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THE FARMER'S ADVOCATE & HOME MAGAZINE

WM. WELD, PROPRIETOR.

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

The FARMER'S ADVOCATE is published on or about the first of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

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Editorial.

"Farmer's Advocate" Prize Package of Fall Wheat.

For sending in the name of one new subscriber we will send to any address in America, post paid, one pound of the Canadian Velvet Chaff Wheat, fields of which have yielded fifty bushels per acre; also a small package of Winter Fife, a new American kind introduced into Canada last year at \$1.00 per ounce; it is a red bald velvet chaffed wheat bearing long heads; also a package of Red Cross Wheat, a new bearded, productive, early sort. We do not offer these for sale, but if you are desirous of them and are too busy to obtain a new subscriber you may have them by paying four years' subscription in advance, but we would much prefer to have a new subscriber.

Canadian Velvet Chaff Wheat.

It affords us great pleasure when we are enabled to furnish you with any information that we believe will add honor and wealth to our country. The increasing and overwhelming testimony regarding this wheat all tends to show that there has been originated in Canada a wheat that appears destined to elevate the reputation and price of our flour. Several of our prominent millers state that this wheat produces just the quality of flour required to mix with the red wheat to enable bakers to make the best quality of bread. The productiveness of this variety, its hardiness, and power to withstand the continued thawing and freezing, its adaptability to the winter wheat sections in Ontario are now fully borne out by the testimonials of leading farmers from Northumberland to Middlesex. Every farmer who grows fall wheat should at once procure sufficient seed to test it for himself in sections where it is not yet known. Mr. J. B. Stone, the originator, has now made arrangements with Messrs. Steele Bros. & Co., and Wm. Rennie, of Toronto; J. Bruce, of Hamilton, and Messrs. John S. Pearce & Co., of London, all reliable and well known seedsmen, to supply this wheat to the public generally this year.

As our readers are well aware we discovered this wheat in a remote corner three years ago. Since then we have given a good deal of time in carefully investigating and testing it. After last harvest we concluded it was a valuable sort, but at that time there was so little of it in existence we urged Mr. Stone to have it all sown, placing it in different sections of the Province. This he did; it has done exceedingly well everywhere, and now, in order to introduce it generally, he has arranged to have the above

named seedsmen introduce it. In a letter, under date of July 24th, 1890, addressed to this office, that well known farmer, of Brooklin, Ont., Mr. John Dryden, M. P. P., writes:—

"DEAR SIR,—The Canadian Velvet Chaff Wheat has done remarkably well, and seems to possess the essential qualities to ensure success in this climate. It is hardy, early, stiff in the straw, free from rust and apparently a heavy yielder. There is but little difference in quality over the entire field. None lodged of any consequence, and, I think, promises to yield 35 bushels per acre. It is well filled and contains no small grains. I will harvest it the end of this week if all is well. Yours truly,

"JOHN DRYDEN."

A meeting of the Dominion Farmers' Council was held on July 19th, President Little in the chair. After a number of members who had examined fields of the Canadian Velvet Chaff wheat had spoken of its merits, Mr. Gibson spoke as follows:—"I have examined a field of the Canadian Velvet Chaff wheat grown on Mr. McEwen's farm, and am highly pleased with it. I can speak emphatically of the merits of the wheat for the production of the best description of pastry and biscuit flour. I have known forty per cent. above the price of ordinary baker's flour to have been paid in some cases for the best brands of pastry flour, and the Canadian Velvet Chaff Wheat is a sort that is now much enquired for by millers who would pay a higher price for it. I offer the following resolution:— 'Moved by R. Gibson, seconded by F. Shore, That the Velvet Chaff Wheat examined by us is very promising while growing, and it is calculated to elevate our flour in the market, especially for pastry and biscuit purposes, more nearly taking the place of the old Soule and Deihl varieties.'"

For the last three years the average yield per acre of this wheat has been much greater than that of any other sort. Mr. Dryden's letter shows what it promises in his section. His farm is not situated in a locality where fall wheat is generally successful and 35 bushels per acre is probably double the average fall wheat yield in that section.

Though very homely in appearance, the toad is valuable to the farmer and gardener. They may be encouraged by keeping about the garden small pieces of boards or old shingles, held two or three inches from the ground by blocks or stones. Beneath these shady retreats our homely insect destroyer delights to squat while plying his trade. Boys and girls, be good to the toads. In France the Government maintains small lettered boards informing the people that toads (and some other reptiles and insects) are among their best friends, and what records they have made.

New Varieties of Fall Wheat.

A number of new varieties have been tried in competition in this vicinity this season, and some of them are most promising. Although it is impossible to speak with certainty as to the yield until the threshing is done, we have to say there will be much disappointment if some of the new sorts do not prove unusually productive, and the samples will be one of the best that we have produced in years. Several of the new sorts have been grown in Ontario for the first time this season, while one was originated in Ontario, although only sown in one locality, and that in a limited quantity, we refer to the

CANADIAN VELVET CHAFF.

The straw when ripe is beautifully bright, good length, is stiff and stands well; it grows close and thick on the ground, the straw being fine; the head is large and well filled to the very top; the ear is beardless, with white chaff and velvety appearance; grain is large and even in size, no small grains, is a beautifully white wheat, and is highly recommended by millers as a sort that is now in great demand for the highest class of biscuit and pastry flour. This wheat is a vigorous grower, was sown very late in this vicinity last fall, stood the winter remarkably well, ripens early, has yielded twice the amount of some of the old varieties when grown side by side, quite free from rust, and has a most handsome appearance while growing.

GOLDEN CROSS

is a strong thick grower, straw fine and standing stiff and well; the head is slightly bearded, red chaff, grain is red, and yielded well when sown in Ontario last year, and is said to have produced remarkably large yields in New York State.

EARLY RED CLAWSON.

This is also a very promising sort, head very compact, ear beardless, red chaff, grain is dark and hard; is said to be very productive, and certainly has a fine appearance when grown.

JONES' WINTER FIVE,

a new sort, has only been sown in lots of a few ounces in plots this season in Ontario, and promises to be an extraordinary yielding wheat. It is a remarkably strong grower, although sown late last fall, and quite thin, covered the ground early in the spring, stooling out remarkably. Straw is medium height and very strong, heads are long and beardless, white chaff velvet-like. Grain is rather small, hard and red, and is said to rival the Northwest No. 1 for milling purposes, excelling in the amount of gluten which it contains.

THE OLDER MANCHESTER

has done well in some localities, although it has rusted in places.

GARFIELD

also looks well, but has never been a heavy yielder.

DEMOCRAT

has gone past its time and is becoming more weak in the straw.

The London Provisioner, England, says:—"Twenty-four years ago the first horse butcher in Paris opened his shop. Since then there have been started nearly 140 horse-flesh shops in the Department of the Seine, and at present about 20,000 horses are killed every year for human food. In Paris the price of this meat is less than half that of ordinary butcher's meat. Berlin is following the example of Paris."

Negligences.

BY MR. R. GIBSON

The old adage reads "Take care of the pence and the pounds will take care of themselves." How many of us take every precaution when looking after the big matters of our profession? We make arrangements to put in a large acreage of grain and do it well, or buy car loads of steers for grazing purposes, or lay out plans for dairying on a large scale. We are keen at a bargain, buy close and market well. Still are we doing our best? Are not many of us neglecting the pence and only looking after the pounds? I will call your attention to a few of the "negligences."

PERFORMING LABOR OUT OF SEASON.

We all know how difficult it is to make headway when work is pressing us. Let us get a week behind hand in the spring, how long does it take to recover? If those roots are not hoed at the right time it will take three times as long to do it. The same with corn, or working our summer fallow, or commencing our haying so late that we not only lose in quality of the hay, but also let the fall wheat be ready for the reaper before the hay crop is saved. Then the barley and oats are ripe before the wheat is in the barn. Most of us know how it is.

Again, after finishing our harvest, do we well clean, oil and pack away

OUR MACHINERY.

We all know how much we have to pay for implements in the present day. Formerly, a wagon, sleigh, plow, harrow, scythe, cradle, axe, grindstone, and a log chain would be a good outfit. Now we must have drills, sulky plows, binders, springtooth harrows, chaffcutters, pulpers, mowing machines, hayloaders, tedders, horserakes, hayslings, &c., &c. After investing in a museum of this kind we are certainly "negligent" unless we provide a suitable building for their reception when not in use. I venture to say more machinery is rusted and rotted out than worn out. The life of a mowing machine is estimated at 1,000 acres, say 10 years cutting 100 acres, or 40 years cutting 25 acres each year. Will they do it if we are "negligent" with them?

Again, do we provide

A WORKSHOP

with tools kept in good order. I remember seeing one in York State made comfortable with stove, &c., &c. On the walls over the bench were pins, hooks, &c. Over each pin was painted in black a representation in full size of the tool that should hang there. Thus, having a place for everything, and everything was expected to be in its place, and a glance would indicate at once any missing tool.

Do we provide a supply of nuts, bolts, copper rivets and wire so as to repair any little breakage, instead of having to go to the shop, perhaps in the midst of harvest? If not, may I not say we are "negligent."

AS TO MANURE.

Do we make all we can? Could we not make a compost where all refuse could be thrown, the ashes from the furnace, the salt from the pork barrel, the bones from the house and the odd refuse that can be scraped up here and there? It is surprising how fast such a heap increases in size if once started, if there is once provided a dumping ground, as it were.

Again, are our buildings provided with eave troughs, or is the rain which falls on them

allowed to percolate through the manure heap in the barn-yard, and by so doing wash out the most valuable, because soluble, elements.

AS TO SEEDS.

Do we change often enough? Are we sufficiently careful to sow only perfectly clean and pure seeds, whether of wheat, oats, barley or clover; but few of us are aware of the vast number of deleterious seeds, usually found mixed in clover seed. If we do not examine such, carefully, before buying, we are certainly "negligent."

HOW ARE YOUR GATES AND FENCES?

Remember poor line fences make bad neighbors. Bad fences make breechy and unruly cattle and horses. Have we abolished bars and put gates in their places? Do we each year look carefully over our fences and see that they are all right? If not, need we feel surprised if we find our horses astray, or our cattle in the wheat? If these duties are overlooked must we not admit that we are "negligent."

Again, are we making the most of the food we are feeding our cattle, whether for beef or the dairy? Are we providing them with comfortable stalls? Are the buildings well battened, so as to keep out the cold and draughts? Do we provide a little soiling corn for summer feed for our cows when the pastures begin to burn and feed gets scarce? If we do not attend to these matters we are certainly "negligent."

I might ask, do we provide a good vegetable and fruit garden, or do we, as I am afraid is too often the case, leave it to be done when we have nothing else to do, or possibly expecting the women to "take hold"? If we fail in having a good garden we are certainly "negligent!"—"negligent" of providing our families with what it is our duty to provide; negligent of enabling our wives to supply our tables with a variety of food, and of our pecuniary interests as well as of our health.

Dominion Farmers' Council.

The Dominion Farmers' Council met July 19th. President Little in the chair.

The discussion touched upon the prospects of the crops generally, all the members speaking of the extraordinary crop of hay. Wheat was not expected to be over an average of twenty bushels per acre, but the sample would be exceptionally good. Oats had suffered much from blight and rust. Peas were good in some localities but many fields had been plowed up on account of the extreme wet weather. Apples were declared to be almost a total failure; there would hardly be enough for home consumption.

President Little had brought in samples of heads of two new varieties of wheat, viz., the Surprise and Canadian Velvet Chaff. The former had a large head and had a handsome appearance, but the straw was very coarse and affected with rust, and upon examination the grains were soft and quite uneven in size. The Canadian Velvet Chaff head was large and attractive; straw quite bright and free from rust, and stiff and quite fine; grain large, even and white.

Mr. McEwen spoke very highly of the Canadian Velvet Chaff wheat, the only variety he had grown, but he had compared it with other varieties grown with it on another farm and certainly gave the Velvet Chaff the preference. It was remarkably hardy, a strong grower, and all his neighbors were favorably impressed with its good qualities, and were anxious to obtain seed of this variety for this fall's sowing.

Mr. Leach spoke very favorably of the crops in his part of the country. The wheat was very good. The soil was light and the crops had not winter-killed, and the yield would be quite satisfactory. Most of the old varieties had been grown.

Mr. Whetter, in speaking of the prospect of the crops in his vicinity, stated that the Democrat wheat had lodged badly. The Garfield was a newer and better variety which promised to yield better. Wheat was badly winter-killed, and on that account the average yield would be much smaller than many supposed.

Mr. Kennedy spoke more favorably, and thought the crops in his locality were exceptionally good. He found the Manchester to have done the best on his farm; had not tried any of the new varieties.

Mr. Deadman thought that the wheat in his neighborhood would not exceed fifteen bushels per acre on an average. That on clay lands had been very badly winter-killed. He thought the field of Velvet Chaff on Mr. McEwen's farm would go at least thirty bushels per acre.

Mr. Richard Gibson had grown three varieties, two of which were new, viz., the Golden Cross and Early Red Clawson. He also had grown the Manchester. He had samples of the three with him. All were red wheats and very bright and plump. The Golden Cross was decidedly the best of the three, all the members quite concurring in this opinion after examining the samples. He had also examined a field of the Canadian Velvet Chaff wheat grown on the farm of Mr. McEwen and was highly pleased with it, and spoke emphatically on the merits of this wheat for the production of the best description of pastry and biscuit flour, stating that he had known forty per cent., above the price of ordinary baker's flour, to have been paid in some cases for the best brands of pastry flour, and the Velvet Chaff was a sort that was now much inquired for by millers who would pay a higher price for it. He therefore offered the following resolution:—

Moved by R. Gibson, seconded by F. Shore, that the Velvet Chaff wheat, examined by us, is very promising while growing, and it is calculated to elevate our flour in the market, especially for pastry and biscuit purposes, more nearly taking the place of the old Soule and Deihl varieties. Carried unanimously.

Our Stock Prizes.

Do not lose sight of the splendid stock prizes we are continually giving for new subscribers. The following is a copy of a letter we have just received from Mr. John Senn, of Cranston, Ont.

DEAR SIR,—I received yesterday (July 22nd) a pair of improved large Yorkshires, sent me as a subscription prize. I am grateful to you and will show my gratitude later in the season by doing what I can for the ADVOCATE.

JOHN SENN.

Through the courtesy of the author we are in receipt of a copy of Blakelee's Industrial Encyclopedia, which is full of useful hints and devices and gives capital ideas how to do a thousand and one things around the farm that require a mechanical education to bring out. When once described, as in this book, they are at once quite easy of construction. Something over two hundred illustrations are given, and there are hints for everybody, but are particularly relating to the farm and farm work, with a boy's department which is useful, interesting, and well calculated to pass away many an idle hour as well as to give the boys a taste for useful employment. The Domestic Department is also full of receipts and designs of the most useful character.

Stock.

"Royal Show" of England and Its Stock.

The Royal Show with its peripatetic character naturally savors much of locality in which it is held. This year, Plymouth being the chosen point, carried it to the extreme south of England, and being distant from the fine stock centres it speaks well for the management that the show proved so successful. In point of numbers horses were not strong. The light-legged classes had good representation but were not numerous. The hunting varieties were chiefly from the counties near Plymouth, while the premiums for coach horses were carried away to Yorkshire, by such well known breeders as the Sterica Bros. and Mr. Scooby.

Among Shires the famous sires Harold and Bar None were not only represented by champions, but the former had two winning colts, the latter two winning fillies to their credit. While such names as Lord Hindlip, Mr. Walter Gilbey, Mr. James Forshaw and Mr. Longton, as usual, were successful in their exhibits in the different classes.

In Clydesdales Mr. Kilpatrick's Prince of Kyle, that has never before met his equal, suffered a defeat at the hands of Mr. Andrew Montgomery's Macara, a horse altogether fresh in the show ring. Prince of Kyle, as most of our readers are aware, is own brother (a year younger) to Prince of Albion, and has hitherto been considered his brother's most dangerous rival. The Marquis of Londonderry's horse Crusader was 3rd.

In two-year-old colts, Mr. A. Montgomery took first with Prince Darnley, another colt in which the union of the blood of Darnley and Prince of Wales brings out a good one. The balance of the prizes go to colts by Castlereagh, Macgregor and Prince of Wales. Altogether the breed made a fine showing considering the distance from home.

Suffolk horses were in strong force and breeders of this sort seem to be pushing them to the front. The champion horse, The Czar, to the astonishment of other breeders, appeared as the heaviest horse in the show, and this class all through was exceedingly well represented, breeders evidently trying to reduce the length of leg and obtain a little more bone.

Shorthorn cattle made a most creditable display. In the aged bull class Mr. J. Deane-Willis' Challenge Cup (57029), a bull of true Scotch type, winning first honors. He was bred by Mr. Duthie and was sired by his noted bull Cupbearer. The other bulls of this class were from the adjoining county of Cornwall and were good types of the breed. In bulls born in 1888, Her Majesty the Queen's New Year's Gift headed the class. Second went to Mr. T. Willis' (of Caperby) Prince Rupert, by Warlabby Royalist. The 3rd to T. F. Roskrug's Rob Roy. The bulls calved in 1889 were headed by the Cruickshank bull Count Lavender, a beautiful and heavily fleshed roan, a credit to his breeder, Mr. Duthie, also shown by Mr. J. Deane-Willis. Cornwall again scored a good second with Mr. Trethway's Pol, a red. The Prince of Wales won 3rd with Lord Fauntleroy. In cows last year's winner, Molly Millicent, was again successful and came forward in beautiful finish, showing her finely developed milking qualities as she did last year. The same

exhibitor was third with Inglewood Gem. Mr. Brierly was second with his Marchioness of Waterloo 6th. Lord Polworth's Wave was the reserve.

In the winning heifers, born in 1888, Lord Polworth's Truth, of the Booth Hecuba family, the Duke of Northumberland's Fairy Rosebud and Her Majesty Empress, a massive heifer by Field Marshall, divide the honors in the order named, while in the youngest female class, Her Majesty's Rosalind by Field Marshall, scores a first. Lady Blythefield, first owned by Messrs. Hosken & Son, of the Waterloo tribe, and sired by an Oxford, is 2nd, 3rd going to a Duthie bred heifer of Mr. J. Deane-Willis. The cow Molly Millicent, taking the champion prize for best female. The Cruickshank bred Count Lavender taking the champion prize for bulls. In Herefords, Lord Coventry's famous cow Rosewater again tops the list of a capital entry in this old established beefing sort, in which the entry is strong in numbers, and high in point of merit. Mr. J. Price, Mr. Palmer, Mr. Robinson fight for honors among the aged bulls, and other well known breeders add their quota to swell the numbers of the exhibits. Devons, being right at home, were brought out in great numbers and made a fine display.

The Channel Island cattle, both Jersey and Guernsey, filled the cow and heifer class to the full with capital representatives that carried quality and character alike.

The sheep department was fully filled, and each breed bearing its characteristic type in that high degree of merit for which the different breeds of mutton-producing sheep of the country have a world wide reputation. Cotswolds never have a large representation, but the quality fully made amends for the lack of numbers present. Messrs. Swanwick, Garne, Bagnall, and Thomas, are the principal exhibitors, and divided honors pretty equally. Leicesters made a good showing both in number and quality.

Lincolns also made a capital display, particularly in this the case in the classes for ewes, which were an unusually good lot.

Oxford Downs made a nice even exhibit, with some extra good specimens. Mr. Brassy and Mr. John Treadwell took the largest number of prizes, in the ordered named, followed by Mr. Adams and Mr. Miles.

Shropshires were far in excess in point of numbers, with classes filled with grand specimens. Mr. A. E. Mansell led off in the old ram classes with Windsor King that won first as a shearing last year at Windsor. Mr. A. S. Berry and Mrs. Barrs followed in the order named, and Mr. Bach took the reserve and highly commended. Over eighty shearing rams proved a huge task for the judges. Mr. Inge was first, Mrs. Barrs second and third. Mr. Inge was also first with a good pen of lambs, Messrs. Bradburn second. Mr. Graham was first in shearing ewes, also third, Mr. T. S. Minton second. Southdowns, Mr. J. J. Colman, M. P., led in two shear rams, Mr. Wm. Toop second. In twenty-six shearing rams the Prince of Wales was first, Mr. E. Ellis second, and Mr. W. Toop third, Mr. Ellis winning for the pen of lambs. Mr. Colman was again first with his pen of shearing ewes and Mr. Ellis second.

The best show of pigs for a great many years appeared to be the general opinion of the old countrymen. The Improved Yorkshires were simply grand, in which Mr. Saunders Spencer, Holywell Manor herd, took two firsts and a second and a third, and took nearly half the

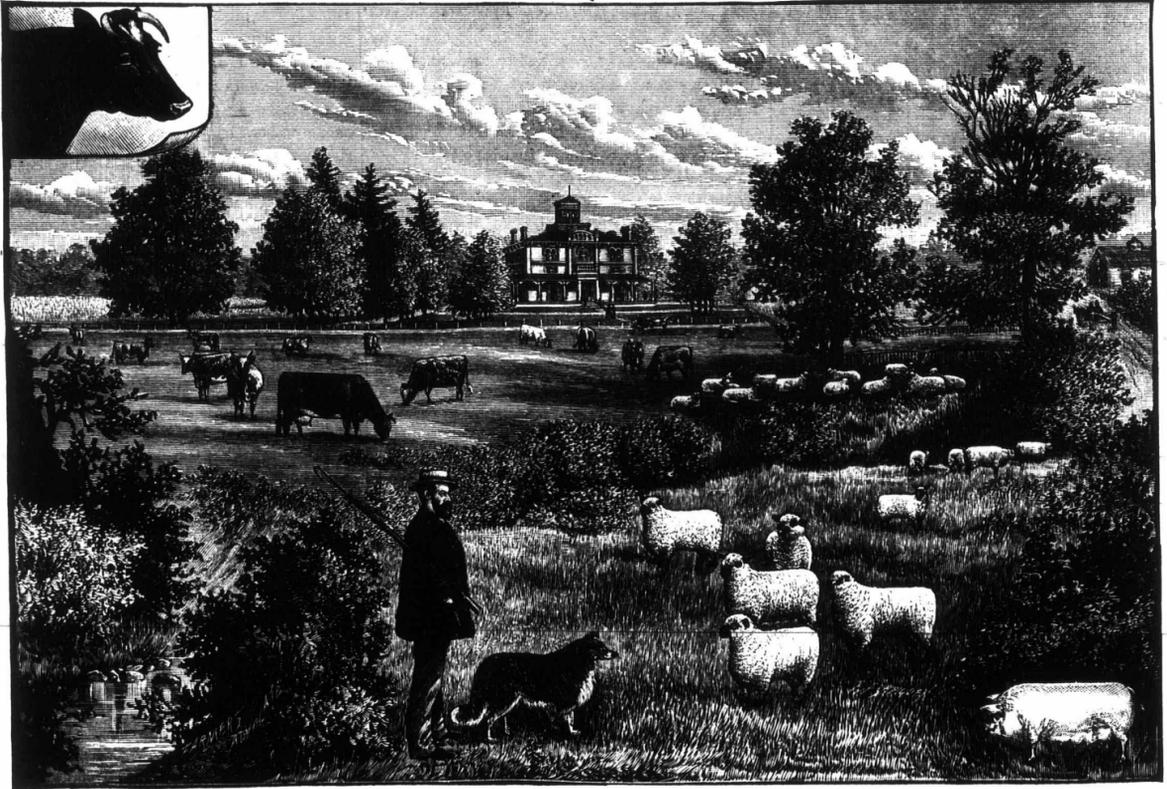
prize money in the section. Messrs. Nuttall, Strickland, and eleven others had a good fight for the other half of the prize money. In the classes for Middle Whites, Mr. Spencer was even more covetous; he won more than half of the prize money, Mr. Twentyman, Mr. Nuttall, and six other exhibitors having to be contented with £30 of the £63 awarded. In the Small White classes the entries were fourteen for twelve prizes, and the competition very slight. The same remarks would apply to the Small Blacks except that the entries were more numerous and the pigs better. We have seen a more useful lot of Berkshires shown in one of our Canadian fairs; those exhibited were mostly short, thick pigs, wanting more length and growth. Mr. T. T. Minton's champion boar was of nice style and full of quality. Mr. Benjafield's second prize

On The Wing.

ON THE FIRST OF JULY—DOMINION DAY.

We visited Belvoir Farm, the residence of Mr. Richard Gibson, a distance of twelve miles from this city. All along the road the cereal crops promised a bountiful harvest. Here tobacco is to be seen growing; there are numerous colonies of bees at work. Overhanging the road the butter nuts, walnuts, and hickory nuts are already set, the chestnut trees are in full blossom, the hazel bushes and the raspberry bushes vie with each other to possess the vacant spots. Every turn of the carriage wheel appeared to bring fresh scenery to view, tending to give greater and more lasting pleasure than the grandest theatrical performance. In fact, it is like a great panoramic view of fairyland, yet

his crops are seldom equalled or surpassed. Here we see the choicest grains, no expense having been spared to produce those that bid fair to be of most value to our country. In addition to his already fine stock he has recently imported another fine flock of Shropshire sheep and some Yorkshire pigs, which are more fully described elsewhere in this number. When among them his beautiful dog "Daylight," lately imported, came to us, she is the most beautiful shepherd dog we ever saw, and is of the most fashionable breeding, her sire having been purchased for 360 guineas. We were exceedingly well pleased with the farm, sheep, dog, &c., and have been able through the skilful hand of our artist to clearly reproduce the place with some of its beauties, and hope you will be as well pleased with it as we were with our visit



A VIEW OF BELVOIR FARM, THE PROPERTY OF RICHARD GIBSON, ESQ., DELAWARE, ONT.

boar was also a good one and in fine condition. A very fine sow won the special for sows, as well as first in her class for Mr. Tricker. Messrs. A. T. Gibson, Edney Hayter and James Lawrence all showed highly bred sows. The pens of three young sows were the weakest, but Mr. Benjafield's prize pen were remarkably good and neat.

The Tamworths are gradually undergoing a change due to crossing or selection or both; they are not as good as the Yorkshire, but quite equal to the common pig of the country. It is said that the Large and Middle White have been used for crossing, if so the good blood has not been wasted. At all events the Tamworth will hardly be popular in Canada. We have already pigs enough of the sort.

The large imported breeds of English and French draft horses are the most powerful, and useful in moving heavy loads, or enduring hard service, but they are specialists, fitted mainly for one branch of service.

real. Where, let me ask, has such variety of the most pleasing and natural products been dealt out with so lavish a hand. Truly this is a land flowing with milk and honey. We entered Mr. Gibson's farm by the gravel drive leading through the avenue of Norway Spruce to his house, a handsome well kept residence, whose rooms are decorated with fine old engravings and paintings of celebrated stock of ancient origin. Mr. Gibson kindly showed us over his fine farm, his extensive, rich, well shaded pastures, reminding one of an English park. He pointed out to us some of his favorites, the Shorthorns, for which he has done so much, and is so widely and favorably known. His present herd is as large and highly bred as ever, possessing good milking qualities, a feature very desirable at the present day. His extensive fields of grain promise a bountiful yield; he was then busy taking care of his hay and attending to the hoed crops;

to "Belvoir Farm." Mr. Gibson has always aimed at possessing the best in every department. Of late years Mr. Gibson has been widely known at the bench shows, where choice specimens of his dogs have been sold to dog fanciers at long figures, others have been purchased by farmers, for what farm does not require the services of an intelligent Collie.

Scratches.

In the early stages wash twice a day with sugar of lead, or add a little carbolic acid to this lotion; but salve made of carbolic acid and glycerine, equal parts, is very good. Acetate, or sugar of lead as it is generally called, is a white powder, and has a sweet acrid taste. For sore shoulders, put as much as would lay on a quarter of a dollar, in from half to pint of rain water.

Good farming consists as much in overcoming adverse circumstances as in improving favorable opportunities.

Our Clydesdale Illustration.

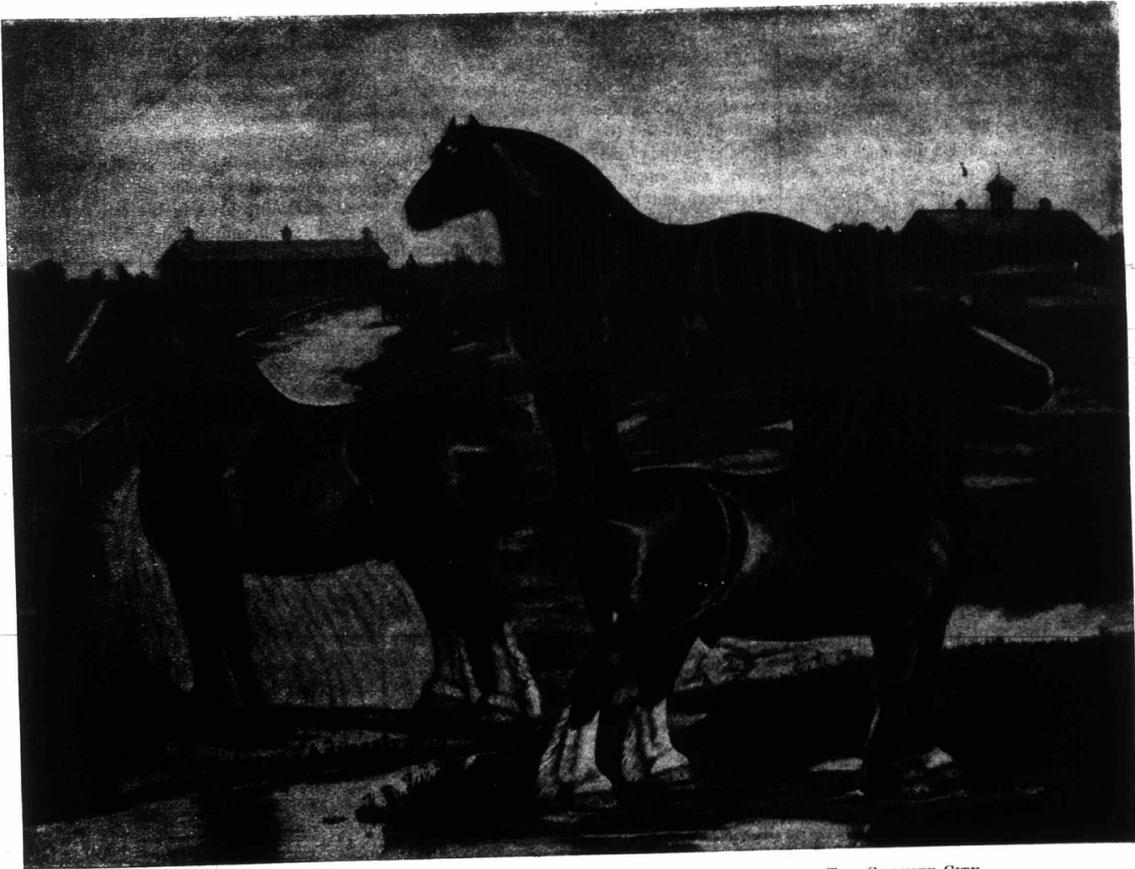
The accompanying illustration represents three magnificent Clydesdale Stallions, The Granite City (709), Bounding Willow (811) and Lord Coleridge (817), the property of the late firm of Everest & Kerr, of Ridgemere Farm, Reaburn, Man. Comment on these three horses is needless, as their successful show career in Manitoba and Ontario is sufficient evidence of their high merit. Granite City has won every prize he has competed for in the Province; Bounding Willow has taken second at these exhibitions, but being absent from Brandon at the time of holding the Portage show this spring, Lord Coleridge took second against a strong field. Granite City is by the popular sire Lord Erskine, well known

stand, take Granite City to his farm at Burnside, while Bounding Willow and Lord Coleridge will remain at Ridgemere, the property of Mr. Everest.

Studs, Herds and Flocks.

In this month's issue we have to report the arrival of four cars of English sheep, arriving in this city on the 28th of June, having been shipped from Liverpool on the 13th of June, and were all imported by breeders of this locality, three cars going to Westminster, to enlarge the flocks of Messrs. William S. Hawkshaw, W. H. Beattie and David H. Dale, just south of this city, and the other to Mr. Gibson, twelve miles from here. The sheep were landed without any loss and were in nice condition, looking as

only from the oldest and most noted flocks. This is Mr. Gibson's second importation of Shropshires, last year he having brought out something over fifty. They were also from the Bulwell flock, which was established in 1877 by the purchase of ewes from Messrs. Bowen Jones, Crane & Tanner, Fanx & Harding, and Peter Everall, at high figures. The ram Britisher was obtained from Mr. J. Evans to mate with these. Since that year the only additions to the ewe flock have been as follows:—1879, from Mr. Bradburn; 1880, Mr. Coxon; 1881, fifteen from Mr. Minton; 1883, five from T. J. Mansall and ten from Crane & Tanner. The principal rams used have been Gallant from Minton, Chesham from Maspén, Shrawardine



BOUNTING WILLOW. LORD COLERIDGE. THE GRANITE CITY.
THREE CLYDESDALE STALLIONS, THE PROPERTY OF MESSRS. EVEREST & KERR, REABURN, MAN.

by the number of his prize winning sons that have been imported. The dam of Granite City, sired by Old Times, g. dam by Prince of Wales forming a combination of exceedingly popular sires. Bounding Willow is sired by that popular son of the famous Darnley, Good Hope, a well known sire. Bounding Willow was district premium horse for Upper Nithsdale, Dumfriesshire, before his exportation to Canada, which along with the winnings of his get at this season's shows in Scotland should pave the way for extensive patronage here. Lord Coleridge is by Chief Justice who was sired by Blue Ribbon, all well known sires in their native land.

Subsequent to this engraving being placed in hands of our artist, Messrs. Everest & Kerr dissolved partnership. Mr. Kerr will, we under-

stand, take Granite City to his farm at Burnside, while Bounding Willow and Lord Coleridge will remain at Ridgemere, the property of Mr. Everest.

BELVOIR FARM,

the importation of Mr. Gibson, consists of 36 shearing ewes and seven rams. The ewes were those selected to put in the home flock, and could not have been bought only for the reason that the estate is in the market and the tenant expects his farm to be sold, hence, in this unsettled state he decided to sell his flock, and this importation is the result of careful breeding from the best flocks of England since 1877, crossed with rams of high individual excellence which have been selected regardless of cost

from Crane & Tanner, Gambetta from Mansall, Gold Dust from German, Royal Frederick from Beach, Uffington Reserve from Evans, Dudmaston Fame from Mansall, and Bonny Beau hired for part of season from Mr. A. Mansall. The flock has been quite celebrated in the show ring, having taken 32 first, 32 second, one third, one fourth, and one special prizes.

MR. W. H. BEATTIE,

Wilton Grove, has a large flock of Shropshires, numbering nearly 100. They are all imported and the produce of imported sheep, the latter including this season's crop of lambs and a few shearlings. In the flock are seven rams over a year, four of which were bred by Mr. David Buttar, Corstan, Couper Angus, Scotland; of the four imported rams a three

shear is by Mr. Buttar's Corston True Blue, the others are got by Scotsman, the former bred by Mr. T. J. Mansall, the latter by Mr. A. E. Mansall. One of the shearlings just arrived is evidently intended for the show ring, and is a likely candidate for high honors. He is well developed and is first rate in quality. The shearling ewes that came over in this lot are also bred by Mr. Buttar and sired by his noted stock rams Scotsman and young True Blue. Twenty ewes have produced 32 lambs this season, many of which are very promising. Several importations have been made, this year's numbering 46. Mr. Beattie has built up a large trade, selling all over Canada and the United States, and has been very successful in the show rings for the last few years.

Breeding and importing Collie dogs is also included in his business, of which he has quite a large kennel on hand. Of two lately imported is a dog by Gower Chief, a son of the famous prize taker Mitchly Wonder. The other is a bitch, sired by Clydesdale Wonder, a son of Clydesdale Trumpet. These are both bred by Mr. Buttar who is also quite a dog fancier.

MR. S. C. MILLSON,

of Glanworth, Ont., is one of the latest to enter the breeding lists as regards Shropshire sheep, but, like most of his other undertakings, does not believe in half-way measures, and although he had not a single Shropshire sheep ten months since his flock now numbers over 100 head. He began by purchasing a number of grade Shropshires last fall, but feeling inclined to add to the quality and notoriety of his flock, soon after purchased ten imported ewes of Mr. Beattie, Wilton Grove, to which he added others until he has 17 imported ewes, and with Canadian registered sheep and this year's crop of lambs number in all nearly sixty recorded sheep. Mr. Millson intends selling out all his grades and investing entirely in pure-bred recorded sheep. His sheep have done well and his lambs are very fine, proving fully what sheep will do in large flocks if they have care and plenty of run. Mr. Millson has been in dairy business; has also been largely in the feeding and exporting of steers, but finds sheep pay better with less labor than any other kind of stock.

MR. HAWKSHAW,

of Glanworth, also has a large flock. His second importation was chosen in person, and have also landed lately. These just arrived, together with their lambs, make up, nearly, combined with the flock imported last fall, one hundred head. Among those lately brought over is the shearling ram Wool Merchant, whose breeder, Mr. Bach, thought so highly of him that he was bred to part of his flock last season. The last selection consists of a choice lot of shearlings and two shear ewes that has been made from Mr. F. Bach, of Onilbury, and Mr. R. Bach, Craven Arms. Mr. Bach took high honors in a very strong class at the late Royal Show at Plymouth with some of his sheep.

A few Dorset horned sheep were selected from the flock of Mr. Thomas Chick, and these should open the way for larger importations of this breed, the specimens having been much admired by all who have seen them.

Five cows well cared for and amply fed are always more profitable than double that number which receive little care and insufficient food. Many farmers make a great mistake by keeping more stock than they can properly feed and care for. Our most successful farmers are those whose stock are well fed and well cared for.

Horse Breeding.

BY FRANCIS GREEN.

There is perhaps no domesticated animal which presents more variety both in size and other attributes than the horse, different types of which are now spread over almost all parts of the world, and there is perhaps no animal which displays a greater aptitude in adapting itself to climatic and other conditions, and that too within very circumscribed areas. Within the limits of the British Isles, at the extreme north, we find the diminutive Shetland, a dwarf in comparison with his gigantic relation, the massive Shire horse, an inhabitant of a milder climate. In the mountains of Wales is the little Welsh pony with his bloodlike head, the diminutive thoroughbred, while within a radius of a hundred miles or so we find the rangy Cleveland Bay, as well as the Scotch draught horse, the well-known Clydesdale. When one considers the number of different types, not only of horses, but also of cattle, sheep and pigs, which are now existent within the limited area of Great Britain, one may well be struck with astonishment, and enquire in what way they were originated and kept distinct, but a little consideration will help to explain the matter and furnish a theory which rests on a good foundation. Years ago, and long before the introduction of railroads, there was little travelling done, and that little was generally on well defined routes. People in those days stayed at home, and their excursions rarely extended further than their county towns. Vestiges of this are even now extant, for each county has its own peculiar dialect, and it is often difficult at the present time for a native of one county to understand another from even an adjoining county. This stay at home habit of the people reflected in like manner on their animals, as the owners did not often go visiting neither did their stock, and in process of time, by a certain degree of breeding and selection, the horses, cattle and sheep acquired a fixity of type and character moulded to suit the requirements of their proprietors. Climate undoubtedly has a great effect, but climate is not the only influence. Taking the Shire horse as an example, we find that the nature of the soil as well as food, the latter being to a great extent modified by the former, has a considerable bearing on the matter; thus the Shire horse on the rich, low-lying, fine counties of Lincolnshire, Cambridgeshire and similar counties, is usually considerably heavier. His bone is hardly as clear, neither are his feet as good as those bred on the higher lands of Derbyshire, &c., and it is a well-known fact in Wales that the feet and legs of horses bred and reared in the rich, low-lying valleys are never as good and clean as those raised on the stony uplands. Careful breeding and selection will certainly obviate this to a great extent, and with judgment and proper mating heavy draught horses can be bred with success in such and similar situations, but for light horses for fast work we must look to land that is high and dry. In Canada this does not apply to the same degree, for during the season of pasturage the greater proportion of the land suffers often rather from a lack of moisture, and in summer is often deficient in herbage. The average specimens of horses in Canada are a mixed lot, as might be expected from the combination of crosses that have been used, com-

mencing with the French Canadian horse, followed by the American trotting horse, and in turn by the Clyde, Shire, Percheron and Thoroughbred. Much enterprise has been displayed by our horse importers, who have at different times brought over specimens of nearly every variety of English horses, and farmers with praiseworthy, but mistaken zeal, have many of them attempted a combination of most of these crosses, without any regard to the kind of mare they were breeding from, and the result of this indiscriminate breeding may be seen in the miscellaneous types of horses in the country to-day. Such was not the method by which England has become so celebrated for her horses. The crosses of alien blood introduced were, on the contrary, rather few, and those with a well-defined purpose kept constantly in view. Like begets like, is the creed of the breeder, but a truer axiom is "like begets like, or else the likeness of some ancestor." This is called atavism, or in common speech "throwing back," and it is this contingency, a contingency which cannot be guarded against, that so often proves a disappointment to the breeder, even of pure-bred stock. How much more, then, is it likely to be a stumbling block in the case of animals of such mixed breeding as the ordinary bred horse in Canada. It behooves, therefore, breeders to exercise great caution in the selection of breeding stock, and it is not sufficient that the animals themselves be possessed of individual excellence, but it is likewise important to ascertain particulars as far as possible as to their progenitors. Horses and mares that are unsound with any hereditary diseases, will certainly reproduce in their offspring the defects which they themselves possess, it being a remarkable feature in procreation that defective points are more easy of production than the more desirable properties. It is essential then to guard against breeding from parents which are themselves infirm or descended from unsound ancestors, unless such defects arise from accidents, for the use of such animals will almost certainly end in disappointment and loss of both time and money. The lack of success in horse breeding is often attributable in a great measure to the want of care in the selection of the dam. Many persons possessing mares, regardless of their loose leggy make, small size, or hereditary unsoundness, have often thought them good enough to breed from. How often has one heard it remarked, "Oh, she will do me to work, and I can afterwards breed a colt from her!" To such, the advice which has frequently been given before, may again be repeated, "do not breed from the old mare because she is old, even though she may be an old favorite." On the contrary, breed rather to a mare that is under rather than over the prime of life. In the selection of breeding animals, due regard must be had to the purpose for which their produce is required, if for a saddle horse or hunter (and for this class of horse a good demand is now arising) he should be considered with reference to the easiness of his paces: he should possess quality and should be able to lift his fore legs well, but not high. High knee action in the saddle horse is not desirable, and is rarely pleasant to the rider; it does not conduce to speed nor necessarily to safety, for the surefootedness of a horse depends more on the manner in which he puts his foot down than in which he lifts them up. He should likewise be able to canter lightly, as

well as gallop, and above all, he should be able to walk at a smart gait. The type of mare for breeding saddle horses should be roomy, compact, deep bodied, with well-placed shoulders, not leggy, loose, slack or narrow, and in addition should be possessed of breeding combined with substance and bone to carry weight. The stallion for such mares should be a thoroughbred, and if possible a proved good stock-getter, sound, and of a good and not fretful temper. He should stand square on all four legs, the forelegs dropping straight from the shoulder to the ground and not calf-kneed; his fetlocks should be sloping but not too long; his feet good and open and free from any signs of contraction; the bones of the hocks should be large, well-formed and clean, with no enlargements or puffs of any kind; his head should be well set on a fine arched neck; his shoulders well laid back; his chest capacious and deep, for depth of chest is necessary for speed; his back should be straight and rather short; girth deep and well ribbed up; hind quarters full and not sloping; his tail set on well and high, while his action should be good; he should be able to walk not gallop free, and lastly, it is not essential that he should be possessed of extraordinary speed. On the other hand, some of the points so valuable in a saddle horse are not equally essential in a driver. The horse intended for harness work ought to assist in his object by throwing all his natural weight into his collar. He should therefore possess both substance and muscular power as well as knee action with high lifting of the feet, for this latter item adds greatly to the grandeur of his appearance, and not a little to his price, and as he carries no rider the jar of putting his feet down does not produce the same amount of wear and tear to himself, neither is the rider inconvenienced. Shoulders in a harness horse are not so important as in the case of the saddle horse, while cantering is not only undesirable but an unspeakable evil. With these exceptions the mares for breeding harness horses should be similar to those for breeding saddlers, but in this case I should prefer to use a different sire, such as the Hackney or the Cleveland Bay, the choice between the two depending somewhat on the mares and somewhat on the class of produce desired. The Hackney is a big little horse, standing on short legs with excellent feet and joints, and is particularly noted for his high action, and as such, is eminently calculated to cross with leggy, weedy mares of which there are many scattered through the country. He is rather deficient in height, few pure hackneys being over 15.2, but having plenty of substance and mated with the larger class of mares of the type before described is calculated to breed horses with plenty of size combined with high action, a quality which is much sought after by fashionable city people who are always ready to give large prices for action. If, however, horses 16 hands and over are desired, we must look to the Yorkshire coach horses or Cleveland Bay with his lengthy quarters and long elegant top lines. The market for this class is likewise very good, and carriage horses of this breeding are fetching from \$700 to \$1,000 a pair in Chicago. As to which is the most profitable horse for the farmer to breed it is impossible to say, so much depends on a variety of circumstances; in the case of the saddle horse and hunter it is seldom that the full profit is realized by the breeder. Few farmers have the time or even the inclination to

school a hunter, and they are consequently often badly broken and put into the market with their business only half learned, at a comparatively low price to a dealer who educates them and in many cases secures a large profit. Fortunately for farmers, wealthy people have a fancy for saddle horses and fine carriage teams, and for comfort in the former and appearance in the latter, they are willing to pay fancy prices. Consequently, if light horse breeding pays at all a considerable profit must be realized from rearing either of these two types, for the demand, already large, must annually increase with the growth of our population, while in the States there is almost an unlimited market. In conclusion, it must not be inferred that I am in favor of crossing pure breeds. On the contrary, if a man owns a standard bred trotting mare let him by all means breed standard bred trotters; while, if it is a Clyde or Shire mare, let him breed to pure sires of their respective breeds. To do otherwise will certainly result in a loss. It is not to breeders of pure bred horses that this paper so particularly applies. It is to the ordinary farmer, who after many years of breeding with no well defined object in view, is still continuing the practice of raising horses which will not average \$125 apiece.

The Devon as a General Purpose Cow.

BY THOMAS CHICK, STRATTON, DORCHESTER, DORSET, ENGLAND.

I was pleased to read Mr. Nicholson's interesting paper in your issues of April and May, on the "General Purpose Cow." No doubt on many points the remarks are right; yet, there are assertions made which, in my opinion, cannot be proved. When Mr. Nicholson says the general purpose cow "requires four essential requisites, viz., robust constitution, hardiness to stand the climate, aptitude to fatten, and fairly good milking qualities," I quite agree with him, having found, from experience, the necessity of having these four qualities.

Starting from this basis, I will endeavour to show where, according to my idea, Mr. Nicholson has certainly erred in one of his statements. First, he says, "the Jerseys, Holsteins and Ayrshires are out of the race on account of being non-beefers." This may be true, but when he goes on to state, "The Galloways, West Highland and Devons are out by not being adapted for either," I cannot agree with him. The breeders of Galloways and West Highlands are able to take care of themselves, and perhaps prove the contrary. As a breeder of Devons for the dairy and general purpose cow ever since the year 1851—nearly forty years—I hope my remarks may be considered reliable, and founded upon personal experience, not upon hearsay or what I have been told by others. As to robust constitution, the native home of the Devon is close to the forest of Exmoor, where they live and thrive on the poor pastures and bleak hills, out of doors, all the year round. If transferred to a richer soil, and better climate, they grow to a larger size. As fat beef, Devons command the top prices, no other breed of cattle being worth more money, weight for weight, than a Devon in the English markets. If they live and thrive on their native hills, where a Shorthorn cannot possibly exist, they should be able to stand the colder but drier climate of Canada, if a Shorthorn can do so. Grazers here will pay as much for a small Devon cow as they will give for a large one of another breed, on account of their

readiness and aptitude to fatten, and value when fat. With regard to their fairly good milking qualities, there are hundreds, probably thousands, of Devon cows kept in this county of Dorset alone, as dairy cows for their milk and butter, by farmers who rent their land, and make their living by doing so. May I add that, this year, 42 cows of my own are rented by a man who pays me £12 for the produce of each cow for the year. Are not these facts sufficient proof that Devons possess the four requisites for a general purpose cow, viz., robust constitution, hardiness to stand the climate, aptitude to fatten, and fairly good milking qualities? Should any of your readers still doubt the "Devon" being a good general purpose cow, I hope, when he crosses to the Old Country, he will come and spend a day or two with me; he will then be able to see for himself, Devon cows that have never been shut up in a house since the days of their calfhood; that breed a calf, and give milk from nine to ten months every year, and are valuable for making beef when no longer required for the dairy. There is another point which appears to be in favor of Devon cattle, they require less food than Shorthorns; they will also live, here in England, on less costly food during the winter, a further proof if needed of their robust constitution, consequently the expenses of keeping are less, or a larger number can be kept at the same cost.

It is far from my wish or intention to detract from the merits of any breed of cattle, but seeing such a sweeping statement as to Devons made without the slightest proof of its accuracy, and knowing, from a life-long experience, how incorrect and wide of the mark this statement is, I give you these facts about Devons that may, perhaps, interest those who know nothing whatever of the valuable qualities of a breed of cattle that deserve to be much better known for their good all-round properties. That "Devons" are appreciated in their native home, was proved at the sale, on the 8th of May last, near Truro, in Cornwall, of the herd belonging to the late Lord Falmouth, when about 100 animals, including young calves, realized on an average as much as £40 each, one young cow being sold for the high price of £273.

Greyhounds and Agriculture.

The Russian official estimate is that no fewer than 170,000 wolves are roaming at large in that country. Last year the inhabitants of the Province of Vologda killed 49,000 of the brutes and in the Casan district 21,000 were killed. There are wolves in the Canadian Northwest, but they are not, like the European wolves, of a dangerous character. The coyotes are, however, at times very troublesome on the plains, especially to flocks of sheep. Sir John Lister-Kaye imported a number of Belgian and French wolf-hounds and Scotch deer-hounds, and other breeds of dogs have been tried with very fair success. By their aid the numbers of those coyotes have been much reduced, no less than seventeen of them having been brought down in a single day on the Cochran range. The hounds in use, however, are scarcely fast enough, and, with a view of giving them a greater turn of speed, Mr. Dar Gordon, the veterinary surgeon, of Ottawa, Ontario, has imported two of the fastest and best bred greyhounds ever shipped from England, namely, Justinian by Cui Bonout of Stylish Lady, and Jetsam by Royal Stag out of Castaway.

Our Yorkshire and Tamworth Illustrations.

The illustrations of the Yorkshire and Tamworth pig, given in this number, will give our readers a very good idea of the form and points of these pigs. All three are produced from drawings made from English prize-winning animals, and accepted as lifelike by leading English authorities. All interested in hog raising should carefully read Mr. Benjafield's article on Berkshires in last issue, also the article on Tamworths in last and present numbers. It is quite evident from these that the question as to the superiority of one of these breeds over another is unsettled even in England. What pork packers require is a pig with a long, deep side, good ham, and smooth shoulder, with an abundance of lean meat of good quality throughout the entire carcass. Such hogs our farmers will find most profitable.

Berkshires and Yorkshires.

Regarding Mr. Snell's assertion that "in his search for high-class Berkshires in England last year he had to compete with buyers from nearly all, if not quite all, the countries of Europe named, etc." I do not for one moment doubt that Mr. Snell believed what he wrote. But, what does it prove if true? The questions are: Are the Improved Yorkshires taking the place of Berkshires abroad? Second, Are the Improved Yorkshires now being more largely shipped to foreign countries than are Berkshires? Third, Are the Improved Yorkshires more suitable for bacon curing purposes? Fourth, Are the Improved Yorkshires a success in Canada, and have they come to stay?

At the risk of offending Mr. Snell, I venture to mention my

own herd since I know more of it, and because more pigs are exported from it than from all the English herds, including Berkshires.

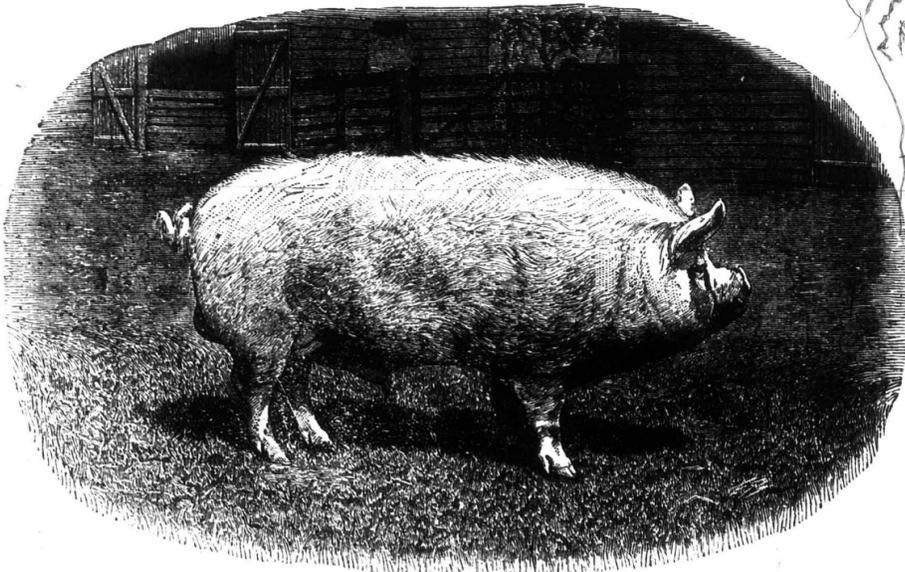
To question one I reply: Certainly, since January 1st, I have sold Improved Yorkshires to thirteen foreign countries, viz., Canada, the States, Buenos Ayres, the Cape, Russia, Germany, Spain, Portugal, Norway, Sweden, Denmark, Holland and France, and to some of these countries as many as thirty-five boars. In many

cases these pigs have gone where Berkshires have proved useless. Now, does Mr. Snell for one moment believe that one-tenth as many Berkshires have been sold for exportation to Denmark, a country where utility, not fancy points, are valued? Or, will he argue that Berkshires have been sent to the other countries, but no notice



IMPROVED LARGE YORKSHIRE SOW SMITHFIELD QUEEN 182.
AN ENGLISH PRIZE WINNER.

given of the sales? He surely cannot have so low an opinion of my countrymen, or so high an opinion of the natural modesty of Berkshire breeders as to imagine that the sales, had they been made, would not have been duly announced in the press. As to whether or not the Improved Yorkshires are more suitable for bacon-



IMPROVED LARGE YORKSHIRE BOAR HOLYWELL WINDSOR, WINNER OF NUMEROUS
FIRST PRIZES AT LEADING BRITISH SHOWS.

curing purposes and consequently for general consumption than the present type of Berkshires, I can only say that I have yet to meet, or to correspond, with a bacon curer who for one moment doubts it. I have sent pigs, seen and corresponded with most of the large curers in Europe, and we have Mr. Davies' word for it in Canada, and everyone declares that the present style of Berkshire pig is worse than useless for their trade.

Whether or not the Improved Yorkshire has come to stay in Canada will much depend on the importers and breeders of this variety in the Dominion. I am led to make this remark from the perusal of a paragraph in Mr. Francis Green's letter in your May issue. When writing of the Large White class of pigs at the English Royal Show, he states:

"As a matter of fact, the Improved Large Yorkshires are almost invariably the sole contestants in that class. I hope he is not correct, nor do I think he is; indeed, the very opposite is the fact. As a proof of what I write I need only quote the prices made at a recent sale conducted for one of our most popular noblemen by our first auctioneer, and after a grand spread. The pigs were sent into the ring in good form, and were bred from two herds, one of which has won many Royal prizes in the classes for Large Whites, and the other, which is advertised as 'all pigs descended from Royal

winners and eligible for entry in herd book.' What more could be wanted if Mr. Green's contention be correct? The result was a total of £105 12s. 6d. for twenty-nine lots of Large Whites. Prices made were from 10s. for five months' old pigs upwards. Seven boars and sows nearly a year old made £19 19s. 6d., or an average of less than £3 each; then seven boars and gets, about five months old, made the enormous sum of £9 15s., or about £1 8s. each. Reputed winning, or being exhibited at Royal shows, or even entry in the herd book, proves nothing, and if our pig breeders buy on that ground alone they are doomed to disappointment. Fancy twenty-nine pigs highly descended and all the rest of it, being sold for far less than I made by private sale this spring of

two young pigs of the real Improved Yorkshire White breed. My sales for 1890 already total 256 boars and gets. SANDERS SPENCER.

Four of a flock of sixteen turkeys were of a white strain, the rest dark. Dogs killed three of the light-colored birds and but a single one of the dark ones. I will hereafter keep only dark birds. The dogs cannot follow them so well as the others. Near many towns dogs are nearly as bad at destroying poultry as sheep. The curs ought to go.

The Tamworth Pig.

BY G. ALLENDER, ENGLAND.
(Continued from July issue.)

If the views of Messrs. Harris, given in my last article, are sound, the most fashionable English pig of the future will be the Sandy Tamworth, two or three pens of which have regularly appeared at the Birmingham Fat Stock Shows, where they have been the butt for the ridicule and sarcasm of fashionable pig-breeders and others. These words struck me as being very common sense, and I determined that, as soon as opportunity offered, I would try the old Tamworth or some kindred neglected breed. In 1882, having a small farm of twelve acres near London, at Rochampton, where I had room for a few pigs, and the wherewith to keep them, on the skim-milk from my herd of Jerseys, I sent a commission to Messrs. Lythall to purchase some Tamworth pigs for me, and in due time two sows arrived. I certainly was somewhat alarmed when the creatures came out of their crates; great, high-back, slab-sided beasts. These sows were in pig. I subsequently purchased the best sow out of one prize pen at Birmingham Christmas Show, and a boar out of another prize pen, and so laid the foundation of my herd. By selection, the produce of these pigs have immensely improved, and not only have many of my friends who at first chaffed me about my "wild" pigs become staunch breeders of the sort, but what is more important, the bacon-curers, not only in England, but in many foreign countries, have become customers for them.

We have now classes for the Tamworths at the Royal, Manchester, Liverpool, and North Lancashire, and also this year, 1888, for the first time at Smithfield. While pleased at the success of my efforts to bring this useful breed into notice, I do not for one moment desire to condemn other breeds. By good fortune, the Tamworth was not crossed with the Chinese, and now that the breeds which were produced by the admixture of Chinese blood have been condemned by the bacon-curers as carrying an excess of fat, this old, lean-fleshed breed will, I think, be as useful for a cross, in a contrary direction, as the Chinese pig undoubtedly was some half century ago. I prove this, and at the same time admit the value of the fat pig, by the following statement. In 1882 I put a Tamworth sow to a large white boar. Out of the litter, the produce of this cross, I exhibited two pigs at Smithfield in 1883, in the "cross-bred" class, and won the first prize and the cup as the best cross-breds in the show. I kept two sow pigs out of the litter, and bred from them by a Tamworth boar; the produce being, of course, three-quarters Tamworth, one-quarter large white. All of these cross-bred pigs have been sold except five, which I last year fed for exhibition at Smithfield. I had also a litter of pure bred large-whites, farrowed at the same time, within a day or two, and I had also a litter of pure Tamworths, farrowed on the same day. I selected pigs out of all the three litters, viz., the pure white, the pure Tamworth, and the three-quarter Tamworth and quarter white; all being kept together and fed alike. The cross-bred pigs are at this moment stones heavier than

either of the pure breeds; the Tamworth is far in advance of the pure whites. Now I submit that this is a very valuable lesson for all who feed pigs for profit, not for show. It indicates that the value of the original Chinese cross has not been lost, only by constant in-breeding the tendency to produce fat has become too strong. The new blood of the pure old-fashioned lean breed has told and has paid.

Pure Tamworths are good feeders, as is shown by my having had six-hams cured, smoked, and dried by Messrs. Harris, of Calne, and which then weighed, in the aggregate, 121 lbs., a full 20 lbs. each, off pigs twenty-seven weeks old.

Having tried the cross with white pigs, and having tried white pigs alone, I have now cleared off every white pig and any pig containing white blood. I believe the Tamworth to be a most valuable cross for the Berkshire. Messrs. Harris have, I believe, proved this; I want to test it myself, and recently bought a Berkshire boar—a large useful pig.

One last word. Tamworths, however carefully one may select, frequently throw pigs with black spots. These are perfectly legitimate in the pure Tamworth, unless the Tamworth, like many other creatures, especially cocks and hens, is to be spoilt by the "fancy" judge.

Special Purpose Cows.

It is my opinion the selection of a cow should be made with particular attention to the object in view, and the special way in which we desire

to profit thereby. Cows are of two kinds, but, strange to say, many familiar with the animal have not yet learned this fundamental truth. As lords of creation, we can, by becoming acquainted with nature's laws, make them serve our ends in the production of animals with wonderful capabilities; yet there are bounds we may not pass. We cannot breed in such a way as to produce cows of a solid red and solid white color from the same individual, because it is necessary to take different directions in breeding to produce animals of different colors. For the same reasons we cannot breed the best beef and the best milk cow in the same animal. These qualities are possessed in perfection by no individual cow of any breed, and while each breed of cattle possess to a greater or less extent some peculiarities of their own, let all bear in mind that the excellencies of none are in the blood but in the breeding, for by one improper mating the good qualities which have been acquired in years may be destroyed, and therefore the real worth of each animal of any breed rests mainly on the breeding of the individual. Hence we have in the best beef breeds animals of bad beefing qualities, as also in the best milking breeds, poor milkers. If we would be the most successful in the production of beef ani-

mals, we must select as a basis of operation animals of individual merit from the best beef strains. If our object is to reach the highest point of perfection in dairy cows, we must select from the best milking families only those animals which have individual qualifications recommending them.

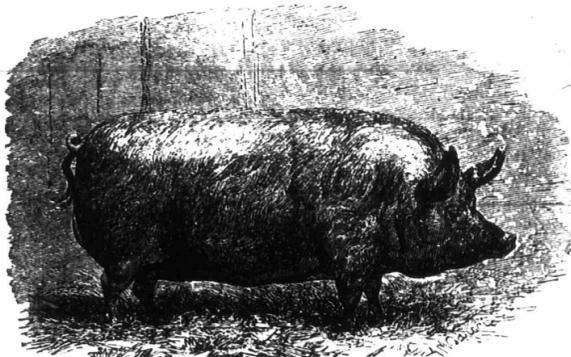
One of the most important questions at present with us as Canadian dairymen is:—How are we to get a supply of good performing dairy cows in the least time and at the least expense? The only way is by making the best use of the means within our reach. My observation and experience has led me to the conclusion that some of our native Canadian cows are exceedingly good milking animals, both in quality and quantity, and would compare favorably with many thoroughbreds, and that if they are intelligently bred and properly cared for, Canadian dairymen cannot possess them selves of a better foundation for a profitable dairy herd than some of our best cows. Being hardy and indigenous, qualities of no little importance place them in more favorable circumstances for development than many of the imported breeds. It is a lamentable fact that our native cattle have for so many years been bred so unintelligently,

carelessly, and unprofitably, and that so many years have been almost lost in the line of bringing them to that perfection and usefulness of which they are capable. It is also to be regretted that much time has been lost in perfecting of thoroughbreds, breeding for color, style, fancy, &c., instead of usefulness. But on the other hand it is pleasing to note that wisdom gained by experience is now having a good effect in the breeding of all domestic animals. Most of us who are now dairymen could, by careful examination, and by making ourselves more familiar with the peculiarities of the animals we have, choose from their number a few at least

that would well repay us for intelligent care in breeding. Use only pure-bred sires that have ancestry possessing such milking qualities as you desire. Pedigrees are of value only as they enable us better to know the individual merits of an animal, and in too many instances are used to mislead. I have had splendid results from the use of Jersey and Guernsey sires, and believe that good effects may be produced by the use of many of the different breeds if we use proper care in the selections.

I believe it is an absolute necessity if we would become successful breeders of dairy cows to have that special object in view. A faithful examination of any herd will prove that the greater is the tendency to take on flesh the less is the profit in milk. By careful study, and the experience of others, combined with our own, we may become capable of determining the ability of our young stock with great accuracy, thus saving time and expense in milking heifers a year or two to find out what they will do. The fact that our Canadian interests and personal welfare would be greatly advanced by an increased production of first class cheese and butter, demands our thoughtful attention. By keeping a greater number of special purpose cows we could greatly increase the profitability of our dairies, and this should be sufficient inducement to stimulate us to greater efforts to possess ourselves of choice animals. Let our aim be no less than to equal, if not surpass, the most successful.

FARMER.



THE PRIZE-WINNING TAMWORTH BOAR, DICKIE 65.

The Dairy.

The Coming Dairy Competition.

As previously announced, the editor and proprietor of this paper has again offered for competition as a dairy prize a splendid silver service to be awarded as a first prize to the herd of three cows which, on being tested, produce the greatest value in milk, &c., for food consumed. This prize will be awarded this year at the Toronto Industrial. The Industrial Association have offered a second prize of \$30 and a third prize of \$20. On June 6th a fully advertised meeting of breeders interested in the dairy breeds was held in Toronto. Mr. Wm. Rodden, of Montreal, represented the Ayrshires of the east; Messrs. D. E. Smith, of Churchville, and R. S. Stevenson, of Ancaster, represented the Holstein Breeders' Association; Mr. Jas. Russell, Richmond Hill, Ont., looked after the Short-horn interests. Prof. James Robertson, the Dominion Dairy Commissioner, addressed the meeting, and with the delegates carefully considered one by one the rules which governed last year's test, each clause being either amended or adopted unanimously. Below will be found the amended rules which will govern this year's test. We hope that each of the dairy breeds will be represented in the test this year:

RULES

TO GOVERN A COMPETITION FOR A COMPARISON IN THE ECONOMY OF THE PRODUCTION OF MILK BY COWS OF DIFFERENT BREEDS AT THE INDUSTRIAL EXHIBITION, TORONTO, SEPTEMBER, 1890.

I. Cows of any breed or age may be entered for competition. The cows of each lot entered may be the property of one or more persons. No lot shall contain animals of different breeds. No lot shall contain pure bred and grade cows. Grade or native cows forming one or more lots will be admitted upon equal terms with the others, but the animals of each lot, which are not entered as pure bred, must be the grades of one breed.

II. Each competing lot shall be composed of three cows. The competitor shall be between the lots and not between the several cows. The person in whose name the entry is made shall declare the age of each cow, the date of her last calving and the time of service, if pregnant.

III. Each entry shall be made to on or before

IV. The tests of the competition shall extend over three days. The milking shall be performed at the times each day to be appointed by the person in charge of the tests.

V. All cows entered for competition shall be milked clean to the satisfaction of the person in charge of the tests, on the morning and evening of the day previous to the beginning of the tests.

VI. There will be no restriction as to the quantity or temperature of pure water that may be given to the cows, or as to the quantity of salt that may be fed. The feed shall be provided by the persons in charge of the several cows or lots. The several kinds of feed shall be valued at current market prices by the person in charge of the tests. Representative samples of the feed shall be open to the inspection of all persons interested.

VII. The quantity of feed consumed by each lot during three full days shall be valued. The three days shall be counted from one day before the first milk for the test is taken, until one day before the last milk for the test is taken.

VIII. The milk from the several lots shall be valued at sixteen (16) cents per pound of total butter fat contained in it, together with two and a-half (2½) cents per pound of total solids—not fat—contained in it.

IX. Counting from ninety (90) days after the date of last calving, five (5) per cent. additional value shall be added to the valuation of the milk for every thirty (30) days thereafter (and proportionally for every part thereof) up to the end of eleven months after calving. Counting from ninety (90) days after the date of the last service (if pregnant), two (2) per cent. additional value shall be added to the valuation of the milk for every thirty (30) days thereafter (and proportionally for every part thereof) up to the end of two hundred and thirty (230) days after service.

X. Milk of unpalatable flavor, or abnormal as to the nature of its constitution and quality for human food, or for manufacture into fine dairy products, shall be rejected.

XI. The lot of cows whose milk shows the largest profit for the food consumed, according to the forementioned scales, will be awarded the prize of a silver service, value \$65.00, given by the editor of the FARMER'S ADVOCATE AND HOME MAGAZINE, London, Ont.

XII. The decision of the person in charge of the tests shall in every case be final, and the animals and premises where they and their feed are kept shall be under his supervision. No feed shall be fed at any time during the time of the test without being weighed or measured by himself or assistant.

XIII. The prize will not be awarded unless at least three lots compete, two of which must be of distinct and different breeds.

The prizes in this class will not be awarded unless at least three herds compete, two of which must be of distinct breeds. Entries for this competition to be made with the Secretary of the Toronto Industrial Exhibition not later than Saturday, August 16th, 1890. Entrance free.

The Dairy Qualities of the Holstein-Friesian.

BY H. BOLLEIT, CASSEL, ONT.

Mr. Chairman and Gentlemen,—In times of depression, men in all vocations strive to lessen the cost of manufacture in their productions. To accomplish this successfully they invent and use skilled labor and fuel-saving machines, so that they can offer their products to the public at a low price and still make a good profit on them. The farmers and dairymen of necessity are compelled to follow in the same footsteps. The grain growing farmer makes use of the different labor and time-saving machinery, by which he lessens the cost on the products of the soil, and so places himself on an equal footing with the manufacturers in the race for cheap production. The dairyman, if he wants to keep pace with the others, must also make use of improved and fuel-saving machinery in the form of the improved dairy cow. The cow which yields the greatest profit from the food she consumes is the cow which the dairyman should choose, for it is only by lessening the cost of production that he may expect to keep even with the others. But where will he find this cow? Owners of all the different breeds of dairy cattle claim to possess her, but let us examine them a little and we will soon come to find which is the most profitable cow for the general farmer and dairyman. It is the cow that will yield the largest amount of milk,

butter, cheese, and beef, from a given amount of food. The Jersey is only a special purpose cow, and hence is not suitable for the general purpose farmer; the Ayrshire also does not find favor on account of being too small for all purposes. The Short horn, at one time a grand dairy and general purpose cow, has, through breeding for the beef form exclusively, been entirely ruined as a profitable dairy cow. The Holstein-Friesian is, in reality, the only worthy general purpose cow. She has almost the size of the largest special beef breeds; is a rapid grower, actually outstripping all others in early maturing qualities. They are already in the foremost ranks as dairy cows. None dispute their claims as the greatest of all milk producers, and slowly but surely they are also acknowledged the greatest butter producers. They are hardy, acclimatize readily in all climates from the far north to the sunny south, and prove themselves the most economical consumers of food under all circumstances.

In Germany, where for many years back tests have been conducted to ascertain which breed gave the best returns in all directions for food consumed, the Holstein-Friesian has always been leading, and ever loud has been the praise of our forefathers (who emigrated from that country) of the large black and white cows from Holland with their immense udders. The stables of the nobility are filled with them, and the cream and butter of these Holsteins grace the tables of the richest in the land. To show you what rank the Holstein takes as a dairy cow in other countries I will quote you a few interesting figures. In 1883 the Department of State, in the United States, issued a circular letter to their Consuls asking them for reports upon the cattle interests of the countries to which they were accredited. I will quote a few figures from the report of Consul Tanner in regard to the cattle of Belgium. The whole number of cattle in the Kingdom (in round numbers) are 1,556,000, of these there are:—

Hollanders (Holstein-Friesians).....	169 000
Durhams (Shorthorns).....	50 000
Ayrshires.....	15 000
Jerseys.....	10 000

The average price of cows of the pure breeds is:—

Hollanders.....	from \$118.00 to \$180.00 per head.
Durhams.....	65.00 " 85.00 "
Ayrshires.....	65.00 " 80.00 "
Jerseys.....	60.00 " 75.00 "

Other breeds not known in this country were reported. Belgium is situated about equal distance from North Holland and Friesland, the home of the Holstein on the north, England and Scotland, the homes of the Durhams and Ayrshires on the west, and the Channel Islands, the home of the Jerseys, on the south-west. Neither of these breeds has any advantage of situation over the others; all are within easy reach; all have been equally free to win a position in this country. Belgium, in fact, has been a great field on which these foreign breeds have met on equal terms to contend for supremacy. Her farmers and dairymen have been acting the part of a great committee to determine on the merits of these breeds. There have been no outside influences to bias their decision. The figures which I have given you is their verdict. The average number of the Holsteins is more than double of all the other three, also the price is more than double. These facts, combined with the favorable impression they have made since their introduction into our country, actually outdoing all others, places the Holstein-Friesian into the front rank as a profitable dairy cow, and crowns her queen of all the dairy breeds.

Dairying in Ontario: The Relation of Breeding to Dairying.

A paper read by Wm. Thompson, Esq., at the Woodstock Holstein-Friesian Association Meeting.

Cattle rearing and handling constitute the strongest ally of successful farming. This proposition I hold to be true: 1st, because without their aid soil fertility cannot be profitably maintained, and with that lost crop failure follows; 2nd, because of the enormous returns that cattle and their products bring to the country. According to the latest data I have at hand the total exports of the produce of Canada for the year 1888 amounted in round numbers to \$81,000,000, of which over one sixth, or \$15,500,000, was for beef, butter, live cattle and cheese, being greater than that of wheat, barley or any other single article on the entire list of exports except that of lumber.

That the main stay of Ontario therefore exists in its herds seems clear. Referring again to Dominion statistics it appears that in the export of cattle and products our greatest returns by far have come along the line of dairying, notably, during the last fifteen years. I have prepared a table showing how the value of the exports of cattle, beef and dairy products have fluctuated since 1874:—

Year.	Cattle.	Beef.	Cheese.	Butter.
1874	951,269	\$270,308	\$3,523,201	\$2,620,395
1875	823,522	133,747	3,886,225	2,337,324
1876	601,148	140,108	3,751,298	2,548,894
1877	715,350	375,974	3,748,575	3,073,409
1878	1,152,394	451,876	3,997,521	2,382,237
1879	2,006,636	148,587	3,790,300	2,101,697
1880	2,764,437	41,948	3,893,366	3,068,069
1881	3,464,871	83,738	5,510,443	3,573,634
1882	2,256,330	49,798	5,500,898	2,936,156
1883	3,890,028	40,722	6,451,870	1,705,817
1884	5,581,082	27,409	7,251,989	1,612,481
1885	5,508,943	54,517	8,265,210	1,430,905
1886	5,916,551	28,745	6,754,626	832,355
1887	6,521,320	22,146	7,108,978	979,126
1888	5,012,713	24,005	8,928,242	798,673

The table shows that while dressed beef and butter exports have steadily decreased the output of live stock and cheese have enormously increased. It also indicates that though the cheese star is strongly in the ascendant, beef production is also too important to be ignored.

During the past five or six years, however, cattle and cheese have fairly held their own, the output of the former ranging between \$5,000,000 and \$6,000,000 annually and the latter about \$8,000,000. That the trend of events in Ontario is towards dairying may also be seen from the fact that milch cows have run up in number to about 780,000, or 40% of the total cattle in this Province, while a serious falling off in young and other cattle amounting to 70 or 80 thousand in the past two years has taken place.

Are the conditions in Ontario favorable to the further expansion of dairying? Climatically we are highly favored in contrast with Manitoba, the Northwest and portions of Quebec. Without excessive severity our winters are just such as will develop vigor of constitution in the animal. Wood, stone, and other requisites for building comfortable stables are in most places abundant at reasonable cost. The well settled portions of Ontario lie between the 42nd and 46th parallels of latitude. The temperature of this territory may average 8 or 10 degrees colder than similar locations in Western Europe, but then the dairy districts of Holland are north of the 50th parallel of latitude, while Denmark, which has captured Canada's place in the British butter market, is all north of the 56th parallel of latitude—10 degrees further north than the most northerly bound of dairying Ontario. In the

matter of heat and moisture, the climatic conditions are well adapted to promote vegetation, giving us the corn crop and other advantages as against the Northwest. Moreover, no fearful dream of Western cyclone haunts the peaceful slumber of the Ontario dairyman. The soil also is rich enough to warrant the carrying of larger herds of cattle and expanding the dairy business. An examination of returns shows, for example, that Ontario grows larger yields per acre of the four great staple grains, viz., fall wheat, spring wheat, barley and oats, than any of the chief grain growing States in the south and west of us with a single exception. In Illinois last year the oat yield per acre was a small fraction above that of Ontario, but in other years it, like the other States, had fallen below our favored Province. Hence I believe we can carry a much heavier stock of cattle with marked advantage. Are we lacking in sagacity, knowledge or enterprise that this business may not be profitably expanded? Are we willing to take a back seat to the Hollander or Dane in these respects? Will not the skill that established our enormous cheese trade with Britain also enable us to recover an honorable place in her butter market? It is not so easy to regain as to lose. Serious difficulties must be overcome. Our rivals in Western Europe have an advantage over us in shipment of two days as against ten, but what with swifter railways and steamship transportation, ventilated cars and steamboats, this obstacle is not insurmountable.

A special reason for extending butter production exists in the fact that it takes so little from the fertility of the soil, and gives the farmer such a generous return for his skill and labor. Probably the most abused animal in America today is the general purpose, or double purpose or all purpose cow, and farmers are told to abandon her for the special or one purpose cow. But, gentlemen, to quote ex-President Cleveland's historic phrase: "It is a condition that confronts us, not a theory." All depends on what the dairyman is aiming at. He must select to purpose and his conditions must determine his object. The city milk man runs a cow for all she is worth, and when she fails at the pail he abandons her. Possibly the creamery patron or private butter maker might do better to veal his bull calves and abandon the beef idea in toto, but some of the most successful farmers I know to day, have for years been turning out annually a handsome bunch of fat steers of their own raising in addition to the production of butter.

Next comes the case of the cheese factory patron—a large and most important class. Can he afford to depend solely upon a cow that starts business on May 1st, operates till Oct. 31st, then shuts up shop having given 2,500 lbs. of milk, and proceeds to spend the next six months eating expensive food and occupying expensive stable room? The special purpose of that cow is to ruin her owner. He must rally to his aid a better milk machine.

Ridicule is heaped upon the farmer on the assumption that he tries to dairy for 8 or 10 years with a beef type cow, in order that she may be successfully fattened at the end of that period. If she can be converted in fair beef why so much the better, but that is not the idea. It is rather this, to handle a dairy cow whose male calves, usually grades, can be profitably turned into fat steers at an early date. Is that problem beyond the breeders' skill?

Can breeders and farmers afford to ignore this adjunct of the business? Is it not worth while persevering? Our conditions are favorable and we have entry privileges that our U. S. beef growing rivals are not likely to secure in the ports of Great Britain.

The cow of the hour seems to be, 1st, one that will economically convert her food into a generous flow of milk. 2nd. When the cheese factory is not running, she should be able for at least four months' good service more as a butter maker. After that I would give her a couple of months' holidays to prepare for another year's business. 3rd. She should produce for her owner male calves that can, as steers, be fattened with profit.

Notes on the Dairy.

Our dairy season has opened with very good prospects. Some farmers are now beginning to see the advantages, and to reap the benefit, of feeding and caring well for cows in the early spring. The average quantity of milk to the pound of cheese is considerably less than usual this season; 10.50 to 10.60 lbs. of milk have made one pound of cheese in several factories which made April cheese. This is a very decided gain on former seasons, and also a corresponding improvement in quality. The cheese makers in Britain are in a good, healthy state. There has been a steady consumptive demand all winter, and the old stock of cheese is being freely used up. There is every prospect of our new make being wanted as soon as it is ready, at a fair price. April cheese is quoted at 8½ cents.

There are three different points which every dairyman should study:—

1st. To see that his cows are provided with plenty of pure water, without which no cow can produce, either a large quantity of milk or milk of a good quality. Water is the chief vehicle or means by which a cow's feed is floated through all her various organs of digestion, and if this vehicle is dirty and impure, everything that is carried in it will be impregnated and contaminated with the impurities that are in the conveyance by which the cow's food is conveyed from one department of her laboratory to another, till the contamination reaches the blood, and here the same vehicle, still in its dirty, filthy condition, has to carry the small globules of fat, the small particles of caseine, and other substances, with the milk-sugar in solution, through the animal's system in the blood, till it reaches the milk glands, there to be elaborated, and the milk produced by the action of these small, tender and minute machines. How can it be possible for a cow (though she will do her very best to throw all the dirt and foulness out) to produce clean, pure, sweet milk which has been carried all through her whole mechanism in a dirty, filthy vehicle? It is absurd to expect the cow to work miracles, when a little attention, with, perhaps, a little experience, could prevent all this by supplying the cow with pure water.

2nd. Every dairyman should provide summer feed for his cows. When the grass gets dry, or begins to fail, the cows should not be allowed to fail. Every farmer should so arrange his farm so as to have a small field near the barn where he could grow green, succulent food for the cows—oats and peas, or oats and vetches. Don't sow too much at a time, put in a little every ten days, and it will be in condition to feed correspondingly and give the best results. To feed green feed it is best to feed it in the stables. Have a good feed always in the mangers when the

cows come in, and they will eat and milk, and if kindly treated will do their best for the dairy.

3rd. Be honest with the milk as well as with the cow. This touches a very tender spot in some people; it rouses the wrath of some to such an extent that they say unkind and hard things against the milk inspector, especially when any fault is found with their milk. The dairymen of Ontario must have had some reason for having inspectors appointed, or was it only for a name or for fun? I believe, and so does every honest dairyman that has had experience in factory operations, that there was reason, and good reason, too, for having inspectors appointed. The result of their work the last two seasons has fully justified their appointment, and shown the necessity of having this work carried out, without which our whole dairy interests were beginning to suffer, not so much, perhaps, from our dairymen getting worse or more dishonest, but from the fact that other countries, and other districts of our own country, were going ahead, and going minutely into all the details, and investigating every cause of failure and every point by which to make dairying a success. Our leading men were obliged to make up and investigate matters too, or be left behind in the business.

Nearly all our cheese is made on the co-operative plan. It was found to be needful that every patron should be aroused to do his best, and that he should help to arouse his neighbor who was either half awake or only pretending to be half awake, and cunningly taking a little advantage of his neighbor. These are the parties who squeal when caught, and generally condemn everybody and everything about the factory but themselves. The result of this work, as given to the public by men who are in a position to know, say that the improvement in Ontario cheese has been very marked. Perhaps that has something to do with the active demand at present for new cheese. No matter who squeals, it is to be hoped our honest dairymen will see that the name and character of our fine cheese will not only be maintained but, if possible, improved from year to year till nothing but fancy goods will be put on the market. I think it is only a display of ignorance when a dairyman gets angry at an inspector when he is doing his duty honestly and faithfully. It is not a matter of opinion with him whether one man's milk is better than another's; he has his instruments, and it is as they register the milk that is tested, not what he thinks, but what the instruments say, he is guided by. Perhaps a little explanation about the system of testing milk might be of interest. Everything that is weighed or measured is simply a comparison with some known fixed quantity. In weighing liquids there is a known given quantity fixed by which all other quantities are compared, which system is known as Specific Gravity. The fixed known quantity is one cubic inch of distilled water which is put into figures thus: 1000, or a thousand parts at 4 Cen. temperature or about 38 Far. temperature. Thus, distilled water 1.000 standard; average milk 1.032, (.032 difference heavier); olive oil 0.915, (.085 difference lighter); sea water 1.026, (.026 difference heavier). Cream is lighter than either water or milk, and consequently skim milk is heavier than normal milk, and by these means the weight or specific gravity of milk can be as accurately tested as the weight of a bushel of wheat or oats, and the inspectors can't help but record what the instruments register, the same as your city weigher registers the weight of wagons on his scales.

The Future Dairy Cow for Canada.

Sir,—There having appeared two letters in the Montreal Witness, advocating the Canadian cow, I hope we, as farmers, have more good sense than to be misled by such prejudice. We have had quite an experience with the Canadian cow, and find that a few will milk well for a while, but they invariably dry off at Christmas. Being fed almost exclusively on straw during the winter for generations, has made this a fixed habit. The Canadian cow is but a scrub, coarse and homely, without any definite shape or color, and is neither profitable nor ornamental; while we have, in the Ayrshire, a cow that has been bred exclusively for the dairy a century or more, beautiful in shape, and fancy in color—a lovely brown, nicely spotted, and speckled with white. Why, Jacob chose the spotted and speckled, so you see he had an Ayrshire fancy. And, as the Scotchman said to Professor Brown, of Guelph, when asked why they preferred the Ayrshires, replied: "She was the coo to mack the siller." And that is what we all are trying to get; besides, I know of no animal that will respond more readily to kind and generous treatment than the Ayrshire cow. In short, she is a thing of beauty and a joy for ever. J. R. S.

J. R. S. has, no doubt, found the Ayrshire cow profitable. There is wisdom in his letter too. He infers that a profitable cow can be oftener and more surely obtained from well established breeds that have been cultivated in one line for generations, the good qualities having been thus established and transmitted from generation to generation. Common sense would teach us that such animals, as a rule, are more profitable than a nondescript, descended for generations from animals that have been bred at hap-hazard, without any especial object in view. A great many farmers, especially new beginners, fall into error by supposing, because an animal is purely bred and duly registered, it is sure to be profitable. This is not always so, nor will it ever be; though, each year we hope to see fewer and fewer unprofitable animals recorded. If your means will allow you to buy pure-bred cows, select those which have the qualities you desire. Do not, in any case, buy an inferior animal, because it is registered or may be registered, but get a good one, descended from good stock among the dairy breeds. A good animal is one that yields a profitable return for food consumed; the greater the profit the better the cow. For her to be valuable as a breeder, her dams and sires, for generations, must have possessed the same qualities. Such a one may be termed a good animal and no other. In selecting and breeding animals, determine what you want and buy, and breed along that line. Other farmers again fall into error by supposing that there are few or no good cows but those that are pure bred or high grades. This is also a mistake; many good milkers may be found among the common cattle, but they are obtained much less frequently than among pure-breds or high grades, and, generally speaking, are not to be depended on as breeders. Their produce may be good milkers and they may not. If we wish to advance, nothing but pure-bred males must be used, and these must be descended from animals that have been profitable for generations. By this means only can we establish a type. It is computed that only one-third of the cows in America are kept at a profit to their owners; one-third just pay their way, the others are kept at a loss. All cows should be tested frequently during the season, and their milk weighed, so that the owner may know to what third his cows belong.

All who pass through the door of success will find it labelled "push."

The Farm.

Preparing Soil for Wheat.

An old English adage says, "That wheat loves a mellow bed but loathes a soft one." The question then arises how to acquire the desired tilth. Land being thoroughly underdrained assists wonderfully in the preparation of the soil, and without it is either naturally open or artificially underdrained there is considerable difficulty attending the successful growing of fall wheat, as the alternate thawing and freezing on such land either kills entirely, or so weakens the plant that the crop cannot be grown with profit. The naked fallow has always been considered the proper preparation for growing wheat, and it is the general plan of the country to concentrate much of their work and appropriate the most of the farmyard manure for this purpose, and when land is very heavy and foul with thistles or other weeds, it is perhaps the most feasible plan to adopt for cleaning. Where the soil is loamy and easily worked and clean just as good results can be obtained by plowing down a clover lea after the first crop has been cut for hay, and by this means the manure can be used for the roots, corn and fodder crops, and by again having these fed on the farm its fruitfulness and fertility may be increased. Plowing at this season of the year should be followed closely by rolling, before the ground has time to dry. This is for two reasons, the clods are much more easily broken when first turned up, and the moisture is retained in the soil, but after being once ploughed let the after tilling be done by working the top entirely, as the more the surface is stirred the more solid the land becomes. There is no greater mistake in the preparation of soil than to continue deep plowing up to the time of sowing, as by so doing the soil is made loose and hollow and is just in a state that freezing and thawing will have the most effect upon the wheat plant. The advantage of plowing and getting the land in good tilth for some time before sowing is that by this means nitrification is undergone. The soil obtaining nitrogen from organic matter, from rain water, from manure or the humus in the soil, by stirring the soil the air acts upon it and the rainfall has more effect. After stirring, rolling prevents evaporation, and by pulverizing soil becomes moist through the action of the atmosphere. If there is no moisture in the soil, not only will seeds not germinate, but plants wither and die, as it is through the moisture in the soil the roots of plants take up their necessary sustenance. It is therefore through having the soil worked down to a moderately fine state that a good stock of wheat can be obtained. It is in the driest season of the year in which our fall wheat seeding is done. The only hope of successful growth is by obtaining moisture through this means. For the same reason manure is better to be thoroughly mixed for some time before the crop is sown and on lands which are likely to produce a rank growth it is better that the manure should be applied to a previous crop, for by the too free use of manure on such land a lodged crop is nearly sure to be the result. The use of commercial manures with wheat has not proved a success, and when land requires other manure than can be made upon the farm it is better to apply these to root crops. There is more advantage in sowing wheat with the drill than any other crop, as it is necessary to have it covered, and yet not too deep. The best results are obtained by sowing from one to two inches deep.

Building a Trout Pond.

Sir,—Being desirous of building a trout pond, and as I think I have a good place for one, and as I do not know anything about raising fish, or how to build a dam, perhaps you could give me some information. 1st. What size of dam, and depth of water would be required? 2nd. How, and what feed do fish require? 3rd. Where could I get fish to stock a small dam. By answering above questions you will oblige a constant reader.

N. Dent, Zimmerman, Ont.

As you are desirous of building a trout pond and rearing the most delicious and gamy fish of our waters, viz., speckled trout, I will hurriedly give answers to the questions you desire information upon. In the first place you say you have a good place for a pond. Now having a good place for a pond does not cover the point only so far as the land is concerned, the essential part is to have good pure water to fill your pond with, and that it should be cold, limpid, running water, from a living stream or from springs jutting out of the earth. In any case the water should not get above 55° to 60° of temperature in the hottest summer months, a higher temperature will not warrant success in the raising of any of the salmonoid family. These include in our Canadian waters, salmon, salmon trout, speckled trout, white fish and herring, all belonging to the higher order of fishes. The lower orders or families take in the spring-spawning fishes, such as bass, muskallonge, pickerel, pike, and lower still, perch, sun fish, cat fish, eels &c., these latter named fish can be tried in water of a very high temperature running up to 70° and 80°, and only take a few days or a few weeks for their eggs to hatch. Whilst the salmonoids, being fall spawners, take from five to six months to hatch the embryos. Temperature is therefore the medium which regulates the time in which the young fish breaks forth from the egg. From these remarks you will see the necessity of filling your pond with cold stream or spring water, if you want to be successful in growing speckled trout. Next as to size of pond, briefly, I would say, the larger the better, if you have sufficient supply of living water to fill it, and keep it full. The larger the surface area, the larger supply of natural food will be produced, and consequently you can grow more fish, and larger ones than in circumscribed limits. It is just like rearing cattle or other animals on land, the larger the pasturage area the more feed there will be, and consequently more cattle can be kept, and they will thrive and fatten better, and become more profitable. As to the depth of your pond, portions of it should be pretty deep, say six, eight or ten feet, when ice will not form to reach the bottom, but a large portion of the pond may only run from six inches along the edges, and gradually increasing in depth, till you reach your maximum depth whatever that may be. The shallower parts will give the most natural food for your trout, especially where aquatic plant or vegetation of any kind are produced; as upon these plants insect life of various kinds feed, and produce their young which in turn are being fed upon by the fish which inhabit the ponds. Without vegetation on land, no animal life could be produced or grown; without vegetation in the water, insect or fish life could not exist, hence the baneful effects of sawdust in streams, its resinous, poisonous effects stops all vegetation, and consequently, in the end, exterminates insect and fish life. If

your pond has a large surface area, and produces plenty of insect life from the aquatic plants, artificial feeding need not be resorted to. If, from the absence of these last mentioned requirements, artificial feeding has to be resorted to, finely chopped bier, or meat of any kind, can be sparsely scattered here and there to the fish.

You ask where you could get fish to supply your pond. This can be readily answered. It may be too late in the season just now, but this you can find out by writing to the officer of the government fish hatchery at Newcastle, Ont., immediately, and if any speckled trout fry are still on hand, you could get them by paying \$2.25 per thousand at the establishment, and transporting them to your pond, where if all the requisites above related are to be had, and your dam safely and securely made, you will, in the course of two or three years, have an abundance of speckled beauties, varying from six to ten and twelve inches long. Keep the little boy and the man poacher off your pond; allow honest angling with hook, line and fly only; uphold the law in its entirety, which forbids the speckled trout being taken by any means from the 15th of September to the 1st of May, and you will be recompensed for your outlay and trouble.

Permanent Pastures vs. Frequent Seeding.

We hear a great deal about the advisability of laying down permanent pastures. These are very desirable on rocky ground, and on such other land as cannot be successfully cultivated, but on good arable fields in all the older provinces, temporary pastures are the most profitable, and we confidently look forward to the time when many of the natural grasses of Manitoba and the Western Territories will be brought into cultivation as timothy and clover are in the east. Even in Europe permanent pastures are not as popular as they once were. The editor of the English Agricultural Gazette, in a recent issue, says: "We are not anxious to see too great encouragement given to the conversion of arable lands into permanent pastures, because we believe that temporary pastures, as a rule, pay better. The system of alternative husbandry is certainly more productive, in meat as well as in crops, than the purely pastoral system." All over the country we find land in grass that is not producing one half the profit it would if broken up, cropped for an interval, and again reseeded. A system in vogue with many excellent farmers in Ontario is to seed a field with clover and perhaps a slight mixture of other grasses, from this they cut one crop of hay or pasture a season. When the opportunity is favorable a crop of seed is cut the same year. This is best done by cutting the grass early or pasturing close until the 20th of June, after the seed is gathered the land is immediately plowed up, put in crop and soon again reseeded. Sometimes the second crop is plowed under instead of being cut for seed, by this system many farmers have greatly increased the fertility of their farms; such reseed and plow up large acres each year. An Ontario farmer with whom we are well acquainted has doubled the productiveness of his land by this method within the last five years. Clover cannot be used in this way in Manitoba, but every intelligent western farmer should watch carefully the native grasses and see if some sort cannot be found to fill the place here that clover holds in the east.

The "slow cow" usually pays the farmer better than the "fast horse."

How to Keep Up the Fertility of Our Farms by Breeding Cattle and Sheep, and Feeding for Profit.

(Continued from July issue.)

The sheep industry is one of the most profitable for the money invested, when carried on in a limited or economical manner in small flocks. I am sorry to have to state that this noble industry has come to be a soil-robbing system. A portion of the grain product should be fed every winter on the farms where it is produced. Do not sell but part of your lambs in the fall for Buffalo or any other market; feed part of them at home; finish them to weigh 140 lbs. in July; they are worth 4½ to 5 cents per pound live weight to ship to England. That price and their fleeces will pay you. For example: A lamb costs \$4, feed \$2.50, total \$6.50; 140 lbs. of July, at 4½ cents per pound, \$6.30, add fleece, \$1.20, makes \$7.50, which leaves a clear profit of one dollar for each sheep, not counting the manure.

In conclusion, let us sum up the different branches that I have endeavored to discuss. I have admitted that it is hard to show large profits in favor of the breeders and feeders for feed consumed. I ask you what industry, connected with agriculture in this Province, can make a better showing? But I will say that I have not valued the manure made from well fed animals too high, viz., on a well managed breeding farm \$8 per head for every bullock fed each year; for the light steers, \$6; the heavy steers, \$8, and for the sheep \$1 per head. If these methods are adopted and continued it will restore our lands to a high state of fertility, and all our cereal crops will be increased from 10 to 20 bushels per acre, according to the location and strength of our soils.

The farmers of Ontario should finish a number of the stock raised on their farms every year either by winter feeding for beef or mutton or feeding through to be finished on the grass. This is the only true system to keep up the fertility of our farms and realize the true value of our stock produced thereon.

To attain the best results in breeding and feeding requires regularity in every detail, and kind treatment. A mixed ration, and see to it that you do not waste a large quantity of food by feeding too much. A light ration, if properly fed, will produce more flesh and bring about better results than a large one improperly fed. The man who feeds 20 lbs. of strong meal per day to a single animal loses much of his feed.

No doubt many will take exception to what I have said. I ask them to look around through their own neighborhoods for proof. Is it not an undeniable fact that the men who are following any one of the lines are the men whose farms you find in the best condition, and their homes the most comfortable?

There is another way to look at this important question. Are not many shutting their doors as far as educating their families are concerned? To be practical feeders and economizers, which is necessary to the prosperity of our families, we must get our sons and daughters drifting from home, and from our own fireside, to where there are vain amusements; from there to the gambling tables, just because we did not get them interested in some one of the branches which should be practically carried on at home. If a home is as it should be, there are so many branches that every member of our family can be interested in one branch or the other, as his or her taste may be, thereby becoming a practical producer and educator.

Ensilage.

Cheap production must be kept in view on the farm as well as in the factory, and every available means will have to be brought to bear to accomplish this end. Machinery has done considerable towards solving this problem in grain production, but Ontario and all the older parts of the country will have to give more attention towards the live stock and dairy departments, and the cheaper the production of feed is just where the profits of feeding stock for any purpose comes in. In our climate we have a wonderfully rapid growth and a great weight of stuff per acre; against which we have a long season at which growth is at a stand still. Consequently we have to fall back on the food supply that is husbanded through our growing season. It has long ago been determined that all dry rations cannot be fed to the best advantage through our long winters.

Horses and cattle rapidly lay on flesh when placed on the nutritious grass of early summer. This has two reasons, the food is in the most palatable form, and is in the easiest state for assimilation; therefore, animals feeding on pasture partake very freely of it, and on account of it being easily digested, all, or most of the nutriment is drawn from it, hence the thrifty condition that follows feeding upon pasture. For the same reason roots are of such benefit. By analysis, Swede turnips contain a little over 8% nutritious ratio, and are only credited with 1% fat, but any one who has fed roots knows full well the benefit of feeding them particularly in conjunction with dry food. When we remember the number of cattle we have seen that have been fattened with advantage upon roots and straw, with very little else added to the ration, we are almost tempted to exclaim that analysis are at fault, but analysis only gives 4% nutritious ratio for ordinary pasture grass, with 0.4% fat. In both the foregoing the results are alike, showing the advantage of food being placed before the animal in as palatable shape as possible as well as in such a softened form that it will immediately be acted upon by the stomach of the animal fed. This is what is claimed in the use of ensilage, not only is all the nutriment retained in the crop that is placed in the silo, but if the process is properly undergone it should be in the very next possible state to feeding grass. The corn crop is the most suitable on account of the immense bulk and weight obtained per acre. But to particularise, it is not now necessary to build as expensively as it was thought when silage first came into notice.

The common plan now is to utilize one end of the store barn, then by taking off all the old siding, and by studding with scantling 2x8, using tar-paper on the studding outside, then by using the ordinary "V" siding over this wherever it comes to the weather, and boarding up on the inside, and coating this with hot coal tar, and applying the tar paper in the same way as papering a room. By this a perfectly frost proof and air-tight compartment will be formed. The tar-paper also helps to preserve the boards, and by this means ensilage can be kept in a most perfect state. For the bottom, perfect drainage is the first necessity, then, by filling up above the water level with clay inside, all will be ready for filling. This is often done by placing the cutting box outside and having carriers arranged there. The cut corn can then be easily carried up to doors left for filling. Two of these, at

different height, will be found sufficient, as by having it fall some distance from the end of the carriers time will be saved by those in charge at the barn. A good way of carrying corn is to take off the back piece of the ordinary hay-rack and change the wheels round by placing the front wheels on the hind axle. This lowers the hind end of the rack, and by having a plank come out at the bottom those loading can easily carry the corn up on to the rack. By having the corn nearly as ripe as is required for cutting, and using such corn as will mature earliest in the locality, sweet ensilage can be made. Then, by filling and tramping corners moderately the process will be quite successfully attained. It is still believed, by those who have tried both methods of taking out of the silo, that moderately narrow compartments give the best results, as by so doing the silage is in the best state. As is often the case, the waste stuff accumulates and spoils, and of course ruins what is good, hence much depends on taking it out and keeping it fresh right up to feeding, for all animals very soon tire and loathe food that is not perfectly fresh and sweet, as is evidenced by the difference in feeding sweet hay from a stack and that fed from a loft above where stock has been housed. In looking into the cheapness of this storing feed it is found that something like \$3.00 per head will cover the cost of the building required. For cattle feeding, there is no doubt that ensilage might profitably be made to cover half the rations, as there is no doubt that green corn is not a perfect feed of itself. When the grain is in the glazed state, or just ready to cut and shock up, and loaded with ears, it will feed as fast and as profitably as at any other time, and by placing it in the silo at this stage it will be preserved as nearly as possible in this state. The softening thus performed is also of benefit in cattle feeding, and is much more palatable than in a dry state. The old time method of husking, shelling and grinding, will not only cost far more, but still leaves the difficulty of handling and storing the stalks to advantage.

Application of Chemistry and Geology to Agriculture.

BY JAMES MILLER.

(Continued from July issue.)

DIFFERENT KINDS AND STATES OF MATTER.

All the kinds of matter which are to be seen, whether comprising the globe upon which we live, the atmosphere which surrounds us, or in the bodies of animals and plants, are divided into two great groups of organic and inorganic matter. The solid rocks and earth, the atmosphere, the waters of the sea and ocean, or, in short, everything which is and which has been devoid of life, is classed under the head of inorganic substances. On the other hand, all bodies, whether animals or plants or their remains, are classed as organic matter. The latter appear, and are of a structure readily perceived by the eye as in the pores of wood or the lean of meat, and are thus readily distinguished from inorganic matter. This distinction is life. Everything which has lived or performed any of the forms of life, however simple, is organic matter, and everything else is inorganic. Although the rocks and soil (the latter in its pure state, for as it appears on the surface, is, for the most part, mixed with organic or vegetable matter,) are classed as inorganic substances, yet the coal which we often find down deep in the earth, or the limestone which is made up of multitudes of skeletons and shells of minute animals, are organic substances, the former being made up of various mosses and ferns, with the large plants and trees which have fallen and decayed and been buried in the earth caused by vast floods.

But in many substances of organic origin also, no structure is observable, such as starch, sugar

and gum, and are formed in plants in great abundance, which do not present any pores or fibres, not being endowed with organs, but are produced by the agency of living organs, and are included under the name of organic matter. When plants and animals die their bodies undergo decay, but still the mold is considered as organic matter, and form plant food for the growth of other plants when made available.

Again, heat chars and destroys wood, starch and gum, changing it into a black substance totally unlike the original substance acted upon. If you distill wood it produces tar and vinegar, and if sugar be fermented it is first changed into alcohol and then into vinegar. All substances thus derived from vegetable or animal products are included under the general designation of organic bodies. Thus, a piece of limestone subjected to heat undergoes a great change by the separation of its component parts, producing carbonic acid and lime, and by a farther process, but much more difficult, can be separated into carbon and oxygen, and the metal calcium and oxygen. These component parts can not be separated further; it is fruitless under every known chemical process, and they remain carbon, oxygen and calcium. These ultimate unchangeable substances are called *elementary* bodies, and those which are formed from the union of two or more of them are called compound bodies. There are now known to be in existence 65 elementary substances which are recognized, but the compound bodies which exist, and are formed by combinations of the elementary bodies, are infinite in their variety. The rocky and earthy crust of the globe, the ocean, the atmosphere, the plants and the animals, are all made up of diversified forms which man can no more number than the sand upon the sea shore. It is one of those wonders of nature wrought by the infinite power and wisdom of our Creator, and at the same time should be of great interest to the farmer as he goes about his daily toil with an observant eye and thoughtful mind, as they are, so to speak, the raw materials from which he is enabled, by his skill and industry, to feed the world. So that all the animal and vegetable products of the farm are made up of only a few of the sixty-five elementary substances by a very most complicated system of combinations. This is astonishing; yet it is more so that nearly the whole mass of these vegetable and animal products consist of, and may be resolved into, one or more of four of these simple substances.

When any vegetable or animal substance becomes decayed, or is burned, it either entirely disappears or leaves behind it only a small quantity of ash. Oil, fats, gum, starch, cotton, fibre, horn, hair, &c., when burned, either disappear altogether or leave only a small remnant behind, while wood or flesh leaves only a small quantity of earthy matter or ash unconsumed. Those substances which disappear, generally consist of three of the elementary bodies, and rarely of four. All of the agricultural products for the greater part, inclusive of the combustible and incombustible portions together, only comprise twelve. The four referred to are carbon, oxygen, hydrogen and nitrogen. The twelve consist of these four and calcium, chlorine, magnesium, phosphorus, potassium, silicon, sodium and sulphur. Particular attention should be paid to these by the student, as they will come up in these pages again and be treated in their proper order.

But a knowledge of the first four elements mentioned is indispensable to the farmer, for without he cannot comprehend the laws which control the operations of nature in the growth of

plants, or the reason why he adopts certain processes in his farm work to aid and facilitate him in successful husbandry. He should also have some knowledge of the remaining eight elementary substances which enter more or less into the ash or incombustible mineral portion of the plants which he cultivates, so that he may be enabled to supply certain mineral manures in which the soil is defective for the successful solubility of plant food.

I shall, therefore, first relate briefly the properties of these organic constituents of plants in order to prepare the mind of the reader for further inquiries—considering by what means, or in what shape, they enter into the circulation of plants, and how, when they have so entered, they are converted or changed into those substances of which the skeleton of the plant consists or which are produced in its several organs, and afterwards treating the other eight in their proper order.

[TO BE CONTINUED.]

The Western Fair

of London, Ontario, has always held a leading position among the exhibitions of this Continent, and this year the Directors are determined not only to equal but far surpass its predecessors in many points of interest.

Many of the principal stock breeders will be on hand with their show animals, in which the Western takes first place in Western Canada. The applications for stabling and other accommodation is far in excess of any previous year. The prize list in the horse, cattle and poultry departments has been specially compiled to assure a very marked improvement in the exhibits of these classes. The agricultural and horticultural, dairy, honey and apiary departments have also received special attention; the prizes offered are largely increased, and the committees of the above mentioned departments are confident the exhibits will be the best by far ever yet shown. In the agricultural and machinery hall space is being taken up at a rapid rate, so that a good showing in this department is also a settled fact. The main building will be greatly improved, as the Directors are placing a line of shafting therein for the use of exhibitors who will manufacture their goods before the public and thus present an instructive and pleasing sight.

The speed programme has been largely augmented to meet the requirements which the ever-increasing number of fast horses in the western section of Ontario demands, and whose exhibition is so much admired by the farming community and stock raisers.

The collective exhibits already promised will be no small feature of the fair. The Dominion Government's Experimental Farm at Ottawa, the Ontario Agricultural College at Guelph, also Manitoba, the Northwest and British Columbia, all promise to make much better exhibits than heretofore.

The Southern Inter States exhibit, which will not be shown at any other place in Canada, and is the product of fourteen of the Southern States, and comprises over 1,000 exhibits, consisting of growing cotton in the full stock, figs as they grow upon the fig bush, rice as it grows in the Carolina's, pecanuty as taken from the ground in Virginia, products of the turpentine stills from Georgia, carpets made from the leaves of the pine and various woods of the South, minerals, woods, grasses, grains, fruits, the live alligator, Florida is also among the exhibits, and photographic views of all the principal cities of the south. The exhibit takes up many feet of space and shows the great undeveloped resources of a section of the States heretofore almost unknown.

The Indian tribes of the Province are preparing a grand exhibit of manufactured goods in woods, leather, bark, etc.; also relics and curiosities of the old hunting days, Indians dressed in native costumes, etc. The first exhibit by these tribes was made at the Western Fair in 1888, which proved an interesting and unique attraction, and this year their purpose improving and adding to their exhibit, which will elicit a greater degree of attraction and insure the attention which the exhibit well merits. Our readers will see that special interest has been taken in securing exhibits of real merit, which are both useful and instructive, and are calculated to increase our knowledge of the capabilities of the various Provinces in the Dominion and the Southern States. At the same time attractions have been secured which will be most pleasing to witness, such as The Famous Wild West Show, which presents a realistic representation of frontier life, and shows the great use of cowboys in protecting both the life and property of their employers, and gives a vivid idea of how herding is conducted on the plains.

The ordinary balloon ascensions and parachute leap have been supplanted by balloon races and parachute descents by two of the most renowned aeronauts in America, which make a most interesting and thrilling sight, both balloons being let loose at the same time and each parachute, with its human freight, being liberated at the same moment, when the novel race begins.

The London Kennel Club again hold their great international bench show of cogs at which will be exhibited the prize-winners of the United States and Canada. There is a manifest interest shown by the leading kennels, who have already signified their intention to be present.

A magnificent display of fireworks will also be given in connection with the evening performances. Bands have been secured. The committee are still in correspondence with others, which will be announced through their programme and the press when secured.

The Toronto Exhibition.

PREPARATIONS FOR THE GREAT SHOW NEXT MONTH.

As the time for the opening of the Industrial Exhibition approaches the interest evinced and the scale upon which the preparations are being made fully warrant the anticipation that in extent, comprehensiveness, variety, &c., it will greatly surpass any of its predecessors, uniformly successful as they have been. The Exhibition will open on the 8th and close on the 20th day of September, but intending exhibitors must bear in mind that the last day for receiving entries is the 16th day of August, a rule which will be rigidly adhered to. A large amount of space has already been assigned to exhibitors, and as applications are coming in earlier than usual this season those who desire to be represented will do well not to defer their applications until the last. The Governor-General and Prince George of Wales have received invitations either to open the Exhibition or pay it a visit at a later period, and their acceptance will add considerably to the interest of the occasion.

Several new buildings are being erected on the grounds to meet the continually extending requirements of the Fair, and improvements in other respects have been made. An annex has been added to the Horticultural Hall designed especially for fruit, so that displays in this important department will be seen to better advantage. A new building 200 feet in length by 100 in width is being put up at a cost of \$8,000 for the Grand International Dog Show. It will comprise the latest improvements in bench accommodation and other respects. Nearly all the large kennels in the United States have signified their intention of forwarding their noted dogs.



VIEW OF THE NEW DOG SHOW BUILDING.

The great demand of exhibitors for seats in the grand stand to view the attractions exhibited in the horse ring has necessitated a large addition to the seating capacity. The north end of the structure will be extended so as to give room for one thousand additional seats.

The new stables erected by the Association last year are the finest in Canada, each stable having stalls fitted up for eighty horses with a walk down the centre to afford the public a view of the animals. The stables are excellently ventilated and drained, and are arranged throughout in accordance with the most improved system.



INTERIOR OF NEW STABLES.

The milking competition for the special prizes offered by the FARMER'S ADVOCATE and the Industrial Exhibition Association is anticipated with considerable interest and promises to be a very popular feature. In all probability every one of the milk breeds of cattle will be represented in this competition, which ought to be witnessed by all interested in cattle raising or dairy farming.

The appointment of judges in the various classes is now engrossing the attention of the management. The greatest care is being taken by the various committees to secure only men of recognized ability, expert knowledge and integrity, who will discharge their arduous duties without fear or favor. The entries already made in the cattle department include the best herds in the Dominion. Last year the entries of horses nearly reached 1,000, but large as was the display then, that number will be exceeded at the coming Fair. Among other noteworthy entries are a splendid lot of horses, which will be forwarded from Montreal by the Company of the Haras National.

The Dominion Government Experimental Farm, at Ottawa, will have a grand exhibit, including

about 100 varieties of potatoes, of which fifty or sixty are new from seedlings originated at the Experimental Farm; also a complete collection of cereals, and some fine samples of grain grown at the North-west Experimental Farms. Particular interest attaches to their specimens of the celebrated two-rowed barley, the yield of which is much greater to the acre than the ordinary kind. The Experimental Farm has sent out 3,000 samples of the two-rowed barley this year with a view to its general introduction as a farm product.

The Ontario Experimental Farm, at Guelph, will be represented by a collection of grain, comprising nearly 300 samples, many of them grown from imported seed, and also the farm varieties grown from seed to a certain extent acclimated. This display comprises barley, winter and spring wheat, oats and peas. Samples of imported grain will be shown in glass jars, and various other kinds of agricultural produce are included in the collection.

These exhibits will be of practical interest to farmers, and an inspection of them with the full information to be given by the attendants in charge, will of itself amply repay the outlay of a visit to the Toronto Exhibition. Large and important exhibits are also promised by British Columbia, Manitoba, and the Canadian Pacific Railway Co. Arrangements have been made with leading manufacturers for several exhibits, showing various processes of manufacture in detail. One department will be occupied with machinery in operation, showing the different processes of manufacturing operations in pin making, and other interesting and elaborate processes, which will be an attractive novelty and full of practical suggestions. A liberal appropriation to meet the necessarily large cost has been made by the Board of Directors.

Among other pleasing novelties will be an exhibit of Edison's Talking Dolls, the latest device of this nineteenth century wizard. A large number of phonographs have also been promised if the Canadian patent laws do not prevent their introduction. Negotiations have been completed for the display of one of Makoffsky's wonderful paintings, "The Russian Wedding Feast," or "Choosing the Bride," provided satisfactory arrangements can be made with the United States Treasury Department for its re-entry into the States after the Fair. These paintings have elicited the highest encomiums from the European and American art critics and connoisseurs wherever they have been exhibited. Many other entirely new features will be provided, and Manager Hill is now in New York completing his list of special attractions, full particulars of which will be announced in the official programme to be issued about the last of August. Among these will be a daily entertainment by a large Wild West Show Company. It numbers over fifty persons, including cowboys, lassoers, bare back riders and Indians, and thirty to forty horses.

Messrs. Pain & Sons, of London, England, will give magnificent fireworks displays each night, concluding with the grand spectacle "The Last Days of Pompeii." Nearly 150 people, in brilliant costumes specially imported, will take part. Spectacular displays will be provided every afternoon and evening. The log-rolling contest, on the small lake on the grounds, a new and amusing attraction, for which good prizes are offered, will be of interest to visitors from the lumber regions, as well as to the general public, including politicians. The spectacular attractions are all being selected with a view to their being carried out irrespective of weather so that there may be no disappointment to visitors. On this account balloon ascensions being unreliable and no longer a novelty, have been dropped from the list.

Particularly favorable arrangements have been made with the railway companies for low rates and excursions from all parts of Canada during Exhibition time.

A large number of important meetings and conventions will be held in Toronto during the Exhibition period for the convenience of members. This is getting to be more and more the custom here as at Chicago, when all the large breeders' associations of the West hold their annual gathering simultaneously with the Fat Stock Show. Among the more notable of such gatherings are those of the most important of the Horse and Cattle Breeders' Associations, the Ontario Poultry Association, the Bee Keepers' Association, the Canadian Association of Inventors and Patentees, the Dog Fanciers' Association and the annual meeting of the Canadian Medical Council. The dates and places of these meetings will be announced in the official programme.

An official catalogue will be published as usual, containing a full list of exhibits in addition to much other information. As the preparation and printing of this book occupies some time, it is imperative that all entries should be received by the day stated.

The Ottawa Fair.

If we can judge by the prize lists the above will be numbered among the big fairs of the coming show season. Nine gold medals are presented by prominent men of the city and the vicinity and large money prizes in the fine stock classes are offered by the Association, which should attract a large display of live stock. Special attention has been paid to this department, as the classes are numerous and well defined. Horses have the benefit of thirteen classes, cat the have eleven classes, and the management give more than usually good prizes for these branches of farm industry. Sheep, pigs and poultry are all assigned handsome premiums, and the dog show is also included, without extra charge. Those that are either contemplating exhibiting or visiting will find plenty to see at Ottawa from Sept. 22nd to 27th. F. ARTHUR JACKSON, Sec.

Garden and Orchard.

Insecticides.

By Prof. A. J. Cook, Michigan Agricultural College.

(Continued from July issue.)

TOBACCO DECOCTION.

The use of tobacco smoke in closed rooms like forcing houses and conservatories is too well-known to need remark. That a decoction is also very valuable is perhaps not so well known. For this purpose even stems, or refuse powder, which can be got very cheaply in tobacco factories, will answer well. A pound of the tobacco to two or three gallons of water makes a very effective decoction. I turn the boiling water on to the tobacco, and when cool strain out the tobacco, and the decoction is ready for use. Last summer I found this very effective against the striped flea beetle, and the cucumber flea beetle, both of which insects are often very troublesome to the gardener. If further use confirms this property of the tobacco decoction, we have in it a very valuable insecticide, and may hope by further experiment to greatly extend its use. This too, I think the best substance to use in the destruction of lice on cattle, horses, and for ticks on lambs. True, the kerosene emulsion will kill such lice, but it does not destroy the lice so entirely, and does not leave the hair of the animal looking so well. I have used both and prefer the tobacco. In cold weather, after thoroughly washing the animal to be treated, it should be warmly blanketed, and kept in a warm place until dry.

The work of washing an animal is not great. I have, unaided, washed a large cow in ten minutes, and I did it well. Neither is it a disagreeable task. I presume a force pump might be used in this case, but it would take more of the decoction, and I prefer to roll up my sleeves and do the washing by hand; then I know it is thoroughly done.

CARBOLIC ACID EMULSION.

I have now used this substance for nearly twenty years, and have repeated assurances from my own experience, and from others of its value and importance. I am glad to see that other Entomologists are beginning to recognize its value. No fruit grower, or lover of shade trees, can afford to be ignorant of this valuable compound. I make it just as I do the kerosene emulsion, only stronger. One part of carbohc acid—I used the crude material, but try to get that of good strength—to from five to seven parts of the soap solution is of the proper strength.

This is the best preparation I know of to protect against the apple tree bark lice and apple tree borers. As there are three species of these borers, all of which are serious enemies of the apple tree, and as one application does for all the borers and for the terribly injurious scale lice, we see that here we kill four birds with one stone. To apply this we have only to take a cloth, roll up your sleeves and with gloved hands if you prefer—I omit the gloves—thoroughly scrub the trunks and main branches of the tree, not wetting the foliage more than we must. This should be applied fifteen or twenty days after the trees blossom. No one can afford to neglect this treatment, especially in case of young trees, as trees newly set are specially susceptible to the borers. In case the little scale

or bark lice are present on the trees, they should certainly be washed with this carbohc acid emulsion. Newly set maple shade trees should also be treated annually—at the same date that we would scrub the apple trees—for two or three years after transplanting, for they are also very liable to attack from the big-headed borer.

We often hear soap, alkaline washes and white-wash recommended for the destruction of these insects. While all of these preparations are serviceable, they do not equal the carbohc acid emulsion. This latter is cheap, easily made and applied, and very effective. Next to spraying the apple orchard in May to destroy the codling larva, the so called "apple worm"—nothing perhaps in the way of insect warfare pays the orchardist so well as scrubbing his apple trees in early June with this carbohc acid emulsion.

WHITE HELLEBORE.

This vegetable poison is so mild, that used in small quantities which I shall recommend, it is entirely safe. It may, like the arsenites, or buhach, be used as a powder or mixed in water. I prefer to apply in the liquid form, as the application may be made more thorough. It should be used about as strong as pyrethrum—one ounce to two gallons of water. This is the best remedy for the currant slug. It should be thrown forcibly on the foliage—especially upon the lower leaves—from below as much as possible, and should be applied early—as soon as the insects commence to eat the leaves. To wait till the bushes are stripped of their foliage is not at all wise. We now have spraying nozzles which bend at right angles, so that it is easy to treat the bushes from below.

BISULPHIDE OF CARBON.

Although I treat of this substance last, it is not because it is unimportant. Indeed it is one of our very best insecticides, and were it not that the vapor is very explosive when mixed with air, and inflammation when fire is brought near, we should place it nearly at the head of the list. Yet with caution in its use, no danger need be feared. It is a compound of sulphur and carbon, one atom of the latter to two of the former, hence its name—bisulphide of carbon—and its chemical symbol—CS₂. It is formed by passing sulphur fumes over superheated charcoal, or bringing sulphur in contact with red-hot charcoal. It is a clear liquid heavier than water, and volatilizes with great rapidity. The vapor is more than two and one-half times heavier than air. From its inflammable nature, it is manufactured with no slight danger. The vapors are also unwholesome, and as their entire confinement is quite impossible, the manufacture of this liquid is attended with much danger, both to health and life. From these causes as well as the extreme volatility of the liquid making its escape from vessels easy and probable, it retails at a high price. If purchased, however, from the manufacturer in 50 or 100 pound cans it can be purchased for about 10 or 12 cents per pound, including the can. The freight is the same on 50 pounds as it is on 100 pounds. The vapor from this liquid is a most powerful insecticide. It is superior to ether, chloroform and gasoline, and far less expensive than the first two, and no more dangerous to use than the last. It is much used in the arts. Especially in extracting oil from seeds, and as a solvent of rubber. Thus it is used in repairing rubber goods, and so its disagreeable odor is not infrequently noticed in the shop of the cobbler.

It is easy to prove that the vapor of this liquid is a very powerful insecticide. The grape phylloxera—the terrible vine destroyer of France—is a minute plant louse which attacks the roots of grape vines, and in Europe has been very destructive. Baron Thenard, in 1869, recommended the use of bisulphide of carbon to destroy these frightful pests. Holes were made in the ground by use of iron bars, the liquid turned in and the hole quickly filled. The liquid quickly volatilizes and kills many if not all of the lice. One dose is said to be ample for a single vine. It requires from 175 to 300 pounds per acre. It is reported that about 200,000 acres have been satisfactorily treated in a single season. Seven thousand tons of the carbon are used in France in a single season. On the western prairies it is now used extensively and very effectively to destroy the prairie dogs. John H. Elmer, of Kansas, writes: "I have used bisulphide of carbon to exterminate prairie dogs with complete success. It took only five gallons to rid 120 acres of the burrowing pests. I used it as follows: I rolled up a ball of cotton batting the size of a small hen's egg, saturated it with the liquid, threw it into the hole and quickly filled the mouth of the latter with earth, stopping it air-tight. It was very rare that I had to use it twice on one burrow. I bought it directly of the manufacturer, Edward R. Taylor, Cleveland, Ohio, for ten cents per pound."

Mr. Isaiah Lightner, Mason, Nebraska, writes: "I have destroyed the dogs on about 80 acres at a cost of \$30, and increased the value of the land \$500. One pound will do for twenty-five holes."

This seems proof sufficient of the power of this liquid to destroy. We have no prairie dogs in Michigan, but we do have the striped gophers and woodchucks which often do much damage. So this information is valuable.

Moreover I have used this same liquid very successfully to destroy ants. I made a hole in the ant hill by use of an iron bar, turned in a half ounce of the liquid, and speedily stopped the mouth of the hole with earth as nearly air-tight as possible. I do not see why this is not as good as to use the cotton, as they do in the prairie dog villages on the western plains. I have also used this liquid very successfully in destroying cabbage maggots that work on or burrow in the underground stems. Several others have had a similar success, but in some soils this does not succeed, and so I have ceased to recommend it.

It is not uncommon, as all who have charge of insect cabinets and general museums well understand, to have our specimens that are not thoroughly poisoned attacked and ruined by insects. The larvae of *Dermestes lardarius*, and several species of *Anthrenus* insects, closely related to the Buffalo carpet beetle, are the destroyers. It is found that by the use of bisulphide of carbon we can very easily and cheaply destroy these destroyers. With reasonably close cases, we have only to turn a little of the liquid in the case and close the latter nearly air-tight as possible to kill all the infesting insects, even though within the skin or crust of vertebrate or insect. I have never tried it, but I believe by judicious use of this powerful insecticide, the extermination of the carpet beetle might be accomplished with slight cost. Brought into close quarters with this vapor and it would speedily succumb. Because of the quick ignition and alarming inflammability of this substance, it is with some hesitation that we even speak of such use. A lighted match or cigar brought into a room filled with this vapor, would very likely result in death and terrible destruction. But great care that no fire be brought near till after thorough ventilation had removed the odor, would make all safe. The dispersion of the vapor is quick upon the opening of windows and doors, and the unpleasant odor is a quick index of the presence of the inflammable vapor, so caution alone will insure safety.

In case of moths, or other clothes infesting insects, attacking furs, clothing or robes,—any material that can be put in close sacks or boxes—it is very safe, cheap and easy to destroy them by the use of this liquid. Here as ever we must look out for fire, whenever the vapors are exposed.

[TO BE CONTINUED.]

Parasitic Plants—The Farmer's Microscopic Foes.

J. HOYES PANTON, M. A., F. G. S.

(Continued from July issue.)

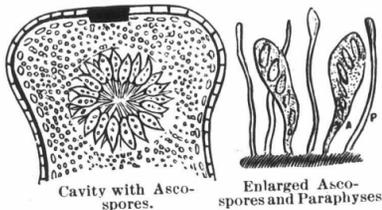
SPHERIA MORBOSA (BLACK-KNOT OF PLUMS).

This fungus is closely connected with the Ergot of Rye, and by botanists is put in the same order, consequently it is proper that we should discuss its life history at this place in our series of papers upon parasitic plants.



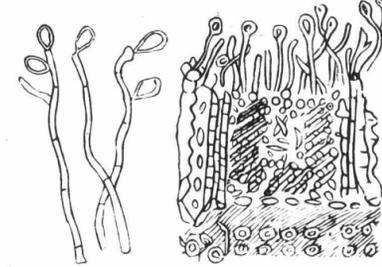
BLACK KNOT as it appears on the tree.

An examination of the knot in its earliest stages shows innumerable small, transparent threads only seen by aid of the microscope. They branch among the cells which compose the tissue of the inner bark of the tree, and form the so called mycelium or vegetable part of the fungus. The threads become very intricately twisted together in bundles as development proceeds, beginning in the growing layer of the bark and radiating outwards. As spring advances, the threads increase and reach a more matured condition. As growth proceeds the knot assumes a velvety appearance; this is the result of the threadlike structures sending off many short-jointed filaments, on the ends of which are borne egg-shaped spores known as conidiospores. (See cut 1.) These are very small, requiring the aid of a microscope to see them. When ripe, they



Cavity with Ascospores. Enlarged Ascospores and Paraphyses.

are readily disturbed, may be blown by the wind and thus reach new starting points so as to give rise to knots similar to that upon which they were developed. This mode of reproduction in the "knot" continues till the summer is well advanced, when another class of spores begins to develop, and which reach maturity about February. The surface of the knot during



winter shows pores that can be seen by the naked eye; these open into cavities, on the walls of which are two kinds of structures, one consisting of slender filaments (*paraphyses*) the use of which is not known; the other club-shaped (*asci*). In the *asci* towards the close of winter *ascospores* are developed, usually eight in each *ascus*, out of which the spores come through an opening at the end; these spores become new starting points for the parasitic

plant, when they reach proper conditions for development. (See cuts 2 and 3.) Other cavities also are found among those with the *asci*; these contain very minute oval spores divided by cross partitions into three parts, and borne on slender stalks. These are called *stylospores*, the use of which is not known, but they are generally believed to be concerned in the perpetuation of the species. Still other cavities exist containing slender filaments (*spermatia*) which also seem to be concerned in reproduction. Besides the cavities referred to, sometimes spaces more flattened than these and in some cases showing a triangular form appear; they are lined with short, delicate filaments that end in a minute oval body. These bodies are produced in great numbers and are discharged in masses, being held together by a sort of jelly. They have been called *Pycnidiospores*, and also seem to be connected with the perpetuation of the fungus.

In case of this parasitic plant we have then five kinds of reproductive organs, viz: conidiospores, ascospores, stylospores, spermatia, and pycnidiospores, all more or less connected with the spread of the fungus. Of these by far the most important are the conidiospores and the ascospores. Until the true nature of this fungus became known it was generally believed that the "knots" were caused by insects, but since the life history of the plant has been made out the insect theory has been abandoned. The following objections may be made against it: (1) The knots do not resemble galls made by insects. (2) Insects may be found in old knots, but seldom if ever in young. (3) The insects are of various species, some of which are found on trees where knots never occur. (4) Wherever the knot is found the fungus described invariably is present, and is never seen but associated with the knot and can be observed in the stem before anything like a knot is visible.

REMEDIES.

1. Hitherto most orchardists have found the best thing to do is to cut off affected limbs and destroy them. Where a tree is badly attacked, destroy the whole tree.
2. Some experiments in applying linseed oil to the knots with a small brush so as to saturate the knot have been effected. This is done three or four times during the summer, as soon as the knots appear.
3. Coal oil may be used, but it must be applied carefully. If it runs over the branch it will kill it.
4. Wild choke-cherry trees near orchards should be destroyed. It is unfortunate that so little regard is paid to the law which requires affected trees to be destroyed. These trees are scattering millions of spores yearly, and thus spreading the disease to all parts of the Province. Blighted trees stand as monuments of the indifference and ignorance of those who should cooperate in fighting against a common foe.

Scraps of fat meat and "dabs" of spoiled grease have been added to the soapgrease supply during the year, and when brought out for use in spring the stench arising from it and the vermin crawling through it are something horrible, but all must go into the soap-kettle together. This is a matter in which there has been no general improvement in fifty years. Why not obviate all the unpleasant part of soapmaking by letting the soapgrease vessel contain a quantity of lye and throw the grease in that from day to day? It will always be sweet, and when soapmaking time arrives more lye should be added, and all boiled up together. Thus one will have clean soap made of sweet material.

Packing and Shipping Fruit.

BY F. G. H. PATTISON, GRIMSBY, ONT.

Too much care cannot be taken by fruit growers to present their fruit in an attractive form to the purchasing public, for though the orchard may be thrifty and the fruit crop a good one, yet, if not properly culled in the first place, and attractively placed on the market in the second, it will fail to yield the grower the best results. Where farming and fruit growing are combined, the owner is not likely to have the time to thoroughly attend to this branch of the business, in which case it is better for him to sell the crop—picked or unpicked, as the case may be—to some one who makes a specialty of packing and shipping.

Apples are a good instance of this. Most farmers grow this fruit, but comparatively few have either the time to spare or the necessary knowledge and experience to go into apple shipping on their own account, more particularly to the Old Country market, which is one that demands special attention and care in grading and packing the fruit to secure good, or indeed any, satisfactory results, and even when all these points are attended to the returns are often not what they should be.

Where fruit growing is made a specialty, however, and little or nothing else is attempted, it will handsomely pay the owner to thoroughly acquaint himself with the best methods of packing and shipping all the different kinds of fruits he grows, and with the best markets for each available to him, which latter can only be learned from experience.

The following are some of the general principles which govern the packing and shipping of fruit. And first of all I should be inclined to rank "honesty," a good reputation for honest packing being invaluable to the shipper. Do not label fruit "No. 1" unless it is No. 1, or "choice" unless it is choice, or "No. 2" when really it is No. 3 or worse.

Again, do not put good fruit on the top of your package and poor below, or good above and below and poor in the middle, but let each basket, or box, or barrel, be as far as possible an even sample throughout. The practice of "facing," as it is called, the tops of apple barrels is far too frequently followed by those who, in other respects, are honest enough shippers.

The next point is careful grading, both as to quality and size. This, if well attended to, will amply repay the shipper for a little extra trouble. Most kinds of fruit will bear grading into three divisions, viz., (1) large and fine, which will sell readily for a good price; (2) medium size and quality, which will usually fetch a fair price; (3) small and inferior, to be sold for what it will fetch or used up at home as stock feed or in other ways.

A good many shippers make the great mistake of mixing No. 1 and No. 2 together, thinking that the No. 1 fruit will sell the No. 2, whereas the exact contrary is the case, for the No. 2 will drag down the No. 1 to its level like a bad husband married to a good wife, and the whole will sell for No. 2. Of course the same will happen, only more so, if Nos. 2 and 3 are mixed together. In the experience of the writer, this is always and invariably true whenever an opportunity is afforded the buyer of examining the fruit, and when it is sold by the brand and the buyer is deceived, the results are worse to the

shipper, as this destroys the buyer's confidence, and if persisted in will soon close that market altogether. Indeed, there is, I think, no branch of business in which the axiom "honesty is the best policy," is more quickly and certainly proved to be true than in that of fruit packing and shipping.

Another most important point is the package. A neat and attractive package does a great deal to secure a ready sale for the fruit at a good price. Never send No. 1 fruit in a No. 2 package, even inferior fruit will sell better if nicely put up. So much is this the case that the writer has known of instances where inferior fruit, attractively put up, has met with a ready sale, whilst really excellent fruit, unattractively packed, has gone begging for a market.

The name and address of the shipper should be marked clearly and distinctly on every fruit package either by means of a tag or by stencil. This will be found a good advertisement for the honest shipper. Avoid shipping unripe fruit as much as possible, especially in the case of grapes and peaches. The shipping of these before they are nearly ripe is far too common a practice in our markets, the object of course being to catch the earliest prices, which are usually the highest. Too much can hardly be said against this, as it is not only bad in the long run for the individual shipper, but also has a most injurious effect on that entire branch of the trade for a considerable period afterwards.

And now a few words as to the modes of shipping and packing the different varieties of fruits. Strawberries, raspberries and blackberries, are best shipped in the basket crate, which holds 24 quart baskets, and is made so cheaply now that it can be given away with the fruit, thus avoiding all the bother of having empties to be returned, which formerly caused a great deal of worry to shippers and to commission agents. Where the berry patch is far from the packing-house it is advisable to erect a temporary shanty close by large enough to contain one or two tables, on which the fruit can be placed for inspection when brought in by the pickers. Field baskets, holding six quarts, are very useful for this purpose, and each picker should keep his or her fruit separate. Careful supervision should be exercised to see that the quarts are well filled and that no poor or bruised specimens have been put in, after which the fruit should be placed in the crates and shipped as soon as possible. A fruit rack, consisting of one or two tiers, which can easily be made by any one handy with carpentering tools, should be fitted on to the market wagon so that a considerable load can be taken at one time.

Cherries, when soft, should be shipped in strawberry baskets, but if hard they are better sent in the twelve-quart slat basket, covered with lino. They should be picked with the stems on, and it is better to employ experienced men than boys for the purpose. Avoid sending mixed kinds of fruit in the crates, they seldom sell so well as if all are of one kind. Currants and gooseberries are sometimes sent in strawberry baskets, but the twelve-quart basket is generally considered better for them also.

Peaches.—For the general crop, the deep slat or truck basket, which was formerly largely used, especially in New Jersey and Maryland, is now being discarded in favor of the shallow twelve-quart slat basket which is almost universally

used by our Canadian growers, one great advantage of which is that it can be piled several deep without bruising the fruit if care be taken to set every alternate pair at right angles with the former two. For very choice samples the four-quart basket can be used to advantage, or the paper cell crate which has a separate compartment for each individual peach, but if a separate grade be made, and marked "choice" or "extra," the twelve-quart slat basket will answer admirably even for very choice samples.

Plums are generally shipped in the same manner as peaches, and, like them, should be shipped as soon as possible after being picked. Avoid mixing different kinds in the same basket.

Poultry.

Poultry Notes.

BY JAMES ANDERSON, GUELPH.

It is a well known fact that when a hen steals her nest and lays her eggs on the moist ground every one hatches out a chicken. I came across one the other day with 12 fine, healthy chicks. So you see the necessity of damping the eggs in hot weather with tepid water often to keep them moist, especially goose or duck eggs when set under a hen, as the moisture from the feathers of the goose or duck seems to be sufficient to furnish moisture for the embryo chick. I often found a great many dead birds in the shell until I used tepid water freely.

I had very bad luck with some of my goose eggs hatching out this year. I had four geese to one gander, which I consider too many, as the gander seemed to pay all his attentions to two of his wives and neglected the other two, so I have come to the conclusion two females is quite sufficient for one male to ensure the eggs being prolific. I had one goose sit twice this season, and each time only hatched out some two or three of the eggs, and I found each time that these were from the eggs of the geese that seemed favorites with the gander. I have young ducks fit to kill now, having fed them all they could eat for the last six weeks, and I have no doubt, the price being high at present, young ducks are as profitable as any other kind of poultry.

Look out for lice on your young fowls. Use carbolic acid freely, and rub the perches with coal oil. The hot weather of July hatches out innumerable quantities of little red mites, and they are certain death to the chicks unless destroyed.

Many turkey raisers seem to think that when the chicks are half grown they can look after themselves, and cease feeding them, but this is a great mistake. Give them a good feed every night and they will come for it, for if they are left to roost at a distance from the house they are sure to fall a prey to owls, weasels, minks, or some of the many midnight marauders. When about two months old, my turkeys commence to roost. I generally train them to go up on a large tree in the orchard, and the thick foliage is a complete protection for them, and they do not injure the tree in the least, but on the contrary make it thrive from the droppings deposited.

Young chicks must be given plenty of shade, and plenty of fresh water at least twice a day. I find wheat and cracked corn the best feed for young chickens. I have some of my chickens, which have been forced too much, getting weak in the legs. I find a little ground bone meal

mixed in their food an excellent remedy for this leg weakness. A little animal food occasionally is excellent for young growing chicks. Boiled liver is good. An excellent food for hot weather is rice boiled quite soft, with a sprinkling of oatmeal over it. It is very nourishing, and counteracts any tendency to chicken cholera, often so fatal in very hot weather. Feed young chicks liberally. A young chick half starved during the first six weeks of its growth never regains the loss afterwards. Give plenty of sand, gravel or crushed oyster shells to all fowls in confinement.

I quote a notice from the July Poultry Journal about my favorite breeds, the L. Brahmas and P. Rocks:—"Light Brahmas and Plymouth Rocks is the legend seen at the head of as many advertisements as of yore. They are two old breeds, but they never get too old to be good. When you go to the shows you find them in undiminished numbers, and their admirers as numerous and enthusiastic as of old. It is a fact patent to all that merit alone could secure such continued success. The Light Brahma came in with an unprecedented boom; in fact the excitement which attended their advent, and the fancy prices paid for specimens, have not since been surpassed even in the palmiest days of the poultry fancy in America. The Light Brahmas were the pioneers, and opened the way for the cordial reception given the Plymouth Rock, which is the embodiment of a general purpose fowl. These two breeds have come to stay. The boom which they had at first has grown into settled respectability."

Points to remember in poultry raising:—

- 1st. Make hens lay when eggs are dearest.
- 2nd. Breed stock when eggs are cheap.
- 3rd. Keep a non-sitting breed to lay when sitters are hatching, and pay expenses of latter.
- 4th. Breed as many chickens as possible, and as early as possible, they all mean so much money.
- 5th. Keep all the pullets; they are worth \$2 each as prospective early winter layers.
- 6th. Kill or dispose of all hens after three years of age.
- 7th. Breed the best flesh formers for market, and feed them up to as great weight as possible.
- 8th. Well fattened and well dressed poultry will bring the best price from the best customers.
- 9th. Begin with a small number, make a success of the few and go on increasing.
- 10th. Do not neglect the little essentials, such as lime, gravel, meat, plenty of clean water, green food, dust bath, &c., regularly supplied.
- 11th. Keep strict account of every cent of expenditure and receipts; the droppings are worth 75 cents per barrel, and will go a long way to pay feed.
- 12th. Market gardeners and dairymen are particularly well situated to make poultry profitable, the former have spare time in winter and the latter are amongst the best customers in the city every day.

When writing to any of our advertisers, say you saw their advertisement in the "Farmer's Advocate."

We want industrious, reliable, pushing men in every township in the Dominion, to canvass for us, and introduce our splendid Subscription Picture. Steady employment and good wages given to suitable men. Write for particulars.

Family Circle.

He Cares.

If I could only surely know
That all these things that tire me so
Were noticed by the Lord!

I wonder if He really shares
I all my little human cares.
This mighty King of Kings!

Dear Lord, my heart hath not a doubt
But thou dost compass me about
With sympathy divine.

HER ONE TALENT.

A STORY FOR GIRLS.

BY FAY HUNTINGTON.

Continued.

Mrs. Hunt noticed the sudden excitement and quivering of the voice, but she seemed not to notice. She remembered then something that she had heard about the circumstances of the Chesters, and wondered if it had not been given her to help this young girl to independence.

Before Mrs. Hunt slept she wrote half-a-dozen notes. The tenor of them all was the same: "Come out and see me! I have had an artist's touch put to my prison walls. I want you to see the change and enjoy it with me."

These she dispatched to half-a-dozen friends. And when they responded in person to her invitation, they too were delighted.

"Why, what has happened? Your rooms are charming! What have you been getting new?" "Not a thing! Yes, brains! I do not wonder that you are bewildered! I scarcely know where I am! Did you ever see such a transformation?"

"Indeed, this does not seem like the same place! I never before realized that so much depended upon the arrangement of pictures and furniture."

"Who is the fairy who has been working such wonders?" asked one of the guests. "Ah! that is my secret!"

"But you will reveal the hiding place of your wonder-worker?" said another. "That depends upon circumstances. My fairy must be clothed and fed, for unlike old-fashioned fairies she goes about in flesh and blood like our own. Now if you have possessions which you desire to put under her magic influence I may reveal my secret."

"In other words you wish us to employ your protégé?" said practical Mrs. Smith. "My dear Mrs. Smith! Do not be so unromantic as to talk of employment to a fairy! Fairies are not employed! They rule! They touch with a magic wand, and behold, a change comes over the scene! You feel that you tread upon enchanted ground, you seem to have dreamed and awakened to new scenes!"

"I see," said Mrs. Grant, falling in with the fancy of her hostess, "we must tie the wand of your enchantress with our gold before it can have power to cast a spell over our apartments."

"Exactly," said Mrs. Hunt, with a little happy laugh. "Now let me come down to facts, plain, unvarnished. You know the Chesters? It appears that Mr. Chester lost heavily by the Gordon failure, and the family are in very straightened circumstances. The older girls earn a little by painting, and music lessons, but it is my little Louise who is to make the fortune of the family, and I mean to introduce her to those who will appreciate her talents. Mrs. Smith, did I not hear that you were to give a kettle-drum soon? Now you shall have my little fay to make a fairy bower for your guests to drink tea in. I'll venture to say that your half-dozen straight-backed chairs stand plump against the wall on three sides of the room, this very minute; and two great easy-chairs are placed upon exactly corresponding patterns of the carpet on either side of the grate; large vases on either side of the mantel flanked by pairs of ornaments. And so on through the lists of elegant furnishings. You are not satisfied with your parlors, and yet you have no idea what is the matter. What you need is the touch of one who does know."

"But I supposed the Chesters were very proud. Do they work for pay?" "They may be very proud; I hope they are. But I think my little girl has no false pride. Why, Mrs. Smith, your husband works for pay, and we do not consider him worse for that."

"But that is different. He does a different sort of work."

"I am not sure that it is more honorable to be a senator than to be a home-maker," said Mrs. Hunt. "Here is Mrs. Griffin; her husband is honored by all, received into the very first circles, stands a peer among his fellows. No one ever imagined that he in any degree lowered the dignity of his family when he adopted the profession for which nature evidently designed him. But if Louise Chester takes up the work for which she has an especial talent, we try out that she works for a living! Where is the difference? Mr. Griffin plans the house and she plans the adornments. He is the architect; she the artist."

Mrs. Smith laughed, and replied, "Well, that is a very pretty way of putting it."

"Well, when Dell comes home I intend to give a party, a large party, and Miss Louise Chester will be among the guests if she can be persuaded to honor us, whether or not she beautifies your rooms for pay."

The next morning Louise received a note which ran thus: "My Dear Child:—Several friends have been to see me; they invariably have expressed their surprise and pleasure at the changes which have been made, and they also express a desire to secure your artistic touch for themselves. I write to tell you this so that you need not be surprised to awaken some morning to find yourself an important personage. And more particularly I wish to give you warning that you may not be so surprised as to fail of making terms to your advantage. I am aware that you did the work for me as a courtesy to an old woman. However, I enclose my cheque for ten dollars as a token of appreciation, and also to serve as a precedent. You need not hesitate mentioning the amount enclosed as your lowest terms."

"Sincerely MELLICENT HUNT."

Louise dropped the letter and cheque, and, clasping her hands, exclaimed, "Well, it seems that my 'genius' for putting things to rights has a market value after all!"

"Need I tell you more? You see how to Louise Chester was revealed 'the way out.' Two points I want you young girls to notice. Louise was ready to take up her 'whatsoever' when it came to her. And it came to her through her willingness to do a favor with no hint of reward beyond that which always comes when we give pleasure to another. You have already foreseen that to Louise there was opened an 'avenue,' and that business flowed in upon her and that the pressure of anxiety was lifted from off the hearts of the Chesters as they saw the clouds breaking away. But there is another part of the story which you may not have guessed, and this I must tell you."

Louise grew to be a great favorite with Mrs. Hunt, and frequently the carriage would be sent for her to go out and spend the day on Browning Avenue. And ere long the whole household responded to the young girl's presence by taking on an air of brightness and tastefulness such as it had not known before. And Mrs. Hunt would often say "What will Dell say to this?" or "That will suit Dell!" But, curiously enough, where Dell was sojourning, and whether for pleasure, study or business, was not revealed to the listener in any of Mrs. Hunt's remarks. Yet the omission was not intentional on that lady's part. She quite forgot that everybody might not know Dell, and be familiar with Dell's movements.

One morning at the beginning of the holidays, Mrs. Hunt's carriage stopped at the Chesters, and a young man asked for Miss Louise. "I am Louise," said the young lady who had opened the door for him.

"Ah! Then I am to give you this," handing her a note, and at the same time following her as she led the way to the parlor. The note which Louise opened, with an apology to the gentleman, ran thus: "My Dear Little Girl:—My nephew Dr. Dell Brockway, of whom you have heard me speak so often, will hand you this and will also act as your escort, if you come out to me this morning, as I am sure you will if your engagements permit. Patrick has some errands to do for me, which will give you time to get ready."

"Sincerely MELLICENT HUNT."

Louise read the dainty note through twice, with heightened color. Then she looked at the tall, bearded young man who stood waiting while she read. Twice reading the note had given her time to recover from her surprise, and she now stepped forward, and held out her hand, saying: "Yes, taking the proffered hand, and you are my Aunt's fairy, good angel, or something of that sort."

"Your aunt is pleased to call me her friend," she said, then added impulsively, "And you are 'Dell'?" "I am Dell," he said laughing; then as he looked into her still puzzled face, he added, "You seem doubtful."

"Well, I—I thought 'Dell' was a girl." Then they both laughed, and he said, "I knew Aunt Mellicent made a baby of me, but I did not know she was playing a trick of this sort upon me."

"Oh, it is all my stupidity," said Louise. Presently, Dr. Brockway said: "And what reply have you to my Aunt's request? Will you answer in person?"

"I shall be happy to do so; that is if mamma thinks I can. And, excusing herself, she ran away to consult the rest."

"Dell Brockway, of course," exclaimed Margaret. "I used to know him at the high school, but I never thought of him in connection with Mrs. Hunt's niece." Then they all laughed; it was easy for the

Chesters to laugh in those days of brightening skies. The first evening after Dr. Brockway's return Mrs. Hunt watched him as he made the tour of the long, back parlor. Presently he came back to her, and seated himself in a luxurious arm chair placed just at the right angle to give the occupant a view of the larger room and a part of the hall. Strangely enough he remembered at that moment that this particular chair used to occupy a somewhat out-of-the-way corner at the end of the piano, the view cut off by the half open door.

"Auntie," he said, "what have you been doing to the old house?" "Doing to it! Why?"

"Because something seems different; it is the same, yet it is brighter, lighted up, as if there were an invisible presence shedding sunshine through it." Then, as he caught the gleam of a smile upon his aunt's face, he added: "Now don't laugh at me; but I remember that always there was a heaviness about these rooms, and I used to feel as though two heavy hands were pressing upon my shoulders whenever I came in here, and now I feel as buoyant as a boy."

Later he said, "I wondered where you would hang that picture. The arrangement is perfect! How did you happen to think of the change?"

"I didn't, but I found one to think for me: a genius!" And thereupon Mrs. Hunt told the story of her young friend and favorite, all about her trials and of her successful work in the homes of the wealthy and cultured of the city, adding earnestly, "Such girls as Louise Chester dignify labor; yes glorify it!"

The young man's eye twinkled as he said, "The young lady seems to have one enthusiastic admirer."

Dr. Brockway was always a gentleman, and if Mrs. Hunt fancied she detected a touch of irony in this speech she must have been mistaken. However, she made no response just then, but a few months afterwards she replied to that remark. It was when her nephew told her of his engagement to Louise Chester that she said: "Well, Dell, it seems that the young lady has two enthusiastic admirers."

"We will miss the touch of her fingers in our homes," said Mrs. Smith, returning from the wedding.

"Yes," replied Mrs. Grant, "but she has taught us all something of the art of home-making, and I am glad that she and Mr. Dell are going to set up a home amongst us—it will be a model!"

THE END

Grains of Gold.

A fresh mind keeps the body fresh. Time is never lost if friends are made. The simple resolution to surmount an obstacle reduces it half.

Injuries should be written in dust; kind actions in marble. "Almost any wife would be good and happy were she loved enough."

A quiet, self-possessed air is the passport of a gentleman the world over. Complete your work, for nothing is done while anything remains to be done.

Study history not so much for a knowledge of events as of human nature. "Fix your character and keep it whether alone or in company."

The highest learning is to be wise, the greatest wisdom is to be great. Education is the bringing out of all the good of which the nature is susceptible.

To be patient and thorough in everything one does is to compel success in any calling. Newton being asked by what means he made his discoveries in science, replied, "by thinking."

If there is any person whom you dislike that is the person of whom you ought not to speak. "Let the same duty return at the same hour every day and it will soon become pleasant."

There are energies slumbering in the smallest bosom among you sufficient to shake the world. We measure a man's intellect by his achievements; we measure his achievements by his difficulties.

Since a man's thoughts must be his life-long companions; he should strive to keep them bright and agreeable. Conscience flourishes best on continuous hard service, and should not be allowed to take a holiday for a single afternoon.

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Minnie May's Dep't.

Help one Another.

"Help one another," the snow flakes said
As they cuddled down in their fleecy bed;
"One of us here would not be felt,
But I'll help you and you'll help me,
And then what a big white drift we'll see."

"Help one another," the maple spray
Said to its fellow leaves one day;
"The sun would wither me here alone,
Long enough ere the day is gone;
But I'll help you and you'll help me,
And then what a splendid shade there'll be!"

"Help one another," the dewdrop cried
Seeing another drop close by its side;
"This warm south breeze would drive me away,
And I should be gone ere noon to-day;
But I'll help you and you'll help me,
And we'll make a brook and run to the sea."

"Help one another," a grain of sand
Said to another grain just at hand;
"The wind may carry me over the sea,
And then, O, what will become of me?
But come, my brother, give your hand;
We'll build a mountain and there we'll stand."

MY DEAR NIECES:—

We do not as a rule realize how much help we as women can be to each other. In all our trials woman's greatest friend should be woman. To be sure our brothers and husbands are all right as advisers or protectors, they are dear, manly fellows, but they cannot give us that sort of sympathy we most require. It is the very greatest comfort to have a woman friend to whom one can turn to for consolation when all seems dark around us, and who can say just the words you want most to hear. Women's talks have been called gossip. Alas, there may be some small foundation for it, but generally they are about the most innocent and commonplace subjects, but interesting to us because they are all about those we love best, and their welfare. To be a real help to one another our sympathies should be kept active, and we must cultivate that excellent gift of charity, charity in its broadest and best sense, which means forbearance as well as love. Let us look at the failings of our friends as we regard our own and judge them not at all. Forbear even to think harshly, and never criticize the shortcomings of a friend for we may have quite as many ourselves. When we are able to do all these we may become such a friend as can give real heart help that will strengthen a well nigh broken spirit and give her courage to try again. You may think, my dear girls, that such trifles as unkind criticism and hastily spoken words are not worth all I say about them, but are not all great results made up of trifles. "Little drops of water, little grains of sand," make oceans and mountains; and were not the laws of gravitation settled by Sir Isaac Newton seeing an apple fall from a tree? Do not neglect little opportunities; speak the kind word when the opportunity presents itself; stretch forth a helping hand when you see it is needed, and do not wait for the chance of doing something great all at once, it may never come.

The greatest charm of conversation consists not in the display of one's own wit and intelligence so much as in the power to draw forth the resources of others; he who leaves you after a long conversation pleased with himself and the part he has taken in the discourse will be your warmest admirer. MINNIE MAY.

It is our business to make the most of our talents and opportunities, and to believe all things possible, as, indeed, almost all things are to a spirit bravely and firmly resolved.

How to Drink Milk.

Don't swallow milk fast and in such big gulps. Sip it slowly. Take four minutes at least to finish that glassful, and don't take more than a good teaspoonful at one sip.

When milk goes into your stomach it is instantly curdled. If you drink a large quantity at once, it is curdled into one big mass, on the outside of which only the juices of the stomach can work. If you drink it in little sips, each little sip is curdled up by itself, and the whole glassful finds itself in a loose lump made up of little lumps, through, around and among which the stomach's juices may percolate and dissolve the whole speedily and simultaneously.

Many people, who like milk and know its value as a strength-giver, think they cannot use it because it gives them indigestion. Most of them could use it freely if they would only drink it in the way I have described, or if they would, better still, drink it hot. Hot milk seems to lose a good deal of its density; you would almost think it had been watered; and it also seems to lose much of its sweetness, which is cloying to some appetites.

If the poor only knew and appreciated the value of milk taken in this way, I am sure there would not be so much beer-drinking among them.

There are thousands of hard-working scrub-women, washer-women, factory girls, and even shop girls in the city, who drink beer with their meals because it gives a little stimulant to their tired bodies, and don't understand that it is only like applying a whip to a weary horse instead of giving him oats. If they only knew, they would find in this simple draught as much real strength as in a barrel of beer.—[New York Tribune.

What to Teach Young Women.

A mother writes to me: "What shall I teach my daughters?" This one important and tremendous fact, my sister:—That there is no happiness in this world for an idle woman. It may be with hand, it may be with brain, it may be with foot; but work she must, or be wretched forever. The little girls of our families must be started with that idea. The curse of our American society is that our young women are taught that the first, second, third, fourth, fifth, sixth, seventh, tenth, fiftieth, thousandth, thing in their life is to get somebody to take care of them. Instead of that, the first lesson should be how, under God, they may take care of themselves. The simple fact is that a majority of them do have to take care of themselves, and, that, too, after having, through the false notions of their parents, wasted the years in which they ought to have learned how successfully to maintain themselves. It is inhuman and cruel for any father or mother who pass their daughters into womanhood having given them no facility for livelihood. Madame de Stael said: "It is not these writings that I am proud of, but the fact that I have facility in ten occupations, in any one of which I can make a livelihood." We should teach our daughters that work of any kind, when necessary, is a credit and honor to them. It is a shame for a young woman, belonging to a large family, to be inefficient when the mother and father toil their lives away for her support. It is a shame for a daughter to be idle while her mother toils at the wash-tub. It is as honorable to sweep house, make beds or trim hats, as it is to twist a watch-chain or embroider a slipper.—[Rev. T. De Witt Talmage, D. D., in The Ladies' Home Journal.

How to Act When in Society.

You want to become a good conversationalist, and acquire the ease and grace which is essential to success in society? Now, my dear, it is just as necessary that in society there should be good listeners as well as good talkers. It shows equal intelligence to listen as to talk well. If you are nervous and embarrassed, study how to say the simplest things in the most natural manner, and, or a while at least, constitute yourself the audience for the brilliant talkers. You can only be graceful and natural by forgetting yourself. The woman who is awkward and ill at ease is the one who thinks continually of how she is looking and how she is acting—who is, in reality, a little bit vain in a peculiar way. She thinks that, in a drawing-room, her hostess should continually look after her happiness and study her enjoyment. This is an impossibility. After her hostess has floated her a few minutes in society she expects her to swim alone, or else to stand at a safe distance and watch the other swimmers.

To converse well it is necessary that you should have the art of discovering what will interest the person with whom you are talking and that you will know how to drop the subject when it becomes tiresome, and never to let a special fad of your own be the one subject that you bring up. Learn to be all things to all people. To avoid personalities or very decided opinions on any subject. You don't want to give a tirade against dishonesty to a man whose father died in State's prison for forging notes. You don't want to object to the divorce laws when the man you are talking to may have married a divorced woman. You don't want to talk about bleached hair to a woman whose hair is pronouncedly yellow, nor to discuss how injurious is rouge and powder to the woman who is made up in a most decided manner. In your heart you may object to all these things, but you are not giving expression just now to what you think; you are simply making yourself pleasant to some one whom you have met to-day and may never meet again. Talk about Egyptian mummies or French politics; how orchids grow, the last new play or the last new song; but use good English, speak as if you were interested, and then you will gain what you want—a reputation of being a charming woman socially.

The gems representing each month and their significations are as follows: January, the garnet; February, the amethyst; March, blood-stone; April, sapphire; May, emerald; June, agate; July, ruby; August, sardonyx; September, chrysolite; October, opal; November, topaz; December, turquoise. We would not advise considering them seriously, but the possession of the stone representing your natal month is supposed to bring good fortune.

No trait of character is more valuable in a woman than the possession of a sweet temper. Home can never be made happy without it. It is like the flowers that spring up in our pathway, reviving and cheering us. Let a man go home at night, wearied by the toils of the day, and how soothing is a word dictated by a good disposition! It is sunshine falling on his heart. He is happy, and life's cares are forgotten. A sweet temper has a soothing influence over the minds of a whole family. Where it is found in the wife and mother, you observe kindness and love predominating over the natural feeling of a bad heart. Smiles, kind words and looks characterize the children, and peace and love have their dwelling there. A sweet temper is more valuable than gold; it captivates more than beauty, and to the close of life it retains all its freshness and power.

What Bessie Wanted Done.

BY EBEN E. REXFORD.

Johnnie and his sister Bessie had a serious "falling-out." And I called them in and asked them what the trouble was about. "She was ugly," "Johnnie plazed me." So their explanations ran, and I found myself no wiser when I stopped than I began.

"Children, it is wrong to quarrel," said I, looking very grave; Then I preached a little sermon on how children should behave. "If you cannot play together without quarrelling, why then I shall separate you," said I, and with that resumed my pen.

Just about a half-hour later Bessie's angry face looked in through the window. "Come out, mamma." Then the frown became a grin: "Johnnie's just as mean as ever. Come out, mamma, right off—quick. I thought p'raps you'd separate him, so I brought along a stick."

and up still the teeter goes, as full of interest now as when first used. The teeter calls back old associations; the old school and playmates and the haunting words of some half-forgotten melody comes to mind and we find ourselves saying:—

"Where is now the merry party
That we loved long, long ago?"
And the refrain is borne to us
"Far away, far away."

KATE ROBERTSON, Strabane, Ont.

An Ever New Subject.

Look out for the person who habitually wishes to warn you against another. In nine cases out of ten, time will reveal to you some grave flaw in his character. Did you ever know a really lovable person who had a keen eye for the faults of others?

The more inveterate the gossip the harder he

with me when taken into consideration with the danger I am in of losing my self-respect. I should despise myself were I to listen to a mean story about a brother or sister."

"But how do you get rid of such people? I never know just what to say to them."

The old man replied: "Sometimes I say, 'See here, sir, I should like to know before you go any farther, what sort of a story you mean to take away from here in place of the one you leave?' Sometimes I ask him of what sort of soil he is composed that causes stories of that sort to grow so rank. Oh, I'm not popular among gossips, but I have a few friends in consequence who are really worth having."

"Can Dame Gossip be banished?" anxiously asks the individual who boasts that she never repeated a story in her life.

Not by such as you, dear madam, for in listen-



SEE-SAW.

See-Saw.

A teeter! Who does not know the enjoyment of it. Who of us have not some recollections of days long, long ago when we sat on the end of a board, and somebody else sat on the other end, and according as we were lighter or heavier, we pulled or gave more board. First lessons in statics—we found them more pleasant to learn and easier to remember than those of later years when we as scholars tried to learn theoretically about length and weight. Across a log or through a rail fence our board was put, and their we went up and down, we fell off and we cried, we held our baby sister and we teetered by the hour. There are all kinds of amusements, whirrigigs, rocking chairs, hammocks, swings, and an endless variety of things, but the teeter, the dear old teeter holds sway still. Through all the changing generations, through all the varied scenes where children play the old-fashioned teeter has a charm; the poorest may have it, the richest do not disdain. Up and down, down

will be to get rid of, and the louder will be his protestations of friendship; but who could make a friend of him whose idea of a confidential chat is something as follows: "Now I really dislike to be obliged to say it, and of course I do not expect you to repeat it. In fact, you are the only person I know to whom I could be induced to speak on so painful a subject; but, So-and-so did or said," etc.

You would feel at once as if you preferred a friend who would at least treat you with as much respect as he did the general public, instead of compelling you to listen to his degrading chatter.

A man once made the remark that although he was seventy years old he had never listened to gossip.

"How did you help it?" inquired a listener. "I am no gossip, but very often I find some one who has his story to tell, and I can not avoid listening to it without positive rudeness."

"I am called rude by such people," answered the old man, "but their opinion has little weight

ing to her you really sanction her presence. She can never be banished until the people who refuse decidedly to listen to her are in the majority, and that will not be until the world has been educated up to the level occupied by the old man referred to, and believes that one can not listen to gossip without being deprived of a certain amount of his self-respect.

A minister, having some of his old sermons, was asked what he had in his package. "Dried tongue," was the reply.

A cab-owner had the word "Excelsior" painted on the door-panel of all his vehicles. He explained that his motto was "Hire?"

Horne Tooke, being asked by George III. whether he played at cards, replied, "No, your Majesty; the fact is, I cannot tell a king from a knave."

A gentleman of Cork ordered his man to call him up at six o'clock; but he awakened him at four. Being asked the reason, he replied, "I came to tell you that you had two good hours to sleep!"

Matrimonial Puzzle.

The following is an extract copy of a letter, sent by a newly married lady to her friend, expressive of matrimonial happiness, and which she first submitted to her husband, who highly approved of it:

"I cannot be satisfied, my dearest friend, blest as I am in the matrimonial state, unless I pour into your friendly bosom, which has ever beat in unison with mine, the various sensations which constantly swell with the liveliest emotions of pleasure my almost bursting heart. I tell you, my dear husband is the most amiable of men. I have been married seven weeks and have never found the least reason to repent the day that joined us. My spouse is in person and manners, far from resembling ugly, cross, old, disagreeable and jealous masters, who think by confining to secure a wife. It is his maxim to treat as a bosom friend and adviser, and not as a plaything, or hired mental slave, the woman of his matrimonial choice. Neither party, he says, should always obey implicitly, but each yield to the other by turns. An acent maiden aunt, nearly seventy, a cheerful, venerable and pleasant old lady, lives in the house with us. She is a perfect idol of both young and old. She is civ to all the neighbors around, generous and charitable to the poor. I am sure my husband likes nothing more than he does me. He flatters me more than the glass; and his intoxication (for I must so call the excess of his love), often makes me blush for the unworthiness of the man whose name I bear. To say all in one word, my dear, and to crown the whole, my former adopted lover is now my indulgent husband. My fondness is returned, and I no doubt might have a prince without the felicity I find in him. Adieu. May you be as blest as I am unable to wish that I could be more happy."

P. S.—Read the alternate lines for the fun of it.

Here and There

Learn to labor and stop waiting.

Know thyself and keep the information to thyself.

Some lights operate under a bushel, and ought to stay there.

Words should be used as the signs, not as the substitutes, of ideas.

Make no mistakes about people looking green; the watermelon is all right inside.

It is better to represent the big end of a short pedigree than the fine point of a long one.

It is unsafe to measure one man by another man; measure all men by immutable standards.

Don't cast jewels before swine. If you don't know how to feed hogs, leave the work to somebody else.

Many a man who objects to carrying a parcel home from the provision store goes home from the bar-room loaded.

It is well that we are permitted to think so much about other people's faults and foibles that we have no time to reflect upon our own.

Never be satisfied with the surface of things; probe them to the bottom, and let nothing go till you understand it as thoroughly as your powers will enable you to.

Let us, by our own kindness, diffuse the cheering rays of consolation into the hearts of those that mourn, and pour blessings upon our fellow creatures abundant as the morning dew.

A young woman, in leaving an omnibus, dropped a ribbon from her bonnet. "You have left your bow behind," said a lady traveller. "No, I haven't—he's gone a-fishing!" innocently replied the damsel.

It is strange that when anything happens to a young woman she is always said to be superlatively beautiful and richly dressed. This ought to make plain and poorly dressed girls feel happy. Nothing will happen to them.

The papers relate an anecdote of a beautiful young lady who had become blind, having recovered her sight after marriage. Whereupon some one wickedly observes that it is no uncommon thing for people's eyes to be opened by matrimony.

Uncle Tom's Department.**"Ho for Slumberland!"**

A little song for bedtime, when, robed in gowns of white,
All sleepy little children set sail across the night
For that pleasant, pleasant country where the
pretty dream-flowers blow,
"Twixt the sunset and the sunrise,
"For the Slumber Islands, ho!"

When the little ones get drowsy and heavy lids droop
down
To hide blue eyes and black eyes, grey eyes and
eyes of brown,
A thousand boats for Dreamland are waiting in a
row,
And the ferrymen are calling:
"For the Slumber Islands, ho!"

Then the sleepy little children fill the boats along
the shore,
And go sailing off to Dreamland; and the dipping of
the oar
In the Sea of Sleep makes music that the children
only know
When they answer to the boatmen's
"For the Slumber Islands, ho!"

Oh! take a kiss, my darlings, ere you sail away
from me
In the boat of dreams that's waiting to bear you
o'er the sea:
Take a kiss and give one, and then away you go
A-sailing into Dreamland,
"For the Slumber Islands, ho!"

MY DEAR NIECES AND NEPHEWS:—

Although we farmer folks are so busy with the harvest others are not so, and while we work early and late with all the physical energy we possess many, wearied with the unceasing work and care of the past months, are in this warm weather off for vacation.

Are my nieces and nephews inclined sometimes to envy them and think that they are losing much in not being allowed to go too. If they will but allow common sense to rule they will not think so. Your leisure time comes at a different season, but not the less enjoyable. Had those young fellows of that camping party a home in the country like yours do you think they would take all the trouble they do of buying of their sometimes meagre earnings so many things necessary for their summer outing, and carrying with them such strange bagfuls of pots, dishes, pans, tins, rugs, clothes, and a lot of other things, with provisions for the coming days or weeks, and the prospect of cooking for themselves, of being bitten by black flies and mosquitoes, and have their pleasant evenings made miserable by sand flies? They come home, it is true, the better of the change, well sunbrowned and with a stronger muscle. But what is that to you—you with health and strength apparent in every movement, in every look. You have already what they seek, then do not envy them. Not that Uncle Tom would have you always at home. At the proper time, when your harvest fields are bare, when the sheaves have given forth their golden grain, when the surplus stock is sold, when the objects of your care for months have carried off their honors at the agricultural fairs, when you see the time and the way, then go and fulfil that cherished wish to see, which object you have had for months before you. It does not detract from the pleasure, it adds to it to have waited so long.

Uncle Tom does not undervalue the beauty or the benefit of park, beach, lake, mountain or rapid, and this beautiful Ontario of ours has many enjoyable resorts. Our northern lakes, island dotted and tree crested, are indeed health giving and soul inspiring, where with blue skies above; from bank and cliff trees wave in majesty and bow to the reflecting waters; where

Hanging between two skies, a cloud with edges of silver,
Floats the boat, with its dripping oars on the motionless water;

where the lilies grow, where point after point is rounded, each seeming to excel the last in beauty; where the dark winding stream flowing through "forests primeval" is followed or resting on weary oars, as the setting sun with his golden wand changes sky, and water, and forest to fire at his touch.

O, no, Uncle Tom loves all these things and sometimes wonders if in their hours of rest his nieces and nephews value not more the descriptions of these beauties, as given by gifted pens, than others do the reality.

An untrained ear does not hear the beauty of the birds, or hear the many sounds of nature. So our enjoyment is in ourselves. If our eyes and ears have been opened to enjoy nature we live on that which to others is nothing. In the Mammoth Cave, Kentucky, we are told, there is a species of fish which once could see, but having lived in the darkness of the cave so long, and left unused their power of vision, they have now the marks of eyes only, but no eyes.

What is the lesson we learn from nature? My smallest nieces and nephews can give me it I am sure. God-given talents left unused are taken from us. Some of you are richly endowed, all have one, some have two, others more, it may be even ten talents. Are we going to cultivate them or have them taken from us? Some of them we may not know we possess, but the faithful use of what we do know will open up the others.

But this is a long letter and the turnips have to be hoed and the berries to be picked, the grain to be put in the shocks, the plants to be watered, and the long yet short harvest days to be fully employed, so when we have said farewell to August, and September days have come, you will hear again from

UNCLE TOM.

—The steamer for Liverpool was about leaving the dock. The friends of the passengers were bidding a last farewell. A brisk, elderly gentleman, evidently a merchant, hastily embraced a lady on deck and hurriedly left the ship. In the crowd on the wharf was a working man, who was leaning against a post looking at the steamer.

"Do you see that lady in black on deck?" asked the merchant of the party of the second part.

"Yes, I see her."

"All right; that's my wife and she expects me to stay here twenty minutes and shake my handkerchief until the steamer is out of sight."

"Does she?"

"Yes. This is the busy season and I've no time to waste. My wife is a little shortsighted, so she will be none the wiser if you wave the handkerchief. I'll pay you a quarter."

"But suppose she gets a spy glass?"

"In that case you bury your face in the handkerchief and appear to weep. You might shake convulsively and perhaps shed a tear or so. A quarter is a great deal of money these hard times."

"I'll have to have an extra dime."

"All right; but I think you ought to kiss your hand to her a few times for the extra dime." Then the merchant looked at his watch and disappeared.

A judge, joking a young lawyer, said, "If you and I were to be turned into a horse or an ass, which would you prefer to be?" "The ass to be sure!" replied the lawyer. "I've heard of an ass being made a judge, but a horse—never?"

Puzzles.

1—August, 1890.

3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31

ACROSS.—1. In music, go on increasing (ITAL).
2. A knight-errant.
3. To quicken.
4. A kind of muffin.
5. One who maintains that all space is full of matter.
6. A letter.
DOWN.—1. Succulent.
2. A species of indigo plant.
3. Similar.
4. To trust or confide in.
5. A majestic tree, of great commercial value, growing in Demerara.
6. A vine of the natural order.
7. Concerning.
FAIR BROTHER.

2—CHARADE.
"The picnic season's now at hand,"
PRIMES our good friend Fair Brother.
He'll attend on a TOTAL three some weeks
And four or five some others.
What fun it is when a caravan
Of boys and girls together
Of every LAST start for the grounds
In the bright summer weather.
The sky so blue looks beautiful;
No cloud its shadow casts.
Ah! me! 'tis so entrancing
I fear it will not last.
The elements now grow angry,
Now hear them in their rage;
Be quick, be quick, retrace your steps
And get them within your cage.
ADA ARMAND.

3—ANAGRAM.
Our Snowbird flew away to the States and left us
all alone,
But now, to take her place, we find a Snowball
freshly blown.
Now, cousin dear, pray do be kind, don't keep us in
suspense,
But tell us what your real name is, 'twill be some-
what more like sense;
For some will say you are a girl and others will say
a boy.
And in our pastimes "frankness" is a watchword
we employ.
Then tell us your name, now Snowball, your place
of residence, too.
You may tell if you wish, but it matters not if your
name we had GOT AS A CLUE.
ADA ARMAND.

4—CHARADE.
There's Amos Hawkins, where is he?
Surely he's not gone to sea!
Clara Rillance; beg your pardon,
Do return and with us be.
Where is cousin Lou, so cunning,
Has she left the art so dear?
Mattie Woodworth, too, has left us.
Oh return and never fear.

Take excelsior for your watchword,
Says cousin Henry Reeve.
Now, add to it perseverance,
And your object you'll achieve.
"Sarcastic Punster," wist thee how?
And "chestnuts," Oh! dear sir,
I wish you'd kindly send us some,
Though net within the burr.

A "Snowball" at this time of year
Seems somewhat out of place,
And yet she leaves her tracks behind
And travels on through space.
I hope she will return some time,
Though LAST on mischief bent,
Nor like the boys he tells about,
Who didst a lark invent.

Our fair and honored friend Miss A.,
Met a physician, did you say?
Who asked her if she would become
His Advocate some day.
Alas, I ENTIRE think it true,
But surely she will knee,
And tell us too—confound the luck,
Those mosquitoes do bite so.

Yes, Uncle Sam's a jolly chap
And full of lots of fun,
But still I think fair Canada
Is not the place to shun.
Miss Armand's cry I will endorse
As loud as I FIRST caw,
And give three cheers for Canada,
Hurrah! Hurrah!! Hurrah!!!
FAIR BROTHER.

5—NEW PUZZLE.
My first may to a lady be a comfort or a bore;
My second you may for comfort shut the door;
My whole will be a welcome guest,
Where tea and table yield their zest.
A. HOWKINS.

6—DOUBLE CROSS-WORD ENIGMA.
In "torchlight parade" very grand,
In "brave volunteers" with their bands,
In "beautiful fireworks" at night,
In "uniformed orders" that do right
All dressed in colors bright.
In "fast firemen" wearing helmets,
In "victorious rowers" their club's pets,
In "promenade concert" for the walkers,
In "Loyal songs" sung by the songsters,
And are talked about by the talkers,
My whole was not a howling success,
As all the newspapers do attest;
Although all those gay, festive sights
Took place during both day and night.
HENRY REEVE.

7—CHARADE.
While looking o'er the ADVOCATE
The puzzles I started to PRIME,
When TOTAL did upbraid me
And reminded me 'twas time.
I had no puzzles ready
This month to send away.
So I came to the conclusion
I'd make up some to-day,
For puzzling is a FINAL
I very much enjoy,
And so my leisure moments
In puzzling I'll employ.
ADA ARMAND.



8—ILLUSTRATED REBUS.
Lives of posers oft remind us,
Tyrone's don't stand half a chance;
To outdo the honest veterans,
Who by won't solves at a glance.
But the vet'ran, who so nobly
Has worked on (with o'bers sleep),
At one time took the under round
Of puzzledom's ladder steep.
Then let all be up and doing,
Send your lists, though ever so small;
PRIME by constant perseverance,
To the topmost round you'll crawl.
If at first you get discouraged,
ENTIRE let your motto be;
And if others stay your progress,
LAST them off and so be free.
FAIR BROTHER.

9—CHARADE.
One fine day, not long since,
When the sun was shining bright
Our Alphabet went out for a walk,
Which was quite correct and right.
Messrs. A. and B., when hand in hand,
The pleasant sight to see,
Closely followed by a noble band
Under the guidance of a capital D.
In alphabetical order they did go;
Now, can you please tell me,
When U, V, W, X, Y and Z went out,
What time of the day it might be?
HENRY REEVE.

- Answers to July Puzzles.
1—AVERS 2—Become.
CARAVAN 3—The letter N.
AVERAGE 4—Met a physician.
SECEDED 5—Mosquitoes.
TRACE 6—Somewhat.
7—Who looks not before finds himself behind.
8—Pastimes.
9—Watchword.

Names of those who have Sent Correct Answers to July Puzzles.

Morley T. Boss, A. R. Boss, A. Howkins, Henry Reeve, Mary Woodworth, Mattie Woodworth, I. I. Devitt, Ed. A. Fairbrother, Clara Rillance, Elnor Moore, Dorothy Fox, Drusilla A. Fairbrother, Gordon Allan, A. G. Carrie, Lewis Montgomery, G. H. Greer.

NEW ADVERTISEMENTS.

All Advertisements, to insure insertion, must be in this office by the twentieth of each month.

SPECIAL NOTICE.

THE FARMER'S ADVOCATE refuses hundreds of dollars offered for advertisements suspected of being of a swindling character. Nevertheless, we cannot undertake to relieve our readers from the need of exercising common prudence on their own behalf. They must judge for themselves whether the goods advertised can, in the nature of things, be furnished for the price asked. They will find it a good rule to be careful about extraordinary bargains, and they can always find safety in doubtful cases by paying for goods only upon their delivery. Advertisements unaccompanied by specific instructions inserted until ordered out, and charged at regular rates.

The FARMER'S ADVOCATE is the unrivalled advertising medium to reach the farmers of Canada, exceeding in circulation the combined issues of all the other agricultural publications in the Dominion. Send for an advertising circular and an estimate.

FOR SALE! THE MAGNIFICENT STOCK FARM "LANG SIDES."

150 acres of the choicest land divided by gravel road; fields contain 15 to 20 acres, tile drained; water for stock in each field. Buildings new and beautifully fitted: barn, 90 x 50; straw shed, 40 x 36; hay barn, 30 x 30; lofts over horse stable 60 x 30; stone basement under the whole; stalls for tying forty cattle, with numbers of large box stalls; horse stable, with seven stalls, two box stalls and harness room; root cellars and water; compartment for running horse-power, etc. Also tenant house and store-barn; house contains ten rooms, with all appliances for comfort and convenience, situated three miles from Sebringville, G.T.R., and six miles from Stratford. Good roads, with mail and telegraph office convenient. Sale in consequence of advanced age and loss of only son.
294-c0 ROBT. BALLANTYNE, Sebringville, Ont.

HEREFORDS & SHROPSHIRE - ENGLAND. SALE OF ONE OF THE BEST HERDS IN ENGLAND.

THE GRAND OLD BENTHALL HERD OF 150 HEREFORDS (bulls, cows and heifers) will be unreservedly sold by Auction in consequence of Mrs. Crane's decease, on
FRIDAY, SEPTEMBER 26th, 1890,
AT BENTHALL, NEAR SHREWSBURY, ENG.,
by order of Mr. John Crane, the Judge of Hereford cattle, appointed by the Council of the Royal Agricultural Society of England in the years 1878, 1879, 1881, 1885 and 1888.

This magnificent herd is fully registered in the H. B., and is one of the finest in England. It is by prizeman 4063, a grandson of the Royal winners, Albert Edward 859 and Walford 871; Assistant 6788, brother to the renowned R. A. S. C. champion Archibald 6290; Myrmidon 10221, by the R. A. S. C. champion Goodboy 5942, and Standard Bearer 14195, a grandson of The Grove 3rd 5751. The absolute sale of so fine a herd affords an unusual opportunity to breeders and importers. The noted flock of 300 Shropshire Sheep, recorded in S. F. B. and of Crane's renowned R.A.S.C. prize blood, will be also sold without reserve on the same occasion. Foreign Commissions executed by E. Goodwin Preece, Live Stock Agent and Exporter, Shrewsbury, Eng., and catalogues of the auctioneers.
W. G. PREECE & SON,
Shrewsbury, Eng.

CANADA'S GREAT EASTERN EXHIBITION AT SHERBROOKE, P. Q., September 1st to 5th, '90. COMPETITION OPEN TO THE WORLD. \$10,000 - IN - PRIZES.

This being the only Industrial and Agricultural Exhibition in the Province of Quebec this year, it is confidently expected that it will be the largest, best and most attractive exhibition ever held in this part of the Dominion. Low rates and cheap excursions on all railways. Entries on live stock close 25th Aug.; in all other departments on 29th Aug. Send for prize lists and entry forms to—
JAS. B. WOODWARD, H. R. FRASER, Sec.,
President. 296-a Sherbrooke, P. Q.

STOCK FOR SALE.
A. B. SCOTT & SON,
 VANNECK, - - - ONTARIO,
 IMPORTERS AND BREEDERS OF
REGISTERED CLYDESDALES

The get of McGregor, Belted Knight, Good Hope, etc. Colts and fillies, winners at all the large shows, for sale at moderate prices. 283-y-OM

JOHN S. ROBSON,
Thorndale Stock Farm,
 MANITOU, MAN.
 Breeder and Importer of Clydesdales and Shorthorns.
 Young animals for sale. Satisfaction guaranteed. 285-y

Imported Clydesdale Stallions and Mares for Sale.



Each stallion guaranteed a breeder. Prize-winners and the get of prize-winners compose our shipments. Grand style, clean legs, sound feet, together with fine action and perfect constitution are characteristics found in every one of our horses. Intending purchasers should see our stock. Terms made very easy. Visitors always welcome. Catalogue on application.

DUNDAS & GRANDY,
 286-y
 Cavanville Station and telegraph office C. P. R.
 SPRINGVILLE P. O.

ELGIN STOCK FARM.



We are one of the largest breeders in the Dominion of

CLYDESDALES,
 And have for sale a lot of imported and home-bred Clydesdales—male and female.

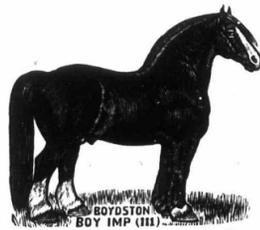
Durham and Ayrshire Cattle, Berkshire and Chester White Pigs, Shropshire and Cotswold Sheep.

A. & J. BELL,
 291-f-OM
 Athelstan, P. O.

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

Breeders and Importers of

FASHIONABLY BRED CLYDESDALES



BOYDSTON BOY IMP (III) is at the head of our stud. 277-y

We always have on hand a large number of imported and home-bred Clydesdales (male and female) of good breeding and quality, which we will sell at honest prices. Our specialties are good and well bred horses and square dealing. Come and see us or write for particulars.

SHIRE HORSES.

We have a choice selection of Imported Stallions and Mares always on hand. Having a partner resident in England our expenses are very light, and we are able to sell at figures 25 per cent. lower than any other importers.

Also Pure-bred Shropshires, Imported and Canadian-bred: all registered. **ORMSEY & CHAPMAN,** The Grange Farm, Springfield-on-the-Credit, Ont. Stations—Streetsville, on the C. P. R., and Pt. Credit, on G. W. R. 285-y

Improved Yorkshire Pigs.

We were the first importers of pedigreed Yorkshires in Canada. All our stock is registered, and our motto is, "A good pig with a straight pedigree at a fair price." Our terms are, "Satisfaction guaranteed or money refunded."

LA COMPAGNIE DU HARAS NATIONAL

30 St. James St., Montreal, Canada.

40—STALLIONS NOW ON HAND—40
 THOROUGHLY ACCLIMATED.

Stable, Outremont near Montreal. Medavy breeding and sale farm, Perche, France. **SPLENDID PERCHERONS** (stallions and mares), French Coach Horses (Normans), all with first-class pedigrees.



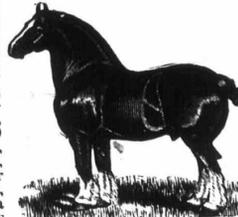
Our connections in France enable us to import cheaper than anyone else. For terms of sale and for our catalogue apply to the office.
 HON. L. BEAUBIEN, President, Montreal, Canada.
 BARON E. DE MANDAT GRANCEY, Vice-President, 5 Av. Friedland, Paris, France.
 R. AUZIAS-TURENNE, Manager. 289-y

ROBT. NESS, Woodside Farm

—IMPORTER AND BREEDER OF—

CLYDESDALES, SHIRES, SHETLANDS, AYRSHIRE CATTLE

The eleventh yearly importation consists of some of the best specimens of the several breeds. Clydesdales from such noted sires as McGregor (1487), Crown Royal (4915), Top Gallant (1850), Macfarlane (2988), Macbeth (3817), Sir Hildebrand (4024), Golden Guinea (3990), Old Times (579), Good Hope (1679), Knight of Snowden (2212). The stock is selected by myself with great care. Intending purchasers are invited to inspect.



The farm is situated 40 miles south-west of Montreal, on the G. T. R., and 100 miles east of Ottawa, by C. A. R. Howick Station on the farm.
ROBERT NESS, HOWICK P. O., Que.
 Visitors always welcome. 291-y-OM

300 PERCHERONS,
100 FRENCH COAGHERS

Comprising my importations for 1889, are now on exhibition at

ELLWOOD'S RANCH,
 DeKalb, Illinois.

This collection embraces all the First and Second Premium Stallions (with one exception); the First Premium for best Collection of Stallions; a majority of First and Second Premium Mares; shown at the greatest of all Percheron Shows, held at La Ferte Bernard, from May 29, to June 2, 1889.

The quality of this stock is guaranteed superior to any importation that ever crossed the water. In addition to the superior Dratt animals which have ever characterized my selections, particular attention has been given to the selection of Coach Stallions, which is the largest ever brought from France by any importer. Conspicuous among this lot is the selection made from the famous stable of Edward de-la-Ville, being the only party that was willing to pay the price that would bring the quality of horses handled by Mr. de-la-Ville to this country, he having been the recipient of more show ring honors than any other owner of Coach horses in Normandy. It will be to the interest of intending purchasers to make a careful examination of quality and prices before buying. I desire to impress upon my customers that, as heretofore, I was the first American buyer in France this season, and my selections are made from the leading Stud, and having the first choice of all of them, I spared no expense to secure the best. All stock fully guaranteed. Favorable prices and terms. For particulars, address,

W. L. ELLWOOD, Proprietor,
 DeKalb, Illinois.

DeKalb is situated on C. & N. W. Ry. 58 miles west of Chicago. 288-y

Pure-Bred Registered Clydesdales & Jerseys

Bred from pure imported stock. Young stock for sale at farmers' prices. 283-y-OM

JOHN PULFER, Springvalley Farm, Brampton, Ont.

FOR SALE 12 head of Shorthorns, bulls and heifers; 20 Leicester and South-down Ram Lambs, and about 30 Berkshire Pigs. All bred with care. Send for prices. 294-y-OM **EDWARD JEFFS, Bond Head, Ont.**

FOR SALE.

Seven Scotch-bred Shorthorns, including the Cruickshank bull Endymion (52847); Pompador, a 16 months' bull, from Mina 11th; a 12 months' bull by Earl of Mar, dam Imp. Clementina. Cows and Heifers—Imp. Clementina, Mina 11th, Sunnyside Mina, Sunnyside Mina 2nd. 294-c-OM **GEO. THOMSON, Bright P. O., Ont.**

Shorthorns for Sale.

Bulls and heifers, sired by Laird of Kinellar, of the Campbell-Buchan Lassie family, from which we have some fine show animals, several prize takers at the Provincial Show, 1889.

JAMES CRERAR,
 294-y-OM **SHAKESPEARE, ONT.**

BOW PARK HERD

—OF—

PURE-BRED SHORTHORNS.

We have on hand Eighteen Young Bulls, fit for service, that we offer at reasonable prices and easy terms. They are good individuals, and well bred. ADDRESS—

JOHN HOPE, Manager,
 290-y **Bow Park, Brantford, Ont.**



D. ALEXANDER,
 Bridgen, Lambton Co., Ontario.

My Shorthorn herd now consists chiefly of Imp. Lady Violet Lustre and seven of her daughters, and two daughters of Imp. Beauty 15th, almost all sired by one bull, and of one character, thick, and fine quality. Can furnish a splendid young herd at reasonable prices. Trains twice daily. Station one mile. 282-y

DAVID BIRRELL, Greenwood, Ont.

Breeder and Importer of First-class

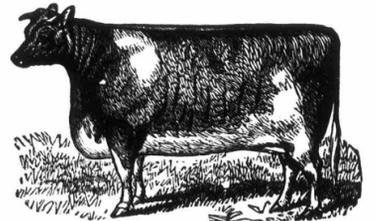
Clydesdales, Cotswolds

—AND—
Scotch Shorthorns.

YOUNG and BREED-ING STOCK for SALE at prices to suit the times. A call or correspondence solicited. Pickering is my station on the G. T. R., and Claremont on C. P. R. 286-y



ARTHUR JOHNSTON,
 Greenwood, Ont.



I have for sale by far the best lot of young animals of both sex that I have ever offered. My yearlings are especially good; they are all by imported sires, and mostly out of imported dams. I have a number of excellent imported and home-bred Clydesdales of both sex for sale.

New Catalogues for 1890, will be ready by January, 20, 1890. Send for one.

My motto is, "No business no harm."

Greenwood P. O. and Telegraph Office, Claremont Station, C. P. R., or Pickering Station on the G. T. R. Parties met at either station on shortest notice. Come and see them. 289-1f

SHROPSHIRE'S



I have on hand a splendid crop of lambs, all from imported ram, and mostly from imported ewes. Shearing Ewes, similarly bred; also imported Ewes. Sheep in American Shropshire Record; also some very good grades.

S. A. MILLSON,
GLANWORTH, ONT.
295-y-OM

SHROPSHIRE -- SHEEP.



This flock has won numerous prizes in England for the last twenty years, besides America, France and Africa. Has been established over seventy years. Several of the best flocks in England started from this flock thirty years back. Sheep always for sale.

F. BACH & SON,
Onibury, Shropshire, ENGLAND.
289-y



SHROPSHIRE SHEEP

DAVID BUTTAR,
Corston, Cooper-Angus, N.B., Scotland
Has taken all the principal prizes in Scotland for several years. His sheep are of the purest blood, and carefully bred; every sheep eligible for registration. Pedigrees and prices on application.
294-y-OM

SOUTHDOWNS.



To make room for my fresh importation, lately landed, I will sell the whole of my flock, consisting of Sixty Southdown Ewes and Lambs of my own breeding. These sheep are large and first-class quality. Prices very reasonable.

DAVID H. DALE,
Glendale, Ont.
296-y-O,M

DORSET HORN SHEEP



MY SPECIALTY. These sheep drop their lambs at all seasons of the year; are good mothers and most prolific. Devon Dairy Cattle, good milkers and grazers. Flock and Herd established nearly one hundred years. Also Shire Horses and Berkshire Pigs. Sheep, Horses and Pigs exported to America have given every satisfaction.

THOMAS CHICK,
Stratton, Dorchester, Dorset, England.
295-y-OM

A. FRANK & SONS, The Grange P. O.,

Ont., Cheltenham Station, C. P. and G. T. Railways. The Centennial - Sweepstakes herd of



SUFFOLK PIGS, being the oldest, largest, and most successful prize winners in America. The boar I-am-First, at the head of this herd, is 17 months old and weighs 440 lbs.

Thoroughbred Horses, Shorthorn Cattle

of the Cruickshank blood. Young bulls for sale, got by Baron Camperdown - 1218 - imp., (47389) and Baron of the Grange - 10954 - Also

Southdown Sheep from Webb's and Coleman's stock. Young stock of all the above for sale. All orders promptly attended to.
294-yOM

SUFFOLK AND BERKSHIRE PIGS

From imported stock, \$6 each, \$10 pair. Address
293-y-OM **F. J. Ramsey, Dunnville, Ont.**

Improved Yorkshire Hogs and Shropshire Sheep,
All bred from imported stock and registered.
293-y-OM **JAS. HALL, Edmonton, Ont.**



CECIL FRENCH,

Ightham Court Farm
Truro, N. S.

Importer and Breeder of

Improved Large White Yorkshire Pigs
Our herd consists of two importations from F. Walker-Jones, and N. I. Hine, Eng. Registered stock for sale at all times.
295-y-OM

H. GEORGE & SONS, CRAMPTON, ONT.,

Importers and Breeders of

Ohio Improved Chester White



SWINE.

ALSO SUFFOLK & BERKSHIRE SWINE

We will have over one hundred pigs for spring trade, sired by four noted imported boars. Orders booked for spring pigs in pairs not akin. All breeding stock recorded. Correspondence solicited. Single rate by express.
286-y

E. D. GEORGE

PUTNAM, - - ONT.

Importer and Breeder of

Ohio Improved Chester White Swine



I have bred fourteen choice Sows for spring trade; have used four imp. boars. Orders booked for spring pigs in pairs not akin. Pedigrees furnished. Prices right. Special rates by express.
293-y

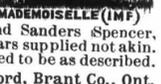
Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.



Entire breeding stock of Yorkshires are imported; specially selected from stock of F. Walker-Jones and Sanders Spencer, Eng. Registered sows and boars supplied not akin. Shipped to order and guaranteed to be as described.
J. E. BRETHOUR, Burford, Brant Co., Ont.
293-yOM

CHESTER WHITE PIGS

FROM PRIZE IMPORTED STOCK FOR SALE.



Special Rates by Express.
296-1f-OM **R. & J. GURNETT, Ancaster, Ont.**

Improved Large Yorkshire Pigs



From the strains of Sanders Spencer and F. Walker Jones, England. Registered young pigs for sale. Apply to

WILLIAM GOODGER,
Woodstock, Ont.
293-y-OM

Write At Once!

If you want something extra good in the line of

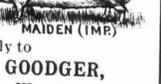
LARGE IMPROVED YORKSHIRE PIGS.

E. M. JARVIS,
ONTARIO LODGE,
CLARKSONS, or OAKVILLE.
291-y-OM

DANIEL DeCOURCEY

BORNHOLM, ONT.,
Importer and Breeder of

OHIO IMPROVED CHESTER (WHITE) SWINE.



I have twenty choice sows to farrow this spring; have used six imported boars, so I am now ready to book orders for pairs or trios not akin. Pedigrees furnished; prices moderate; single rates by express. Mitchell Station and Telegraph Office. 293-y-OM

IMPROVED -- LARGE -- YORKSHIRES!

All bred from imported stock and registered. Imported boar "Holywell Wonder II." heads the herd.
JAMES FIELDS,
293-y-OM Castle Hill Farm, ANCASTER, ONT.



The Great AMERICAN HOG
Two-thirds more raised than all breeds in the United States. Rapid growth. Most Pork for food consumed by actual test. Pedigreed. 200 FOR SALE.
291-c

G. M. ANDERSON, - - Tyneside, Ont.

BERKSHIRES

AND LARGE YORKSHIRES

A SPECIALTY.

We are now prepared to book orders for spring delivery pigs of the above breeds. Also for sale a few fall pigs, Ayrshire, Cattle, Shropshire and Southdown Sheep. Call or write for what you want.
287-y

W. H. & C. H. McNISH, Lyn, Ont.

THE - GLEN - STOCK - FARM

SCOTCH SHORTHORNS,

SHIRE HORSES,

Improved Large (White) Yorkshire Pigs.

DAISY (IMP) [22]

First importation of Yorkshires specially selected from the herd of F. Walker-Jones, Eng., whose herd won upwards of \$10,000 in prizes in 3 years. Second importation shortly expected. Orders now booked for young registered pigs. Shorthorns and Shire horses for sale.

GREEN BROS.,
INBERKIP, Oxford Co., Ont.
292-y-OM

IMPROVED LARGE YORKSHIRE PIGS

FOR SALE

of both sexes and in no way related.

Bred from Sanders Spencer's and N. T. Hines' stock, and from aged sires and dams. Crated on cars at Huntingdon, G. T. R., at \$5 each.

Also aged sow Lady Bird, No. 45, registered, and due to farrow August 29th.

July, August, September and October Litters.

Address **Andrew Gilmour,**
296-a-OM Oakdale Farm, HUNTINGDON, QUE.

THE GREAT

CENTRAL - FAIR

- WILL BE HELD IN -

HAMILTON,

- ON -

Monday, Tuesday, Wednesday, Thursday and Friday,
Sept. 22, 23, 24, 25 and 26, 1890.

ONE OF THE LARGEST AND BEST EXHIBITIONS IN THE DOMINION OF CANADA.

Roadster, Draught, Pacer, Carriage & Trotter form a most magnificent

Horse Exhibit of the very best breeds in the country.

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IT IS GOOD FOR \$2.99. SEND IT AND A 3
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now ready, and will be mailed free upon application. Among other desirable varieties, we are offering this season the new
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a promising Winter Wheat of Canadian origin. Prices and full description upon application. In comparing prices, remember that all our samples are thoroughly re-cleaned with improved machinery.

Clover and Grass Seeds
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Is prepared by T. H. BUTLER, for twelve years manager of the Thorley Company of Hamilton, and is guaranteed equal to the best Thorley Food ever made, and superior to the Meyers, Empire, Manhattan or any other food.
No antimony or any other poison used in it. Give it a fair trial and you will never buy any other. Ask for the Canadian Horse and Cattle Food of Hamilton and see that you get it.
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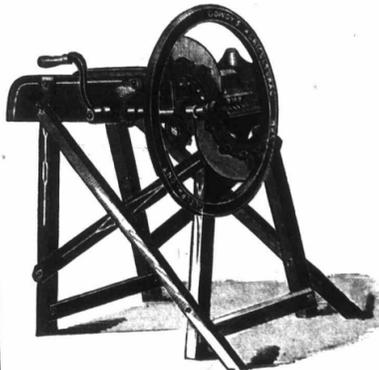


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SHROPSHIRE SHEEP

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COLLIE DOGS.

A choice lot of Ewes bred by Mr. David Buttar, Couper, Angus, Scotland; two Shear Ewes, imported last season, and their produce. Also Collie Dogs just imported.

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NEW
FALL WHEATS

FOR 1890

EARLY RED CLAWSON. CANADIAN VELVET CHAFF.

JONES' WINTER FYFE GOLDEN CROSS.

VOLUNTEER.

AND ALL THE LEADING SORTS

Catalogue now ready and mailed free to all who apply. Address,

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New Fall Wheat

"THE CANADIAN VELVET CHAFF."

(By far the most promising new variety.)

The above new variety of Fall Wheat was raised by J. B. Stone, a well-known farmer in the county of Durham, Ontario. Some years ago he observed growing in a field of Martin's Amber Wheat a single stool so distinct in its character and so promising in appearance and fine milling properties, that he has decided to offer it in quantity to the agricultural community. For full description and other particulars we refer you to printed circulars, which will be mailed to any address on application.

Prices, for one bushel, \$3.75; for two bushels and over, \$3.50 per bushel; per half bushel, \$2.00; per peck, \$1.25. The above prices do not include bags, for which 25c. each are charged. Will send by mail 1 lb. for 25c. and 5 lbs. for \$1.00, postage pre-paid. Early orders are requested.

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Two men and one horse only are required to operate this machine. Will pull green grubs and stumps ranging from three to twenty four inches in diameter, and in many cases much larger, and any size with a little help. County rights for sale.

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LANDS FOR SALE
— BY THE —
Canada Company

WILD LANDS. IMPROVED FARMS.

TITLE GUARANTEED

The Canada Company have still a large number of lots to dispose of at reasonable prices, (from \$4 to \$30 per acre, according to quality and location).

In Western Ontario.—In the Counties of Essex, Lambton and Perth; also in the Township of Tilbury East, in the county of Kent; and in the Township of Aldboro, in the County of Elgin.

In Northern Ontario.—In the County of Simcoe; also in the Township of Euphrasia, County of Grey; and in the Township of Amaranth, in the County of Dufferin.

In Central Ontario.—In the Counties of Peterborough and Hastings; and in the Township of Sheffield, in the County of Addington.

In Eastern Ontario.—In the counties of Lanark, Carleton, Prescott, and Russell, besides many lots scattered through the older sections of the province.

These lots are, generally speaking, within a short distance of a railway, and are easily accessible by good travelled roads from a market town. Many of the farms have from fifteen to twenty-five acres of clearing fenced ready for cultivation.

The Climate of Western Ontario.—The winters being comparatively mild and short, and the summers correspondingly long, is specially adapted to the successful cultivation of corn, grapes, peaches and all kinds of fruit, for which this section is rapidly becoming noted.

To actual settlers the most liberal terms of payment are offered, only a small payment being required down, the balance payable in seven or ten years, with interest chargeable as a rental at the rate of 5 per cent. per annum.

Full particulars, with complete lists of vacant lands, and prices of any lots selected by applicants, will be furnished on application to the

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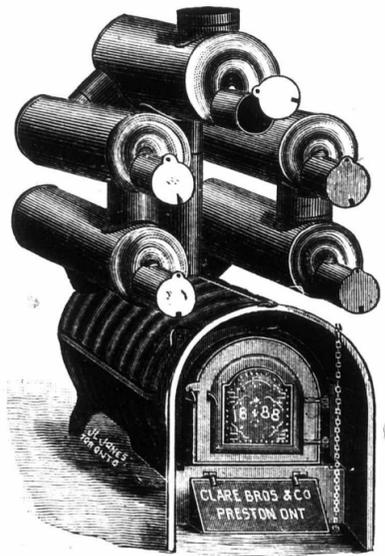
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COAL & WOOD HOT-AIR FURNACES

10 STYLES. 35 SIZES.



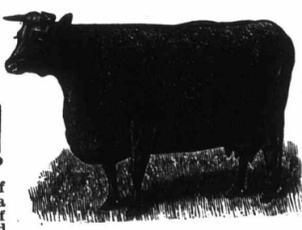
All our Furnaces are so constructed that they can easily be cleaned out at any time, and they are, undoubtedly, the best in the market. Estimates cheerfully given, and Illustrated Catalogue sent free on application. Mention this paper. 295-b-O

DR. CARVER 7369, Rideau Stock Farm PALM LEAF 7634,
 two-year-old record 2.40.
 By New York Dictator, (trial) 2.25½.
 Dam—Kitty Morgan.
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**Standard-bred Trotting Horses,
 Registered Holstein (H.F.H.B.)
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 YOUNG STOCK FOR SALE.
 F. A. Folger, Box 579. Send for catalogue.

BY PANCOAST 1439.
 Foaled 1887.
 Sire of Patron, 2.14¼.
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 Dam of Chanter, 2.20¾.
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 BREEDERS OF SCOTCH-BRED
Shorthorn Cattle!



With Campbell, of Kinellar, bull, imp. Albert Victor, at the head of the herd; also several imp. Urys, also bred at Kinellar, and a daughter, and grand daughters of the sweepstakes cow Rose of Strathallan 2nd, and other useful sorts. A nice lot now on hand for sale. 233-y-OM

Imported Clydesdale Stallions and Mares for Sale.

Highest Prize Winners in the Leading Shows of Scotland and Canada,
 AND THE GET OF FAMOUS SIRE
 Such as Lord Erskine, Darnley, Old Times, McCammon, Prince Lawrence, Lord Hopton, Bold Magee, Sir Wyndham, Good Hope and Fireaway.
 Prices Reasonable. Catalogues Furnished on Application.



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 BOWMANVILLE, ONT.
 Bowmanville is on the line of the G. T. R., 40 miles east of Toronto and 294 west of Montreal. 233-y

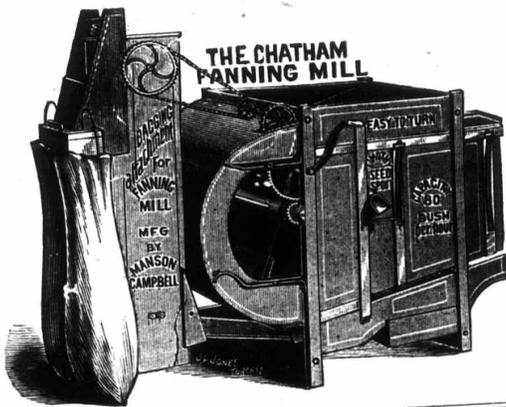


IMPORTED AND REGISTERED
CLYDESDALE AND HACKNEY
 STALLIONS AND MARES
 Constantly on hand, and For Sale at Reasonable Terms.

Our last importations comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (673). Also a few choice SHETLAND PONIES. Correspondence solicited, and visitors always welcome.

GRAHAM BROTHERS
 Twenty-five miles east of Toronto, on the C. P. R. 233-y CLAREMONT, ONT.

THE CHATHAM FANNING MILL
 FOR 1890,



Has some valuable improvements, and the following sales show that it still takes the lead in all parts of Canada. An order has been booked this month for sixty-five mills and baggers to go to London, England.

2,000 MILLS SOLD IN 1886
 2,300 " " 1887
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 3,600 Mills and 1,500 Bagging Attachments sold in 1889.

More than three times as many as have been sold by any other factory in Canada.

The Bagger is now run with chain belt that will not slip.
 My new Patented Attachment for taking clay out of beans works first-class. For full particulars apply to

Manson Campbell,
 233-a-OM CHATHAM, ONT.

ADVERTISE IN THE ADVOCATE.

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate

Messrs. Elliott & McLeod, of this city, who recently purchased the entire stock of Wyandotts, Plymouth Rocks and Leghorns from Wm. Moore, of this city, are fitting a number of birds for the exhibitions.

Rock Bailey, Union, Ont., reports that he has got his flock of Merinos all registered in the Michigan Merino Sheep Breeders' Register. He has sold to J. W. Hannan, of Rushville, Indiana, five rams and three ewes for show purposes for the fall fairs. He also sold to Andrew Elliott, of Galt, Ont., 85 breeding ewes and one ram. Both his Jerseys and sheep are doing well.

Mr. J. C. Snell, Edmonton, reports a steady demand for Berkshires, and has made shipments in the last two months to fill orders from Quebec, Manitoba and British Columbia, and to the following states: Tennessee, Kentucky, Indiana, Missouri and Texas. A new importation of select Berkshires, from the herd of Mr. Benjafield and other leading breeders, is expected to arrive about 1st August.

John Jackson, Abingdon, Ont., writes us that his show sheep this year are as good, if not the best he ever had. Lambs have done uncommonly well. Our this year's importation left Liverpool on the 11th July, and should be here before the end of the month. In this lot are included the shearing ewes, bred and exhibited by J. J. Colman, that won first prize at the Royal Show at Plymouth.

Messrs. John Morgan & Sons, Kirwood, Ont., write that they have lately sold to Mr. J. W. Hunt, of Ashton, Illinois, the two Shorthorn heifers, Roy Queen 2nd and Silver Flower. Both of these heifers appeared in the illustration in the May issue of the FARMER'S ADVOCATE, which they state was instrumental in making the sale. Mr. Hunt has also purchased of Mr. Currie, Everton, Ont., the bull Silver Star, also bred by this firm. He was the winner of the silver medal at the late Provincial held at London.

Mr. Wm. Duthie, of Aberdeenshire, Scotland, the celebrated Shorthorn cattle raiser, in a letter of recent date, says:—"My Shorthorns continue to do well. You will see by the reports of the principal English shows this year that two bulls, Challenge Cup amongst the old, and Count Lavender in the yearling class, both bred by me, have in every case been first in their respective classes. I have between sixty and seventy calves this year; over forty bulls, and they are a promising lot."

J. E. Brethour, Oak Lodge, Burford, reports recent sales of Large White Yorkshire pigs. E. W. Martin, Welcome P. O., one boar; James Little, Trenton P. O., one boar and two sows; James C. Wood, Florence P. O., one boar and sow; William Thirlwall, Kentville, Nova Scotia, one boar and two sows. My recent importations of Yorkshires arrived in safety and I am very much pleased with them. The boar Holywell Emigrant was bred by Mr. Sanders Spencer, Holywell Manor, St. Ives, England. I think he is one of the best Yorkshire boars that I have yet seen. The sows are soon due to farrow, one of them is in pig to the champion boar of England. The orders are coming in as fast as we can produce the stock. I find my "ad." in your paper very satisfactory in reaching intending purchasers. One of my imported Yorkshire sows recently produced a litter of seventeen pigs. This sow is not two years old until November and has farrowed a total of forty-one pigs. I think this record is hard to beat.

In a letter recently received from Bollert Bros., of Cassel, Ont., they say that their Holsteins are doing very nicely this summer, and are booming in spite of all the bitter opposition and prejudice they have to undergo. They recently sold a fine yearling bull to Mr. J. T. McNamara, Leadbury. This is the first Holstein in that section; also a yearling bull to Mr. S. Stephens, Waubano (Mr. Stephens introduced Holsteins in his section in 1886 and has found them a grand success). Mr. A. E. Plumer, of Waterville, N. B., took a grand pair of yearling heifers; Mr. J. Wilson, of Jamestown, one of the finest heifer calves we ever owned, and Mr. A. Bald, of Sebringville, the three-year-old cow Emma J. Neptune. This we believe to be one of the finest, if not the finest, cow of her age in this country. Last year as a two-year-old and with her first calf she gave 48¼ pounds of milk in a day, and for 60 days averaged out with the rest of the herd. We have lately made an importation consisting of seven head, which will be released from quarantine in September next. We will make some comments on them later on.

ENGLISH PEDIGREE LIVE STOCK.

Shire Horses, Shorthorn and Hereford Cattle, Shropshire, Dorset, Hampshire and other Sheep, Berkshire and Yorkshire Pigs, etc.

E. G. PREECE,
 LIVE STOCK AGENT,
 SHREWSBURY, ENGLAND,

has choice registered stock for sale at moderate prices, from the best studs, herds and flocks. Foreign buyers assisted in the purchase and shipment of stock. Choice animals of various breeds bought on commission. Special low freights. Highest references. Terms for buying 2½ per cent. All importers should communicate. 236-j

STOCK GOSSIP.

Mr. J. C. Snell, Edmonton, Ont., writes that the demand for sheep the last two months has been brisk, and sales from his flock of Cotswolds have been made to the following States: Maine, Pennsylvania, Ohio, Indiana, Kentucky, Wisconsin and Missouri. Sheep are said by American farmers to be the most profitable stock to handle at the present time and that the outlook is bright. Mr. Snell has an importation of select Cotswolds coming out which he expects will arrive about August 1st.

James Tolton writes:—On the 24th inst. my son arrived home from England per S. S. Lake Superior. He has brought with him forty-four Oxford Down sheep, one shearing ram, three ram lambs, and forty shearing ewes. The shearing ram and three of the ewes were bred by A. Brassey Esq., and were awarded in their respective classes first prize at the Royal Show held at Plymouth, and they were first at the Oxford Show, also took first place at the same show against all breeds. He also has the second prize pen of shearings at the Royal and Oxford Shows, bred by Geo. Adams, Royal Prize Farm, Faingdon, Berks, and from the same gentleman thirty breeding ewes.

Mr. T. W. Evans, of Yelverton, Manvers, has just landed his annual importation at Topgallant Farm. Fortunately he experienced this year a very smooth passage, and all the animals are in as good condition as could be desired. They comprise five Clyde stallions, two fine Clyde Topgallant fillies, a band of fine Highland ponies and one beautiful sweepstakes Welsh stallion pony. Of the Clydesdale entries one grand four-year-old, Royal Salute, by Darnley, has been first drawn in the "shortlect" at every show in Scotland where exhibited. Two fine two-year-olds are grandsons of Darnley. A fine three-year-old by Harold, and a very promising one-year-old by Darley's great son Macgregor.

IMPORTANT SHIPMENTS OF SHROPSHIRE SHEEP FROM ENGLAND.—Mr. E. Goodwin Preece, live stock agent and exporter, Shrewsbury, Eng., has just shipped, per S. S. Dominion, sailing from Liverpool on July 12th, 300 head of Shropshire rams, ewes and lambs specially selected from the best English flocks, with his assistance, by Messrs. C. S. Blizham, of Vernon, Mich., and Nicholls, of Cresco, Iowa, which were shipped under Mr. Goodwin Preece's personal superintendence at Liverpool. He has also been buying with Mr. Robert Miller, jr., for Messrs. Miller & Sons, of Brougham, Ont., 200 very choice Shropshires, which sail on July 25th per S. S. Toronto, and has a commission for 380 head for Major Elliott Gray, of Mich., who is in England at present selecting these Shropshires, with Mr. Goodwin Preece's assistance, for a well-known, wealthy American stock breeder. The popular Shropshire is gaining daily in public favor.

CONSUMPTION,

IN its first stages, can be successfully checked by the prompt use of Ayer's Cherry Pectoral. Even in the later periods of that disease, the cough is wonderfully relieved by this medicine.

"I have used Ayer's Cherry Pectoral with the best effect in my practice. This wonderful preparation once saved my life. I had a constant cough, night sweats, was greatly reduced in flesh, and given up by my physician. One bottle and a half of the Pectoral cured me."—A. J. Eidson, M. D., Middleton, Tennessee.

"Several years ago I was severely ill. The doctors said I was in consumption, and that they could do nothing for me, but advised me, as a last resort, to try Ayer's Cherry Pectoral. After taking this medicine two or three months I was cured, and my health remains good to the present day."—James Birchard, Darien, Conn.

"Several years ago, on a passage home from California, by water, I contracted so severe a cold that for some days I was confined to my state-room, and a physician on board considered my life in danger. Happening to have a bottle of Ayer's Cherry Pectoral, I used it freely, and my lungs were soon restored to a healthy condition. Since then I have invariably recommended this preparation."—J. B. Chandler, Junction, Va.

Ayer's Cherry Pectoral,

PREPARED BY

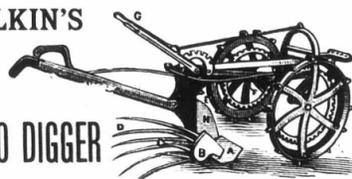
Dr. J. C. Ayer & Co., Lowell, Mass.

Sold by all Druggists. Price \$1; six bottles, \$5.

292 y-0

WILKIN'S

POTATO DIGGER



295-b

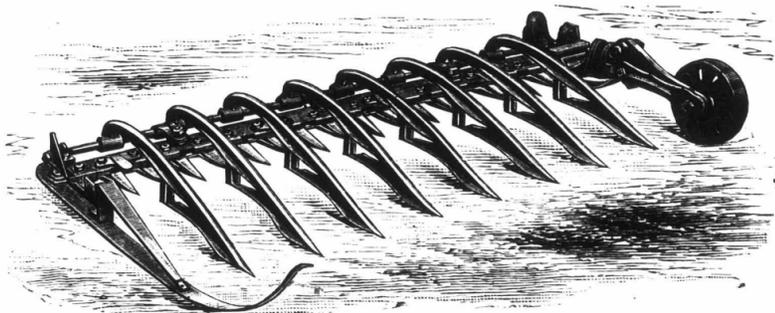
Agents wanted.

ALEX. WILKIN, Manufacturer, London P. O. Ont.

THE BEST IN THE MARKET,

STRONG, SIMPLE AND COMPLETE. Shovel A raises the drill or hill. Mould-board B and Standard H casts off the outside. Prongs C and D move right and left alternately, with a drop of six inches from C to D. The potatoes are shaken to the surface by the quick action of the Double Action Prongs. Pitman F operates prongs; is fifteen inches above A; it cannot choke. Knife E cuts all tops and weeds that collect on Standard H. Send for circular, &c.

THE GENUINE TOLTON PEA HARVESTER.



THE MONARCH OF THE PEA FIELD.

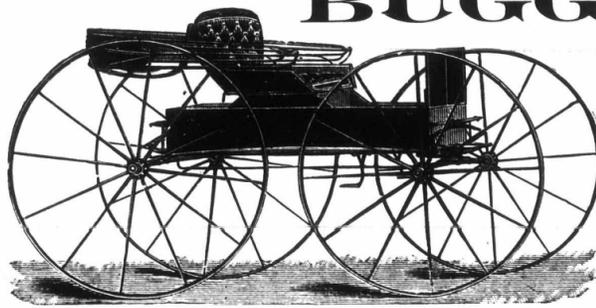
The most successful harvester manufactured, and the greatest labor-saving machine in use harvesting from eight to ten acres per day in the most complete manner. It is indorsed by all first-class farmers who have this Harvester, to be as useful in the pea field as the mower is in the hay field. It can be attached to any mower bar, and has the only Vertically Acting Lifter, having a practically successful movement to suit the unevenness of the land, of which we are the Sole Manufacturers and Patentees.

Send for circular with prices and instruction, and order early and secure one.

296-a-0

TOLTON BROS., Guelph, Ont.

BUGGIES



We make a specialty of PIANO BOX TOP BUGGIES specially adapted for farmers' use.

Our output for 1888 was over 1000.

Agricultural agents will find it to their advantage to send for Catalogue and Price List. All work is guaranteed.

B. J. NASH & CO.,

We sell only to the trade.

294-e

111 YORK ST., LONDON, ONT.

BAIN WAGON CO.'S

FARM TRUCK



THIS cut represents the most convenient Wagon ever put on a farm, because it is suitable for all kind of work, and always ready, no changes being necessary.

THIS WAGON was invented and first introduced in Michigan, U. S., and is now very extensively used by leading farmers in the United States.

AND EVERY WAGON made and sold by us in Canada is giving entire satisfaction. For further particulars and prices.

288-1f

Address BAIN WAGON CO., Woodstock, Ont.

OUR NEW 70 DEGREE BUCKET CARRIER

THE CELEBRATED ROSS SPECIAL ENSILAGE AND FODDER CUTTERS, CARRIERS and POWERS

Five New Lines of Carriers adapted to any Angle or Place.

The FINEST and LARGEST LINE OF FODDER CUTTING MACHINERY IN THE WORLD

Better Made, Stronger, More Durable, and will cut more with less power than any other Cutter manufactured. Latest Catalogue **Y**, and our new standard 150 page Book **Y** on Ensilage and Silos sent free on application. Address

THE E. W. ROSS CO.
MANUFACTURERS,
SPRINGFIELD, OHIO, U. S. A.
FROST & WOOD, GEN'L AGENTS,
SMITH'S FALLS, ONT., AND QUEBEC, QUE.



STOCK GOSSIP.

Mr. Andrew Gilmore, Huntingdon, Que., writes as follows:—I am purchasing a boar and two sows, Yorkshire bred, by Mr. Walker-Jones, England, and as I have at present stock from Messrs. Sanders Spencer and D. N. T. Hines, England, can supply pigs not akin. I might further mention that my sales the past season were made chiefly through my advertisement in the FARMER'S ADVOCATE, and would advise any stock breeder to place his advertisement in your paper. Annexed is a list of our spring sales of Yorkshires: Boar and two sows to W. C. Huff, Mountain View, Ont.; boar and sow to G. Blzgar, Huntingdon, Que.; boar to J. T. Gillis, Kelso, Que.; boar to D. McDewar, Carrillon, Que.; boar and two sows to S. J. Osgood, Cookshire, Que.; boar and three sows to R. G. Murphy, Elgin, Ont.; two sows to T. G. Brameld, Oakville, Ont.; boar to D. M. Fuller, Cowansville, Que.; two boars and four sows to Model Farm, New Brunswick; boar and sow to Alex. Hume, Burnbrae, Ont.; boar and sow to George A. Hyde, Shakespeare, Ont.; boar to M. H. Standish, Warden, Que.; boar and three sows to James Little, Trenton, Ont.; boar to Norman Masson, Hoards, Ont.; boar and two sows to E. W. Brooks, Glen Ross, Ont.; boar and two sows to E. Graham, Elmside, Que.; two boars and two sows to C. Purser, Chatham, Ont.; four sows to Rathburn & Blakie, Deseronto, Ont.; boar and sow to Sandy Matchett, Peterborough, Ont.; boar to George Swinton, Peterborough, Ont.; sow to James Chambers, Peterborough, Ont.; boar and sow to George Yerex, Elverton, Que.; boar and sow to W. J. McGerrigle, Ormstown, Que.; boar and two sows to W. C. Wilson, East Oro, Ont.; boar and two sows to W. Kough, Owen Sound, Ont.; sow to John Watson, Dresden, Ont.; boar and sow to C. M. Simpson, Almonte, Ont.; boar to James A. Thompson, Durham, N. S.; boar and sow to Duncan Munro, Bay View, N. S.; two sows to I. H. Snary, Croton, Ont.; sow to Cecil French, Truro, N. S.; boar to John McIntosh, Athelstan, Que.

Dairymen, Attention!



Thomson's Milk Aerator!

PATENTED 1888.

EVERY CHEESEMAKER Knows the necessity of the thorough aeration of milk. This Aerator works automatically, strains and aerates the milk on the milk stand or in the wagon or any other place required. When milking is finished the milk is in the finest condition for making a first-class article of cheese. Endorsed by the best dairymen in the Dominion. All information, with circulars, testimonials, etc., sent free on application to

ALEX. THOMSON, General Agent, Gaintown, Ont.
Right for sale for Manitoba and the Northwest. Agents wanted in every county in the Dominion. 294-d-OM

NOTICES.

Our subscribers will find in this issue an advertisement of Mr. J. Barton's stump and grub extractor. From what we have been able to ascertain concerning it, we believe it to be a first-class machine. For pulling large stumps there is a derrick used which gives increased power.

We have pleasure in directing attention to Mr. S. S. Kimball's advertisement of safes and stump and stone lifter. It would be to the interest of many of our readers if they would invest in one of the above safes. Every farmer has valuables in his house which should be in safe keeping, as fires are more apt to start when you are least prepared for them. The stump and stone lifter manufactured by him is also spoken highly of.

We draw attention to the new advertisement in another column of Southdown sheep, of Mr. David H. Dale, Glendale, Ont., a few miles south of London. Mr. Dale has lately made quite a large importation which he has selected in person, consisting of a choice lot of shearing ewes bred by Mr. J. J. Colman M. P., also another lot of ewes were purchased of Mr. George Jonas, and a third lot bred by Mr. Garrett Taylor. To mate these a ram selected at a long price was purchased of Mr. W. Toop. Mr. Dale has a grand flock bred by himself, which for really good, robust, large sheep with quality are hard to equal, a number of these are now for sale.

THE TOLTON PEA HARVESTER—REPORTS FROM THE FIELD. Springville, New York, U.S., 18th July, Messrs. Tolton Bros., Guelph, Ont.

Gentlemen,—We have tried your pea harvesters in both the short and long vine green peas and are pleased to say that they are doing their work well and giving us the best of satisfaction.

Yours truly,
THE BALTIMORE CANNING CO.
Prince Edward County, Ont., 15th July, 1890.
Messrs. Tolton Bros., Guelph, Ont.
Gentlemen,—We tried one pea harvester that we purchased from you this season and are pleased to say that it is doing excellent work and giving us the best of satisfaction. Our neighbors who have seen it work are delighted with it also.
Yours truly,
T. RAYNOR & Co.

MICA ROOFING

USE Mica Roofing

On all your Buildings.
It is Cheaper than Shingles.
Water Proof and Fire Proof.



USE MICA PAINT

To Repair Leaky Roofs.
Shingle, Iron or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of 108 square feet each, 36 feet long by 3 feet wide, and costs 24c. per square foot, thus affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing to sell about 75c. per square cheaper than shingles. Special terms to dealers who buy our Mica Roofing to sell again. Orders and correspondence answered promptly.

HAMILTON MICA ROOFING CO.

292-f-OM

Office—108 James Street North, HAMILTON, ONT.

MANITOBA LANDS FOR SALE BY D. A. ROSS & CO.

ESTABLISHED 1877.

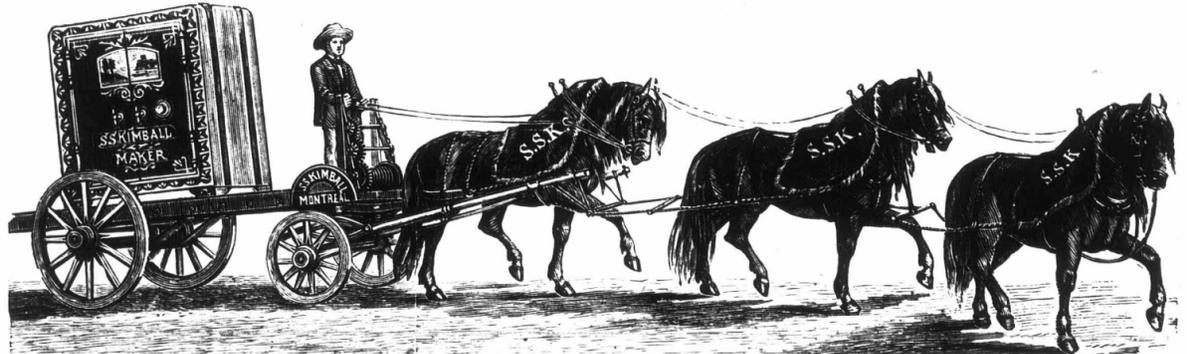
We have over 1,000,000 acres for sale in the best districts in the Province. 200 improved farms for sale. We are sole agents for the sale of lands of four loan companies, and consequently can give you some cheap farms and easy terms of payment. We have been inspecting lands for loan companies and private individuals for the past twelve years and know every farm within a radius of 50 miles around Winnipeg. Parties buying from us get the benefit of our experience. Send for list of land or any other information. Large blocks of land a specialty. References—British-Canadian Loan Co., Canada Landed Credit Co., Freehold Loan & Savings Co. (Ltd.), Manitoba & North-west Loan Co.

D. A. ROSS & CO., 2 William St., Winnipeg.

NEW FALL WHEATS		... PRICES ...
CANADIAN VELVET CHAFF, = = = = =	11b. 25c.; 5lbs. \$1.00.	By Mail Postpaid. Pk. \$1.25; ½ Bh. \$2.00; 1Bh. \$3.75 2 Bhs. or over at \$3.50 per Bh.
GOLDEN CROSS, = = = = =	11b. 20c.; 5lbs. 75c.	½ Bh. \$1.00; Bh. \$1.75. 5 Bushels or over at \$1.50.
AMERICAN BRONZE, = = = = =	11b. 25c.; 5lbs. \$1.00.	Pk. \$2; ½ Bh. \$3.50; Bh. \$6
JONES' WINTER FYFE, =	11b. 50c.; 3lbs. \$1.25.	Pk. \$3.50; ½ Bh. \$6.25; Bh. \$12
EARLY RED CLAWSON, =	11b. 25c.; 5lbs. \$1.00.	Pk. \$1.25; ½ Bh. \$2.25; Bh. \$4

Send for our Fall Wheat Circular, giving full description and testimonials from growers. **THE STEEL BROS. CO., Toronto.** Bags, in all cases, 25c. each, extra. 296-a

Kimball's CHAMPION Fire and Burglar-Proof Safes



Thirteen Sizes, from the largest Bankers to a very small House Safe. My Farmers Safe, 16 in. high, 14 in. wide and 14 in. deep, inside measure, with best Combination Lock of 1,000,000 Changes, is the Cheapest and Best Safe made. Send for Catalogue.

S. S. KIMBALL, P. O. Box 945; Office, 577 Craig-St., Montreal.

P.S.—The Editor of this paper bought one of my medium-sized Safes several years ago, and now I have just placed in his office one of my largest ones. 296-OM

WESTERN FAIR

BEST OF CANADIAN FAIRS.

LONDON, - CANADA,

SEPT. 18 to 27, 1890--Nine Great Days in London.

LIVE STOCK, AGRICULTURAL, INDUSTRIAL AND ART EXHIBITION.

THE BEST HORSES AND CATTLE IN CANADA

are to be seen at this Fair, Sept. 22nd to 27th.

SPECIAL EXHIBITS

from Ontario, Manitoba, British Columbia and North-west.

The Celebrated Indian Exhibit.

14 Southern States!

Grand Display of more than one thousand different exhibits, including cotton in full bloom, figs as they grow, &c., carpets made from the needles of pine, minerals, woods, grasses, grains, fruits, vegetables, medicinal plants, &c., &c., taking up many feet of space.

We promise our visitors a rare treat. London is the only place in Canada the Southern States exhibit.



MACHINERY IN MOTION!

The main building has been supplied with shafting, and an exceedingly interesting and instructive display will be made by exhibitors manufacturing their goods in view of the public.

A Number of Bands

Will be in attendance discoursing music every hour.

ATTRACTIONS:

FAMOUS - WILD - WEST - SHOW

COMPRISING,

Bucking Horses, Cowboy Races, Lasso Throwing, Shooting and Picking-up Objects at Flying Speed, Cowboy Duels, Fancy Shooting, Attack of Emigrants' Wagon by the Indians, and their Rescue by the Cowboys.

GREAT BALLOON RACES

—AND—

PARACHUTE LEAPS

made by two of America's best Aeronauts. Dropping 6000 feet through space.

MAGNIFICENT FIREWORKS

Several Evenings of the Fair.

For Prize Lists and information, address

CAPT. A. W. PORTE, President.

296-OM

THOS. A. BROWNE, Secretary.