense, the sharp report of the gun.

Her heart beat so heavily that it made her tremble all over. She sat thus, her poor little house of life all ajar with the heavy working of its machinery, and waited. Two, three minutes passed, and Mrs. Steele did not come. Five minutes passed. Susan began to scream: "Mis' Steele, O Mis' Steele, are you killed? Mis' Steele, answer! Why don't you answer? Mis' Steele, are you killed? Oh! oh! Here I am, an' can't stir a step; perhaps she's bleedin' to death out there. Oh, where's Lawson? Lawson! Lawson! come—come quick! Mis' Steele's killed! Mis' Steele! Mis' Steele!"

"Susan Lawson, what are you hollerin' so for?" said Mrs. Steele, suddenly. Susan had not heard her enter amid her frantic outcries.

"O Mis' Steele, you ain't killed?" she said faintly.

"Killed? I'd laugh if I couldn't shoot a cat without gettin' killed. What have you gone an' got into such a stew for?"

"You was so long!"

"I thought perhaps I'd get aim at another, but I didn't."

"Did you kill one?"

"I guess so. She ran, but I guess she was hurt pretty bad."

Susan peered round at her. "Why, you look awful white, Mis' Steele. You ain't hurt, are you?" Susan was shivering now so that she could scarcely speak. Her eyes looked wild, her thin lips were parted, and she panted between her words.

"Hurt, no; how should I be hurt? I've been lookin' kinder pale for a few days, anyway; quite a number's spoke of it."

"Why, Mis' Steele, what's that on your dress?"

"What?"

"All over the back of it. Why, Mis' Steele, you're all covered with dust. Where hev you been? Come up here, an' let me brush it off. There's hay seed, too. It's too bad—on this nice dress."

"Land! I guess 'twon't hurt it any. I must ha' rubbed

against something out in the barn. That's enough. I'm goin' to put my shawl on, an' that will cover it up. I'll take it off an' give it a good cleanin' when I get home. Come to think it over, I don't know's I'd better stop to make that cake to-night, if you don't care much about it. I'll come over an' do it to-morrow. It's a little later than I thought for, an' I've got to bake bread for supper."

"I wouldn't stop, Mis' Steele. It ain't any matter about the cake, now."

"She goes kinder stiff," thought Susan, watching Mrs. Steele in her black silk and cashmere long shawl going out of the yard. "How beautiful an' green the grass is gettin'! I'm thankful she wa'n't hurt."

In the course of half an hour, Jonas Lawson, Susan's husband, came up from the garden, where he had been planting peas. The woman at the window watched the tall, soberly moving figure. The broad yard was covered with the most beautiful spring grass, and the dandelions were just beginning to blossom. Susan watched her husband's spreading feet anxiously. "There! he's stepped on that dandelion; I knew he would," said she.

Lawson opened the door slowly and entered. "Who was it fired a gun a little while ago?" said he. His arms hung straight at his sides, his long face was deeply furrowed, the furrows all running up and down. He dropped his lower jaw a good deal when he spoke, and his straight black beard seemed to elongate.

"O Lawson, it was Mis' Steele. She skinned me 'most to death."

Lawson stood listening to the story. "The gun kicked, most likely," said he soberly, when Susan mentioned the dust on Mrs. Steele's black silk. "It's apt to. It ain't a very safe gun; I'm 'most afraid of it myself. I reckon she got knocked over."

"Oh dear! Do you suppose it hurt her much, Lawson?"

"Shouldn't be surprised if she was pretty lame to-morrow."

"Oh dear! I wish she hadn't touched it."

"I heard the gun, an' I thought I'd come up as soon as I got that row of peas planted an' see if there was anythin' the matter. I knew you couldn't do nothin' to help yourself, if anybody was to kill you."

Lawson plodded about, getting tea ready. Susan had been unable to walk for several years, and all the domestic duties had devolved upon him. She had taught him how to cook, and he did fairly well, although he was extremely slow and painstaking. Susan had been very quick herself, and sometimes it fretted her to watch him.

"It took him jest three hours and a half to make a pan of gingerbread this mornin'," she told Mrs. Steele one day. "It was real good, but it seemed as if I should fly, seein' him do it. He measured the flour over ten times—I counted." She was all of a nervous quiver telling it.

Nobody knew the real magnitude of the trial which the poor vivacious soul had to bear, sitting there in her calico-covered rocker, with her stiff feet on a little wooden stool, from morning till night, day after day. She fluttered and beat under Providence as a bird would under a man's hand, but she was held down relentlessly in that chair, and would be till the beating and fluttering stopped.

Lawson turned her chair about, as was the custom, that she might watch him preparing the meal.

He spread the cover on the table and placed the plates; then he was in the pantry a long time fumbling about.

"What are you doing, Lawson?" Susan asked, trying to peer around the corner.

"I—can't seem to see the knives anywhere. It's curious. I allers put 'em in one place."

"Ain't they in the knife box?"

"They appear to be gone, box and all." Lawson spoke in a tone of grave perplexity, and fumbled on.

"No, I—don't seem to see 'em yet. It's curious."

"Oh dear! push me in there, an' let me see if I can't see 'em. Mis' Steele came in here an' righted up things," said Susan, after sitting in the pantry an' staring vainly at the shelves; "she must have put 'em somewhere else."

They spread their bread and butter with Lawson's jack-knife that night.

"Mis' Steele means real well," said Lawson, laboring with the narrow blade, "but it seems as if she kinder upsets things sometimes."

"I ain't goin' to hear a word again, Mis' Steele. She put 'em up somewhere; they're safe on'th."

"I—can't seem to see 'em, Susan; we'll come across 'em. I don't mean a thing again, Mis' Steele."

Lawson, after he had cleared away the tea things, fumbled again in the pantry.

"What are you huntin' for now?" Susan called out.

"Nothin' but my shavin' things. I don't seem to see 'em. It's curious."

"Ain't they in the corner of the top shelf, where they allers are?"

"I don't seem to see 'em there. I guess mebbe Mis' Steele set 'em somewhere else. It ain't no matter. I was kinder thinkin' of shavin' an' goin' to meetin', but mebbe it's jest as well I didn't. I feel kinder stiff to-night."

"Seems as if you ought to go to meetin'. You're sure they ain't right there?"

"I don't see 'em. I guess Mis' Steele must ha' put 'em up. Well, it don't make no odds."

Lawson sat down and read the paper.

The next day Mrs. Steele came over and revealed the knives and the shaving apparatus in the top drawer of a bureau in the kitchen.

"There wa'n't nothin' in there," said she, "an' I thought you could use it for a kind of sideboard."

That day Mrs. Steele made the cup-cake and broached a plan.

"You be ready, Susan," said she, standing with her bonnet and shawl on, taking leave; "I'm comin' over with the horse an' wagon to-morrow to take you to my house."

"Oh, no, Mis' Steele!"

"You needn't say a word. You're comin', an' you're goin' to make me a good long visit."

"Oh, I can't!"

"Can't? I don't see any reason why you can't."

"I can't leave Lawson."

"Goodness! If Lawson can't take care of himself six weeks, I should think 'twas a pity."

"O Mis' Steele, I couldn't stay six weeks!"

"Don't you say another word about it. I'm comin' over to-morrow, an' you be ready."

"I couldn't get into the wagon."

"Me an' Lawson can lift you in. Don't you say a word. You ain't goin' to sit in that chair without change a day longer, if I can help it. You be ready."

"O Mis' Steele!"

But she was out in the yard, looking back at the window and nodding emphatically.

When Lawson came in from his planting he found Susan crying.

"What's the matter? ain't you feelin' as well as common to-day?" he inquired, with long-drawn concern.

"O Lawson, what do you think? Mis' Steele's comin' over with her horse an' covered wagon to-morrow an' take me over to her house and keep me six weeks."

"Don't you feel as if you wanted to go?" Lawson said, with a look of slow wonder.

"I'm scared to death. You don't think about it; nobody thinks nothin' about it—how I've been sittin' here in this house night on to ten year, an' what an awful thing it is for me to think of goin' out of it."

"Don't you feel as if it might do you good?"

"Good! I've been lookin' at that grass out there. I feel as if I'd stayed in this house so long that I'm rooted, jest as the grass is in the yard. An' now they're goin' to take me up root an' all, an' I'm only a poor little old wornout woman, an' I can't stan' it. I—can't—stan' it!" Susan sobbed hysterically.

"It seems to me I'd tell her I couldn't come if I felt so about it," said Lawson, his face lengthening, and the long furrows in it.

"There's them lilacs an' them flowerin' almonds gettin' ready to blow under the window here. An' the yard's greener than I ever see it this time o' year."

"The grass round Mis' Steele's place is uncommon forrard; I noticed it goin' by there the other day."

"What do you s'pose I care about her grass? You can't get along alone, Lawson, neither."

"Oh, I shall do well enough! I can make me some pies."

"Yes, you won't make a thing but mince pies, an' git sick, I'll warrant."

"I was calculatin' to make some apple pies."

"Mis' Steele made some cup-cake to-day, an' I expect nothin' but that'll make you sick, now I'm goin' away. It's rich. She put a cup of butter an' two whole cups of sugar in it. I didn't know how to have her, butter's so high, but I couldn't say nothin'. She was real good to do it."

In the night Susan aroused Lawson. She had thought of another tribulation connected with her prospective visit.

"Lawson," said she, "I've thought of somethin' else. I can't go nohow."

"What is it?" asked Lawson, with his usual steady gravity—not even his sudden awakening could alter that.

"I ain't got a bonnet that's fit to wear. I ain't been out to meetin' for ten year, you know; an' I ain't hed a sign of a bonnet for all that time."

"Is the one you hed when you was taken sick worn out?"

"Worn out! No; but it don't look nothin' like the bonnets they wear nowadays. It's as flat as a saucer, an' Mis' Steele's is high in front as a steeple. I ain't goin' to ride through the town in such a lookin' thing. I've got some pride left."

But for all poor Susan Lawson's little feminine pride concerning attire, for all her valid excuses and her tearful, sleepless night, she went. She tied on nervously the flat Neapolitan bonnet, with its little tuft of feathery green grass, which had flourished bravely in some old millinery spring; the strings, also, were grass-green.

Lawson and Mrs. Steele carried her out between them in her chair. Poor Susan in her old bonnet, coming out into the sweet spring world, was like the feeble blossoming of some ancient rose which had missed the full glory of the resurrection. The spring, which one thinks of as an angel, was the same, but the rose and the old woman were different. The old woman felt the difference, if the rose did not.

"Oh, dear! I ain't what I used to be," she groaned, as they hoisted her, all trembling with fear, into the wagon. "I can't do as I used to, an' my bonnet is all behind the times."

Mrs. Steele's vehicle was a "covered wagon." There was no opening except in front—the black curtains buttoned closely over the back and sides. Susan sat, every nerve rigid, on the glossy back seat, and clutched the one in front firmly. Mrs. Steele sat there driving in a masterly way, holding the lines high and taut, her shoulders thrown back. The horse had been, though he was not now, a spirited animal.

Years ago a long stable at the right of Mrs. Steele's house had been well filled with horses. Mr. Steele had been an extensive dealer in them, and had thus acquired the wealth which his widow now enjoyed. She had always been well conversant with her husband's business, and now she liked to talk wisely about horses, though she had only one of their noble stock left.

"Ain't you afraid, Mis' Steele?" Susan kept asking, nervously.

"Afraid! Why, I've drove this horse ever since John died."

"Then you're used to him!"

"I should hope I was. He's rather smart, but he's a pretty fair horse. He's been a little lame lately, but he's gettin' over it all right. He interferred goin' down that steep hill by Sam Basset's one time, last February, an' hurt him. Two years ago I thought he had a spavin, but it didn't amount to nothin'. John always thought a good deal of this horse; he valued him pretty high."

Susan looked with her wide, wondering eyes at a small galloped spot on the horse's back, and thought innocently that that was the fraudulent spavin.

She watched timorously every motion of the animal, and felt such a glad sense of safety that she did not repine as she had expected when she was carried over Mrs. Steele's threshold by Mrs. Steele and her hired man.

But the repining came. Susan was quite prostrated from her unusual exertion, and had to lie in bed for several days. She stretched out there in Mrs. Steele's unfamiliar bedroom, staring at the unfamiliar walls, that terrible, anticipated homesickness attacked her.

"I don't want you to think I ain't grateful," she told Mrs. Steele, who found her crying one day, "but I do kinder wish, if I'm goin' to be sick, that I was to home in my own bed."

"You ain't goin' to be sick, that I was to home in my own bed," Mrs. Steele pronounced Mrs. Steele, with cheerful alacrity; "an' if you was, you're a good deal better off here."

In a few days Susan was able to sit up. Mrs. Steele arranged her comfortably in a stuffed easy chair beside her sitting-room window.

"There, Harrison," she told her hired man that night, "that poor soul in there is goin' to take a little comfort for a few weeks, if I can bring it about."

Harrison Adams, the hired man, had come into the service of the Steeles in his boyhood. Now he was married and lived at a short distance; but he still carried on the farm for Mrs. Steele. She was not a woman to live idly. She could not deal in horses, but she could make a few acres profitable, and she did.

This man was all the servant she kept. She managed her house herself. She was a fine cook, and Susan, during her visit, could complain of no lack of good living. The house was comfortable, too; indeed, it was grand compared with the guest's own domicile.

But all this made no impression on Susan. The truth was that she had become so accustomed to her own poor little pebbles, and loved them so, that she thought they were diamonds.

Seated there in Mrs. Steele's soft easy-chair, she would sigh regretfully for her hard creaking rocker at home. She tasted Mrs. Steele's rich food, and longed for some of Lawson's cooking. She looked out of that pleasant front window on the broad road, with the spring garlands flinging over it and the people passing, and muttered, "It ain't half so pleasant as my window to home. Mrs. Steele's fine sitting-room, with its brave Brussels and its springy haircloth, what was it to her own beloved kitchen, with the bureau in the corner, the table and stove and yellow chairs, and its voice—the clock?"

On the morning of the day when the six weeks were up, Susan woke in a tumult of joyful anticipation. Nothing was said, but she supposed that her going home that day was an understood thing. So after breakfast she sat waiting for her hostess to mention it. Mrs. Steele was busy in the kitchen all the morning; the sweet, rich smell of baking cake floated into the sitting-room.

"Mebbe she thinks we'd better not go till afternoon; she seems pretty busy," Susan thought, patiently.

But when the afternoon was spinning out, and Mrs. Steele sat sewing and said nothing, Susan's heart sank.

"Mis' Steele," she said timidly, "don't you think we'd better go before much later. I'm afraid it'll be growin' damp."

"Go where?"

"Why, go home."

"Go home?"

"Why, I thought I was goin' home to-day; it's six weeks since I came."

"Oh, you ain't goin' home yet a while; you're goin' to stay till you get better. Your visit ain't half out yet."

"O Mis' Steele, you're real good, but I feel as if I must git home."

Now, Susan Lawson, I should like to know what earthly reason you have for wantin' to go home. You can't do nothin' when you get there."

"I feel as if I'd oughter get home. I've left Lawson a long spell now."

"Nonsense!—a man that can cook as well as he can!"

"He won't make nothin' but mince pies, an' get sick."

"I didn't see but he looked well enough when he was here last week. You ain't goin', so don't you say another word

about it. You're goin' to stay here, where you can be took care of an' have things as you'd ought to."

"You're real good, Mis' Steele." Susan turned her face towards the window. There were tears in her eyes, and she saw the trees all wavering; the grassy front yard seemed to undulate.

Mrs. Steele watched her sharply. "I declare I'm 'most mad with her!" she said to herself when she went into the kitchen to get tea. "Seems as if anybody might know when they was well off."

June came, and poor Susan Lawson still visited. Her timid entreaties and mild protests had availed nothing against Mrs. Steele's determined kindness. Once she had appealed to Lawson, but that had been fruitless.

"She doesn't want to go," Mrs. Steele had assured him, following him to the door. "She'll be all off the notion of it to-morrow. Don't you do nothin' about it."

"Well, jest as you say, Mis' Steele," Lawson had replied, and gone home undisturbedly and eaten his solitary pie for tea.

In the second week of June, on Sunday afternoon, Susan was all alone in the house. Mrs. Steele had gone to church. It was a lovely day. The June roses were in blossom; there were clumps of them in the front yard. Susan at her window poked her head out into the sweet air and stared about.

This poor old troubled face at the window, and the beautiful day armed against grief with roses and honey and songs, confronted each other.

"Then the old woman began complaining, as if to the other. 'Oh,' she muttered, 'there's roses and everything. It's summer, an' I ain't to home yet. I'm a poor old woman, that's what I am—a poor old woman with a longin' to get home, an' no legs. Oh, what shall I do? Oh dear! oh dear me!'"

Harrison Adams came strolling up the road. He was not a constant churchgoer. Susan eyed his swinging arms in their clean white Sunday shirt-sleeves, and his dark red face, with its sun-bleached blonde moustache.

"Harrison!" she called. Her voice quavered out shrilly. "Won't you please come up to the window a minute?" she cried out again, when he stopped and looked around inquiringly.

"Anything wrong?" he asked, standing under the window and smiling.

"I want you to harness up an' take me home."

"Why, Mis' Steele's got the horse," the young man said, staring at her.

"Can't you git one somewhere—can't you?"

"Why, Mis' Steele'll carry you when she gets home. 'Twon't be more'n half an hour."

"No, she won't—she won't!" Susan's voice rose into a wail. "She won't; an' I want to go home."

"Why, she would if you asked her—wouldn't she?" Harrison looked at her apprehensively. He began to think there was something wrong with her head.

"I've asked an' asked her."

"Well, I should think it was pretty work if she wouldn't let you go home when you wanted to."

"Mis' Steele means all right. I ain't goin' to hear a word again' her. She's done everything for me, an' more too; but she don't know how gold ain't yellar an' honey ain't sweet when anybody's away from home and wantin' to be there. She means all right."

"Well, I don't know but she does; but it seems pretty hard lines if you can't go home when you want to," said the young fellow, growing indignant and sympathetic.

"Can't you git me home somehow? I've got to git home; I can't stan' it any longer. It seems as if I should die." She began sobbing.

Harrison stood looking at her—her little frail, quivering shoulders; her head with its thin, yellow-gray hair; her narrow, knobby hands, which covered her poor, weeping face; her peaked elbows, which seemed pricking through the sleeves; those pitiful, stiff, helpless feet on the cricket. Before this young man, with all his nerves and muscles, all his body-servants ready to obey joyfully and strongly his commands, this woman appeared like a little appealing skeleton who, deprived of her own physical powers and left stranded in an element where they were necessary, besought the assistance of his.

"I don't know," said he. "I'm perfectly willin' to carry you home, if we can fix it. But you see the horse is gone."

"Ain't there another you can git?"

"Nobody's but White's over there. They've gone to meetin', but I can get into the barn, I guess. But I don't know 'bout takin' you with him. He's an awful smart horse, jumpin' at everything. They don't drive him to meetin' because 'he women folks are so scared of him. He ran away last spring, an' one of the boys was throwed out an' had his arm broke. I ain't afraid but what I can hold him, but you might get uneasy."

"I ain't afraid. Harness him up quick."

"Well, I'll do just as you say. I can hold him fast enough, an' there ain't any danger really. I'll go an' see if I can get into the barn."

"Hurry, or she'll be home."

That black, plunging horse had to be securely tied to the stone post while Harrison lifted Susan in. Then he unfastened him and sprang for his life to the seat. Then they flew.

"Don't you be afraid, Mis' Lawson," said Harrison, the veins swelling out on his forehead, his extended arms like steel. "I can hold him."

"I ain't afraid."

Harrison glanced at her. That old wasted face looked above fear. Her eyes were fixed ahead, and rapt.

"You're pretty spunky," said he.

"I've allers been scared of horses, but I'm goin' home now, an' I don't care for nothin' else."

The horse was somewhat subdued by the time they reached the Lawson place.

Susan gave a cry of rapture when they came in sight of it. Then she leaned forward and looked. Just a low, poorly kept cottage, with a grassy yard sloping to the road, to the ordinary eye, but no one knew—no mortal could ever know—what that poor homesick soul saw there.

As they drove into the yard one of the black cats peered around the open door of the barn; her wild green eyes shone.

"How bright that cat looks!" said Susan, admiringly.

Presently Lawson opened the side door. He had an apron on, and his hands were white with flour.

"O Lawson, I've got home!"

"I was jest makin' a few apple pies," said he, going out to the buggy. "I don't calculate to do such things Sunday, but I was drove yesterday, hayin', an' I got short. How do you do, Susan?"

When Susan was safely in the kitchen, seated in her old beloved chair, she leaned her head back, and closed her eyes with a happy sigh. "Oh!" she said, "I ain't never set in a chair so easy as this!"

Lawson stood looking uneasily at a bowl on the table. "I reckon I'll set this up," said he; "it's a little mincemeat I had. I brought it out, but I didn't really think I'd use it—I thought I'd make a few apple pies."

"I'd make the mince ones, Lawson; I guess they'd taste good. You need somethin' hearty whilst you're hayin'."

"Well, perhaps it would be a good idea for me to."

"Lawson, them cherry trees out in front of the house are loaded with cherries, ain't they?"

Lawson stared at her. "There ain't a cherry on 'em this year," said he; "I've been wonderin' what ailed 'em. Porter thinks it's that frost we had when they were blowed out."

"You'd better go an' look again by and by. I guess you didn't look very sharp; the trees was red with 'em. Them blush roses is beautiful, too."

"Why, there ain't one rose on the bushes."

"I rather guess I know when I see 'em."

He crossed the ocean many times
Without a thought of fear;
He crossed the rugged Alpine range,
He crossed the desert drear;
He crossed the busy, busy Strand,
Nor trembled for his life,
And yet he doesn't dare to cross
His little brown-eyed wife.

—Anon.

Memory Gems.

CONTRIBUTED BY MISS HATTIE PATCH, BROME CENTRE, QUE.

I.
To live in the presence of great truths and eternal laws, to be led by permanent ideals—that is what keeps a man patient when the world ignores him, and calm and unspoiled when the world praises him.—*Balzac.*

II.
Religion is the mortar that binds society together, the granite pedestal of liberty, the strong backbone of the social system.—*Dr. Guthrie.*

III.
Who does the best his circumstances allow does well, acts nobly. Angels could do no more.—*Young.*

IV.
Genius and virtue, like diamonds, are best plain set.—*Emerson.*

V.
Virtue alone outbuilds the Pyramids; her monuments shall last when Egypt's fall.—*Young.*

VI.
Not a day passes over the earth but men and women of no note do great deeds, speak great words, and suffer noble sorrows. Of these obscure heroes, philosophers, and martyrs, the greater part will never be known till that hour when many that were great shall be small and the small great.—*Charles Reade.*

VII.
If there be some weaker one,
Gave me strength to help him on;
If a blinder soul there be,
Let me guide him nearer Thee.
Make my mortal dreams come true
With the work I fain would do.
Let me find in Thy employ
Peace that dearer is than joy;
Out of self to love be led
And to heaven acclimated,
Until all things sweet and good
Seem my natural habitude.

VIII.
The study of literature nourishes youth, entertains old age, adorns prosperity, solaces adversity, is delightful at home and unobtrusive abroad, deserts us not by day or night, in journeying nor in retirement.—*Cicero.*

IX.
Who reads
Incessantly, and to his reading brings not
A spirit and judgment equal or superior,
Uncertain and unsettled still remains.

X.
Books are waste paper unless we spend in action the wisdom we get from thought.—*Lytton.*

XI.
All that we are is the result of what we have thought—it is founded on our thoughts. If a man speaks or acts with an evil thought, pain follows him as the wheel follows the foot of him who draws the carriage. If a man speaks or acts with a pure thought, happiness follows him like a shadow that never leaves him.—*Dhammapada.*

XII.
Blessed is the man who has the gift of making friends, for it is one of God's best gifts. It involves many things, but above all is the power of going out of one's self and seeing and appreciating whatever is good and noble in another man.—*Thomas Hughes.*

XIII.
Oh! that a shaft at random sent
Finds mark the archer little meant,
And many a word at random spoken
May soothe or wound a heart that's broken.

XIV.
That man is freed from servile bands,
Of hope to rise or fear to fall;
Lord of himself, though not of lands,
And having nothing yet hath all.

XV.
The hour draws near, how'er delayed and late,
When at the Eternal Gate
We leave the words and works we call our own
And lift void hands alone
For love to fill. Our nakedness of soul
Brings to that gate no toll.
Giftless we come to Him who all things gives,
And live because he lives.

CONTRIBUTED BY MISS ALICE HUME, BURNBRAE P. O.

I.
There are two angels that attend unseen
Each one of us, and in great books record
Our good and evil deeds. He who writes down
His good ones, after every action closes
The volume, and ascends with it to God.
The other keeps his dreadful day-book open
Till sunset, that we may repent; which doing,
The record of the action fades away
And leaves a line of white across the page.

II.
There are briars besetting every path
That call for patient care;
There is a cross in every lot,
And an earnest need for prayer;
But a lowly heart that leans on Thee
Is happy anywhere.

III.
Be good, sweet maid, and let who will be clever,
Do noble things—not dream them all day long;
And so make life, death, and vast forever,
One grand sweet song.

IV.
No human being can come into this world without increasing or diminishing the sum total of human happiness, not only of the present, but of every subsequent age of humanity.—*Elihu Burritt.*

V.
Do the good and not the clever,
Fill thy life with true endeavor,
Strive to be the noblest man;
Not what others do, but rather
Do the very best you can.

VI.
The whole wild wood is one vast instrument of thousand thousand keys; and all its notes come in sweet harmony, while Nature plays to celebrate the presence of her God.

VII.
High worth is elevated place; 'tis more—
It makes the poet stand candidate for thee;
Makes more than monarchs—makes an honest man.
Though no exchequer it commands, 'tis wealth,
And though it wear no riband, 'tis renown—
Renown that would not quit thee though disgraced,
Nor leave thee pendent on a master's smile.

VIII.
Truth forever on the scaffold, wrong forever on the throne,
Yet the scaffold sways the future, and behind the dim unknown,
Standeth God within the shadow, keeping watch above His own.

IX.
Whoever with an earnest soul
Strives for some end, from this low world afar,
Still upward travels, though he miss the goal,
Better than fame is still the wish for fame,
The constant training for a glorious strife.

X.
Like warp and woof, all destinies
Are woven fast;
Linked in sympathy, like the keys
Of an organ vast.
Pluck one thread and the web ye mar;
Break but one
Of a thousand keys, and the paining far
Through all will run.

XI.
Thou canst not to thy place by accident—
It is the very place God meant for thee;
And should'st thou there small scope for action see,
Do not for this give room to discontent.

XII.
The path of sorrow and that path alone
Leads to the land where sorrow is unknown;
No traveller ever reach'd that bliss'd abode
Who found not thorns and briars in his road.

XIII.
Knowledge is now no more a fountain seal'd;
Drink deep, until the habits of the slave,
The sins of emptiness, gossip and spite
And slander, die. Better not be at all
Than not be noble.

XIV.
Every deed
That comes to thee in God's allotted time
Is just the greatest deed that thine could be,
Since God's high will appointeth it to thee.

XV.
The chase is always worth more than the quarry.

Something the heart must have to cherish,
Must love and joy and sorrow learn;
Something with passion clasp, or perish,
And in itself to ashes burn.

Action may not always bring happiness, but there is no happiness without action.—*Disraeli.*

Beautiful sights are like visions of the Spirit. They throw open the windows of the chamber of our small selfishness, and let in a breath of that air that rushes round the rolling sphere and for a while illuminates our darkness with a far-off gleam of the white light which beats upon the Throne.—*Rider Haggard.*

The soul's armor is never well set to the heart unless a woman's hand has braced it, and it is only when she braces it loosely that the honor of manhood fails.—*Ruskin.*

Ah, wasteful woman!—she who may
On her own self set her own price,
Knowing he cannot choose but pay—
How has she cheapen'd Paradise!
How given for naught her priceless gift,
How spoiled the bread and spilled the wine,
Which, spent with due respective thrift,
Had made brutes men, and men divine!

A man of sense takes the time necessary for doing the work he is about well, and his haste in business only appears by the continuity of his application.—*Chesterfield.*

Call to mind from whence we sprang:
Ye were not formed to live the life of brutes,
But virtue to pursue, and knowledge high.

Let not the people be too swift to judge,
As one who reckons on the blades in field
Or ere the crop be ripe. For I have seen
The thorn grow rudely all the winter long,
And after bear the rose upon its top;
And bark that all the way across the sea
Itan straight and speedy, perish at the last,
E'en in the haven's mouth.

As in the sun's eclipse we can behold the great stars shining in the heavens, so in life's eclipse have these men beheld the light of the great eternity burning solemnly forever.

Learning hath gained most by those books by which the printers have lost.

To assail a wearied man were shame,
And stranger is a holy name;
Guidance and rest and food and fire,
In vain he never may require.

Each human soul is the first created inhabitant of its own Eden.

Like acts upon like. Therefore do not amend by reasoning, but by example; do not hope to excite love but by love. Be what you wish others to become. Let yourself and not your words preach.

Virtue will not grow unless its root be hidden, buried from the eye of the sun. Let the sun shine on it—may, do but look at it privately thyself—the root withers, and no flowers will glad thee.

Silence never shows itself to so great an advantage as when it is made the reply to calumny and defamation.

Thou earnest not to thy place by accident,
It is the very place God meant for thee;
And should'st thou there small room for action see,
Do not for this give room to discontent.

Affection never was wasted;
If it enrich not the heart of another, its waters returning
Back to their springs, like the rain, shall fill them full of refreshment.

Before we judge like God, let us see as He does, whose eyes are too pure to behold iniquity.

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Something the heart must have to cherish,
Must love and joy and sorrow learn;
Something with passion clasp, or perish,
And in itself to ashes burn.

Action may not always bring happiness, but there is no happiness without action.—*Disraeli.*

Beautiful sights are like visions of the Spirit. They throw open the windows of the chamber of our small selfishness, and let in a breath of that air that rushes round the rolling sphere and for a while illuminates our darkness with a far-off gleam of the white light which beats upon the Throne.—*Rider Haggard.*

The soul's armor is never well set to the heart unless a woman's hand has braced it, and it is only when she braces it loosely that the honor of manhood fails.—*Ruskin.*

Ah, wasteful woman!—she who may
On her own self set her own price,
Knowing he cannot choose but pay—
How has she cheapen'd Paradise!
How given for naught her priceless gift,
How spoiled the bread and spilled the wine,
Which, spent with due respective thrift,
Had made brutes men, and men divine!

A man of sense takes the time necessary for doing the work he is about well, and his haste in business only appears by the continuity of his application.—*Chesterfield.*

Call to mind from whence we sprang:
Ye were not formed to live the life of brutes,
But virtue to pursue, and knowledge high.

Let not the people be too swift to judge,
As one who reckons on the blades in field
Or ere the crop be ripe. For I have seen
The thorn grow rudely all the winter long,
And after bear the rose upon its top;
And bark that all the way across the sea
Itan straight and speedy, perish at the last,
E'en in the haven's mouth.

As in the sun's eclipse we can behold the great stars shining in the heavens, so in life's eclipse have these men beheld the light of the great eternity burning solemnly forever.

Learning hath gained most by those books by which the printers have lost.

To assail a wearied man were shame,
And stranger is a holy name;
Guidance and rest and food and fire,
In vain he never may require.

Each human soul is the first created inhabitant of its own Eden.

Like acts upon like. Therefore do not amend by reasoning, but by example; do not hope to excite love but by love. Be what you wish others to become. Let yourself and not your words preach.

Virtue will not grow unless its root be hidden, buried from the eye of the sun. Let the sun shine on it—may, do but look at it privately thyself—the root withers, and no flowers will glad thee.

Silence never shows itself to so great an advantage as when it is made the reply to calumny and defamation.

Thou earnest not to thy place by accident,
It is the very place God meant for thee;
And should'st thou there small room for action see,
Do not for this give room to discontent.

Affection never was wasted;
If it enrich not the heart of another, its waters returning
Back to their springs, like the rain, shall fill them full of refreshment.

Before we judge like God, let us see as He does, whose eyes are too pure to behold iniquity.

IX.
Whoever with an earnest soul
Strives for some end, from this low world afar,
Still upward travels, though he miss the goal,
Better than fame is still the wish for fame,
The constant training for a glorious strife.

X.
Like warp and woof, all destinies
Are woven fast;
Linked in sympathy, like the keys
Of an organ vast.
Pluck one thread and the web ye mar;
Break but one
Of a thousand keys, and the paining far
Through all will run.

XI.
Thou canst not to thy place by accident—
It is the very place God meant for thee;
And should'st thou there small room for action see,
Do not for this give room to discontent.

XII.
The path of sorrow and that path alone
Leads to the land where sorrow is unknown;
No traveller ever reach'd that bliss'd abode
Who found not thorns and briars in his road.

XIII.
Knowledge is now no more a fountain seal'd;
Drink deep, until the habits of the slave,
The sins of emptiness, gossip and spite
And slander, die. Better not be at all
Than not be noble.

XIV.
Every deed
That comes to thee in God's allotted time
Is just the greatest deed that thine could be,
Since God's high will appointeth it to thee.

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UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

"If you're waking, call me early, call me early, mother dear,
For I'm to be Queen of the May, mother, Queen of the glad
new year."

The custom which gave Tennyson the theme for his well-known and much-loved poem, from which I have quoted, has long been in vogue in Merrie England, and has also to some extent been carried on in the New England States. In the mother country this pretty ceremony of crowning a May-queen took place on the first day of the month, but in the colder climate it was necessarily deferred until nearly the end. No wonder little Alice was excited at the prospect of being crowned queen, for that was the highest honor it was possible to confer upon any maiden.

When the eventful day arrived, a very high pole (twenty feet or more), garlanded with flowers, was firmly planted in the ground. From the top of this hung sixteen ropes, made of evergreens and flowers entwined. The throne, erected at a distance suitable for viewing the proceedings, and also a portable bower or canopy (both completely covered with nature's loved wildlings), were, of course, prepared before the company assembled. When the merry-makers arrived, a little girl, dressed to represent Flora, the Goddess of Flowers, came and stood before the throne. She told them she had heard a number of youths and maidens conversing in the woods, and that they meant to crown one of their number as Queen of the May. This, she said, was in token of gladness that the reign of King Frost, her greatest enemy, was over, and she hoped they would allow her to perform the coronation. Just then the "Mayers," as they were called, appeared, singing gay carols. Several boys carried

the last quarter will be of more interest at present than May-day ceremonies, so I shall announce them.

J. McLean, Kentville, Nova Scotia, carries off first prize; 'Arry 'Awkins, Toronto, wins second; and Miss M. Nagle, West Huntley, obtains third. I am really glad our niece did not let the boys have it all their own way—they've been having it too long already. "Toledo," Lizzie Conner, A. E. T. and "Ena" followed closely in the order named, and I think if the girls keep on they'll give the boys a hot chase next quarter.

Before we have another chat fair May will have flown, but we will not pine o'er her departure, as we know she will come again.

"Companions sweet, why do you weep,
Or where is cause for sorrow?"
"Alas! the May goes out to-day."
"But June comes in to-morrow."

Your loving— UNCLE TOM.

Woman's Wit and Dr. Johnson.

Dr. Johnson's tongue spared nobody, and naturally enough if any one ever got the better of him in a verbal encounter it was considered a memorable victory.

In this spirit a Scotch family cherishes an anecdote of his trip to Scotland. He had stopped at the house for a meal, and was helped to the national dish.

"Dr. Johnson," said the hostess, "what do you think of our Scotch broth?"

"Madam," was the answer, "in my opinion it is only fit for pigs."

"Then have some more," said the woman.—*Philadelphia Inquirer.*

"Has Shakespeare written anything good lately?" asked the man who liked to know about things. The grave Debats informs us that he has. The little Hungarian town of Illye was recently bedecked, it appears, with a poster setting forth that—"By the holy will of God, on the 29th day of January, A.D., there will be given for the first time, 'Romeo and Juliet,' a sensational tragedy of world-wide renown, in five acts, with songs, dances and Bengal fire, by William Shakespeare. The author will assist at the performance."

"The Cleveland Plain Dealer" says that a school teacher of that city was in the basement of a big department store when she observed a rural-looking party passing before some cheap

prints of famous paintings. There was a middle-aged man, plain, but evidently with a thirst for information, who was "explaining" the pictures to three tired-looking children.

"Here's a picture called 'Millet,'" he was saying as they gazed open-mouthed at "L'Angelus"; that's what it says at the bottom. Millet's a kind of a grain. See 'em lookin' at the ground? They ain't plantin', but I guess they're just pickin' up the seed. Mighty poor farmin' there. Come along!"

Heckling an M. P.

A well-known M. P. was addressing an agricultural meeting in the South, and in the course of his remarks expressed the opinion that farmers do not sufficiently vary their crops, and make a mistake in always sowing wheat.

One of the audience opposed to him in politics asked him what crops he would recommend.

"Everything in turn," he replied.

"Well," said the interlocutor, "if swedes don't come up, what then?"

"Sow mustard," said the M. P.

"And if mustard don't come up, what then?"

And so he went on through a whole list of crops, until the M. P.'s patience being exhausted, he put an end to his questioning amidst roars of laughter by saying:

"Oh, sow yourself, and I hope you won't come up."—*Spare Moments.*

The stars are best seen in the darkest nights; so God's promises, like stars of hope, are best seen when the darkness of trouble is upon our way.

V.
Life! What is it? A flash,
A drop in the sea of time,
A comma in Eternity's line,
In human poetry a rhyme,
In billow's play a dash.

—McCormac.

VI.
Boys flying kites haul in their white-winged birds:
You can't do that way when you're flying words.

—Will Carleton.

VII.
Despise not thou small things—
The soul that longs for wings
To soar to some great height of sacrifice, too oft
Forgets the daily round
Where little cares abound,
And shakes off little duties while she looks aloft.

—Jean Ingelow.

VIII.
Is the work difficult? Jesus directs thee.
Is the path dangerous? Jesus protects thee.
Fear not and falter not—let the work cheer thee,
And through the coming year He will be with thee.

—F. R. Havergal.

IX.
When God intends to fill a soul, He first makes it empty;
when He intends to enrich a soul, He first makes it poor;
when He intends to exalt a soul, He first makes it humble;
when He intends to save a soul, He first makes it sensible
of its own miseries and nothingness.—*Flavel.*

X.
He who is honest is noble,
Whatever his fortune or birth.

—Alice Cary.

XI.
Vice is a monster of so frightful mien
As to be hated needs but to be seen;
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace.

—Pope.

XII.
With patient steps the path of duty run—
God nothing does, or suffers to be done,
But thou thyself would do could'st thou but see
The end of all He does as well as He.

XIII.

A brave man knows no malice, but forgets in peace the injuries of war, and gives his direst foe a friend's embrace.—*Cotper.*

XIV.
Nature is but a name for an effect,
whose cause is God.—*Cotper.*

"Pilgrim Exiles."

In this beautiful picture the first thing that seems to strike one is its aspect of utter loneliness. True, there are three people, evidently bound strongly together, but the loneliness is there, nevertheless. There is a deep calm of resignation in each figure. The strong, handsome face of the man speaks of determination blended with a tenderness which makes him a striking example of the old, old days we read about when it was a common thing for earnest men and women to suffer martyrdom

for truth's sake, as in our own modern times men and women are still suffering. The sweet yet strong faces and graceful figures of the two fair girls are good to look upon. We can imagine them as wife and sister of the stern young Pilgrim, whose sternness, however, is not for them, but for his cause. What a beautiful dress!—how picturesque, yet simple! And where are those lovely faces of olden times, which could look so irresistible, with plainly parted hair and close-fitting hood? Are they gone into exile with their ancestor Pilgrims? As for the youth, one can only marvel that so becoming a dress has ever been replaced by the hideousness of modern costume. Although in this picture the interest is naturally with the Pilgrim exiles themselves, yet the surrounding landscape and the calm and boundless stretch of sea add greatly to the general beauty of the whole and make the scene seem so thoroughly of one piece. It is in such minute particulars that an artist shows his power. Some subjects require strong contrasts, others an absolute similarity, and both, in their proper places, are equally effective. One is loth to leave this fascinating picture, for the longer one looks into the fine faces, so full of character, the more there seems to read in them, but space tells us "Good-bye to the Pilgrim Exiles."

Duties never conflict. God has but one duty at a time for any child of His to perform. If we are doing the one duty God has for us to do at the present moment, we are doing just right. If we are not doing that one duty, we are at fault, no matter how good or how important the work we are doing. And we need have no question as to what is our duty in God's plan for us.



"PILGRIM EXILES."

the floral canopy, and under it walked the queen-elect, attended by two tiny maids who carried a tray on which reposed a crown of daisies. When they reached the throne the bower was placed over it, and one of the boys announced the object of their presence, stating that they had chosen the most amiable and gentlest of maidens to be their queen, and that they were now going to crown her.

The favored one disclaimed all right to such praise, and thanked them for the honor, which she declared was equally merited by any other girl. Then Flora begged to be allowed to crown the queen, which she did, while all the others knelt until Her Majesty, with a wave of her newly-acquired floral sceptre, bade them arise and begin their sports. She also assured them that she would try to reign justly and kindly, again thanking them for the honor done her.

Then sixteen boys and girls, each taking one of the evergreen ropes suspended from the Maypole, went through a dance or drill in time to music, and other sports were indulged in to complete the day.

Do you not think this would be a pleasant way to spend your Twenty-fourth this year? And you could then celebrate our good Queen Victoria's birthday as well. When wild flowers are plentiful it could be easily arranged, and would, I am sure, be a novelty and a treat to many young folks.

"Such a starred bank of moss
Till that May morn,
Blue ran the flash across—
Violets were born."

Perhaps the names of the successful solvers for



False Kindness.

The softest little puff of fur! The gentlest, most persuasive pur! Oh! everyone told me that She was the "loveliest little cat."

And, spite of all my watchful care, Will snatch the choicest dainties there: And everybody says, "Scat! scat!"

The Family Fairy.

(Continued from page 226.)

In course of time the queen gave birth to a son, and there was great rejoicing over the arrival of an heir to the throne. One day, a little before the christening, the family fairy arrived in tears.

"I have come," said she, "to make a sacrifice of myself, and to prove how devoted I am to your welfare. I am grieved to say that I have been plotting horribly to get the christening fixed for a wrong day, so that I may work my wicked will on your second child as I did on your first."

So at midnight the queen locked the fairy in the box, leaving the key for fear she should forget where she put it, and began to hurry on the preparations for the christening. She said to her daughter, "Whatever you do, you are not to think of not going to try not to undo that box!"

It took the princess half an hour to undo all the knots; then she got up and went to the chest. Inside she heard a poor little voice crying, "Let me out! let me out! I am so good!"

Out came the family fairy, looking quite good. "When is the christening?" she asked.

"Dear me!" said the queen, coming upon her. "I quite forgot I had let you out again. When is your good day again? We will make the christening the day after to-morrow. You won't mind going back into the box again for one night?"

"No," said the fairy; "not in the least. Only you had better let me tell the princess about not opening it."

So all that day the fairy went about looking as good as gold, and at night she got into the box and was locked up.

"Be sure," the fairy had said to the princess, "that directly the queen has locked me in, you come and let me out again!"

The queen had heard the fairy say this, and she thought to herself, "Did she say in night, or did she say it wrong? Well," thought she, "to make it quite safe I will put the box where nobody but myself can find it; then, whether the princess means to be obedient or disobedient, no harm can come of it."

The fairy inside the box was laughing to herself, for it was her bad day, and she had deceived everybody. "To-morrow," she said, "is my good day, and I shall be locked up, so that I can't go and tell tales about myself, and the next day is the christening, and I shall get let out."

"Oh, let me out! let me out!" cried the poor fairy. "This is my good day! Let me out, or I shall be doing dreadful things at the christening to-morrow."

But the queen had put her away in the most secret of hiding-places, and nobody heard her; and of course the disobedient little princess never came to look for her.

At the little prince's christening all went happily. The godfathers and godmothers had brought gold mugs and forks and spoons.

Presently the courtiers began asking, "But

where is the family fairy?" The question went from mouth to mouth, and grew louder and louder till it reached the royal ears.

"The what?" said the king.

"The which?" said the queen.

"The family fairy!" cried the courtiers.

The king and queen looked at each other, and shook their heads. "But we don't remember any-one of that name!" said they.

"And even if I did," murmured the queen, "I'm sure I have forgotten where I put her!"

Puzzles.

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

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient.

Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1-BEHEADMENT.

Good Friday and Easter again have come and gone, And now Spring is here, with all its bon-ton. Cold Winter is past, with its clear COMPLETE nights, And its piercing gales and its sharp frost-bites.

2-SQUARE.

1. A seat fixed on an elephant; 2, a bird; 3, cold; 4, spotted; 5, now, curtailed and transposed; 6, wildness. DICK.

3-CONFUSION WORSE CONFOUNDED.

Rearrange the letters of the following words and then rearrange the words so as to form a proverb: A Rome god is dearer adde than to be a noli evil. F. L. S.

4-FLOWERS.

b-n-a b-t-l-n a-l-m-a a-o-e-m-a a-a-n-h-s a-t-n-m a-n-i d-l-h-s e-s-m-m. "FLORENCE."

5-ARITHMETICAL QUESTION.

If the surface of a lake is one hundred square miles, how many gallons of water will fall into it during a storm in which one half-inch of rain has fallen? "BUTTERCUP."

6-HALF-SQUARE.

1. A great empire; 2, to displace; 3, a picture; 4, dress of the ancient Romans; 5, hail; 6, that is; 7, a consonant. M. N.

7-CHARADE.

My First is a name you often say When you meet a man upon the way; My Second a city of note they say That is in some part of Canada;

8-HALF-SQUARE.

1. Personal; 2, to deny (obs.); 3, to accustom; 4, real; 5, era; 6, a beverage (phon.); 7, in simple. "ARRY 'AWKINS."

9-ACROSTIC.

1. Root of a plant imported from Mexico; 2, to lead; 3, a nymph of paradise; 4, prayers, formerly so called; 5, a hermit; 6, volcanic ashes; 7, used on the farm; 8, uniform; 9, a volatile liquid. Primals and finals will name two of the people of Long-fellow. "ARRY 'AWKINS."

10-MULTIPLICATION PUZZLE.

1. Multiply a vowel by pecked and get to look for. 2. Multiply two letters by two and get angry. 3. A vowel by five letters and get flat. 4. Multiply a color by two letters and get puzzled. 5. A vowel by a pronoun and get to go out. 6. A vowel by bold and get professional. FRANK E. WAGG.

11-SQUARE.

1. A rifleman; 2, stay; 3, mocks; 4, formerly a province in Asia, and 1; 5, an inflammable substance. A. E. T.

12-CHARADE AND ANAGRAM.

And still FIRST puzzlers come to join our merry Dom., They have taken quite a notion to our good Uncle Tom. There's "M. A. A." and "Simple Simon," two good ones at any rate. And Mr. Box—a puzzler rare, an excellent "candidate."

Many FIRST, SECOND have passed since puzzles were sent to London. But FIRST ones are going THIRDLY, for puzzling is fine fun. And when the quarter is ended and we wish to know how we stand, The ADVOCATE fills our hearts with joy if we come out strong and grand.

So every THIRD I have to spare I strive to make a FIRST rhyme. And send it off to Pakenham, and be sure it arrives in time; And off on the cars it goes so fleet, But think! what will our Corner be like if it continues till next COMPLETE?

So, "puzzistic cousins," come, all be cheerful; If you wish to puzzle jest Commence right now and not be fearful, For we ARE TO STRIVE to do our best. "DICKENS."

Answers to April 1st Puzzles.

1. (1) Because it would smother your mother; (2) because it makes a fund of fun; (3) Cuba—a cub; (4) cur—cure. 2. Difference is one inch.

3-CHARLES

H A H optic A d d I E sal Radical e L I C I D ppa E A O celat She L do N devotee

5-valve

aween 6-solver leant oriole venue lintel enter votive eleven relent

- 7-Colorado. Dominion. Lanark. Durham. Montreal. 8-Sea-seal - L. Pet-peat - A. Got-gout - U. Aid-raid - R. Char-chair - I. Mat-mate - E. Band-brand - R.

- 10-m oil o nces i cicle l eature s lurs ers e 11- f all flect learn train nicer negus rustly sty y

- 12-Chamois, dormouse, ferret, gazelle, lemming, tapir weasel, polecat, elephant, merino. 13-Her, edible, noise, rev., yule-Henry Reeve. 14-Thackeray, Coleridge, Wetherell, Ingelow, Tanahill, Chaucer. 9-Answer has been mislaid.

ADDITIONAL SOLVERS TO APRIL 1ST PUZZLES. "Les," "Ena," "Dickens," "Dick," M. R. G.

ADDITIONAL SOLVERS TO MARCH 15TH PUZZLES. J. McLean, M. N., "Dickens," Lizzie Conner.

COUSINLY CHAT. L. C.—Your other work came safely. I do not know how much was lost in that accident, but I think there was considerable. I got a few mutilated scraps of paper bearing my name and "Dickens" signature.

F. W.—I am glad to welcome you to our Corner, and hope you will solve too. We had no cousins from your part of the country before.

It doesn't seem quite right that the boys should capture almost all the prizes, now does it? There, now, boys, you'll set me down for a "hen's rights hen." I suppose, but really this contest has been too one-sided. Never mind, our clever girls are going to work hard, and perhaps the tables will turn. I dare say old Uncle Tom is chuckling audibly at the victory of his sex, but "he laughs best who laughs last." ADA A.

THE QUIET HOUR.

"I Wonder What I Would Do?"

Out on the street there a beggar waits, In the driving storm so cold, A homeless child, with a furnished look, And garments thin and old. I give from my bounty a meagre dole, And pennies I spare a few; If I knew that my Saviour was standing there, I wonder what I would do?

In yonder attic, so cold and bare, There's a woman that sits and sews For her children's shelter and scanty fare Till the weary midnight goes; She is stitching her life in those seams for me— Am I giving her back her due? If I knew that my Saviour was keeping account, I wonder what I would do?

There are fatherless children that cry for bread, There are widows old and poor, And there is the sick man Lazarus, That lieth beside my door— Shall I have all the luxuries here, While their's shall be so few? If I thought I was like Dives of old, I wonder what I would do?

I have home and friends and silver and gold— Far more than I daily need; And I clothe myself in costly garb, While these for a pittance plead. My house is full of beautiful things That are only for taste and show; If I knew that my Lord had need of these, I wonder what I would do?

I have prided myself on my goodly deeds, And my name's on the Church's roll; But I waste in some needless things, perchance, The price of a heathen soul. I have told the world of my love for God— My love for His children too; If the Lord should ask me to prove my word, I wonder what I would do?

There comes a time in the future near, When this life has passed away, When the needy one will stand with me In the light of a judgment day. When the Angel reads, from the Book of Life, My deeds for that great review— If these should speak and accuse me there, I wonder what I would do?

Then the Son of Man, with His angels fair, Will sit on the great white throne, And out from the millions gathered there He will know and claim His own. If He said to me these words I've read In that Book so old and true, "Inasmuch as ye did it not to these," I wonder what I would do?

Helping Somewhere.

"Is your father at home?" I asked a small child on our village doctor's doorstep.

"No," he said, "he's away." "Where could I find him?"

"Well," he said, "you've got to look for some place where people are sick or hurt, or something like that. I don't know where he is, but he's helping somewhere."

And I turned away with this little sermon in my heart. If you want to find the Lord Jesus, you've got to set out on a path of helping somewhere, of lifting somebody's burden, and lo! straightway one like unto the Son of Man will be found at your side.

Are you "helping somewhere?" If so, you will find that

"The great Physician now is near, The sympathizing Jesus."

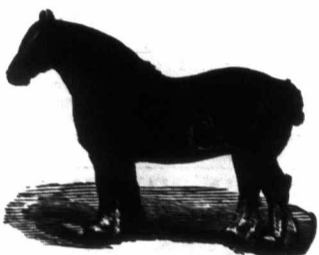
GREAT DAIRY CATTLE SALE

The subscriber will sell by PUBLIC AUCTION, ON MAY 10th, his entire herd of Dairy Cattle, containing Mrs. E. M. Jones' great herd of Jersey, supplemented by importations direct from Jersey, Guernsey, and Alderney. Sale positive and without reserve. All animals registered.

BENJAMIN HEARTZ, Charlottetown, P. E. I.

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.

CLYDESDALES FOR SALE.

We have on hand a few choice animals, of both sexes. I. Devitt & Sons, FREEMAN P. O., Farm 1/2 mile from Burlington Station G. T. R.

CLYDESDALES FOR SALE

DALGETY BROS., GLENCOE, ONT.,

Importers and exporters of horses. Have a few extra good Clydesdales for sale. Will have another large consignment about August or September next.

One Imp. Clydesdale Stallion For Sale!

3 YEARS OLD IN JUNE. Large, Quality Good, and Breeding Right. For particulars apply to JNO. DAVIDSON, ASHBURN, ONT. Station: Myrtle, C. P. R. or G. T. R.

FOR SALE:

Nine Clydesdale Stallions

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

JOHN ISAAC,

KINELLAR LODGE, MARKHAM, ONT.

Seven Imported Clydesdale Stallions

Four just landed, two winners at Royal Northern Show, 1898. For particulars address GEORGE ISAAC, ROMANTON, ONT. Cobourg Station, G. T. R.

CLYDESDALES, AYRSHIRES and POULTRY.

We are now offering a limited number of imported stallions and mares, and looking orders for young Ayrshires from our show cows. Shetland ponies and fancy poultry. R. Ness & Sons, Howick, Que.

SPRINGFIELD FARM

HERD OF Shorthorns, Oxfords, and Berkshires. Young bulls and heifers on hand. Also a few choice Berkshires.

CHAS. RANKIN, Wyebridge, Ont. SROOK CO.

ROBERT MILLER, STOUFFVILLE, ONT.,

Importer and Breeder of

Shorthorns and Shropshires

Offers young bulls and heifers, rams and ewes of the most approved breeding and finest quality, at moderate prices. Station, Telegraph, Telephone, Post Office, three minutes' walk.

ATTRACTIVE AUCTION SALE OF High-Class Jersey Cattle

PROPERTY OF HOWARD FRALEIGH.

To be sold by public auction, without reserve, at the Forest Flax Mill Farm, at FOREST, ONTARIO, on WEDNESDAY, MAY 24th, 1899



30 head of pure-bred Jerseys, registered in A.J.C.C.R., comprising cows and heifers in milk and in calf, heifer calves and young bulls. These cattle are principally Tennessee-bred, and are full of the blood of high-class butter-producing families, being closely related to Oonan 1485, test 22 lbs. 2 1/2 ozs. in 7 days; Oonan of Riverside, 34 lbs. 3 ozs., and Bisson's Belle, 1,028 lbs. 15 oz. in a year. On the sire's side the best of St. Lambert blood is represented. Terms: Six months time on approved joint notes; discount at rate of 6 per cent. per annum for cash. Sale to commence at 2.30 p. m. Tabulated catalogues ready May 10th, sent on application to H. FRALEIGH, Forest, Ont.

W. G. PETTIT & SON,

FREEMAN P. O., Burlington Junction, Ont. Telegraph Office.

10 SHORTHORN BULLS 10

By Indian Statesman - 23004 - from 10 to 20 months. Twelve young cows or heifers with calves by side or in calf. Twelve ram and 30 Shropshire ewe lambs, sired by (Imp.) Flashlight. Also, Berkshire boars and sows, all of which will be sold at moderate prices. Farm half mile from Burlington Junction, G. T. R.

F. BONNYCASTLE & SONS

CAMPBELLFORD P. O., ONT.,

BREEDERS OF

Shorthorns, Cotswolds, and

BERKSHIRES.

offer for sale 7 bull calves from 1 to 5 months old, also heifers and heifer calves. A choice lot of Berkshire pigs, December and January litters, at five dollars each, registered.

"MAPLE SHADE"

WE OFFER AT REASONABLE PRICES

6--Massive Shorthorn Bulls--6

FROM 7 TO 12 MONTHS OLD.

Form, Flesh,

Substance, ...All Right.

Pedigree....

John Dryden,

BROOKLIN, ONT.

Scotch Shorthorns For Sale:

50 HEAD TO SELECT FROM.

We are offering four young bulls by Valkyrie, and a number of cows and heifers (including some show heifers), from such sires as Valkyrie = 21806 =, Young Abbottsburn's Heir = 15947 =, and imp. Mariner = 2720 =, served by imp. Diamond Jubilee (Vol. 15) now at the head of herd. Farm 1 mile north of town.

T. DOUGLAS & SONS,

Strathroy Station and P. O.

Springhurst Shorthorns.

4 Young Bulls

GOOD OXES. BREED RIGHT. READY FOR SERVICE.

ALSO, Young Cows and Heifers FOR SALE.

H. SMITH, HAY, ONT.

Exeter Station, G. T. R., half mile from farm.

MOUNT ROSE STOCK FARM

Young Shorthorn bulls, heifers and cows for sale. Prices right.

J. W. Hartman & Sons,

Elmhedge P.O., Ont.

4 - SHORTHORN BULLS - 4

SCOTCH BREEDING.

Good growthy ones from 5 to 15 months. Also one coming 3 years. Would spare a few heifers. Prices very moderate. Write—

SHORE BROS., White Oak, Ont.

SHORTHORN CATTLE AND LINCOLN SHEEP.

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

J. T. GIBSON,

DENFIELD, ONT

Maple Lodge Stock Farm

SHORTHORNS--Imported Knuckle Duster, and the great sire and show bull, Abbottsford, in service. Several choice heifers for sale, and a grand lot of young bulls by Calthness, from good milking dams. Some splendid Leicester ewes and rams for sale also.

A. W. SMITH,

MAPLE LODGE P. O., ONT.

ARTHUR JOHNSTON

Greenwood P. O. and Telegraph Office,



15 SHORTHORN BULLS

FIT FOR SERVICE; 3 IMPORTED.

25 COWS AND HEIFERS

Including 9 recently imported heifers. Prices right. Catalogues on application.

Claremont Station, C. P. R.

Pickering Station, G. T. R.

"NO BUSINESS, NO HARM."

SHORTHORNS

9 BULLS, 4 HEIFERS,

Mostly Scotch-bred, and got by such bulls as Kinellar Sort (imp.), Northern Light (imp.), Prince and Prince Bismark. Prices right. Correspondence Solicited, and Visitors Welcome.

G. A. BRODIE,

Stouffville Sta., G. T. R. BETHESDA, ONT.

River Bow Stock Farm.

B. SNARY & SONS, CROTON, ONT.,

Breeders of

Shorthorn Cattle,

Poland-China and

Chester White Swine.

We offer for sale seven good young bulls, from seven to twelve months old; eight heifers of choice quality and breeding. Sired by Chief Captain. Pigs of both sexes and all ages at moderate prices, quality considered.

This space for A. J. C. Shaw & Sons,

Thamesville, Ont. Durham Cattle and

Berkshire Pigs, both sexes, for sale.

Write or come and see us. Breeding particulars next issue of ADVOCATE.

SHORTHORNS

FOR SALE: 4 YOUNG BULLS

From 6 to 18 months old, sired by Ronald - 25325 - and Zeccho - 23397 - . Good quality. Moderate prices.

Estate of late JOHN VANNOSTRAND,

Aurora Sta., G. T. R. - on Vandorf, Ont.

SCOTCH SHORTHORN BULLS AND HEIFERS

HERD ESTABLISHED IN 1872.

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

A. & D. BROWN,

ELGIN COUNTY. - on IONA, ONTARIO.

HAWTHORN HERD

OF DEEP-MILKING SHORTHORNS.

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

Wm. Grainger & Son. - Landeshorn, Ont.

SHORTHORN BULLS

From 10 to 14 months old, also 4-year-old bull, Elvira's Saxon 21064. Breeding and quality first-class.

R. MITCHELL & SON,

Burlington Station. - on Nelson, Ont.

SPRINGBANK FARM.

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

JAS. TOLTON, WALKERTON, ONT.

3 SHORTHORN BULLS

Quality and breeding of the best. Come and see us.

H. C. GRAHAM, Ailsa Craig, Ont.

Young Polled Angus Bulls FOR SALE.

American registered. Fit for service. JAMES McFARLANE, Clinton, Ont.

NOTICES.

Eggs.—Pekin duck eggs are going rapidly from L. A. Spencer's "Dorset" poultry yards at Brooklin, Ont. Orders should be sent in early, as they will be filled in the order in which they are received.

Matthew Moody & Sons, Terrebonne, Que.:—"Yours of the 4th inst. to hand, asking what we consider the most important devices, from the point of serviceability, which we have incorporated in any of our machines turned out from our works. We believe that our 2-horse tread power threshing machine would be the machine. Of recent years, in a considerable portion of the country, it has completely, or almost completely, taken the place of steam engine threshers and sweep power threshing machines. Year after year small improvements have been made, as experience has shown their desirability, until now we believe that on the great majority of farms in this country a good horse threshing machine is one of the most economical devices that a farmer can have around. The power can be used with one or two horses, as may be desired, to produce power for any purpose whatever. A very considerable amount of power can be produced on one of these machines. In fact, on an average, more power can be got out of two horses on one of our tread powers than out of four horses on any sweep power on the market. The thresher is suitable for threshing all sorts of small grain, is of such convenient size that it, along with the tread power, will fit in the battery floor of an ordinary barn with the door shut, so that threshing can be done in bad weather.

"We find that there is a great diversity of opinion among threshermen as to the wind that is required and as to the speed at which the shoe, which holds the sieves should go. We were not able before to change the speed to suit every demand, but by a recent change we have made we are now able to give the different speeds to suit the idea of any buyer. "We have added a new device to our thresher by which the grain, when it is being threshed in a damp condition, will not wind around the cylinder, which it otherwise has a tendency to do. The same device prevents the grain from shooting out too far on the separating tray, which has a tendency to do when it is very dry. There are a number of other features in our threshing machine which in recent years we have improved in different directions until we consider this machine is now one of the most economical machines that the progressive farmer can have around."

An Excellent Remedy.

Flat Ridge, Va., Oct. 12, '97.

The Lawrence-Williams Co., Cleveland, O.:

I used "Gombault's Caustic Balsam" for scratches, and have never seen anything to equal it. I find it to be an excellent remedy for human flesh when used on bruises, etc.

A. B. ROBERTS.

GOSSIP.

Mr. R. P. Snell, Snelgrove, Ont., on the 20th April shipped 100 Cotswold rams to Mr. N. Godfrey, of Martinsdale, Montana, and 50 to George Harding & Son, Waukesha, Wis. This makes a total of 500 Cotswolds shipped by Mr. Snell to the United States since September last.

Messrs. B. H. Bull & Son, breeders of Jersey cattle, Brampton, Ont., write:—"Our stock never wintered as well as in fine shape. Cows milking heavily, and the calves arriving, sired by imported Monarch, winner of the championship at Toronto Exhibition, 1898, as best Jersey bull any age, are real beauties of the highest type. We have sold nine bulls since the Industrial Exhibition, and have four right good ones yet." They are from some of our best show cows.

At the sale of Hereford cattle, property of C. A. Stannard, Emporia, Kan., held at Kansas City, April 18th, Messrs. O'Neil Bros., of Southgate, Ont., secured the seven-months-old bull calf Sunny Slope Tom 1st, son of imp. Wild Tom, at \$310. The highest price for a bull at the sale was \$365. Mr. Sotham paid \$500 for Cadelia 2nd, and Ashton Bloom brought \$555; 97 head averaged \$177.37. At the sale of Herefords belonging to Scott & Marsh, Belton, Mo., April 24th, \$450 was paid for Isabella 2nd, by F. A. Nave, Attica, Ind., which was the highest price; 47 animals averaged \$170.21.

The dispersion sale of the large herds of Jersey, Guernseys and Holsteins of Mr. Benjamin Heartz, at Charlottetown, P. E. I., on May 10th, will afford an unusual opportunity of selecting high-class dairy stock of any of the breeds named. We believe we are safe in saying, from a personal observation, that this herd is unexcelled by any in the Dominion for high-class dairy type and quality, as seen in the fresh pastures on the farm in September last. No doubt Maritime Province dairymen will be ambitious to secure some of them, and western breeders will find among them material to strengthen their herds.

Quinn Bros., Brampton, Ont., write:—"We send you a list of the prizes won by our horse, Wiley Buckles, illustrated in May 1st issue of the FARMER'S ADVOCATE: 1892, Provincial Stallion Show, Toronto, first for Thoroughbred best calculated to get hunter and saddle horses; also 1st at Ayr, Paris and Galt, same spring, 1893, 1st at Provincial Stallion Show, Toronto, and 1st at Ayr, Paris and Galt; was selected by the Provincial Government to go to the World Fair, but, owing to an accident, was prevented from going. He afterwards met and defeated the winner, Mikado. 1894, 1st at Peel Co. Stallion Show, held at Brampton. 1895, 1st at Industrial Fair, Toronto; 1st at Brampton. 1896, 1st at Canadian Horse Show, Toronto; 1st at Milton, Halton Co. Fair; 1st at Brampton Stallion Show; 2nd at Ayr, Paris and Galt; in the fall, 1897, 1st at Brampton, only place exhibited that year. 1898, 1st at Brampton; 2nd at Industrial, Toronto; 3rd National Horse Show, New York. 1899, 1st at Canadian Horse Show, Toronto, defeating all the best horses in Canada, and now stands champion Thoroughbred sire of hunters and saddle horses in Canada."

POLO PONIES BOOM IN BRITAIN.

Polo ponies are having a great boom just now in England. For well-bred and well-trained ponies fabulous prices are being paid. At a dispersal sale of a very select lot of 34 ponies by E. D. & G. A. Miller, at Rugby, a total of 8,553 guineas was realized, an average of over 250 guineas. A chestnut mare, 6 years old, topped the scale at 750 guineas; another made 700 and still another 500 guineas.

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



OFFERS FOR SALE Twenty-two Shorthorn Bulls CHOICE from three to fifteen months old.

TWENTY COWS AND HEIFERS served by imported bull, Golden Fame -20056-.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898.

T. E. ROBSON, Ilderton, Ont.

SHORTHORNS FOR SALE

HERD ESTABLISHED 1855. A number of Young Bulls, Cows and Heifers for sale.

JAMES DOUGLAS, GLEDONIA, ONT.

4 SHORTHORN BULLS

FOR SALE FROM TEN TO FIFTEEN MONTHS OLD.

J. & W. RUSSELL, Richmond Hill.

TROUT RUN STOCK FARM.

One Ayrshire bull calf, 3 mos., \$25. Grand lot of females, all ages.

WM. THORN, Norfolk County, LYNEDOCH, ONT.

MAPLE CLIFF Dairy and Stock Farm.

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

R. REID & CO., HINTONBURG, ONT.

AYRSHIRES FOR SALE.

The kind that can speak for themselves. Size, constitution, dairy and show combined.

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

Ayrshire Cattle and Berkshire Pigs.

The bull Tom Brown and the heifer White Floss, winners of sweepstakes at World's Fair.

D. BENNING & SON, Glenhurst Farm, Williamstown, Ont.

AYRSHIRE BULL FOR SALE.

Bull 10 mos. old; sire Neidpath Chief -2142-; dam Conney -2683-.

GEORGE HILL, DELAWARE, ONT.

4 Yearling Ayrshire Bulls for Sale.

Also a number of spring calves, sired by Douglas of London.

F. W. TAYLOR, Wellman's Corners, Ont.

2 - Choice Young Ayrshire Bulls - 2

Descended from the noted heavy-milking Orange Blossom family, so successful with my late father.

F. T. GUY, BOWMANVILLE, ONT.

HIGH-MILKING AYRSHIRES.

Descended from some of the most noted prizewinners at the World's Fair, Chicago, and other important competitions.

DONALD CUMMING, LANCASTER.

GOSSIP.

Mr. Robert Hunter, superintendent of Mr. W. W. Ogilvie's fine herd of imported Ayrshires, at Lachine Rapids, Que., writes: "We have made a number of sales lately as a result of our advertisement in the ADVOCATE."

THE FINEST SALE OF JERSEYS.

The announcement in our advertising columns of the dispersion sale on May 24th at Forest, Ont., of the entire herd of 30 head of Jersey cattle belonging to Mr. H. Fraleigh will interest Canadian Jersey breeders and dairymen generally.

W. F. STEPHEN, Breeder and importer of choice and fashionable

AYRSHIRES

from deep-milking strains. Two bull calves for sale. Write or come to BROOK HILL FARM,

Carr's Crossing, G. T. R. on Trout River, Que.

AYRSHIRES AND YORKSHIRES.

Several CALVES of either sex, young mostly light-colored.

Females, any age. All of which are of the choicest breeding, from either imported stock or close to imported.

Young Boars, fit for service. Sows just bred. Young pigs ready to ship.

ALEX. HUME & CO., Meale P. O., Ont. Importers and breeders. Hoard's Station, G.T.R.

WM. WYLIE, 228 BLEURY ST., MONTREAL, OR HOWICK, P.Q.

Breeder of high-class Ayrshires. Young stock always for sale; bred from the choicest strains procurable.



Six - Young Ayrshire Bulls - Six FOR SALE!

From eight to ten months old; all imported in dam, and all from good herds. Will sell them right. Address

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

CHOICE AYRSHIRE BULLS

Four calves dropped in August, October, December and March, and sired by Craigielea of Auchincrain (imp.), first prize bull at Toronto in 1897.

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

MEADOWSIDE FARM,

J. YUILL & SONS, Props., Carleton Place.

Breeders of high-class, deep-milking Ayrshires. Sweepstakes young herd at Ottawa. Shropshire sheep from prizewinning stock.

INGLESIDE HEREFORDS.

UP-TO-DATE HERD OF CANADA!

TAMWORTHS

CHOICE PIGS SIX TO SEVEN WEEKS OLD.

Send for Illustrated Catalogue. Address,

H. D. SMITH, COMPTON, QUE.

F. W. STONE ESTATE,

GUELPH, ONTARIO.

The first Hereford herd established in Canada by importations in 1839 of the best prizewinners of England.

HIGH-CLASS JERSEY BULLS

Owing to his being related to most of my herd, I will sell the perfect show bull, Prince Frank's Son 48758.

HANDSOME A. J. C. G. BULL CALF

Dropped 8th Sept. (1898); sire Jubilee Rover, dam Matrina of St. Lambert.

WM. CLARK, Meyersburg, Ont.

GLEN ROUGE JERSEYS.

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

PLEASE MENTION FARMER'S ADVOCATE.

Jersey Cattle

THAT WILL PUT MONEY IN YOUR POCKET.

Mrs. E. M. Jones,

Box 324, BROCKVILLE, ONT., CAN.

Deschenes Jersey Herd.

HEADED BY IDA'S ROTTER OF ST. LAMBERT 47570.

4 young bulls fit for service - registered. Also Tanworth swine from diploma herd, Canada Central Fair, Ottawa, 1898.

R. & W. CONROY, DESCHENES MILLS, QUEBEC.

S. WICKS & SONS

MOUNT DENNIS, ONT.

Offer two Registered A. J. C. Jersey Yearling Bulls. These are grand youngsters; cheap if sold at once.

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

B. H. Bull & Son, BRAMPTON.

HOLSTEIN-FRIESIANS

I offer for sale MADGE MERTON 5th, sire Colanthus Abbecker 2nd, dam Madge Merton (nine months old); INKA 5th's MERCEDE, sire my champion show bull Count Mink Mercedes, dam the

G. W. CLEMONS, ST. GEORGE, ONT.

HOLSTEIN BULLS

that we think you will want when you know their breeding, and the large OFFICIAL milk and butter records of their nearest ancestors.

Henry Stevens & Sons, Lecona, N. Y.

NORTH HASTINGS HOLSTEIN HERD

Contains blood of De Kol 2nd, Pauline Paul, Pieterje Hartog, Mechthilde, Inka, and Kornidke strains. Headed by a son of Manor De Kol.

Now Offering calves of both sexes, sired by a son of Manor De Kol, with an official butter record of over 26 lbs. 10 oss. butter in seven days.

J. A. CASKEY, Madoc, Ont., N. Hastings Co

LYNNFIELD HOLSTEIN HERD.

Herd headed by the butter-bred bull, Homestead De-Kol Belle Boy. I advertise for sale from this herd a heifer calf sired by this grand bull, and from the cow Rideau Delah; a Netherland bull, 11 months old; also some richly-bred one- and two-year-old heifers and young cows.

C. M. KEELER, GREENBUSH P.O., ONTARIO.

CHOICE HOLSTEIN BULLS

9 to 14 months old. Just imported. Personally selected. Bred by Chapman & Horr Bros., Ohio; sired by the richly-bred bull, Pauline Paul's Grandson Clothie. Dams are great producers in this fine herd.

A. & G. RICE, Currie's Crossing, Ont.

HOLSTEIN-FRIESIAN BULLS

of the very richest milk and butter breeding, from 3 to 11 months old, for sale. Also, Eggs for hatching from a grand pen of B. P. Rocks at \$1.00 per 15; from Rouen Ducks at \$1 per 11. Satisfaction guaranteed.

H. BOLLERT, CASSEL, ONT.

GUERNSEYS

Two Choice Bull Calves AND Five Heifers for Sale.

Tamworth and Berkshire Pigs.

W. H. & C. H. McNISH, LYN, ONT.

GUERNSEYS.

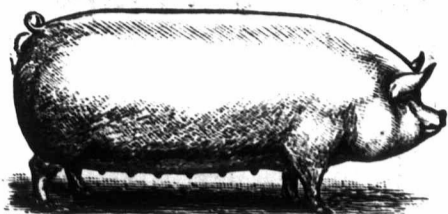
This is the dairy breed for ordinary farmers. Large, vigorous, and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices.

Address - SYDNEY FISHER, 17-y-0 ALVA FARM, KNOWLTON, P. Q.

CONSUMPTION CURED.

An old physician, retired from practice, had placed in his hands by an East Indian missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Brouchitis, Catarrh, Asthma and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints.

HIGHEST TYPE OF BACON HOGS.



Oak Lodge Herd of Large Yorkshires

The largest herd of pure-bred Yorkshires in America. This herd has won the best prizes offered for the breed during the last ten years.

Thorncroft Herd of Improved Yorkshires

Choice pigs, February and March litters. One extra good boar eleven months old. All bred from Featherston and Brethour stock.

WM. C. WILSON & SON, EAST ORO, ONT.

W. R. BOWMAN, MT. FOREST, ONT.

Offers York and Berk. Boars and Sows, weighing from 30 to 40 pounds, at \$6 each, registered; a few boars weighing from 200 to 300 pounds, at \$12 to \$14 each.

PINE GROVE FARM HERD OF LARGE YORKSHIRES.

Imported and Canadian-bred, from the Hasket family, which has taken more prizes at the leading fairs in Canada and the World's Fair at Chicago than any other family of Yorkshires in America.

Yorkshires, Holsteins, & Cotswolds

Boars and sows not akin for sale, of the bacon type. Thoroughbred and high-grade Holsteins, also a three-sheared ram for sale.

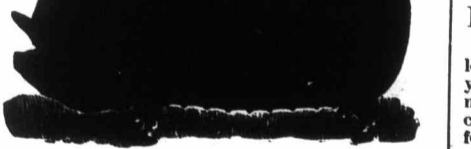
R. HONEY, WARKWORTH, ONT.

YORKSHIRES. 6 - BOARS READY FOR SERVICE - 6

12 lately imported by J. E. Brethour. A large number of young boars and sows on hand, and 20 sows to farrow this spring.

E. DOOL, HARTINGTON, ONT.

LARGE ENGLISH BERKSHIRES.



Herd headed by four first prize stock boars of large size, strong bone and fine quality. Young Boars and Sows, all ages, for sale.

GEORGE GREEN, - FAIRVIEW P.O., ONT.

SPRING OFFERING Yorkshires AND Berkshires

A fine lot of boars and sows eight weeks old. Pairs and trios supplied, not akin, of the best breeding and individual merit.

H. J. DAVIS, BOX 290, WOODSTOCK, ONT.

Special Sale for 30 Days on Following:

One Chester White boar, 12 months (imp.); one Chester White sow, 12 months (imp.); safe in pig; one Berk. boar, 2 years old, a herd header.

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

SEE PAGE 270 FOR ADVOCATE PREMIUMS

- Snelgrove - BERKSHIRES AND COTSWOLDS

High-class Berkshires of the large English bacon type, bred from the best specimens of the best importations.

R. P. SNELL, Snelgrove, Ont.

LARGE ENGLISH BERKSHIRES

Maplehurst Herd. IF YOU WANT MONEY-MAKERS FROM US.

We have the kind that both the farmer and the packer want. Stock of Best Breeding, all Registered. Pairs not akin. Write us—

J. J. Ferguson, Box 373 Smith's Falls, Ont.

BERKSHIRES FOR SALE.

A few choice boars at reasonable prices; also sows of all ages. Young pigs from stock of A1 breeding.

JOHN RACEY, JR., Lennoxville, Que.

YORKSHIRES & BERKSHIRES

Yorkshire sows ready to breed, boars fit for service; extra quality. Boars and sows two months old, choice.

JAS. A. RUSSELL, Precious Corners, Ont.

BERKSHIRES.

Two sows due to farrow in February, 1890. My pigs are all of the up-to-date bacon type.

J. H. EWING, Dartford, Ont.

At a Bargain.

Registered CHESTER WHITE Boars, strictly of the bacon type, from 6 months to 13 months old. Write for prices.

R. H. HARDING, THORNDALE, ONT.

BORNHOLM HERD IMP. CHESTER WHITES.

Stock for sale at all times, all ages. Nothing but first-class stock shipped.

Daniel DeCoursey, Bornholm P. O., Ont.

CHESTER WHITE SWINE.

Young stock, both sexes. Booking spring orders.

W. E. WRIGHT, GLANWORTH, ONT.

REGISTERED CHESTER WHITE PIGS.

Eight weeks old, at \$5.00 each.

F. BIRDSALL & SON, BIRDSALL, ONT.

DUROC - JERSEY SWINE

We have an excellent lot of long, strong, hardy young Duroc-Jersey pigs now on hand.

WM. J. DUCK, MORPETH, ONT.

5 POLAND-CHINA BOARS

Five months old, sired by imported Corwin Ranger—1065; d. Kent Beauty—1204; by imported Black Joe—708.

JOS. M. SMYTH, Box 619, Chatham, Ont.

OXFORD HERD OF POLAND-CHINAS

The home winners of the Headed by the imported boars, Conrad's Model and Klondike, assisted by Bacon Boy and Lennox.

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

NOTICES.

In writing to advertisers, mention the "Farmer's Advocate." Spray Pumps will have commenced their death-dealing operations to fungous and insect pests on many farms before this date.

Cockshutt Plow Co., Brantford, Canada, write:—"One of the most novel devices, and which we believe will be largely used in the future, is our disk riding plow, of which we enclose you cut."

Threshing Outfits.—Threshermen when purchasing expensive machinery with which they expect to make money for themselves and to do satisfactory work for their customers may be depended upon to investigate carefully and select only such machines as will secure for them the desired results.

Transactions of the Highland and Agricultural Society of Scotland, Vol. XI. of the 5th series of the Highland Society, edited by James Macdonald, Edinburgh, has recently been issued.

McCormick Harvesting Machine Company, Chicago, U.S.A., write: We have your favor of April 5th, asking what is the one most important feature or device, from the point of serviceability to the farmer, which we have incorporated in any farm machines sent out from our works.

HELLO!! HELLO THERE!!! What would you like to get in Victoria Hogs at present. Let me know at once; also write for my new catalogue.

TAMWORTHS OF THE MOST APPROVED TYPE. WE have a dozen vigorous sows to farrow this spring to O. A. C. 419, and can book orders for right good stock.

W. C. SHEARER, Bright, Ont.

POLAND-CHINA SWINE.

Young stock, both sexes. Eggs for hatching from B. F. Rocks and L. Brakmas, \$1 per 15; Roosa Ducks, \$1 per 11. Turkey Eggs in season. Farm three miles east of town.

J. F. M'KAY, PARKHILL, ONT.



Tamworth and Imp. Chester White Boars.

Fit for spring service. Also, a choice lot of fall sows and sows due to farrow in March and April.

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

Tamworths, Holsteins, and Barred Rocks.

Tamworth (January, 1889) barrow (choice), sired by (Royal winner) White Crystal (Imp.) Also, booking orders for spring litters, sired by imported boars.

A. C. HALLMAN, NEW DUNDEE, ONT.

TAMWORTHS

OF THE MOST APPROVED TYPE. WE have a dozen vigorous sows to farrow this spring to O. A. C. 419, and can book orders for right good stock.

P. R. HOOVER & SONS, GREEN RIVER, ONT.

Chatham Herd of Tamworths

One 12-mo. boar and 1 10 mo.; 18 6-mo. sows, bred to imported sire; 10 sows 4 mo.; half a dozen 3-mo. sows, and a bunch of boars of the same age.

J. H. SIMONTON, Box 304, Chatham.

18-Tamworth Brood Sows-18

FOR SALE. From George and Laurie stock, and in pig to a George-bred boar.

W. D. REESOR, MARKHAM, ONT.

CHOICE SPRING PIGS

In pairs, not akin; also young sows bred and ready to breed. Prices right and freight paid.

JOHN FULTON, Jr., Brownsville, Ontario.

HELLO!! HELLO THERE!!!

What would you like to get in Victoria Hogs at present. Let me know at once; also write for my new catalogue.

CHRIS. FAHNER, Crediton, Ont., Canada.

Tamworth Boars.

4 Tamworth Boars two months old, from Toronto winners, \$6.00 each, registered. White Wyandotte eggs, 15 for \$1.00, from winners at recent poultry shows.

D. J. GIBSON, Bowmanville, Ont.

The 3 Popular Breeds, TAMWORTHS, YORKSHIRES, BERKSHIRES.

We have bought the best, and only retain the choicest females as matrons. Write us before buying elsewhere.

COLWILL BROS., Newcastle, Ont.

TAMWORTHS AND POULTRY

FOR SALE--Pigs of all ages; also eggs from Barred Rocks, White Rocks, Silver Wyandottes, Black Minorcas, Black Spanish, Partridge Cochins, Red Caps, Leghorns, Hamburgs, Pekin and Rouen Ducks, at \$1.00 per setting.

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

Barred Plymouth Rock Eggs

From a pen of selected, extra well barred, large, strong, healthy hens. And have purchased an A1 imported cockerel of the "National" strain to mate with them.

W. C. SHEARER, Bright, Ont.

EUROPEAN ADVERTISEMENTS.

Hampshire Down Sheep.

GREAT ENGLISH PEDIGREE SALES.

July, August, and September, 1899

WATERS & RAWLENCE, SALISBURY, ENGLAND.

Will sell by auction during the season upwards of

50,000

PURE-BRED EWES, LAMBS, RAMS

Including both Rams and Ewes from the best Registered Prizewinning Flocks in the country. Commissions carefully executed. Address:

WATERS & RAWLENCE, SALISBURY, ENGLAND.

Hampshire Down Sheep.

SPLENDID MUTTON. GOOD WOOL. GREAT WEIGHT.

This highly valuable English breed of sheep is unrivalled in its

Rapid and Wonderfully Early Maturity,

possessing, too, a hardness of constitution adapted to all climates, whilst in the quality of

MUTTON AND LARGE PROPORTION OF LEAN MEAT IT IS UNSURPASSED.

Full information of

JAMES E. RAWLENCE,

Secretary, Hampshire Down Sheep Breeders' Association,

SALISBURY, ENGLAND.

HENRY DUDDING, RIBY GROVE, GREAT GLEMSBY, LINCOLNSHIRE, has always for inspection and sale from the largest and most noted flock of pure Lincoln Longwool Sheep in the country, both Rams and Ewes of all ages. Representative specimens from this flock have secured for many years past at the Royal Shows champion and other prizes; whilst they have also at both the Paris Exhibitions, Vienna, Amsterdam, Chicago, Palermo, secured champion awards, and at all the leading shows in Australia, New Zealand, Canada, and the States. Riby sheep and their descendants have secured the highest honors. Wool is a leading feature in the flock, its quality being amply testified by the fact that wherever exhibited it has each time secured the premier prize including that at Windsor in 1899. The record of its careful breeding and consistent success is world-wide, and the present members of the flock are fully equal to any that have preceded them during the past 130 years in which it has been in existence, descending from father to son without dispersal. The flock holds the record for the highest price ram of 1898 (i. e., 1,000 gs.), and for the highest recorded average for an auction sale of fifty-two rams (i. e., £26 19s.) at the annual sale in July, 1898. A grand selection of yearling and other sheep on offer, sired by the most carefully selected sires obtainable, in which are contained all the best strains of the present day. Telegrams: "Dudding, Keelby."

Kent or Romney Marsh SHEEP

ANNUAL RAM SHOW SALE.

The annual show and sale of registered Kent or Romney Marsh rams, consisting of selected specimens from the leading flocks of the breed, will be held at

ASHFORD, KENT, ENGLAND,

Friday, 29th Sept., 1899

CATALOGUES AND FULL INFORMATION FROM

W. W. CHAPMAN,

SECRETARY KENT OR ROMNEY MARSH SHEEP BREEDERS' ASSOCIATION,

FITZALAN HOUSE, ARUNDEL STREET, STRAND, LONDON, ENG.

W. W. Chapman,

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

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

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

GOSSIP.

At the Shorthorn sale of Thomas Tormey, Fennimore, Wis., April 19th, George Harding & Son, Waukesha, Wis., secured the 4-year-old cow Latena and her heifer calf at \$500, Rosemary 3rd for \$430, and Carmenata for \$450. These were the highest prices of the day. The 3-year-old bull Golden Crown, by Golden Rule, sold for \$325; 47 animals averaged \$170.21. At George McCart's sale of Shorthorns at Humeston, Ia., April 19th, 50 head averaged \$146.50. The highest price for a bull was \$350, and for a cow \$205.

A number of leading buyers in New York have decided that for the coming season they will not buy ram lambs unless at a valuation of at least \$1.00 per hundred less than ewe and wether lambs, and all mixed loads, which have not heretofore been discriminated against, will hereafter be bought by them with the understanding that the rams shall be thrown out at a price not less than \$1.00 per hundred lower, or, on the same basis as has hitherto governed their purchases of sheep. This rule shall govern all purchases of Canada lambs for the season of 1899.

Alex. Hume & Co., Menie, Ont., breeders of Ayrshires and Yorkshires, write: "We have recently sold a number of calves and pigs, and are receiving orders every week. We have still some choice bull calves, and have two young bulls fit for service, bred from the imported bull Prince of Barcheskie, and from deep-milking, prizewinning cows. Our young calves are doing well, and are a fine lot. Having used four first-class bulls, all either imported or bred close to imported stock, and having so many distant strains in our herd, we are in a position to supply pairs not akin, of choice breeding, and good ones at moderate prices. We enclose change of advertisement.

PRIZES FOR SHORTHORNS AT TORONTO.

The following list of prizes for Shorthorn cattle has been arranged for between the Industrial Board and the Shorthorn Breeders' Association for 1899:

	1st	2nd	3rd	4th	5th
Bull, 4 years old and over...	\$50	\$35	\$25	\$	\$
Bull, 3 years and under 4...	50	35	25		
Bull, 2 years and under 3...	50	35	25		
Bull, 1 year and under 2...	50	35	25		
Bull calf under one year...	40	30	20	15	10
Bull of any age, Gold Medal, value \$25.					
Cow, 4 years old and over...	\$40	\$30	\$20	\$	\$
Cow, 3 years and under 4...	40	30	20		
Heifer, 2 years and under 3...	35	25	20		
Heifer, 1 year and under 2...	35	25	20		
Heifer calf, under 1 year...	30	25	20	15	10
Female, of any age, Gold Medal, value \$25.					
4 calves, bred and owned by exhibitor...	\$50	\$35	\$25		
5 females, bred and owned by exhibitor, any age...	50	35			
Bull and 4 of his get, owned by exhibitor...	50	35			
Bull and 4 females, any age, owned by exhibitor...	60	45	30		
Herd, bull and 4 females, owned by exhibitor...	100	75	50		
Original grant of Industrial Exhibition.	\$ 767				
Advanced grant by Industrial Exhibition.	150				
Dominion Shorthorn Breeders' Association grant.	750				
Grand total	\$1,667				

AYRSHIRES AT GLASGOW.

At the annual show of the Glasgow Agricultural Society, April 19th and 20th, Mr. Howie, of Hillhouse, Galston, won first honors in the class for aged bulls, with Kohinoor, who won also the championship, as he did the previous week at Kilmarnock. Interest in the class was somewhat discounted by the absence of his old rival Douglas Chief. Mr. Gilmore's Rare Style was placed second, and Mr. Wardrop's Darnley third. In the 2-year-old class John McKean took 1st with Douglas Dale, by Douglas Chief. Mr. R. Montgomerie was second with Blucher, by Sensation, and Mr. Howie's Luck's All was third. In yearling bulls Mr. Thomas Scott Sandland's was first with Sirial, Mr. Howie 2nd with a White Cockade bull, and Mr. R. M. Reid 3rd with Claymore, by Sensation. In the 4-year-old class of cows in milk Mr. Robert Sillars, Monkton, was first with Juniper 14th, a brown and white cow bred at Burnhead, and got by Duncan Gray. Second went to Mr. D. Fleming. For 3-year-olds in milk Mr. Howie was 1st, with Drummy 2nd, which was 1st at Castle Douglas and Kilmarnock, in calf. Mr. Hugh Duncan had 2nd with Maid of Bute. In the class for cows in calf, 4 years and upwards, Mr. Geo. Alston was 1st with Dandy III., a home-bred cow, one of the best in the show. Mr. Andrew Mitchell, Barcheskie, was 2nd with Pansy, a brown and white cow bred at Castlehill. James Neil was 3rd with Hover-a-Bink 13th, by Duncan Gray. In 3-year-olds Messrs. McAlister had 1st and 3rd with Pride of Bute and Lady Ascog. The Derby was possibly the best seen at Glasgow. Mr. Howie was first with his Kilmarnock winner, Drummy II., to which we have already referred. She was by Sloth Boy of Burnhouses, and is a good cow. For 2-year-olds Mr. Andrew Mitchell was invincible with his white and brown quey Lily, which he bought at Castle Douglas from Mr. Robt. McKinlay. She was by Douglas Chief. Second went to Mr. Robert Montgomerie for Pansy, by Sensation.

J. E. CASSWELL, Laughton, Folkingham, Lincolnshire,

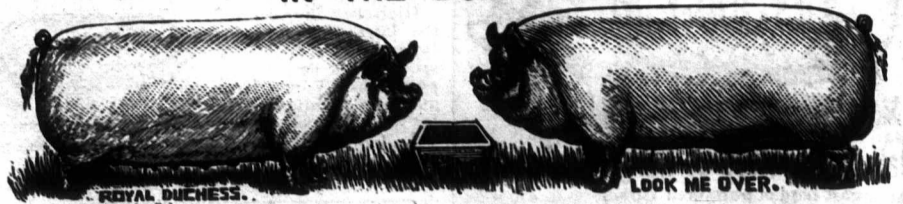
breeder of Lincoln Long-wooled Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 20 ram, at the "Annual Lincoln Ram Sale," 1895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

FAMOUS ALL OVER THE WORLD.

ALFRED MANSELL & CO., LIVE STOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MANSELL & CO., Secretaries of the Shropshire Sheep-Breeders' Association, Shrewsbury, England.

AT SUMMER HILL IS THE **Imported Yorkshires** LARGEST HERD OF... IN THE DOMINION.



Among them being the first choice of the most important prize-winning English herds. My Canadian-bred herd comprises the choicest individuals, selected from the best herds in the country, and is headed by the undefeated prize-winning boar, Look-Me-Over 3612. I am offering young stock directly imported, imported in dam, or Canadian bred. We ship to order, prepay express charges, and guarantee stock as represented. Trains met at Hamilton by appointment. **D. C. FLATT, MILLGROVE, ONT.**

HOW TO GET A FIRST-CLASS COLLIE

Twelve New Subscribers



Twelve New Subscribers

TO ANY SUBSCRIBER sending us the names of 12 NEW yearly paid up Subscribers we offer a young COLLIE, six weeks old or over, eligible for registration, and bred by Mr. R. McEwen, Byron, Ont., whose stock has been so successful in the leading shows in Canada and the United States. (See page 36, January 16th issue.)

Bagster's NEW Comprehensive Teacher's Bible,

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, with SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

ADDRESS **The WILLIAM WELD CO., Limited, London, Ontario.**

WE ARE OFFERING FOR SALE

8 HIGH-CLASS YOUNG IMPORTED SHORTHORN BULLS OF THE BEST SCOTCH BREEDING,

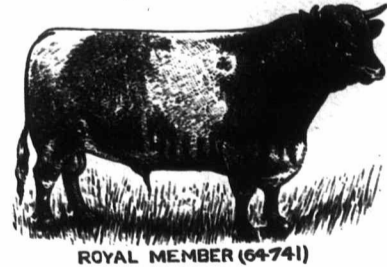
TOGETHER WITH A FEW

Home-bred Bulls

AND A NUMBER OF

Cows and Heifers

BOTH IMPORTED AND HOME-BRED.



ROYAL MEMBER (64-741)

Correspondence or a personal visit solicited. Catalogues on application.

H. CARGILL & SON, CARGILL, ONTARIO.

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

ALEX. HUME & CO., MENIE P. O., ONT.

IMPORTERS AND BREEDERS OF

AYRSHIRES and YORKSHIRES.



2 YOUNG BULLS fit for service, sired by (imp.) bull, Prince of Barcheskie. YOUNG CALVES OF EITHER SEX, all from prizewinning stock, and deep milkers. Young pigs of good breeding, from 2 to 4 months old. Can furnish pairs of either calves or pigs not akin. Prices away down for class of stock.

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

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

DUROC-JERSEYS. Easiest fed, easiest fattened; will do best when fed on forage crops. Sweepstake herd to select from. Seventy now for sale.

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

WM. BUTLER & SONS, DEREHAM CENTRE, ONT.

TESTED SEED CORNS.

FARMERS! Is there any fun in plowing, harrowing, rolling and planting your land to corn that won't grow? Or, if it does grow, and you spend a hard summer's work on it, have it killed by an early frost? No, there is no fun about either one, but, on the contrary, it is humiliation and financial disaster. You should avoid being caught either way. Remember this: When you buy seed corn of us you get seed that has been **THOROUGHLY TESTED** as to germination, and you take no chance whatever on it not growing. When you can get tested seed at a cost of 25c. per acre, what more do you want? Farmers, don't fool yourselves out of a crop by planting seed that has lain out in the field after the snow came, as it will be damaged and not fit for seed at all. Take no chances, but send to us direct and get seed **THAT WILL GROW.**

Iowa Silver Mine, Dent. The only early white dent corn grown. First-class fodder, 7 to 8 feet high; ears 10 to 12 inches in length, 18 to 20 rowed. Will ripen in from 95 to 100 days. A first-class variety. Peck, 50c.; bush., \$1.50.

Clark's Early Mastodon, Yellow Dent. One of the best varieties for ensilage. A strong grower, immense straw and ear, but unless in the best corn sections of Ontario it will not ripen. Peck, 25c.; bush., 90c.

White Cap, Yellow Dent. A strong, rank grower, and for shallow clay or sandy land one of the best varieties to grow. Stalks 7 to 8 feet high and a good yielder. Ripens in from 100 to 110 days. Peck, 25c.; bush., 90c.

Genuine Mammoth Southern Sweet. For fodder and silo purposes only. Grows immense fodder, which is sweet and rich, syrup having been made from it; of the best germinating quality. Will grow more tons of fodder to the acre than any other known variety. Bush., 70c.; sacks, 2 1/2 bush., \$1.65. Sacks free.

Longfellow, Flint. Stalks 8 to 10 feet; ears 10 to 12 inches; 8-rowed, broad kernel; will ripen in about 100 days. Peck, 25c.; bush., 90c.

Star Leaming, Yellow Dent. A great improvement on the old Leaming, and one of the best for ensilage purposes. Peck, 30c.; bush., \$1.00.

Evergreen Sugar Corn. (For green fodder.) Very leafy, succulent and sweet, and said to be better for fodder than any other variety grown. Peck, 40c.; bush., \$1.50.

Early Butler, Yellow Dent. Early, immense yielder; 70 lbs. of ears will shell over 64 lbs. shelled corn. One of the best. Peck, 25c.; bush., 40c.

Iowa Gold Mine. Grain very deep; cob small; an immense yielder, 70 pounds of ears make 60 to 62 pounds of shelled corn. Peck, 25c.; bush., 90c.

Cuban White Giant, Dent. For ensilage purposes. It yields fodder in great quantity and of finest flavor. Peck, 25c.; bush., 90c.

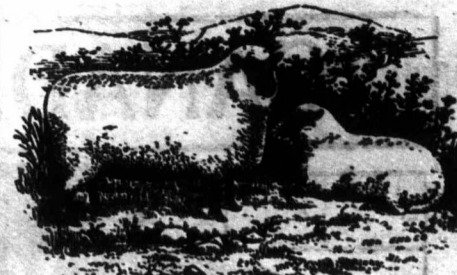
Mammoth 8-Rowed Yellow, Flint. As a corn for shelling there is none to beat this. Long ears, 12 to 15 inches, with very small cob, and stalks 8 to 10 feet high. We recommend this variety as the best flint corn grown. Peck, 40c.; bush., \$1.25.

100-Day, or Angel of Midnight. The earliest yellow flint corn in cultivation; broad kernel, long cob, 8-rowed; a sure cropper. Peck, 25c.; bush., 90c.

Cloud's Early Yellow, Dent. Grows a good height; taller and better than the Rural Thoroughbred. Peck, 25c.; bush., 90c.

CASH WITH ORDERS. DON'T FORGET TO REMIT FOR BAGS: JUTE, 8c.; COTTON, 15c.

JOHN S. PEARCE & Co., LONDON, ONTARIO.
"SEEDSMEN TO THE CANADIAN PEOPLE."



To Farmers, Stock Dealers and Wool Growers:
For Sheep, Cattle and Horses.

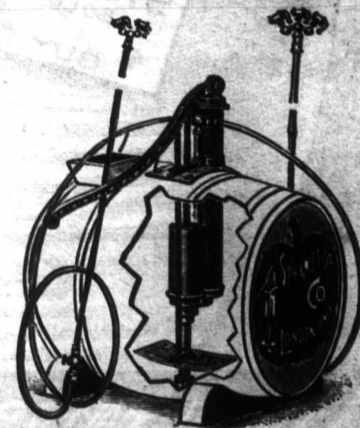
Leicestershire Tick and Vermin Destroyer

It effectually destroys Ticks, Lice, Worms or Grub, to which sheep, horses and cattle are subject, and enables the animals to thrive. It will be found far superior to other preparations used for the similar purpose. The proprietors will guarantee perfect success when used according to directions, as will be found on each box. It prevents scurf and scab, and renders the wool bright and clear. It is put up in tin boxes, price 30 cents each. One box is sufficient for twenty ordinary-sized sheep. It only requires to be tried to prove itself all that is claimed for it. Sold by druggists and grocers. Manufactured by G. C. BRIGGS & SON, 31 King Street West, Hamilton, Ont.

ALL SPRAYING, DISINFECTING AND WHITEWASHING CAN BE DONE WITH THE

SPRAMOTOR

It is the result of most careful and exhaustive experiment. Each feature was thoroughly tested before being placed on the market.



Toronto, November 9th, 1898.

Spramotor Co., London, Ont.:
Gentlemen,—The machines for spraying and white-washing you have supplied to Dentonia Park Farm have done their work well, and are quite satisfactory. I could not have believed there was so much value in spraying fruit trees. We had a good crop of apples, whereas our neighbors who used no spraying machine had practically none. Yours truly
W. E. H. MARSH.

CERTIFICATE OF OFFICIAL AWARD.
This is to certify that at the Contest of Spraying Apparatus, held at Guelph on April 2nd and 3rd, 1898, under the auspices of the Board of Control of the Fruit Experimental Stations of Ontario, in which there were seven contestants, the SPRAMOTOR, made by the Spramotor Co. of London, Ont., was AWARDED FIRST PLACE.

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Judges.

If you desire any further information, let us know and we will send you a 72-page copyrighted catalogue and treatise on the diseases affecting fruit trees, vegetables, etc., and their remedies.

SPRAMOTOR CO.,
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Mention this paper AGENTS WANTED.

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FOR POWER AND PUMPING
DANDY
WOODSTOCK STEEL WINDMILLS
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FOR SALE—SHADE TREES.
All kinds and sizes; ornamental trees; evergreens from 5c. each up, according to size and quality; flowering shrubs, all kinds; clematis, all colors; and other vines, shrubs, etc. No agent or any other dealer can supply better or cheaper, and give instructions or do the work that I can do. Grafting and pruning done.

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Do you keep a DOG?
Send for free pamphlet on feeding, treatment, etc., and catalogue of foods, etc.
To **SPRATT'S PATENT** Ltd
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SCABBY SHEEP.
\$5000 REWARD
To any party who can produce a scabby sheep which the Lincoln Dip will not cure. Write for particulars.
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Canadian Office: WEST CHEMICAL COMPANY,
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Importation of **SHROPSHIRE**
.. NEXT JULY. ..
ORDERS TAKEN TO IMPORT OTHER BREEDS.
Barred Plymouth Rock Eggs, \$1.00 for 13, or \$1.75 for 26. Only cock second at Guelph show. Selected hens.
JOHN CAMPBELL,
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Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.
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SHROPSHIRE
FOR SALE:
30--Ram and Ewe Lambs--30
Mostly sired by the imp. ram Newton Stamp 99631. A prizewinner at Toronto in 1897.
GEORGE HINDMARSH,
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HILL HOME FLOCK of SHROPSHIRE
At Hill Home are a few of the best rams and ewes and ewe lambs that money can buy. Write for prices before you buy.
D. G. GANTON,
SIMCOE COUNTY. -o SAURIN P. O.

SHROPSHIRE
Shall have a fine lot of choice early lambs for the fall trade. We import and breed only the best.
J. P. PHIN, Hespeler, Ont.

SHEEP MEN
Don't You Know that ticks are hard to kill. Then why use dips and washes which only do for the time being?
Miller's Tick Destroyer
IS A PREPARATION WITH NEARLY 30 YEARS' REPUTATION.
KILLS TICKS, EGGS AND ALL
Also cures SCAB and improves the wool.
HUGH MILLER & CO.,
Manufacturing Chemists,
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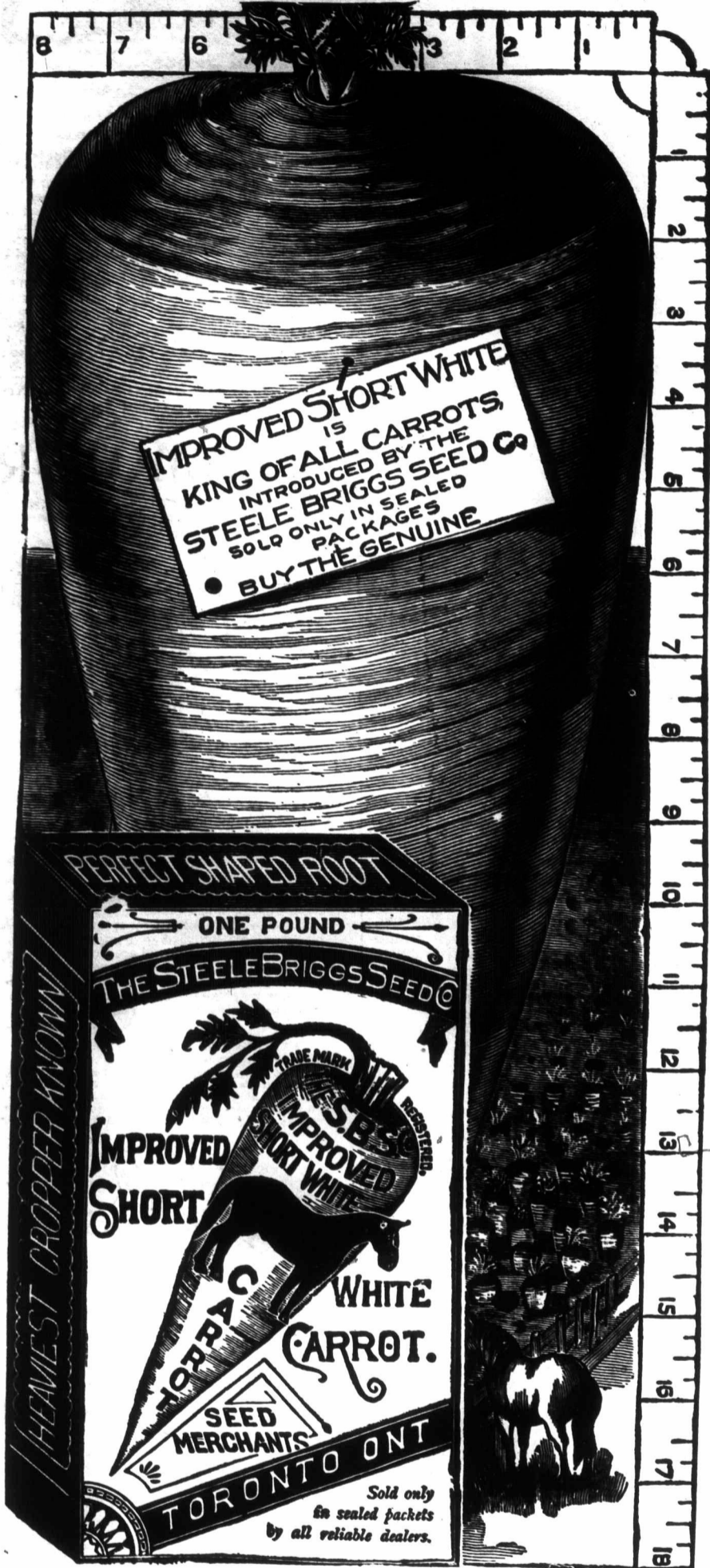
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DIP YOUR SHEEP IN COOPER DIP
BENEFITS THE FLOCK
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Used and endorsed by Hon. John Dryden, Minister of Agriculture, Toronto, Ont., and leading breeders everywhere.
SUPERIOR TO ALL LIQUID DIPS.
Twenty-five gallon packet, 50c.; one hundred gallon packet, \$2.00. If druggist cannot supply, send \$1.75 for one hundred gallon packet to
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Book premiums on application to COOPER DIP, Galveston, Texas.

IT PAYS TO ADVERTISE IN THE **FARMER'S ADVOCATE**

GOSSIP.
In writing to advertisers, mention the "Farmer's Advocate."
A NEW IMPORTATION OF YORKSHIRES.
Mr. D. C. Flatt, Millgrove, near Hamilton, Ont., has recently replenished his Summer Hill herd of Yorkshires by a new importation of some 40 choice young boars and sows and maturely bred sows in farrow, selected from a number of the best known herds in England, and principally from the Hollywell Manor herd, of Mr. Sanders Spencer, of St. Ives, which enjoys a world-wide reputation for superiority. The importation reached Summer Hill, April 20th, in prime condition, thanks to the excellent care and attention of Mr. Thos. Bradshaw, of Danville, Quebec, who made many of the selections and superintended the shipment, which is acknowledged to be one of the best that has ever come to Canada. Visitors to the farm have been unanimous in expressing admiration of the splendid breeding sows with magnificent litters at foot, some of which were farrowed at sea and in quarantine, and others at Summer Hill since the arrival of their dams. The young boars and sows ranging from 6 to 12 months old are a uniformly good lot, lengthy, deep and smooth, with beautiful, straight, glossy hair, good heads and hams and plenty of bone of the right quality and standing well up on their feet. While confessing our admiration for the quality of the immigrants, we could not but compare with them favorably the strong contingent of home-bred sows in the herd, all of which are directly descended from first-class importations and are up-to-date in conformity to the standard of the ideal bacon hog as they have it in England and as the trade demands it here. Many of these we noted are of the favorite Haskett family, which have made such a grand record as prizewinners and as producers of the most approved type of bacon hogs, among which may be mentioned the grand trio of daughters of the signally successful sire, Dominion 5th, namely, Josephine 5th, Lady Haskett 2nd, and Lady Minto, and others, which are in farrow to or nursing litters by the invincible boar, Look-Me-Over, winner of 1st prize at Toronto Industrial Exhibition and all around the circuit of shows in 1898. He is certainly a model of the breed and is carrying himself in fine form, with his smooth shoulders, well-sprung ribs, strong, straight and well-fleshed back and full hams. He will stand looking over every day in the year, and fills the bill to perfection. The grand imported sow, Royal Duchess, imported last year, a first-prize winner at the Royal Show at Birmingham, is nursing a splendid litter by Look-Me-Over, and her appearance as a matron has not shaken in the least our high estimate of her excellence when seen last year in her maiden form. The Summer Hill homestead, which was well illustrated in the Christmas number of the FARMER'S ADVOCATE, is undergoing still further improvements, among which is the erection of another large and commodious 35x70 ft. pigery, designed after the most approved modern plans as to health, convenience, and comfort of stock. This, in addition to the already extensive accommodation, will place Mr. Flatt in a position to handle his large herd even more successfully than in the past, and enable him to meet the ever-increasing demand which has taxed the herd to the utmost to supply orders from all parts of the Dominion and the United States having been received almost daily during the winter and spring, many having been booked for pigs which were yet unborn, but which have not disappointed the great expectations entertained of them. Judging from the extent of the breeding herd, now one of the largest and best on the continent, the large increase of youngsters this spring, and the extensive correspondence daily arriving at Summer Hill, we predict for the express companies a brisk business in the next few months. See new advt.

"CANADA'S GREATEST SEED HOUSE"



The Steele, Briggs Seed Co.'s

Enormous annual trade in Farm and Garden Seeds has been attained by 26 years of constant vigilance and care, and in supplying merchants and growers with the very highest standard of quality that can be procured, and at most favorable prices consistent with "Good Seeds," which is the first essential for a good crop.

Among our many introductions of merit

The Steele, Briggs' Improved Short White CARROT

Is the . . .

World's Champion

Because it is the Surest Cropper
The Heaviest Yields
Easiest Harvested
The Handsomest Shaped Roots
And the Very Best Field Carrot
in existence

It may be properly called "Little Giant." Seldom exceeds sixteen inches in length, and has been grown to measure twenty-seven inches in circumference; stands nearly one-fourth out of ground, with a strong, handsome top, broad and heavy at the shoulder, tapering evenly to a point, as perfect as if turned in a lathe. The color is pale green above ground, and a light creamy white under ground; flesh rich white, solid, sweet and very nutritious. Under good cultivation has yielded one thousand bushels per acre.

. . . As an Exhibition Prize Winner it is the Peer

Price (post-paid) per lb., 45c.; $\frac{1}{2}$ lb., 25c.; $\frac{3}{4}$ lb., 15c.; oz., 10c.

PLEASE NOTE.—As a safe-guard to growers, we supply the genuine "Improved Short White" Carrot in sealed packages only, printed in colors and bearing our name and trade mark as shown in the illustration. If your resident merchant cannot supply you, write to us for it. Refuse imitations of our packages and varieties said to be "just as good."

NEW... Danish White Oats

A remarkably heavy-yielding variety, produces strong, stiff straw, large, plump, heavy, bright grain with thin hull, and adapted to a great diversity of soils; withstands stormy weather without lodging or shelling.

Price by mail (post-paid) per lb., 15c.; 4 lbs. for 50c., or by freight or express (purchaser paying carriage) peck 25c.; bush, 80c.; 10 bush. lots or over, 75c. per bush. Cotton bags, holding 2 $\frac{1}{2}$ bush., at 15c. each.

Write for our Catalogue, contains descriptions and prices of the newest and best Field and Garden Seeds. Please mention this paper.

"Canada's Greatest Seed House"
The STEELE, BRIGGS SEED CO.,
TORONTO, ONT. Limited

Barred Plymouth Eggs for Hatching.

Two pens of fine, large, well-barred birds, fine laying strain. 15 Eggs, \$1; 30 Eggs, \$1.75; 45 Eggs, \$2.

Thos. Baird & Sons, Chesterfield, Ont.

EGGS. It pays to get the best. We have them in L. and D. Brahmas, B. and W. Rocks, W. Wyandottes, Black Minorcas, and Indian Game, at \$1.25 per setting.

JACOB B. SNIDER, German Mills.

\$1.00 per Setting. Eggs from the "Ontario" prizewinning Golden and Silver Wyandottes, Barred and White P. Rocks, and Pekin Ducks. A few Bronze Turkey Eggs at 25c. each.

JAMES LENTON, Park Farm, Oshawa.

EGGS FOR HATCHING: Brahmas, Games, Minorcas, Wyandottes, Dorkings, Hamburgs, Houdans, Polands, Leghorns, Ducks, Geese, and Turkeys. For prices write

WM. STEWART & SON, MENIE, ONT.

FOR SALE—Toulouse Geese Eggs at 25c. each, Rouen Duck Eggs at 10c. each, Yorkshire and Tamworth Pigs under six months at farmers' prices.

JOHN HORD & SON, Parkhill, Ont.

DO YOU WANT EGGS

From the Best Strains Procurable?

If so, try us for B. and W. Cochins, L. Brahmas, Black Spanish, Langshans, Minorcas, and Javas, Buff Leghorns, S. L. Wyandottes, Red Caps, \$1.50 per 13. Barred Rocks (try our Rocks, they will please you), W. & B. Leghorns, and Pekin Ducks, \$1 per setting. Won 300 prizes last season. Satisfaction guaranteed. J. C. LYONS, Lucknow, Ont.

EGGS FOR HATCHING

From Barred Plymouth Rocks (imported direct from I. K. Felch, Natick, Mass., U.S.); Silver and Golden Wyandottes, and Pekin Ducks. My Wyandottes are all bred from my noted prizewinners. Only \$1 per setting of 13 hen or 11 duck eggs. Several extra good Silver Wyandotte cockerels for sale at \$1.25 each.

J. E. MEYER, - KOSSUTH, ONT.

PEKIN DUCK EGGS

From grandly developed

PROLIFIC PRIZEWINNING STOCK.

\$1.00 for eleven. Perfectly packed.

L. A. SPENCER,

on "DORSET FARM," BROOKLIN, ONT.

BARRED PLYMOUTH ROCKS (EXCLUSIVELY)

BRED FOR UTILITY.

Eggs for hatching from large, vigorous, well-bred stock of good laying qualities, \$1 per 15; incubator lots, \$4 per 100. From choice breeding pen, mated and scored by I. K. Felch—cockerel 92 $\frac{1}{2}$, and females 90 to 93—\$3 per 15, or \$5 per 39. Mated to produce prizewinners. All birds have free range, and fertile eggs guaranteed. Customers liberally dealt with, and eggs carefully packed. After 1st June two fine yearling cocks for sale. Also some good breeding hens.

(MISS) P. J. COLDWELL,

Constance, Huron Co., Ont.

MEADOWBROOK W. WYANDOTTES

After the 8th of April I will place eggs at \$1.25 per setting, or \$2 for two settings. These fowls are large, are the best winter layers, and the earliest maturing, making the best all-round farmers' pen of fowls, and from the first-prize winning fowls at Western Fair.

EDGAR SILCOX, Shedden, Ont.

EGGS FOR HATCHING

From Bronze Turkeys, Pekin and Rouen Ducks, B. P. Rocks, Andalusians, Black Javas, Houdans, B. Leghorns, and Black Spanish. Turkey eggs, 25c. each; others, \$1.50 per setting.

W. R. KNIGHT, Bowmanville, Ont.

PLEASE MENTION FARMER'S ADVOCATE.

Reliable Seeds

FOR THE FARM AND GARDEN.

Our stock includes all that is best in
GARDEN AND GRASSES,
FIELD ROOTS, CLOVERS,
SEED GRAIN, FLOWER SEEDS,
AND FLOWERING PLANTS.

Illustrated Catalogues mailed free on application.

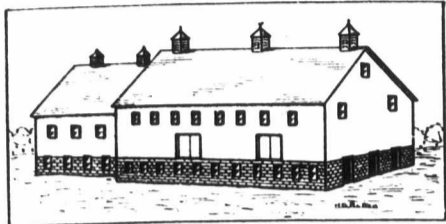
William Ewing & Co.,
Seed Merchants, 142 McGill Street,
MONTREAL, QUE.

SEED POTATOES

Saltzer's Champion of the World is said to have yielded over 1,000 bushels per acre. Good cooker. Price, \$1.75 per 80-pound bag, delivered at G. T. R. or C. P. R. station here.

C. W. THOMPSON,
P. O. BOX 84, NORTH BAY, ONT.

Work Done With **THOROLD CEMENT** Speaks for Itself.



Barn of Messrs. H. Cargill & Son, 100 x 70 feet.

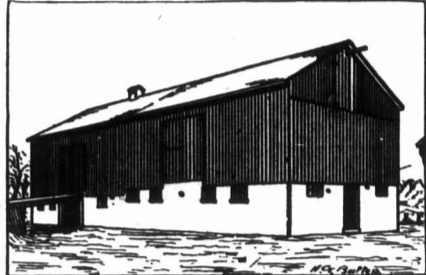
This testimonial is from Messrs. H. Cargill & Son, Cargill, Ontario, of which firm Mr. Henry Cargill, M. P., is the senior member:

Cargill, Ont., March 14, 1899.
ESTATE OF JOHN BATTLE, Manufacturers of Thorold Cement, Thorold, Ont.:

Dear Sirs,—It is a pleasure to us to inform you that the concrete floors, 70 x 100 feet, 4 inches thick, put in our stable with your Thorold Cement, under the supervision of your Mr. H. Ward Hagar, gives complete satisfaction in every way. We therefore cheerfully recommend it to any farmers who have in view the putting in of Cement floors, etc., etc.

Yours truly, H. CARROLL & SON.

FOR FREE PAMPHLET WITH FULL PARTICULARS, ADDRESS



Barn of W. J. Weir, 34 x 102 feet.

The following is what Mr. W. J. Weir, of Crumlin, Ont., says about Thorold Cement:

Crumlin, Ont., March 6, 1899.

ESTATE OF JOHN BATTLE, Manufacturers Thorold Cement, Thorold, Ont.:

Dear Sirs,—It is with pleasure that I testify to the excellent qualities of your Thorold Cement for building purposes. Last summer I built a concrete wall under my barn (size 34 x 102 x 9 feet high). It makes a splendid wall, and I consider that I have a first-class job. I also put in concrete floors for horses and cattle with your Cement; they give good satisfaction, being perfectly dry and warm, and are easily kept clean. I can strongly recommend it to all farmers who intend using Cement.

WM. J. WEIR.

ESTATE OF JOHN BATTLE,
THOROLD, - ONTARIO.

...THE...

MACHINES

...THAT MADE...

AMERICA FAMOUS.

**DEERING
BINDER TWINE.**

"New Twine from New Mills."

DEERING BINDER TWINE is the best. It is made in the largest and finest mills in the world. The machinery is of the newest pattern, and the operatives are the most skilled. Deering twine is "smooth and strong, even and long."

SEND FOR TWINE BOOKLET, IT'S FREE.

Deering Harvester Co.,

Main Office and Factory: CHICAGO, U. S. A. Permanent Branch House: LONDON, ONT.

GOSSIP.

A PROSPEROUS BUSINESS—SUCCESS SUCCEEDS—THE FARMER'S ADVOCATE AS AN ADVERTISING MEDIUM.

Mr. Arthur Johnston, of Greenwood, Ont., reports the Greenwood herd of Shorthorns as being in fine breeding form. "The present crop of young calves promises to be an uncommonly good one. Heifers greatly predominate. We have at present 15 capital young bulls for sale, all of which are fit for service, including three red imported bulls. They vary in ages from nine to sixteen months. The imported heifers which we advertise in this issue for the first time are a right good lot, and in the very nicest form to go on for show, or keep as they are for breeding purposes. Sales have been good during the past winter and spring. We have sold \$6,750 worth of Shorthorns since I came home from Scotland in September last, besides Clydesdales and Berkshires. I find the FARMER'S ADVOCATE not only reaches every part of the Dominion, but many parts of the United States as well, and brings enquiries that lead to sales."

Mr. W. D. Flatt, Hamilton, Ont., writes:—"The following are among some of my recent sales of Shorthorns: To A. C. Pettit, Freeman, Ont., Miss Mary, imported. This is a young cow of remarkable scale, being very large and well finished. She will compare with the best; also Miss Mary 2nd (imp.), a very promising red heifer calf. Mr. Pettit can be congratulated on securing such a valuable foundation. To F. Brown, manager for Chas. E. Ladd, North Yamhill, Oregon, U. S., Missie of Neidpath 2nd, a grand four-year-old cow. To James Yule, manager for the Hon. Thomas Greenwood, Crystal City, Man., Elvira 21st, a beautiful young cow, Golden Fame's Hero, a young bull of rare promise, Lady Jane (imp.). It is safe to say that this young cow will compare favorably with anything in the Dominion. Isabella Stanley, a heifer of wonderful substance and quality. To Gavin Barbour, Cross Hill, Ont., Lowville Lady, a very large young cow of fine form and an exceedingly good milk; also Trout Creek Baron, a very promising young bull. To J. E. Rowland, Newry, Ont., Nora and Waterdown Queen, a good pair of heifers with strong individual merit. To T. E. Bowman, Berlin, Bell Duchess 4th. Mr. Bowman made no mistake in selecting this heifer. She is a true type of a modern Shorthorn."

FAIRVIEW FARM AND SHROPSHIRE.

Fairview, the farm and home of Mr. John Campbell, the noted Canadian importer, breeder and successful exhibitor of high-class Shropshire sheep, is located about two miles from Woodville, Ontario, which is his post office and telegraph office, and is station on the Midland Division of the G. T. R., three hours' run from Toronto, the capital of the Province. Fairview is acknowledged by common consent to be one of the cleanest, most neatly kept and best cultivated farms in the Dominion. Order, heaven's first law, finds its realization at Fairview, and success is written in living letters in field and flock. What the energetic and enterprising owner does he does with his might, and his motto is "Excelsior!" His success in breeding and developing the Shropshires has been phenomenal, as the records of the prize lists of the leading shows amply attest. The flock was founded in 1881 by the purchase of choice imported ewes, one of which during her seven years of life gave a yearly return of \$100 in her lambs sold. Very few years have passed since the founding of the flock that new blood has not been added by the importation of high-class rams, and many of the English prizewinning ewes have been brought out and retained in the flock. While its success has been unequalled in honors gained in Canada, having won the only Dominion gold medal offered for flock of Shropshires, besides first prizes galore in all the sections of the class, which was at the World's Fair at Chicago in 1893 that the flock distinguished itself by making an unparalleled record, carrying off one-half of the total number of first prizes in competition with all America and as many of England's best rams as could be bought, and the first prize ewes from the Royal Show, winning the sweepstakes for best ram with Newton Lord, all three first flock prizes, and six other first prizes, and all with sheep bred in the flock, with only one exception. As evidence that the Fairview flock has been kept up-to-date it is only necessary to refer to the prize list of the Toronto Industrial Exhibition of 1898, when nine out of the ten first prizes offered for Shropshires were awarded to Fairview sheep, including the three flock prizes, one of which was open to all, one for Canadian-bred sheep and the other the American Shropshires Association's special for best flock of lambs bred by exhibitor. Another importation will be made this summer, and orders and commissions are now being received for the selection of show animals and breeding stock, and judging from the class and character of stock composing former importations it is safe to predict that only animals of first-class quality and breeding will find their way to Fairview. A choice flock of Barred Plymouth Rocks are also kept, and at the head of the harem is a model cockerel, for which a high price was paid, as none but the best is good enough for Fairview.

NOTICES.

A Healthy Nursery is the only safe to patronize; and not only that, but it should be free from insect infestation. Mr. C. Baker's nursery at London, Ont., was inspected this spring by Mr. G. E. Fisher, acting under the Dominion Government, and pronounced free from San Jose scale. See Mr. Baker's advertisement in this issue.

Caterpillar Barrier.—A great many of the worst insects that trouble fruit and ornamental trees gain access to the branches by crawling up the trunk. Such harmful pests as the Codling moth, which causes the wormy apples, and the Tussock moth, which has for years done serious devastation by destroying the foliage of trees in the gardens, streets and parks of Toronto and other places, are among these tree-climbers. Dr. Wm. Mole, Toronto, has discovered a preparation that when applied with a brush around the trunk of the tree in the form of a band remains moist and impossible of being crossed by caterpillars or other insects. An advertisement of this preparation appears elsewhere in this issue.

ESTABLISHED 1889

BELLEVILLE BOGLE & JEFFERS, PROPRIETORS. BUSINESS COLLEGE

Students have a LARGER EARNING POWER who acquire the following lines of preparation under our efficient SYSTEM OF TRAINING. IT HAS NO SUPERIOR.

1. Bookkeeping.
2. Shorthand.
3. Typewriting.
4. Telegraphing (Commercial and Railway Work).
5. Civil Service Options.

Students may commence telegraphing on the first of each month, and the other departments at any time.

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

Address: BELLEVILLE, ONT.

What is Your Work?
If you are dissatisfied with your situation, your salary, your chances of complete success, write to The International Correspondence Schools, Scranton, Pa., and learn how others so situated are getting **An Education by Mail**. Students in the courses of Mechanical or Electrical Engineering, Architecture, or any of the Civil Engineering Courses are soon qualified for salaried drafting room positions. Write for pamphlets. The International Correspondence Schools, Box 900, Scranton, Pa.

WOODSTOCK BUSINESS COLLEGE AND SHORTHAND SCHOOL.
We give an all-round practical education. Every transaction and every paper is real. Special advantages in Shorthand. Connected with the Business Educators' Assoc'n of Canada. Write for particulars. H. M. KENNEY, PRINCIPAL, WOODSTOCK.

CENTRAL Business College
STRATFORD, ONTARIO.
Properly prepares young men and women for business life. 44 of our recent students have accepted good situations. Business men appreciate our work, and apply to us for our graduates. Enter now if you can. Prospectus free. W. J. Elliott, Principal.

"McLaughlin Carriages Are Good Carriages."
SPECIAL FEATURES:

- Strictly A Standard Wheels (not B. C. or D. Standard).
- Finest Grade English Cast Steel Springs (not American open heart).
- Patented Noiseless Rubber and Brass Washers.
- Patented One-Lever Top.
- Patented Steel Safety Fifth Wheel (not unsafe malleable iron).
- Forged Steel Reach Irons, Brace Ends, etc., etc. (not malleable iron).
- Patented Noiseless Whiffletree Plates.
- Combined Dash Rail and Reel Holder.



"One Grade Only and that the Best"
Our motto for thirty years.

Eighty-three Varieties to choose from, and they're all right, up-to-date.

McLaughlin Carriages of necessity cost more than others, but they're cheaper in the end. Consider this carefully! Ninety-six page catalogue free, or of agents.

The McLaughlin Carriage Company, OSHAWA, CANADA.

Shipping Points—Oshawa and London, Ont.; Montreal, Que.; St. John, N. B.; Winnipeg, Man.

PLEASE MENTION FARMER'S ADVOCATE.

CANCER CURED WITHOUT KNIFE OR PLASTER. FULL PARTICULARS FREE. -om
F. STOTT & JURY, Bowmanville, Ont.

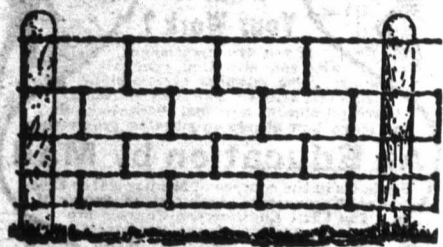
FARMERS WANT IT
 AND WILL HAVE IT.



We Make It
 And want you to sell it.

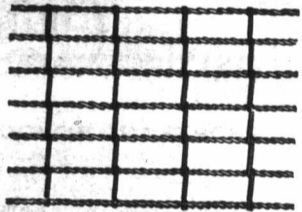
Write for our illustrated fence catalogue describing it.

The Frost Wire Fence Co.
 WELLAND, ONT., CAN..



We can cut your 1889 fence account just in half. We claim we have the most practical fence on earth. Four miles of it in use at the Experimental Farm, Guelph. Send for prices.

TORONTO PICKET WIRE FENCE CO.
 TORONTO, - ONTARIO.



Our patrons have been asking for a fence with cross-sections running through fence. Our Eclipse Fence Machine makes the fence cheaper, stronger than any other. We sell you the material and fence machine for a complete fence (no guessing what it's going to cost you), or fence machine alone, \$5.00. Write us for just what you want.

TORONTO PICKET WIRE FENCE CO.
 221 River Street,
 TORONTO, - ONTARIO.

WRITE FOR SAMPLE STAY and full particulars Machine \$10

Who'sale Price where we have no Agents. AGENCY FREE. NO DUTY TO PAY

THE BOWEN CABLE STAY FENCE CO.
 Box No. 58 NORWALK, OHIO., U.S.A.

CYCLONE FENCE CO.

From 27 to 60 inches.
 From 7 to 14 Cables.

Build Your Fence Cheap.
 100 Rods Per Day.

TORONTO, ONT.

Sheep Shearing Revolutionized.

New Chicago SHEEP SHEARING MACHINE.

Greatest Machine ever Invented. Price, \$15.

(Used and endorsed by the Editor of the American Sheep Breeder.)

Don't butcher your sheep. Saves 1/2 to 1 lb. more wool per head.

Drop us a postal and we will tell you all about it. We also make Horse Clipping Machines. Chicago Flexible Shaft Co., 158-160 Huron St., Chicago.

LIVE STOCK AUCTION SALES

Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Edmonton; John I. Hobson, Guelph; Hon. M. H. Cochrane, Compton, P. Q.; or this office.

JOHN SMITH, BRAMPTON.

GOSSIP.

John Isaac, Markham, Ont., reports having 23 head of Scotch Shorthorns leaving Glasgow on the 14th of April for Quebec.

W. Thom, Lyndoch, Ont., writes under date of April 21st:—"Enclosed please find change of advertisement for May. I have sold the stock bull advertised to Mr. W. F. Bates, of Waterford, and the yearling goes to James K. Fraser, La Chute, Que. I have a splendid bull calf on hand yet, and some choice females, all ages, to dispose of, fit to show in any showing."

Mr. Sanders Spencer, Holywell Manor, St. Ives, reports in the London Live Stock Journal the sale to Mr. D. C. Flatt, Millgrove, Ontario, of a boar and ten young sows which, together with other selections, were to be shipped from Glasgow about the end of March. The selections from the Holywell Manor herd are said to be of exceptional merit individually, and represent several of the best tribes which have been in Mr. Spencer's herd for thirty years.

D. J. Gibson, Bowmanville, Ont., breeder of Holstein cattle, Tamworth swine and White Wyandotte fowls, writes:—"My advertisement in your valuable paper did good work last month, through which I have made a great many sales at good prices. Enquiries are still pouring in from all parts of the Dominion; in fact, the demand for Tamworth sows and Holstein heifers has been much greater than the supply." Mr. Gibson offers Tamworth pigs 2 months old, and White Wyandotte eggs. See advertisement.

AN IMPORTATION OF HOLSTEINS.

Messrs. A. & G. Rice, Currie's Crossing, Ont., breeders of Holstein cattle, write:—"The demand for Holsteins is extraordinarily good, as we were sold out of bulls of a serviceable age and had many enquiries. We have purchased from the celebrated and long established herd of Chapman & Horr Bros., Ohio, a carload of Holsteins personally selected for individual merit and breeding. Among the lot are six fine young bulls ready for immediate use and in fine breeding condition. We hope our customers will appreciate our effort in placing such bulls within their reach at a reasonable price. Owing to vexatious custom regulations it is considerable expense to bring over a few. As we are now able to handle a carload at a time, and have good connections and experience with the breed, we can give our friends the benefit of our experience. We have a reputation to maintain, and the newly imported bulls elsewhere advertised are of the right sort."

ANOTHER SHIPMENT OF "CRACK" STOCK FOR MANITOBA

Mr. James Yule, farm manager for Hon. Thomas Greenway, has again been in Ontario selecting high-class Shorthorns, Ayrshires and swine to strengthen the Prairie Home herds, and left on the 19th of April with a carload which he considers the best that he has ever shipped West, which is saying a good deal, when we remember the show he made at the Winnipeg exhibition last year. We have not less than 13 first prizes, and amongst others are four head of Shorthorns from the Trout Creek herd of Mr. W. D. Flatt, Hamilton, including the grand roan 4-year-old imported cow Lady Jane, for which Mr. Flatt paid \$500 a few months ago. She was sired by the Cruickshank bull Coldstream, is of the Lancaster family, long regarded as one of the best at Siltyston, is a worthy representative of the tribe and of the most approved pattern. From the same herd went the young cows Elvira 21st and Isabella Stanley, and the young bull Golden Fame's Hero, a son of imported Golden Fame, the bull that Mr. Flatt paid \$720 for when 13 months old. Mr. Yule selected six head from the herd of Mr. Thomas Russell, Exeter, including his well-known young prize-winning cow Bracelet 8th, by imp. Rantin Robin, the others being choice young animals of fine quality and breeding. From the herd of Mr. W. W. Ballantyne, Stratford, were selected a pair of typical Ayrshire cows, both bred from imported cows, one being sired in Scotland. From Mr. N. Dymont, Clappison's Corners, were taken two high-class Ayrshire cows, one of which has won 13 first prizes straight at leading shows, including the Toronto Industrial, and both have been awarded highest honors in milking tests. A Yorkshire sow was selected from the Summer Hill herd of Mr. D. C. Flatt, Millgrove. She is said to be of great merit, one of the best in that famous herd, and likely to hold her own in any company. A number of other Yorkshires and several Berkshires and fine specimens of poultry were included in the shipment, but we have not at this writing the names of the parties furnishing them. Mr. Yule is a hustler. He can buy a carload of first-class stock in as little time and with as good a judgment as any man within our ken. Premier Greenway is to be congratulated on securing the services of so faithful and capable a manager for his farm, herds and flocks.

NOTICES.

A Strong, Safe, Visible Fence is the proper sort when it is neat and cheap. These are the good qualities claimed for the **TORONTO PICKET & WIRE FENCE CO.** for either of the sorts they sell. The Lock Grip Section kind so largely used on the Experimental Farm, Guelph, is proving very satisfactory, and their latest up-to-date fence woven with the new Eclipse fence machine looks to be all right, and costs \$35 per 100 rods when six wires high. See advertisement in this issue.

A Promoter of Better Times.—Twenty-one and two-thirds machines per hour, or fifty-two per day, Sundays included, for one year, is lively work for one company, when it is binders, reapers, mowers, corn harvesters, rakes and shredders that is referred to. This is claimed to have been the output of the McCormick Harvesting Machine Co., of Chicago, last year. It is evident that the term "expansion" is not confined merely to American politicians, which has tended to divide parties during the last few months, as McCormick goods have also spread themselves at a tremendous rate, not in presentations, however, but by bargains between the McCormick Company and shrewd farmers who are wise in their deals. This is not only a sign of better times, but an influential promoter of a more favorable future.

HOGS WILL ROOT
 but the hog hasn't been bred that will tear up or break through the

ELLWOOD WOVEN FENCE.

Made of hard Bessemer Steel Wires, rust proof, and proof against all attacks of animals, heat or cold, dry or wet, wind or weather. Although the best,

The Ellwood Costs but Little and is practically everlasting.

Your dealer ought to have it. If he hasn't, write for catalogue, etc., to

AMERICAN STEEL & WIRE CO.
 CHICAGO AND NEW YORK.

GOOD FARM FENCE

should turn all kinds of live stock and even tramps; should expand and contract according to the weather so as always to be tight; should stand all storms—even fire and last indefinitely.

The Coiled Spring Page
is just such a fence.

Its virtue is attested by the fact that there is more of it in use than all other makes combined. Prices lower than ever this year.

THE PAGE WIRE FENCE CO., (Ltd.)
 Walkerville, Ont.
 Or DAVID ROSS, N. W. Agt.,
 Box 855, Winnipeg.

PLYMOUTH BINDER TWINE

**IS PUREST.
 IS STRONGEST.
 IS EVENEST.
 IS LONGEST.**

IT PAYS TO BUY THE BEST

**BEST AND MOST ECONOMICAL.
 DOES QUALITY COUNT WITH YOU?**

American Standard Corn and Bean Planter.

PRICE, \$2.00 WITH ORDER.

FARMERS!

The leading improvement in Disk Harrows to-day is the spring pressur and its application to hard and soft ground. And to avoid weight on horses' necks the pressure must be applied directly over and in line with center of disk—just where you will find it in the Watford, and where it has been for years. See buggy spring construction for comfort. If no Watford agent in your neighborhood, write us and we will make an interesting price, which, however, must not be understood as having any bearing on the regular price. WHOLESALE OF RETAIL just a special price for a special purpose. If in want of a good plow, just mention plows.

Thom's Implement Works, - Watford, Ont.

ESTABLISHED 1875.

B. D. STEACY, Importer, BROCKVILLE, ONT.
 SOLE AGENT FOR CANADA.

FOR SALE BY

The Tiller of the Soil

Deserves the gratitude of mankind, his are the hardships, exposure and wearing work of life. Its pleasures are few and its disappointments many. Dyspepsia, Rheumatism, Bad Blood, Anxious Nerves and worried mind beset the struggling farmer and make his task of providing food for the people harder than it should be. **Dr. Ward's Blood and Nerve Pills** remove these troubles and give the vim, vigor and vitality that make success sure. You can get a book of information free. Dr. Ward's Blood and Nerve Pills 50c. per box, 5 for \$2 at druggists or mailed by the

THE DOCTOR WARD CO., Limited. Dept. F.
71 VICTORIA ST., TORONTO.

To the Farmers of this Canada of Ours...

WE heartily thank you for the liberal and increased patronage which has made the past year a record-breaker in our business. Remember, we do not class our

Queenston Cement

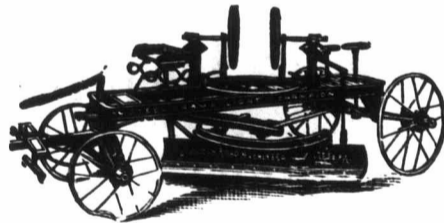
with the Water-Limes and Hydraulic Cements now on the market, but guarantee it equal to the **Imported or Domestic Portlands** for all farm structures, such as Basement Walls for Stables, House or Cellar Walls, Cisterns, Hog Pens, Poultry Houses, and for all kinds of Stabling.

Kindly investigate our **System of Ventilation**. This system is fully covered by letters patent, but to our patrons we make no charge.

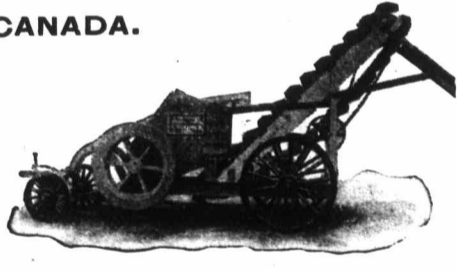
Write for our New Pamphlet for 1899, containing valuable information, prices, etc.

Isaac Usher & Son, Queenston, Ont.

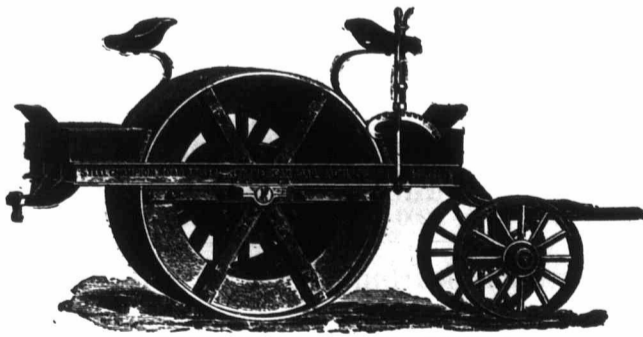
GOOD ROADS MACHINERY CO'Y,
HAMILTON, CANADA.



Steel "CHAMPION" Road Grader.



"CHAMPION" Steel Frame Mounted Portable Rock Crusher.



"CHAMPION" Horse Road Roller.

Road Graders,
Rock Crushers,
Steam and Horse
Road Rollers,
Engines,
Road Plows,
Wheel and Drag
Scrapers,
Macadam Wagons
for spreading
Road Material,
Elevators
and Screens. -om

HAMILTON

Engine and Thresher Works.

ESTABLISHED 1836.

FIRST IN THE FIELD! STILL IN THE LEAD!

WE MAKE AND SELL MANY MORE ENGINES AND THRESHERS THAN ANY OTHER FACTORY IN CANADA.

OUR COMPOUND AND SIMPLE TRACTION AND PLAIN ENGINES

Are models of SIMPLICITY, and pictures of NEATNESS and FINISH. They are unequalled for high-class working qualities.

OUR PEERLESS DAISY AND ECLIPSE SEPARATORS AND CLOVER HULLERS

Are unsurpassed for fast and clean threshing. Forty-page Descriptive Catalogue sent on application to

SAWYER & MASSEY COMPANY, Ltd., HAMILTON, ONTARIO.

GOSSIP.

W. H. Parlee, Sussex, N. B., in sending list of subscribers, writes:—"I have just received in quarantine two very fine Ayrshire heifers in calf from Scotland. They are of good size and promise to make grand cows."

H. C. Graham, Ailsa Craig, Ont., writes:—"The bulls I offer in this issue are descended from heavy milkers; are all reds; one is got by Calthness, and the others by bulls as fashionably bred and good stock-getters. Any person wanting a really first-class animal should see these bulls."

Mr. W. S. Marr, of Upper Mill, Aberdeenshire, has recently met with a heavy loss in his herd of Shorthorns. The dam of the bull calf Scottish Champion, sold at auction to Mr. Duthie last year for \$1,650, gave birth to triplets, two of which were dead when born. The other was alive, but, unfortunately, has since died.

Charles Rankin, Wyebridge, Ont., writes:—"Please discontinue my advertisement of young bulls. I have been a breeder of Shorthorn cattle for eighteen years, but am in a backward part of the country for being known. I have never advertised much, and I have much satisfaction in telling you that it is through the medium of the FARMER'S ADVOCATE that I have been enabled to sell my stock this year easier and at better prices than I have ever done before."

Mr. Richard Booth, son of the late Mr. T. C. Booth, has taken over from the executors the management of the Warlaby farm and herd of Shorthorns, in Yorkshire, Eng. Ten old cows and a few heifer calves were retained when in 1885 about fifty head were sold, and the herd has increased to about forty head, the families represented being Brights, Ribys, Christons and Mantalinas. This is no doubt the oldest herd in existence as having continued in the hands of one family. Its history has been an interesting and honorable one, and the young breeder will have the best wishes of very many for his success.

Mr. John Fulton, Jr., Brownsville, Ont., writes:—"My brood Farmwork sows came through the winter in good shape, and I have the finest lot of spring pigs I ever had. I had sixty-six pigs from six sows. The last sow that farrowed is Brave Lassie, whose sire is Amber Luther, the first prize boar at Toronto and London last year. She is a very deep and lengthy sow. Her pigs are from Revell's Choice, a very lengthy, heavy-boned hog. I have four choice young sows bred which I keep for my own use, but since I have had such good luck with my older sows I will sell these reasonably. Two of them are from Brave Lassie."

J. M. Gardhouse, Highfield, Ont., writes:—"Shires, Shorthorns and Leicesters have all wintered well. Sales have been good, prices fair and business brisk. There is ready sale for young draft stallions and fillies. Our 2-year-old Fitzsimmons went to J. R. Robinson, Manion, Ont. His dam is Queen of Highfield, the sweepstakes mare, and Fitz looks like making a champion horse. A promising yearling stallion was sold to A. J. McArthur, Paisley, Ont. Shorthorn sales have been brisk. Have sold 30 head since September. Some of the principal sales were to White Bros., Perth, who selected seven head and got some very promising heifers by imp. Scottish Pride and imp. Prime Minister; also to Mr. Robinson, Manion, Ont. These are new leaders of Shorthorns, and they are the right men to make a success of them. W. D. Flatt, Hamilton, purchased three very promising young bulls by Scottish Pride, and a capital roan heifer, Verbena's Flower, by imp. Guardsman, g. sire Eclipse, a winner in Scotland, and g. g. sire Royal Windsor, a Royal winner. With her was a red bull calf. She was one of the herd that we did not care to see go away, but the price was a good one, and she has gone where she will not only do Mr. Flatt good, but assist the reputation of the herd where she was bred. Capt. T. E. Robson, Ilderton, got Verbena's Dandy, by imp. Prime Minister, and out of Verbena's Blossom. She is a very promising calf, and should do good work in the hands of the genial Captain. Along with her went two fashionably bred heifers direct from imported stock. To W. A. Heuback, Touchwood Hills, N. W. T., went one carload and a half of bulls and heifers. They were a good lot, and should do well on the ranges. Prime Minister's calves are coming good, and should sell well in the fall. For Leicesters the demand has been beyond our supply, as we could not fill several orders for ewe lambs and breeding ewes. Have a grand lot of good healthy lambs, which along with our shear-lings will place us in a position to supply either show or breeding stock in the fall. Our flock numbers about 100 head at present. We shipped sheep to the United States, Manitoba, Quebec, Calgary, and Ontario. The first-prize yearling ewe at Brantford gave us a pair of lambs, and though our four show ewes bred nine lambs, and are raising six of them, my short experience teaches me that we cannot show aged ewes to win and raise lambs that are satisfactory."

MR. F. T. GUY'S AYRSHIRE.

Within a stone throw of Darlington station, in the township of the same name, and some four miles east of the town of Bowmanville, we found upon a recent visit in that section a very choice bunch of Ayrshire cattle in the hands of Mr. F. T. Guy, the foundation of which was produced by his father, the late Thomas Guy, so widely and favorably known among Ayrshire breeders in former show-yards in this country. The present herd was built upon the Orange Blossom foundation, a family highly prized on account of their persistent milking qualities, and upon which were employed sires whose ancestry traced directly to the Tulip strain, which on account of their great flow of high-testing milk were equally well prized by their owners, and bred from those families we were shown a very choice young herd of some 20 animals, seven of which are now milking. The younger animals are largely the result of the mating with Guy's Defender 10173 (by Lord Derby 1450, and out of Idalia 4th 2200), a straight good bull employed until recently, and whose place has been taken by a very choice youngster lately selected from Mr. D. Drummond's herd. Worthy of special notice are a pair of 11-months bulls, either of which have quality sufficient to warrant them being fitted for show purposes, and both of which are held for sale. See Mr. Guy's advertisement in this issue.

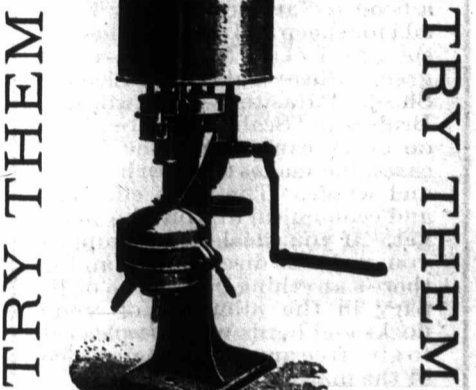
HORSEMEN! THE ONLY GENUINE



See large advertisement on page 424, Sept. 1st (1898) issue, and which is of unusual interest to the readers of the FARMER'S ADVOCATE. And any horseman interested in a reliable remedy can well afford to investigate the matter.

The Lawrence-Williams Co.,
21 Front St., West, Toronto, Ontario.

Alexandra & Melotte



TRY THEM CREAM SEPARATORS TRY THEM

FOR PARTICULARS, APPLY TO

R. A. LISTER & CO.
LIMITED,
579 to 581 St. Paul Street,
MONTREAL, - QUEBEC.

SUPPORT HOME MANUFACTURE

CANADIAN-MADE HAND SEPARATORS



Turns easy. Open bowl. Well finished. Most durable. Price reasonable. Best investment farmers can make. Catalogue free. Delivery Supplies of Every Description. Genuine Parchment Paper, for lb. prints, neatly and tastefully printed. By mail, post-paid. Prices reasonable. Write us.

JOHN S. PEARCE & CO.,
LONDON, ONT.

"To be simple is to be great."—Emerson.

AMERICAN CREAM SEPARATOR

is considered such a Great Machine. No simpler Machine can exist, and the results of the work are wonderful.

GASOLINE ENGINES

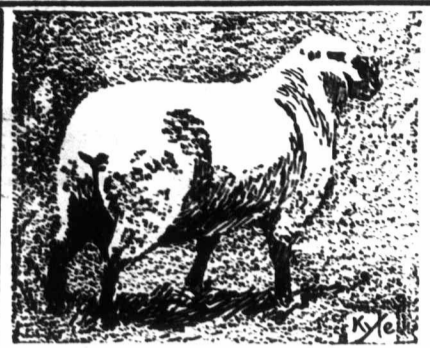
for all purposes.

WRITE US for full particulars and Catalogues.

Richardson & Webster,
ST. MARY'S, ONT.

THE ONTARIO VETERINARY COLLEGE (LIMITED),
TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto. Patrons: Governor-General of Canada, and Lieut.-Governor of Ontario. Fee, \$65.00 per session. Apply to ANDREW SMITH, F.R.C.V.S., Principal. 18-2-y-om



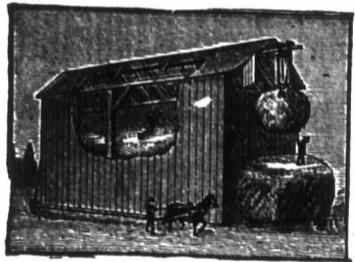
Persiatric Sheep and Animal Wash

A powerful non-irritant and healing preparation that is proving a boon to farmers all over Canada for sheep and cattle ailments, such as Ticks—Maggots—Gangrene—Shear Cuts—Red Lice on Sheep—Parasites—Ringworm—Bruises and Scab. Full directions on every can. Cures the worst cases, and makes the skin healthy and whole. The most effective and economical dip on the market. If your dealer can't supply you, write us direct for it, and if there's anything out of the ordinary in the ailments of your flocks and herds we'll be pleased to give free any additional advice in the matter.

THE PICKHARDT RENFREW CO., Limited,
STOUFFVILLE, ONT.



BUCHANAN'S (Malleable Improved) PITCHING MACHINE
For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter.

Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

RESPONSIBLE AGENTS WANTED

Circulars, Prices and Terms on application to **M. T. BUCHANAN & CO., Ingersoll, Can.**



FAMILY KNITTER!

Will do all knitting required in a family, homespun or factory yarn. **SIMPLEST KNITTER ON THE MARKET.** We guarantee every machine to do good work. Agents wanted. Write for particulars.

PRICE, \$8.00.

DUNDAS KNITTING MACHINE CO., DUNDAS, ONTARIO.

TORONTO ENGRAVING CO.
92 BAY ST
CUTS BY ALL PROCESSES
LIVE STOCK A SPECIALTY.

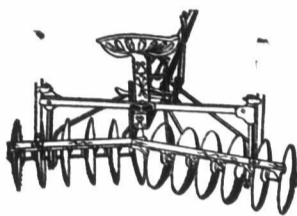
DAVID MAXWELL & SONS

ST. MARY'S, ONTARIO.

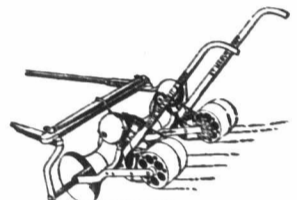
MANUFACTURERS OF High-Class Farm Implements



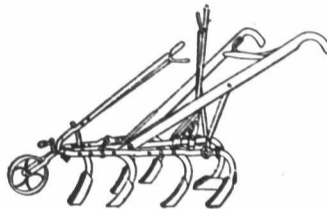
THE MAXWELL BINDER.



DISK HARROW.



TURNIP SOWER.



SCUFFLER.

GOSSIP.

At Mr. J. H. Simonton's farm, adjoining the City of Chatham, we had the pleasure of looking over his stock of Tamworth swine, and although the enormous demand has depleted his herd in numbers, Mr. Simonton has retained a long string of splendid brood sows which have or will farrow during the present spring. Mr. Simonton is one of those who foresaw the present rise and demand for this class of stock, and has never missed an opportunity of purchasing really good stock when he could see or hear of any for disposal, and even then only retained the very select of their progeny for his breeding pens. Perhaps in no herd on the continent could a greater variety of first-class pedigrees be found. Notably among the brood sows may be mentioned the splendidly formed Amber Lilly, Amber Clara and Precilla, the first named being a full sister to the great show sow Amber Luther, winner of 1st and sweepstakes in the aged class in 1888, in perhaps the most important competition in the history of the breed. These are three very strong sows of true Tamworth conformation, possessing the requisite length and depth, with a good amount of bone, and under their owner's management are in the best possible breeding form. Amber Mimulus, by Astronomer, and out of the great show sow Middleton Mimulus, possesses all the qualifications for gilt-edge production in her combination of breeding and conformation. She has just weaned a very nice litter of eight to the present aged stock boar Sambo, Eliza, by Nimrod (imp.) 174, and out of Briery Banks Bell, suckles a choice bunch of ten to Hunter, a strong yearling, by King David, which mating we would consider highly desirable, as the length and quality of the Nimrod coupled with the growth and strength of bone of Hunter should produce a robust race which should retain the strong qualities of both the sire and dam, while maintaining the feeding qualities so characteristic in both. Among the sires most recently employed we would emphasize the strongly constituted and vigorous Sambo 338, by Rex 177, and out of the great show sow Countess 2nd 105, and while in the hands of his breeders was an easy winner at all the leading shows, including Toronto, Montreal and Ottawa. Athol 932, by Amber Rodman 319, dam Amber Duchess 110, and Hunter 1047, by King David and out of Daisy 925, are also in service, while lately added is the splendidly-bred young Whitacre Lad 115, by Whitacre Monarch (487), and out of the Royal Show sow Whitacre Countess 2nd (imp.) 1010. Whitacre Lad was farrowed in quarantine the latter part of August, and was the first choice of the litter. From his sire and dam and from his own merits we consider this one of the wisest purchases made within the period of our knowledge of the herd, coming as he does from one of the best herds in England, and from one of the best if not the best sow in England. Barring misfortune, we shall look forward to very satisfactory results from the mating with such a sire. Mr. Simonton frequently changes his advertisement, and in this issue he offers pigs of a great variety of ages and breeding.

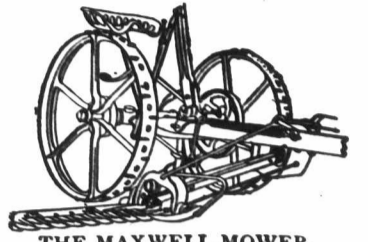


Binders, Reapers, Mowers, Hay Rakes, Hay Loaders, Hay Tedders, Disk Harrows, Scufflers, Turnip Sowers, Turnip Slicers and Pulpers, Hand and Power Straw and Ensilage Cutters, Churns, Wheelbarrows, Cider Mills, Corn Shellers, Pea Harvesters, Lawn Mowers, Etc.



SEND FOR ILLUSTRATED CATALOGUE.

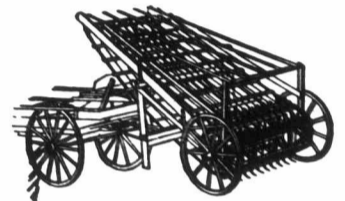
Agents Wanted in all Unoccupied Territory.



THE MAXWELL MOWER.



TEDDER.



LOADER.



TEST OF

Alpha De Laval and Reid's Improved Danish Cream Separators

Made at Nilestown Factory of Thames Dairy Co

Date, 1890.	Machine	Amount skimmed per hour	Speed revolutions per minute.	Butter-fat left in skim milk at following temperatures.	Lbs. Milk per Lb. Butter.
January 25	Alpha	2800	6000	80 85 90 95	21.10
January 27	Reid's	2800	6200	.05 .02 .01 .01	22.45
January 30	Alpha	2800	6000	.15 .14 .12 .10	
January 30	Reid's	2800	6200	.05 .03 .02 .15 .10 .08	

On January 25 Buttermilk from Cream of Alpha churned at 50 tested .05 (no water added).

January 26th Buttermilk from Cream of Reid's Improved Danish churned at 48 tested .10 (no water added).

Mr. Richardson, St. Mary's, and Mr. John Brodie, Mapleton, were present when testing Reid's Improved Danish, January 27th.

On January 30th both Separators were running at the same time, and the skim milk from the Reid's was put through the Alpha. There were 3,700 lbs. of milk received, and after it had been skimmed by Reid's Improved at a temperature of 90 degrees the Alpha skimmed 303 lbs. of Cream from the skim milk which tested 8/10 of 1 per cent.

The Cream from each Separator was ripened by the use of a pasteurized starter, and contained .65% of acid at the time of churning when tested by Farrington's Alkaline Tablets.

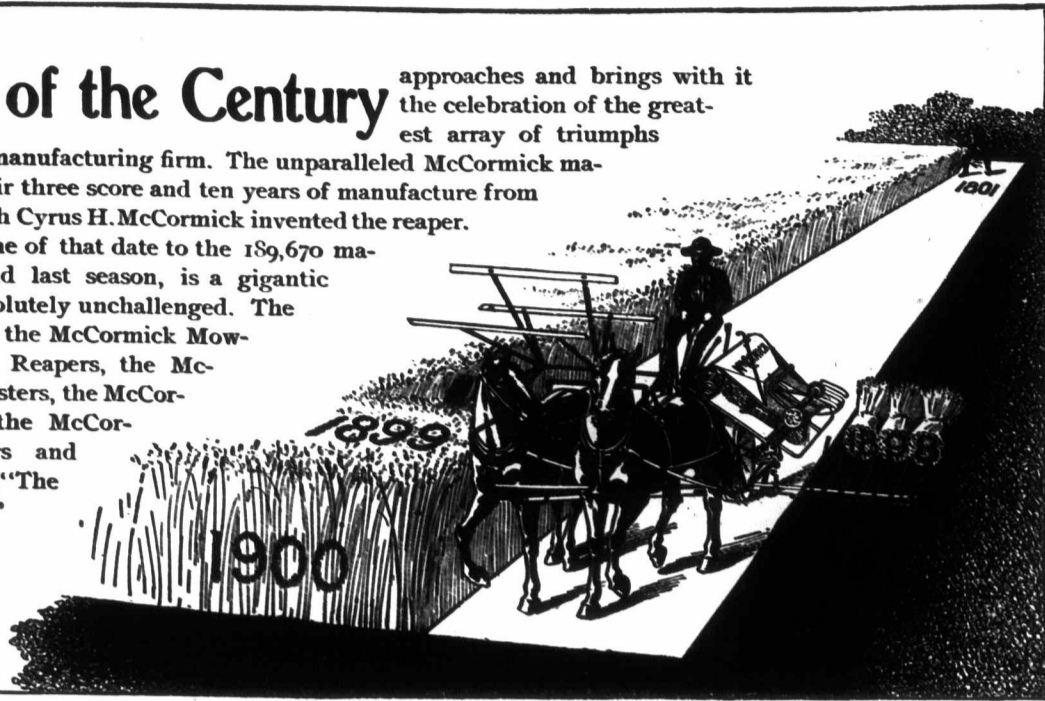
(Signed) **T. B. MILLER,**

Manager Thames Dairy Co.

The End of the Century

approaches and brings with it the celebration of the greatest array of triumphs ever credited to one manufacturing firm. The unparalleled McCormick machines will reach their three score and ten years of manufacture from 1831, the year in which Cyrus H. McCormick invented the reaper. From the one machine of that date to the 189,670 machines built and sold last season, is a gigantic growth of output absolutely unchallenged. The McCormick Binders, the McCormick Mowers, the McCormick Reapers, the McCormick Corn Harvesters, the McCormick Hay Rakes, the McCormick Corn Huskers and Fodder Shredders are "The Best in The World."

McCormick
Harvesting Machine
Company,
Chicago.



IF YOU WANT A
"GANG" TRY OURS.

COCKSHUTT'S "New Twin" Gang Plow.

LIGHT DRAFT. BUILT ENTIRELY OF STEEL.

Cheap,
Strong,
Durable.

Will Plow from
Two to Eight
Inches Deep.



A Taker,
A Seller,
A Worker.

COCKSHUTT
PLOW CO., Ltd.,
BRANTFORD,
CANADA.

"Chainless"

"Perfect"

"Garden
City"

"Dominion"



WELLDAND VALE MFG. CO., Limited,

ST. CATHARINES, ONT.

WILL YOU HAVE THE BEST, OR THE OTHER WITH NO REPUTATION?

ROGERS' "PEERLESS"
IS THE
BEST



KNOWN FOR FARMERS' MACHINERY AND GENERAL PURPOSES. GREAT SAVING TO USE IT. WON 12 GOLD MEDALS. HARDWARES ALL SELL IT. KNOWING ONES WANT IT.

QUEEN CITY OIL CO., Limited, TORONTO.
SAMUEL ROGERS, President.

THRESHERS

SEND TO US FOR PAMPHLET NO. 67 RELATING TO THE

COCK O' THE NORTH
SAPARATOR.

The John Abell Eng. & Mach. Works Co. Limited,
TORONTO, CANADA.

PLEASE MENTION FARMER'S ADVOCATE.

BOYS FOR FARM HELP.

The managers of Dr. Barnardo's Homes will be glad to receive applications from farmers or others for the boys who are arriving periodically from England to be placed in this country. All the young immigrants will have passed through a period of training in English Homes, and will be carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained on application to Mr. ALFRED B. OWEN, Agent, Dr. Barnardo's Homes, 214 Farley Ave., Toronto.

SHEEP BREEDERS' ASSOCIATIONS.

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary Lafayette, Indiana.

GOSSIP.

At the forty-seventh annual sale of young Shorthorn bulls, the property of Mr. W. T. Talbot-Crosbie, Ardferd Abbey, County Kerry, Ireland, Hope of Clydesdale, a handsome roan, was the favorite, and sold to Mr. Young, of Antrim, for 65 guineas. The same buyer took Prince of Hope for 42 guineas. Eighteen bulls averaged £23 10s. 9d.

Mr. Edgar Silcox, Shedden, Ont., breeder of Jersey cattle, Tamworth swine and White Wyandottes, advertises in the FARMER'S ADVOCATE, and finds good demand for his stock. His herd of Jerseys number twenty-two head, fourteen of which are registered cows, and at the head stands the typical dairy bull Sir Brier of Brampton, winner of first prize and sweepstakes as best bull any age at the Provincial exhibition at Montreal in 1897. Among the animals Mr. Silcox offers for sale is a two-year-old heifer out of Alice of Conmore, 42 lbs. milk per day testing five per cent., and another out of a daughter of this cow which promises well. These have been bred to calve in June and July. An excellent yearling bull and a promising eight-months bull calf, great-grandsons of the great old cow Massena (502 lbs. 3 ozs. butter in one year and fifteen days), whose son, a sweepstakes winner at Toronto exhibition, was used in Mr. Silcox's herd before Sir Brier, are offered for sale. The bull calf above mentioned is out of Alice of Conmore, and both he and the yearling are of solid color. Some fine young Tamworth boars and sows of breeding age are held for sale, as well as spring pigs. The White Wyandottes are of McCormack strain.

OFFICIAL TESTS OF HOLSTEIN-FRIESIAN COWS.

The following tests of Holstein-Friesian cows (May 1 to May 31, 1898) are for seven consecutive days, and supervised by officers of agricultural colleges and State experiment stations, or by persons vouched for by such officers. The amounts of butter-fat are determined by the Babcock test, and the amounts of butter are calculated on the basis of 80 per cent. fat to a pound of butter, the rule established at the World's Columbian Exposition.

- Rosa Silva's Last 39389, 2 years, 11 months, 12 days; fat, 10,339 lb.; butter, 14,174 lb.
- Lady Longfield 3rd 39945, 3 years, 3 days; fat, 12,894 lb.; butter, 16,114 lb.
- Jessie Forbes 3rd 32286, 6 years, 1 month; fat, 17,111 lb.; butter, 21,391 lb.
- Vevie De Kol 40332, 1 year, 9 months, 22 days; fat, 7,936 lb.; butter, 9,921 lb.
- Johanna Clothilde 40384, 2 years, 6 months, 26 days; fat, 10,339 lb.; butter, 13,549 lb.
- Johanna Rue 3rd 42167, 2 years, 29 days; fat, 13,477 lb.; butter, 16,846 lb.
- Johanna Aaggie 36477, 4 years, 5 months, 9 days; fat, 18,289 lb.; butter, 22,861 lb.
- Aaggie Paul 40930, 2 years, 2 months, 2 days; fat, 12,574 lb.; butter, 15,728 lb.
- Fannie Douglas 4th 41943, 1 year, 11 months, 26 days; fat, 8,354 lb.; butter, 11,198 lb.
- Ollie Watson 3rd 41944, 2 years, 11 days; fat, 7,311 lb.; butter, 9,139 lb.
- Franktje 2nd 40125, 1 year, 9 months, 28 days; fat, 8,637 lb.; butter, 10,796 lb.
- Gewina 2nd's Lulu 41945, 2 years, 17 days; fat, 11,959 lb.; butter, 14,919 lb.
- Lottie Lass 19220, 9 years, 2 months, 3 days; fat, 15,751 lb.; butter, 19,691 lb.
- Vrouwkje of Hilaard 7th 29449, 7 years, 26 days; fat, 14,731 lb.; butter, 18,489 lb.
- Sijtje Twisk Pietertje 38233, 4 years, 10 months; fat, 12,041 lb.; butter, 15,051 lb.
- Hetje 6th's Pietertje 38945, 3 years, 29 days; fat, 11,123 lb.; butter, 13,904 lb.
- Lotty Moselle's Pietertje Mechthilde 41805, 2 years, 2 months, 24 days; fat, 9,765 lb.; butter, 12,206 lb.
- Hetje 6th's Mechthilde 41806, 2 years, 1 month, 7 days; fat, 9,001 lb.; butter, 11,251 lb.
- Mechthilde of Midland 41806, 2 years, 1 month, 29 days; fat, 7,456 lb.; butter, 9,321 lb.
- Midland Gem 41811, 1 year, 11 months, 19 days; fat, 7,916 lb.; butter, 9,895 lb.
- Pietertje Mechthilde of Midland 41887, 2 years, 2 months, 1 day; fat, 7,732 lb.; butter, 9,665 lb.
- Leda's Princess 2nd's Aaggie Wayne 33591, 6 years, 10 months, 3 days; fat, 16,441 lb.; butter, 20,551 lb.
- La Reina Maud 43380, 3 years, 7 months, 3 days; fat, 13,681 lb.; butter, 17,101 lb.
- Aaggie Paul 40930, 2 years, 2 months, 2 days; fat, 11,303 lb.; butter, 14,129 lb. Cost per pound, 6.3 cents. S. HOXIE, Sup't Advanced Registry, Yorkville, N. Y.

THE LATE AMERICAN SHORTHORN SALES.

At the sale of F. A. Webster's cattle at Iowa City, April 5th, forty-seven head averaged \$24.58. The highest price, \$1,305, was made by the seven-year-old cow Rose of Honnibree 2nd, by imp. Scottish Chief. C. C. Bigler & Son, Hartwick, Iowa, were the buyers. Gay Victoria, three years old, by imported Gay Monarch, brought \$645; Strathearn Missie, \$675, and Red Crest, \$900. It was a good sale, the eleven top females bringing an average of \$900 each.

Martin Flynn sold at Des Moines, Iowa, April 6th, fifty-one head at an average of \$207. A number of thin, small, dehorned cows, which had been bought last fall, pulled the average down. The highest price for a female was \$410, and for a bull \$330.

I. H. Allen, of Chanton, Ia., sold thirty-four animals on April 7th at an average of \$109.55, the highest price for a bull being \$375, and for a cow \$255. The cattle were thin and mostly dehorned.

SOME GOOD PRICES FOR "DODDIES."

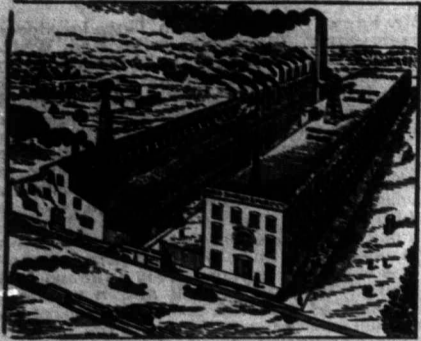
At the sale of the entire herd of Aberdeen-Angus cattle belonging to M. A. Martin, Wall Lake, Iowa, April 4th, the 4-year-old bull Black Jam, by Jim Jams, brought \$500, and Valiant Knight \$325. The 4-year-old cow Eunice of Estill 2nd sold for \$465, Pride of Lakeside for \$445, and Queen 3rd of Lakeside for \$400. The 47 head sold averaged \$208 each.

H. W. Elliott, Estill, Mo., sold at Kansas City, April 6th, 60 head at an average of \$209.91. The highest price was \$400 for Polaria 28298. Nine others sold at \$300 to \$365 each.

MARENGO MAY GO TO SOUTH AMERICA.

Mr. Philo L. Mills, Nottingham, England, owner of Marengo, the champion Shorthorn bull at the Royal Show of 1888, having been importuned by South American breeders to put a price on the bull, has consented and named \$2,000 as the figure. It is not likely that the price will stand in the way of a deal, as the Argentine buyers generally take what they want when a price is named.

Brantford
Galvanized Steel Windmills,
Towers and Grinders. ...



Our New Factory—Large, Well Equipped.

Send for Illustrated Catalogue of Windmills, "Maple Leaf" Grinders, Iron and Wood Pumps, Bee Supplies, etc. (Mention this paper.)



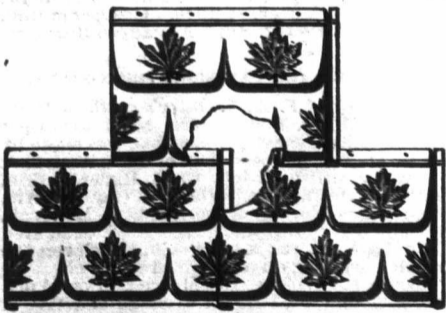
ROOFS must be chosen with care and judgment in any country, and especially so in Canada.

All our products are constructed for use in Canada, and ample provision is allowed for contraction and expansion, and we guarantee them to be water, wind and storm proof.

Information from any dealer, but should he offer you something "just as good," write us.

Pedlar's patent steel shingles are the best, and the best cost no more than the poorest.

Pedlar Metal Roofing Co.
OSHAWA, CANADA.



IF PEOPLE ONLY KNEW

the advantages of using metal roofing constructed on our patent "SAFE-LOCK" principles they would not accept a substitute.

OUR "SAFE-LOCK" SHINGLES

interlock each other on all four sides, leaving no openings for snow or rain to get in. They are easily put on by anyone, are practically fire and lightning proof, and give a building a neat, finished appearance. We can tell you more. Ask for free catalogue and samples.

THE METAL SHINGLE AND SIDING CO., LIMITED.
PRESTON, ONTARIO.

LIVE STOCK AUCTIONEER.
The undersigned is prepared to conduct pure-bred auction sales. 20 years' experience. References: John I. Hobson and Alfred Stone, Guelph; Jas. Hunter, Alma, and Mossom Boyd, Bobcaygeon. Thos. Ingram, Care Mercury Office, Guelph, Ont.

GOSSIP.

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

At the Castle Douglas (Scotland) spring show Ayrshires were judged by Mr. G. Muir, Knockdon, and Mr. James Moffat, Gateside. The herd book prize for the best female was won by Mr. William Howie, with the first aged cow in milk, Gipsy 2nd of Burnhouses. Mr. Howie had also the first three-year-old cow in calf. Mr. Andrew Mitchell being first for aged cows in calf, and Mr. Stroyan first for three-year-olds in milk. The latter was one of a pair which won the Queenshill prize for the best pair of three-year-olds. There was a capital show of young queys, Mr. McKinlay being first for two-year-olds. Messrs. Wardrop were first for storks. Mr. McKinlay's celebrated old bull, Douglas Chief, easily won the herd book special for the best male.

AN IMPORTANT SHIPMENT OF SHORTHORNS.

Mr. Frank Brown, Superintendent of the Oak Hill Stock Farm of Mr. Chas. E. Ladd, at North Yamhill, Oregon, has been in Canada for a month making selections of choice Shorthorns from a number of well-known herds, and shipped from London on the 20th of April twenty head (two bulls and eighteen females), which compose one of the most valuable and uniformly good lots of cattle that has left this country in recent years. Mr. Brown has displayed excellent judgment in his selections, making individual merit the first consideration, while requiring in addition good sound pedigrees, many of the animals being of the most popular families, and all having the benefit of the blood of many high-class sires of the most approved breeding and type. Youth, beauty and robustness are combined in an eminent degree in the shipment, none being over four years old, and it required no little skill to get together so good a lot at the present time. The bull selected is the rich roan yearling Commander 139005, from the herd of Captain T. E. Robson, Iderton, and is the best son of the famous Moneyfuffel Lad, thrice champion over all Canada, and is "a chip off the old block," full of substance, quality, symmetry and character, and should nick well with the females he goes with. His dam is Isabella 10th, by the imported Cruickshank Victoria bull Vengarth, and traces to imported Isabella, by Diphthong. From the same herd was taken the charming red yearling heifer, Louan of Browndale 5th, by Gold Dust, sire of the sweepstakes bull calf at the Omaha Exposition, and out of Louan of Browndale 2nd, winner of first prize at Toronto, London and Ottawa in 1888.

From the herd of Mr. W. D. Platt, Hamilton, was selected Missie of Neidpath 22nd, a handsome roan four-year-old cow, by Scotsman, a son of the champion Barmpton Hero, and of the Cruickshank cow Lively 22nd, dam by imported Prince Royal. This is one of the popular Missie family, bred by Mr. Marr, Upper Mill, Scotland, from which came Marengo, the champion bull at the Royal English Show in 1891. Missie 23rd, a capital roan two-year-old of the same family, and from the same dam as the last named, was taken from the herd of Mr. F. A. Gardner, Britannia. She was sired by Bold Briton, a straight Scotch-bred bull, by Golden Crown, and is one of the best in the lot.

From the herd of Mr. James Leask, Taunton, was secured the roan yearling heifer Bonnie Lind, by Northern Light 2nd, a son of imported Northern Light and Isabella's Mina, and out of imported Mary Lind 2nd, bred by Mr. James Bruce, Fochabers, and sired by Goldfinder, an English prizewinner.

From the Belvoir herd of Mr. Richard Gibson was selected the excellent red yearling heifer, Belvoir Bonanza, by Knight of Waraby 2nd 12424, a Mantalpa bull, by The Baronet, imp. in many John Hope for Balm Park, his dam being one of Garne's Evenlodes, a winning sort. Diana of Hillcrest, a red yearling by Scottish Prince 4th, dam by the Toronto sweepstakes winner, War Eagle, was taken from the herd of Mr. Daniel Talbot, Everton, and Deane's Heiress, a red four-year-old cow, from that of Mr. Alex. Burns, Rockwood. She is by Strathallan 2nd, out of Moss Rose of Strathmore. From the herd of Messrs. J. Davidson & Son, Balsam, was taken two choice roan yearling daughters of Sittytion Hero, first prize winner at Toronto in 1886, son of Earl of March, by the champion Barmpton Hero. One of these heifers, 54th Duchess of Gloster, won first prize in the heifer calf class at Toronto last year, and is of the favorite Cruickshank Duchess of Gloster family. The other, Village Beauty 8th, out of Village Beauty 4th, by imported and exported Hospodar, is of the fine Cruickshank family which produced young Abbotsburn, the champion bull over all beef breeds at the World's Fair at Chicago.

From the herd of Messrs. T. Douglas & Sons, Strathroy, Mr. Brown selected a capital bull calf and two excellent yearling heifers—Roan Gem, Dora, D and Maple Bank Fashion—sired by Valkyrie, a son of Abbotsford and Vanity, both first prize Toronto winners, the former being also of the same family as the World's Fair champion bull.

At the dispersion sale of S. J. Pearson & Son, Meadowvale, was secured the handsome roan yearling Besse Earl, by British Comet, a son of imported British Statesman and Nonpareil 39th, dam by imported Tophillie.

From the large herd of Mr. James Douglas, Caledonia, Mr. Brown selected three very useful looking heifers, namely, Woodbine 11th, Elgitha 25th and Elgitha 26th, all sired by Isabella's Heir, by Waterloo Banner, out of Isabella 3rd, by imported Ingram's Chief, a son of Mr. Linton's famous Sir Arthur Ingram, three times first at the Royal Show of England. The dam of Isabella 3rd was Lady Isabel, the great Bow Park show cow, winner of many first prizes in England, and at State and Provincial fairs. The herd of Mr. Samuel Allin, Bowmanville, furnished the two excellent heifers, Lady Aster 2nd and New Year's Lady 3rd, sired by Allan, a son of Mina Chief, made famous as being the sire of the great quartette of heifer calves that won all the four prizes in their class, and the first prize bull calf at Toronto in 1891. Mina Chief was son of the famous Cruickshank Victoria bull Indian Chief, sire of a long list of prizewinners. The dam of Mina Chief was one of the famous Rose of Strathallan family.

Mr. Ladd is to be congratulated on the acquisition so grand a lot of cattle to his herd, which already includes Mysie's Rose, the sweepstakes cow at the leading shows in Canada in 1897 and 1898, which he purchased from Capt. Robson in November last.

Proper Protection

FOR LIVE STOCK
CAN BEST BE GAINED BY COVERING ALL OUTBUILDINGS WITH OUR

**SHEET
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PRESSED BRICK.

It is lightning proof, it is fire proof, and it always gives thoroughly dry and durable protection. Its low price and the ease with which it is applied make it very desirable for new buildings and also for improving old ones. Write us for further information about it.

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SPECIAL BARGAINS.

WILL NOT BE REPEATED AGAIN.

Save Money and Make Money.

It Pays

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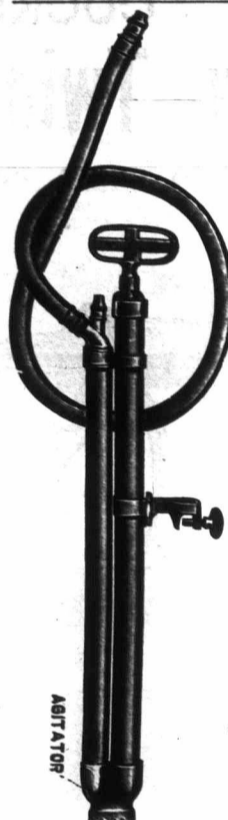
FOR CASH
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OR C. O. D.

The "Little Giant" will be sold for \$3.00 each.

The "America" (with 5-foot hose, nozzle, 3-foot suction pipe, strainer and agitator) for \$9.

Also Windmills (Canadian Airmotor), Pumps, Tanks, Grinders, Hay Tools, Etc.

ONTARIO WIND ENGINE AND PUMP CO.,
Atlantic Ave., Toronto, Ont. (LIMITED).



The "Little Giant."



The "America."

AN ACRE OF AVERAGE CROP.

CLOVER requires 25% more PHOSPHATE than wheat or other grains.

It also requires 75% more MAGNESIA.

TURNIPS require over 50% more PHOSPHATE than the grains.

WHEAT, notwithstanding this, shows 76% PHOSPHATE in its ash.

ALBERTS' THOMAS-PHOSPHATE POWDER (Rd.) is the safest manure to meet these demands.

WALLACE & FRASER,
Masonic Temple, 58 Canada Life Building,
ST. JOHN, N. B. TORONTO, ONT.



This cut represents our 240-eggs capacity improved

SAFETY INCUBATOR

Like all our machines, it is absolutely self-regulating and supplies its own moisture. It is manufactured in Canada—hence there are no customs duties to pay on it. It is guaranteed in every particular and your money will be refunded if you are not satisfied at the end of the first hatch. No matter what INCUBATOR you place beside it, there is none that can out-hatch it. Thoroughly well built and perfectly automatic. It will hatch chickens, ducks, turkeys, and geese. Just

send in your address and get one of our free circulars. There is money in it for you. Address—

J. E. MEYER, KOSSUTH, ONT.



4, 5 AND 6 FOOT CUT.

"O YES!" Our No. 8 Mower will start in heavy grass without backing the team, and will cut grass any other mower can cut. Will run as easy and last as long. We sell our machines on their merits, and build our reputation on the "quality," not the quantity, of goods we make.

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BINDER TWINE

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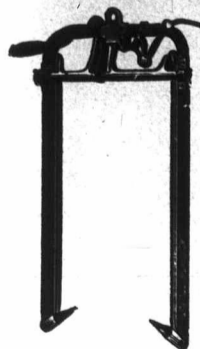
PURE MANILA, 650 FT. TO LB.
SPECIAL MANILA,
TIGER, STANDARD.

Farmers! Don't be taken in. There is none "just as good." These twines will not bunch at the knotter, and a Binder will run all day without stoppage, thus saving time, annoyance and a "lot o' cussin'."

We pack our twine in bags of the size of ordinary grain bags, and we are not ashamed to put our name upon it. Don't take any other.

CONSUMERS' CORDAGE CO.,
LIMITED,
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Provan's Patent Reversible Carriers, Fork and Slings



HAVE now become a Standard of Excellence with the Farmers of Canada and the United States. At the World's Fair, Chicago, 1893, the only Medal and Diploma given on Hay Carriers, Forks and Slings was awarded to us on these Implements.

Following is a copy of the Judges' Award:

AWARD. "For open trip hook to receive the sling; automatic clutch, adjustable for size of load desired; ingenious design of stop block, which enables perfect control of carriage; no springs required for locking car, which has motion in all directions; compact form of fork, which can be tripped in any position; the car is reversible and of double action; for novelty, ingenuity, and usefulness. Excellence of material and construction."

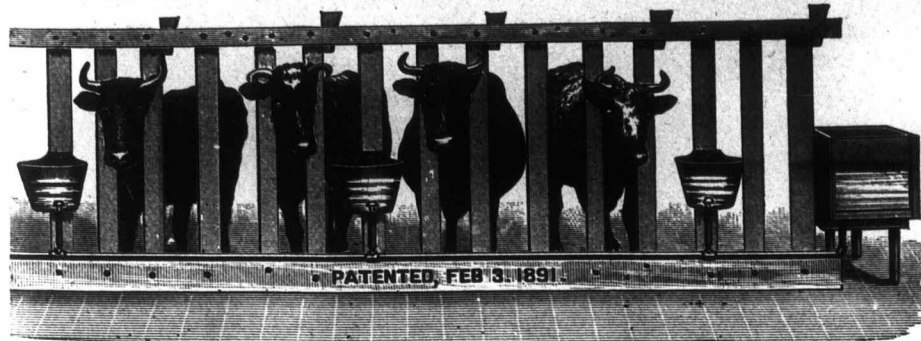
CORRESPONDENCE SOLICITED.

SPECIAL DISCOUNT FOR CASH.

MANUFACTURED BY JAMES W. PROVAN,

OSHAWA, ONTARIO, CANADA.

AGENTS FOR PROVINCE OF QUEBEC: MASSEY-HARRIS CO. (Limited), MONTREAL.



RANEY, SELBY & COMPANY, BOX 620, KINGSTON, ONTARIO.

GOSSIP.

At the sale of Aberdeen-Angus cattle, property of Daughmer & Son, Geo. Shawver, and Corey and Broadfields, at Galesburg, Ill., April 14th, forty-four head averaged \$121. The highest price for a bull was \$355, for Victor of Evergreen Park, age 18 months. Duke of Evergreen Park, 16 months, sold for \$255. The highest price for a female was \$170.

J. B. Ewing, Dartford, Ont., writes: "I have on hand at present forty-seven head of Berkshires, of the up-to-date bacon type. I have January, February and March pigs for sale. My herd has been established some years. I have bred only from the best animals. My herd last year captured nearly all the red tickets at some of the best county shows in Ontario."

Forty-three head of Shorthorns, the property of Thomas Andrews & Son, Cambridge, Ind., were sold by auction at Omaha, April 12th, for an average of \$176.55. Dewey, the first-prize calf at the Omaha exhibition last year, sold for \$350. A bull said to have been a better one than Dewey unfortunately had his neck broken in transit to the sale. The highest price for a female was \$440 for the red and white three-year-old Cambridge Lass. T. R. Westrope & Son, Harlan, Iowa, sold twenty-seven head at the same place on April 13th for an average of \$221. The highest price for a bull was \$500, for Violet Victor, a yearling by Lavender King 3rd. Lavender King, a red twin, sold for \$400, and his twin brother for \$105. Albina, a red six-year-old cow by Golden Prince, brought \$455. She was the highest priced female in the sale.

Mr. W. G. Laidlaw, proprietor of the Ettrick herd of Jersey cattle, at Wilton Grove, near London, Ont., has recently sold to Geo. E. Peer, Rochester, N. Y., the pure St. Lambert cow, Vic's Pops of St. Lambert 78292, by Nell's John Bull, and out of Vic of St. Lambert. Mr. Laidlaw has also sold to John Vining, Thorndale, Ont., the ten-months bull, Lord Mayor of London, by Prince Frank, and out of Queen of Glen Duart. The Ettrick herd has been enriched by the recent purchase from Mr. C. A. Sweet, of Buffalo, N. Y., of the choice and richly-bred St. Lambert bull, King of Beechlands, now eleven months old, sired by Queen's Count, dam Adelaide's Daughter, granddam Adelaide of St. Lambert, whose record of 82 lbs. milk daily is unparalleled in the annals of the breed. The sire of Adelaide's Daughter, Simcoe 39497, is a son of Adelaide of St. Lambert, so that King of Beechland is an inbred Adelaide of St. Lambert bull. This young bull is said to combine all the good qualities of the typical Jersey, and his conformation fills the bill for dairy type. Mr. Laidlaw in this issue advertises for sale three grand young Jersey bulls, one of which, the yearling Prince Frank's Son 48758, has never been beaten in the showing, having won first at the Western Fair at London in 1897 and 1898 against very strong competition, in which the greatest show herd in the United States was included, and he is good enough to be a strong candidate for the sweepstakes at any show in Canada or the U. S. this year. His breeding too is very fine, his sire having won the sweepstakes three times at the Western Fair, and his dam, Zola of Glen Rouge, is a pure St. Lambert of the best type. Stoke Pops of Ettrick, the other yearling bull, was sired by the grand young bull Pride of Alton, winner of second prize at the Western Fair in 1897, and one of the best that has been shown in many years. His dam was by the sweepstakes bull Prince Frank, and his granddam St. Lambert's Jane. The bull calf offered is eleven months old, sired by Jack of Meadowview, and out of an excellent cow. Parties needing a bull may safely rely upon these being the right sort, and should see them or write for prices before purchasing.

GOSSIP.

R. & S. Nicholson, Sylvan, Ontario, write:—"We are pleased with the result of our advertisement. We think fully two-thirds of the applicants for catalogues of our sale of Short-horns saw the advertisement in the FARMER'S ADVOCATE."

Mr. J. E. Caswell's annual sale will take place at his farm, Laughton, Folkingham, Lincoln, on the 27th of July next, where any Canadian who may be in England at that time will receive a hearty welcome, and where as good Lincoln rams will be offered for sale as any one would be able to select from any flock in England, for the Laughton flock is one whose repute is second to none for quality of fleece and type.

Mr. G. W. Clemons, breeder of Holstein cattle, St. George, Ont., in ordering a change of advertisement, writes:—"Trade has been very good this winter, and inquiries are still coming in daily. Among recent sales from Maple Hill are the following: To Mr. R. Walker, of Utica, bull calf, Daisy Banks 3rd's Prince, a grandson of the Toronto dairy test winner of 1898; to Mr. John McGrath, of Corbeton, a heifer, Inka 5th's Countess, a daughter of my champion show bull, Count Mink Mercedes, and Inka 5th, who has a record of 184 lbs. of butter in a week. I believe this to be the first Holstein to go to this section of the country. Wm. Rennie, of the O. A. C. Guelph, took the imported bull, Sir Pledge DeKol. This is a fine yearling, who was a winner in the show circuit last year. He has a cross of the fashionable DeKol blood, and the College is to be congratulated on securing him. Mr. A. C. Smith, Paris, took the bull calf Queen DeKol 2nd's Colanthus, a son of the test winner, Queen DeKol 2nd. She has an official butter record of 104 lbs. in a week at two years of age, one hundred and forty days after calving. She won the Prince of Wales sweepstakes prize at the Provincial Dairy Show in 1897. This is the second bull Mr. Smith has purchased at Maple Hill. The ten-months calf, Mercena's Abbe Kirk Prince, went to Mr. Thomas Malcolm, Kincorlough. His dam, Mercena, gave 574 lbs. of milk in a day when fourteen years old. My imported cow, Queen DeKol, recently calved a fine bull sired by Sir Pledge DeKol (imp.), which promises to develop into something extra. He has a double cross of DeKol blood, which is more sought after at the present time than any other strain of the breed. I have also a fine heifer calf sired by my champion, Count Mink Mercedes, out of Inka 5th, 184 lbs. butter in a week, which is extra fine. I have only one bull left, a son of Lady Akkrum 2nd—a dandy; will be a show bull."

It Pays to Care for Your Horse

The Crystal Rosette is double the size of this out.



The Crystal Rosette is double the size of this out.

NATIONAL GALL CURE

Is wonder-working in its effects. No other preparation in the world can equal it. It is the only speedy and sure cure for GALLS, SORE BACK AND SHOULDERS, CORNS, SCRATCHES, MUD SCALDS, ETC. National Gall Cure does its Good Work while the Horse is Working! For Sore Tests on Cows it gives immediate relief and certain cure.

OUR SPECIAL OFFER!

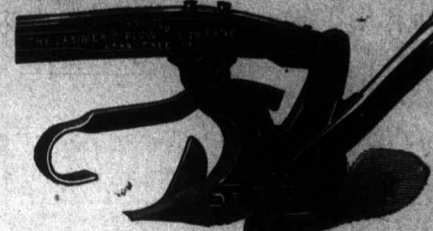
On receipt of 25 cents we will send a full size box of National Gall Cure and a pair of handsome Crystal Rosettes, like illustration above, which are retailed at 50 cents a pair.

Money refunded if not found satisfactory. National Gall Cure is for sale by all dealers. When ordering from us, please write name and address plainly, and enclose this advt.

English Embrocation Co.,

327a St. Paul Street, -om MONTREAL.

LARIMER DITCHING PLOW.



Covered by patent in Ottawa for the Dominion of Canada, and in Washington for the U. S.

How soon a farmer will use up \$20 in the old way of ditching!

How much the want of draining, and the trying to ditch by chains and old iron plows, and the compelling of boys to dig ditch by hand, has to do with making those dissatisfied with the farm who might otherwise regard farming the best and pleasantest work!!

And how many times \$20 is lost every year on a farm because the ground is not underdrained!!!

The LARIMER PLOW will be laid down at your door for less than \$20.

All information by addressing

R. G. SCOTT,

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"CANADA'S GREATEST STORE."

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IMPORTANT TRUTH FOR STOCK RAISERS.



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

Fleming's Lump Jaw Cure.

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

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

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

PRICE, \$2.00.

SENT ANYWHERE BY MAIL. TREATISE AND IMPORTANT REPORTS SENT FREE.

FLEMING BROS., CHEMISTS,
ST. GEORGE, ONTARIO.

CONTAGIOUS ABORTION AND HOG CHOLERA

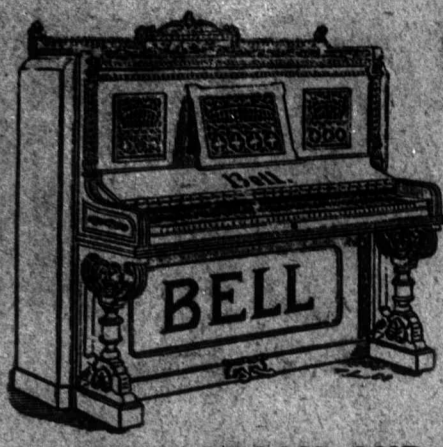
can positively be cured or prevented by the use of

WEST'S FLUID, DISINFECTANT.

which is also a cheap and effective

Circulars (specially prepared by a veterinary surgeon) on these diseases, on application.

THE WEST CHEMICAL CO.,
48 and 50 Long St., CLEVELAND, O.
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Agents wanted in all counties.

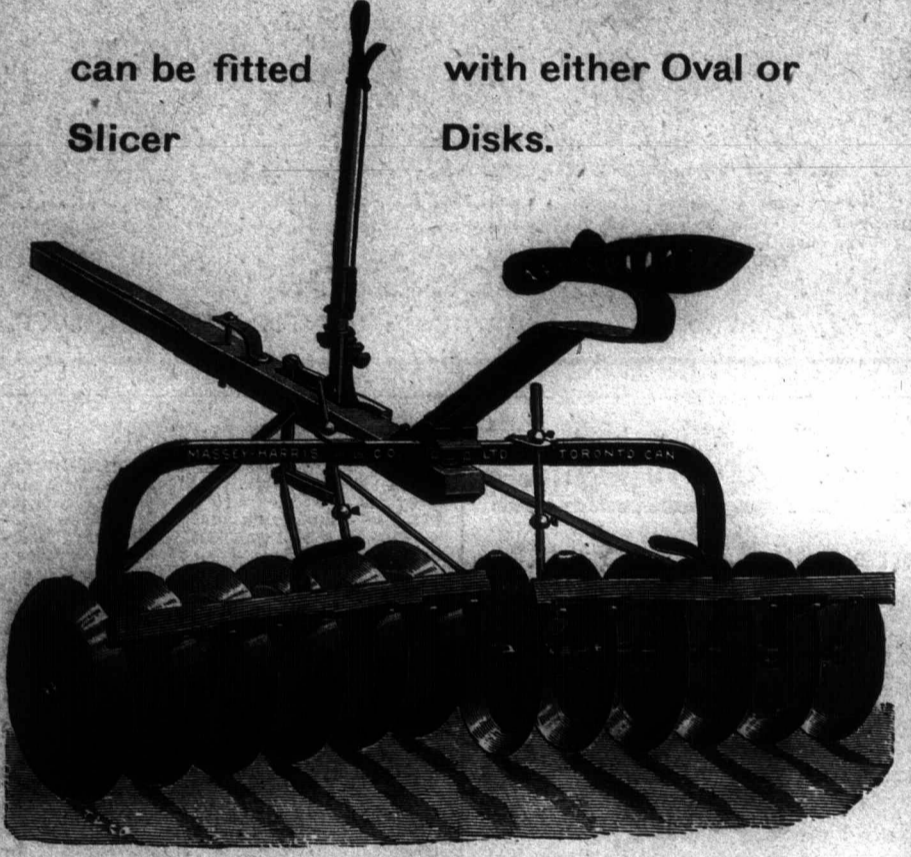


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The BELL ORGAN AND PIANO COMPANY, Limited,
OVER 75,000 OF OUR INSTRUMENTS NOW IN USE. GUELPH, ONT.

THE MASSEY-HARRIS HARROWS



can be fitted with either Oval or Slicer Disks.

MASSEY-HARRIS DISK HARROW. FITTED WITH SLICER DISKS.

They are very strong and reliable.

MASSEY-HARRIS Co. LIMITED.
TORONTO, CANADA.

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"The Scientific Compounds for Stock and Poultry."

Formulated by a Physician and Veterinary Surgeon.

DR. HESS' STOCK FOOD

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

DR. HESS' POULTRY PAN-A-CEA
Cures Diseases and Makes Hens Lay.

Its wonderful effects are at once shown when fed to young fowls, preventing or curing gapes, indigestion, diarrhoea or other bowel disorders; promoting a healthy, vigorous growth of muscle, bone and feathers. Use it and the ills of poultry-raising will rapidly disappear.

INSTANT LOUSE KILLER KILLS LICE.

The effective and convenient article for destroying lice on horses, cattle or poultry, ticks on sheep, fleas on dogs, etc. Just the thing to dust in the nest and on the sitting hen. It destroys the large, gray-head lice that are so fatal to chicks and turkeys.

DR. HESS & CLARK, Ashland, O., U. S. A.

PRICE: Pan-a-cea and Louse Killer, 35c. each; Stock Food, 7 lbs., 65c.; 12 lbs., \$1.00; 35c. articles by mail 5c. extra.
Send for Scientific Book on Stock and Poultry, FREE.

CATERPILLARINE.

A preparation for checking the ravages of all tree-climbing insects and caterpillars. Costs one cent per tree. Sold by all seedsmen and druggists. Prices, \$1.00, \$1.50, and \$2.50 per ten-pound tin. SEND FOR CIRCULAR.

Dr. Wm. Mole,
443 Bathurst Street. TORONTO.

BIG MONEY FOR AGENTS

THE STAR RIVETER

For MENDING HARNESS, BELTING, etc. Indispensable to Farmers, Livery-men and Threshermen. **STAR RIVETER** complete, with 50 tubular rivets, \$1.50. Best selling article ever introduced. Agents write for special prices and territory.

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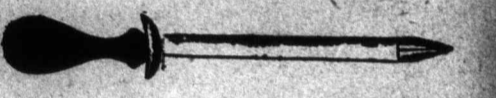
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