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THE FARMER'S ADVOCATE & HOME MAGAZINE

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Editorial.

The World's Columbian Exposition.

Mr. N. Awrey, M.P.P., Ontario's Commissioner to the Columbian Exposition, has recently issued the following letter, copies of which have been sent to many of the leading fine stock breeders residing in Ontario:—

Toronto, May 1st, 1892.
DEAR SIR,—I have taken the liberty of forwarding you a blank form for preliminary application for space at the World's Columbian Exposition, 1893. On account of the limited space at the disposal of the Commissioner for exhibits from this province, all stock before being sent will have to pass inspection by a properly appointed officer from this department. I would call your attention to the fact that the cost of transportation, maintenance, and care of all animals will be defrayed by the Governments of the Dominion and province of Ontario. It will not be necessary for exhibitors to send herdsmen with their stock, as the Commissioners for Ontario will provide professional herdsmen, who will have trained men under them, who are fully competent to care for stock. All animals required to remain in quarantine will be maintained and cared for at the expense of the Government. Trusting that you, as one of the leading breeders of the province, will feel it your duty to do all in your power to make the exhibition of stock such a one as will be a credit to our country. I would ask you to fill up the accompanying entry form with the names of all animals you would be willing to exhibit, and return it at as early a date as possible to Henry Wade, Esq., Secretary of the Ontario Commission, corner Queen and Yonge Streets, Toronto.

Any of our readers resident in Ontario who have not received a copy of this letter, accompanied by the necessary application forms, will be supplied with the same by applying to Mr. Henry Wade, by letter or otherwise. The Commissioner earnestly invites the hearty co-operation of all classes in Ontario, but especially the farmers and breeders. There are some persons foolish enough to suppose, or say they suppose, that in this matter the various governments will each give a preference to their political friends. We are in a position to state that nothing so foolish or suicidal to the best interests of Canada will be for a moment tolerated, either by Mr. Awrey or Professor Saunders. We would like to hear from Quebec and the other provinces by the sea. What are you doing in this matter, gentlemen?

Brandon Summer Fair.

Active preparations are in progress for the Summer Fair of the Brandon Agricultural Society to be held on their grounds July 19th and 20th. Several new features have been introduced, and a considerable amount is offered in special prizes, in addition to upwards of \$2,000 offered by the Society in the various classes. Special attention will also be given to the poultry exhibits, which will be under the superintendence of the Brandon Poultry Association. A large increase of the number of entries is anticipated in this department. The prize list speaks for itself. Write to the Secretary for a copy. The indications are that the fair this year will surpass any previously held, both in the number of entries and in the quality and excellence of the exhibits. A grand display of live stock in all the classes is looked for, both of imported and home-bred animals.

C. P. R. Extension.

The extension of several lines of the Canadian Pacific Railway will be continued vigorously during the present season in south-western Manitoba, and into the Territories, which bodes well for that section of the province. The Souris branch, completed last season as far as Oxbow, is being rushed through to the coal fields in southern Assiniboia; the connection between the Deloraine branch westward to Napinka on the Souris branch is to be made, and the Glenboro line, last season run to Nesbitt, will be completed to Souris, and a further branch westward from Menteith to the well-settled Pipestone district is contemplated. It is also announced that the company will begin grading an important line from the southern Assiniboia coal fields, before mentioned, away to the main line at Regina or Moosejaw, thus opening up a large area of new territory, and another line from Fort McLeod to the Crow's Nest Pass.

C. P. R. Lands Selling Fast

Mr. L. A. Hamilton, C. P. R. Land Commissioner, Winnipeg, reports continued and unprecedented sales of farm lands throughout the Northwest. Greatly encouraged by the remarkable success of the auction sales of Edmonton lands at that place on May 3rd, he has arranged for another sale on Tuesday, July 5th. Purchasers will receive a refund of travelling expenses to the sale, by a deduction from first payment. For full particulars write the Land Commissioner, Mr. L. A. Hamilton, Winnipeg.

The Toronto Industrial—Canada's Great Fair, 1892.

At last the perseverance of the directors of the Toronto Industrial Exhibition Association, in their efforts to procure more land for the enlargement of their exhibition grounds, has resulted in success, and the long sought relief has been obtained by the acquisition of the land to the east of the present grounds, which has for a long time been used as a rifle range. This will add over sixty acres to the present grounds, and will nearly double them in size. A new half-mile track will be at once constructed on the new land, and a new grand stand capable of seating fifteen thousand persons will be erected. New stables and new cattle sheds will be erected as early as possible, but whether the latter will be erected in time for this year's exhibition, which is to be held from the 5th to the 17th of September, has not yet been decided. It is certain, however, now that the much desired additional land has been secured, that the Industrial Association will spare no expense in providing the most modern and most improved buildings possible. The grand stand will be constructed on the plan of the best stands on this continent, which are supposed to be those at Morris Park and Monmouth Park, New Jersey. The estimated cost of the proposed improvements is nearly \$150,000.

The revision of the prize list for this year's fair has been completed, and will be ready for distribution in a few days. Whenever occasion arises, or the interests of the live stock breeders require it, the directors of this Association are always ready to add new classes to the list and to increase the prizes in those already there. This is fully evidenced by the fact that over \$2,000 has been added to the prize list this year, making the total now offered at the Toronto fair about \$30,000. Of this amount more than three-fourths is for live stock, poultry, agricultural, horticultural and dairy products, or in other words, goes direct to the breeder or farmer. The additions this year to the horse department amount to \$1,160, being a full class for Hackneys, the addition of fourth and fifth prizes for roadsters and carriage horses in the sections in which there is a large competition, a fourth prize in each section for saddle horses, fourth prizes in the first three sections of the Clydesdale class, and additional prizes for the jumping contests. A special prize of \$175 is also added for the best heavy draught or agricultural team. The prizes for stallions in the agricultural class have been struck out. In the cattle classes \$500 has been added to the Galloway prize to make them equal to the Herefords and Friesians, \$91 to the Jerseys to put them on an equality with the Holsteins and Ayrshires, \$25 to Durham, \$21 to Ayrshires and \$16 to Holsteins for fourth prizes in some of the sections. The sheep classes have received an addition of \$150, being proportionately distributed through all the principal classes, and also for an advance on the horned sheep. In the swine department the class for Essex has been struck out, and that for Suffolks reduced on account of lack of competition, but the prizes taken off these have been added to the other classes in the same department, and a full class has been added for Tamworths. The poultry classes received an

addition of \$104, being principally on breeding pens, and \$322 has been added to the prizes in the horticultural department, chiefly on collections of fruit and plants.

The American Shorthorn Breeders' Association give a special prize of \$150 for a butter test in the Durham class, and special prizes are also given by the Eastern Dairymen's Association, the Ontario Creameries' Association, the Beekeepers' Association, the American Shropshire Association, Leicester and Lincoln Breeders' Association, the American Berkshire Association, the Canadian Clydesdale Association, the Canadian Hackney Association, John Holderness, and many others. Altogether, the prize list for the Toronto fair this year will be a very liberal one, and it will, no doubt, as usual bring out the finest stock in the land. All entries in the stock department have to be made before the 13th of August, and for grain and roots before the 20th of August.

The following statement of the amount awarded in prizes and the amount received as gate money in 1891 by the three principal fairs in Canada, as taken from their annual report, may be of interest to our readers:—

AWARDED IN PRIZES, 1891.	
Toronto Industrial Fair.....	\$27,059.00
Montreal Exposition.....	15,375.50
Western Fair, London.....	8,924.34
GATE RECEIPTS AND GRAND STAND, 1891.	
Toronto Industrial Fair.....	\$64,000.25
Montreal Exposition.....	28,167.45
Western Fair, London.....	18,470.02

Western Fair London, September 15th to 24th, 1892—The Great Nine-Day Fair.

All is life and activity in the Western Fair offices. The committees are busily engaged in going over the prize list and arranging details for the coming great fair. The several committees are greatly pleased with the action taken by the Board of Directors in arranging their estimates so as to add about \$2,000 to last year's prize money. This step they felt was necessary to further encourage the farmers and breeders who go to a large expense annually to secure and prepare their stock and products, as nothing but the finest seed and breeding stock satisfy the present demands. Of the \$2,000 the live stock departments will receive about \$1,500. The balance will be divided among the agricultural, horticultural, dairy interests, etc. Third prizes have been added to the cattle classes where they had been omitted heretofore, and new sections have been placed in the sheep classes. In short, new sections have been added where considered necessary, and the already large prizes have been considerably increased. The principal alteration in the live stock department is the adding of a class for the Tamworth pigs which has of late been accepted as one of the leading breeds.

A large number of specials have been received, and among the donors are the Canadian Clydesdale Association, the American Shropshire Association, the American Berkshire Association, the Western Dairymen's Association, the Ontario Creameries' Association, the Ontario Beekeepers' Association, and several private individuals and firms.

The dairy exhibit of last year was the most successful ever seen in Canada, and the chairman, Mr. J. S. Pearce, has again secured the hearty co-operation of the manufacturers, which insures for the Western Fair even a better display of cheese and butter than heretofore.

The Association have thoroughly refitted their new poultry building, so that it is a credit to them, and pronounced by fanciers as second to none in the Dominion. This, together with the fact that \$100 has been added to the prizes in this department, replacing a 3rd prize in every section, is beyond a doubt sufficient to pack the building from end to end with the best poultry on the continent.

The Directors have decided to adopt the one judge system in all classes practicable, and have

received from the principal live stock associations a list of the names of men selected by them as good, reliable, competent judges; from the lists received most of the judges will be chosen. This should give the utmost satisfaction to the exhibitors, from the fact that they themselves had a voice in nominating these men. This will no doubt do away with the petty exhibitions of dissatisfaction sometimes noticeable after the awards have been made.

The beautifying of the grounds has not been lost sight of; roads are being laid out where desirable, and 500 maple and spruce trees are being planted. Other improvements are in contemplation. The Directors mean to keep up with the times in these matters. The Secretary, Mr. Thos. A. Browne, informs us that the horse stables are to receive all necessary repairs. He also states that the Prize List will be ready for distribution not later than the 1st of June. He will be pleased to mail one or more copies to any address on application. The features of the special attractions will be made known to our readers in due time, and it is quite certain they will be of the first order of merit. We fully expect the Western Fair of 1892 to surpass any of its predecessors.

Winnipeg Industrial Exhibition.

The prize list and programme of attractions for the Winnipeg Industrial Exhibition, July 25-29, announces no less than \$15,000 in prizes, special and regular. Of this sum \$2,500 is devoted to attractions, which include a programme of turf events, bicycle and other races, Rugby foot ball, gymnastic exhibitions, balloon ascensions and parachute descents, and other features, with band music galore. A grand lot of prizes are offered in the live stock, poultry, agricultural, and in fact in all the substantial departments of the fair. The display of horses, cattle, sheep, swine, and poultry promises to eclipse anything ever before brought together in the Prairie Province. Several eastern judges will be secured to award the trophies in the prize ring competitions. In horses, by the way, it might be mentioned, stallions of any age, Clydesdales, Shires, and Percherons (the three recorded draught breeds for which provision is made in the prize list), will meet in competition for a sweepstake silver medal offered by the FARMER'S ADVOCATE, which also offers another for the sweepstake pen of sheep (ram any age, two ewes any age and two ewe lambs) open to all pure breeds. The Provincial Minister of Agriculture, Hon. Thos. Greenway, supplements the silver medal by a cash prize of \$25, so that the sheep breeders should be forward in great force for the sweepstakes ring. The pen is made up the same as the pens in all the regular sections of the sheep departments. Last year the ADVOCATE medals went to dairy cattle, hence it is not inappropriate that they should go now to the encouragement of other classes. The dog show will this year be under the direct control of the Fair Association. In order to meet increasing demands for space, the Association is spending nearly \$11,000 in new buildings, extensions and improvements on the grounds. Among the larger items are \$1,500 for a new dairy building, \$750 for offices, \$1,000 for a carriage house, \$1,200 for horse stables, \$750 for cattle sheds, \$1,000 for dining hall, \$3,200 for wing to main building, and \$1,300 for general improvements. The Canadian Pacific, Northern Pacific, Manitoba and Northwestern, Great North West Central, and other railways carry all exhibits to and from the exhibition free from all points in Manitoba and the Territories, and low passenger rates are also quoted—in many cases under single first-class fare. All entries are to be in on or before July 14th. Write to the Secretary, Mr. J. K. Strachan, Winnipeg, for prize list containing full particulars. Send in your entries early. Large numbers of visitors from Eastern Canada are expected to visit the fair, as the C. P. R. proposes running a special excursion which will afford visitors an opportunity not only to see the exhibition, but the country and the growing grain crops.

Stock.

Chatty Letter from the States.

Too much cannot be said in condemnation of the habit of western breeders in using inferior bulls. The quality of a majority of the beef cattle at market is shameful, and yet good blood was never cheaper.

The distillery cattle feeders are holding back their cattle for better prices; so are many of the corn feeders.

Many of the big Texas cattle dealers if they make \$1 per head are well satisfied. Many of them pay 10 @ 20 per cent. for the use of money during a season.

Considering the great number of common horses being forced to market, the horse trade is very good. High time for those who intend to do something at the World's Fair to be "up and doing."

Current top prices: 1300 @ 1500 lb. steers, \$4.50; Texas steers, 1125 lbs., \$3.70; native heifers, 900 lbs., \$3.75; distillery steers, 1200 lbs., \$4; hogs, \$4.75; western woolled sheep, 116 lbs., \$6.15; lambs, \$7. Top prices a year ago: Native steers, 1370 lbs., \$6.10; Texas steers, 1066 lbs., \$4.80; native heifers, 947 lbs., \$5.65; distillery steers, 1267 lbs., \$5.75; Wyoming heifers, 1422 lbs., \$5.70; hogs, \$4.80; western sheep, \$6; lambs, \$7.25.

Spring lambs are being raised in the west more extensively than ever before. Holden & Brown, of Gallatin, Tenn., marketed 188 head of spring lambs averaging 59 lbs., which sold for \$8.

Live cattle exporters have made money this year, but the latest prices do not leave them much margin, best American steers making 11 cents against 14 cents a year ago; but they have been costing \$4.25 against \$5.50 a year ago.

The late floods all over the western country have stopped general farm work, but facilitated stock shipments, especially cattle, as the feed lots have been in bad shape.

Studs, Herds and Flocks.

SHORTHORNS AT MEADOWVALE.

For several years Messrs. S. J. Pierson & Son, of Meadowvale, have been found at the different Shorthorn sale rings, and it is evident from the class purchased by them that they intend to get in the front ranks as breeders of Shorthorn cattle. It was, therefore, no great surprise to find upon a recent visit so good a selection in their barns. The herd proper was started as early as 1879, when was purchased the cow Zee of the Rose, by Skipton tribe, and bred by John Snell's Sons, of Edmonton. From this cow a lot of good things have been produced, some of which are still retained in the herd. Among these is Zee 3rd, a wonderfully thick, massive cow that has been quite successful in the show ring. In 1882 the imported bull Roderick = 1291 = was placed in the herd, bred by Lord Polwarth, and belonging to his branch of the Brawath Bud tribe, and again in 1886 was purchased the Booth bull Sir Redmond. He was bred by Mr. Chas. Morgan, New Jersey, and was sired by the Warlaby bull Royal George, dam imp. Rosamond 3rd. The bull now at the head of the herd is Tofthills, imported by Messrs. J. & W. Russell, Richmond Hill, bred at Kinellar, of the Claret tribe. This is a large, thick-fleshed bull, and particularly smooth in finish. Cows and heifers principally of the Kinellar line of breeding have been purchased during the last two or three years, among which are imp. Mina Lass, by Gravesend, and Wimple of Halton, the latest purchase being the very thick, handsome heifer, Jilt, sired by imp. Reporter, dam by Baron Linton, grandam the imp. cow Juliet. The above are all of orthodox Kinellar breeding. The yearling heifers sired by Tofthills are neat and good, the whole herd are displaying the greatest possible thrift. We were particularly impressed with a beautiful yearling bull of Jan. 1891, from imported Mina Lass, and sired by J. & W. Russell's prize-winning Stanley. The young calves by Tofthills are also most promising.

Axland (6693).

The accompanying illustration is one of the well-known standard-bred trotting stallion, Axland, now at the head of Mr. J. C. Dietrich's stud at Galt. Axland is a seal brown horse, standing 16 hands high and weighing about 1200 pounds, bred by Chas. Backman, Stony Ford, N. Y. To say that he is royally bred is not an exaggeration, his sire being Leland (1300), he by Rysdyk's Hambletonian, dam by American Star, and, therefore, a full brother in blood to the famous Aberdeen, this being in the opinion of the well-known driver, Hiram Woodruff, the most successful nick that has ever been made with two strains of trotting blood.

Axland's dam, Axis, was by Princeps, sire of the fast mare Trinket, and so many other good ones. Second dam by the old Goldust horse; third dam by Pilot, Jr.; and fourth dam by Orphan Boy, a son of American Eclipse.

While Axland has never been trained for more than a few weeks at a time, he has shown a wonderful turn of speed, having covered a quarter in 35 seconds on the Woodstock track—a 2.20 gait. His action is almost perfect—a long, open stride, easy and frictionless—while he wears neither boots nor weights, and only carries a very light shoe. His breeder, Mr. Backman, is well known to the trotting-horse world as the breeder of the world-renowned Electioneer, the premier stallion at the Palo Alto stud in California.

When in Galt a few weeks ago we had an opportunity of looking over Mr. Dietrich's stud, which comprises some sixteen brood mares, headed by Axland. Among the mares we especially noted a pair of browns, got by the thoroughbred horse Terror, each of whom had a very likely foal at foot by Axland.

Another good one is the bay mare Maud Cranston, by Crown Imperial 2.27½, dam by Whitely's Old Clear Grit—a slapping big mare, with any amount of quality. This mare also has a foal by Axland. In another box stood the Kentucky-bred mare Nellie Goldust, by Dorsey's Goldust, dam by Green Mountain Morgan—a stylish, breezy-looking matron; while running in a paddock near by was a two-year-old stallion by Axland out of a mare by Harper, a son of Lexington—a very promising colt, with capital action. One thing that struck us very much was the uniformity in the foals got by Axland, all being apparently cast in the same mould. Mr. Dietrich tells us that he is making a point of breeding just as much for style and finish as for speed, while trying to obtain the maximum amount possible of these points combined, and he is certainly to be congratulated on his choice of a stallion.

Good, stylish, well-finished road horses always sell well, and we wish Mr. Dietrich every success in his undertaking. His advertisement of a sale of young stock will be found in another column, and we would draw our readers' attention to the fact that it will be a rare chance for farmers to secure brood mares of the highest individual excellence, combined with the choicest strains of blood.

Single judging is being adopted at a great many exhibitions. Those who have seen it tried at larger shows claim it is a success. At the spring show at Douglas Mr. James Elder, of Virden, undertook the task of judging the animals exhibited, and did it thoroughly, and, it might be said, to the satisfaction of all. Mr. Elder, though, is one man in a great many, and it would be a difficult matter to find many so well qualified to perform these duties as he is. —[Brandon Sun.

Among Scottish Horsemen.

SPRINGHILL, BAILLIESTON.

Among the names enrolled as winners in the Clydesdale classes at the famous Highland Society's shows in the last twenty years, we more than once find those of Messrs R. & J. Findlay, owners of the well-known Springhill stud at Baillieston, a few miles out of Glasgow. Here was bred and owned one of the best known sons of the famous Old Darnley; we refer to Springhill Darnley, sire of more than one stallion that is to-day doing good work in a new home across the Atlantic; and here was bred, and is still owned, the grand Darnley mare Chrystal (5387), winner of so many premiums at the Highland and other shows.

At the time of our visit the oldest stallion in service at Springhill was Springhill Victor (7280), a son of Springhill Darnley, and out of a half-sister to the well-known mare Flashwood Sally (60), the dam of Macgregor (1487), by Young Prince of Kilbride (3327). This is a big, useful, good colored horse, and bred on such lines as he is, he cannot fail to leave his mark. In a stall adjoining we found the three-year-old colt, Caledonia (8503), by Cairnbrogie Stamp (4274), and out of Chrystal (5387). This colt took our fancy very much; a nice bay with very little white; he combines size and quality with nice

victories in the show ring would take an endless space. At the time of our visit she was carrying a foal to Mr. Kenwick's champion colt Prince Alexander, and if all goes well we may expect to see in the near future a youngster that will carry back to Springhill the honors won in a hotly contested show ring.

BLAIRTUMNOCK'S CLYDESDALES.

From Springhill, through the kindness of Mr. John Findlay, we were driven over to Blairtuminock, where we spent a couple of hours looking over the stud of Clydesdales owned by Prof. McCall, of the Glasgow Veterinary College. Among the first shown us was the brown mare Queen Anne 2nd, by St. Lawrence, and out of Queen Anne 1st, by Knight of Keir. This is a very nice type of mare, short-legged and thick, with plenty of quality, a grand back and ribs, and wonderful nice feet and pasterns. At the time of our visit she was carrying a foal to Mr. Riddell's Gallant Prince, to whom the young Lorne mare Abby has also been bred. This last, a grand, big mare, with any amount of substance, is the dam of a very promising colt by the same horse. This youngster, whom we found in a box close to the mare, is a black, with some white markings, and shows a grand set of legs, hard, flat bone, nice silky hair, and really capital feet and pasterns. Besides these two, the Challenger mare Lofty of Blairtuminock, has also been stinted to Gallant Prince, while the four-year-old mare Strawberry 2nd, by Cairnbrogie Keir, and the five-year-old mare Duchess of Blairtuminock, by the Lord Erskine horse, Duke of Flemington, have both been bred to Messrs. Findlay's Springhill Victor. Here before leaving the brood mares we must mention a very nice filly foal which we found in a box adjoining its dam, the aged mare Strawberry. This foal we were told was got by the Prince of Wales' horse Queen's Own, now owned by Messrs. Graham Bros., of Claremont, Ont. But the most interesting sight shown us perhaps were five fillies, all rising two years old, and all got by Prince of Fashion (a son of Prince of Avondale) purchased by Sir



AXLAND (6693), THE PROPERTY OF MR. J. C. DIETRICH, GALT, ONT.

flat bone, and silky hair, while in spite of the fact that a hard frost the night before had made the ground very slippery and bad for travelling, he showed nice, true action. Another very useful horse is the bay colt Elliot (8606), by George Elliot (5301), and out of Forest Queen, by Springhill Darnley (2439). This is a thick, short-legged colt, and should make a useful horse for the American or Canadian trade, while his half-brother, the yearling colt Barm's Heir (Vol. XIV.), out of the same mare, by Sir Everard, a champion horse at Glasgow, promises to grow into a big upstanding horse with clean, flat shanks and nice feather. A somewhat different type is the chestnut two year-old, Springhill Sampson, by Top Knot, a son of Top Gallant, his dam also being by Springhill Darnley. This is the making of a very heavy horse, with any amount of timber, and very heavy feathering. He struck us as being a horse that would do a great deal of good in those parts of Canada where size has been somewhat neglected, being calculated to breed just such geldings as the Old Country market is calling for. Although we have not time or space here to describe the many other animals shown us, we cannot leave Springhill without mentioning again, the well-known mare Chrystal (5387), a daughter of old Darnley, and out of the mare Skerblin, by Lorne, for whom the senior Mr. Findlay paid what was in those days a long price. Chrystal is a full sister to the famous Springhill Darnley. To enumerate her many

James Duke, from Mr. Riddell for the handsome sum of £1,700. These were a very even lot, all showing a remarkable likeness to each other, although out of mares of very different stamps. Of these a very sweet, smooth filly, a nice rich bay in color, was, we were told, out of Strawberry 2nd, while another was a half-sister to the Gallant Prince colt already referred to; this latter, also a black, is a very sweet, though rather undersized filly, with beautiful pasterns, and good feet. Of the other three, a chestnut out of old Strawberry, and a black out of Lofty Lass, by Prince of Wales, promises to make very large mares, while the fourth, a bay out of Duchess of Flemington, we found running out in a paddock in company with a thick, useful looking filly, out of the Challenger mare, by the Cumberland horse Gartaherrie, a son of Old Darnley. The only stallion that had been kept for use at Blairtuminock last season was, we were told, the St. Lawrence colt Mains of Blairtuminock, a compact, deep-ribbed horse, with clean, flat legs. A notice of Blairtuminock would, however, be incomplete without an allusion to Cedric, Col. Holloway's famous stallion. This horse was bred by Prof. McCall, and sold by him to Col. Holloway, in whose hands he has turned out one of the best, if not the best, breeding horse in America. Prof. McCall's card will be found in our columns, and a visit to Blairtuminock, should be in the order of the day for all Clydesdale men who visit Glasgow.

MANSWRAES.

A few miles out of Paisley, at the Brig o' Weir, is the farm of Manswraes, the home of Mr. Robt. Wilson, well known as a successful breeder of and dealer in high class Clydesdales and Ayrshires. Born at the Cross of Kilbarthan, in the heart of a district long noted as the home of some of Scotland's best Clydesdales, and reared on a farm which time and again has sent Ayrshires out to conquer at all the leading shows in Scotland, Mr. Robt. Wilson, at the age of twenty-seven, on his father's death, took up the business of breeding and exhibiting both Ayrshires and Clydesdales. To-day Mr. Wilson's herd stands in the front ranks, having gained, we are told, more prizes in the last fifty years at the Highland Society's shows for cows in milk and calf, than any other herd in Scotland. A glance over the cattle last February, as they stood in a long double row in the byre, was enough to satisfy us that we were looking at a herd that not only could hold its own in the show ring, but that also has been bred with a view to practical utility. There was no evidence of pampering, the cows being all in simply good store condition, while the young stock were all out in the fields; but a finer display of cattle, showing every point requisite for milk production, it would be hard to find. Mr. Wilson's first venture in English show rings was in 1868; since then at the Royal Agricultural shows at York in 1883, and Preston in 1886, and later still, at the British Dairy Farmers' London show of 1886, he has been most successful, while in Clydesdales, he has also made a lasting record, having sold some of the best horses that have crossed the Atlantic, among them that well-known stock horse of Messrs. Galbraith's, St. Columba, by the Prince of Wales's horse Duke of Hamilton. This horse won numerous 1st prizes in Scotland, and since his advent to America has distinguished himself by winning 1st at the Chicago show as a two-year old, and 2nd as a three-year-old in competition with some of the best horses in America, while among those that have gone from Manswraes to Canada we might mention The McKinnon, by Lord Erskine, and out of a sister to the Glasgow premium three-year-old of 1892. This colt was sold last fall to parties in Ontario. Besides breeding and handling Clydesdales and Ayrshires, Mr. Wilson is proprietor of the Paisley cattle Mart, where he holds weekly sales. His card will be found in another column, and we can confidently recommend him to buyers, as a thoroughly reliable man.

Snow Eating and Abortion.

I have some experience to report in reference to sheep eating snow. Last winter I had my sheep in a stable about half a mile from the house, and watered them from a pump and trough about four rods from the stable door every day till about the 1st of February, when the pump gave out by being frozen. The sheep ran out during the day, both before and after the pump was frozen, and were housed at night. They drank the water freely once per day. I then allowed them to eat snow for a couple of weeks. About the end of that time they began to cast their lambs, and in less than two weeks I had lost nine. When eating snow their health was not so good as when drinking water; they did not seem to thrive as well, though none was actually sick. When changed from water drinking to snow eating no change in feeding was made; they got sheaf oats and timothy hay all along. I next resumed watering them regularly, and in two weeks after stopping the snow eating the trouble had ceased. I have, therefore, concluded that snow eating is not good for sheep, and, for my part, shall take care that this is not repeated. For three years before, my sheep had been watered from the pump, and I never lost a lamb by abortion.

SHEPHERD.

NOTE—Since cases have been reported where snow eating did not produce such results, the trouble in this instance doubtless arose from some derangement caused by the sudden change from drinking an abundance of water to the very limited supply of fluid the sheep would take in the form of snow.—[ED. FARMER'S ADVOCATE.]

Profitable Feeding of Cattle.

During the few months past a number of Farmers' Institute meetings and cheese factory meetings have been held—a good many subjects have been discussed relating to farming, especially to mixed farming. One great object in these meetings is to find out how the farmer can increase his profits, and at the same time maintain or increase the fertility of his farm.

It is now generally received as an established fact, beyond all dispute, that growing grain and hay, and selling nearly all the produce off the farm in its natural state, is an exhaustive system, and will only require time to reduce both the land and its owner to poverty.

To prevent this, and also to restore land that has been so treated to a good, fertile condition, are questions worthy of the best thought of our best men, to assist in this laudable and really necessary work. The experimental stations that have been established are doing a good work for the Dominion in assisting to solve the problem of profitable farming.

As our conditions have very materially changed of late years, it makes it necessary that our system of farming must be changed to meet the changed conditions. Not many years ago both grain-growing and feeding beef cattle were paying the farmers well, but now it is conceded neither of these branches are paying the farmer for his investments and labor. The farmer is powerless to raise prices on the markets where his produce is sold, and where he is met in open competition with other producers whose conditions are more favorable for cheap production than his own. It is well known by all practical men that beef cannot be produced at a profit to sell at 4 to 5 cents per lb. along the old lines of procedure by feeding on hay, roots and meal—the food is too costly; and so far as any help can come to the beef producers, it must come by cheapening the food from which the beef is to be produced, and also by supplying to the animal the proper kind of food in proper quantities and in proper proportions, so that no food may be wasted, but the animal be enabled to utilize and assimilate all the nourishment from the food it consumes. It is now well known that an animal's powers of digestion and assimilation are limited. All feeding should be kept within the limitations of the animal's capacity to fully utilize all the food it eats, and the animal should be fed with food containing the necessary material from which it can manufacture beef with the greatest comfort and ease to itself. One experiment carried out last winter by the Dairy Commissioner at the Experimental Farm, Ottawa, is very instructive as to the cost of feeding for beef:—

NO. 1 RATION.

Hay	20 lbs.
Turnips	40 "
Straw	5 "
Chopped Barley	2 "
Chopped Peas	2 "
Ground Oilcake	1 lb.
Cotton-seed Meal	1 "
Total	71 lbs.

Valued at:—Hay, \$8.00 per ton; turnips, \$4.00; straw, \$4.00 per ton; peas and barley meal, 1c. per lb.; oilcake and cotton-seed meal, 1½c. per lb. This ration of hay, roots and meal, the old-fashioned way of feeding, cost within a fraction of 19c. per day for each animal, and every pound of increased weight cost 14.44c., or say 14½c. per lb.

NO. 2 RATION.

Corn Ensilage	50 lbs.
Straw	5 "
Chopped Barley	2 "
Chopped Peas	2 "
Ground Oilcake	1 lb.
Cotton-seed Meal	1 "
Total	61 lbs.

The ensilage costs \$1.40 per ton. Straw and grain, as in No. 1, cost per day per animal the first two months, 9.01c.; one pound of oilcake meal and one pound of cotton-seed meal was then added,

which raised the cost to 11.60c. per day, which gives a difference of 7½c. per day of less cost than the other. And that is not all; those fed on the cheap ration made an average of 33 lbs. more weight in the same time than those whose food cost 7½c. per day more. The cost of the increased weight under this ration is 7½c. per lb., and even at this figure there can be no profit in producing beef if the food had all to be bought and paid for at market prices.

The same food that would produce 1 lb. of beef would produce 1 lb. of butter or about 2½ lbs. of cheese, if fed to a good milk cow. It does not need a great knowledge of arithmetic to see which would be the most profitable way of converting the crop from the land into money. This would open up a wide field for thought, but I give the facts as above, taken from the published report of Prof. Robertson's examination before a Select Committee of the Government at Ottawa.

This winter, at several farmers' meetings I have attended, a number of farmers gave very favorable statements of their experience with ensilage. A number of them had gone into it last season who formerly were a little sceptical about the silo, but without exception they spoke very much in favor of it, as it had even exceeded their expectations as a cheap and wholesome food. When it is fed with solid food, as bran or chopped oats and peas, or peas and barley or corn, it makes an excellent food for milk cows in winter, supplying the place of roots to a very great extent, and at little more than half the cost of hay and roots.

DAIRYMAN.

The Hog Question.

BY F. W. FEARMAN.

There has been considerable correspondence in reference to the values of the different breeds of hogs for breeders and packers' purposes, more particularly referring to the improved Yorkshires and Berkshires. I have long been acquainted with the latter breed, but not until this season have I been able to secure any quantity of the former. While the Berkshires have for many years held first place it was during a quite different state of demand from the trade that prevails at the present time. Then it was for a large, fat hog, suitable for the lumbermen and the backwoods farmer, and the Berkshire with its heavy head and shoulders, and almost all fat sides filled the bill. Now the farmer's family, with their much lighter labor, refuse to eat the solid fat of the log rolling and rail splitting days of long ago, and require the long bodied, mixed fat and lean, as well as the resident of the city and town. Then, again, the lumbermen get their pork in at half the duty that anyone else does, thus the demand for a lighter and a leaner hog. Recently Mr. Jas. Blodgen, of Carlisle, brought in to our market a fine load of three-quarter bred Improved Yorkshire dressing hogs. There was a keen competition for these and they brought over the market price. I bought them and measured and weighed one of them as follows in length:—

	Size.	Weight.
H. ad.	10 in.	16 lbs.
Shoulders	10 "	56 "
Sides	27 "	107 "
Hams	12 "	58 "
Girth	3 ft. 8 "	5 "
Total		242 lbs.

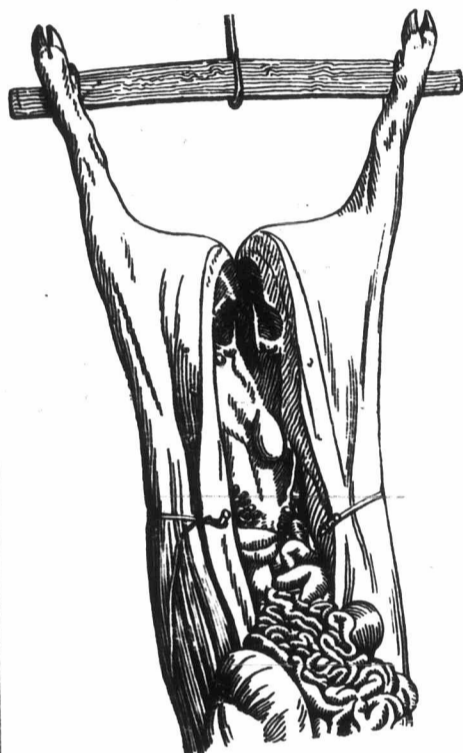
The head and sides cut close to the shoulders, all untrimmed, lard left in the sides. This was one of the litter of eleven that at eight and a-half months old averaged 224 pounds, and was two and a-half months on stubble, and two and a-half months in the pen, and fed on chopped oats and peas, and were quiet, good feeders, and increased in weight very fast. These hogs were finer in the limbs, longer and deeper in the sides than any Yorkshire that I have seen, but still too heavy in head and shoulders. I will, if I have the opportunity, make a similar test on the Berkshires and Tamworths, and should like to see it done by other packers, and the results given. The meats are fat, too fat for choice stuff, and not so streaky or as mixed fat and lean as I would like or have expected, but still there is a larger proportion of side than is usual.

The Spaying of Sow Pigs.

BY W. W. HALL, B. S. C. V. A., HAMILTON, ONT.

There is no doubt that in the near future farmers and hog raisers must pay more attention to this important subject. The spaying of young sows is a necessity, and why the subject has been so much neglected in Canada is not quite apparent, but the fact remains that the operation of spaying sows is comparatively unknown amongst the generality of pig keepers. It may also be observed that the practice is not so generally followed in the remote parts of the agricultural districts of England as it was in former times. We account for it in a measure that the class of men known as spayers and gibbers, who perform this operation, have in a measure died out, giving place to the veterinary surgeons, who now practice castration in horses, and do not care to undertake so unthankful, unclean, and poorly paid operation as spaying pigs; and indeed we do not blame them, as it is a very delicate operation, and can be taught to any intelligent farmer in about ten minutes. The necessity arises, and it ought to be done, and must be done more extensively than it is at the present time. The next question arises, *Will it pay, and why?* The question is thrust upon us by attending the markets and observing the actions of the pork packers. They invariably look for the mark or scar left by the operation, and are willing in every case to give a cent a pound more for spayed than for open sows. It is the general rule in the western counties of England, and almost universally practiced in Ireland; in other districts it is not so frequently done. But recently the larger bacon curers of Limerick have refused to take open sows unless at a reduced price. They maintain that the flesh of unspayed sows will not cure or take the salt as well as those spayed, and the evidence of those who have experience in raising spayed sows, say that they cost less to feed, make a much better animal, superior in quality, less disposed to fret, and are never chased or worried by the male. They also record their experience by observing that it requires greater time to bring open, unspayed sows to maturity, that they require a larger amount of feed to fatten, and that during their period, oestrus or season, the flesh seems to melt off their sides, and during the ensuing twenty-eight days it requires double the amount of food to make up for the lost time. Mr. Fearman, the well-known pork packer of Hamilton, Ont., says that "Whenever I come across a defective side of bacon that has resisted the salt in curing, I find that it is the product of an unspayed Canadian sow." He recommends the Yorkshire as being the best for packing. It is a good, long, deep-sided pig with plenty hair of a reddish hue, and large in bone. And he further says: "If a pig shows the two latter points a invariably means a good proportion of lean meat." This coming from such an authority ought to be deeply impressed on the minds of the Canadian farmer. The average consumer, more especially in cities, requires and will have as much lean meat as fat, and it has come to point to the condition of tending a class of hog that lays on as much lean as possible. The present class of animal that is offered seems to me to be of a grade of Yorkshire Whites, and are most favored by bacon curers. As a rule they prefer them about nine months old, weighing (alive) 160 to 200 pounds for Canadian trade; for export should not exceed when dressed 140 pounds; should be ready for market during the earliest months in summer, June, July, August and September, for preference. The quality wanted is lean pork from dairy fed swine, to meet the requirements of the English market and export. They should be sold alive to the packers, where the system of killing, dressing, cooling and curing can be done in a quick, uniform manner. It will be found that it will pay the farmer better to sell his swine as fat than to market them dressed; and it is not profitable to feed swine after they exceed 200 pounds alive. The public taste has turned

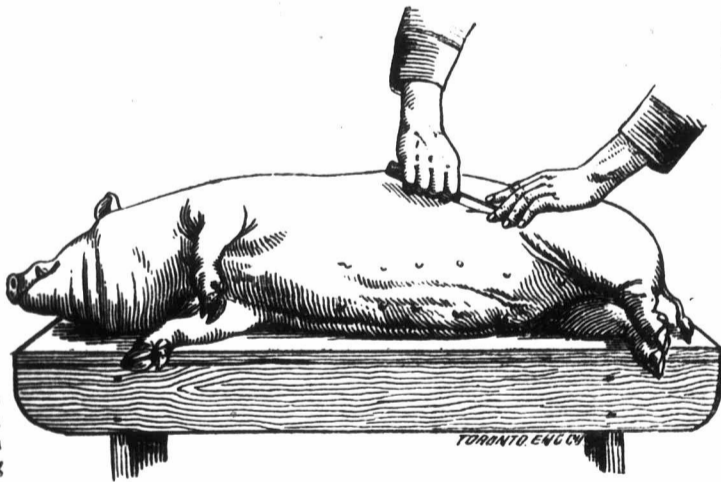
against fat meats of all kinds, and the farmer must produce what the consumer requires, so that with a little extra care in housing, the winter raising of young pigs to be sold off in June, July and August should become a very valuable adjunct to winter dairying. Mr. Fearman writes that he finds great difficulty in getting animals that are always suitable in size at the right time of year, and can never get the quantity that he requires from the surrounding districts. When in full running order he will consume 750 per



day, and can only get this number by sending long distances. The old fashioned practice of killing large stores must rapidly give way to the improved method of summer killing young pigs. The operation of spaying pigs consists of removing the ovaries, the essential organ of generation in the female, and analogous to the testes of the male. They are two ovid, irregular-shaped bodies smaller than the latter situated in the abdominal cavity. The diagram shows them in situation pinned forward slightly from their proper position, and may be likened to a small

14 to 18 hours before the operation. They should be from one month to six weeks old; they will be then ready for the market at about nine to twelve months of age.

Have the animal held on a bench by two men, one holding the fore legs, the other the hind ones extended. Make an incision in the flank a little below the angle of the hip bone; for general guidance two fingers space may be observed. The hair when present should be clipped or shaved off about a hand space, and with a sharp, broad-bladed spaying or castrating knife make an incision from behind forward, if standing at the back of the pig, with the animal stretched on its right side; if on the left side, from before backwards, about one inch in length, and only through the skin on to the fat. With the nail tear away the tissue until you feel the bowel and search in a backward and upward direction at the entrance of the pelvis bones for the womb, which will be found floating free between the bladder and straight gut. On bringing it up to the opening be quite sure that it is the ovary, and it may be recognized by its color, being slightly red, and the womb being pearly white, the bowels being of a dull lead color. The ovaries are as described above—something like a very small bunch of unripe red grapes, firm, though elastic to the touch. When drawn through the opening the round little balls of vesicles are easily cut off with a scraping motion of the knife. Some men twist them off, but I prefer cutting, as being more expeditious. The lower ovary is brought out and treated the same way. Part of the womb may be brought out in searching for the second ovary, but it must be returned again, the aperture being stitched with a needle and thread, or twisted suture. There is little blood to escape, and should be carefully prevented from falling into the interior of the bowels. Wash the outside with a sponge after returning the parts and accurately stitch the wound with one or two stitches. Remember, the smaller the wound or opening, the less chance there is of any unfavorable results. It is rarely that any evil results follow. The little pig seems to take very little notice. Feed with a bulky ration—not too much at a time. In two or three days the thread of the stitches should be removed, and the effects of the operation are soon manifest by the improvement the animal makes in condition. What seems to be the result of the operation, and why it is so beneficial is that the animal has no period of season or oestrus, and the next six months of its life is engaged in putting on flesh, and the animal is ready for market in August—two months earlier than she would be if left open.



cluster of unripe mulberries; they are a number of small vesicles or membranous sacs of various sizes, reddish in color. These are the Graafian vesicles in various stages of development. The pig of which the diagram was taken was just approaching her period of season, and is the finest illustration that I have seen.

In the spaying of pigs, there are certain conditions that must never be lost sight of, and point directly to the success or failure of the operation. The first essential condition, is that you must have the bowels comparatively empty by starving or withholding food for about

The little pigs begin to feed themselves when about a month old. They should then be fed apart from the mother sow with skim milk, a small quantity of ground oats, wheat or shorts, and spayed at five weeks. Then the quantity of food should be gradually increased until they are ready for the market, and bacon curers require a pig as light in head as possible, light in shoulders, long and deep in ribs, wide in loins, thick in flanks, with hams square and deep, and not strong in bone, but possessing a good coat of hair. The demand is now for almost exclusively light, fleshy meats.

Next to good food, etc., exercise must be counted upon in the attainment and preservation of health; it leads to develop muscle or lean meat instead of fat, thus causing them to be the ideal pig of the buyer. A noticeable fact in the rearing of young spayed pigs is the bones are very immature, and do not grow in the same proportion to the other parts of the body. An opinion that we hold on the subject is that it is due to the deficiency of the lime salts that make up the earthy constituents of bone; therefore, in all cases when spayed pigs are grown for the market, hardwood ashes, or better, bone meal, should be fed with the daily ration. The effect will soon be evident; not only will it build up the bony structures of the body, but will aid digestion, which must be kept at the highest

pitch of efficiency. Hog feeders who have tried this practice pronounce the effects most gratifying, and the benefits unmistakable. The wood ashes may have a little, very little, salt mixed with them to advantage. Any man who holds that the pig is not deserving of care and attention will never make a dollar raising them. Whilst as the scavenger of the farm they are invaluable, and will more than earn their keep for that purpose alone. But what is the general practice of keeping these animals? Any place seems good enough for a sty—dark, damp, and hence unclean. No man would think of keeping any other animal under such conditions. Give your animal plenty of light; let the sun shine into the pig sty, by making large windows that can be opened, admitting fresh air and sunlight by that means. See that the pens are kept clean, give plenty of straw, and you will soon find that pigs are quite as clean as any other animal. It is often said pigs delight to wallow in the mud. That is no doubt true; at the same time it must not be forgotten that they are carrying out a natural instinct, for they are of the pachydermatous class of animal—the same as the hippopotamus that delights in taking a mud bath occasionally. We hold the opinion that the best animal to grow fat and thrive in the least possible time is a half-bred pig—a direct first cross from pure stock to the ordinary stock of the district, and may be described as a grade pig, and are always so described. If pigs are not intended for breeding purposes, they should be all castrated and spayed at the time mentioned above, and it will be found that the average loss by the operation will not exceed one per cent., if ordinary care is taken.

Our Scottish Letter.

The month of April, 1892, will long be remembered in the annals of Scottish stockbreeding. The sales of Clydesdales at Seaham Harbour, Montrave and Kilmarnock revealed an amount of vitality in the home trade in Clydesdales which completely belied the gloomy vaticinations in which some indulged. The only class of stock for which there is a slackened demand is that of stallions. The sudden collapse of the American trade, through the operation of the new restrictions, has rendered all but the very best of Clydesdale, Shire and Suffolk stallions a drug in the market. Mares and fillies, however, never sold better than they did at the sales during April, and the sensational figure of £1,050, paid for a two-year-old filly, was not more notable than the high average of prices realized for females at all of these sales. The Montrave sale will long remain the record sale of Clydesdales. Prince of Albion has proved himself to be a wonderfully uniform breeding horse, and his produce are marked by strong family resemblances. Fifteen yearlings and two-year-olds got by him made the high average of £167 7s. 4d. each.

Macgregor mares are also a splendid item in an auction sale, and their high average at Montrave of £185 17s. 0d. each for five of three years old and upwards is an achievement possibly unequalled of its kind.

The steady and unmistakable growth in popular favor of the produce of the Londonderry stud horse Castlereagh is well illustrated by the following results:—

Year	Price	£	s.	d.
1887	their average price	£	31	7s. 3d.
1888	"	"	80	12 3
1889	"	"	106	4 6
1890	"	"	109	14 6
1891	"	"	130	19 9
1892	"	"	145	57 0

Castlereagh himself is a strong, powerful, well-colored horse. Perhaps no horse of the present day is equal to him in the formation of his top and general outline as a draught horse.

The great show at Kilmarnock on 15th April, and the scarcely less interesting gathering at Ayr on 27th, afforded illustration of the success which has attended the breeding of Clydesdales in the south of Scotland. At Kilmarnock there was perhaps as grand a display of Clydesdales as has ever been seen; and of the eight first prize winners, four were bred in Galloway, two in Ayrshire, one in Lanarkshire and one in Renfrewshire. The two best animals in the show were, without doubt, the two that

were awarded the championships—Mr. David Mitchell's magnificent strawberry-roan mare Sunray and Mr. Andrew Montgomery's three-year-old stallion Prince Patrick. The former has had a remarkable career. Bred by a small farmer in Gartcosh Parish, Lanarkshire, she was unable when a yearling to take any position in the show ring, and was sold at a small price to Mr. David Riddell. He sold her to Mr. David MacGibbon, Chamberlain to the Duke of Argyle, in Kintyre, who secured the championship with her at the Kintyre show in 1886. She was then two years old. At the Glasgow summer show, then held in June, Mr. MacGibbon sold her to the late Mr. John Simpson, Drumfreck, Helensburgh. In his hands she secured a long succession of show-yard distinctions, and at his displeasing sale she became the property of Mr. James Johnston, Lochburnie. Her career in his hands was again one of unbroken triumph, except one season when she aborted, and consequently was not at all like her former self. She, however, was quick to recover her form, and two years ago at the Lochburnie sale she was sold to Mr. David Mitchell, of Millfield, for a splendid price. She has gained many prizes since, but never in all her history did she so captivate the popular eye as on her appearance at Kilmarnock a fortnight ago. She has foaled within the past few days to the celebrated horse Prince Alexander, and her career as a breeding mare will be followed with great interest. It is hardly necessary to remind the reader that she is a get of the celebrated Merryton show horse Prince of Avondale and a well-built Darnley mare, which is now also owned by Mr. Mitchell.

Mr. Andrew Montgomery's Prince Patrick has fairly taken the popular fancy. He was bred by Mr. W. H. Rolston, Culmore, Stranraer, and his sire was Prince of Wales, dam a mare by McCamon. He is a horse of great substance and size, with beautiful quality, combined with strength of bone. His action is simply perfect, and there are those who regard him as the best stallion of his age. Last year he was second to Prince Alexander at the Royal, and to Rosemount at the Highland. The latter is dead, but the former would have hard enough work to hold his own against Prince Patrick now. His own sister, Enid, is a wonderfully sweet mare, and has gained numerous prizes, and in her new owner's (Mr. R. Sinclair Scott) hands she was second at Ayr in a fine class of brood mares. Their dam is a capital mare, and it is to be hoped that she may breed many more like Enid and Prince Patrick. The latter is the Stirling premium horse this season, and as the farmers there were smart enough to engage him at the Highland Society's Show in July last they have got him well worth his money, and are likely to make plenty of money by means of him.

It was another worthy circumstance that in the family competitions the two best groups were bred in Galloway. The competitors were Mr. James Lockhart's young horse Handsome Prince, a son of Prince of Wales, and the celebrated prize mare Pandora, by Darnley, and Mr. Andrew Montgomery's veteran, Macgregor. The success of this famous horse in competitions of this class—in which five yearlings have to be produced got by one sire—has been one of the leading features of the Scotch show yards for the past ten years, and the fact that during that long period, although he has never failed to compete even for one year, Macgregor has only twice been placed second, is a striking testimony to the uniform merit of his progeny. On the present occasion it was felt that he had a stiff opponent to face, and he was somewhat handicapped through four out of his five of a family being fillies, while the five produce of Handsome Prince were all colts. With a bench of six judges he, however, emerged triumphant, the award being made with the approval of at least four out of the six. The produce of Handsome Prince were an excellent lot; they were in first-rate form, and were greatly admired when three of the five were first, third and fourth in the class of yearling colts. Considering that the horse was only two years old when these prize-winners were got, and that there were less than a score of foals to select from altogether, the position taken by Handsome Prince must at once be pronounced unprecedented.

Vanora was first in the yeld mare class at Kilmarnock, and her son, by Prince of Kyle, named Vanora's Prince, was on the same day first in the class of two-year-old colts. Both animals are owned by Mr. Geo. Alton, and occupied the same positions in competition with different animals at Ayr ten days later. The same remark holds good regarding Mr. Robert Murdoch's massive Prince Lawrence filly, Duchess II., three years old, which gained second prize last year at the Highland. She is a black filly with a fine top and good action, and was bred by Mr. John M. Hannah, Gervan. She was first both at Kilmarnock and Ayr.

Two-year-old fillies at all the shows this season so far are abnormally good. At Kilmarnock Mr. R. Sinclair Scott was first with the Prince Lawrence filly Scottish Ruby, bred by Mr. Walter S. Park, and Mr. Leonard Pilkington was second with a beautiful filly by Flashwood, bred by Mr. Robert McClelland, Balfarn. At Ayr this latter was not forward, but another daughter of Flashwood, the noted Lillie Langtry, bred by the Earl of Galloway, was in the field and beat Scottish Ruby, being placed first, while the Ruby was second. Lillie Langtry is one of a group of three sisters bred by the Earl of Galloway and got by Flashwood, out of Maritana, by Premier Lyon, gr. dam the Barneau mare, by Drumflower Farmer. All of them have been purchased by Mr. Jas. A. Wallace. The eldest, Mary Anderson, has been a noted prize-winner, and was second at Ayr. Lillie Langtry was first last year at Ayr, Glasgow and the Royal, and the youngest, Ellen Terry, was fifth at Ayr. She and Lillie Langtry have been sold to Mr. David Mitchell, of Millfield, whose stud they have now joined.

The third prize two-year-old filly at Ayr was Lady Muriel, owned by Mr. Andrew Mitchell, Barcheskie. She was first at Castle Douglas in the beginning of April, and last year was a well-known prize-winner. Her sire was Prince Lawrence, and she was bred by Mr. W. Watson, Ochterbury Mains, Forfar.

The class of yearling fillies at Kilmarnock was one of the finest displays of young Clydesdales seen for many a day. There was a great struggle for first place between a very sweet filly, Royal Rose, bred and owned by Mr. And. Montgomery, and got by Macgregor, out of Black Sally, by Top Gallant, and a handsome big filly, dark in color, and of Prince of Wales type, shown by Mr. James Lockhart. She was got by that gentleman's deceased horse, Prince Fortunatus, out of the Darnley mare that is dam of the celebrated Lady Louisa. Royal Rose is a popular favorite—indeed, some go the length of characterizing her as the best yearling seen for many a day, and her victory would have been popular. However, by a majority vote she was put second, and Mr. Lockhart's filly got first place. The latter repeated her victory at Ayr, where she appeared in better form than at the earlier show; but Royal Rose was not there exhibited.

The first prize three-year-old stallion at Ayr was, like the champion at Kilmarnock, a Galloway-bred son of Prince of Wales, namely, Garthland Prince, owned by Mr. Matthew Marshall, Stranraer. He is a big, gay, well-colored horse, and like so many other good horses by the Prince, is out of a Darnley mare.

The other notable incident of the Ayr meeting, so far as young horses were concerned, was the unqualified success that attended the stock got by Prince Fortunatus. As has been intimated, his daughter was first amongst the yearling fillies, and, in addition, two of his sons were first and second amongst the yearling colts. The breeding of a two-year-old colt that left stock of such quality is worth looking into. He was got by Prince of Wales, and his dam, Miss Meekle, was got by Prince George Frederick, a well-known prize horse, whose sire was Prince of Wales, so that Prince Fortunatus was the produce of a stallion and his own grand-daughter. The breed of the dam have a high reputation, and the gr. dam was a well-known breeding mare and the dam of several prize-winners. She was got by Logan's Lord Clyde 477, a celebrated prize-winner. The three prize-winning produce after Prince Fortunatus are, it is worth noting, all out of Darnley mares.

The brood mare choice pair—S owned by Mr. first prize as th Mr. Scott is la which many fir be bred.

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The brood mare class at Ayr was led by a choice pair—Scottish Marchioness and Enid, owned by Mr. R. Sinclair Scott, and they got first prize as the best pair of mares in the field. Mr. Scott is laying in a first-rate stud, from which many first-class animals should one day be bred.

Maryhill Show, which is chiefly patronized by breeders and exhibitors in the four counties of Lanark, Renfrew, Sterling and Dumfries, was held on 29th April. It was an unqualified success. I do not suppose the oldest inhabitant can recall a better show held on the beautiful show ground outside of the Glasgow municipal boundaries. Brood mares formed a phenomenal exhibition, and Messrs. Galbraith Bros.' Topsman's Princess, by Prince of Wales, was a popular first. Mr. William Park's Nelly, by King of the Forest, from Brunstone Portobello, which followed, was an uncommonly good second. She was got by King of the Forest, and was first last year at the Highland. The same gentleman was first in the class of yield mares with a splendid three-year-old bred in Cumberland and got by that great horse Lord Lothian 5998. This mare was awarded the championship as the best female in the show. Mr. David Mitchell, of Millfield, was first in the three-year-old class with Princess Mand, a level, low-set, typical Clydesdale, got by Top Knot, and first in the two-year-old class with the sweetly balanced filly, Maritana, by Excelsior. The first yearling was a great beauty, owned and bred by Mr. James McLaren, Bandeath, Sterling, and got by Boy in Blue. It is worthy of notice that of these five first prize-winners, no less than three, including the Champion, are by sons of Top Gallant—Lord Lothian, Top Knot and Boy in Blue, were all got by the Ardgowan Stud horse.

The winning horses amongst the stallions were, in the three-year-old class, Mr. W. S. Park's Gallant Poteath, a son of Top Gallant and the Glasgow premium horse; in the two-year-old class Mr. William Clark's Darnley Again, a splendid horse by Darnley's Hero; and in the yearling class, Mr. James Johnston's colt by Prince of Albion. Gallant Poteath was awarded the Championship, and there were three sons of Prince of Albion amongst the seven prize-winners in the yearling class.

SCOTLAND YET.

Feeding Calves.

On the successful start in feeding while young hinges the after success and usefulness of the mature animal, and it is those who study to follow or assist nature that achieve the greatest success in breeding and feeding. Thus we find in the four branches of farm stock, viz., horses, cattle, sheep, and swine, the most perfect food for the young animal is the milk that nature has supplied. This contains all the elements for forming bone, sinew and muscle, as well as to finish and round into lines of beauty, and harmonize the whole animal structure. Again, milk is not only a properly balanced food that contains all the necessary constituents for growth of the component parts of the animal construction, as all the essential elements are held in solution, but is also in the best state for assimilation, thus supplying the nourishment with the least possible strain upon the digestive apparatus. The following table gives the average composition of milk from the cow, mare, and ewe:—

	Cow	Mare	Ewe
Casein, or flesh formers	4.65	3.40	4.50
Butter fat	4.00	2.50	4.20
Milk sugar, food of respiration and fat	4.50	3.52	5.00
Ash	.60	.53	.68
Water	86.85	90.05	85.62

Thus the young animal receives through the casein in the milk the chief constituents, which when chemically examined contain the earth of bones, and in such a soluble form that they are capable of reaching every part of the body. This clearly shows that the casein performs a great office in the growth of the young animal, as it furnishes

the nitrogen in the formation of muscle, nerve, brain, skin, hair, and hoofs, and in such a soluble form that it can reach every part of the body. Then the oil in the milk furnishes fat ready to be appropriated by the young animal to be changed into animal fat; therefore we find milk is a perfect food. It is replacing it with a cheaper and more convenient diet that requires practical skill and knowledge, for this in all young animals is the critical period in their lives. It will then be necessary to study to supply a food that contains the same elements as the milk, and also in a like proportion. By analysis, as well as in practice, wheat, rye, barley, and corn are all too heating, with not enough of muscle-forming material, while peas and oats are much superior in forming muscle, and with bran and oil cake would form a capital ration later on, but are all too irritating to the stomach of the young animal at first. We have found nothing equal to middlings, five parts, and one of oil cake, and ground peas and oats added later on. It should also be served up in such a form that the young and delicate animal may derive the full benefit of what the food contains without impairing in any degree the digestive apparatus. It would be equally improper to remove the milk diet abruptly or to feed the grain ration too generously at first. The changes must be made as much by degrees as circumstances will allow. One overdose of meal too often disarranges the whole system so that it is extremely difficult to recover the health of the animal and tone up the system so that the food will have the proper nourishing power. By mixing the meal ration twenty-four hours previous with cut hay, or if grass is used, immediately before feeding, better results will be obtained. Whole milk, the natural food, as before stated, has a large proportion of oil which prevents constipation, thus promoting health. When milk is skimmed this oil is removed, and the animal fed on the milk is liable to become constipated, and in order to carry this off nature enforces diarrhoea, always a symptom of indigestion. Therefore, to supply this needed element, a little oil meal first mixed with cold water and then boiled and thoroughly mixed with the skimmed milk supplies this essential. Whey is often held up by cheese factory men as good feed on account of the amount of sugar of milk it contains. Although sugar is an important element, no animal could subsist upon sugar alone. Again, whey is so liable to deterioration through becoming acid that in this state it is dangerous to feed to calves. Though by scalding the danger of scouring may be modified, still as ordinarily handled at cheese factories, whey had better be left out of the calf feeding ration.

England's Importation of Frozen Meat.

BY PROF. S. M. BARRE.

England's importation of frozen meat has been steadily increasing, and shows that from 15 to 20% of the meat now used in England is imported in a frozen condition. The following figures show the progress of the frozen mutton trade during the last three years:—

From	1889 HEADS.	1890 HEADS.	1891 HEADS.
Australia	86,547	27,984	334,693
New Zealand	1,068,286	1,531,393	1,896,706
Different points		10,168	18,897
La Plata	1,000,936	1,196,531	1,073,325
Total	2,164,769	2,948,076	3,323,621

The yearly production of frozen mutton is now estimated at 8,000,000 heads, and new slaughter and freezing establishments are now being erected in New South Wales and Queensland. Eighty-seven ships equipped with freezing apparatus were engaged in this special transportation trade during 1891, and new ships are now being built and equipped for this service between Queensland and London. Number of sheep sold to Great Britain during the last three years:—

1889 HEADS.	1890 HEADS.	1891 HEADS.
25,632,020	27,272,459	28,732,501

Poultry.

Poultry on the Farm.

BY IDA E. TILSON, WEST SALEM, WIS.

When "the time of the singing of birds is come, and the voice of the turtle is heard in our land," as wrote wise, observant Solomon, then we of this practical age like to hear mingled clucks and peeps from our domestic fowls. We have now approached a tender subject—the spring chicken. Before proceeding, it might be well to explain the following terms, which, in conversing on poultry culture with people, I often find confused. A "coop" is the cage for a single hen and her brood, while "hen house" means the larger inclosure for a whole flock. "Chick" applies to the downy state. We have "chickens" when they feather, and "pullets" and "hens" as they mature. A lady recently asked whether I had "chickens" to sell, and after further inquiry I learned "sitting hens" were what she really meant and desired.

Coops may vary somewhat in size, according as the time chosen for raising chickens is early or late, and the breed to be accommodated is large or small. My coops are square, reminding one of a modified dry goods box. They have a slanting roof, rain proof, and a floor. This floor stands on two cross pieces of joist, which raise it from the ground and insure dryness. Perpendicular slats, from top to bottom, extend across the whole face of coop. In addition, outside the slats, is a close-board front, two-thirds as high, hung as a door, with hinges at bottom. Unbuttoned and let down, day-times, this forms a nice, sunny platform for little chicks, and is a night protector from vermin, while yet admitting air above. In hot weather this outer front might be made of fine wire. Skunks, rats, and dogs easily dig under and into floorless coops, and squeeze between slats, or reach into a coop that has no closed front some distance up. Years ago, when we had primitive arrangements, an unearthly noise awakened us. Following our faithful pussy, which was gazing anxiously in a coop, there was seen and shot a skunk, four chickens surviving the horrors of sound and scent. A portion of my coop's rear side is provided with leather or other hinges, and with button or hook fastener. This forms mother Biddy's door, and mice, too, for here are inserted scraping knife, whisk broom, whitewash brush, and other weapons of warfare against filth. A yearly outside and inside coat of whitewash, with some sulphur stirred in, is both wholesome and artistic. I once placed a brood within a coop whitewashed that very morning, and barely saved hen and all from dying of chills, learning thereby to make all preparations well ahead. A daily bedding of June grass or rowen makes coop cleaning easier by bringing out the droppings on itself, and if fine, well-packed, and not too deep, seldom entangles the chicks' toes, and must add much to comfort. For constructing the coops use lumber as light as practicable, so the little dwellings can easily be moved about.

I formerly had trouble from hens picking each other's chicks, even unto death occasionally, till I adopted the plan of locating my sitting hens side by side. These are taken off together every morning, and, though Biddy is supposed to be an exclusive creature, sticking resolutely to her own set, three weeks' constant association wears out all animosities and creates considerable friendship. Having had dust bath, sitting quarters and food so long in common prepares the way for neighborly courtesies. Several cluckers are set at the same time, so that they can begin housekeeping simultaneously, and their chicks, before given them, are well mixed, to secure uniformity in number and appearance for all the broods. As a result, the mother hens often stroll in companies, or at least hunt in couples, and a delightfully changeable and experimental relationship exists. Only strong chicks remain with roamers, weak ones gravitate to the quietest hens, and the clucker which stays by longest gets finally a monstrous family. Years of kind, systematic treatment, and a determination to be gentle and patient with little creatures knowing so much less than myself, have helped develop a trustful, friendly feeling among my fowls.

Several broods when weaned have adopted other cluckers—broken-up sitters without families. Last year one brood had simultaneously three mothers caring for them in perfect harmony day and night. I dubbed them "ma-ma," "grandma," and "auntie." Some guinea fowls, by following up, surrounding and persistently heading off, compelled in succession three adopted cluckers to scratch for and accompany them. A rooster of mine once took pity on a d joined the overworked mother of seventeen chicks. Finally I ventured to let him sit in the coop with her at night, as he desired, and soon found he was hovering sixteen chicks, while the old lady had one only. Shortly after this ungrateful mother, feeling her flock were in good care, deserted entirely both him and them. But this wonderful step-relative proved equal to the emergency, and brought up the chickens.

Hens are generally ravenous when the long period of incubation is over, and fully satisfying them with grain and water at the outset saves the chicks' choicer food afterwards, and prevents restlessness. For two weeks, or less, I allow chicks no water to drink; first, because with so much soft food they do not need other liquid; second, when so little, they cannot drink without getting their feet in, tumbling around, and generally wetting themselves; third, the small red worm which causes gapes originates in water, where it may often be seen, and of which chicks need to get the start. Here, by contrast, may be the very place to emphasize how much older chickens, and especially laying hens, need water. An egg is eighty-four per cent. water, and cannot be produced unless the hens have liquid as well as solid food. They like a new, fresh supply of water three times a day.

"Natural Incubation."

[A Paper read by S. B. Blackball before the Winnipeg Poultry Association.]

In obedience to the commands given at our last meeting, I am to endeavor to place before you some ideas in reference to the conditions necessary to the successful raising of chickens by natural incubation. In these days when everything has to go by steam or electricity, and inventors are straining every nerve to find some even more expeditious way to annihilate space, it seems almost as if we were going back to the dark ages when we attempt to talk of raising chicks by the old fashioned hen. Still, in spite of the fact that artificial incubation has so far been made a success that from 100 to 700 egg machines are to-day in successful operation, we who are limited to small city yards, and in consequence are debarred from the use of these machines must of necessity keep the old track, or go out of the business altogether. The last solution of the difficulty is one that you will all agree with me is not to be thought of, hence a little advice will not be out of place. First, as early broods are what we all want, and in this country the frost is not out of the ground when we want to commence setting our hens, our preparations really have to commence six months before, in the placing of a sufficient quantity of earth where we can easily get it when wanted. In making the nest, I believe it better to have it on the large size at the bottom; put say six inches of good mould (sod would be better), see that it is not frozen, at the same time have it quite moist, being careful to have the top of it perfectly even. Then with good, soft hay make your nest on the top of the earth, using about two inches of hay; this will permit of sufficient moisture reaching the eggs, as the warmth generated by the hen draws it up from the earth beneath the hay. In the early part of the season it is well to remember that it is better to "go slow but sure," and we would not recommend the placing of more than nine eggs under the hen, as with this number the body of the hen actually comes in contact with each egg. It is also well to sit two hens at the same time, as the eggs by the sixth day can be tested, and it may possibly happen that one hen can cover all the fertile eggs, and the other hen can be started anew. A great mistake made, especially by beginners, is to suppose that the hen must sit

all the time, and to this end they feed her in the nest, and even fasten them down to prevent them coming off. I have known this to be done. The hen should be allowed to leave her nest every day; more than that, if she does not do so voluntarily she should be taken off; in doing this care should be taken not to frighten her; if the same person attends her all the time she will after a day or two allow the attendant to handle her. In lifting her take hold of the wings and gently raise them, first lifting the bird by them. Feed only good, sound wheat or barley (wheat preferred), no soft food; see that fresh water is at hand, and, I was going to say, above all, see that a good dust bath of sifted coal ashes is always ready. This is necessary, not only for the comfort of your hen, but also for the life of your prospective chicks. Another point that I would draw your attention to is the location of the nest. If at all possible, have it entirely away from the other birds; remember that the quieter it is the better. With the above carefully followed out there is not much fear but what you will be able to report a good percentage as the result of Bidy's three weeks retirement at her country seat. I have purposely left out the question as to the advisability of taking the chicks as they come out from the eggs until all are hatched, though I believe that it is better to leave them alone. Some advise sprinkling the eggs and nest with warm water the last day or two, but my opinion is that with the earth at the bottom of the nest all the moisture that is necessary will be supplied.

The Farm.

Notes from P. E. Island.

BY WILLIAM CLARK, NORTH WILTSHIRE, P. E. I.

An experimental dairy station for this province is now an established fact. Prof. J. W. Robertson, Dominion Dairy Commissioner, visited our island during the early part of last month and made final arrangements for the establishing of the station. New Perth, Kings Co., is to be the favored location. At New Perth the Professor found a vigorous dairymen's association willing to guarantee him the milk of 340 cows for the station, and to provide all buildings necessary. On his part, the Commissioner promised to furnish all the necessary appliances for manufacturing cheese by the best methods, to put an expert in charge of the station, and to market the product in England as P. E. Island cheese. The patrons who furnish the milk will get all the proceeds save the charge for manufacturing. It is intended to carry on the work of dairy instruction in other parts of the province as well. The expert in charge of the New Perth station will be at liberty at times during the summer to address meetings of farmers and give all the instruction in his power as to the best methods of dairying to all who are willing to learn. In the autumn further plant will be provided the station for manufacturing butter instead of cheese during the winter.

Dairying during the last eight or ten years has not received the attention from our farmers that its merits demand. Horse breeding has been so remunerative that the majority of our farmers have turned all their attention to raising horses. But now there is a decided change, and farmers have to face the fact that they cannot get two-thirds the price they could several years ago for good horses, while they can hardly get clear of plugs and smaller horses at any price. Therefore, at this stage the operations of the dairy station will be watched with the keenest interest.

In a meeting held recently, Prof. Robertson touched on matters of general farming, but dealt chiefly with his favorite theme, "The cow and the dairy." He impressed us with the fact that if we intend to make the most of our business, we must raise more cheap feed, such as corn ensilage, clover, etc., which, when fed on the farm, left us a fine lot of rich manure. He also told us that in selling dairy products we sold a very small amount of plant food off the farm.

Trade and Transportation.

Although our agricultural export trade, taking all lines into consideration, is now on a better basis than at any previous time, there are still serious drawbacks that cannot but militate against a better and faster development of trade in some articles.

The trade in cheese and cattle has made wonderful progress, until these are now on a most satisfactory footing as far as demand is concerned. The last few years has opened the way for a further extension in products from the farm, which, heretofore, have not successfully competed with the same lines from other countries.

It is to the latter word in the heading of this article we wish to call special attention, and to the reason why Canada is so unfortunately situated as regards her carrying trade. Geographically no country is better situated than ours to supply with agricultural products Great Britain, the present market of the world; our producing powers are practically unlimited, and require only time and demand to develop them. Then what is it that at the present time is keeping us from possessing that which we are so badly in need of, viz., this market? The answer is, the defective transportation. Not only are the relative freight rates higher, distance considered, than those from any other country in competition, but the handling of the goods, the allotted space and accommodation on board both cars and steamships, is often so defective that goods are entirely ruined in transit. And, again, so much time is consumed during their transportation that prices at the time of shipping are no criterion of what prices may be when the goods arrive; consequently many dealers are deterred from embarking in the trade, or refuse to continue that with which so much uncertainty is connected.

How different from ours are other countries. Take Tasmania, for instance, that has an ocean voyage of at least ten thousand miles, with all the difficulties of tropical heat to contend with, yet is enabled through the efficiency of her steamship service to land every description of perishable products in England in perfect condition. This not only applies to meat, but also to dairy products and fruits of all kinds. Apples, pears and plums are landed as fresh as if just plucked from the trees, while car loads of Canadian fruit are repeatedly subjected to such high temperature on board the vessels employed in the Canadian trade, that they are absolutely ruined.

The government of Australia, New Zealand and Tasmania are all making strenuous efforts to gain the British trade, and have been so successful thus far that they have already supplanted trade which heretofore had little opposition.

And now let us enquire what has been done for us in Canada. Our government has given substantial aid to our grandly equipped railway systems; but are those who have paid for these luxuries deriving a corresponding benefit? The answer is certainly not in the affirmative. Our railways charge such exorbitant rates for local freight, which, together with the equally bad arrangements at the sea-board, and still worse accommodations on board the vessels employed in Canadian trade, combine to make shipping disastrous in the extreme.

Substantial government aid has been given both by Dominion and Provincial Departments in order to educate the farmers of this country as to what they should produce. But of what avail is the production if the proper outlet is wanting?

In some lines of production, such as grain, etc., and articles not perishable, only reasonable promptitude in delivery is required in order to give the shipper a fair profit; cheese also arrives successfully in the British markets; but in the matter of our more newly-found demand for Canadian eggs and butter the case is far different. These must have suitable departments both in cars and on shipboard; success or failure depends upon the promptness of delivery. There is now no question as to the reception that these goods receive, providing they arrive in the proper condition.

Already Canadian eggs have obtained a name at a number of points in both England and

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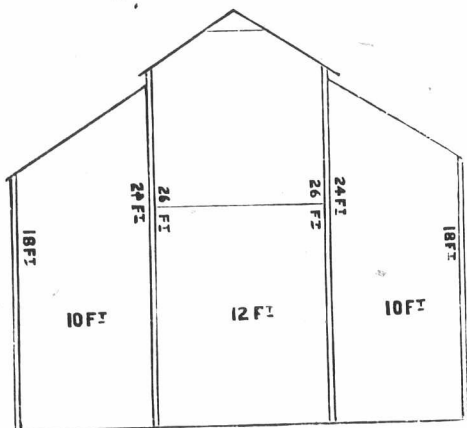
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Scotland that is most flattering to producers, and assuring to shippers. At the same time these being shipped via American railways and from American seaboard obtain better and cheaper rates, and more prompt delivery than from Canadian ports. Freight rates on export cattle are equally favorable to American shippers, and the advantage that Canadian cattle enjoy in British markets is often entirely overbalanced by the extra rates charged from Montreal over those from Boston. Again, every season has a repetition of buying and selling space, and Canadian cattle feeders and shippers too often lose the profit of a rise in the British cattle markets by being enforced to pay double rates for space. The fact is there is nothing so unsatisfactory as the present shipping accommodation, and as all our hope of future success depends upon an effective transit service for our agricultural products, we see no chance of a change for the better until the Dominion Government see fit to take this matter in hand. What the Danish Government has done for Denmark in her wonderfully developed butter trade, what those of Australia and New Zealand have done in meat and butter, Canada deserves at the hands of her government. Not in any one line, but in the whole transportation of her agricultural products, and without the assistance from some such source she must decline instead of develop in a trade to which she has a natural right.

Storing Hay.

As haying time advances, again comes the consideration, How shall the hay be housed? Stacking hay is wasteful and takes up entirely too much valuable time at the busiest season, and if stored in the grain barn it occupies the space required by grain, and also becomes injured by dust from threshing.

In order to overcome these disadvantages and to make ample room, I thought of building a cheap hay barn in which the work of storing is most easily performed, and where it is convenient to be got at during winter, and where no loss of quality would be effected. (An end section of this barn is given in illustration.)



Now, to build, I took six telegraph poles thirty feet long, placed them four feet in the ground in pairs twelve feet apart one way, sixteen feet apart the other—this to form what may be termed a drive-way through the centre. Then to form the wings of the building three shorter poles were placed on each side ten feet from, and directly opposite the first poles. These shorter posts are twenty-two feet long, four feet in the ground, forming the wings eighteen feet at the eaves. Thus the hay barn, or barrack, is thirty-two feet square, a drive-way twelve feet wide through the centre and ten-foot wings on each side. Scantling sixteen feet long are spiked from pole to pole, twelve feet from the ground, parallel with the drive-way, and ties twelve feet long are also spiked, running across this drive-way six feet higher up, or eighteen feet from the ground. Again, plates for the wings are spiked to the sides of the poles another six feet higher and twenty-four feet from the ground, and the top plates spiked two feet higher for which to place the rafters for the middle space or drive-way. As the wings are boarded down to eight or ten feet from the ground, the first scantling is ten feet from the

ground, another fourteen feet up, and the plates eighteen feet, or at the top of these wing posts.

By building in this way it is an easy matter to scaffold in order to spike on the higher ties and get up the necessary timber for the roof. As the spans are short and the roof light, two-by-four rafters are all that is necessary.

The board roof is built of good lumber, running up and down with the rafters, across which strips are nailed to receive the roof boards. A very thin board, three inches wide, is placed beneath the boards where they come together, then nail the boards in the centre. This will make them a little hollowing. By capping the cracks with strips four inches above, the roof will be found to be perfectly waterproof as long as the lumber remains sound. A short tie is nailed a short distance down from the peak to hold the horse fork track and strengthen the roof. Braces should be nailed diagonally across from heel to point under the rafters, as the strips will not hold the roof as stiff as sheeting. A facing board is nailed one inch from each end rafter to admit the gable boards which slip in the groove thus formed. At the tie below an extra scantling is held by long staples; the outside scantling is left loose and held like the cross scantling in a double gate. The boards that form the gables have cleats nailed on the inside, rest on the tie, and are then readily taken down when required to run the hay in without removing a nail. When finished, the building is boarded within ten feet from the ground all round, which is sufficient, as the hay can be taken out and moved away in sections and need not be left exposed.

The advantages in storing hay by this method are the cheapness of building, the convenience, for a horse fork and track work as well as in a barn. Hay in these quarters will keep far better than in a barn, as it is quite away from the breath of cattle or other stock. By exercising care in hauling, the centre or drive-way should be filled with the driest hay; then at the sides may be placed that which is not so well cured, as these spaces are comparatively narrow. This barn, or barrack, will hold from fifty to sixty tons of hay, and should be built for \$75, not much more than a dollar per ton for the first year, and should pay for itself in the extra quality of the hay.

What an Agricultural Journal Should Contain.

BY THOMAS J. FAIR, FRANKFORD, ONT.

An agricultural journal, considering the very few farmers who have had any educational training to fit them for their occupation, should contain the latest and best information on all subjects relating to both scientific and practical agriculture, such as the care and feeding of stock, the selection and thorough testing and cleaning of seed and the preparation of the soil to receive the same, the best time and ways of harvesting and storing the crops, the best kinds and methods of cultivating fruits and vegetables; placing before the farmers the great importance of thorough and clean cultivation, the benefit to be derived from underdraining, and in some soils from subsoiling, giving prominence to stock raising and dairying, and the raising of soiling and other forage crops, including roots, and scores of other topics which will suggest themselves to publishers or be contributed by others, the articles to be published at least one month before the season for putting them into practice. Then when a farmer receives his journal he will expect some spicy information relating to the work he has planned for the next month or two, and will be benefited by it. For example, the notes on seed grain in the March number were replete with valuable information relating to the choice of seed grain; then a part of the April number might profitably be devoted to the best method of preparing the soil and sowing the same; May, to the putting in and cultivation of roots and other hood crops, interspersed with other articles of importance, and so on through the whole year. But no communication, no difference by whom written, should be published unless the matter was in accordance with the fundamental principles of scientific and practical agriculture. Many very absurd things are sometimes thought-

lessly published that are misleading, and the editor is held responsible for the same. The above is a brief outline of what I think an agricultural paper should contain. I will now mention a few that I feel should not receive much space, one of which is allowing breeders column after column to puff the good qualities and grand performances of their favorites, seeming to think self-praise the best of all, for they can have it at any time, forgetting that one column by editor or some disinterested party would be worth more than a score over his own signature. An old adage reads:—

“The wi-est and the best of men
Enjoy some nonsense now and then.”

But I would not publish much in an agricultural paper such as stories, puzzles, etc., for the press of the world is poisoned with too much sensational, frothy and nonsensical literature. How the ADVOCATE accords with the foregoing I leave with your readers to judge. Fellow farmers of this magnificent country, is it not a shame if a paper like the ADVOCATE should go begging support when published solely in the interest of us, who number seven-tenths of the population, when the balance, made up of lawyers, doctors, merchants, grocers, manufacturers, druggists, and many others support a journal published in their respective interests, with this difference, all other trades and professions had special training, while most farmers when commencing their business are almost entirely ignorant of the scientific and practical part of agriculture? As for myself, though having a fair education, I knew very little about farming, and though still ignorant enough, I have my eyes open and can see the knowledge we are in need of. I would suggest that every reader of the ADVOCATE induce one or more of his neighbors to subscribe. In nearly every county in Ontario are farmers of first-class scholastic attainments, many of them graduates of universities, some of them specialists, who could contribute first-class articles on the science and practice of farming. If the man who makes two blades of grass grow where only one grew before deserves well of mankind, what doth the man merit who teaches the thousands of toiling farmers in his country to do the same?

The Laying of Stable Floors.

BY J. D. THOMPSON.

One of the first things to consider before making a floor is the durability of it; this is too often lost sight of. The saving effected by a waterproof floor would in a few years pay for it. A mixture of Portland cement and fine, clean gravel makes one that will last a lifetime, and let nothing run to waste. On preparing to lay such a one be sure to have the ground well drained around your stable, make a good level bottom with a slant of two inches from manger to drop. Lay a course of cobble stones as near a size as possible, pour over them a mortar of common lime and coarse sand thin enough to run into and fill all holes. Work this in with a coarse broom, leaving the top rough; let this dry, then mix and put on a finishing coat, Portland cement, one part; and fine, clean gravel, five parts; mix first while dry, then add water and work until thoroughly wet, then spread over the stones to a depth of about two inches. An iron snow shovel will give the quickest and nicest possible finish. To make the drop, lay the cement against a bevelled scantling; this is better and much cheaper and easier than putting in curb stones. The gutter or trench should be not less than six inches deep and two feet wide, behind this lay cedar blocks, in sand, cut four inches long. These should be laid nearly as high as the main floor slanting the trench up to them; this is more convenient and easier to clean out than a square one. In using this for a horse stable we would make it stronger; four parts of gravel to one of cement, when hardened, would withstand the sharpest calks. Cement floors should be made in summer or early fall, as a frost prevents them from hardening; sprinkling with water quickens the process. The cost of such a floor is little more than plank, and there's no home for vermin under them. We have used such a one as this for three years, and it has given perfect satisfaction.

Rape Culture.

BY JOHN I. HOBSON.

Perhaps there is no problem more difficult for the Canadian farmer to solve than how to keep up the fertility of the soil. No observing farmer can have travelled through this province at intervals during the past ten or fifteen years without clearly recognizing the fact that there was more than legislation or foreign competition that was tending in the direction of ever making it more difficult for the farmer to hold his own. In many sections where I have travelled there appears to be an ever decreasing quantity of stock kept, and consequently less grass, and a greater proportion under the plow. This, on very many farms, is doing the work effectually of bringing the land into that shape that it is certain that unless some radical change is made in the system followed—a change whereby the fertility of the land is restored—many of these men will be forced to leave their farms. Artificial manures, except in special cases, are out of the question. The experience of the best farmers in the country does not tend to make them put much faith in their general use, but rather that the cheapest of all sources of manure is the farm-yard itself, and, unquestionably, on it we must mainly depend for our supply.

It is very noticeable that, with few exceptions, the most successful farmers in the country are men who follow stock-keeping largely in some of its forms. In fact, so noticeable is this, that we may well be led to the conclusion that on the ordinary soils of this province stock-keeping is the basis of good farming, and that a farmer's success will depend a good deal on the quantity of dairy produce or meat per acre his farm is made to produce. As a means in that direction, the growing of rape and feeding it off on the land has been found by many of our farmers to be followed by highly satisfactory results. During the past two or three years, owing to its having been grown extensively on the government farm at Guelph, it has, as a branch of farm management, been brought prominently to the front, and its uses and its value have been pretty freely discussed. However, although it has been grown extensively in this section of the country for many years, and thousands of lambs fattened on it have annually been sent to the American markets, yet I have found, when travelling in other parts of the province, that it is quite exceptional to see it grown to any considerable extent, and it is a little surprising that such should be the case, for there is no question of this fact, that those farmers engaged in growing it have made a good deal of money for years past in sending their lambs in prime condition to the Buffalo market, and it has been found to be no small factor in keeping their farms in a good state of fertility.

I would say to the farmer who has never grown a crop of rape that he would be acting wisely to go into it in a small way at first, and prove, by his own practice and observation, whether the conditions in which he is placed are suitable to its production, and to find out for himself many little things that can be learned best by experience.

The system which is generally followed by those who have grown it successfully is to prepare the land just as is done for the turnip crop. Taking it for granted that one of the objects in growing it is that it will be a cleaning crop, then it follows that if the land is pretty well worked the fall before a good many thistles and weeds will have been got rid of and so much less work will be required in the way of hand hoeing the next season. The last plowing should be done deeply, or if the land is inclined to be stiff, plowing in what is termed ridge and furrow—that is, putting it into drills—is an excellent plan. I have found in my own practice that it answers a good purpose, the winter's frost making it more friable when worked the following summer. An important matter is to have the land in fine tilth when sown.

As to the soil best suited for growing rape, a fair crop can be grown on almost every variety of soil properly prepared. I have a few acres of sandy soil on the opposite corners of my farm;

in one case it is what may be called a poor leaching soil, and some of the finest crops of rape ever grown on the farm were on these fields. In both cases it was sown thinly, with about three-quarters of a pound of seed to the acre, and top-dressed when the plants were into broad leaf with two hundred pounds of gypsum to the acre. Scientists can, perhaps, explain the reason why. My general practice of late years has been to grow it on land at the end of the course and apply a small quantity of manure—about seven or eight loads to the acre.

The time of sowing may be any time from about the 20th of June to the middle of July. I prefer the last week of June, if the land is in good condition and the weather favorable. The drills should be from twenty-seven to thirty inches—the latter width is preferable if the land is very rich and likely to produce a heavy growth.

A good deal has been said about whether rape should be sown on the flat or raised drills. It appears to me that as a general plan it is so much the best to sow on raised drills that it is not worth discussing. Of course, one can theorize and prove to their own satisfaction that the contrary is the right plan to follow, but the fact remains that the consensus of opinion of nearly every farmer that I have met who has grown it successfully is opposed to growing it on the flat. The only objection to a raised drill is that there is more danger of the sheep and lambs getting on their back and not being able to get up. For the first few years in my own experience a good many were lost in that way; but I soon found that close attention was necessary to keep down to a minimum the percentage of loss.

Coming to the question of sowing, if the seed is fresh and good, and the land well prepared, from one to one and a-quarter pounds to the acre is ample. It is a great mistake to sow thick. To obtain a full and well-grown crop it requires room for the plant to grow large and high. I mean by a good crop one that when a flock of lambs is turned in they will be about covered with the plants; and it is quite a mistake to think that the strong and thick stalks of the rape plant are not quite as nutritious as the leaves. At all events, if a chemical analysis was to show the contrary, practical results would then be at variance with science.

The after-working should consist of a free use of sculler as long as there is room to work between the rows, and it is here where comes in one of the advantages of raised drills, the work of horse hoeing being so much more readily done. If the drills have been carefully made of a uniform width, the sculler can be set as to hoe close up to the plants, and then the work of hand hoeing, if it is done (and it certainly should be if the best results are to be obtained), is a comparatively light affair, just cutting away any weeds or thistles that may be amongst the plants. By a free use of the sculler not only will the land be left as clean as after a first-class summer-fallow, but the weight of the crop will be much increased.

In regard to the value of rape as a late fall feed, there are no two opinions as to its being the best crop grown for fattening sheep and lambs, but there is some difference of opinion as to its value for feeding cattle; not but what it is well understood that flesh can be laid on at less cost and more rapidly than by the use of any other feed that is fed off directly in the field, but the experience of many growers is that it is rather risky. Without advising as to its use for cattle, what I can say is this, that having grown it somewhat extensively for over twenty years I have found it a very cheap and satisfactory fall feed for cattle, and even pigs do remarkably well upon it when they receive a small allowance of grain. During the many years we have grown it there has been the loss of only two calves, one of them clearly the result of mismanagement in turning on with an empty stomach. With regard to either cattle or sheep great care should be exercised that before being allowed to feed on rape they have been well fed beforehand. My own practice is to have a grass field adjoining into which the stock can have free access at all times, and when once put on the rape leave them there until the weather gets cold and rough in the late fall, when it is necessary to house at

nights. When taken off in this way it is very important to see that they are well fed in the morning. Much of the trouble and loss which does occasionally happen in feeding rape is mainly attributable to not exercising a little common sense in these matters of detail.

A well-grown crop of rape should carry from ten to twelve lambs to the acre for eight or ten weeks, or say from about the 20th September to the end of November. Some feeders consider it a good plan to feed a small quantity of grain when in the field. My own experience leads me to think that there is no profit or advantage in doing so unless for special reasons—such as being a little over-stocked, or when meat is high and oats and bran very cheap. Of course, all good feeders know that the lambs should become accustomed to eat grain before being changed from the fields to the yards, and for the same reason it is always well to mix in a little turnip seed when sowing. If attention is paid to these things very little shrinkage will occur when put on to changed feed.

Mr. Donaldson, of the county of Oxford, one of the very best farmers and stock managers in Ontario, always feeds oats to his lambs when on rape, commencing with a small quantity and increasing until they get one pint per day to each lamb. In that way he fattens from 15 to 18 lambs to the acre, with an average increase of weight of from 25 to 30 lbs. per head in ten weeks. In this way he always turns off a splendid lot every year, bringing the very highest price going.

Mr. Laidlaw, another very extensive and intelligent feeder in South Wellington, has had single lambs increase forty and even as high as fifty pounds in seventy days when on rape.

My own flock of purchased lambs was put on last year at an average of 98 lbs.; were fed for sixty-three days, and weighed, when delivered in Guelph, 121½ lbs. However, a fair average flock of 200 good lambs would be from 20 to 25 lbs. in seventy days.

Care should be exercised that before the nights get frosty to have the lambs closely trimmed. They do not thrive so well when hanging with dirt; the buyers do not like it, and the farmer shows himself to be careless and slovenly.

A word as to the class of stock to buy. Never buy miserable runts of lambs if good ones can be had—the experienced feeders who have been in the business many years fully understand that. It does not require that they should be fleshy if they are only the right stamp of animals. I always prefer black-faces when I can get them. They, as a rule, have done best with me. Ram lambs should not be bought at any price if it is intended that they be kept on until early winter. They are troublesome with the other lambs, do not sell well, and are unsatisfactory to handle in any way. It is to be hoped that the American buyers will make such a difference in the price this year as will make farmers feel that they have made a mistake in not castrating them.

In regard to the after use of the land, it is needless to say that if the preparation for the crop and its after management has been what it should be the land will be quite as clean as after a first-class summer-fallow, with the advantage of having received from \$10 to \$20 an acre (in some cases considerably more) in the increased value of the stock from the time of their being turned on until they are taken off, or rather when they are sent to the market, which is usually, in this section, between the 5th and 15th of December. Besides this, the land has received all the benefit of the manure without even the expense of drawing and spreading—this is a good preparation for next year's crop.

Owing to its being the last feeding crop of the season, one is a little apt to get caught with the frost before getting the land plowed. However, if it can be managed at all, it is very important that the plowing should be done. With much treading of the stock the soil will have become very firm and stiff and stands much in need of the action of the winter's frost after being turned up. Spring plowing of rape land with us has not been followed with satisfactory results. On the other hand, on our soils, when plowed in the fall, we always expect a good crop of spring wheat if the season is at all favorable, and the land we find to be in good shape for seeding down.

Weeds.

BY J. HOYES PANTON, M. A., F. G. S. (Continued from page 185.)

PORTULACACEÆ (Purslane Family).

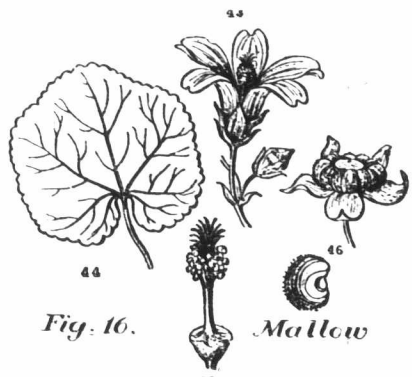
The leaves of the plants in this order are very succulent; the flowers are regular, but there are fewer parts in the outside whorl than in the next. The beautiful portulacacæ, whose flowers are so numerous and varied in color, also belong to this order.

Portulaca oleracea (Purslane).

The stems of this annual lie on the ground and spread; the oval leaves are very thick and juicy. In July small yellow flowers appear, and the plant spreads rapidly, becoming one of the worst weeds in the garden to attack. So succulent is this plant that it will continue to perfect its seeds long after separation from its parent root. A day's sun will hardly wither the plant, but may ripen and shed many of its seeds. When pulled or hoed, it should be gathered into a heap and destroyed. In hoeing, it would be well to avoid tramping upon it, for if it is not entirely removed it is almost sure to continue growing, unaffected by its temporary disturbance. It seldom becomes a nuisance elsewhere than the garden. It has wonderful vitality, and may be for days root up without being destroyed. Hoeing is not sufficient, unless it is completely overturned and allowed to wilt beneath a scorching sun. The best remedy against Purslane is continued vigilance and incessant use of the hoe.

MALVACÆ (Mallow Family).

This is an order in which some beautiful flowering plants are found, such as the Abutilon, Hibiscus and the Hollyhock. A very striking characteristic of the family is that the flowers have many stamens all uniting by their filaments to form a tube around the pistil, and thus crowding the anthers together.



Malva rotundifolia (Mallow, Cheese plant).

This is also a great trouble to gardeners, but seldom invades the open fields. It delights in the rich loam of the garden, and retains a good foothold where once rooted. It has a perennial root which enables it to continue from year to year. Its long, creeping stalk contains a large amount of nourishment, which enables the plant to keep up life under adverse circumstances. It is known by its creeping stem—bearing round leaves, among which, from May to August, may be seen white flowers about half an inch in diameter, possessing the peculiar union of the stamens already referred to. When matured, the seeds form a structure not unlike a cheese in form, and hence the name sometimes given—Cheese-plant. It must not be allowed to go to seed, and as far as possible the leaves should be kept from forming. If these hints are followed the perennial root will soon fail and the plant be destroyed.

M. Moschata (Musk Mallow).

The stem of this plant is erect (1 to 2 feet), and is somewhat hairy. The leaves are more or less parted, or cut into slender linear lobes. The flowers are about one and a-half inches in diameter, and are usually white. This plant is

frequently seen along the roadsides in some parts, and can scarcely be considered a serious weed as yet. It has no doubt escaped from gardens to its present place.

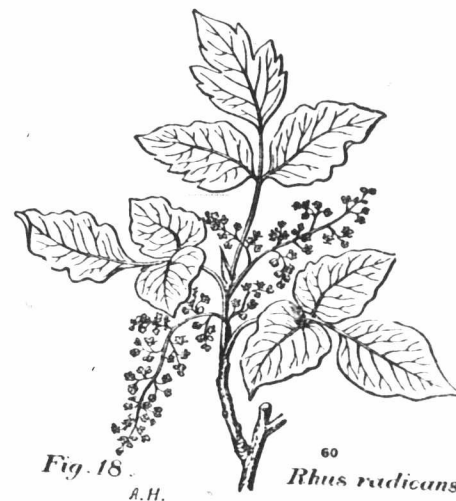
ANACARDIACÆ (Cashew Family).

Attention is called to this order on account of three species here that possess poisonous characters. Where such are found they should be entirely destroyed. Not only the juice, but even the exhalations from some species are poisonous.



1. Rhus venenata (Poison Sumach, Poison Elder, Swamp Dogwood).

This is a very poisonous variety. The leaves are arranged in pairs along the leaf stem; from seven to thirteen leaflets, oval, entire, pointed, each about three inches long and one-half inch wide. These soon change color in the fall, and present foliage of a very attractive appearance. The flowers are small, greenish and in loose panicles. The fruit is in the form of small nut-like structures; dry, smooth and shining, whitish in color and about the size of small peas. The drupes are well separated from each other, and not crowded as in the case of common Sumach. This species grows from ten to fifteen feet high, usually in low spots. Several are to be seen in the Dufferin Islands, Niagara Falls. One very good specimen can be seen at the south end, right-hand side of the second bridge, as you go south. It would be a warning to visitors to have this plant labelled. Its convenient position and gorgeous foliage have no doubt been often a cause of sorrow to wanton visitors who visit the park from time to time.



2. Rhus Toxicodendron (Poison Oak, Poison Ivy).

This is a low variety; leaflets in clusters of three, broadly oval, pointed, two to five inches long, three-quarter inch wide; leaf-stalk three inches. The plant seldom if ever exceeds three feet in height, and is generally about two feet high. It is exceedingly common along the banks of the Niagara River, in the vicinity of Victoria Park. Flowers, yellowish-green in panicles; fruit, dry, smooth, shining, pale-brown berries. This is also a poisonous variety, but not so much so as the preceding. This plant is very common in many parts of Ontario, and is often seen along the railroads.

Alderman G. F. Frankland's Impressions of Manitoba.

The Dominion of Canada—how vast, how rich. Manitoba with her boundless prairies, brings to my recollection the works of Bryant:

"These are the gardens of the desert; these The unknown fields, boundless and beautiful, For which the speech of England has no name; The prairies, I behold thee for the first, And my heart swells, while the dilated sight Takes in the encircling vastness."

During last fall I was wandering through Southern Manitoba, talking with the farmers and observing their crops, for unfortunately their industry is confined principally (through lack of funds) to the growing of wheat, oats and barley, and thousands of acres of grass and wild peas, knee deep, are going to waste for want of cattle. And if the pioneers were better off it would not be so; for two years before this frost ruined their wheat, and the few cattle they possessed had to be sold to meet their bills. However, last year of plenty will assist in making a change, and their lands will be utilized for different lines of agriculture. I am sorry to write that money is very dear to the farmers, and exorbitant interest is demanded for small sums that are borrowed from local money lenders. It does seem to me that when a man is down the treatment he receives is not calculated to get him on his feet again. One poor fellow gave his note for \$100 for six weeks until he got his wheat into market, and for that note he received \$76. And yet, notwithstanding all these difficulties, Manitoba is solid and developing well, for it was clearly demonstrated to my mind some miles from Manitou that necessity is the mother of invention, for I came across a farmer who had built a stable on the side of a bluff, covering it with small poplar trees and then placed square cut sods upon them that made a good warm roof, and as he had 10 acres of very fine turnips and a large quantity of frozen wheat and oats he had contracted to feed 50 eleven hundred pound steers for 190 days for \$20 each, and guaranteed to make them fat fitted for export to Great Britain. I saw the cattle and took note of the man and his pile of feed, and I felt assured that a man of energy and pluck that he appeared to be, who could build such a stable, dig a well under the same roof over an eternal spring, would never say fail. It is such men as these that are moulding Manitoba, for they have no sympathy with cowboys and cattle ranches, but believe in domestic farming.

I was engaged late one day in visiting several cattle breeders and was obliged to sleep in Manitou, therefore, I had to drive across a sea of prairie some 25 miles on Sunday morning to Pilot Mound, as I had promised to go with friends to hear a Rev. Dr. Lane preach some missionary sermons, for be it known that the little village of Pilot Mound is as full of churches as Toronto, comparatively speaking—Presbyterian, Methodist, Baptist, and the dear old Church of England, and a corporal's guard of the Salvation Army. If I could write with the pen of Faith Fenton I would describe my lonely drive on that beautiful, sunny Sabbath across the solitude. But stay, I met fathers and mothers and children walking and driving, no doubt to some place of worship, and they looked happy. I will close by quoting again from Bryant:

"From the ground Comes up the laugh of children, the soft voice Of maidens, and the sweet and solemn hymn. Of Sabbath worshippers. The low of herds Blends with the rustling of the heavy grain Over the dark brown furrows. All at once A fresher wind sweeps by, and breaks my dream And I am in the wilderness alone."

The crops were marvellously great, and God has bountifully blessed the farmers of this western part of our Dominion.

Turnips and Turnip Culture.

BY A. P. KETCHEN, BRUCEFIELD.

Turnips have long been, and still are, held in high esteem by the best feeders of stock, both in the Old Country and this. In fact they are the mainstay of the British farmer. If the turnips are a good crop, he has a prosperous year; but, on the other hand, if they fail, he reports a deficit in the treasury. This crop, perhaps more than any other, has been the subject of discussion in the agricultural press and at farmers' meetings. One of the first objections to them is the large amount of labor they entail; true, but then it must be remembered that no good thing can be obtained for nothing, and if the profit corresponds to the labor there is no cause for complaint. Again, we hear a great deal about the large amount of water they contain. Grass itself contains 80 per cent. of water, and grass is, perhaps, the most perfect cattle food. Beef contains 50 per cent. and milk 87 per cent. of water, and they are two of the most nutritious articles of diet we have. So it will be readily seen that the feeding value of a substance cannot always be determined from its chemical analysis. In fact it is largely to their succulent nature that turnips owe their value as a food. It is always noticeable that cattle fed a small quantity of turnips have a sleek, healthy appearance. The turnips improve their digestion and enable them to digest the coarse feed given them and turn it into a marketable product, whether beef or milk, to a better advantage than can be done without them. Another point in favor of turnips is that cattle always relish them. I have seen cattle that were fed a heavy ration of meal get so tired of it that they would refuse to eat a bite of meal and go off their feed altogether for a week or ten days. Now, this means a heavy loss to the feeder. Not only does he lose the time, but he will lose a good many pounds of beef, which costs him time and money to produce. Not so with cattle fed a ration which contains a reasonable amount of turnips. They have always a healthy, vigorous appetite, and are always ready and eager for their food. Even in the warm, close days in May, towards the close of the feeding season, these cattle will thrive and take on flesh, when without the turnips you can scarcely coax them to take enough meal to keep them from losing in weight. Another point in favor of a root crop is that it cleans the land. It is an indisputable fact that in order to obtain the best results from our land, we must keep it free from all foul weeds, and in order to do this we must either summerfallow or hoe. Now, it just takes about the same amount of team labor to prepare a field for roots that it does to work a summerfallow. This leaves us the crop for the hoeing and harvesting. Taking an average crop of turnips to be 600 bushels per acre, and their value to be five cents per bushel, which is very low, it gives us \$30 per acre for the hoeing and harvesting. Surely a man ought to make good wages at that!

And now for a word as to the best methods of culture. The preparation of the soil should commence immediately after the removal of the previous crop by gang plowing thoroughly. Allow it to lie long enough for the most of the rubbish to germinate, and then plow it well. Pains should be taken with the plowing, as a little extra time taken then will save a lot of time and labor the next summer. It is a good plan to plow it as soon as possible after seeding. Harrow and roll, and then leave it till about the 10th of June. This will help to kill the weeds. After applying the manure, plow it well and work it up fine. You cannot make the land too fine and mellow. The turnips will amply repay any extra labor put on the land. Drill it up about 28 inches apart and sow. It is a good plan to soak the seed for about ten hours in coal

oil before sowing. The flies will not be nearly so hard on the turnips if this is done. We always roll the drills after sowing, to press the earth close up to the seed; it will make it come up better. The horse hoe should be kept going through the turnips as often as possible, even if there are no weeds to cut; it stimulates the plants to increased growth every time the land is stirred up around the roots.

There are many ways of harvesting turnips—in fact, nearly every man has a way of his own; but the plan we have always followed has been to top them with the hoe and plow them out, using an iron plow without the mould-board. If the weather is favorable this way works well; but if it is wet and the land sticky, we pull and top them by hand.

Value of Exhibitions.

BY W. H. HAY, EXPERIMENTAL FARM, OTTAWA.

In treating of the value of exhibitions, I wish to discuss the subject from an agricultural standpoint. It appears to me that a great many people look upon an exhibition as being an institution somewhat similar to a circus—as something planned to give amusement, and to make money for the promoters. It must be admitted that there are a great many side shows and circus-like performances carried on, but these, it is contended, are found necessary to please the people who go there for amusement, and without these special attractions funds enough could not be raised to defray the unavoidably heavy expenses incurred.

From a somewhat considerable experience gained by attending exhibitions in charge of the Dominion Experimental Farms' exhibits, I am led to believe that they are of great value to the agriculturist, the manufacturer, and, in fact, to everyone else who may have goods to advertise and sell. The manufacturers seem to be fully alive to the advantages derived by attending these exhibitions, and bringing their goods under the notice of the public; but the farmers do not seem to realize the value of the exhibitions as a means of advertising their products. The majority of farmers who make exhibits, do so with no other end in view than to secure the prizes offered, the value of which in many cases does not cover the cost of preparation and transportation of the goods. They find this out in time, and cease to become exhibitors, believing that there is no money in it, overlooking the fact that the prize money is a small matter as compared with showing to the world the value of their grain and stock, and also forgetting the educational value and pleasure derived by themselves and their families in the preparation of the articles for the exhibition, and the pride they take in exhibiting the prizes won, and showing off their prize animals to their envious neighbors.

It may be asked, Why should the farmer advertise his products? For the very same reason that the manufacturer advertises his implements, or the merchant his goods. The manufacturer makes his machines to sell, and when he has a good thing he lets the public know it. The merchant makes his living by selling goods, and he who advertises most (provided always that he has a good article) generally makes the most money. The farmer is not only a producer, but may also be classed as a merchant. Many of them are successful as producers, but failures, or at least partial failures as business men, or in the disposing of their products. Why is this? Simply because they do not let the public know that they have a superior article, and do not use their best efforts to secure the highest possible price for it.

In the first place the farmer should aim to obtain the very best results from every branch of agriculture in which he may be engaged. As a

means towards obtaining the largest possible returns for what he has to sell, it occurs to me that he cannot overestimate the advantages that may be derived from making a neat and attractive display of his products at the agricultural exhibitions. To him it is a means of advertising not only the produce on hand, but for future supplies, for there is always a demand for pure seed and choice stock, not only by the seedsmen and dealers, but by other farmers, who may want a change of seed, or who may wish to try some new variety.

It appears to me that the displays of agricultural products at the exhibitions held in Toronto during the past two or three years, have been very meagre and few in comparison with the other exhibits; and although most of the grain shown was of excellent quality, it was not nicely arranged, and, consequently, made a poor showing.

To show how little interest the farmers seemed to take in their exhibits, I might say that I was commissioned to buy any samples of grain that I should consider suitable for the World's Columbian Exposition to be held in Chicago next year. I undertook to do so, and started out to interview the exhibitors, but they were not to be found. Many of them no doubt, were taking in the side-shows, and neglecting their own interests. Several times I passed through the Agricultural Hall and Dairy Building in hopes of seeing a few at least of these men, but only one exhibitor did I find, and he was constantly at his post, giving information about his grain, and taking orders for grain to be shipped when he returned home. This gentleman very kindly went with me and we took a small sample of grain from the different lots, together with the name and address of the exhibitor, so that the Canadian Commissioner if he wished could deal with them by mail. I am not sure, but I believe the gentleman referred to was the only one of the lot from whom grain has since been purchased. Doubtless these exhibitors lost many more orders by their neglect.

VALUE OF THE EXPERIMENTAL FARMS' EXHIBITS.

There can be no doubt but that the exhibits from the Experimental Farms have been of special value to the farmers and public generally. These exhibits have included grains and many other agricultural products collected from all parts of the world, many of them introduced and grown in this country for the first time. Samples of fruits have been shown—especially grapes grown at Ottawa—that many people thought could not be grown and ripened in such a northern district. The large and beautiful collection of grasses was an attraction of special interest to the ladies, who admired them for their beauty, while the farmers and stock raisers examined them and enquired about their value as fodder plants. The great variety of potatoes shown received their share of attention, especially by farmers, many of whom had probably never seen nor heard of more than half a dozen sorts, and would go away determined to try some of the new kinds in hopes of being able to do better with them than with the old varieties which they had grown for years. Many of the farmers would no doubt get some new ideas as to the arranging of their exhibits, and thus gain some helpful information. Altogether, I think our exhibits have been a success—they have been an object lesson to the farmers, and have proved to be not only interesting but instructive.

That the Industrial Exhibition held in Toronto has been a success, is manifested by the progress and growth made during the past few years. The immense crowds of people who attend from all parts of the Dominion, and from the United States prove the prosperity of the institution. Canadians should feel proud of this exposition, as it is acknowledged to be the finest of the kind in North America.

Farmers should take special interest in these exhibitions, and do all in their power to make them a success, as they have been inaugurated and carried on for their benefit more than for any other class. They should attend, not only as exhibitors, but as visitors, taking their families to see the sights, and to profit by what they may observe and hear.

Feed your Land before it's Hungry.

BY JOHN TAYLOR.

Every farmer knows that he can never grow paying crops unless he has his land in a fair state of fertility. The manner in which they pretend to do it is enough to satisfy an intelligent observer that they either don't know, or else they are too lazy or greedy. I think the latter is the reason in many cases. If he sows clover seed he will stint the number of pounds per acre, for fear he might sow ten cents worth too much. If he sees the young clover growing up nice in the fall, and sees a bit of pasture might be obtained off it, he will turn his cattle on it to eat the life out of it, until there is nothing left to protect the root in winter, when it would pay him a hundred times better to be feeding his cattle in the stable, keeping them improving in condition, instead of going back all the time pasturing young clover out by the roots. Ask him how he is keeping up his land, he will say he is manuring his land with stable manure. Well, stable manure is all very well, but I think it will be far from meeting the demand required. Every farmer knows he can not cover all his farm with manure every other year. To keep the land in right shape it must have something between every coating of barnyard manure. I do not believe that the average farmer in Ontario grows over two-thirds the grain he might if he kept his land as rich as it ought to be. How is the land to be kept up? Fall back on the provision Providence has made. Sow clover, sow it thick and sow it often, and you will never run your land down. Some may say, how do you know you will have a catch of clover? If you have your land as rich as you ought, you will never miss a catch. The poverty of the soil is the trouble in nine cases out of ten. I think every man who can get it ought to sow plaster on the young clover about the middle of April; it is manufactured at Paris, Ont., and costs \$4 per ton at the mills. It seems to be especially adapted for clover. I sow from 100 lbs. to 150 lbs. per acre, and would sow it if it was double the price, for I think it would pay. We haul it right from the mill and get it at \$4 per ton. I never let a field, stand in clover or grass more than one season. If you let it stand longer you run the clover out, and are apt to let quack grass or other foul weeds in, and impoverish the land so it will not grow clover, or in fact anything else without a great deal of nursing. If you ask farmers what they are going to put on this field or that field, they will often say they don't know, and don't seem to know until they start to sow. That kind of work is ridiculous. A farmer that doesn't work on a better system than that will never make it a success. Every farmer ought to have a systematic rotation of crops that he intends to follow, and stick to it. One farmer may be growing two thousand bushels of grain every year, while his neighbors, with the same size of a farm, same kind of land, may grow only one thousand bushels. The man who grows the two thousand bushels by systematic feeding of his land, is increasing the fertility of his soil every year, while his neighbor is impoverishing his land every year. One follows a proper rotation, while the other has no rotation at all. With all our boodle governments, high tariffs and low prices, I see no reason why a farmer cannot live, and live well. The reason why there is so much depression and grumbling is because they do not mind their business, study their business, and try to make it pay. I believe the percentage of farmers in Ontario who make the most out of their farm is very small, very small, indeed. As a grain-grower, I sow lots of clover. I

can tell you what I am going to grow on this field or that field for ten years to come. My land is always rich enough to insure a catch of clover. I never let it stand more than one year, and never have a bare summerfallow. I never plow wheat land more than once, and keep it worked on the top, which is far ahead of plowing three or four times. Some say you cannot kill thistles that way. I say, if you farm right you will not have thistles; and if you are unfortunate enough to have them sow lots of clover, and you will smother them out, or at least make them weak and sickly, so that if you plow them up once and keep them down by working the top, they will not bother you.

Effects of Forests.

(John Craig, Horticulturist to Experimental Farms, before Agricultural Committee of House of Commons.)

The effects of forestry on the climate of a country are nearly all beneficial, such as more equal distribution of rainfall. This is one of the most important points to be considered; another is the regulation of the temperature—by this I mean prevention in a measure of extremes—the possibilities of a sudden rise or fall in the temperature—changes so frequent in prairie districts—may be lessened. Then, again, evaporation from the soil is very much reduced. There is a vast difference between the condition on the surface of the bare and uncovered soil, and the soil on the forest floor. A forest floor serves the purpose of a sponge in collecting and holding the moisture which comes down in the form of rain. The fine root system of the trees assists in drawing up moisture from below. As the rain falls it collects around and within these forest centres, which hold and give it up gradually, thus obviating spring torrents and summer freshets. Another important point which has not been sufficiently emphasized in connection with forest influence is the prevention of the strong force of the winds, with their great evaporating power. The evaporating power of the wind is generally in direct proportion to its velocity. The greater the velocity the stronger its evaporating power. Thus we can see the value of shelter belts. The more protection we have in the way of shelter belts the less sweeping winds we have, and the moisture is taken less rapidly from the soil. There is no doubt that as soon as we can get in the Northwest a sufficient amount of forest area to mitigate to some extent the force of the winds, we will have a much less rapid evaporation, and much more favorable conditions for fruit culture and agricultural operations generally. Among the most promising varieties of forest trees for giving quick shelter are a class destined to be one of great service in the Northwest; I refer to the testing of a large number of fast growing willows and poplars which have from time to time been introduced from East Europe and the plains and steppe country of Russia. We have now growing at the Central Farm, raised from cuttings, several thousands of these willows and poplars which will be increased as rapidly as possible. They are a remarkably fast growing, hardy race of trees. We have already tested them at a few points in the Northwest in small quantities, and they have given every indication of hardiness and success. We are now making arrangements to continue the work of distributing next year by sending a large selection of these to a number of points in Manitoba and the Northwest. If we can introduce and establish at different points groves of hardy, fast-growing poplars and willows, and thus obtain a little shelter, we may hope a little later on to introduce some of the more tender and valuable sorts which are not able to withstand the rigors of the climate unprotected; and so, by making a small beginning, our woods may be gradually increased.

Dairy.

Churning.

BY J. W. HART, SUPERINTENDENT OF DOMINION DAIRY STATION, N. B.

Churning effects the separation of fat from the other constituents of milk or cream by means of agitation in a churn. Milk contains fat in the form of minute globules, which are emulsified in the serum of the milk. So small are they that not less than 100,000,000 of them enter into the composition of a butter-granule the size of a grain of wheat. The effect of the agitation produced by churning is to unite these microscopic fat globules more or less rapidly and completely, forming solid granules or masses of butter which are visible to the naked eye.

Not to enlarge upon the chemical changes which take place in milk and cream, a butter-maker has the following factors to deal with:—The temperature of the cream and of the air of the room in which the churning is done, the time occupied in churning, the ripeness of the cream in degree and in homogeneity, the proportion of space the cream occupies to the total capacity of the churn, the richness of the cream in butter fat, the size and shape of the churn, the speed of the churn, the length of time the cows have advanced in lactation, the breed and individuality of the cows, the season of the year, and the character of the feeds given to the cows. Of these factors the ones that are under the control of the butter-maker must be skillfully adjusted to each other, and to those over which he exercises no control.

In this way may butter of a uniformly high quality be made, and the buttermilk be left poor indeed. The Babcock tester is a valuable aid to the butter-maker. By using it he is enabled to find out how much fat is being left in the skim-milk and buttermilk, and having located the leaks he may mend his ways so as to reduce the loss to a minimum.

The cream from "strippers" has to be churned at a higher temperature than the cream of "fresh" cows. The melting point of fat, and consequently the churning temperature, increasing as a cow advances in lactation.

The character of the feeds used in the dairy has an important effect upon the butter, especially upon the flavor. Butter of the finest flavor cannot be made from the milk of cows fed upon musty or tainted feed, nor when large rations of turnips are fed. Although it is possible that such deleterious volatile flavors in the milk may largely be driven off, in doing so the desirable and aromatic flavor is also driven off. In the best butter, the creamy, delicate flavor that the cows had put into the milk has been retained in the butter; hence the essential importance of good milk to begin with.

The cream of the cows of the Channel Islands breeds can be easily and exhaustively churned, owing to the large size of the fat globules, or rather to the scarcity of small fat globules in it. But if the proper methods be adopted, exhaustive churning may be done always, and there is no excuse for any butter-maker leaving more than half of one per cent. of fat in the buttermilk; nor will he if he knows his business.

In separating cream, the cream should leave the cream spout just as thick as it will readily run, thus saving the largest possible percentage of the by-product from lactic fermentation, and

having the smallest quantity of cream to handle consistent with good work.

As soon as separated the cream should be cooled to a temperature between 45° and 60°. After cooling it should be ripened as rapidly as can be done without injuring the quality. Whether separated by the natural method or by the centrifugal, cream should be ripened, churned and marketed with as little delay as possible. The use of a fermentation starter will aid in shortening the time between the cow and the churn. A "starter" made of skim-milk in John Boyd's fermentation can be the best, while sour cream is good. About 2 per cent. of starter is the proper quantity to use. In ripening cream a high temperature should be guarded against, or the curd will be cooked—a most undesirable condition in butter-making.

High temperature, and neglect to stir cream that is ripening when the air dries the surface, are the most common causes of white specks in butter. It is better to keep the cream vat covered. Cream should be evenly ripened throughout its whole mass. By gentle stirring at frequent intervals uniformity in ripening is secured. If cream be over-ripened the butter made from it will not keep, because lactic fermentation has advanced too far, and putrefactive fermentation has commenced in the cream, and will continue in the butter. As soon as cream coagulates (and under the action of lactic acid it will coagulate just as certainly as will milk upon the addition of rennet) it is ripe and ready for churning. Just here judgment, skill and experience are necessary to secure uniform ripeness of the cream every day, and at the same hour every day, so that the work may be carried on with some system.

If the cream be distinctly sour without being thickened it may be run into the churn, and churning commenced on the slightest appearance of thickening. The John Boyd ripening vat is a valuable device for small dairies, but the common cream vat with a large faucet, and with plenty of ice and water space, is preferable for creameries.

It is a good plan to strain the cream into the churn. In coloring, care must be taken to secure the same shade from churning to churning. The color should be added to the cream immediately before churning is commenced.

The use of the Babcock tester will convince anyone that there is a loss of fat varying from one to three per cent. in the buttermilk when the butter comes quickly, say in fifteen or twenty minutes, while if the time of churning be doubled by slightly lowering the temperature, the percentage of fat in the buttermilk will be as low as from a trace to half of one per cent.

From thirty-five minutes in hand churns to forty-five minutes in power churns, should be occupied in churning. When the churning is finished the butter granules should be about the size of No. 6 shot, and the buttermilk thin enough to run from under them readily.

If there be cream enough to fill the churn more than three-fifths full, it is better to divide it and churn twice. If the quantity of cream to be churned varies from day to day, it will be necessary to lower the temperature in case of a small churning, and to increase it when the churning is larger than the average.

The churning temperature will be in the neighborhood of 56° in summer and 64° in winter. The correct temperature is that temperature at which the cream is churned when the butter comes in the proper time.

In starting to churn, if the churn be not self-ventilating, it requires to be opened once or twice after starting, to permit the "gas" to escape. Although the speed at which the churn swings or revolves is one of the most important operations in the whole series of operations entering into the production of butter, it is too often a point to which little attention is paid, even in large creameries. Most churns are run too slowly, especially at the critical period of the butter's history when it

"breaks," and while it is gathering. The result is that the easy, gentle, rolling motion of the churn allows the fat globules to carry into the composition of the butter globules a large amount of casein. These granules are of various sizes and shapes with surfaces ragged and jagged, and are loaded down from centre to circumference with buttermilk, which no amount of washing and working will remove. On the other hand if the churn be run rapidly (and in a revolving churn a rapidity of motion only slow enough so that the centrifugal force will not prevent the contents of the churn breaking against its sides will not be too fast) the small pellets as they form into larger pellets go together solidly; the granules, without the undesirable buttermilk, are spherical, smooth and even in size. When such butter is washed once it is freer of casein than slowly churned butter after repeated washings.

When the granules of butter are of the proper size, the churn should be stopped, and about five per cent. of cold water sprinkled over the surface of the butter. When the cream has been very fat or rich, a larger proportion of water may be added with advantage. A dozen rapid revolutions of the churn should follow. The buttermilk may now be drawn off after the surface of the butter has again been sprinkled with cold water. The water for washing the butter should be of a temperature that will leave the butter neither too hard nor too soft for working. In a room where the thermometer stands at 60° or 65°, the temperature of the water need be only slightly lower than the churning temperature; during the heat of summer it may have to be lower by 15° or more.

After the buttermilk has been drawn, water in quantity sufficient to replace the buttermilk should be poured into the churn, after which the churn should be revolved quickly a few times, and the water allowed to run off. The butter may now be taken out of the churn. Butter may be salted and packed directly from the churn without the intervention of a butter worker, but the practice is not to be recommended under ordinary conditions. The same care and attention that has been given the butter thus far should be followed in salting and marketing it.

To make the finest quality of butter, strict attention must be paid to cleanliness. It is needless to experiment to ascertain the fidelity or falseness of this statement, as we have it from the highest authorities on dairying that first-class butter cannot be made unless scrupulous cleanliness be observed throughout the entire process. All utensils ought to be washed and scalded as soon as used, and every wooden implement or vessel should be scalded and cooled before bringing it into contact with butter or cream. The cream should not be run into a dry churn, as the manner of some is, neither should neglect to rinse the particles of butter from the churn, to wash, scald and to dry it after using, and before the grease has dried into it be tolerated. All water used about butter or butter-making should be clear and pure.

Because butter-making is not an exact science as is mathematics, and because it is impossible to implicitly follow, and never deviate from a set of rules, other than the most general, an intelligent thinking man or woman may find in this business an outlet for all the professional skill that he or she can command. A butter-maker should endeavor to master every detail of the business. Owing to the complex and changeable nature of the compounds which have to be dealt with, the methods must vary from day to day, and from week to week. "Eternal vigilance is the price" of "gilt edged" butter, and to handle the milk and cream in the most economical manner, and to make butter that will be eagerly sought for by consumers when the ordinary article is a drug on the market, necessitates something more than ordinary care and skill in its preparation.

With her temperate climate, abundance of pure water, with rich pastures and fertile fields, with "cattle on a thousand hills," there is no reason why Canada's butter should not be on top in the world's markets, and to "get there" requires only systematic and persistent effort on the part of the producers.

Dairy Notes and Comments.

The Babcock milk tester has been pretty extensively used and discussed all through the West last winter at the institute meetings, especially at the Wisconsin Farmers' Institute meetings. It is an old saying "ignorance is bliss," but a man who is keeping a lot of cows and feeding them at considerable expense, and is ignorant of the fact that they are not paying for their board, is suffering from an expensive kind of ignorance. A writer in an American paper, who has been attending these meetings, makes the following remarks: "We have tested milk at every institute so far this winter, and we have never failed at a single meeting to make some owner of cows unhappy by showing him that he was keeping some of his cows at a loss, or feeding a good deal of butter fat to the calves. I am in hopes that the misery caused thus by their enlightenment will do these unhappy men good, by causing them to weed out their poor cows and adopt better methods by testing their milk." We hope the readers of the FARMER'S ADVOCATE will take this same matter up and not rest contented until they have a Babcock tester, or are in easy access of one, to have their cows tested and know just what they are giving them in return for the feed they consume. The same writer, referring to a test of skim-milk that was made at an institute meeting, says: "Three samples of skim-milk were tested, each showing .4, .6, 1.6 of butter fat. It was interesting to see the dismayed countenance of the owner of this last sample, his loss resulting from defective setting. He is a German farmer, keeps quite a number of cows, and makes excellent butter, for which he gets top prices. And the thought that he had been feeding half of his twenty-five and thirty-cent-per-pound butter to his pigs simply overwhelmed him, and he will use a better method of separating his milk by a separator, as a result of this test." We wonder how many readers of the ADVOCATE are doing very much the same as this German farmer, feeding fifteen to twenty-cent butter to their pigs and calves, when five cents worth of linseed meal or oil cake would do their pigs or calves quite as much good.

The question of a good thermometer often crops up, and a great many dairymen seem to grudge the price asked for a good one. We know of farmers and dairymen who come in to buy their thermometers from those who keep nothing but what are true and reliable, and go away saying they can buy one for twenty-five cents. We do not dispute the correctness of this assertion, but we would not take a dozen of the cheapest and carry them home as a gift. Reliable and correct thermometers cannot be made and sold for less than fifty cents to one dollar each. The value of a correct thermometer in every dairy is not appreciated, and the importance that should be attached to such an article is overlooked. There is many a churning of first-class cream that would have made good A1 butter, but has been spoiled for the want of a good thermometer. We hope our readers will not neglect this important little instrument, and not grudge paying a good price for a good article. Some dairy supply dealers keep a regular standard thermometer, which is correct to half a degree at any time. These thermometers, of course, are very expensive, and we know of one firm who has one that cost them \$10. They use this one for testing the thermometers that are supplied their dairy customers before being sent out, and if there are any not correct they are discarded.

Augustus F. Schulz, of the town of Lake Mills, Wisconsin, was one of the first dairy farmers to adopt the silo, and he has become so thoroughly convinced of its value and utility that we read the other day, in a leading dairy paper, that he is about to build a silo that will hold 800 tons. This is an enormous quantity of ensilage, but no doubt Mr. Schulz knows what he is about. To produce this quantity of ensilage would require 50 or 60 acres of silage corn; from this our readers will have some idea of the extent to which some dairy farmers are investing in silos and ensilage.

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A great many dairymen and farmers think that it does not pay to keep posted, or in other words, to take one or more good agricultural papers. We have been taking observations on this point for a great many years, and in every case our most progressive and intelligent dairymen, stockmen or farmers are those who take from one up to one-half dozen leading agricultural papers. A man to be a successful dairyman or farmer or stock raiser must work with his head as well as with his hands; in fact, it is a question whether it will not pay him to work harder with his head, and let somebody else do the hand work.

Now that the question of winter dairying and silos is being taken up and discussed, and our leading dairymen are about to adopt this method of dairying, it becomes a question of profitable feeding. The policy of that veteran dairyman, the late Hiram Smith, was to make the land carry more cows, and at the time of his death his farm was carrying 100 cows on 200 acres; this he did largely by the aid of the silo and soiling. He once remarked: "The question of milk hangs on the question of feed, providing that the feed be fed in an intelligent manner to a profitable cow. The farmer should set it down as an invariable law that he must always provide the cow with an abundance of feed. Starvation policies result in starvation profits." These are pithy, pointed remarks, and are worthy of careful thought.

Anyone who has stood beside the weigh can of a large cheese factory and watched the different cans of milk as they are poured into this receptacle, and observed the bottoms of some of the patrons' cans after the milk has been carefully poured out, has doubtless been surprised at what may be seen in the bottoms of some of these cans. This unsavory looking article is due to indifference and carelessness. Milk should never be allowed to go to the factory without straining, whether you think there is any filth in it or not. We touch upon this subject because we have so many times seen patrons bring their first mess of milk to the factory liberally supplied with black bits of excrement, and in apology we have heard them say, "As soon as I get around to it I will rig up a strainer and strain my milk." We can only say: Observe the strictest cleanliness before you ever draw your milk to the factory; have arrangements and preparations made for the thorough straining and handling of your milk in the most careful and cleanly manner, and no patron should allow anything to go from his premises to the cheese factory that he would not place upon his own table. There is quite as much dishonesty in allowing improper or filthy milk to go to the factory as in allowing some member of the family to skim it.

Prof. Dean, under the direction of President Mills, of the Ontario Agricultural College, is fitting up a dairy school at the college at Guelph. Their appliances will include five small vats, with the necessary conveniences for working each one separately and independently of the other. The idea of this is to enable the pupils who are taking lessons to take charge of a vat independently and separately from one another. This is a wise move, and will be a great advantage and assistance to the pupils who are taking this course at the college, and will give them a degree of information and assurance which will enable them to complete their course very much more thoroughly than they could otherwise do. We think this is a move in the right direction, and we hope the dairy public of Ontario will appreciate this, and render these gentlemen all the assistance in their power.

When the price of butter runs away down, many dairymen raise the question and say that it does not pay to keep and feed cows, and they invent all sorts of excuses to relieve themselves from giving their cows the necessary care and attention and feed that they should have. Now, these are just the times when the cow should have extra care, feed and attention. If a dairyman is going to keep cows, and intends to derive a part of his living and income from this source, he should stick to it year in and year out—high price and low price. If he does this he will make his dairying a success.

The first meeting of the London Cheese Association was held in the City Hall, London, on Saturday, the 14th ult. At that meeting John Geary, Esq., was unanimously nominated President for the ensuing year, and J. A. Nelles Secretary-Treasurer. A code of by-laws was read and adopted, and the Secretary instructed to have them printed for distribution among the members of the Association. Among the rules and by-laws adopted was that of selling on the Call Board system for the ensuing year. This plan has worked very nicely and satisfactory on this board during last year, and there was no opposition to that motion at the annual meeting. There is no doubt that this is much the nicest and best way of conducting the cheese market, and if the members will only live up and act honorably with regard to the rules and regulations governing the call system, it is the most satisfactory way a salesman can market his cheese. The offering was very light, only a few small lots of the first half of May. Some salesmen reported having sold and shipped the first week in May, which is a pretty good indication that new cheese are wanted at reasonable prices.

The dairyman who wishes to succeed in the dairy business and make it pay must not be set in old ways, but must be alive and progressive. He must read intelligently, and think and study for himself, and be on the lookout for all the new modes and improvements in the dairy industry. If he is going to make the dairy business a success, he must stick to it, increase his products and lessen the cost. The question of the cost of his products is one of most important facts in connection with the success of the dairy industry, and this is one of the points that all the leading and progressive dairymen are turning their thoughts and attentions towards. This points directly towards the silo and winter dairying, and the dairyman who is going to make dairying a success will have to lay himself out and keep his cows milking at least ten months in the year.

The Elma cheese factory commenced operations in April, and will pay their patrons on the basis of the per cent. of butter fat, as shown by the Babcock tester. This factory is, we think, the first in Canada to adopt this system, and we hope their example will be followed by dozens of other factories before the season of 1892 has closed. There has been a large demand this spring for these machines. The dairy goods firm who are manufacturing these in Canada this season, informs us that they have not been able to keep up with the orders, and are some twenty or twenty-five machines behind their orders. This is a pretty good indication of the value and importance of the Babcock tester, and we do not think the day is very far distant when every factory in the country will have one of these machines.

Some cheesemakers, and a good many proprietors, will object and raise the question of extra labor that will be entailed in making these tests. But surely any live, wide-awake company or factoryman will not object to allow their cheesemakers a fair remuneration for this extra labor, which should be in the neighborhood of \$50 to \$100, according to the size of the factory, and the number of samples he will have to test. The plan adopted by the Elma factory is what is called composite test, which is simply this: A sample of each patron's milk is taken every morning from the weigh can after the milk has been poured in and thoroughly mixed. This sample is put into a glass jar (a pint gem fruit jar for instance) with the label or name of the patron upon each one. These are set away, and a sample is taken every morning during the week from each patron's milk and put into his jar. These six samples being all in one jar are then taken on Saturday, and after adding a little powdered lye and shaken up, a sample from this composite sample is then taken and put into the Babcock bottle and a record made from this test, which process simplifies the labor of testing patrons' milk very much, and is quite as correct and quite as reliable as if a sample of each patron's milk was tested every morning.

The cheese factorymen and dairymen of the United States are trying to regulate the quality of their cheese (that is, the amount of butter fat) by law, but we do not think they will be very successful along these lines. We think it would be wiser and better for the factorymen, the buyers, and all who are interested in handling their cheese, to make combined efforts to keep up the quality of their goods by discouraging, discountenancing and denouncing any tampering or adulterating or partial skimming of the milk before being made into cheese. This has been the policy adopted by the Canadian dairymen, buyers, and all interested in the welfare and success of the Canadian cheese trade, and we think that the success of Canadian cheese to-day is largely due to this fact. It is an old saying, "Give a man an inch, and he will take a foot;" give a factoryman the privilege of skimming, and he will skim too far; in fact, we do not believe in skimming at all for cheese.

No doubt a number of dairymen are debating in their minds the advisability of building a silo, and are undecided as to whether it will pay them or not to invest along these lines. To all such we would say that the silo has come to stay, and the wide-awake, intelligent dairymen are building them. The expense is not a serious matter, and a good silo can be built for less than one dollar per ton of its storage capacity. And from what we know of the value of good ensilage to dairymen, we have no hesitation in saying that this expense will pay for itself, if a silo had to be constructed every year.

Judging from the prizes offered for competition at their annual convention last winter, the Ontario Creamery Association are evidently trying to discourage and discountenance dairy butter and the manufacture of butter in private dairies. This we think is a great mistake on their part; the day will never come when all the butter can be made in creameries or at butter factories, and it looks very selfish and ungenerous on their part to exclude dairy butter. We think it would be a wiser and better plan to draw out and try to encourage and stimulate the improvement and advancement of the make of butter in private dairies, for in very many instances they are the stepping-stone to a butter factory or creamery.

Mechanical Milking and Pasture Grasses.

Your issue for March contained many articles, several of which being of more than usual interest to me. In your report of the meeting of the Ontario Agricultural and Experimental Union, President Mills is stated to have said: "That there was a machine now used in Scotland which after a long and careful test had proved an entire success. They had written about it. The cost of the machine would be about £1 per cow. The entire herd could be milked in about five minutes."

To say the least of it, this statement is very much exaggerated. Other than the inventor (Mr. Murchland, Kilmarnock), I have tested this apparatus longer and more exhaustively than any one else, and am, therefore, in a position to say exactly to what stage of proficiency it has been brought. During 1891 I had it under test for the whole year, the number of cows continuously milked with it being from eight to twenty. The results of the first year's working (which was entirely experimental) are contained in a paper which will be published immediately in the Transactions of the Highland and Agricultural Society of Scotland, a copy of which I will send you when issued.

The results of the first four months were not satisfactory, owing to the fact that the apparatus did not milk the cows quite clean, and because in the state it then existed, if the cows were hand stripped, they yielded up to the apparatus a smaller percentage of their milk. The best results were attained where no hand milking was done; but then, without hand milking, some cows did not give all their milk. Since autumn, however, matters have been very much improved, the most of the cows being now milked quite dry, and either the hand or machine may be used, without any detriment to the use of the

latter. As yet I am working the apparatus with a hand pump, but I expect shortly to have this driven by some mechanical power. Had I one of your tread horse-powers I would put the stock bull to do the work of milking the cows, and expect it will be about one of the handiest and cheapest powers available. In Scotland, where water-power is very plentiful, it may be most generally used, but with you such does not exist. The cost is about that stated by Mr. Mills, viz., £1 per cow up to say 20 or 25 cows, after which it is little more, no matter how many cows are in use. Mr. Mills is, however, wrongly informed as to a whole herd being able to be milked in five minutes. This might be done if the herd was composed of one only, which was particularly easy to do, but under no other circumstances.

The milk of each cow runs into a separate can, or at most that of two cows may run into one can. These cans are connected with a permanent pipe running through the cow house, which in turn is connected to the air pump. From each can four tubes are led, one to each teat, and to place the cans in position, make the connection with the exhaust pipe, and put on the teat cups takes, roughly speaking, from half a minute to a minute. With nothing else to do but attend to the cans, my experience leads me to believe that a man will be able to attend to five or six cans. By the time he has put these all on, the cow to which the first one was attached will be milked, or nearly so. This one he will take off and put on say the seventh cow, by which time the second will be milked, and so on throughout the whole herd. Under ordinary circumstances each cow takes about the same time to milk mechanically as by hand, say from six to eight minutes, but the attendant during milking looks after six at one time instead of one, as in hand milking. The average hand strippings obtained here from the mechanically milked cows, seldom exceed one pound after the cows have stood half an hour, which in many cases is the natural production for the time, often no milk at all being left when the cups are taken off. Only exceptional cows fret at it, and heifers are easier milked by it than by hand.

In connection with dairying, I am pleased to note that your people are devoting themselves to a knowledge of pasture grasses, as is shown by the articles of Mr. Elder, of Virden, and Mr. Fletcher of the Experimental Farm, Ottawa. To Mr. Elder I would suggest the propriety of sowing his timothy and other grass seeds on a fairly rough surface, and then well harrowing them in. Out of a great number of tests made by me here, in the open, I find the principal grasses, including timothy, all germinate well from $\frac{1}{4}$ to $\frac{3}{4}$ inches deep, and even at $1\frac{1}{2}$ inches in 100 tests extending over five years, the percentage of plants is fully four times greater than when the seeds are sown on the surface. These results I expect will be intensified with you, because in Manitoba the sunshine is so much stronger than with us. Deep seeding (comparatively speaking), I think, would also help to prevent the plants from being thrown out by the frost of the following spring.

When in Canada in 1890 I saw the plots of grass at the Ottawa Experimental Farm under the charge of Mr. Fletcher, and in many of these I was very much interested. I am pleased to learn from some of his remarks that several of the British grasses are likely to do well in your climate. He speaks well of the fescues, orchard grass and poas, and if these do fair you should have no difficulty in producing better pastures than any I saw in Canada. If there was one thing more than another with which I was disappointed in the country it was its pastures, natural and artificial, and it gives me pleasure to know, that with the importation of European varieties, combined in all probability with some of the native varieties I saw being tested at Ottawa, there is a probability of your pastures being in the future very much improved. In this matter I think Mr. Fletcher is doing good service, and if only individual farmers all over the country, like say Mr. Elder, would make similar tests, progress would be very much quicker.

JOHN SPEIR,
"Newton Farm," Glasgow, Scottish Farmer
Delegate in 1890.

A Well-kept Record.

What do my cows yield in milk or butter? and do they pay me a fair return above what it costs for their care and feed? are questions which the practical dairyman should be able to answer. In making an honest effort to do so by the pursuit of accurate knowledge regarding these matters, many have found themselves for the first time getting on the highway to success in dairying. As a sample of a milk record, we have seen nothing from a farm dairy to exceed, in neatness and apparent accuracy, that which Mr. Edwin C. Harvey, of Dugald, Man., has handed us. It covers the performances of 20 cows (mostly "natives"). Several important lessons are to be gleaned therefrom. The 20 cows gave a total of 96,173 lbs. in the year covered, yields ranging from as high as 8,835 lbs. down to 1,009 lbs., the five best yielding 39,165 lbs. and the ten best 69,809, or an average of nearly 7,000 lbs. milk each, one week's milk after calving in each case not being counted. Mr. Harvey's record shows that the large yielding cows were the *persistent milkers*, viz., those keeping up their milk flow practically the year round. He made butter summer and winter. In the latter season he fed fodder, shorts, ground oats and a little oil cake. Under generous grain feeding, some cows ran to beef and were sent to the butcher. On an actual test, one of his heaviest milkers was found giving milk just about as rich in butter fat as those "away down" on the list. The detailed tables give the name of each cow, date of calving, age and the average number of pounds per day each week throughout the year. The following table shows the general result:—

Name of Cow.	Age.	Milk. lbs.	Remarks.
Lo.	6	8,835 $\frac{3}{4}$	
Daisy.	9	8,415 $\frac{3}{4}$	
Teenie.	11	7,511	
Rosy.	12	7,209 $\frac{1}{2}$	
Duff.	6	7,196	
Victoria.	9	6,807 $\frac{1}{2}$	
Bruce.	10	6,483 $\frac{3}{4}$	
Rascal.	2 $\frac{1}{2}$	6,154 $\frac{1}{4}$	
Polly.	8 $\frac{3}{4}$	5,807 $\frac{1}{2}$	
Grey.	10	5,300 $\frac{3}{4}$	
Topsy.	9	4,084 $\frac{1}{2}$	Jersey cow — 5 per cent. butter fat in milk.
City.	8	3,582 $\frac{3}{4}$	
Sally.	3	3,529 $\frac{3}{4}$	
Nigger.	4	3,155 $\frac{3}{4}$	
Semiramis.	2	2,821	
Granny.	15	2,621 $\frac{1}{2}$	4 mo. milk. Sucked while at pasture after that.
Spoondyke.	2	2,145 $\frac{1}{2}$	
Cherry.	7	1,799	Sold for beef in May.
White Face.	8	1,615 $\frac{1}{4}$	Sold for beef in May.
Pickles.	2	1,009 $\frac{3}{4}$	2 mo. milk. Sucked while at pasture after that.
		96,173	

Mr. Harvey has resumed dairying and record keeping, selecting, feeding and breeding cows with a view to the dairy qualities, ignoring altogether the idea of combining beef therewith. In fact, he says he ruined one herd as dairy cows by the infusion of strong beef-type blood.

Some of the dairy associations in the United States are adopting the plan of offering a prize for the best essay on various subjects, to be competed for and read at their annual convention. This is a capital idea, and we think that our Eastern and Western Ontario Dairywomen's Associations, and also the Creamery Association, will do well to follow this example and arrange for a series of essays to be written and compete for prizes at their coming convention next winter.

A good many prominent dairymen of the United States are now discussing, and some are advocating, the disposal of the skim-milk from their herds by feeding it back to the cows again while in a perfectly sweet condition. Whether this will become satisfactory remains to be demonstrated. Those who have tried it claim that it keeps up a large flow of milk, and that the milk is much richer. This method saves the trouble of keeping so many hogs for those who do not like them, and if the practice has the merits claimed it should be a profitable one; however, more careful tests are needed for this use of skim-milk before it should be recommended and generally adopted.

Garden and Orchard.

Experiments with Large Fruits.

[John Craig, Horticulturist to Experimental Farms, before the Agricultural Committee of the House of Commons.]

In large fruits we are making a test of varieties running along two lines; first with the standard varieties chosen from the nurserymen's catalogues of to-day. These are the product of the first introductions by the early settlers, as modified by selection and cultivation, and now called the American varieties. These varieties have mostly come to us from the western and moister parts of Europe as our settlers came from that region. The French colonists when they first came here brought with them the best fruits of their native locality; the English settlers followed and brought their favorites; and the Scotch, Irish and Welsh did the same with theirs; so that to begin with, as I have already stated, we had the fruits of western and the milder portions of Europe. I might say this class then, composes one side of the varietal test. Secondly, the other class is made up of East European sorts which you have frequently heard referred to as the "Russian apples," and I will draw attention to them quite often in the course of my remarks, as we are testing this class extensively. In order to give you an idea as to the causes which led to their introduction for trial into this country, touching upon the early history of the movement, I will relate briefly a few facts relating thereto, upon which hinged the beginning of the work.

Ever since the introduction of the Duchess of Oldenburg from Russia, by way of England, about 40 years ago, there has been a growing interest in the fruits of that cold climate. The first large importation was made in 1870 by the United States Department of Agriculture. This comprised 252 varieties, but owing to the very crude state of Russian pomology, evidenced by the many synonyms afterwards found in the collection, and coupled with long unpronounceable names, the work of sifting the good from the bad in this cumbersome list has been laborious and slow. Without going into details in regard to their merits and demerits I may say, that already a sufficient number of valuable varieties have been found to repay all the expenses incurred in the work of introduction and trial; and when we look at the possible advantages to be derived from these foreigners by uniting them with our native varieties, thus obtaining hardiness on the one side, and, possibly, quality on the other, the benefits likely to accrue are inestimable. I have said the first importation was made by the United States Department of Agriculture, but the credit of bringing this work to a practical and a successful issue is due to a Canadian—one now departed—I refer to the late Chas. Gibb, of Abbotsford, Quebec. At great personal expense, in company with Prof. Budd, of Iowa, he undertook the arduous task of visiting the various localities in which these fruits were grown, making notes on condition and quality of tree and fruit. The result of those investigations—a fair and unvarnished statement of facts was published, and is now the foundation of our knowledge of the Russian fruits.

As far as we know at present any apple tree not up to the grade of hardiness of Duchess, Tetofsky, Wealthy or Pewaukee is of doubtful usefulness for planting in the district of Ottawa or similar latitudes. I have referred to the work in apples. Experiments of a like nature have been carried on with pears, cherries and plums.

Our Flower Garden.

BY J. H. HUNTER.

Nothing has afforded us more pleasure than to note the increasing interest taken by school teachers and their scholars to beautify the school-houses and their surroundings. This has transformed many an unsightly box of a school into a pretty rural nest. By a little labor the children can make real pictures of the old weather-beaten school-houses, and will take an interest in the work if encouraged to do so. The boys can make a rustic porch over the door, which may soon be covered with vines. The girls will make hanging-baskets for the windows, and plant ferns on the cool, shady side of the building, and form flower beds in the sunshine. Children will learn all the better with these fair things about them, and acquire taste and refinement that will sweeten and beautify all their lives.

I will give a list of a few varieties most easily cultivated, and with the expenditure of fifty cents or a dollar, and a little care, will, in a few months' time, work a wonderful change in any school house:—Astor, Balsam, Phlox Drummondii, Mignonette, Candytuft, Alyssum, Pansies, Ten Week Stocks, Four o'Clock, Petunia, Zinnia, Sweet Peas, Mourning Bride, Morning Glory, Scarlet Runners, Canary Bird Flower, Double Daisy, Portulacae, descriptions of which can be seen by referring to the two previous numbers of the ADVOCATE.

Garden Annuals.—These are all beautiful, and some lovely. Many who buy and sow them never see their full beauty. Why? Simply because they have never had the following secrets of sowing and growing put plainly before them for their guidance:—

The situation must be open, free from shade, roots of trees and shrubs, etc., etc. It is astonishing how thick and far these roots extend, taking every bit of moisture and goodness out of the ground. The soil should be dug deeply, and, if very poor, moderately manured. This done, it is no matter whether the seed is planted by making an indentation in the soil half-inch deep with the edge of a bit of wood or any other contrivance. The seed must be covered with fine soil—the smaller the seed the finer and thinner the soil. Usually they come up like mustard and cress, and the thick, green growth looks nice and cheerful. Now, the most remarkable part of the business for amateurs to understand, and understand they must, is to have nerve enough to pull nearly all of them up. Nearly all the annuals are better for being thinned or transplanted, if done at the proper time and in favorable weather. It will be surprising how well you will succeed by letting them have sufficient room to develop their proper individual proportions; if not, they are poor and puny, and in and out of bloom in no time. Thus ill is spoken of the plants and the seedsman who supplied them.

The Hollyhock.—There are very few plants in the world so large, so grand, and yet so perfect and delicate as the Hollyhock. Its flowers are quite as double and almost as pure and perfect as those of the Camellia, and when we remember that they mass around a column from three to five feet in height, we get some idea of their beauty. They embrace a great variety of colors, such as shades of crimson, primrose, lavender, mauve, black, white, rosy carmine, etc., and are more easily raised from seed than is generally supposed. The usual way is to sow the seed in August half an inch deep in the place where they are to remain. The Hollyhock is very hardy, and will stand our most severe winters without the slightest protection.

Fuchsias.—These are elegant flowers, delicate in coloring and exquisitely graceful in form.

When in full bloom they are a most beautiful sight. The Fuchsia requires a light, rich soil. Sprinkle often and give plenty of light and air. The usual way is to obtain plants, flower them in the house during winter, and then consider them useless. This is all wrong. If you have any defective spot on the north side of the house that you wish concealed during the summer, nothing will answer the purpose so beautifully as the Fuchsia. Put out the plants in early summer, sinking the pots a little deeper than the rim, and before the first frosts remove the plants to the house, and they will make you glad all winter, and be ready for service the following spring.

Hydrangea, Paniculata Grandiflora (Native of Japan).—The most beautiful and useful of all Hydrangeas. It is perfectly hardy, and grows freely; one of the best hardy garden shrubs. The flowers are produced at the end of each shoot, in large panicles, often a foot in length. They first open creamy white, changing to pure white; as the season advances, it becomes a light tinge of pink. On strong shoots the flowers stand erect, on others they have a drooping habit. One of the grandest plants for the lawn, garden or border, also used largely in cemeteries; blooming in July, August and September.

Ferns and wild flowers are excellent material

involved in obtaining the chemicals.

“In a vessel capable of holding two or three gallons, dissolve 1½ pounds of copper sulphate (blue vitriol) in 2 quarts of hot water. This will be entirely dissolved in fifteen or twenty minutes, using the crystalline form. In another vessel dissolve 1½ pounds of sal soda (washing soda) also in 2 quarts of hot water. When completely dissolved, pour the second solution into the first, stirring briskly. When effervescence has ceased, fill the vessel with water and stir thoroughly; then allow it to stand five or six hours, when the sediment will have settled to the bottom. Pour off the clear liquid without disturbing the precipitate, fill with water again and stir as before; then allow it to stand until the sediment has settled again, which will take place in a few hours. Pour the clear liquid off carefully as before, and the residue is Carbonate of Copper. Using the above quantities of copper sulphate and sal soda, there will be formed 12 ounces of copper carbonate.

Instead of drying this, which is a tedious operation, add four quarts of strong ammonia, stirring in well, then add sufficient water to bring the whole quantity up to 6 quarts. This can be kept in an ordinary two-gallon stone jar, which should be closely corked.

FORMULA.

Each quart will contain 2 ounces of the carbonate of copper, which, when added to 25 gallons of water, will furnish a solution for spraying of the same strength and character as that obtained by the use of the dried carbonate, and one which can be prepared with little labor, and kept ready for use throughout the season.

CARBONATE OF COPPER IN SUSPENSION.

When the carbonate is to be used in suspension, instead of adding the ammonia to the sediment, add water until the whole quantity is made up to 6 quarts. Stir this thoroughly until the sediment is completely suspended (entirely mixed throughout), and pour the thick liquid into a suitable jar, when it will be ready for use.

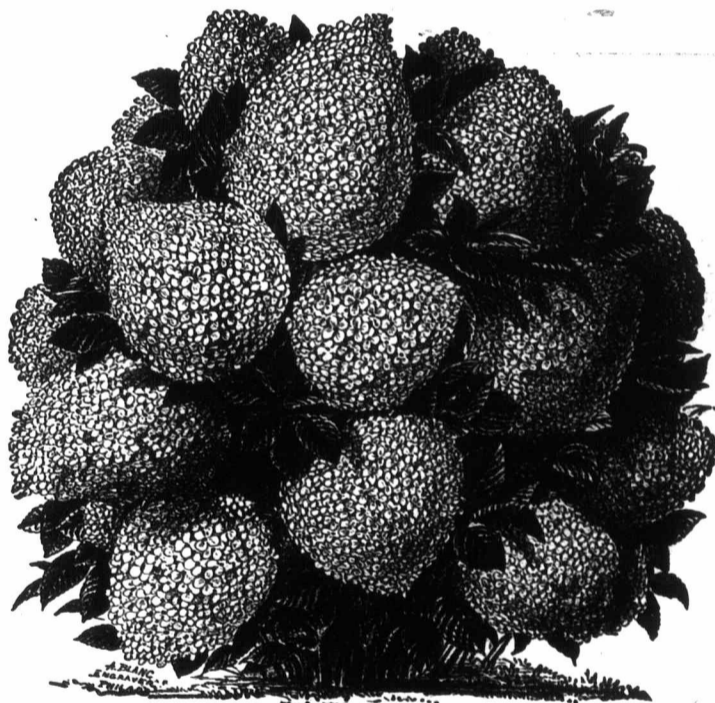
Before using shake the contents thoroughly, so that all the sediment may be evenly distributed in the water. Pour out a quart of the thick fluid and mix with 25 gallons of water. Spray early and at intervals of two weeks, making three applications.—[From Bulletin No. 10.

Strawberries.

[From Horticulturist's Report, Central Experimental Farm, 1891.]

RENEWING OLD BEDS.

When old beds have become run out and lacking in vigor, it is occasionally found convenient to renew them without losing a crop, which may be accomplished by the following plan:—As soon as the crop of berries has been picked, remove the mulch from between the rows, dress these interspaces with rotten manure, wood ashes, or some commercial fertilizer, which should be well worked in with a small plow or cultivator, then train the runners into these spaces. By the middle of September the young plants will have become firmly rooted, when the line is stretched on either side of the old rows, and the young plants separated rapidly with an edging knife or sharp spade. In small plantations it will be found more convenient to use a spade than a plow in turning under the old plants; where larger, a plow will be found to be more economical.



HYDRANGEA, PANICULATA GRANDIFLORA.

for brightening shady and dingy corners. Give them a light and well drained soil. Many native ferns are very ornamental, and require only a little care in watering in dry season, slight protection in winter and an occasional light top-dressing of manure.

Geraniums.—When planting out large plants that have been in the house all winter, cut well back, and you will increase the bloom.

Hyacinths.—Cut off flower-stalks when the leaves are ripe. If they have been in the ground two or three years they should be taken up and heeled in some out-of-the-way place, and then placed in a cool cellar till October. The bed will be good for annuals.

Remedy for Apple Scab.

BY JOHN CRAIG, HORTICULTURIST DOMINION EXPERIMENTAL FARMS.

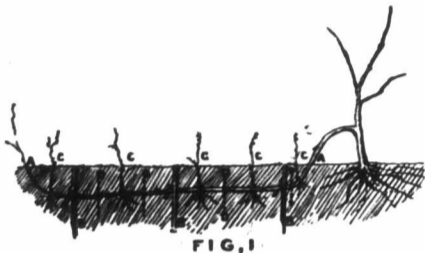
HOME MANUFACTURE OF COPPER CARBONATE.

As the precipitated form of carbonate of copper is not always obtainable from druggists, directions are herewith appended for the easy preparation of this material at a cost much less than the usual wholesale price. These instructions are important, as many fruit growers are prevented from spraying by the expense and trouble

Propagating the Grape.

BY W. W. HILBORN, LEAMINGTON, ONT.

Grapes may be propagated by layers and from cuttings of well-ripened new wood. Growing vines by layering is very easily done, and usually gives the strongest plants. Select a long cane of the past season's growth, one that starts out from the vine as near the ground as possible, (as in Fig. 1.) Dig a trench four inches deep,



parallel with the grape row, peg the vine *a a* down in the bottom of the trench with wood pegs *b b*, cut with a fork or piece of a limb left on to hold the cane firmly in place. This should be done early in spring before growth begins. Do not put any soil over the cane until the new growth, *c c*, has reached six inches in length, then fill in about an inch or two at a time at intervals of a week or more until the trench is full, keep the ground well worked around the growing plants to induce a strong, vigorous growth. In the fall, when growth has been stopped by frost, dig up the cane and cut up into plants at the dotted lines *d d*. These plants may be heeled in for future planting, or planted at once where they are to remain. Usually one vine or plant will be produced from each bud on the layered.

Some varieties do not root very readily, such as Delaware; with such sorts it is better to make a tongue-shaped cut just back of and opposite each bud before covering with soil (as in Fig 2). This cut should not be more than



one quarter of the way through the cane. The wound will callous over and roots are sure to start out, thus making the work more certain.

Another, and the most common way of propagating the grape is from cuttings. The cuttings should be made in the autumn as soon as convenient after the frost has killed the foliage, or they may be made any time when the wood is not frozen, but should be made in time to bury for a few weeks to callous as directed below. Select strong, healthy, new wood and make into cuttings six to eight inches long, usually containing two or three buds. The base of the cutting should be cut off just below a bud (as shown in Fig. 3), as the roots push out more



readily from a joint. Cut one inch above the bud at the top end. Tie the cuttings into bundles of about fifty each with small wire, as cord will rot, and label with painted pine labels. The cuttings may be stored in damp sand or moss in a cool cellar, but are better buried about one foot deep in a dry, sandy spot where all surplus water will drain off readily. Any kinds like Delaware that are hard to root will grow with few failures if the following plan is adopted: Bury the bundles of cuttings only about one or two inches deep, butt end up, and place over them a frame eight or ten inches high, or an old box with the bottom knocked out. Bank up on the outside with earth, and fill the box with coarse horse stable

manure, to keep out the frost. In early spring take off the manure and place glass over the box. This will give bottom heat to the base of cuttings, while the top is kept cool by being buried top end down; the callousing is thus hastened. They should remain under the glass two or three weeks, or until the buds begin to swell on grape vines. Then take out and plant in a fine, mellow soil in rows two and a-half feet apart and six inches apart in the row. While planting keep the cuttings protected from wind and weather by putting a little fine soil over them. After the soil has been thoroughly prepared by stirring deeply, stretch a line and dig a trench deep enough to admit the full length of the cuttings, plant with the upper bud level with the surrounding soil. The earth should be pressed very firmly around the cuttings. The soil should be stirred often, say twice a week, in between the rows with a fine toothed cultivator; especially during the early part of the season it is important that cultivation should not be neglected. If they receive proper attention they will make good strong plants by the autumn, and may be planted where they are to remain. I prefer a plant of that age to an older one for my own planting, if it has been well grown.

Mildew of the Grape.

BY JOHN CRAIG, HORTICULTURIST TO EXPERIMENTAL FARMS.

The disease particularly referred to in the following, known among viticulturists as "downy mildew," "brown" or "gray rot" of the grape, and to scientists as *Peronospora viticola*, was very severe last year in many grape growing districts. It has been particularly destructive in the Eastern and Central States, and also in Western Ontario. Last year it was prevalent in vineyards in the province of Quebec, and also in the Ottawa Valley.

As a rule, it is first noticed on the fruit—when about half formed—presenting a downy and frosted appearance, which gives place to a grayish brown in the later stages. The berries shrivel and fall to the ground when slightly shaken. Beginning with one or two varieties in the vineyard, the disease, if allowed to run its course, will spread rapidly, attacking other kinds which were at first entirely exempt.

It usually affects the leaves and wood later in the season, sometimes in the case of early varieties after the fruit has been gathered. This stage of the disease was prominent as affecting the Roger Hybrids in experimental farm vineyard last season.

At first it was seen on the upper surface of the leaf showing in brown spots, while the lower surface presents the frosted appearance, resembling that form of the disease affecting the fruit. This particular leaf form is not easily detected on grapes having the thick pubescent leaves characteristic of the Concord family.

TREATMENT.

Carbonate of copper.....	2 oz.
Ammonia.....	1½ pint.
Water.....	25 gals.

As soon as the mildew made its appearance last year on our vines they were thoroughly sprayed with the above mixture. Two applications and the removal of all diseased berries had the effect of checking the spread of the malady, but at the same time demonstrated—when compared with the results of my former experiments—that the proper line of treatment leading to complete success, lies in the early application of the remedy.

When the vines are uncovered, spray with a simple solution of copper sulphate, 1 lb. dissolved in 15 gallons of water.

Spray, using the above formula, soon after the fruit sets. Make two or three additional applications at intervals of ten days or two weeks, as the necessities of the case seem to demand. Remove and destroy diseased parts of fruit and foliage.

Horticultural Hints for June.

BY G. C. CASTON.

We hail the month of June as the most beautiful in all the year. It is then that nature wears her brightest and most gorgeous livery. Mankind seems to catch the inspiration of nature and feel as if youth were renewed. 'Tis the month of blossoms and roses, and the latter part of it ushers in the first-fruits of the soil in the shape of the large luscious and toothsome strawberry. It is the season of the most rapid growth as a rule, the exception being in occasional droughts like last year. But with favorable weather there is more rapid development in June than almost any other month. The conditions under which nature performs her most important work are present usually at this time, viz., warmth, moisture, and a porous soil. We cannot force nature, nor perform her work, but we can render her valuable assistance in the way of cultivating the soil. Nature provides two of the conditions named, viz., warmth and moisture—the other, a porous soil, is our part of the work. Hence will be seen the great importance of the most thorough cultivation at this time of the year. We thus facilitate the important work going on in nature's laboratory—the manufacture of "nitrates"—or in other words, available plant food in the soil. The importance of thorough cultivation of the orchard and garden at this time should not be overlooked. The requirements of the soil that produces fruit are a supply of three principal foods, viz., nitrogen, potash, and phosphoric acid. The first is supplied in the barn yard and stable manure; the others can be supplied in the cheapest way by a liberal dressing of good hardwood ashes. Where these cannot be obtained, some commercial fertilizer containing a high percentage of these ingredients may be used. Then there is the humus or vegetable mould in the soil from decayed leaves, grass and weeds that have been plowed under. All these things can be converted by nature, under favorable conditions, into available plant food, so that if a sufficient supply of the proper material is furnished, and the soil made porous by thorough cultivation, we may then expect with a great degree of confidence, other things being equal, a good crop, and of the best quality. This is a good time for plowing and cultivating orchards that are up in years—that is, that have been in bearing for several years, as at this time the lower limbs are up in their natural position, and we are able to get closer to them, whereas later in the season, as the fruit develops, the branches gradually bend lower, till it is impossible to get close to them with the plow. By plowing one way in the fall, and then crossing the other way in the spring, and using a one-horse plow when close to the trees, a very small square is left at each tree which is rapidly gone over with the spade and hoe. It is a good plan where the orchard is on level ground to apply the manure and ashes in fall or winter. The melting snow and spring rains will leach a certain quantity into the soil which will be early available and taken up by the roots. The cross plowing will turn under most of the remainder. This will be manufactured into plant food later on, and if good cultivation is given by the occasional use of a spring-tooth cultivator or harrow (as with such an implement we do not require to drive the team very close to the trees), the trees will thus receive a sufficient supply of food and will be

well nourished all through the season. There will be a good growth of wood, the foliage will be a dark green, healthy color, and the fruit of the best quality. Of course, trees, like plants, are said to draw more or less nourishment from the air. Thorough cultivation will facilitate this process also; hence we see the importance of cultivation, especially at this time of year. Not only do we keep down weeds and grass, but we enable the trees to obtain their supply of food. This month is the best time to prune, and whenever an orchard requires pruning, if this has been neglected for some time, I would repeat the advice I have often given before, Do it in this month, but never remove a large limb under any circumstance, if you wish your trees to attain to a good old age. This remark will apply more particularly to the colder sections of the country where the season of growth is shortest. The early part of the month is the time to spray the trees for the Codlin Moth, after the blossoms have fallen, and while the trep or blossom end of the young fruit is upward. So much has been said and written of late years on this subject that it is unnecessary to say much about it here. Everybody must recognize the importance of it. There are one or two important points, however, which I might mention, and that I would like to emphasize. First, as to the time: Immediately after the blossoms have fallen. Do not use the solution too strong, so as to destroy the foliage. Where the paris green is of good, even quality, two ounces to forty gallons of water for plums, and three ounces to forty gallons for apples and pears. It must be kept constantly stirred while being applied, and when near the bottom of the barrel a little more water should be added to keep the stuff at a uniform strength, as in spite of constant stirring it will settle to the bottom to a certain extent. The early part of this month is a good time to scrub fruit trees with some alkaline wash, and for this purpose there is nothing better than lye made from hardwood ashes—made just strong enough so that it will scarcely float a potato. That is the strength I use it. It is applied with a birch broom, such as the Indians used to make. The rough bark is first scraped off, and then they are well scrubbed with the lye, reaching well up into the limbs. This will remove moss and bark lice, will keep the borers away, and give the trees a nice, healthy appearance. The man who has attended to all these matters, who has his orchard thoroughly cultivated and manured, and his trees properly pruned, sprayed and scrubbed will be well repaid for his trouble. His neighbors will congratulate him on the fine appearance of his fruit trees, he will take pleasure in looking at them and showing them to others, and he will reap a still greater benefit later on in the quantity and quality of the fruit.

Small fruits will require thorough cultivation also at this time, in order to attain the best results. There is an old and commonly accepted idea that strawberries should not be cultivated after they begin to blossom. This is, of all times, the one when a constant stirring of the soil will be of most benefit to them. Cultivate and clean them till they begin to ripen; they will be all the better for it; you will get larger berries, and more of them. The same applies to raspberries, currants, and other fruits. The more frequent and thorough the cultivation up to the time of ripening the better the crop. In seasons of drought a thorough cultivation is the next best thing to a shower—it attracts moisture to the part of the soil where it is most needed.

There are many ways in which we can assist nature in her great work, and every good agriculturist is proud of his position as nature's assistant. But there is perhaps no way in which we can render her greater assistance than by thorough cultivation of the soil, and especially at this important season of the year.

Entomology.

Injurious Insects—No. 5.

BY JAS. FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA, CUT-WORMS AND BARK-LICE.

1. CUT-WORMS.



FIG. 1.—A Cut-worm. It represents the true Army worm, *Leucania unipuncta*, so injurious to grass lands in the Maritime Provinces. Fig. 2. shows a cut-worm moth with the wings closed and open.

There are few farmers, horticulturists or gardeners in all parts of Canada who will not have the exasperation during the month of June of seeing some of their young plants of most kinds eaten off by Cut-worms. These insects are the caterpillars of a number of different dull-colored, active moths which fly at night, and which may frequently be found under boards, or in dark corners during the daytime. Fig. 1 gives a good idea of the general appearance of a Cut-worm; it

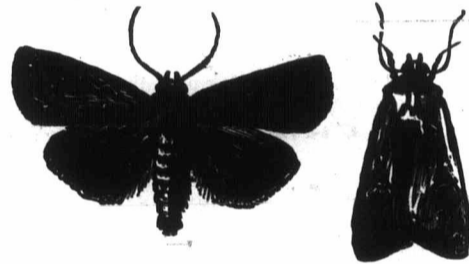


FIG. 2.—Moth of a Cut-worm, with wings expanded and folded.

Cut-worms are smooth, greasy looking caterpillars of inconspicuous colors similar to the earth in which they live. At the time they injure crops they range from one-half an inch to two inches in length. The eggs of most species are laid in autumn, and the young caterpillars make about one-quarter of their growth before winter sets in. They pass the winter in a torpid condition, and are ready in spring to attack crops as soon as these come up or are planted out. Cut-worms work almost entirely at night, coming forth from the ground beneath which they have lain hid all day, and crawling over the surface in quest of any green plant. There are probably upwards of three hundred different kinds of Cut-worms in North America, differing somewhat in habits and choice of food. These belong to the three large families *Agrotis*, *Hadenæ*, and *Mamestra*. The full growth of most Cut-worms is reached by the first week in July, when they form cells in the ground, and change to chrysalides. About a month afterwards the perfect moths appear. The eggs of some kinds although laid in the autumn do not hatch until the following spring. The Red-backed Cut-worm, *Agrotis ochrogaster*, is one of these.

REMEDIES: There are several remedies which may be used to reduce or prevent injury from these insects. I have obtained the best results from the following:—

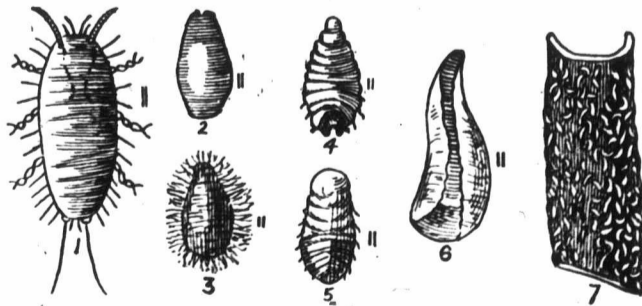


FIG. 3.—Oyster-shell Bark-lice—1-6, different stages enlarged; 7, natural size on piece of bark.

1. **Hand-picking**—Of course, whenever a plant is seen to be cut off, the caterpillar should be dug out; it will, as a rule, be found within a few inches of the cut-off plant, and just beneath the surface.

2. **Clean Culture**.—Of great importance is clearing all unnecessary vegetation from the ground as soon as possible in autumn. As stated above, many of the caterpillars hatch at that season of the year; by clean culture not only are these deprived of their food supply, but the female moths are not attracted to the cleared spots to lay their eggs, because instinct leads them to deposit these only where the young are likely to find suitable food.

3. **Traps**.—A remedy which has given most satisfactory results is killing the Cut-worms by means of poisoned baits. These are made as follows: The loosely together in small bundles any succulent weeds or other vegetation; dip these into a strong mixture of Paris Green and water, and spread them over the surface of infested land, about twenty feet apart, either before the crop is planted or appears above ground, or between the rows of a growing crop. The Cut-worms crawling about at night find the poisoned bundles, eat some portions of them, and then bury themselves and die. In hot, dry weather the bundles should be put out after sundown, and if a shingle be placed upon each it will be kept fresh much longer than if exposed to the air.

4. **Banding and Wrapping**.—A most effective remedy against Cut-worms is to place a band of tin around each cabbage, tomato or other plant after setting out. These may be easily made by taking strips of tin six inches long and two and a-half inches wide and bending them round a spade handle so as to form short tubes. In placing them around a plant the two ends can be sprung apart to admit the plant, and then the tube should be pressed about an inch into the ground. This is a useful method of disposing of empty tomato and other cans; the tops and bottoms can be easily removed by putting them on a hot stove. Wrapping a piece of paper round the stems of plants so as to leave an inch of the paper above the ground when setting them out will also save a great many.

2. **OYSTER-SHELL BARK-LOUSE** (*Mytilaspis pomorum*, Bouché).—This insect, which is represented natural size on a piece of bark at Fig. 3, 7, is one of the most destructive enemies with which the fruit-grower has to contend. There is only one brood in the year, and when this first hatches from the egg, in the beginning of June, is the best time for the Canadian horticulturist to exterminate it. A piece of bark covered with the scales is shown below. If one of these scales be raised early in spring there will be found beneath it a large number of small white eggs. These hatch about the beginning of June into minute lice, with six legs, which emerge from beneath the scales and move about over the bark for a few days, seeking for a suitable place to attach themselves. They then insert their tiny beaks through the young bark and never move again, but live entirely on the sap of the tree. A waxy scale is gradually secreted and covers the whole body. By August each of the females (and by far the larger number are of that sex), has transformed into merely a scale covering a cluster of eggs; these remain unchanged through the winter, and the young do not hatch until the next June.

Remedy.—The best remedy is to spray the trees at the time the young lice hatch, with Kerosene Emulsion made as follows:—Dissolve half a pound of hard soap in boiling water (one gallon), and while boiling hot turn it into a tub containing two gallons of coal oil, churn the mixture by means of a syringe or force-pump for five minutes, when the result will be a creamy mass, which will thicken into a jelly like substance on cooling. When required for use, mix one part of this emulsion with fifteen parts by measure of cold soft water, and then spray it over the trees, when all the young lice will be destroyed.

The Apiary.

Robbing

BY R. F. HOLTERMANN, A. O. A. C.

At almost all seasons of the year the bee-keeper has to watch for robbing with bees. The strong and energetic will rob weaker colonies when natural sources for honey cannot be found. The past spring has been particularly bad for robbing, and even experienced bee-keepers have been seriously inconvenienced by the bees from one colony getting into another and often injuring it to such an extent that it never recovers. When one colony robs another they attempt to break through the bees who guard at the entrance, and if they succeed they generally attempt to destroy their queens, which completely demoralizes them, when taking away what sweets may be left in the hive for store is an easy matter. Even when entrance into the hive is effected, the bees being robbed often guard their queen for some time and make repeated efforts to keep the robbers out. To a novice it is often no easy matter to know when a colony is really being robbed; there is often a good deal of excitement about the entrance of a hive after confinement to the hive for some time owing to cold weather, but this need not be robbing. If one colony is black or hybrid and the other Italian, it is not difficult to detect the strange bees. If not, the entrance should be watched, and if there is more or less of pulling and dragging and fighting, it is likely, ninety-nine cases out of one hundred, that strange bees are attempting to get in. I say ninety-nine out of one hundred, because in some instances there will be a colony which appears to naturally fight with itself; they keep pulling at one another's legs, and every bee that alights they make a rush at, as if they took it for a stranger; probably their bump of combativeness is abnormally developed. Bees dragging and pulling at one another should be a warning to the bee-keeper to watch the colony, and as the bees, if really robbing, will attempt to sting one another, it means death to the bee stung. If the bees mean business, dead bees will soon be found about the entrance, and if the robbed succeed in getting in, they soon come out full of honey, and with a peculiar hurrying, fluttering motion of the wings, as if they were chased out with a broomstick. If the bee-keeper is still doubtful as to robbing, he had better dust the bees with flour, and if any other colony in the apiary is doing the robbing, the bees dusted with flour will be seen passing into it. In robbing, as in a great many other things in life, prevention is better than cure. No cracks should be left about hives for bees to attempt to get in. No combs should be left about the apiary, and if the bees have to be examined when not working, a tent should be used under which to open up the hives. Weak colonies should not be allowed an entrance larger than they can properly guard; weak colonies would be better with a heavy entrance block made of oak or hardwood. A pine entrance block the bees are able to move away, but a hardwood block is too much for them. If the bees are not strong enough to defend an ordinary entrance, cut in one end of the entrance block a notch the width and depth of one bee, and if there is a queen in the hive and the colony worth saving at all there is but little danger from robbers.

If the bees have made considerable headway in gaining entrance to a hive, take two strips of wood just wide enough to slide into the entrance when a piece of tin is nailed on top of them; by nailing the latter on the wood, make a passage half an inch by eight or ten inches long, and slide it into the entrance with the remainder of the hive closed up. The bees will pass through this passage into the hive, but coming out at the front in the usual way find it closed and they will remain prisoners in the hive; they can be released just before night. If a colony has quite given up fight and the queen remains, it may sometimes be saved by placing it in the cellar for a few days and putting upon its stand an empty hive. The robber bees will for a day or two pour into this and finding nothing in it give up the attempt in disgust, when the bees from the cellar can be brought out. There is no

doubt that the Black or German is far more liable to be robbed than the Italian; the latter defend their hives more readily than the Black, and those having Italian or mostly Italian bees experience less difficulty with robbing. The loss this spring has been exceptionally heavy from robbing. There is no season exempt from the danger only when the natural sources of honey are abundant.

Miscellaneous.

The Provincial Fat Stock Show for the Province of Ontario.

A Provincial Fat Stock Club has been formed in Ontario by a union of the Agriculture and Arts Association, the Dominion Sheep Breeders' Association, the Dominion Swine Breeders' Association, and the Fat Stock Club of Guelph, the bases of agreement being that the Agriculture and Arts Association shall be represented by five delegates, two each from the Sheep Breeders' and the Swine Breeders' Association, and three representatives from the Fat Stock Club. The delegates sent by the Agriculture and Arts were Messrs. Awrey, J. C. Snell, Simmons, Rawlings, Westington, Sisson, and Secretary Wade, five of whom only were entitled to vote according to the agreement entered into at the last meeting. The Sheep Breeders' Association was represented by John Jackson and F. W. Hodson; the Swine Breeders' Association by S. Coxworth and J. E. Brethour; the Guelph Fat Stock Club by John I. Hobson, James Miller, and John McCorkindale. The following prize list was formulated and accepted by the delegates:

PRIZE LIST.

CATTLE.

CLASS 1.—SHORTHORNS.

Section 1.—Best Steer, 2 years and under 3—1st, \$20; 2nd, \$15; 3rd, \$10.

Section 2.—Best Steer, 1 year and under 2—1st, \$20; 2nd, \$15; 3rd, \$10.

Section 3.—Best Steer, under 1 year—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 4.—Best Cow, 3 years and over that has had a calf—1st, \$20; 2nd, \$15; 3rd, \$10.

CLASS 2.—HEREFORDS.

Section 1.—Best Steer, 2 years and under 3—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 2.—Best Steer, 1 year and under 2—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 3.—Best Steer, under 1 year—1st, \$10; 2nd, \$5.

Section 4.—Best Cow, 3 years and over that has had a calf—1st, \$15; 2nd, \$10.

CLASS 3.—POLLED-ANGUS.

Section 1.—Best Steer, 2 years and under 3—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 2.—Best Steer, 1 year and under 2—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 3.—Best Steer, under 1 year—1st, \$10; 2nd, \$5.

Section 4.—Best Cow, 3 years and over that has had a calf—1st, \$15; 2nd, \$10.

CLASS 4.—GALLOWAYS.

Section 1.—Best Steer, 2 years and under 3—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 2.—Best Steer, 1 year and under 2—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 3.—Best Steer, under 1 year—1st, \$10; 2nd, \$5.

Section 4.—Best Cow, 3 years and over that has had a calf—1st, \$15; 2nd, \$10.

CLASS 5.—DEVONS.

Section 1.—Best Steer, 2 years and under 3—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 2.—Best Steer, 1 year and under 2—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 3.—Best Steer, under 1 year—1st, \$10; 2nd, \$5.

Section 4.—Best Cow, 3 years and over that has had a calf—1st, \$15; 2nd, \$10.

CLASS 6.—GRADES OR CROSSES OF ANY BREED.

Section 1.—Best Steer or Heifer, 2 years and under 3—1st, \$25; 2nd, \$20; 3rd, \$10; 4th, \$5.

Section 2.—Best Steer or Heifer, 1 year and under 2—1st, \$21; 2nd, \$15; 3rd, \$10; 4th, \$5.

Section 3.—Best Steer or heifer, under 1 year—1st, \$15; 2nd, \$10; 3rd, \$5.

Section 4.—Best Cow, 3 years and over that has had a calf—1st, \$20; 2nd, \$15; 3rd, \$10.

CHAMPIONSHIP PRIZE OF A CUP, VALUED AT \$50, GIVEN BY THE FAT STOCK CLUB OF GUELPH FOR THE BEST ANIMAL ON THE GROUND OF ANY AGE OR BREED, MALE OR FEMALE.

SHEEP.

CLASS 1.—LONGWOOLS.

TO INCLUDE COTSWOLDS, LINCOLNS AND LEICESTERS.

Best ewe or wether, 2 years or over—1st, \$12; 2nd, \$8; 3rd, \$4.

Best ewe or wether, 1 year and under 2—1st, \$12; 2nd, \$8; 3rd, \$4.

Best 3 ewes under 1 year—1st, \$20; 2nd, \$15; 3rd, \$7.

Best 3 wethers under 1 year—1st, \$20; 2nd, \$15; 3rd, \$7.

Best ram and five of his offspring, the progeny to be two years old and under, a 1 to be bred by the exhibitor—1st, \$25.

CLASS 2.

Oxfords, Shropshires and Hampshires will compete in class 2.

The sections and prizes are the same as in class one.

CLASS 3.

Southdown Downs, Horned Dorsets and Merinos will compete in class 3.

Here also the sections and prizes are the same as in class one.

SWEEPSTAKE PRIZES.

Best pure-bred wether any age or breed, \$15.

Best pure-bred ewe any age or breed, \$15.

CLASS 4.—GRADES AND CROSSES.

Best ewe or wether two years old or over—1st, \$12; 2nd, \$8; 3rd, \$4.

Best ewe or wether one year and under two—1st, \$12; 2nd, \$8; 3rd, \$4.

Best three ewes under one year—1st, \$30; 2nd, \$15; 3rd, \$7.

Best three wethers under one year—1st, \$20; 2nd, \$15; 3rd, \$7.

Best wether any age—1st, \$9.

Best ewe any age—1st, \$9.

Best grade ewe or wether—A cup by the Fat Stock Club, Guelph.

SWINE.

CLASS NO. 1.—TO INCLUDE BERKSHIRES AND POLAND CHINAS.

Best barrow over nine and under eighteen months—1st, \$12; 2nd, \$8; 3rd, \$4.

Best barrow nine months and under—1st, \$10; 2nd, \$6; 3rd, \$4.

Best sow over nine and under eighteen months—1st, \$12; 2nd, \$8; 3rd, \$4.

Best sow nine months and under—1st, \$10; 2nd, \$6; 3rd, \$4.

Best brood sow and two of her offspring; progeny to be bred by exhibitor; sow not otherwise entered—1st, \$0; 2nd, \$15; 3rd, \$4.

CLASS NO. 2.

Yorkshires and Chester Whites will compete in class No. 2. The prizes and sections are the same as in class 1.

CLASS NO. 3.

Suffolks, Essex, Victorias, Jersey Reds and other small breeds will compete in class 3; sections and prizes the same as in class 1.

CLASS 4.—TAMWORTHS.

Best barrow over nine and under eighteen months—1st, \$8; 2nd, \$4.

Best barrow nine months and under—1st, \$8; 2nd, \$4.

Best sow over nine and under eighteen months—1st, \$8; 2nd, \$4.

Best sow nine months and under—1st, \$9; 2nd, \$4.

SWEEPSTAKE.

Best pure-bred barrow any age or breed, \$15.

Best pure-bred sow any age or breed, \$15.

CLASS NO. 5.

In class No. 5 will be shown

GRADES AND CROSSES.

Section 1.—Best barrow over nine and under eighteen months—1st, \$12; 2nd, \$8; 3rd, \$4.

Section 2.—Best barrow nine months and under—1st, \$12; 2nd, \$8; 3rd, \$4.

Section 3.—Best sow over nine and under eighteen months—1st, \$12; 2nd, \$8; 3rd, \$4.

Section 4.—Best sow nine months and under—1st, \$12; 2nd, \$8; 3rd, \$4.

CLASS 7.—SWEEPSTAKES FOR HOGS.

Section 1.—Best grade hog of any age, breed or sex—Cup given by the Guelph Fat Stock Club.

Prizes for dressed poultry were not arranged. List given at a later date.

In all the classes single expert judges shall perform the work of judging. The expenses incurred by these gentlemen will be paid by the Agriculture and Arts Association. Judges in the cattle departments have already been chosen. Those on sheep and swine will be chosen Tuesday of the second week of the Toronto Industrial. The show will be held on the 14th and 15th of December, 1892. Judging will commence at 2 o'clock Wednesday, the 14th.

The entry fee is one dollar per entry, not one dollar per animal. Animals shown in the regular classes will not be charged an additional fee when entering for the sweepstake prizes.

The Agriculture and Arts Association furnished all the money in the cattle department, also the third prizes given pure-bred sheep and swine, and all the prizes in the grade and crossbred sheep and swine sections. The amount of prizes given by the Agriculture and Arts Association to cattle is \$750.00; to sheep, \$216.00; to swine, \$144.00; total given by Agriculture and Arts Association, \$1,110.00. Amount given by the Sheep Breeders' Association, \$405.00. Amount given by Swine Breeders' Association, \$400.00. Value of prizes given by Guelph Fat Stock Club, \$75.00. Total prizes, \$1,990.

Altogether the coming show will eclipse any winter exhibition ever held in Canada, and will afford splendid advantages for dwellers in Manitoba and the Northwest, as well as to Americans, to visit Ontario and inspect the live stock which will be shown by the principal breeders.

The most enterprising of Canada's seedsmen and dairy supply men will be present and occupy a separate building provided for their accommodation. It is always advantageous for a buyer to know the party with whom he deals.

In classes Nos. 1, 2 and 3 for sheep, and 1, 2, 3 and 4 for swine, and also in sweepstake prizes for pure-bred sheep and swine, all competing animals must either be registered, or eligible to register, in the Canadian Records, or in some one of the recognized American or British Records. In the pure-bred classes the pedigrees of unregistered animals which compete shall be submitted to Mr. Henry Wade at the time of making the entries. If satisfactory, the animals shall be allowed to compete. The owners of registered animals shall produce a certificate of registration for each animal exhibited. All animals in the pure-bred classes, when not otherwise specified, must have been bred by the exhibitor or have been his property for at least three months prior to the first of December, 1892.

Before the meeting adjourned, the following resolution was moved by Mr. W. J. Westington, seconded by Mr. J. C. Snell:—That this meeting thoroughly approves of the appointment by the Provincial Government of Mr. N. Awrey, M. P., as Ontario's Commissioner to the World's Columbian Exposition, to be held in Chicago in 1893. Mr. Awrey is a gentleman of brilliant address, sound judgment and wide experience. The prominent position he has long taken in agricultural affairs renders him a worthy representative of this the banner province of Canada. We believe that by his efforts the great agricultural interest which he represents will be fully and ably administered at Chicago, and that his work there will be a credit to the province and the means of greatly enlarging her trade.

This resolution was enthusiastically received and carried amid great applause.

We have printed the above prize list in full that it may serve as an example to other provinces or sections where the inhabitants wish to embark in a winter show.

Where the climate and facilities will allow, this is one of the best means of bringing the buyers and sellers of fat stock together and also of showing the public what excellencies can be developed by properly feeding the best pure-bred stock. Many farmers are of the opinion that feeding rather than breeding makes the chief difference in animals. A winter show will afford them an opportunity to compare scrub stock when fat with pure-bred animals in the same condition.

As an educator a good winter show cannot be excelled.

Stray Thoughts.

CANADIAN HORSES IN NEW YORK.

People who have all along been expressing a fear that the American demand for Canadian horses would entirely cease, owing to the legislation of the United States Congress, have had a few object lessons recently which should thoroughly convince them of their error. In the first place there was the great show and sale held in Toronto by Mr. Grand, at which American buyers were present in force and bought freely, paying long prices for what they took away. Following on this event was the sale held in New York city by Mr. Howland, of Toronto, when a string of thirty-one Canadian horses brought an average price of \$650 each, thus clearly proving that our American cousins are ready and anxious to buy our horses if they are of the right sort. The object, then, with our farmers should be to raise nothing of the scrub class, but, as the ADVOCATE has always urged, use only the very best sires obtainable. It may cost a few dollars extra outlay at the beginning, but this will be more than recouped by the extra good prices which will be secured for the stock when put on the market. Let those of your readers who have not yet begun to breed good saddle, driving and hunting horses, do so now without delay, and they will never regret that they took your advice.

AT THE NEW YORK SHOW.

Canadian horses did more than well at the recent New York horse show, Messrs. George Pepper and Harry Hamlin, of Toronto, being the principal winners. Canadian Queen, a prize winner at Grand's late sale, and Gladys, who held the same position last year, were considered the best pair at the show. The following, from the New York World, is worth producing, showing, as it does, the prominent place taken by Canadian horses at the show:—The pet of the ponies from the start was George Pepper's imported Charlie Burgess, a roan Welsh stallion, 12 hands high and 7 years old. He had a great crest, a chunk of a body, and strong legs, and was ridden by a Canadian boy. The pony knew how to lift his feet and the boy could ride like a cross-country lad. They won the first prize easily, with Seward Webb's Princess second and George B. Baker's Billy and Jack third and fourth. The most sensational event of all was the best performance over six successive jumps, not under 5 feet nor exceeding 5 feet 6 inches. Although the jumps at the Garden have been at a height of 7 feet or more, 5 feet 6 inches is a tall fence. Queensberry, the successor of Roseberry, ridden by Tim Blong, who rode Roseberry when that great horse fell and killed himself at Chicago, did the best work and won the prize.

When horses can be taken from Ontario and succeed in securing such prominence at a show held in New York city, our farmers should not be backward in supplying the demand which has been created, and which is still unsupplied.

WINTER BUTTER-MAKING.

The Agriculture Committee of the Dominion House of Commons has been busy taking evidences during the past month, the principal witness before it being the energetic Dominion Dairy Commissioner, Prof. Robertson. In the course of his evidence the professor layed great stress on the advisability of Canada going more extensively into winter butter-making. He pointed out to the committee that probably 25 cheese factories in Ontario alone would be altered into creameries this year for winter butter-making, and it would entail an expenditure of from \$250 to \$500 in each cheese factory to fit and prepare it for making butter. A large portion of the expense was incurred in the purchase of new machinery, which would be useful hereafter. Other colonies are encouraging the output of butter, the Government of Victoria having bonused the industry to the extent of over a quarter of a million dollars last year. The value of the exports of butter from Victoria to England had increased from £22,000 sterling in 1887 to £168,000 sterling in 1890, the butter realizing 1s. a lb. in the London market, although it took 45 days in transit. He thought if the Dominion Government assisted in the conversion of cheese factories into winter creameries to the extent of \$50 each for 25 creameries, and a bonus of two cents per pound on the butter they produced, say for three winters, the result would be to advance this movement in four years to such a position as otherwise would take it ten years to attain. Prof. Robertson explained the effect of feed in the production of milk, and stated that milk producers in cities made a mistake by overfeeding meal to their cows, that the milk was inferior and the yield not so great when a cow was given 10 or 12 pounds of meal a day as if she received six or eight pounds of meal daily. Incidentally the question of dehorning cattle was brought up, and Prof. Robertson inclined to the opinion that it was less cruel to dehorn steers and allow them to run loose than to keep them tied up and not dehorn them. Conducted with proper appliances the dehorning process was simple and expeditious, suffering being reduced to a minimum. Prof. Robertson is doing a great work for the Dominion in his special lines, and it is to be hoped the Government will see its way clear to carry out his recommendations in reference to winter dairying. It will be a good investment for the country at large.

FEEDING PIGS.

Before the same committee Prof. Robertson gave some valuable information on the above subject. A most important statement was made as to the value of frozen wheat for the feeding of hogs. He stated that if a hardy breed of hogs was introduced into Manitoba and the Northwest, they could be fattened on frozen wheat, should the farmers find themselves with frozen wheat on their hands. The farmer could make more by fattening hogs on soaked frozen wheat than he could by selling sound wheat for the purposes of flour-making. Thus the farmers would not be left at the mercy of frost in Manitoba and the Northwest.

ENSILAGE.

The Professor also spoke on the question of ensilage, and said that he believed the albuminoid lacking in the ensilage at present could be supplied by growing the sunflower, a plant the value of which had not heretofore been observed in Canada. He explained that machines for threshing sunflowers were in use in Russia, and the seeds formed a good food. He intended to experiment with sunflowers along this line this year. He also stated that a farmer could keep 30 cows the year round on 40 acres of land, by using proper seed for the growing of grains for ensilage purposes.

THE WORLD'S FAIR.

Active steps, I understand, are being taken all along the line to make Canada's exhibit at the World's Fair one that every Canadian may be proud of. Prof. Saunders, the Dominion Commissioner, has had a conference with Mr. Awrey, the energetic Ontario Commissioner, in order that they may perfect a course of united action on the part of the provinces in the matter of our exhibits. This is as it should be. There is no doubt that these gentlemen are able to make the whole affair, as far as Canada is concerned, a grand success. It is reported that Sub-Commissioners are to be appointed in Ontario who will be divided into committees to assist the Commissioner in the various departments. This should be done without delay. While Ontario is taking an active part, what are the other provinces doing? Each province should appoint a Commissioner and Sub-Commissioners.

ALEXANDRA SEPARATORS AND BABCOCK MILK TESTERS.

We were not a little surprised to learn the other day from Messrs. John S. Pearce & Co., seed merchants and dairy supply dealers, London, Ont., that they have already sold some 37 of these celebrated separators since receiving the agency last October. Every one of these machines is giving perfect satisfaction and doing all and more than is claimed for them. This is most encouraging and satisfactory. If our farmers and dairymen will only take hold of the separator and winter dairying, Canada will soon come to the front as a butter-producing country. The sizes sold are as follows:—Twelve No. 1 machines, two No. 2, two No. 3, seven No. 7 and fourteen No. 8. Besides those placed in Ontario, a number have been sent to British Columbia and one or two to the United States. The above firm are manufacturing the Babcock Milk Tester, and have sent out several five of these machines this spring. They sold forty-five

of these machines last year. This speaks well for Canadian dairymen. We hope and trust they will continue to move along these lines.

We look upon the Babcock Tester as one of the most important inventions ever brought out for the benefit of the dairy public.

CANADIAN PRODUCE IN ENGLAND.

A leading English correspondent of a commercial paper remarks that there is a growing antipathy among the working classes in England to United States produce, while Canadian is growing in favor, especially cheese and butter. This is due to the feeling which has been engendered by the McKinley Bill, which the English working classes feel has and is doing them harm. We are not surprised at this, and the only wonder is that the English working people have not expressed themselves more emphatically before this. It is most amusing to read the inconsistent remarks and articles that appear from time to time in the leading American papers, and the lectures that some of them attempt to read to the various European countries on the tariff question, by advocating free imports into those countries, and in another column of the same paper advocating a high protective duty for all foreign goods coming into the United States. Where is the consistency or logic in such articles or arguments. It would not surprise us if the English people would soon express themselves pretty strongly on these matters. OBSERVER.

Highly Efficient Threshing Engines.

From a comparatively small beginning, the Forest City Machine Works, of London, Ont., have grown into an extensive manufacturing establishment. The firm of Messrs. George White & Sons, who now operate these works, make a specialty of manufacturing the well-known White Threshing Engine. That these engines are steadily growing in favor is most conclusively proven by the ever-increasing demand for them.

Year by year large additions have been made to what were previously extensive buildings. At the time of our recent visit we were surprised to see another commodious building, 130 x 50 feet, in course of erection, and not too soon, to judge from the crowded state of the present premises. All available space is occupied in manufacturing the various parts of these famous engines, every part being manufactured by the firm. From appearances, we would judge the greatest economy of room is observed, yet quite a staff of men were at work in the open air.

Genuine merit is the essential qualification to ensure success in any line, and no where is there greater need for it than in this class of machines. Such excellence the White Engine possesses in a marked degree, which is easily accounted for when we find that each department is managed by a member of the firm, each of the Messrs. White being an expert in the branch which he superintends, while the whole is under the supervision of Mr. George White, Sr., who is the head of the firm, and has had a life-long experience in manufacturing engines.

One of the most commendable features of this engine is its economy in the use of fuel and water, a quality obtained by use of an easy firing boiler connected with a large engine cylinder, one half the stroke of which can be worked on expansion, or speaking more simply, make steam more easily, and use all the power there is in it. Another advantage this engine possesses is in the form of its boiler, the great circumference of which gives the desired capacity for generating steam without requiring undue length, hence containing fewer joints and less rivet holes than the boiler of an ordinary engine. The fire-box and return tubes are surrounded with water, thus the heat generated is thoroughly utilized, and as a consequence steam can easily be kept up.

For the Northwest trade, the boiler is protected from the extreme cold by lagging of asbestos inside a casing of wood, thus ensuring effective service at any reasonable temperature. The firm have reduced straw-burning to a science by the proper arrangement of dampers in connection with their baffle plate, by which means perfect combustion is obtained. The engines specially built for the Northwest trade are mounted on wheels, the tires of which are six inches wide, providing a means of easy transit where soft ground is encountered.

During this season the firm are building a much greater number than in any previous year, and are each week shipping a car load of four or five to their customers in Manitoba and the Northwest.

Family Circle.

"Look Aloft."

In the tempest of life, when the wave and the gale
Are around and above, if thy footing should fall,
If thine eye should grow dim, and thy caution de-
part,

"Look aloft," and be firm, and be fearless of heart!

If the friend who embraced in prosperity's glow,
With a smile for each joy and a tear for each woe,
Should betray thee when sorrows like clouds are
array'd,

"Look aloft" to the friendship which never shall
fade.

Should the visions which hope spreads in light to
thine eye,
Like the tints of the rainbow, but brighten to fly,
Then turn, and through tears of repentant regret,
"Look aloft" to the sun that is never to set.

Should they who are dearest—the son of thy heart—
The wife of thy bosom—in sorrow depart,
"Look aloft" from the darkness and dust of the
tomb

To that soil where affection is ever in bloom.

And oh! when death comes in his terrors, to cast
His fears on the future, his pall on the past,
In that moment of darkness, with hope in thy heart,
And a smile in thine eye, "look aloft," and depart!

J. LAWRENCE.

The Click o' the Latch.

Oh, the click o' the latch! how pleasant its sound
When at evening my father returns
From his work on the farm! and he smiles to see
The fire as it brightly burns.

And he sees the table for supper spread,
Prepared by his daughter's hand;
"There is not another such housewife as she,"
He says, "in the whole broad land."

"Click! click! goes the latch with a merry sound,
As my brothers return one by one,
Each honest face glowing with smiles at the
thought

Of the work of the day well done.
As my mother smiles welcome to each as he comes,
A glad woman is she, I ween;
And as each stoops o'er to kiss her dear face,
She looks up as proud as a queen.

Oh, the click o' the latch! as cheery its sound
As the chirp of the cricket at eve;
Though the folks are all home, yet I listen for it,
As I muse and sweet fancies weave.

I fancy I see in the twilight youth
Coming up by the blackberry patch,
And I list for the sound of his footsteps, and
cream

That I hear the click o' the latch.

Oh, the sweetest music that ever I heard
Is the sound of his manly voice,
And the truest heart in the whole wide world
Is the heart of the lad of my choice.—
Ah, that merry whistle, I know it well,
It comes from the blackberry patch.—
Here he comes at last! That step—it is he!
I hear the click o' the latch.

ON EATING AND DRINKING.

BY J. K. JEROME

I always was fond of eating and drinking, even
as a child—especially eating, in those early days.
I had an appetite then, also a digestion. I remem-
ber a dull-eyed, livid-complexioned gentleman
coming to dine at our house once. He watched
me eating for about five minutes, quite fascinated,
seemingly, and then he turned to my father, with
"Does your boy ever suffer from dyspepsia?"

"I never heard him complain of anything of
that kind," replied my father. "Do you ever
suffer from dyspepsia, Collywobbles?" (They
called me Collywobbles, but it was not my real
name.)

"No, pa," I answered. After which, I added,
"What is dyspepsia, pa?"

My livid-complexioned friend regarded me with
a look of mingled amazement and envy. Then in
a tone of infinite pity he slowly said, "You will
know—some day."

My poor, dear mother used to say she liked to
see me eat, and it has always been a pleasant re-
flection to me since, that I must have given her
much gratification in that direction. A growing,
healthy lad, taking plenty of exercise, and careful
to restrain himself from indulging in too much
study, can generally satisfy the most exacting expec-
tations as regards his feeding powers.

It is amusing to see boys eat, when you have
not got to pay for it. Their idea of a square meal
is a pound and a half of roast beef with five or six
good sized potatoes, plenty of greens, and four

thick slices of Yorkshire pudding, followed by a
couple of currant dumplings, a few green apples,
a pen'orth of nuts, half-a-dozen jumbles, and a
bottle of ginger beer. After that, they play at
horses.

How they must despise us men, who require to sit
quiet for a couple of hours after dining off a spoon-
ful of clear soup and the wing of a chicken!

But the boys have not all the advantages on their
side. A boy never enjoys the luxury of being
satisfied. A boy never feels full. He can never
stretch out his legs, put his hands behind his head
and, closing his eyes, sink into the ethereal bliss-
fulness that encompasses the well-dined man. A
dinner makes no difference whatever to a boy.
To a man, it is as a good fairy's potion, and, after
it, the world appears a brighter and a better place.
A man who has dined satisfactorily experiences a
yearning love toward all his fellow creatures. He
strokes the cat quite gently, and calls it "poor
pussy," in tones full of the tenderest emotion. He
sympathizes with the members of the German
band outside, and wonders if they are cold; and,
for the moment, he does not even hate his wife's
relations.

A good dinner brings out all the softer side of a
man. Under its genial influence, the gloomy and
morose become jovial and chatty. Sour, starchy
individuals, who all the rest of the day go about
looking as if they lived on vinegar and Epsom salts,
break out into wreathed smiles after dinner, and
exhibit a tendency to pat small children on the
head. Serious young men thaw and become
mildly cheerful; and snobbish young men, of the
heavy moustache type, forget to make themselves
objectionable.

I always feel sentimental myself after dinner.
It is the only time when I can properly appre-
ciate love stories. Then, when the hero clasps
"her" to his heart in one last wild embrace, and
stiffles a sob, I feel as sad as though I had dealt at
whist, and turned up only a deuce; and, when
the heroine dies in the end, I weep. If I read
the same tale early in the morning, I should sneer
at it. Digestion, or rather indigestion, has a
marvellous effect upon the heart. If I want to
write anything very pathetic—I mean, if I want
to try to write anything very pathetic—I eat a
large plateful of hot buttered muffins about an
hour beforehand, and then, by the time I sit
down to my work, a feeling of unutterable mel-
ancholy has come over me. I picture heart-
broken lovers parting forever at lonely wayside
stiles, while the sad twilight deepens around
them, and only the tinkling of a distant sheep
bell breaks the sorrow-laden silence. Old men
sit and gaze at withered flowers till their sight
is dimmed by the mist of tears. Little dainty
maidens wait and watch at open casements; but,
"he cometh not," and the heavy years roll by,
and the sunny gold tresses wear white and thin.
The babies that they dandled have become grown
men and women with podgy torments of their
own, and the playmates that they laughed with
are lying, very silent under the waving grass.
But still they wait and watch, till the dark shad-
ows of the unknown night steal up and gather
round them, and the world with its childish
troubles fades from their aching eyes.

I see pale corpses tossed on white-foamed
waves, and death-beds stained with bitter tears,
and graves in trackless deserts. I hear the wild
wailing of women, the low moaning of the little
children, the dry sobbing of strong men. It's all
the muffins. I could not conjure up one mel-
ancholy fancy upon a mutton chop and a glass of
champagne.

A full stomach is a great aid to poetry, and,
indeed, no sentiment of any kind can stand upon
an empty one. We have not time or inclination
to indulge in fanciful troubles, until we have got
rid of our real misfortunes. We do not sigh over
dead dicky-birds with the bailiff in the house;
and, when we do not know where on earth to get
our next shilling from, we do not worry as to
whether our mistress's smiles are cold, or hot, or
lukewarm, or anything else about them.

Foolish people—when I say "foolish people" in
this contemptuous way, I mean people who enter-
tain different opinions to mine. If there is one
person I do despise more than another, it is the
man who does not think exactly the same on all
topics as I do. Foolish people, I say, then, who
have never experienced much of either, will tell
you that mental distress is far more agonizing
than bodily. Romanic and touching theory; so
comforting to the love-sick young sprig who looks
down patronizingly at some poor wretch with a
white starved face, and thinks to himself, "Ah,
how happy you are compared with me!" so
soothing to fat old gentlemen who cackle about
the superiority of poverty over riches. But it is
all nonsense—all cant. An aching head soon
makes one forget an aching heart. A broken fin-
ger will drive away all recollections of an empty
chair. And when a man feels really hungry, he
does not feel anything else.

We sleek, well-fed folk can hardly realize what
feeling hungry is like. We know what it is to have
no appetite, and not to care for the dainty victuals
placed before us, but we do not understand what
it means to sicken for food—to die for bread
while others waste it—to gaze with famished
eyes upon coarse fare steaming behind dingy
windows, longing for a pen'orth of peace pudding,
and not having the penny to buy it—to feel that
a crust would be delicious, and that a bone would
be a banquet.

Hunger is a luxury to us, a piquant, flavor-
giving sauce. It is well worth while to get hun-
gry and thirsty, merely to discover how much
gratification can be obtained from eating and

drinking. If you wish to thoroughly enjoy your
dinner, take a thirty-mile country walk after break-
fast, and don't touch anything till you get back.
How your eyes will glisten at sight of the white
table-cloth and steaming dishes then!

Make sure, however, when adopting this plan,
that the good dinner is really to be had at the
end, or the disappointment is trying. I remem-
ber once a friend and I—dear old Joe, it was.
Ah! how we lose one another in life's mist. It
must be eight years since I last saw Joseph
Talboys. How pleasant it would be to meet his
jovial face again, to clasp his storrz hand, and to
hear his cheery laugh once more! He owes me
fourteen shillings, too. Well, we were on a holi-
day together, and one morning we had breakfast
early, and started for a tremendous long walk.
We had ordered a duck for dinner over night.
We said, "Get a big one, because we shall come
home awfully hungry"; and, as we were going
out, our landlady came up in great spirits. She
said, "I have got you gentlemen a duck, if you
like. If you get through that, you'll do well";
and she held up a bird about the size of a door-
mat. We chuckled at the sight, and said we
would try. We said it with self-conscious pride,
like men who know their own power. Then we
started.

We lost our way, of course. I always do in the
country, and it does make me so wild, because it
is no use asking direction of any of the people
you meet. One might as well inquire of a
lodging-house slaver the way to make beds, as
expect any one to know the road to the next
village.

We had lost ourselves two or three times. We
had tramped over fields. We had waded through
brooks, and scrambled over hedges and walls.
We had had a row as to whose fault it was that
we had first lost our way. We had got thoroughly
disagreeable, footsore, and weary. But, through-
out it all, the hope of that duck kept us up. A fairy
like vision, it floated before our tired eyes, and
drew us onward. The thought of it was as a
trumpet call to the fainting. We talked of it,
and cheered each other with our recollections of it,
"Come along," we said, "the duck will be spoilt."

We felt a strong temptation, at one point, to
turn into village inn, as we passed, and have a
cheese and a few loaves between us; but we
heroically restrained ourselves; we should enjoy
the duck all the better for being famished.

We fancied we smelt it when we got into the
town and did the last quarter of a mile in three
minutes. We rushed upstairs, and washed our-
selves, and changed our clothes, and came down,
and pulled our chairs up to the table, and sat and
rubbed our hands while the landlady removed the
covers, when I seized the knife and fork and
started to carve.

It seemed to want a lot of carving. I struggle
with it for about five minutes without making
the slightest impression, and then Joe, who had
been eating potatoes, wanted to know if it
wouldn't be better for some one to do the job
that understood carving. I took no notice of his
foolish remark, but attacked the bird again; and
so vigorously this time, that the animal left the
dish, and took refuge in the fender.

We soon had it out of that though, and I was
prepared to make another effort, but Joe was
getting impatient. He said that if he had
thought we were to have a game of blind hockey
with the dinner, he would have got a bit of bread
and cheese outside.

I was too exhausted to argue. I laid down the
knife and fork with dignity, and took a side seat;
and Joe went for the wretched creature. He
worked away, in silence for a while, and then he
muttered, "Hang the duck," and took his coat
off.

We did break the thing up at length, with the
aid of a chisel; but it was perfectly impossible to
eat it, and we had to make a dinner off the vege-
tables and an apple tart. We tried a mouthful of
the duck, but it was like eating india-rubber.

It was a wicked sin to kill that orake. But
there! there's no respect for old institutions in
this country.

I started this paper with the idea of writing
about eating and drinking, but I seem to have
confined my remarks entirely to eating as yet.
Well, you see, drinking is one of those subjects
with which it is unadvisable to appear too well
acquainted. The days are gone by when it was
considered manly to go to bed intoxicated every
night, and a clear head and a firm hand no longer
draw down upon their owner the reproach of
effeminacy. On the contrary, in these days an
evil-smelling breath, a blotchy face a reeling gait,
and a husky voice are regarded as the hall-marks
of the cad rather than of the gentleman.

Even nowadays, though the thirstiness of mankind
is something supernatural. We are for ever
drinking on one excuse or another. A man never
feels comfortable unless he has a glass before him.
We drink before meals, and with meals, and
after meals. We drink when we meet a friend,
also when we part from a friend. We drink when
we are talking, when we are reading, and
when we are thinking. We drink one another's
healths, and spoil our own. We drink the Queen,
and the Army, and the Ladies, and everybody else
that is drinkable; and, I believe, if the supply ran
short, we should drink our mothers-in-law.

By-the-by, we never eat anybody's health,
always drink it. Why should we not stand up
now and then and eat a tart to somebody's suc-
cess?

To me, I confess, the constant necessity of
drinking under which the majority of men labor
is quite unaccountable.

Minnie May's Dep't.

MY DEAR NIECES:—

How very few of our back yards present an attractive appearance. Because it is not seen, it is left neglected—probably a luxuriant growth of burdock and dandelions covers the ground, and in convenient proximity to the door the suds, slops and dish-water are thrown, to soak at their leisure into the well which is situated a few yards distant, or throw off malaria as the sun evaporates it, not to mention the breeding of millions of flies, which, in their turn, swarm into the house and kitchen, making matters a little more complicated for the worried house-keeper. There is no reason why such a state of things should be—why old tins, hoop-skirts, broken china, stove pipes, boots and rags should be thrown out there instead of being buried or put on a rubbish heap kept for such things. This refuse makes the best material for drains, and can be used for such a purpose. The refuse water of the house makes one of the best of fertilizers for vegetables or flowers, and should be saved in a barrel and kept covered from flies, to be poured around the roots of trees or plants at sundown, for a supply of water is not easily to be had at certain seasons in the country. Burdocks and other weeds can be kept down with a hoe until the grass grows, which it will after the sun is let upon it, and recovered from the dampness caused by the weeds. In almost every house the kitchen is situated at the back, and not a tree is planted there to shade the windows or roof from the blazing sun, not even a vine is trained over the roof or windows, and the kitchen of an ordinary farm-house is one of the most uninviting places upon the earth.

What is to prevent a better state of things? Nothing, if we set about it, you know. My dear nieces, great results always spring from small beginnings, and a few hours' work of the men some leisure day will make easy work of it for you. Instead of the dirty muck hole, arrange a flower bed, and plant flowering shrubs; have a narrow board walk laid to the wood shed or outhouse, to keep the shoes clean in wet weather, or if the wood shed adjoins your house, as it often does, have it whitewashed within and without. Plant vines to grow over it, and in a few weeks it will become a thing of beauty. The scent of the blooming nasturtiums and verbenas will greet you in the early morning, and raise your thoughts to higher and better things, besides it is comforting to know that there is not one spot on or about your home that will not bear inspecting. The kitchen garden should be a little distance from the house for many reasons, and poultry should never be permitted to strut about the kitchen door. These small signs show too often a lack of cleanliness, and stamp the house keeper with a reputation she would be glad to repudiate if she only could. The back door is always used by the family; why should it not be the prettiest and brightest of all doors?

MINNIE MAY.

A prize of \$2 is offered for the best essay on "Labor and Genius." All communications to be in our office by the 15th of July.

STRENGTH.—Strength does not only consist in the more or the less. There are different sorts of strength, as well as different degrees. The strength of marble to resist; the strength of steel to oppose; the strength of the fine gold, which you can twist around your finger, but which can bear the force of innumerable pounds without breaking.

Kingfisher and Fish.

The picture is a very natural one of the kingfisher as seen by our Canadian streams. The nest is made in a hole in the side of a bank of earth, like the sand-martin, but unlike it in having it near water from which it gets its prey. Aquatic bugs or fishes suit its taste, for catching which its long beak is quite adapted. Marshy places, with high grass and shrubbery, where the water flows quietly and the fish fear no hook or line are to their taste. The fish is suddenly seized, as in the picture, and the victim has very little chance of escape. Any study of birds is quickly repaid for its trouble by the renewed interest it brings in our walks and drives. They are very pretty, even the commonest of them, on a close examination.

What to Teach a Daughter.

Teach her that not only must she love her father and mother, but honor them in word and deed, says a writer in the February Ladies' Home Journal.

That work is worthy always when it is well done.

That the value of money is just the good it



KINGFISHER.

will do in life, but that she ought to know and appreciate this value.

That the man who wishes to marry her is the one who tells her so and is willing to work for her, and not the one who whispers silly love speeches and forgets that men cease to be men when they have no object in life.

That her best confidant is always her mother, and that no one sympathizes with her in her pleasures and joys as you do.

That unless she shows courtesy to others she need never expect it from them, and that the best answer to rudeness is being blind to it.

That when God made her body he intended that it should be clothed properly and modestly, and when she neglects herself she is insulting Him who made her.

Teach her to think well before she says no or yes, but to mean it when she does.

Teach her that her own room is her nest, and that to make it sweet and attractive is a duty as well as a pleasure.

Teach her that if she can sing or read or draw, or give pleasure in any way by her accomplishments, she is selfish and unkind if she does not do this gladly.

Teach her to be a woman—self-respecting, honest, loving and kind, and then you will have a daughter who will be a pleasure to you always, and whose days will be long and joyous in the land which the Lord hath given her.

PRIZE ESSAY.

How to Keep Home Healthy.

BY MISS GRACE GLADWELL, MINDEN, ONT.

What nobler theme could we lift our pen to write upon than that which forms the subject of our essay? Who among us that does not look back to "home" as being the spot where our bodies as well as minds were prepared to fight the battle of life? Let us then do our best to keep our homes healthy, so that our children can look back with pleasure to their home, knowing the best was done for them. To accomplish this we must, besides paying attention to good air, clothing, etc., pay particular attention to the three C's. These are Cleanliness, Cheerfulness, and Contentment. In fact we think so much of these C's that we believe there can be no perfectly healthy home without them.

Clothing.—As this is a subject much written upon at this day little need be said. We all know that clothing should be suspended from the shoulders, and that tight-lacing is very injurious; and, as to children's clothing, let mothers use their own judgment, and not that of some fashion-maker, and they will not go far astray. What mother would willingly injure the health of her children? But this they often do by dressing them in some uncomfortable costume fashioned by somebody who was certainly not a mother.

Food.—Prepare good, wholesome food. Use plenty of milk and vegetables, as nothing could be healthier. Both butter and meat should be partaken of sparingly unless you are an outdoor worker, then we think considerable meat is needed. Do not force yourselves to eat what does not agree with you, as in that case more harm than good is done. We have seen children forced to eat porridge when their little stomachs cried out against it. No good ever comes of this forcing process, as far as we are able to learn, but only increased dislike for the article thus forced, and often for the person who forces such article upon them.

Cleanliness.—All cooking utensils should be kept very clean. Servants are very often careless in this respect. As it is impossible for a mistress to superintend all work in the kitchen, she should endeavor to find time to examine all cooking utensils at least once or twice a week, especially if a new servant is engaged. Be cleanly in your habits. If elders are, the children will soon follow the example. A bath at night to remove the dust after the toils of the day is an absolute necessity. It may take a little time from our rest, but it pays, as our sleep will be so much more healthful and refreshing. See that all rubbish is removed from yards, and that no pools of stagnant water are around. Be careful of your cellars. If vegetables are kept there see that any which show signs of decay are at once removed. Allow plenty of fresh air, and keep dry. If it be damp, lime sprinkled around will dry it up.

Air, Exercise and Rest.—Pure air is as necessary to us as food. The more fresh air we get the healthier we are. Keep all rooms well ventilated, both in summer and winter. Teach girls to throw up the window, and turn down the bed clothes to air before leaving their room in the morning. It would not hurt the boys should they do this also. Clothing taken off at night should be hung where it will be aired before being put on again.

A good exercise for old and young is gardening; but should the elders have no time for this pursuit they should try to interest children in it, as it proves beneficial to both mind and body, for they know that they are doing something which will give pleasure and profit to others as well.

Not enough rest is taken in this busy, pushing world. Grandmother's rhyme is completely forgotten. Let us revive it:

"Early to bed, and early to rise,
Makes a man healthy, wealthy and wise."

How much better it would be if more attention were paid to the dear old lady's training. We would not see so many puny faced children, and not so many (shall I say it?) dissipated looking faces among their elders.

Contentment.—We have all our own troubles, but who among us could not lessen them if we set about it? We nurse and hug them till what were once mole-hills we have magnified into mountains; and what good does it do? Not any to our troubles; but to our health how much harm, for what is so wearing as trouble? Let us remember that

"For every evil under the sun
There is a remedy, or there is none.
If there is one, try and find it;
If there is none, then never mind it."
Half of our troubles are only imaginary. We fret about what may never happen. If your lot be humble, try to better it if possible; but be content with your best efforts. You will gain in that best of God's gifts, good health, for "Contentment is a greater gem than sparkles in a diadem."

Cheerfulness.—This should go hand in hand with contentment, but it does not always do so. "A cheerful heart doeth good like a medicine." Besides doing good to the owner of said heart, it cheers all who come in contact with him. There are so many little worries, that it is hard to be cheerful at all times. This is true especially with women who overwork themselves. If they would only try and manage their work so as to have spare time in the afternoons for calls, walks, etc., they would feel much better. I know there are many women who have a great deal to do, but I think they should neglect their work before they neglect their health. So many things could be slighted that are often thought to be a necessity. Let that nice cake you were planning for tea go, or just iron about half those clean clothes you have in the basket. You know we have a good excuse for the latter, as doctors claim that unlaundried linen is much healthier, and we quite agree with them in its being healthier, especially for the woman who has to do the ironing. To the woman whose work confines her to the house so much, we would say: If necessary, neglect your work before you neglect your health, and you will have a much happier and healthier home, and feel more like giving that cheerful greeting

(which he expects, and which he should have,) to the good man when he comes home at night wearied, and perhaps out of sorts after his day's work.

Would You Comfort An Invalid?

Then forget to say, "Oh this is a gloomy day." Don't say, "It will be many a day before you will wear these boots again."

Remember, that although starch has its uses, there are invalids who cannot endure the rustle of aprons or shirts.

Never seem so absorbed in book or paper as to give the impression that your patient is only of secondary importance.

Enter the room quickly, but not stealthily—as though you belonged there, never peering slyly through a half-open door.

Let a few cool, fresh blossoms, that are not overpoweringly sweet, touch the feverish face; they seem to bring rest with them.

Allude not to personal appearance, especially to say, "You look like a ghost," or, "I know by your looks that you are worse."

The best government is not that which renders men the happiest, but that which renders the greatest number happy.

Heathen Temples.

To the traveller in foreign lands there are few objects of deeper interest than the temples which have been erected in honor of the heathen deities of the respective countries. This is true wherever we may travel, be it in the densely populated lands of the East, where Buddhism to a large extent holds sway, be it in the classic lands of Greece and Italy, with their beautiful ruins to remind us of the temples which once stood in glory and pride, frequented by crowds of worshippers, or be it in the northern lands where the monoliths of Stonehenge still excite the wonder and admiration of all who visit them.

Perhaps the most wonderful temple ever built was that erected by the Ephesians in honor of the goddess Diana. It was one of the seven wonders of the ancient world, and so great was the enthusiasm at its restoration, after being destroyed by Herostratus, that the very women contributed their ornaments to secure the necessary funds. It was two hundred years later before the new building was complete, but at the present day even its site is not positively known, and nothing remains to show us where the great temple of Diana once stood.

Then there are the Sun Worshippers, the most complete system of sunworship being that exist-

there comes to us the remembrance of one who, standing upon Mars Hill, surrounded by some of the most beautiful temples and monuments that man's skill could devise, spoke of the God who "dwelleth not in temples made with hands", but who desireth that the lives of His worshippers may show forth His praise. When we consider that the men and women of these heathen countries gave of their best to build and adorn the temples of their gods, what manner of persons should we be, and with what heavenly grace should we seek to be adorned that we may indeed be fitting temples of His Holy Spirit, Who hath honored us with this high calling!

EVELYN L.

Recipes.

SALAD.

Wash clean as much lettuce as required, cut in pieces with a sharp knife, and put into the dish you intend to serve it in; pour over it the following dressing:—One wine-glass of vinegar, half a wine-glass of melted butter, a pinch of pepper, one of salt; rub the yolks of two hard boiled eggs into it, and ornament the top with the whites of the eggs cut in long strips.

RHUBARB.

Peel and slice sufficient rhubarb, cover with sugar and stew gently until tender; do not stir if possible; pour into a glass dish, and eat with cream or thin boiled custard.

LAYER CAKE.

One cup of butter and two of sugar beaten to a cream; add the well-beaten yolks of four eggs; then the froth of the whites; stir in three cups of sifted flour and two teaspoons of baking powder, with three-quarters of a cup of milk, adding the flour and milk alternately; beat well for a few minutes, and bake in four layers, with currant jelly between; ice with boiled icing colored pink.

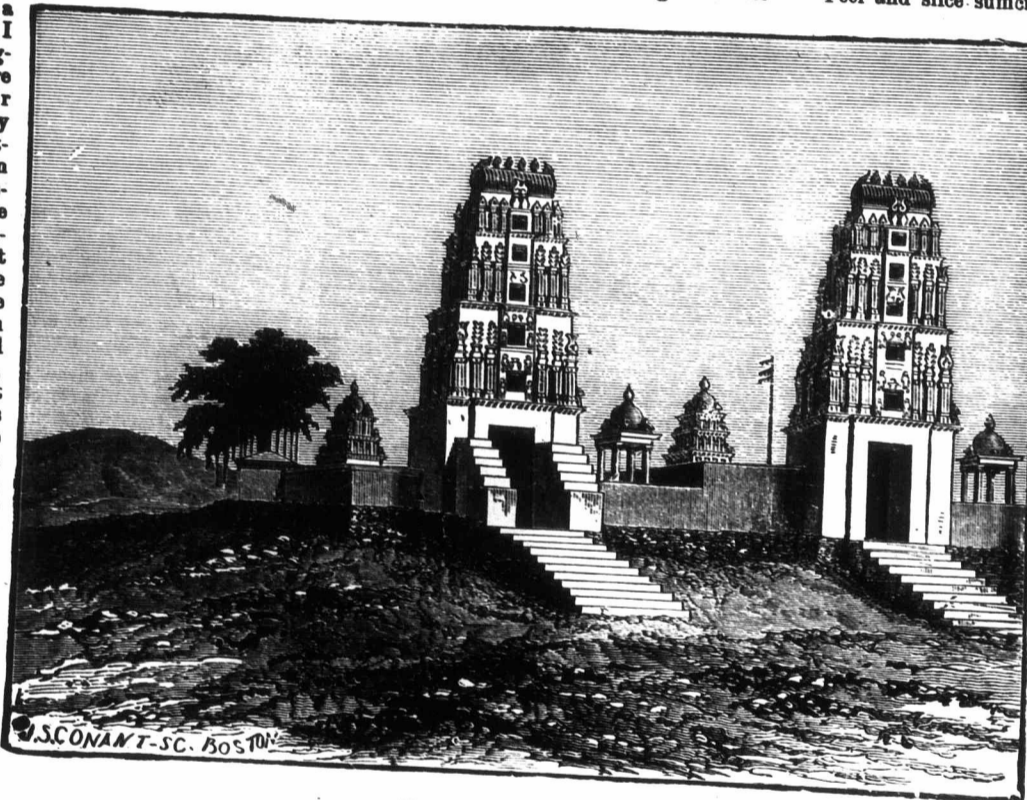
MINT SAUCE.

Chop leaves of mint small; add two teaspoons of vinegar, and half one of white sugar; prepare about half an hour before using.

CHARLOTTE RUSSE.

Some lady's-fingers, three quarters of a pint of cream, half an ounce of isinglass, one teaspoonful of vanilla, an ounce of white sugar, a large sponge cake, and the white of one egg. Take as many fingers as will line the bottom and sides of the mould, slightly moisten with the whites of two eggs, and lay them a little over each other all round. Now do the same on the bottom, making them fit closely and place the mould in the oven for five minutes to dry. Whip well the cream and liquor, adding the isinglass and sugar dissolved in just sufficient water to dissolve it well—not more than a tablespoonful—beat it well into the cream. Then cut a slice from the large cake to put on top, and that must fit very tight. Put the cream into the mould, press carefully into the piece of cake, and set on ice till it is needed. If that does not turn out solid the fault will not be in the recipe.

With human beings the desire to better their appearance—to look "pretty", as the wits have it—is just as laudable an ambition, when carried out in good taste, as the hankering for the improvement of the mind or the accumulation of wealth.



HEATHEN TEMPLES.

ing in Peru when discovered by the Spaniards (1526). The following interesting account of their temple is given in a standard work:—"In Cuzco, the capital, stood a splendid temple to the sun, all the implements of which were of gold. On the west end of the interior was a representation of the sun's disc and rays in solid gold, so placed that the rising sun, shining in at the open east end, fell full upon the image, and was reflected with dazzling splendor. In the place or square of the temple a great annual festival was held at the summer solstice. The multitude, assembled from all parts of the empire, and presided over by the Inca, awaited in breathless solemnity the first rays of their deity to strike the golden image in the temple, when the whole prostrated themselves in adoration."

In India there are many beautiful Hindoo temples, some of them being erected in a somewhat similar manner to the buildings shown in our illustration, but are much more elaborate, the carving alone taking years to complete.

In China also we find the many-storied tower, which takes the place of the bell-shaped dagoba or relic shrine of other Buddhist countries.

From the thought of the heathen deities, for whose worship these buildings were erected,

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES:—

Longfellow's beautiful song, "The Bridge", and particularly the words,

"And far in the hazy distance Of that lovely night in June,"

will be recalled to your minds these beautiful June evenings. The scent of roses is in the air, and the modest lily of the valley breathes its perfume from under the horse-chestnut tree or by the vine-covered arbor. The woods in their richness of verdure, from the tall, dark pines, swayed by the summer breezes, to the flowering honeysuckle at the corner of the verandah, on which the dew-drops sparkle, all tell us June is here again. The summer sounds of bird and beetle, fly and insect, are in the air or in the old garden where the dear old-fashioned flowers bloom. There, with blinded eyes, I could still find the peonies and the lilies, the monkshood (which the children must not touch), the sweet williams and the larkspur and the flags—beautiful as the Spanish Iris which we plant and water and care for, and when blown smells less sweetly and looks less nice than the dear old-fashioned flowers of our childhood's days.

It is no wonder James Russell so well wrote of this month, saying:—

"And what is so rare as a day in June! Then, if ever, come perfect days. Then Heaven tries the earth if it be in tune, And over it softly her warm ear lays."

Have you ever thought, my children, of the pleasure of living in a country such as ours, where the days are long and bright and beautiful? Where, when your day's work is done, you are not too tired to fly your kite, play base ball, cricket, foot ball, tennis or lacrosse. Where, when the family gather around, you play your concertina or violin in accompaniment to your sister's instrument. You know it is only in such latitudes as ours people feel like doing such things. The intense heat of a warm climate causes a languor and a not-want-to-exercise feeling, which steals away the relish for work and robs it of its charms. "Charms!

Work's charms!" I hear some of you exclaim, "I don't think it has any." You say you could run a mile for fun and never feel it; but you feel it very hard to have to saw or split the wood for twenty minutes. Let me say, do even that well and carry mother in plenty when you get it done, and have her forget all her troubles in your kindness, and see if works has not charms.

Sir Joshua Reynolds was one of the most distinguished painters of his day, and in answer to an inquiry how he attained to such excellence, he replied:—"By observing one simple rule, viz., to make each painting the best." Now, some of you have been out of school for the past few weeks helping at home in the house, in the garden or the field. If you learn this June the lesson the old painter teaches in his answer, it may be the best month's education you will ever get.

Have you ever heard of the minister who had but one hearer? He used the opportunity, and preached his sermon as he best could. In after years a stranger met him and asked if he remembered the time, and said that sermon had changed his whole life. He did the best he could, and thus a life was changed, like a mountain stream, to go ever afterwards on its course refreshing and making better where it touched.

Many of you will remember that old story which happened eighteen hundred years ago, but which will never be forgotten, of a woman

of whom it was said, "She hath done what she could."

UNCLE TOM.

P. S.—In awarding the prize for the best story on the illustration given in the April No., I would say that I feel very proud of my nephews and nieces. Amongst the seventy-four stories sent in there were many that were very good, and the competition for the prize was keen and close. I hope those who have written so well on this subject will not be discouraged, but will try again this month, as I offer again a prize of \$2.00 for the best story descriptive of the accompanying illustration. UNCLE TOM.

PRIZE STORY.

A Bear Hunt Reversed.

(Based on Illustration in April Number.)

BY H. T. COLEMAN, HANLAN P. O., ONT.

"I say, boys," said Harry, looking out from a warm corner by the fire-place, "I wouldn't wonder but what Uncle Fred is going to tell us a story to-night." Now I must explain that Uncle Fred, or rather Grand Uncle Fred, had invited some half dozen of us boys, all nephews of his, out to his place to spend a few days at Christmas. He had a delightful old farm house, with old lumber rooms that we used for treasure chambers and pirates' caves; an old-fashioned, wide stairway, with a

while bears could be met with almost at all times prowling through the woods. These latter were usually harmless, but it was generally advisable, unless one was well armed, to have as little to do with them as possible. Port S—, as you know, was at least thirty miles away, but it was there that we did all our trading. During the spring and summer months, except when we were putting in or gathering our scanty crops, we were busy logging and burning off. After the huge brush piles were burned off, the ashes were collected and made into potash. This always brought a good price, and it was customary for all the settlers in this immediate neighborhood to club together and send two or three cart loads down to the front every fall. There were five boys of us who were especially close companions—William Thomson, Sam Henderson, Tom Clews, my brother Henry, and myself. Though well on in our teens we had never seen the lake, except from a distance, while the Port with its score of house, its grist mill, its carpenter's and blacksmith's shop, and its river mouth, in which every week one of the few schooners then plying the lakes, rode at anchor, was to us a world of unknown wonders.

One summer, by dint of much promise and persuasion, we succeeded in getting permission to take the potash down to the Port ourselves. It had been already sold, so we considered ourselves fully equal to the undertaking. The trip usually took two days—one for going and another for the return. One fine August morning we started—young Columbuses setting out to explore what to us was a new world. In one of the carts there was, besides the regular load, a hamper packed with a generous supply of eatables, enough to stay even our hearty appetites for a space of longer than two days. Our outfit consisted of an axe, two stout ox-goads, and an old-fashioned shot gun, which in the hands of such sportsmen as ourselves was more liable to do harm to the person holding it than to the object at which it was aimed.

The journey down was rather uneventful. Any of you would think that to travel thirty miles in a lumbering ox-cart would be more tiresome than pleasant. But then we knew nothing of easy-riding covered buggies, and found enough in the novelty of our position, and the new sense of our own importance to make up for all unpleasantness. Our arrival was to us a sort of triumphal entry. With the curiosity natural to boys, and which most boys find it hard enough to outgrow, all that was novel and strange received our closest attention. We fully intended, when we reached home, to make all less favored boys with whom we might come in contact positively green with envy at our extensive knowledge of the world.

We spent the night in a loft over a store-room, which the purchaser of our potash kindly placed at our disposal. Early next morning we started homeward with a light cargo of sundries, in the way of store goods which the needs of our different families required, and five boys charged to the muzzle with news about life at "the front." What we needed, though, to lift us up to the standing of first-rate heroes was some extraordinary adventure. Sam thought that if we were attacked by Indians and were able to kill some dozens of them, with the aid of our shot-gun, his utmost desire would be gratified. All the rest of us had undefined longings in the same direction. We were not to go begging for adventure long, though, as what follows will show. Noon came, and found three-fourths of our journey completed. Tom, who was steward of the expedition, summoned us into the rear cart to finish the contents of the hamper. We were busily engaged in so doing, allowing the



bannister down which we delighted to slide, much to the injury of a certain critical part of our trousers, and huge chimneys up which the Christmas fires roared as if they were bidding defiance to all the cold and storm and darkness without. When evening set in we would gather round the old open fire-place in the sitting room. (Uncle Fred thought that stoves chilled all the warmth out of a person's feelings, especially at Christmas time, and would only tolerate one in the kitchen.) There we would sit and roast apples and crack hickory nuts while the hired man would make shadow-pictures of rabbits and donkeys, and other animals on the wall, and Uncle Fred, from his comfortable arm-chair, would tell us stories of his boyhood days, and of the changes that the old house had seen.

"About what shall the story be," he said. Tom suggested a ghost story. Somehow he had a special delight in being scared half to death, and wanted a ghost story almost every night. Ernest thought that Indians would be an agreeable subject, while Harry was of the opinion that a first-class bear story would "fill the bill." A vote being taken, the bear story was found to be most in favor, so Uncle Fred cleared his throat and began—

"Fifty years ago nearly all this part of Ontario was covered with forest. There were no regular roads—only a few paths 'blazed' through the bush, and a corduroy road, partly opened up, down to 'the front.' Wolves were plentiful,

steady-going oxen in front to plod along by themselves, when Sam paused in the act of disposing of a huge slice of bread and butter, and exclaimed, "Boys! what's that ahead of us?" We all looked and saw a small animal, for all the world like a young puppy, making his way along the roadside a short distance ahead. "I know," almost shouted Henry; "it's a young bear!" Nothing would do but what we should capture it. The carts were stopped. Sam headed it off. Soon the little fellow was cornered, and notwithstanding his awkward attempts to escape, I soon had him in my arms.

"For goodness' sake, hurry up, boys," shouted Henry from the cart; "here's the old one coming after us!" Sure enough, at no great distance from us was the mother bear, who, feeding on berries some distance from the road, had allowed the young one to stray away from her. Quickly enough into the cart tumbled Sam and I. "Chuck the little beggar into the hamper," suggested Tom. Into the hamper head first went young Mr. Bruin. "Hand me the gun quickly," said Sam, who was by general consent the gunner of the party. Resting it on the end-board of the cart he took aim and fired. The wounds which she received seemed to madden the bear the more, for, giving vent to a hoarse growl, she plunged into the roadway, evidently intending to make it warm for us. The oxen, too, seemed to object to the cart being used as an artillery wagon, for they broke into a trot, which soon changed into a gallop. All we could do was to hang on while the oxen, now thoroughly excited, bore madly along. Well it was for us that the carts were strongly made, for whenever we struck a piece of corduroy we were oftener in the air than on the ground. The bear showed remarkable activity for such a large animal. Every little while she would make a giant spring that would bring her dangerously near to us. We thought of the chances there were of the cart breaking down or of the oxen fagging out. In fact, already the laboring beasts gave signs that they could keep up the pace but little longer. Something had to be done. Sam grabbed the axe. William and I each laid hold of one of the goads. We had just reached the edge of a hill, and were shuddering to think of what might happen in the descent, when the bear made another great leap that almost brought her into the cart. Whack! came the heavy goads on the sides of the brute's head, while Sam's axe came down with crushing force on top of the skull. The hand of Providence seemed to direct and add force to the blow, for the bear fell with its skull cleft open. The axe flew out of Sam's hand as we rattled down the steep descent. The tired oxen only too gladly stopped at the next rise. Of course, we could not leave such a prize behind. Back we went, but found that to lift the bear into the cart was too much even for our combined strength. "We'll have to give up, boys," said Sam ruefully, gazing at the huge carcass, which weighed at least four hundred pounds. "Hello, young fellows!" "What's this you have?" called out a cheery voice from behind. Two men in a cart came up unnoticed by us, who had been working to no avail for at least half an hour. "Well, I never!" ventured the owner of the voice, a few seconds later, when he saw our prize. "You have a monster here, and no mistake." With the help of the new arrivals, we soon had Mrs. Bruin safely loaded. Our two assistants, who turned out to be settlers living a few miles in the bush from the point where they had come upon us, soon turned off after receiving our hearty thanks for their timely aid. Towards sundown that evening we bore down in state on the little group of houses in the clearing. Everybody turned out. Everybody wondered. Everybody asked for the articles for which they had sent, and found that what had not been broken into countless pieces had been thrown out in the rapid ride over the corduroy; but, notwithstanding, everybody, including ourselves, voted that this was the most successful expedition that had ever been sent down to the front.

The feeble tremble before opinion, the foolish defy it, the wise judge it, the skillful direct it.

Man Like His Shoes.

How much a man is like his shoes!
For instance, both have a sole to lose;
Both have been tanned, both made tight
By cobblers; both get left and right.
Both need a mate to be complete.
And both are made to go on feet;
Any both need healing, oft are cold,
And both in time will turn to mould.
With shoes, the last is first; with men,
The first shall be the last; and when
The shoes wear out they're mended new;
When men wear out they're men dead, too.
They both are trod upon, and both
Will tread on others, nothing loath;
Both have their ties, and both incline,
When polished, in the world to shine.
And both peg cut. Now, would you choose
To be a man, or be his shoes?

Grains of Gold.

He has not lost all who has the future left to him.

A handful of common sense is worth a bushel of learning.

Man's knowledge is but as the rivulet, his ignorance as the sea.

When may a ship be said to be in love?—When she wants a mate.

"When the swallows homeward fly," then the homeward fly is swallowed.

What is it that works when it plays, and plays when it works?—A fountain.

It is not cowardice to yield to necessity, nor courage to stand out against it.

What word is that composed of five letters from which you take two and one remains?—Stone.

A friend you have to buy won't be worth what you pay for him, no matter how little that may be.

"I don't know which do the most harm," said an old judge, enemies with the worst intentions, or friends with the best.

The object of all ambition should be to be happy at home. If we are not happy there, we cannot be happy elsewhere.

The incapacity of men to understand each other is one of the principal causes of their ill-temper towards each other.

Happiness, it has been well observed, is in the proportion of the number of things we love, and the number of things that love us.

Merit is never so conspicuous as when it springs from obscurity, just as the moon never looks so bright as when she emerges from a cloud.

He took her fancy when he came, he took her hand, he took a kiss; he took no notice of the shame that glowed her happy cheek at this. He took to coming afterwards, he took an oath he'd ne'er deceive, he took her father's silver spoons, and after that he took his leave.

True wisdom is to know that which is best worth knowing, and to do that which is best worth doing. If people were as willing to be pleased and as anxious to please in their own homes as they are in the company of their neighbors, they would have the happiest homes on earth.

It is easy to pick holes in other people's work, but it is far more profitable to do better work yourself. Is there a fool in all the world who cannot criticize? Those who can themselves do good service are but as one in a thousand compared with those who can see faults in the labor of others.

SUCCESS.—The first and chief element of success is decision of character. Without this, and the kindred traits that are always found in its company, such as resolution, courage, and hope, there is little chance of success. With it "there is no such word as fail," and seldom any such thing as a failure. To such a spirit even difficulties afford a stimulus; "for a resolute mind," it has forcibly been said, "is omnipotent."

LITTLE OPPORTUNITIES.—How often do we sigh for opportunities of doing good, whilst we neglect the openings of Providence in little things! Dr. Johnson used to say, "He who waits to do a great deal of good at once will never do any." Good is done by degrees. However small in proportion the benefit which follows individual attempts to do good, a great deal may thus be accomplished by perseverance even in the midst of discouragement and disappointments.—Crabbe.

An American Girl at Court.

I notice that as each woman goes through here she turns her head; surely the Queen can't be there. I will know when my turn comes, I think, and I do. On the other side of that doorway the wall is lined with mirrors, and one wouldn't be a woman if she didn't take a last glance at herself before entering the room where the Queen of England stands, writes Mrs. L. B. Walford in the *May Ladies' Home Journal*.

Before I reach her I see her. I see that good, kind, sweet face that all America knows and honors, and it makes everybody else around her seem of little moment. I am a Republican born and bred, but standing in the presence of Queen Victoria, brought face to face with her, I forget that, and I think that kingdoms may fall and rise, that republics may tumble to pieces, but that the great glory of a womanly woman will rule the world forever and forever. The pages let down my train, the Lord Chamberlain has taken my card, I dimly hear a voice say, "Miss Columbia for Presentation," than a small hand, once the most beautiful in the world, is raised and saluted; but I can't help it, my eyes will raise and I meet those of Victoria, Queen of England and Empress of India, and I am sure they tell her the reverence and honor I feel for her. Then I make the proper courtesies toward the line of princesses and princes at Her Majesty's left hand.

My train is quickly picked up and thrown over my arm, and the ordeal is over. Somebody tells me that I have done marvelously, and somebody who wishes to give me information, whispers that the Queen's pages attend to the trains, and that they are the sons of noblemen, who are given a holiday from school specially to attend the Drawing Room. Then I remember that I saw the beautiful Princess and how superb the Lord Chamberlain looked in his cloth of gold. Soon we are in the room where we wait for our carriage; friends are met and greeted; I gaze at the magnificent jewels and dresses, but never for a minute do I forget the kindly face of the great Queen, who has known sorrow and joy, and who, through it all, has been a royal woman. Mayfair and Belgravia, Kensington and South Kensington, are all giving "Drawing Room" teas, and we go from one to the other to see the other women, and to give them a chance to look at us. Somebody tells me that my name will appear and my dress be described in to-morrow's "Presentation" list, and I intend to get as many copies as I can, mark them with blue pencil and send them home.

Kitchen Hints.

Never scrape your baking board or rolling pin with a knife. Scrub with soap and hot water. Scraping soon makes them hollow in the centre, and when a rolling pin becomes that shape it is useless.

Cover your kitchen tables with zinc or white oil-cloth; it saves scrubbing and always looks clean, for a wash with soap and water removes every soil on it.

Have a small shelf put up in your kitchen and holes of various sizes bored in it for holding your whisk, pancake turner, strainer, butcher-knife, chopping-axe, wooden spoon, or any utensil that usually lies in the kitchen drawer or cupboard. It is easy to step to the rack and take the article out, compared to the trouble of searching through a drawer or cupboard.

Scrape all greasy plates before putting them into the dish-pan; it keeps your sink free and helps the grease pail.

Keep an old dish in your sink to empty tea leaves, coffee grounds, peelings, etc., into; it will save gathering them up again. Punch some holes in the bottom of the dish so the water will run freely from it.

Always keep an old whisk broom in the sink, with a small piece of soda and a little hot water; the whisk will save the hands many a parboiling.

Keep a jar of coarse salt near the sink, so you can rub a burnt stain off a pudding dish, or a dark tea stain from cups and saucers. Use graniteware instead of iron or tin; it is lighter to handle, cleaner to cook in, and prettier to look at than the great iron pots that fell to the lot of our mothers to wrestle with.

Bessie's Secret.

"I know the nicest secret!"
Cries bonny little Bess,
Her golden curls all flying;

Dickens to His Son.

With the exception of the first-born, my
brothers were sent to school very young. And
as they grew up, and were sent out into the
world, my father wrote a letter of counsel to
each, writes Mamie Dickens in an article on
" What My Father Taught Us " in the Febru-

ary Ladies' Home Journal. Here is one such
letter :-

"I write this note to-day because your going
away is much upon my mind, and because
I want you to have a few parting words from me
to think of now and then, at quiet times. I
need not tell you that I love you dearly, and am
very, very sorry in my heart, to part with you.
But this life is half made up of partings, and
these pains must be borne. It is my comfort,
and my sincere conviction, that you are going to
try the life for which you are best fitted. I
think its freedom and wildness more suited to
you than any other experiment in a study or
office would ever have been; and without that
training you could have followed no other suit-
able occupation. What you have always wanted
until now has been a set, steady constant pur-
pose. I therefore exhort you to persevere in a
thorough determination to do whatever you have
to do as well as you can do it. I was not so old
as you are now when I first had to win my food,
and do this out of this determination, and I
have never slackened in it since. Never take a
mean advantage of anyone in any transaction,
and never be hard upon people who are in your
power. Try to do to others as you would like
them to do to you; and do not be discouraged if
they fail sometimes. It is much better for
you that they should fail in obeying the greatest
rule laid down by our Saviour than that you
should. I have put a New Testament among
your books for the very same reasons, and with
the very same hopes that made me write an
easy account of it for you when you were a little
child. Because it is the best book that ever was
or will be known in the world; and because it
teaches you the best lessons by which any
human creature who tries to be truthful and
faithful to duty can possibly be guided.

"As your brothers have gone away, one by
one, I have written to each such words as I am
writing to you, and have entreated them all to
guide themselves by this book, putting aside the
interpretations and inventions of men. You
will remember that you have never at home been
wearied about religious observances or mere
formalities. I have always been anxious not to
weary my children with such things before they
are old enough to form opinions respecting
them. You will, therefore, understand the
better that I now most solemnly impress upon
you the truth and beauty of the Christian
religion as it came from Christ Himself, and the
impossibility of your going far wrong if you
humbly but heartily respect it. Only one thing
more on this head. The more we are in earnest
as to feeling it, the less we are disposed to hold
forth about it. Never abandon the wholesome
practice of saying your own private prayers
night and morning. I have never abandoned it
myself, and I know the comfort of it. I hope you
will always be able to say, in after-life, that you
had a kind father."

Puzzles.

1-CHARADE.

My first is an animal that can see in the dark;
My second is a letter contained in ark;
My third is an instrument for the head;
My whole is a receptacle for the dead.

CHARLIE S. EDWARDS.

2-CHARADE.

As we were walking down the street,
That is my chum and I;
We saw a man, yet not a man,
For he was full of "rye."

The Cop arrested him, and then
The magistrate did raise
His eyes, and say, your fine will first,
Sent down for sixty days.

He has a wife at home I'm told,
As well as children three;
And when at night he goes home tight,
They off to bed do flee.

His home, I say; he has no home,
'Twas sold at Sheriff's sale
To pay the mortgage that was raised
To bail him out of gaol.

This man was once a little boy,
And free from habits bad;
At first he smoked the cigarette,
And then a cigar had.

From bad to worse it soon led on,
"Come, boys, let's have a drink,"
Was what some older lads had said,
He, drinking, did not think.

At first he took some ginger ale,
No harm in that he thought;
But once the habit he had formed,
There soon a change was wrought.

The boys would laugh at him and say,
'Tis only a milkop
Who would drink such stuff as that,
And lemonade and pop.

He took a drink of wine at last,
To show the boys that he
Was not afraid to do as they;
Bravado, don't you see.

The habit formed, 'twas easy then,
He soon fell into line-
And spent his all, alas; and then
He had no place to dine.

His friends, if I may call them friends,
Deserted him right here;
COMPLETE he had no wealth to spend
In buying "lager beer."

The moral of this little song
Is, boys, oh! boys, beware;
The first step is the one that leads
You down in dark despair.

The cigarette, though small may be,
Will LAST you oft to sigh;
In after years, if practiced now,
And smoked (upon the sly).

FAIR BROTHER.

3-DECAPITATION

I'm much given to reflection,
And you'll always find it true
That just as you appear to me
Do I appear to you.

My head take off, a maiden
Will from my depths appear;
Of me, when whole, much use she makes,
Unto her I am dear.

Cut off her head. Nay! do not start,
For she will not be dead,
Nor even hurt, but only changed
Into a quadruped.

RIDDLE.

A contradiction strange am I,
Making some merry making sad;
Strong men at my sight do tremble and pale,
Yet I'm loved by each lassie and lad.

oft, oft have I pierced a poor mother's heart,
As my touch laid her brave darling low;
Strange, then, it must seem that I'm hailed with
delight
By young ladies wherever you go.

ADA ARMAND.

4-A CROSS.

My first is "single" and always will be,
My second "expresses denial" to a certain degree,
My third is "an epoch" or period of time,
My fourth may be "charged upon" to turn into
rhyme.

My fifth is "from the north," a region of snow,
My sixth is "a defender" or guardian I trow,
My seventh is "to wander" or choose the wrong
way.

My eighth is "the whole," I can venture to say,
My ninth shall "always" and "ever" remain
To the end; and of faith 'tis the end again.

LILY DAY.

5-CHARADE.

My first is what I have to feed,
When I get home from school;
My second is what we may often get,
When the weather is wet and cool.

My whole is a flower. I am told
Its hue is something the color of gold.

CHARLIE S. EDWARDS.

6-DOUBLE LETTER ENIGMA.

I'm in the "Button-hole bouquet,"
That's worn upon a Sunday;
I blossom in the "Noon-day sun,"
That dries the washing Monday.

In "Pleasure" I participate,
I try to down them all;
I take part in the "Latest games,"
That's played both spring and fall.

Once more the season has come around,
The boys are out at play,
They say my WHOLE'S good exercise
Upon a summer's day.

FAIR BROTHER.

Answers to May Puzzles.

- 1. WATER 2. Hope for the best, prepare
ABOVE for the worst; and take what
TOKEN God Sends.
EVENT 3. Leap-frog. 4. Bargain.
RENDS 5. Under-take.

Names of those who have Sent Cor-
rect Answers to May Puzzles.

Lily Day, I. Irvine Devitt, Addison Snyder,
Oliver Snyder, James Mowbray, Geo. W. Blyth,
E Gamache, Almer B. Borrowman, Alex. Hartle,
Charlie S. Edwards, J. H. Foster, Elsie Moore,
Willie Morehead, Jessie Cumberland, Harold
Moore.

How many take a wrong view of life, and
waste their energies, and destroy their nervous
system in endeavoring to accumulate wealth,
without thinking of the present happiness they
are throwing away. It is not wealth or high
station which makes a man happy. Many of
the most wretched beings on earth have both;
but it is a radiant, sunny spirit, which knows
how to bear trials and enjoy comforts, and thus
extract happiness from every incident in life.

The Melita District.

That the country tributary to Melita offers special
inducements to persons desirous of engaging in
mixed farming as well as wheat growing as a
specialty, is recognized at once by those visiting
this section. The beautiful rolling prairie of rich
virgin soil, watered plentifully with such fine
streams of pure water as the North Antler, South
Antler, Tory, Jackson and other creeks, and the
Souris river, presents a combination of natural
advantages which are enjoyed in few if any other
localities to such an extent. Add to this the con-
venient railway facilities, the rising town of Melita,
in which almost all industries are represented,
with ample provision for supplying the wants and
disposing of the products of the community,
and the adaptability of the section for the suc-
cessful raising of stock as demonstrated to the satis-
faction of the pioneers who have thoroughly tested
it, and the abundant yields of wheat and other
cereals also established by the undeniable results,
shipments having been made of wheat alone last
fall to the amount of 20,000 bushels, over two-
thirds of which was No. 1 and 2 hard, with a prob-
able 70,000 bushels left unthreshed, leaves no room
for doubt as to the capabilities and desirableness
of this portion of Manitoba. Mr. James Hay,
manager for the Lake of the Woods Milling Co.,
who have one of their large elevators located here,
and who shipped from this point 105,000 bushels of
wheat last fall, informs us that the price paid there
was exceptionally high, signifying to him the
superior quality of the wheat grown in this vicinity.
The impression might be made that the maximum
yield has been attained, and that there is no room
for other settlers, but the great query with those
who visit this part when the wheat is growing is,
Where does the wheat all come from? When there
is comparatively such a very small proportion of
the available land yet cultivated, as will be seen in
another page, land is still to be had at reasonable
prices; this is no doubt largely due to the fact that
it is only within a very recent date that railway
connection has been established. Mr. Geo. L.
Dodds, the agent for the C. P. R. lands there, states
that sales are being made with increasing frequency,
which no doubt will continue with a better know-
ledge of Melita and the surrounding country.
Those applying to Mr. Dodds will be rendered
every possible assistance in locating farms; his ex-
tensive knowledge of the different soils and other
features will greatly aid those immigrating. There
are farms yet to be had peculiarly fitted for grain
growing, others for stock raising, and others for
mixed farming, so that all comers can reasonably
expect to get what they most desire. While to
the agriculturist choosing a new home, perhaps the
most important point is the fitness of the soil, and
conditions of growth as affecting the line of farm-
ing he wishes to follow, yet closely connected with
this is the kind of market he has, and the kind of
business men with whom he will come in contact.

In Melita business is transacted by men of ability and energy, who seem anxious to please their customers and supply their wants. One of the chief features of the town, its three large elevators, is worthy of special note. The prices for furniture, groceries, harness, clothes, implements, and in fact all kinds of goods required by settlers, are such that it is not advantageous to move old effects or even purchase new to transport. The following are some of the leading business enterprises:-

E. M. Graham, who has a well established general store, is also postmaster, and agent for the N. P. Railway. He began farming in 1883 about a mile from the present town, and moved in a year ago. He carries a large stock of well assorted goods suitable to the requirements of the town and surrounding country, and does a large trade.

Geo. L. Dodds, an enterprising and pushing general merchant, is also interested in farming, and takes a lively interest in the raising of high class stock, having bred some very fine drivers. He is also the agent at this point for the sale of C. P. R. lands, in reference to which, as well as the country adjacent to Melita, any information will be freely furnished.

M. Livingston, V. S., Reeve of the municipality of Arthur, has a fine farm one mile from town, beautifully located on the bank of the Souris river. Besides being a regularly qualified and skilful veterinary surgeon, he is also interested in breeding heavy horses, and takes pleasure in aiding the advancement of the town and endeavoring to develop the resources of the fertile acres around him, thus helping to build up a prosperous community.

H. L. Elliott, dealer in dry goods, clothing, boots and shoes, groceries, etc., has been in business since the acquisition of railway facilities on August 15th, 1891. The fine stock of goods in this well ordered establishment, and the business capacity of the proprietor, together with the rapid progress of the town are certain to develop an extensive concern.

A full line of jewellery, watches and clocks is kept in the shop of **A. E. Kemp**, who started business here in March '91. He is fully convinced that it is much better to buy goods here than pay transportation, and take chances of breakages, etc.

C. P. Holden's furniture and undertaking is a very complete establishment. A nice picture framing department is in connection. He guarantees satisfaction to those leaving orders with him, and as he buys in large quantities can give good values.

John Hughes, "the fashionable tailor of Melita," came to Manitoba from Toronto in 1880, and being well pleased with the locality, present aspect, and future prospects of Melita, is fully determined to "suit" everybody that gives him an opportunity to their entire satisfaction.

The firm of **Campbell & Ferguson** have a fine and complete stock of building material of all descriptions.

Mr. J. L. Campbell, of the above firm, is also interested in the sale of lands and real estate, as well as insurance, etc. He is putting forth continued and earnest efforts to advance the interests of the town. The residence of men who take an unselfish interest in the progress and development of a place is a fortunate circumstance wherever existing, and we feel sure persons desirous of locating in this vicinity will find in Mr. Campbell a person at all times ready and willing to render any assistance possible, or furnish information which will aid them in selecting desirable homes.

There are at present two good hotels. The "Grand Union" is a fine building with ample room, well appointed, having in connection a livery and stable. There is room for the accommodation of about 40 to 50 guests, and two sample rooms. The proprietors, Messrs. Turner & Hulse, will be found attentive.

At the "Metropolitan Hotel" will be found Mr. John Cobb, the proprietor, who will receive and so look after you in comfort as to impress the traveller with a homelike feeling so much appreciated by strangers. Although he now has 30 bed rooms he intends enlarging his house this summer to accommodate his patrons. There are two sample rooms, also stable and livery in connection.

Space will not permit us to mention the many other industries and business houses represented, comprising stores, blacksmith and machine shops, fruit, butcher, baker and barber shops, millinery establishments, law and other offices, bank, etc. In another column will be found information respecting the store of **Wesley Jackson**, which will interest anyone looking for a business in this district. The Melita Enterprise, published and edited by **Graham & Larn**, fills the bill as a local newspaper.

NEW ADVERTISEMENTS.

- Jerseys at Auction—Henry Young.
- Extensive Auction Sale—J. C. Dietrich.
- Berkshires—H. J. Davis.
- Holstein-Friesians—A. Kirby.
- Shorthorns—Valentine Eicht.
- Improved Large Yorkshires—J. H. S. Barbour.
- Holsteins—H. McCaugherly.
- Shire Horses and Improved Yorkshires—Wm. Mullin.
- Shorthorns, Coach Horses and Berkshires—A. J. C. Shaw & Sons.
- Shropshires—E. G. Preece.
- Holsteins—E. M. S. & C. S. Mott.
- Hertfords, Leicesters and Poland Chinas—Dan Reed.
- Shorthorns—C. G. Davis.
- Reservoir Stock Farm.
- Breeding Eggs Wanted—T. V., Advocate Office.
- Waggoning.
- Cutswolds, Jerseys and Berkshires—J. C. Snell.
- Binding Twines—S. Mills & Co.

- Melita, Man.
- Farm Implements—Mercer Co. (Ltd.)
- Pea Harvester—Tolton Bros., Guelph.
- DeLaval Cream Separators—Frank Wilson, Montreal, P.Q.
- Chester Whites and Horned Dorsets—R. H. Harding, Thorndale.
- Shropshires—W. H. Hawkshaw, Glanworth.
- Holstein-Friesians—A. C. Hallman & Co., New Dundee.
- Shorthorns—Dr. F. C. Sibbald, Sutton West.
- Beekeepers Supplies—Stanley Rightmyer, Wooler.
- Hay Loaders and Tedders—Wilson Mfg. Co., Hamilton.
- Herbageum.
- Jersey Bull—Percy & Young, Bowmanville.
- Situation Wanted—C. H. McNish, Markham.
- Picket Wire Fence—Toronto Picket Wire Fence Co.
- Business College—M. MacCormick, Guelph.
- Farm Lands—A. J. Bannerman.
- Shropshires and Yorkshires—T. H. Medcraft, Sparta.
- Clydesdale for Sale—Wm. Agnew, V. S., Langton.
- Campbell's Quinine Wine.
- Farm Implements—D. Thom, Watford.
- Boys for Farm Help—Alf. B. Owen, Toronto.
- Plow—Wm. Dick, Aldton P.O.
- Produce—Fruit, Provisions, etc.—Thos. Irvine & Co., Liverpool, Eng.
- Wind-mill—Ontario Pump Co., Ltd., Toronto.
- Wind-mill for Sale—Jackson Johnson, Warkworth.
- Pea Harvester—Jno. Richmond & Son, Blyth.
- Sale of Lands—C. P. R.
- Jersey Bull—J. C. Snell, Edmonton.
- Shorthorn Bull—J. C. Snell, Edmonton.
- Shropshires—Wm. Pettit, Freeman P. O.

PRODUCE.

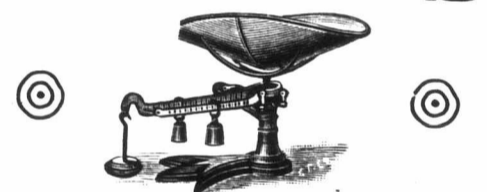
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SPECIAL PRICES THIS MONTH.

Stock or Hay Scales!

PLATFORM -- SCALES.

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PORT SIMPSON, B.C.

Offers the same opportunity to the investor that Vancouver did ten years ago. Business Lots can be had now at low figures, which may make the fortune of the investor a few years hence.

Address for particulars, GEO. D. SCOTT, 318-a-om Box 61, VANCOUVER, B. C.

ALEX. STEWART, MINNEDOSA, - - MANITOBA,

Agent for sale of C. P. R. and Canada Northwest Land Company's lands, and of thousands of acres of other lands in the neighborhood of above town and along the little Saskatchewan River, where there is abundance of hay and first class water. No better part for mixed farming. Improved lands among the above. Enquiries promptly answered, and any information required will be cheerfully given. 318-v-om

FREE

Information will be sent to those desirous of becoming acquainted with the advantages to be gained by locating on

FARMS

In the neighborhood of Hamiota and Rapid City. A number of improved and unimproved farms for sale, and lots in the rising town of Hamiota. 318-y-om MALCOLM TURIFF, Rapid City.

STOCK FOR SALE.

EXTENSIVE AUCTION SALE

High Class Trotting-Bred Road Horses

MR. J. C. DIETRICH, Maple Leaf Farm, - - Galt, Ont., WILL SELL BY

PUBLIC AUCTION

at his farm, in the suburbs of the Town of Galt, on

THURSDAY, June 16, 30 - HEAD - 30

Finely-Bred Roadsters

comprising brood mares with foal at foot, and one, two and three-year old colts and fillies. This will be a grand opportunity to purchase breeding stock of the choicest type, with action unexcelled, the young stock being, with two exceptions, sired by the well-known standard-bred stallion Axland (6893), by Leland (1300). Leland is by Rysdyk's Hambletonian, and his dam is Imogeur, by American Star. Axland's dam is Axis, by Princess; 2nd dam Fav, by Dorsey's Goldust; 3rd dam Grace, by Pilot, Jr.; 4th dam by Orphan Boy, son of American Eclipse. The brood mares are a choice lot, being grand individuals. This stock has been bred especially with a view to supplying the demand for high class Roadsters and Saddle Horses for the foreign market.

Terms—Ten per cent. of amount to be paid as soon as sale is made, on the balance four months' credit will be given when parties are known to me and security approved.

Sale commences at 1 o'clock, p. m. Pedigrees furnished at time of sale.

THOS. TILT, J. C. DIETRICH, AUCTIONEER. 318-a-m PROPRIETOR.

JERSEYS AT AUCTION

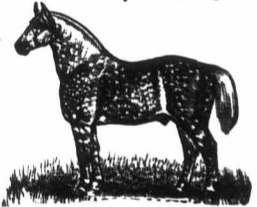
on Tuesday, June 14th, 1892, at my farm, one mile from Tavistock, G. T. R., four miles from Shakespeare, G. T. R., and two miles from Woodstock, C. P. R. and G. T. R. Thirty-five high class Jersey cows, heifers in calf, heifer calves and young bulls, registered, pure-bred unregistered, and high grade, deep milkers, rich butter producers, handsome colors, and models of the butter breed. Sale to commence at 2 o'clock. Terms, six months credit, or four per cent. discount for cash.

JOHN SMITH, Auctioneer, Brampton, Ont. 318-a-0

R. AZIAS-TURENNE, General Manager. BARON EDEGRANCEY, Vice-Pres., PARIS, France. 30 St. James Street, MONTREAL, CANADA.

LA COMPAGNIE

DU HARAS NATIONAL



35 PRIZES AND DIPLOMAS IN 1891 FOR OUR NORMAN, PERCHERON, BRETON STALLIONS 318-y-om FOR SALE OR TO LET.

HILLHURST -- HACKNEYS

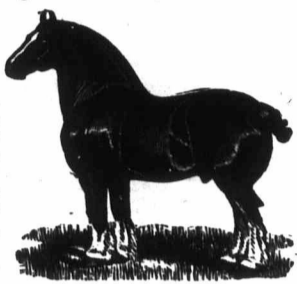
Oldest Stud in America and largest in the Dominion.

All stock full registered and bred from the most fashionable and purest blood, direct from breeders in the heart of the Yorkshire Hackney breeding district.

STALLIONS. Fordham (287) 28, by Denmark (177); Maxwell (143) 76, by Prince Alfred (1325), and Danesfort (333) 77, by Dargelt (174). MARES by Matchless of Lonsborough (1517), Danegelt (174), Wildfire (1224), Fordham (287), etc. Young stock for sale. Cobs, Saddle Horses and half-bred fillies by Fordham. Standard-Bred Trotters—Electioneer, Almont, Happy Medium and Wilkes blood. Polled Aberdeen-Angus and Jersey Cattle, Shropshire Sheep and Yorkshire Pigs. For catalogues address M. H. COCHRANE, Hillhurst Station, P. Que. 310-y-om

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—IMPORTER AND BREEDER OF—
Yorkshire Coachers, French Coachers, Clydesdales, Clydesdale Mares, Shetlands, and Ayrshire Cattle.

The stock has taken more prizes than all importers and breeders combined in the province. I am prepared to sell at prices to suit the times. Give me a call. Canada Atlantic Ry and G. T. R. on the farm. ROBERT NESS, Woodside Farm, Howick P. O., P. Q. 315-y-OM



MESSRS. JAS. GARDHOUSE & SONS.,
ROSEDALE FARM, HIGHFIELD P. O., ONT.

Have on hand and for sale at low figures, Draught Colts and Fillies, both from imported and Canadian bred mares, and mostly sired by their sweepstakes horse "King of the Castle." These are all good ones, and will make very heavy mares and horses. Also Shorthorns and Leicesters of the choicest strains of blood. Write for prices or come and see us. Station and Telegrams: MALTON on G. T. R. 313-y-OM

CLYDES, SHIRES AND YORKSHIRE COACHERS.



MR. FRANK RUSSELL, Mount Forest, Ont., offers for sale at low figures and on easy terms choice stallions of the above breeds; also pedigreed Improved Large Yorkshire Pigs, at \$15.00 per pair. 310-y

MANITOBA HORSEMEN, LOOK HERE

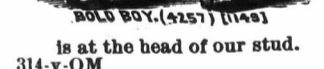
I can sell you an imported Clydesdale Stallion for less money than any other dealer. I handle none but sound, first-class stock, and sell at a small profit. I number among my customers such well-known horsemen as Enright Bros., Winnipeg, Man., and Dundas, Ont. Also a few choice Shetland Ponies.

A. K. TEGART,
IMPORTER AND BREEDER,
TOTTENHAM, ONT.
313-y-OM

D. & O. SORBY, GUELPH, ONTARIO,
BREEDERS AND IMPORTERS OF

FASHIONABLY BRED CLYDESDALES

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.



BOLD BOY (4257) (144)
is at the head of our stud.
314-y-OM

SHIRE HORSES.—A grand young imp. stallion for sale at a low figure.

IMPROVED YORKSHIRES.—Young stock of all ages at farmers' prices.

WHITE HOLLAND and BRONZE TURKEYS.—Orders booked for young birds for fall delivery. Correspondence solicited. Prices on application. 318-y-om **WM. MULLEN, Hillsburg, Ont.**

Standard-Bred Trotters and A. J. C. C. Jerseys for Sale.

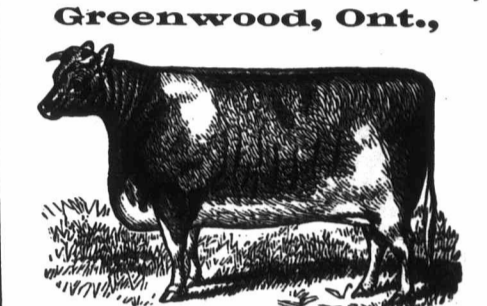
Produce of such sires as Gen. Stanton (2545), 5 in 30 list this year; Almont Wilkes (11242), 2.30, trial 2.16; and Superior, sire of Canadian Girl. Brood Mares, daughters of Gen. Stanton, Almont Wilkes, Clear Grit, Brown Douglass and Winfield Scott, including dam and three full sisters of Fides Stanton 2.28 1/4, last half in 1.12. Jerseys principally of St. Lambert strain, all young stock, sired by sweepstakes bull Toronto 1890.—**J. CARPENTER, Ingledale, Winona, Ont.** 307-y-OM

Standard - Bred Stallions
AT OTTER PARK, NORWICH, ONT.

Premier Stallion, Lexington Boy 2.23, by Egbert 1136, sire of Egthorne 2.12 1/4; Temple Bar 2.17 1/4, and forty-three others in thirty list. Other standard-bred Stallions in stud. For particulars send for announcement. 315-y-OM **CORNWELL & COOKE, Proprietors.**

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A FIRST-CLASS IMP. CLYDESDALE STALLION of Prince of Wales (673) blood. A grand stock horse and sure breeder. Price very low, breeding and quality considered. **WM. AGNEW, V. S.,** 318-tt-om Langton, Ont.

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Has for sale, at MODERATE prices, an exceedingly good lot of young cows and heifers—all by imported sires and mostly from imported dams of the best strains to be had in Scotland.

A FEW YOUNG BULLS FIT FOR SERVICE also FOR SALE

New Catalogues for 1892 now ready. Send for one; they are mailed free.

My motto is "No business, no harm."

Greenwood P. O. and Telegraph Office, Claremont Station on the C. P. R., or Pickering Station on the G. T. R. Parties met at either station on shortest notice. Come and see my cattle. 311-y-OM

FOR SALE!

Four Shorthorn Bulls and 8 Heifers, 30 Leicester and Southdown Ewes, and a number of Berkshire and Yorkshire Pigs. Good animals of good blood. Send for catalogue. 311-y-OM **E. JEFFS & SON, Bondhead, Ont.**

SHORTHORNS.

I have for sale several fine young bulls and heifers—red and rich roan, low set, thick and stylish, and grandly bred, and at reasonable prices. Dams are either imported or daughters of imported cows.

D. ALEXANDER
308 OM BRIGDEN, Ont.

SHORTHORNS, BERKSHIRES,

Plymouth Rocks, Bronze Turkeys. Write me for prices on the above. I have one of the finest show cows in Ontario for sale. Waterloo-Booth strain. H. Chisholm, Montrose Farm, Paris, Ont. 309-y-OM

SHORTHORN BULL,

16 months, red, thrifty, good feeder, from deep milking family. Price reasonable. Write J. C. SNELL, Edmonton, Ont. 318-a-om

VALENTINE FICHT,

Maple Leaf Farm, Oriel, Ontario,

offers for sale at reasonable figures and on liberal terms, 30 head of well-bred Shorthorn bulls and heifers, yearlings and two-year-olds, also a three-year-old shire stallion from imported sire and dam (2nd prize Toronto), and a grand lot of Cotswold sheep. STATION: Woodstock, on C. P. R. and G. T. R. 18 y-om

SHORTHORNS!

The Briars Herd, the property of Dr. F. C. Sibbald, Sutton, Ont., is one of the largest in Canada—over 60 head of registered breeding stock. Young bulls always for sale. Address

F. C. SIBBALD,
The Briars,
Sutton West, Ont.
318-y-om

If you want a well-bred Shorthorn Bull for use on Grade Cows, or a Heifer to start a herd with, at a price that your pocket can stand, write me. I can suit you. **C. G. DAVIS, Woodlands Terrace Farm, Freeman P. O., Ont.** 318 y-om

SHORTHORNS, COACH HORSES & BERKSHIRES

My herd is headed by Daisy Chief; he by the famous Indian Chief. My stock is kept in breeding condition, and I have always a few young bulls and heifers for sale at reasonable figures. Also registered Berkshires and a few extra choice Cleveland Bay Mares, the get of Disraeli, Dalesman, etc. Write for prices, or come and see us.

A. J. C. SHAW & SONS, Camden View Farm,
318-y-om Thamesville, Ontario.

SCOTCH-BRED : SHORTHORN : BULLS,

Scotch-Bred Heifers,

Imported Shropshire Rams, Imported Ewes,

Home-Bred Rams, Home-Bred Ewes,

FOR SALE,

in any number. All of very best quality, and at the lowest prices.

We want 500 recorded rams for ranches.

Correspondence solicited.

John Miller & Sons,

Brougham, Ont.

Claremont Station, C. P. R., 22 miles east of Toronto. 306-y



OAK RIDGE STOCK FARM

Shorthorns & Berkshires

My herd of Shorthorns are from select milking strains. Young animals at right prices. A few fine yearling bulls now ready. For particulars and pedigrees of stock address

DAVID HAY,

309-y-OM **ARKONA, ONT.**

MAPLEWOOD STOCK FARM.

SCOTCH SHORTHORNS, IMP. YORKSHIRE AND BERKSHIRE FIGS. Herd of Yorkshires headed by Favorite (imp.) and Royal Duke. Both prize winners; also registered Berkshires of Snell's stock. Pairs supplied not akin, and satisfaction guaranteed. Correspondence invited. Address, 310-y-OM **J. G. MAIR, HOWICK, P. Q.**

SCOTCH-BRED SHORTHORNS FOR SALE

6 Choice Young Bulls

And the Imported Cruickshank Bull

ABERDEEN HERO,

Their sire. Also some nice

Young Heifers

From one year old up. Prices to suit the times.

310-y-OM **SHORE BROS., White Oak.**

SHORTHORNS AND BERKSHIRES

The herd is headed by the noted Sir Christopher = 3877 =, and Mina Chief = 18670 =. The females consist of Mina and Strathallan families. Our Berkshires are prize-winners wherever shown. Choice young bulls and Berkshires for sale.

C. M. SIMMONS, Ivan P. O., Iderton Sta., Ont.

JAMES QUIRIE, Delavan, Ont. 309-y-OM

MAPLE SHADE

—NOTED FOR—

SHROPSHIRE

—AND—

Shorthorns.

Now ready for inspection—a choice lot of strong, fleshy young bulls, sired by the imp. Cruickshank bull Sussex (56625). Call or write for prices. Address

JOHN DRYDEN,

314-y-OM **BROOKLIN, ONT.**

BOW PARK HERD

—OF—

PURE-BRED SHORTHORNS.

Have always on hand and for Sale young Bulls and Females, which we offer at reasonable prices.

ADDRESS—

JOHN HOPE, Manager,

306-y **Bow Park, Brantford, Ont.**

**SCOTCH SHORTHORNS.**

Imported Prince Royal and cows bred by S. Campbell, Kinnellar, and James Bruce, of Burnside, together with their descendants by imp bulls. Seventy head to choose from; also Cotswold sheep. Farm close to station. **J. & C. Taylor, Rockwood, Ont.** 317-yom

= SHORTHORNS =

-AND-

Improved Large Yorkshires

at prices to suit the times.

SEVERAL choice spring litters to select from; also a few sows fit for service.

WM. COWAN, V. S., GALT.
313-y-om

Estate of Robert Hay,

Breeder and Importer of

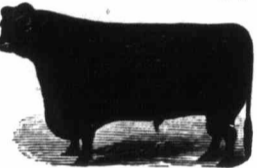
choice Aberdeen-Angus

Polled Cattle, also

Shropshire Sheep from

the best blood of Eng-

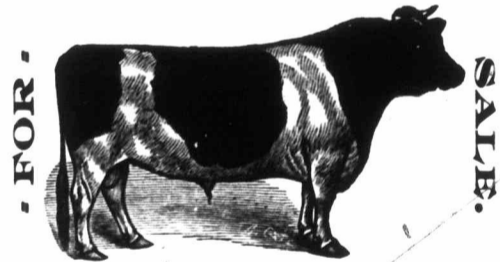
land, Ireland & Scotland



We have now much pleasure in telling our patrons that we have never been in better shape to meet their demands. We have not shown for three years, and all our stock have been on grass from May to December, and on sward turnips and rye hay from December to May. We can supply farmers with bulls to breed the best class of steers, besides settling once and for all the vexed dehorning question. Our strong point in the past has been the breeding and feeding of **Show Animals**. We are breeding them **NOW**, and can turn out herds fit to stand against the world at Chicago next year. Our prices will be found most reasonable, and we shall gladly welcome farmers and stockmen, whether on business or pleasure. Send postal card for private Sale List and give us a call before investing.

J. G. DAVIDSON,

Kinnone Park Stock Farm, **MANAGER.**
317-f-om New Lowell, Ont.



A choice lot of thorough-bred Holsteins. We have on hand a large number of choice bull and heifer calves which we offer for sale at reasonable prices. They can be seen at Wyton, which is on the St. Mary's Branch of the Grand Trunk R. R. Before buying, give us a call. For further information apply to **W. B. SCATCERD, Secretary,** Wyton, Ont. 312-y-OM

HOLSTEIN-FRIESIAN CATTLE.

My stock is selected from the leading herds. Choice young stock for sale. Before you buy elsewhere, write me for quotations.

W. MCCLURE,

Mint Creek Farm, NORVAL, ONT.
On main line G. T. R. 310-y-OM

ONLY HOLSTEINS ONLY

We are making a specialty of breeding Holsteins of the following strains—Aagries, Barringtons and Mercedes. Our last importation comprised nineteen head from one of the leading herds in the United States. Our herd now numbers close to 30 head. Young bulls and heifers for sale. Prices right and terms reasonable. **E. M. S. & C. S. MOTT, The Gore Farm, Box 95, Norwich, Ont.** 318-y-om

HOLSTEIN-FRIESIANS

Owing to change of residence and sale of farm on the part of the owner, a small herd of these fine cattle, including some prize-winners in the Toronto Industrial, will be offered for sale at extremely moderate prices. Apply to

A. KIRBY,

Maple Grove Farm, 318-a-om **PICTON, ONT.**

THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS.

SMITH BROS., Credit Valley Stock Farm, CHURCHVILLE, PEEL COUNTY, ONT., (24 miles west of Toronto).



This is the place to get stock of best quality at reasonable prices. We have seventy-five head, including prize-takers; best strains, cows and heifers, with large milk and butter records; young bulls of superior quality. Send for catalogue. 316-y-OM

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RIDEAU STOCK FARM

KINGSTON, ONT.,

- - - - - AND GET PRICES ON - - - - -

Holstein Bull Calves

Calved since January 1st, 1892.

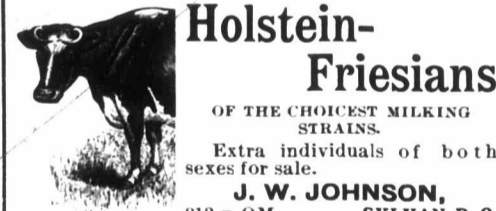
F. A. FOLGER,

315-y-om Proprietor,
Box 579.

HOLSTEIN-FRIESIANS

The Choicest Herd in Canada.

A few rich-bred bulls left, fit for service for 1892, sired by our silver medal bull, 2nd out of cows with large records. Will sell at a bargain in order to make room for young stock. Other stock of all ages and highest excellence for sale. Write at once for prices. Railway station, Petersburg on G. T. R.; New Dundee P. O., Waterloo Co., Ont. 318-y-om **A. C. HALLMAN & CO.**

**Holstein-Friesians**

OF THE CHOICEST MILKING STRAINS.

Extra individuals of both sexes for sale.

J. W. JOHNSON,

313-y-OM SYLVAN P. O.

HOLSTEINS AGAIN IN FRONT.

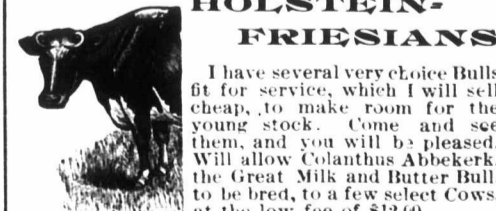
At Toronto show we showed eight head, and we brought away 4 firsts, 1 second, 2 thirds and 3rd on the herd. Stock for sale.

J. C. McNIVEN & Son,

307-y-OM Lansdown Farm, WINONA, ONT.
13 miles east of Hamilton on the G. W. Div. G.T.R.

REGISTERED HOLSTEIN BULLS AND HEIFERS.

John Pringle, Maple Lawn Farm, Ayr, Ont., offers for sale a few well-bred bulls and heifers of the above breed at reasonable figures. My bull, Ira's King, was bred by Dudley Miller, and my cows are all of choice breeding. 309-y-OM.

HOLSTEIN-FRIESIANS

I have several very choice Bulls

fit for service, which I will sell

cheap, to make room for the

young stock. Come and see

them, and you will be pleased.

Will allow Colanthus Abbekerk,

the Great Milk and Butter Bull,

to be bred, to a few select Cows,

at the low fee of \$12.00.

318-y-OM Address: **H. BOLLERT, Cassel, Ont.****BROCKHOLME STOCK FARM**

Ancaster, Ontario.

R. S. STEVENSON,

Breeder of Holstein Cattle and Improved Yorkshire

Pigs. Holsteins recorded in advanced registry.

Yorkshires bred from imported stock. Young stock

for sale at all times. 307-y-OM

HOLSTEINS at WALNUT HILL FARM

Messrs. **H. McCAUGHERY & SON, Streetsville, Ont.**, offer for sale, at low figures, choice young Bulls and Heifers of the best dairy strains. Write for prices, or, better still, come and see us. Visitors welcome. No trouble to show stock. Streetsville Station 1/4 mile. 318-y-om

JERSEY BULL.

After June 10th; first prize and first class; 16 months old. Sire, first prize Toronto Exhibition; dam imported. One of the best cows in Canada. Come and see or address **J. C. SNELL, Edmonton, Ont.** 318-a-om

FOR SALE.

A THOROUGH-BRED JERSEY BULL, (registered number 27024 A.J.C.C.) two years old. For further particulars, etc., apply to

PERCY & YOUNG,

318 tf-om Bowmanville, Ont.

JERSEYHURST FARM, MARKHAM, ONT.

ROBT. REESOR, importer and breeder of A. J. C. C. Jerseys of the choicest breeding, with the St. Heller bull Otolie 17219 at the head of the herd. Stock of all ages on hand and for sale. 308-y-OM

SUNNY BRAES FARM

Hillhurst, P. O.

ST. LAMBERT JERSEYS.

The prize-winning herd of the Eastern Townships, headed by Rene of St. Lambert (20343), winner of 1st prize and sweepstakes wherever shown.

I make a specialty of pure St. Lambert blood, and breed none but the best.

Choice young stock for sale. Terms, prices and pedigrees on application.

Mrs. C. H. Crossen,

Sunny Braes Farm, **HILLHURST, P. O.**
310-y-OM

GLEN ROUGE JERSEYS!

WM. ROLPH, Glen Rouge Farm, Markham, Ont., offers for sale Jerseys of all ages from his famous herd. The world-renowned St. Lambert blood a specialty. Also registered Clydesdale Horses. 309-y-OM

JERSEYS AND TROTTERS.

Herd headed by Carlo of Glen Duart (1637), the champion bull of 1891, and Pussy's John Bull (21200), a son of Canada John Bull.

STUD headed by Arklan (10331), a son of the world-renowned Guy Wilkes, 2.15 1/4.

I breed none but the best and keep no calls.

A. C. BURGESS, Arklan Farm,

312-y-OM Carleton Place, Ont.

BELVEDERE JERSEYS SERVICE BULLS ARE

Canada's Sir George, Canada's John Bull.

Allie of St. Lambert, 26 1/2 lbs. butter a week; 56 lbs. milk daily.

Pure St. Lambert. Hugo Chief of St. Ames, Pure St. Lambert.

Massena's Son—Massena, over 20 lbs. a week; 9,099 lbs. milk, estimated to have made 907 lbs. 2oz. butter in 1 yr., 11 days.

Sir Signal. Miss Satanella (Signal cow), 20 lbs. 6 oz. butter a week, on 2nd calf.

Believed to be the three greatest living bulls. Silver cup at the Kellogg Combination Sale; Silver Tea Set (Farmer's Advocate) for milk test; over 20 medals, gold, silver and bronze; over 300 prizes in money, also numerous diplomas, commendations and special prizes.

Special Offering Now. 3 Sons of Canada's Sir George, (pure St. Lambert's).

2 Sons of Massena's Son, from tested cows. Registered and express paid to any reasonable distance.—**MRS. E. M. JONES, Brockville, Ont., Canada.** 313-y-OM

Ayrshire Cattle & Poland China Hogs,**MERINO SHEEP AND FANCY FOWL.**

We have the largest herd of Poland Chinas in Ontario. At the last Industrial Fair we carried off 17 prizes out of 26, including both prizes for pens.

We breed from none but the best, and our aim is to supply first-class stock at living prices. We mean business. Write, or come and see us.

W. M. & J. C. SMITH,

310-y-OM Fairfield Plains P. O., Ont.

DOMINION PRIZE HERD OF AYRSHIRES

This herd has taken all the first prizes wherever shown in Quebec and Ontario since 1887 to 1891. From imported stock. Young stock for sale at liberal prices.

JAMES DRUMMOND & SONS,

315-y-OM PETITE COTE, MONTREAL, P. Q.

Prize-Winning Ayrshires for Sale



Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors welcome. Address

THOMAS GUY,
314-y
Sydenham Farm, Oshawa, Ont.

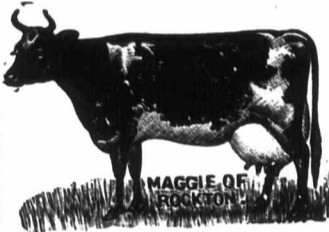
MAPLECLIFF STOCK FARM
Choice Ayrshire Cattle for Sale.

We make a specialty of these grand dairy cattle, our stock consisting of very heavy milkers, and have some fine young stock for sale; also high grades. One mile from Ottawa.

R. REID & CO.,
311-y-OM
Hintonburg, Ont.

PRIZE-WINNING AYRSHIRES FOR SALE.

I have at present one of the largest & best herds in Ontario, which has been very successful in the prize ring. They are deep milkers and of a large size. Bulls, cows and heifers for sale always on hand.



JAS. McCORMICK & SON,
311-y-OM
Rockton, Ont.

Herefords, Leicesters, Imp. Yorkshires and Poland-Chinas.

Send in your orders now for Ram Lambs for fall delivery. Three really good Yorkshires Boars and one Sow, 7 months old, registered pedigrees, \$15 each if taken soon. **DAN. REED, The Spruces, Glanford P. O., Ont.** 313-y-om

HEREFORD CATTLE & CHESTER WHITE HOGS.

The undersigned offers for sale three grand bulls and a few heifers of the above breed. Also pigs of both sexes. Prices dead right—**JOS. CAIENS, CAMLACHIE, ONT., 14 miles from Sarnia.** 313-y-OM

BREEDING EWES WANTED

—TO PURCHASE, ABOUT—
200 GOOD GRADE SHROPSHIRE DOWN EWES, IN THE FALL.

T. V., Farmer's Advocate, Box 214,
318-b-om
Winnipeg, Man.

SHROPSHIRE!

A choice lot of ram lambs sired by my imp. Thomas ram, and out of Bradburne and In-stone ewes, for sale at reasonable prices. Several of these are good enough to head pure-bred flocks. Also a yearling Shortborn Bull, by my Sheriff-Hutton bull The Premier. **WM. PETTIT, Freeman P.O., Ontario, Burlington Station.** 318-y-om

SHROPSHIRE AND YORKSHIRE.

Imported and Home-bred **EWES, LAMBS**

—AND—
SHEARLING EWES
of best quality and lowest prices.

ALSO
YOUNG YORKSHIRE PIGS.
Come and see me before buying elsewhere.

T. H. MEDCRAFT,
Sparta P. O., Ont.,
309-y-OM Eight miles south-east of St. Thomas.

SHROPSHIRE!

I AM now ready to take orders for the coming summer, and after weaning. My flock consists of 170 imp. ewes and lambs; a few shearling rams, with a fresh importation to arrive shortly. If you want size and quality I can supply you. Visitors welcomed.

W. S. HAWKSHAW,
GLANWORTH P. O.
(7 miles south of London.) 315-tf-OM

SHROPSHIRE.
Imported Ram Lambs, Shearling Rams, Imported Breeding and Shearling Ewes; Ewe Lambs imported or bred from imported sire and dam.

W. E. WRIGHT,
307-y-OM
Glanworth.

THE GLEN STOCK FARM.

Clydesdales, Shropshires and Berkshires.—Choice young registered stock for sale. Telegraph office, Innerkip. Farm, 3/4 miles from Innerkip Station on C.P.R. and 6 miles from Woodstock G. T. R. **WHITESIDE BROS.,** Innerkip, Oxford Co., Ont. 316-y-om

SHORTHORNS and SHROPSHIRE.

I offer for sale at right prices, a very choice lot of imported ewes and rams; also Scotch Shorthorns from the very best strain in Scotland. Write, or come and see them.

W. B. COCKBURN, ABERFOYLE, ONT., Corwhin, C. P. R., 7 miles east of Guelph. 310-j-om

Cotswold Sheep.

The gold medal flock; established in 1854. All bred straight from imported stock. Three imported Rams in use. Young stock for sale.

Berkshires. Herd established in 1865. Imported and bred from imp. stock. Sows in far row.

and young stock for sale at all times. Spring Pigs now ready to ship. We ship to order, guarantee satisfaction. Come and see, or write.

Jersey Cows, pure-bred registered, and high grades, bred from rich butter stock. 315-y-om

J. C. SNELL, EDMONTON, ONT.

Cotswold Sheep!

Wm. Thompson, Mt. Pleasant Farm, Uxbridge P. O., Ont., Importer and Breeder. Flock established 13 years. Imp. rams only used. Stock for sale reasonable. Visitors welcome and met at Uxbridge Station, Mid. Div. G. T. R. 315-y-OM.

DORSET HORNED SHEEP.

T. W. HECTOR, IMPORTER AND BREEDER. The oldest and largest flock of Dorset in Canada. First Prize Toronto and Montreal Exhibitions, 1891, for flock. Sheep of all ages for sale. Ewes and rams not skin. **T. W. HECTOR, The Cottage, Springfield-on-the-Credit P. O., Ont. Stations, Springfield and Cooksville on the C. P. R. Port Credit on G. T. R.** 314-y-OM

MCGILLIVRAY & TAZEVELL,

Jerseydale Farm, Uxbridge, Ont., Midland Division G. T. R., importer and breeder of **DORSET HORN SHEEP.** 314-y-OM

EUROPEAN ADVERTISEMENTS.

SHROPSHIRE SHEEP

DAVID BUTTAR,
Corston, Couper-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

SHROPSHIRE

We handle none but the best. We sell at living prices. We have one of the most successful flocks in the show yard in England. We import direct from our English to our American flocks. Write for prices. We can suit you.

THONGER & BLAKE BROS.,
Wolf's Head Farm, NESSCLIFF, Salop, Eng., 309-y-OM and GALESBURG, Mich., U. S. A.

BEAM : HOUSE : SHROPSHIRE.

WM. THOMAS
offers for sale

RAMS AND EWES

from his famous flock, which has sent so many winners to the leading shows. Address—

WM. THOMAS,
Beam House Farm, Montford Bridge, Salop, 316-y-om
England, 7 miles from Shrewsbury.

Astwood Hill Shropshires,

the most famous flock in England. We led in the show ring at the Royal and the Bath and West of England in 1891.

I. & S. BRADBURN,
Astwood Hill, Red-ditch, Eng. 316-y-om

SHROPSHIRE, -:- SHORTHORNS

and Yorkshires.

My Shropshire flock is founded on the best blood in England. My Shorthorns are of the deepest milking strains. American and Canadian visitors always welcome.

Young Stock always for sale at reasonable figures.

GEO. THOMPSON, Wroxall, Warwick, England. Station and Telegraph:—Hutton. Trains met by appointment. 316-y-om

SHROPSHIRE SHEEP

The Loughcrew flock has been very successful in England and Ireland wherever exhibited. It consists of 300 breeding ewes of the most fashionable appearance & blood. Eavens, Beach, Barrs, Coxon and Mansell. The Annual Sale first Wednesday in September.

EWES AND RAMS FOR SALE.

Apply to **J. DIXON,**
Loughcrew, Oldcastle, Co. Meath, Ireland. 307-y-OM

ADVERTISE IN THE ADVOCATE

ALCESTER PARK SHROPSHIRE.

It will pay Canadian buyers to visit the above flock, which is founded on the best strains in England. Rams and Ewes always for sale. ALSO IMPROVED YORKSHIRE PIGS.

H. PARKER,
The Park Farm, Alcester, Warwickshire, Eng.
316-y-om

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.
285-2v-OM

LINCOLN -- SHEEP

I always have for inspection and sale a large flock of pure Lincoln Longwool Sheep, including many prize-winners, having taken eighty prizes the last two years at the Royal and other shows, for both rams and ewes, also the first for the best collection of Lincoln fleeces of wool at the Royal Windsor show last year, which proves the character of this flock, which is most famous for their great size and 130 years' good breeding. Also breeder of

WHITE -- YORKSHIRE -- PIGS

Address—
HENRY DUDDING,
Ribby Grove, Ct. Grimby,
307-y-OM
Lincolnshire, Eng.

DORSET HORN SHEEP!

CULVERWELL BROS., Durligh Farm, Bridgewater, Somerset, Eng. Breeders and Exporters of Improved Dorset Horn Sheep. Sheep and wool from this flock have won many first prizes at all the leading shows in England and Canada. Flock registered in English record. For price, etc., in Canada and U.S.A., apply to—
315-y-OM
JOHN TAZEWELL, Uxbridge, Ont., G.T.R.

BLAIRTUMMOCK -- CLYDESDALES

Prof. McCall invites inspection of his Stud of Clydesdales, by American and Canadian buyers. Among the many good ones bred at Blairtummock may be mentioned Col. Holloway's renowned 'edric, acknowledged the greatest breeding horse in America. Address—

PROF. McCALL,
The Veterinary College,
317-y-om
GLASGOW, SCOTLAND.

THE HOME OF SIR EVERARD!

Wm. Taylor, Park Mains, Paisley, Scotland, calls the attention of American and Canadian buyers to the fact that his stud of Clydesdales and Hackneys is one of the best in Scotland. Inspection solicited. No trouble to show horses. 317-y-om

CLYDESDALES AND AYRSHIRES

Walter Park, Halton, Bishopton, Scotland, the breeder of the world-renowned "Lerd Erskine," has always for sale a choice lot of Clydesdale Colts and Fillies; also pure-bred Ayrshires of the best milking strains. Visitors welcome. 317-y-om

THE HOME OF SPRINGHILL DARNLEY.
Clydesdale dealers when in Scotland should not fail to visit Messrs. R. & J. Findlay's Stud, Breeders and owners, amongst others, of the famous H. A.S. winner, Chrystal 587. Address—Springhill, Baillieston, Glasgow. 317-y-om

HACKNEYS!

Duncan Jenkins, The Cross, Govan, Scotland, offers for sale Stallions and Fillies, the get of such sires as Danegott, Amicus, Sir Gibbie, etc.; all registered, and of the very choicest quality. All American and Canadian buyers should visit this stud. 317-y-om

W. G. BUTCHER,

The Chestnuts, Needingworth, Hunts, England offers for sale a grand selection of **HACKNEY AND SHIRE-BRED COLTS AND FILLIES** of the choicest breeding, and good individually. All registered. Visitors welcome. Station: St. Ives, Hunts. 317-y-om

CLYDESDALES AND AYRSHIRES.

Parties visiting Scotland to purchase the above should call on the undersigned, who always has a choice selection bred from the best strains of blood. **ROBT. WILSON,** Manswraes, Bridge o' Weir, Renfrewshire, Scotland. 317-y-om

2250 SHROPSHIRE

Including most of the greatest winners, also Horses, Ponies, Cattle, Pigs and Sheep of other breeds, exported during 1891, by

E. GOODWIN PREECE,
Live Stock Exporter, - SHREWSBURY, ENG.

Who has personal knowledge of the best flocks, herds and studs, experience in shipping, and the privilege of selecting the choicest specimens of any breed, either for exhibition or breeding. American buyers supplied at lowest rates, and those visiting England conducted round the best stocks, so as to compare merits and prices before buying, and assisted in buying and shipping. FREE OF CHARGE. All necessary documents furnished. Highest references. Information free. All importers should communicate. 318-y-om

LOOK FOR

—THE—

ROSEBERRY STOCK FARM'S ADVERTISEMENT

in the July and August numbers.

It will pay you to read it. 318-a-om

TO STOCKMEN AND BREEDERS.

LITTLE'S PATENT FLUID

NON-POISONOUS

SHEEP DIP

AND CATTLE WASH.

For the destruction of Ticks, Lice, Mange, and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.

Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy.

The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS.

BROOKLIN, ONT., Sept. 4th, 1890.

DEAR SIR,—I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.

Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WIGHTMAN, DRUGGIST, OWEN SOUND, ONT.

Sole Agent for the Dominion. 315-y-OM

CHOICE REGISTERED SOUTHDOWNS.

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Young dogs for sale from the imported sires Turk II., first prize Toronto, and Moonstone, value \$500, and out of the choicest prize-winning bitches money could buy in England. **A. BURLAND,** Sec. Ont. Collie Club, Grimby, Ont. 307-y-OM

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—Two grand boars fit for service, also a few sows. Cheap. **A. D. ROBERTS,** Walmer Lodge, Ancaster, Ont. 315-y-OM

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A choice lot of young Berkshire pigs, from two to three months old, from imp. and prize-winning stock; also a few choice boars fit for service. I have also some Yorkshire pigs fit for show purposes, boars and sows from six weeks to six months old. Prices reasonable. Address **H. J. DAVIS,** Breeder of Berkshires, Yorkshires and Shorthorns, box 290, Woodstock. 318-y-OM

THE MARKHAM HERD, Locust Hill, Ont.

(Farm one mile from Locust Hill St., C. P. R.) Registered Improved Large Yorkshire, Berkshire and Suffolk Pigs. Stock selected from the best herds in Canada. Am booking orders for Spring Pigs.—**LEVI PIKE,** Locust Hill, Ont. 308-y-OM

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—AND—

BERKSHIRES.

We have for sale forty head of yearling Cotswold Rams; thirty head of yearling Cotswold Ewes, and a number of young Berkshire Sows, in farrow to imported boars. We are now getting young pigs, which will be ready to ship in April and May. Write us for prices.

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Breeder of Pure-Bred Berkshire Pigs and Pig. Cotswolds of the choicest strains. A few choice sows, six months old, for sale. Now is the time to order young pigs to be shipped in April and May. Nothing but choice stock shipped, and satisfaction guaranteed. Write for prices, or if convenient come and see my stock.—C. P. R. Station, Claremont, Ont. 316-y-om

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Young Boars and Sows from two to eight months old. Also booking orders for spring pigs. Satisfaction guaranteed. **E. E. MARTIN,** Nithside Farm, Paris Station, Canning P.O., Ont. 308-y-OM

Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.

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A few very choice young boars, between 3 and 4 months old, at \$10 each.—**J. H. S. Barbour,** KING P.O., Ont. 318-y-om

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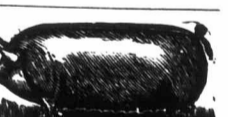
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The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 305-y

CHESTER WHITE SWINE AND DORSET HORNED SHEEP A SPECIALTY.

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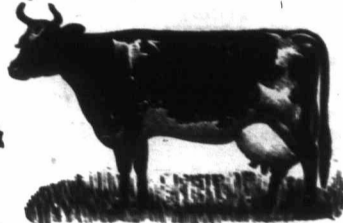
Has young stock of the above breeds for sale at right prices. None but first-class stock shipped. Write for particulars. 310-y-om





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The imported Cruickshank bull **GRANDEUR** is at the head of this herd of imported and Home-bred Cows and Heifers of the most approved Scotch families.

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Shorthorns, Shropshires and Berkshires

Our flock is from the choicest English stocks, headed by the ram sent out by Mr. Theo. Dyke, also milking Shorthorns with imported bull **PIONEER** at the head of the herd.

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Ayrshires, Jerseys and Berkshires.

Imported **EMPEROR** at the head of a grand lot of imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and imported Berkshires.

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50 acres, bordering on the City of Brantford.

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Shropshire Sheep.

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Apples—(in quantity)—Plums.

Registered Stock, all ages, for sale.

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100 acres, bordering on the City of Brantford.

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Have on the farm a modern wooden Silo. Capacity 250 tons. Dorset-Horned Sheep. Jerseys, A.J.C.C. Holsteins (Royal Aargie family). Advance Register. Chester White Pigs.

Three grand modernized stock farms under one management.

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175 acres, eleven miles from City of Brantford.

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Oxford-down Sheep.

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Medium Yorkshire Pigs.

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LIVE STOCK AUCTION SALES

Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Edmonton; Hon. M. H. Cochrane, Compton, P. Q., or this office.

JOHN SMITH, BRANTFORD. 317-y-o

NOTICES.

Anyone needing a reliable man, as either farm manager or foreman, should read Mr. McNish's advertisement in this issue. Mr. McNish is a thoroughly practical man and has had long experience among dairy cattle and hogs.

The attention of our readers is directed to the advertisement in another column of Messrs. Kirkpatrick & Cookson, commission merchants, Montreal. They give personal and special attention to consignments of grain, flour, butter, etc., and are a house of long standing, having been established in 1880. They will be pleased to attend promptly to all communications from the west, and will aim to give their patrons every satisfaction.

MONTHLY PRIZES FOR BOYS AND GIRLS.—The "Sunlight" Soap Co., Toronto, offer the following prizes every month till further notice, to boys and girls under 16, residing in the Province of Ontario, who send the greatest number of "Sunlight" wrappers: 1st, \$10; 2nd, \$6; 3rd, \$3; 4th, \$1; 5th to 14th, a Handsome Book; and a pretty picture to those who send not less than 12 wrappers. Send wrappers to "Sunlight" Soap Office, 43 Scott street, Toronto, not later than 29th of each month, and marked "Competition"; also give full name, address, age, and number of wrappers. Winners' names will be published in the Toronto Mail on first Saturday in each month.

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Mr. Geo. D. Scott, box 61, Vancouver, B. C., is making special offerings in Port Simpson, B. C., of business lots. The opportunities for making investments there are said to be especially good. Write him for information.

We understand that Messrs. G. & B. Deo, New Sarum, Ont., the well-known Merino breeders, recently sheared 28 lbs. of wool from a thoroughbred Merino lamb.

As will be seen by our advertising columns we are in receipt of communications respecting the purchase of good breeding ewes for fall delivery. We are pleased to notice the increasing interest being taken in this profitable and important branch of agriculture in Manitoba. Parties who can supply good grade ewes for breeding will do well to mark the increasing demand, and take means to inform those wanting them.

A. C. Hallman & Co., New Dundee, Ont., importers and breeders of pure bred registered Holstein-Friesian cattle, when sending a change of advertisement, write under date of May 24th: "The space occupied by our advertisement brings us a large number of enquiries. We highly appreciate your services and consider the ADVOCATE, both as an advertising medium and practical farm journal, without a rival in Canada. We enclose a change of advertisement for June. We have now for sale a few choice bred bulls of good quality fit for service. All are got by our silver medal bull. These we offer low in order to make room for young stock."

Mr. T. H. Medcraft, Sparta, writes us that since their sale held in April, he has taken up the breeding and importing business carried on previously by his father and himself, as the firm of Wm. Medcraft & Sons. He has now a choice flock of imported Shropshires, and also a lot of capital improved Yorkshire pigs. These were selected by Mr. T. H. Medcraft in England. The following sales have been made: 2 imported ewes, Mr. Anderson's Middlemarch; 2 yearling ewes, Mr. Hopkins's Middlemarch; 2 imported ewes with their lambs, Mr. H. Haver, St. Thomas; 2 imported ewes and lambs, Mr. Edkins; 2 imported ewes with lambs, Mr. Davis, St. Thomas; 2 imported ewes with lambs, Mr. Evans, Middlemiss; 2 imported ewes with lambs, also 2 yearling ewes, Mr. Begg, St. Thomas; 2 Yorkshire sows, Mr. Lewis, Orwell; 1 Yorkshire boar, Mr. Brampton, Exeter.



IMPORTED AND REGISTERED CLYDESDALE AND HACKNEY

STALLIONS AND MARES
CONSTANTLY ON HAND, AND FOR SALE AT REASONABLE PRICES

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), Darley (222), and Prince of Wales (679). 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. 314-y-OM CLAREMONT ONT.

JERSEYS: AND: WELSH: PONIES.

A number of sons and daughters of Nell's John Bull, A.J.C.C. 2191, at prices to suit the times. All reg., or eligible to registry, in A. J. C. C. This herd is the home of such cows as Allie of St. L., 28 lbs. 12 oz. butter in one week; Miss Stoke Pogis, 21 lbs. 5 oz.; Kit, 22 lbs. 11 oz.; Polley of St. L., 19 lbs. 7 oz.; Vic of St. L., 18 lbs. 5 1/2 oz., and Kettle of Grimsby, 16 lbs. 7 oz. Nell's John Bull, the sire of this young stock, is sired by the famous prize-winner Canada's John Bull. He is also a grandson of Ida of St. L., the largest milking Jersey in the world—67 lbs. milk one day, 455 1/2 lbs. in one week and 1,888 lbs. in one month. Her sister, Allie of St. L., gave 62 1/2 lbs. milk one day and 455 1/2 lbs. in one week. Those wishing dairy animals can find both butter and milk in this breeding. Nell's John Bull is also individually good. He won at Toronto Fair in 1890 first in his class and sweepstakes silver medal as best bull any age. At Hamilton, London first in his class and headed silver medal herd. We also have sixty head of Welsh Blood Ponies, all ages. These ponies are superior to any other breed for ladies or children. They are very handsome, free drivers and very gentle, and have taken first prize wherever shown. Prospective buyers would do well to inspect our herd and learn prices. Visitors will be met at station upon giving one day's notice.

315-d-CM

GEORGE SMITH & SON, GRIMSBY, ONTARIO.

Improved Large White
Yorkshires, Pedigreed.

We have lately added to our herd, which are from the strains of Sanders Spencer, Charneck, and F. Walker-Jones, England. Young stock on hand at all times for sale. Apply to

Wm. Goodger & Son,
306-y-OM WOODSTOCK, ONT.



IMPROVED
LARGE YORKSHIRES

Sixty head of the best strains and quality.

Write for prices.

SMITH BROS., Credit Valley Stock Farm,
CHURCHVILLE, ONT. 314-y-OM



Registered Poland-Chinas—Canadian

Black Bess Herd.

Stock strictly of the

Corwin, King, Hutter and

Black Bess blood.

Choice stock at all

ages for sale at reason-

able prices. Im-

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head of herd, assisted by Imported Boars Condit,

Luck and Moorish King. Farm two miles south of

G. T. R., C. P. R. and E. & H. R. stations. Cor-

respondence and inspection of herd solicited. Re-

duced rates on shipment by express.—J. J. PAYNE,

Chatham, Ont. 314-y-OM



PURE-BRED TAMWORTH HOGS AND CLYDESDALES
JOHN BELL,

Clydesdale Farm, L'Amaroux P.O., Ont.

Offers for sale young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them, it will pay you. Orders now booked for spring pigs. Some AI Clydesdale Stallions kept for service. Imported and home-bred Colts and Fillies for sale. 317-y-om

TAMWORTHS

Improved Large Yorkshires.

Our stock is all imported from the very best herds in England, and every pig traces to the English Herd Book. We offer for sale at lowest figures Boars and Sows of the above breeds and of all ages. Write for prices, or give us a call and see our stock. Over forty head on hand.

JAS. L. GRANT & CO.,
Ingersoll, Ont. 317-y-OM

REGISTERED DUROC JERSEYS.

The Pioneer Herd of these famous American hogs has its headquarters in Essex County, Ont. Address, PETER LAMARSH, 310-y-OM WHEATLY, ONT.

NOTICES.

In writing to advertisers please mention the Farmer's Advocate.

REPORT OF ONTARIO COMMISSIONER TO WORLD'S FAIR.

We found in visiting Chicago that Mr. Buchanan was willing to deal fairly with the province as far as to allotment of space in the different departments.

Mr. Saunders had left the arrangement as to stock largely in our hands, and there had proceeded me a letter from him saying that he believed that he would have to leave the matter to me, the result of which Mr. Buchanan entered cordially into the discussion of the question as to the necessity of increased space, under a previous arrangement that had allotted space for seventy-five horses for the entire Dominion. I requested that there be allotted to Ontario sufficient space for an exhibit of 125 horses, leaving Mr. Saunders or representatives of the different provinces to deal with space for themselves.

I requested that there be set apart for the province of Ontario space for 150 head of cattle, space for 3000 sheep, and accommodation for 1000 hogs, leaving, as in the cases of horses, the other provinces to look after their own interests.

Mr. Buchanan cordially agreed with me that this amount of space be allotted under the circumstances, after having given him a list of the different breeds which are in the province, and without such increased space it would be impossible for us to make a creditable display. We found him in every respect a reasonable man to deal with.

The question of dairy products was the next matter considered by the head of the department, and I asked that Ontario should be allotted space for 2,500 packages, that being three times the quantity at the Centennial. I had the pleasure of being accompanied by the Commissioner of Crown Lands, who is deeply interested in the mineral and forestry exhibits. He in company with myself waited upon the heads of these departments, and were assured that space would be at our disposal for an exhibit of 376 specimens in the department of mines.

The question of a fruit exhibit is one that affects materially the province, as it is becoming one of its most important industries. In Philadelphia we had 1,200 square feet, which meant an exhibit of 1,450 specimens of apples, 200 pears, 200 plums, 173 grapes, 26 peaches and 86 crab apples, with 20 of miscellaneous character. Knowing the extent to which this industry has increased, I asked that the amount of space be increased to 2,400 square feet, which will enable the fruit growers of this province to make a display which will be second to none at the Exposition. I found that my requests were cheerfully acceded to in this department as in the others.

The question of the poultry exhibit was next considered, and remembering that it was a creditable display in Philadelphia, and taking into consideration the increased interests in that branch in Canada since that time, I asked that we be allowed the privilege of exhibiting 200 coops of poultry; that also was conceded without any hesitation.

What might not be of much importance to many stock men, and yet which is dear to the minds of the Canine men was the question next considered, and I was assured that ample space would be provided for an exhibit of 200 specimens of the canine race from this province alone. I found when it came to the art exhibit there was more difficulty. The Dominion Commissioner had made application for four thousand square feet of wall space, but that amount had not been granted. The entire Dominion is limited to 2,900 square feet, and the Ontario Society of Artists wished to have 2000 square feet of wall space, which left the balance to the Dominion very limited, and the best arrangement I could make was to put in an application to the Director-General, who expressed the hope that the additional space would be forthcoming.

What has been of considerable importance to stockmen has been conceded by the managers of the Exposition in Chicago. Heretofore it has been understood that the stock would require to remain at the Exposition for three months. I am glad to say that sufficient pressure has been brought to bear upon the management of the Columbian Exposition to change that regulation, and it is understood that cattle will only be required on the ground from the 21st of August to the 21st of September, the limitation of a month. Sheep and swine the time is very much more limited, they only require to be there from the 25th of September to the 14th of October, very much under 30 days. Poultry from the 16th of October to the 28th, in case of hogs one week is all they are required to be in Chicago.

Some difficulty seemed to have arisen with the exhibitors as to the definite ages, as to calculating them, which has not been specified in the rules or regulations, the result was, the breeders feared, that if any animal was only one year and eleven months old at the commencement of the Exhibition would it be ruled out for the reason that it might be over two years at the time the animal was shown for competition for prizes. The time each breed is taken to the Exposition is the date from which ages are to be computed. Cattle, Sept. 11th, 1893; sheep, Oct. 21st, 1893; swine, Oct. 2nd; fat stock, Oct. 16th, 1893.

It has been decided that entries can be taken as late as June 15th, 1893, cattle and horses; July 1st, 1893, sheep; May 20th, 1893, dogs; July 13th, 1893, poultry.

**IF YOU WANT
FINE CALVES, THRIFTY PIGS
—AND SUCCESS IN—
FATTENING HOGS**

HERBAGEUM

—IT GIVES—
EXCELLENT RESULTS

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**FRESH WHEY or with SKIM-MILK
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Wanted—A situation as farm manager or foreman by a young married man, thoroughly experienced in handling dairy cattle, sheep and swine; had at one time sole charge of the best herd of Berkshires in the U. S., and for the past two years has managed a large herd of Guernseys. Good butter-maker, and understands steam engine and all kinds of machinery. Best of references. Address—C. H. McNISH, Markham, Ont. 318-a-om

BEEKEEPERS, NOTICE.

Stanley Rightmyer, manufacturer of Beehives, Sections, Crates, Comb Foundation, and a full line of supplies. Newest styles and lowest prices. Correspondence solicited. 318-b-o STANLEY RIGHTMYER, Wooler, Ont.

HAY LOADERS AND HAY TEDDERS

—MANUFACTURED BY THE—
WILSON M'F'G CO.



HAY LOADER

With a hay loader a man with a steady team can load alone. A man with a boy to drive can load as fast as three men can pitch on. If a third person is at hand two men on a waggon can load a ton in five minutes.

HAY : TEDDERS.

In catchy weather a Tedder will pay for itself in one season. Prof. Shaw, of the Ontario Agricultural College, says that with a horse and a small boy he could do the work of 10 men in turning hay. For further information address

**WILSON M'F'G CO.
318-a-om HAMILTON, ONT.**

TREES! Now in stock, a fine line of all kinds of nursery stock, including Roses, Shrubs, and true to name. Salesmen wanted at once. Write for terms, quick.—THOS. W. BOWMAN, Peterborough, Ont., "The Rochester Star Nurseries." 314-y-om

DRS. ANDERSON & BATES, Surgeons of the Eye, Ear, Throat and Nose. 34 North James St., Hamilton, and 5 College Street, Toronto. Sole agents for Prof. North's Earphone for the incurable deaf. A large assortment of artificial eyes on hand. 284-y

EGGS! EGGS! For hatching from prize stock. White Plymouth Rocks, English Rouen Ducks, English imported Aylesbury Ducks, Mammoth Pekin Ducks. Warranted fresh and newly laid. Address—
H. H. WALLACE, 316-f-om Woodstock, Ont.

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Express and Post Orders promptly attended to. Send for Pamphlet; contains Price 315-y-om and Color List

**CAMPBELL'S
QUININE WINE
CURES—Dyspepsia,
Low Spirits, Loss of
Appetite, Painful Di-
gestion, Malaria, and
gives tone and vigour
to the whole system.**

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Take the direct road. Why go a long distance around when you can, by applying to the undersigned, immediately get catalogues, prices, etc., of the world-famed

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CREAM SEPARATORS?**

I can supply you with Hand-power Separators with a capacity of from 275 to 600 lbs. of milk per hour, and Steam-power Machines with capacity of from 1,200 to 3,600 lbs. per hour.

Wholesale Agent for the Dominion.
**FRANK WILSON,
313-f-om 33 St. Peter St., Montreal.**

CUT THIS OUT!

If you don't want it, tell some one who does.

WIND-MILL for sale; a double header; 2 twenty-foot wheels; 10 horse power; shafting for 65-foot tower; 18 feet of line shaft, with 3 24-in. pulleys, 5 and 6 in. face; all as good as new, and can be bought for \$250. Also a Bone Mill, suitable to run with the wind-mill, for \$80; all F. O. B. Colborne, Ont. For further particulars write to

**JACKSON JOHNSON,
MANUFACTURER OF
JOHNSON'S CANADIAN BONE MEAL,
WARKWORTH, ONTARIO.**

318-b-om

KEEP YOUR EYE AND ON THIS **"THE DOLLAR" KNITTING MACHINE**
Ask your sewing machine agent for it, or send a 3ct. stamp for particulars and price list. **THIS IS GOOD FOR \$2. SEND TO CREELMAN BROS. M'f'rs., Georgetown, Ont.**
314-f-eot-0

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use and recommend Butter-Makers to use
CARVER'S BUTTER MOULDS & PRINTS

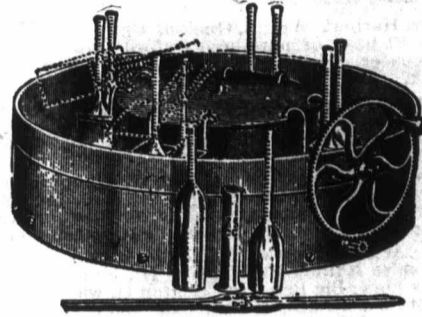
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REAL ESTATE & FINANCIAL BROKER
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 314-y OM

WINNIPEG CITY PROPERTY!

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ALEXANDRA

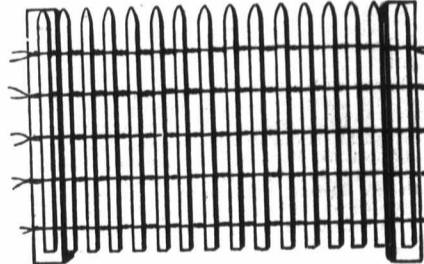
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Nicest thing out for wrapping Butter.
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Orders respectfully solicited. French and English catalogues on application. 316-c-om



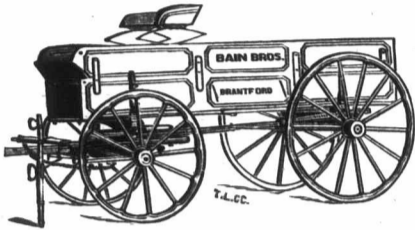
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Lathyrus -:- Sylvestris.

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 For further particulars address
F. E. CLOTTEN,
 316-y-om 58 High Holborn, London, Eng.

THE CELEBRATED BAIN BROS.' WAGON



Farmers wanting an easy running & serviceable wagon should be sure and purchase the BAIN BROS. All timber and material used is carefully inspected by ourselves before it is put together.

ADDRESS—
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GUELPH BUSINESS COLLEGE, GUELPH, ONTARIO.

1. Students may enter at any time with equal advantage, as there is no summer vacation.
2. The demand for our graduates is greater now than at any former time, because the quality of our work is more widely known.
3. In view of the superior educational advantages afforded our rates of tuition are the most favorable offered by any self supporting Canadian institution. The truth of which statement may be verified by a careful comparison.
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6. The self-supporting school is the only educational institution that is founded on a basis of absolute justice. Standing on this basis, and on the genuine merit of its work, the "Guelph Business College" respectfully solicits public patronage.
7. The Eighth Annual Circular, giving full information and illustrated with beautiful specimens of our own pen-drawing, will be sent free to any address on application to
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EGGS! For hatching from Dark and Light Brahmas, White and Brown Leghorns, Plymouth Rocks and Game, \$1.00 doz.
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 PART CASH.
480 Acres
 Consisting of 100 acres wood lot and 380 acres prairie. 100 acres ready for crop. 2 storey house, stables and out-buildings. Unfailing supply of water.
 OTHER CHOICE FARMS.
 EASY TERMS.
WALTON & UNSWORTH,
 REAL ESTATE AGENTS,
 28-b-om EMERSON.

FRED. D. COOPER,
 GENERAL AGENT FOR
MANITOBA AND THE NORTHWEST TERRITORIES

FOR THE
British Empire Mutual Life Assurance Co.
 of London, England.
 Established in 1847. Good openings for active and intelligent agents. 318-y-om

D. CAMPBELL & CO.,
 REAL ESTATE
 And Financial Agents.
 415 MAIN STREET, - WINNIPEG.

A large number of choice farms for sale on easy terms. City Lots and House Properties at great bargains. 309-y-om

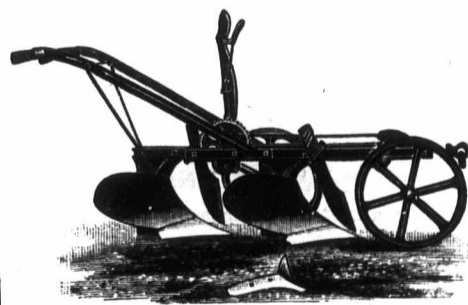
FARMERS -:- IN -:- ONTARIO

Wishing to settle in Manitoba or the Northwest should write us before purchasing improved farms or wild lands in any part of the province. Cheap farms on easy terms of payment. Write to
WAUGH & OSBORNE,
 Or to 496 Main St., WINNIPEG.
JOHN STARK & CO.,
 307-y-OM 26 Toronto St., TORONTO.

Graduated Prices. Pure Spring Water.
LELAND HOUSE,

W. D. DOUGLAS & CO., -:- PROPRIETORS.
 The popular hotel of the Northwest. Corner City Hall Square, Main and Albert Sts.
City Hall Square, -:- Winnipeg, Man.
 Extensive repairs are being made. 315-y-OM

The Best Thing Yet in Plows.



Our Big 5 is a Two-Furrow Plow, made of fluted steel frame and steel axles. The mouldboards are the best American cast steel, making it the best cleaning, easiest running, and most durable plow in Canada. We guarantee the frame to stand three horses, and any farm boy can handle it. Price, only \$20. Liberal discount for cash.

Be Sure and See it Before Buying.
WM. DICK,
 Manufacturer,
 Albion P. O.
 318-c-o

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Mr. Herbert Wright, Guelph, Ont., has recently sold 80 head of pure-bred Oxford Down to one purchaser. He still has a large and fine breeding flock.

Breeders should remember that the auction sale of 26 head of Shorthorn cattle takes place at the farm of Mr. Heber Rawlings, near the town of Forest, June 15th inst.

Mr. Levi Pike, of Locust Hill, Ont., reports sales good; has shipped to points in Ont., N. B. and Manitoba. Hon. Thomas Greenway, Minister of Agriculture for Manitoba, was among the purchasers.

Mr. Wm. Beasey, of Hillsburg, is the owner of the shire stallion Packington II, by the famous stock horse Big Ben. Packington II was imported by Messrs. Ormsby & Chapman, and his colts, we hear, are doing credit to his breeding.

Messrs. Shore Bros., White Oak, write us: "That they still have a few good bull calves left that are old enough for service. All got by Imp. Aberdeen Hero, and from such Crutchbank families as Brawith Buds and Duchess of Gloster, and Miss of Kinellar."

R. H. Harding, Thorndale, Ont., writes as follows: "My Chester White pigs were never so large and even for their age as they are this spring. The demand for good ones is still increasing. My Dorset Horned lambs are all weaned and doing well. Quality not quantity is my maxim."

We were recently favored with a catalogue of Galloway cattle owned by Mr. Wm. Kough, Owen Sound, Ont.; 19 cows and heifers, and 8 bulls are included. Many of our readers will remember having seen this beautifully fitted herd the last time they were seen on a Canadian show ground.

Mr. Robt. Hall, Edmonton, Ont., reports the sale of a straight stallion by the imported shire horse Welshman, and out of an imported mare, to Mr. Henback, of the N. W. T. Mr. Hall and his brother are championing the cause of Shropshires and Yorkshires in the Edmonton, Ont., district.

In our list of the purchasers, given in the May issue, at Mr. Ackrow's sale of Shorthorns, the imported cow Charlotte, was purchased by Messrs. A. & D. Brown, of Iona, not S. & H. Brown. These gentlemen have also purchased the imported bull, Warfare, of Kinellar breeding, from Messrs. James Gardhouse & Sons, Highfield, Ont.

Mr. J. C. Snell, Edmonton, in ordering a new advertisement says he has had numerous enquiry for Cotswold sheep and Berkshire pigs, and has made numerous sales extending over a wide territory from Georgia and Virginia in the south, to Oregon, Alberta and B. C. in the west. He has a fine stock of young things for sale, and will receive a new importation of show stock early in the summer.

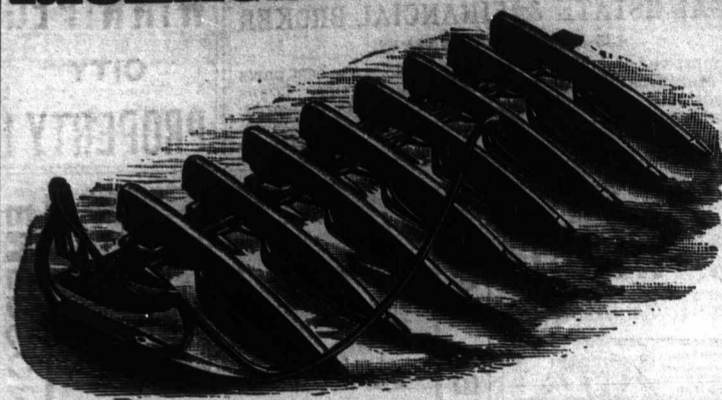
Messrs. H. McCaugherly & Son, Walnut Hill Farm, Streetsville, Ont., report the following sales: To Peter Kelly, Sheridan, Ont., the Aagie bull Sir Mac, by Prairie Aagie Prince, and a choice heifer calf out of Fulton Queen. To Mr. Silverthorn, Dixie, Ont., a grand young bull, Amazon, by Sir Archibald's Son, and out of the imported cow Nora Bakker. Messrs. McCaugherly still have a few more to dispose of. See their advt.

Mr. W. G. Pettit writes us that his flock of Shrops are doing very well—reports 30 lambs from 20 ewes so far, all sired by his prize-winning imported ram, from the famous Beam House flock of Mr. Wm. Thomas. The lambs from his imported Bradburne and Instone ewes, by this ram, are something extra. He also reports the following sales: 5 shearing rams to Mr. Gourlay, N. W. T.; 1 ram lamb to Jno. Dickon, Milton, Ont.; 10 ram lambs and 4 shearlings to Jno. Miller & Son, Brougham, Ont.; a yearling bull by "The Premier" to P. Truesdell, Elfrida, Ont. One more bull for sale. See his advertisement.

In a letter under date March 30th, Mr. Pringle, of Ayr, writes as follows concerning his Holstein cattle: "I have made the following sales: 1 yearling bull to Conrad Hedinhammer, Elmira; 1 yearling bull to Mathew Richardson, Caledonia; 2 grade cows to Wm. Currie, Manitoba; 1 grade cow to R. Barnett, Washington, 4 other young things to others. I have still two fine young bulls left. I have had some very fine calves dropped the last few days. My stock are doing well, although short of food. I measured the bag of a four-year-old cow that measured 5 feet 1 inch round. I am having a good many enquiries for stock through my advertisement in ADVOCATE.

Mr. James S. Smith, Maple Lodge, writes us to the following effect: "We have disposed of our old stock bull Conqueror—5227—to Hon. Jno. Dryden, for use in his herd, and have secured from Mr. Dryden a young Lavender bull, got by Imp. Sussex, dam Imp. Lavender Pride, by Cumberland (46144) gr. dam by Pride of the Lea (35082), gr. g. dam by Lord Lancaster (26996), etc. Conqueror was bred by Mr. Dryden, and has been perhaps the most useful bull ever used at Maple Lodge, his calves possess so much quality, size and finish, and are of exceptional uniformity. The Lavender bull, which is to succeed Conqueror in our herd, gives promise of making a worthy successor; he is much of the same pattern, a red, and will be larger. The Lavenders were very much valued by Mr. Crutchbank as a family distinguished for a large number of first-class show animals, and the frequent development of good milkers, which is kept prominently to the front as a feature of our herd."

RICHMOND + PEA + HARVESTER



Best, Cheapest, and Most Successful Device for Harvesting Peas in Use.

Are you anxious to know how the Richmond Pea Harvester, in the fourth year of its existence, came to be known from Quebec to British Columbia? Why all other manufacturers of pea harvesters work harder against it than all others? Why it does cleaner work, shells less peas, will work where no other would? How we came to originate the sprin, and why we use a wooden lifter?

1st—We commenced in a field in which there had been no improvement for fifteen years, and none has yet been shown except in feeble imitation of our inventions. 2nd—Before commencing to manufacture, exhaustive experiments were made with iron and wooden lifters in all conditions of soil and grain. We found that a wooden lifter would work best, allowing the peas to slide more easily than on iron lifters. 3rd—Every farmer knows, who has had any experience with pea harvesters, that the want of a spring to hold the lifters down to their work has been the great reason of so many failures with pea harvesters, and that is the reason why our Harvester has become so popular in so short a time. Our Harvester is the only one in the market at the present time which uses a spring lifter.

Write for testimonials and price list. Address, JOHN RICHMOND & SON, Blyth P.O., Ontario.

Manitoba Farm Lands for Sale

—BY—
W. M. MOORE & CO.,

437 RICHMOND STREET, LONDON.

w 1/2	13,	8,	21,	\$10 00	All	5,	6,	23,	\$10 00
n 1/2	13,	7,	21,	8 00	n e 1/2	35,	6,	23,	10 00
s 1/2	24,	7,	21,	8 00	e 1/2	32,	18,	23, imp.	5 00
s e 1/2	19,	13,	21,	4 00	All	19,	5,	24,	10 00
w 1/4	19,	14,	21,	5 00	w 1/2	21,	5,	24,	10 00
w 1/2	33,	14,	21,	5 00	n 1/2	3,	9,	26,	6 00
All	3,	7,	22,	10 00	w 1/2	1,	10,	26,	5 00
n 1/2	13,	6,	22,	10 00	n 1/2	35,	10,	26,	10 00
n 1/2	23,	6,	22,	10 00	e 1/2	3,	12,	27,	8 00
e 1/2	33,	6,	22,	10 00	n e 1/2	36,	18,	27,	5 00
s e 1/2	17,	6,	23,	15 00	All	12,	17,	12,	6 00

We have a large list of Manitoba land beside the above. We also have a list of Ontario Farm and City property, either of which we will forward to any address. Parties wishing to exchange Manitoba lands for Ontario property should send us particulars. We have some choice property to exchange. Ranches in Calgary district wanted.

316-f-om W. M. MOORE & CO., 437 Richmond Street, London, Ont.

SWEEPING REDUCTION IN PRICES!

C. P. R. Lands in the oldest settled parts of Manitoba and the Northwest Territory, previously priced at \$4.00 per acre and upwards, are now subject to

A REDUCTION IN PRICES AMOUNTING

To from 25 to 33 per cent.

C.P.R. LANDS WEST OF THE THIRD MERIDIAN.

The undisposed of lands in the Railway Belt west of the 3rd Meridian and the Saskatchewan, Red Deer and Battle River Valley will be placed on the Market on the 4th April, 1892, at

THE UNIFORM PRICE OF \$3.00 AN ACRE.

Only one-tenth of the purchase money required down; thus a payment of

\$48.00 WILL SECURE A FARM OF 160 ACRES;

The balance is payable in nine annual instalments; interest six per cent.

(Coal lands and sections in the immediate vicinity of Railway Stations are reserved.)

Edmonton Lands.

The lands in the Edmonton District will be sold by auction in Edmonton on the 3rd May. For maps, price lists and full particulars, write to

316-c-om L. A. HAMILTON, Land Commissioner, Winnipeg.

ADVERTISE IN THE ADVOCATE.

TURNIP SEED DRILL.



Sows two rows at once, follows course of drills and drops seed always in the centre; sows also CARROT, BEET and MAN-GOLD-WURTZEL SEEDS.

We also manufacture DIAMOND HARROWS OF ALL SIZES, SINGLE & TWO-FURROW PLOWS, SCUFFLERS, MOWERS, PEA HARVESTERS, ETC.

THE GOWDY M'F'G CO.,
GUELPH, ONTARIO.

THE GENUINE TOLTON PEA HARVESTER

SIMPLE, SUBSTANTIAL, LIGHT, STRONG AND DURABLE.



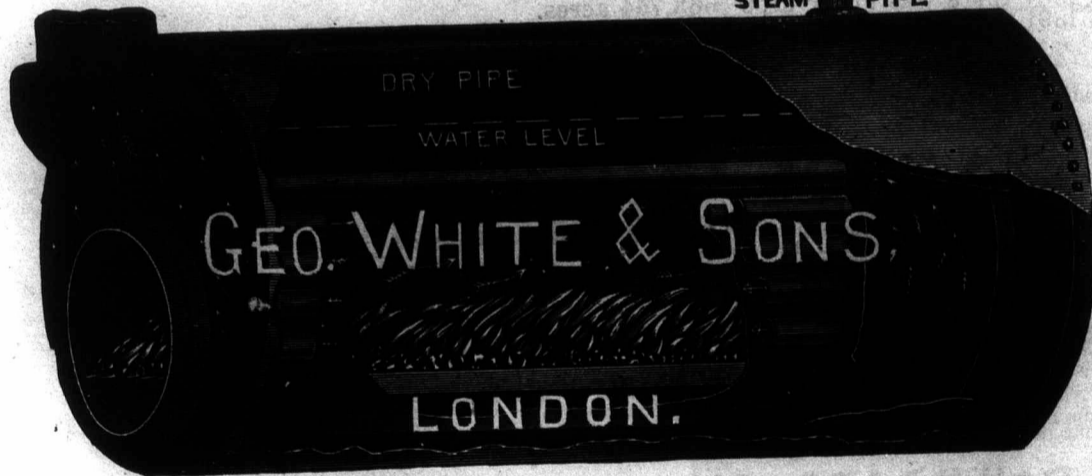
THE MONARCH OF THE PEA FIELD.

Thousands of them now in use in Ontario, in the hands of the leading farmers, who endorse it as being highly satisfactory. This Pea Harvester pays, and is one of the greatest labor-saving machines in use—harvesting from eight to ten acres per day in the most complete manner. It is endorsed 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 instructions. Order early and secure one.

TOLTON BROS., Guelph, Ont.

318-b-0

STEAM PIPE



Whites' Wood and Straw-Burning Boiler. Special Internal Arrangements for Burning Straw.

LAND FOR EVERYBODY.

FREE GRANTS OF GOVERNMENT LAND.

CHEAP RAILWAY LANDS FOR SALE ON EASY TERMS.

GOOD SOIL!

PURE WATER!

AMPLE FUEL!

The construction of the Calgary & Edmonton Railway, and the Qu'Appelle, Long Lake and Saskatchewan Ry. has opened up for settlement two new districts of magnificent farming land, viz., that between the North and South Saskatchewan Rivers, and that between Calgary and Red Deer. Full information concerning these districts, maps, pamphlets, etc., free. Apply to

OSLER, HAMMOND & NANTON,

LAND OFFICE, 331 Main Street, WINNIPEG.

Calgary and Edmonton Railway Qu'Appelle, Long Lake and Saskatchewan Railway Company

308-7-0M

\$50.00 FREE.

We offer in prizes as follows:— 1st, \$50.00; 2nd, \$25.00; 3rd, 1 Box C. P. B., value \$2.00; 4th, 1 Box C. W. C., value \$2.00; 5th, 10 parties sending most words made out of the word "Cottam's" and eleven capital letters in next column.

COTTAM'S

P. C.

B. B. W. B.

B. S. C. P. M.

(Cottam's Patent Bird Bread.)
(Cottam's Bird Seed.)
(Cottam's Washing Compound.)
(Cottam's Baking Powder.)
(Cottam's Mustard.)

Old and young, everybody can compete. Mail 10c. for rules governing contest and we will send you a sample box of C. P. B. B., worth 10c.
316-1-0M **HART. COTTAM, London, Can.**

FARMS FOR SALE

If you want to buy, sell or exchange any kind of farm lands in Western Ontario—the garden of North America, put yourself in the way of doing business by calling on

A. A. CAMPBELL,

Land Office 137 Dundas street, London, Ont.
315-7-0

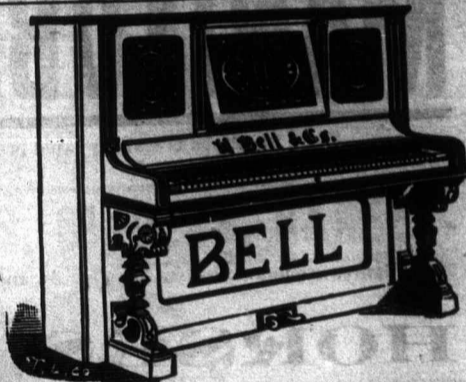
FARMERS!

If you want the best value for your money. If you want an article that will never disappoint you. If you want thoroughly good and healthy Baking Powder, into which no injurious ingredient is ever permitted to enter.

BUY ONLY THE GENUINE



REMEMBER THAT—
McLAREN'S COOK'S FRIEND
IS THE ONLY GENUINE.
THE BEST GROCERS SELL IT.
315-7-0M



Pianos, Reed Organs & Church Pipe Organs

THE STANDARD INSTRUMENTS OF THE WORLD.
Send for Catalogue.

BELL ORGAN AND PIANO CO., Guelph, Ont.
308-7-0

J. F. QUIN, V. S., BRAMPTON, ONT.
Ridging horses successfully operated upon; write for particulars.
315-7

MELITA

Prosperous Business Centre of a Prosperous Agricultural District.

GATEWAY TOWN TO COAL FIELDS AND NEWLY-OPENED TERRITORY!

Melita is located where the C. P. R. Southwestern crosses the Souris river. The location of the town site is most favorable in every particular, the elevation and the gravelly nature of the soil insuring clean, dry streets at all seasons of the year. Undoubtedly this is the most thriving town of its age in Manitoba. Though not a year old, all the trades, professions, businesses and callings of old-established places are represented. The streets are well laid out and wide. The buildings are large, substantial and of a superior class, while its business men are active and enterprising. Its growth has been phenomenal, and the idea that strikes a stranger is that it must have substantial backing. And so it has. The town is situated in the midst of one of the MOST FERTILE DISTRICTS in the whole Canadian Northwest. Water is abundant and pure. The land is uniformly good; free from stone, scrub and alkali, while the soil has early maturing qualities, ensuring an early and bountiful harvest. It is a well-known fact among grain dealers that a larger percentage of HIGH GRADE WHEAT comes from the Melita district than from any other locality in the Province. The town is well supplied with elevators, RAILWAY FACILITIES, churches, schools, stores, banks, etc. The Government Lands are all disposed of, but there is yet a large quantity of C. P. R. Lands and Hudson Bay Lands for sale, as well as some improved farms. Prices range from \$3.00 to \$10.00 per acre, according to situation and state of improvement. This district offers more variety of choice than almost any other. Farms can be had suitable for GRAIN-GROWING only, for STOCK-RAISING only, or for MIXED FARMING, the latter predominating. It may be asked, Why, if this land is so good and the locality so desirable, it has not been settled before? The answer is that the locality was without railway facilities until last autumn. The pioneers have prepared the way, and everything is now ready to receive the man of even small means and enough energy to make a comfortable home for himself. The Melita district lacks nothing but tillers of the soil, and thousands of acres of first-class land invites them. Any of the readers of the above who wish fuller information regarding Melita, or the Southwestern district, will be furnished with the same on application to

318-a-OM

J. L. & J. CAMPBELL, or to GEO. L. DODDS, Melita.

MANITOBA THE GREAT GRAIN AND CATTLE PROVINCE

HAS WITHIN ITS BORDERS

HOMES FOR ALL!

Manitoba is making rapid progress, as shown by the fact that in four years the area under crop has more than doubled.

In 1887 there was under crop 663,764 acres.
In 1891 there was under crop 1,349,781 acres.

Increase, - - - - 686,017 acres.

These figures are more eloquent than words, and indicate clearly the wonderful development taking place. NOT A BOOM, but certain and healthy growth

HORSES, CATTLE AND SHEEP

Thrive wonderfully on the nutritious grasses of the prairie, and MIXED FARMING is now engaged in all over the Province. There are still

FREE HOMESTEADS in some parts of Manitoba.

CHEAP RAILROAD LANDS—\$3.00 to \$10.00 per acre. Ten years to pay for them.

IMPROVED FARMS for sale or leasing, from private individuals and corporations, at low prices, and on easy terms.

NOW IS THE TIME to obtain a home in this wonderfully fertile Province. Population is moving in rapidly, and land is annually increasing in value. In all parts of Manitoba there are now

GOOD MARKETS, RAILROADS, CHURCHES & SCHOOLS,
AND MOST OF THE COMFORTS OF AN OLD SETTLED COUNTRY.

Investment of Capital. There are very good openings in many parts for the investment of capital in manufactories and other commercial enterprises.

For the latest information, new books, maps, etc., (all free) write to

HON. THOS. GREENWAY,

Or to

THE MANITOBA IMMIGRATION AGENCY,
No. 30 York Street, TORONTO.

Minister of Agriculture and Immigration,
WINNIPEG, MANITOBA.

311-f-0

MERCER COMPANY, LIMITED

HEAD OFFICE AND WORKS:

ALLISTON, = = CANADA.

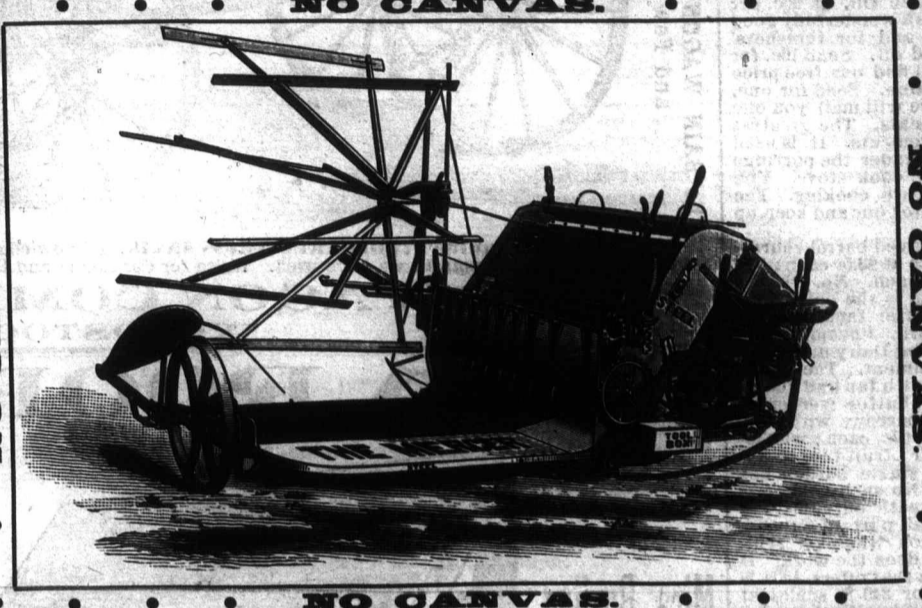
BRANCHES.

WINNIPEG,
MANITOBA.

LONDON,
PADSTOW,
(CORNWALL)
ENGLAND.

GLASGOW,
KELSO,
SCOTLAND.

BALLARAT,
VICTORIA,
AUSTRALIA.



BRANCHES.

DUNEDIN,
NEW ZEALAND.

CAPE TOWN,
SOUTH AFRICA.

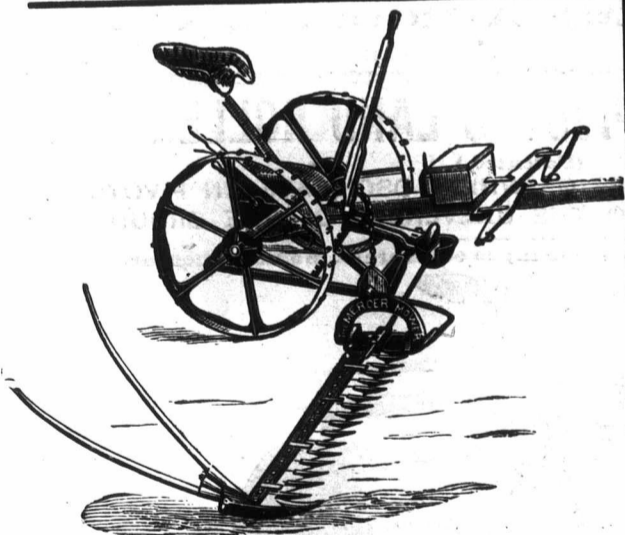
HEAD OFFICE AND WORKS:
ALLISTON,
CANADA.

THE MERCER STEEL BINDER, No. 4

Steel Frame, Steel Supports, Steel Elevator Sides, Steel Cross Bars, Steel Conveyor and Steel Elevator Tables. The only Binder in the World successfully handling all kinds of Grain **WITHOUT THE USE OF CANVAS.**

THE MERCER KNOTTER

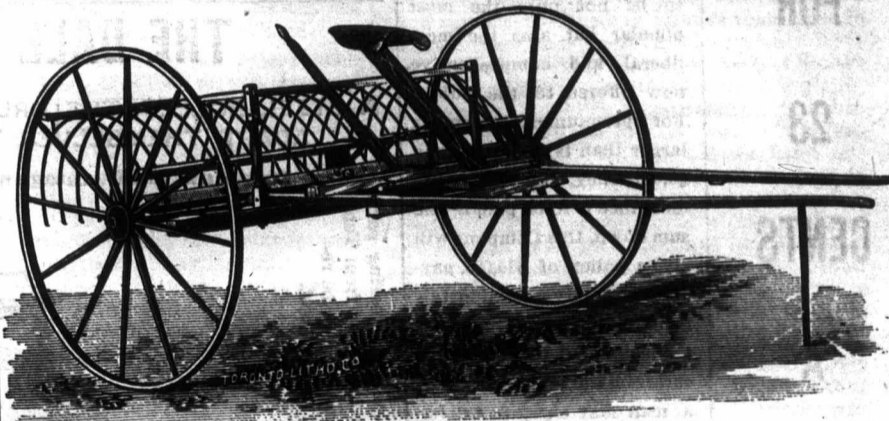
THE SIMPLEST IN THE WORLD. ONLY FOUR WORKING PARTS. NO DISK WHEEL. NO KNIFE ARM. NO PLUNGER BOLT. NO WASTE TWINE. CUTS ONLY ONE COORD. TIES A KNOT WITH LESS TWINE THAN ANY BINDER MADE.



THE "MERCER MOWER."

The sweetest cutting machine made. All the latest improvements. Built either with 2½ or 3-inch sections.

- MERCER MOWERS, BINDERS, RAKES. -



THE "PERFECTION TIGER RAKE."

HIGH WHEELS. SUREST AND EASIEST TO DUMP AND CLEAR ITSELF OF ITS LOAD. FARMERS, DON'T BE DELUDED INTO BUYING CHEAP FRICTION RAKES.

We make a Specialty of the above Implements, and extra care is thereby given in the construction of the same. Farmers purchasing any of the above Implements may rest assured they are buying the best that can be produced.

MERCER COMPANY, LIMITED.

BINDING - TWINE!

Of all the different brands of white binder twines the American Sisal takes the lead. It is perfectly even; runs nearly 600 feet to the pound; it is an unmixd pure white twine, having a long, strong fibre, and works well in every machine. This is the third season we have sold this twine. It is no experiment with us. We consider it the best twine in the world, and strongly recommend it. It is manufactured in the U. S., and is in no way subject to the dictation of any combine or monopoly. Put up in 50-lb. sacks (12 balls). Price, \$11 per 100 lbs. F. O. B. Hamilton. Terms cash with the order. Send 50c. for sample ball by express.

Our American Amber Machine Oil, at 30c. per imperial gallon, in barrel lots, is a wonderfully good oil for agricultural machinery and for threshers' use. It is a thick, heavy-bodied oil. Send 10c. for sample by mail. Threshers will find our free price list of their supplies of great value. Send for one. Send us 30c. in stamps and we will mail you one of our Woman's Friend stove mats. The greatest of all modern kitchen improvements. It is used under the preserving kettle, or under the porridge kettle, and right on top of any cook stove. You cannot then burn anything you are cooking. The mats are indestructible. Send for one and keep up with the Yankees.

We offer the very latest improved barrel churns, known as the Leader. No. 2 size at \$3.50 each; No. 3 size, \$4 each; No. 4 size, \$5.50 each. No. 3 is the standard size. The barrel churn is the only churn that has come to stay. All butter factories and creameries use the revolving churn. Recommended and in daily use by the Travelling Dairy under the control of the Ontario Government. The latest improved XXX tin creamers, with tap and pump, we offer at 75c. each; the lever butter worker at \$4 each; a good strong wheelbarrow, with iron wheel, \$3 each; leather fly nets, 60c. each; whiffletrees (ironed off) only \$1 per pair; fruit tree spraying outfit only \$1.50. Our \$15 single harness has taken the Dominion by storm. No such value was ever before offered. The same with our \$16 road carts. We are shipping them to all parts of Canada, and they give entire satisfaction wherever sent. It is our spot cash system that does the work. Is there any other firm in Canada that offers 1000 lb platform scales at \$12.00 each, or 240-lb scales at only \$5 each? Our terms are cash with the order in every case. Send for our price list; it contains prices that are interesting to every farmer.

S. MILLS & CO., 36 KING STREET WEST, HAMILTON, 318-a-om ONT.

\$500 A YEAR FOR 20 YEARS.

FOR 23 CENTS A WEEK.

The plans of insurance operated by the Manufacturers' Life are universally admitted to be not only the most popular but also the most liberal and comprehensive now offered to the public. For a premium not very much larger than is charged for a \$5,000 policy, where the entire insurance is to be paid in one sum down, this Company will give a policy of \$10,000, payable in twenty annual instalments of \$500 each. That's the instalment plan. By insuring on the ten-twenty plan a man may carry \$1,000 for the insignificant sum of twenty three cents a week! No other company in the world can give cheaper insurance than this.

THE MANUFACTURERS' LIFE INSURANCE CO., COR. YONGE & COLBORNE STS., TORONTO. 307-3y-OM

WAGONS, TRUCKS & DEMOCRATS

The BAIN WAGON has no Superior, and Few Equals.



Only the Best Materials used in the Construction of Goods Made by us.

We import the genuine STUDEBAKER TRUSS SKEIN, acknowledged to be the best in use. Not a breakage in the thousands we have used. Write for Catalogue and Price List, or see Agents.

BAIN WAGON COMPANY, 315- WOODSTOCK, ONTARIO

MICA ROOFING

Complex advertisement for Mica Roofing and Mica Paint. Includes images of a roof and a paint can. Text: '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.

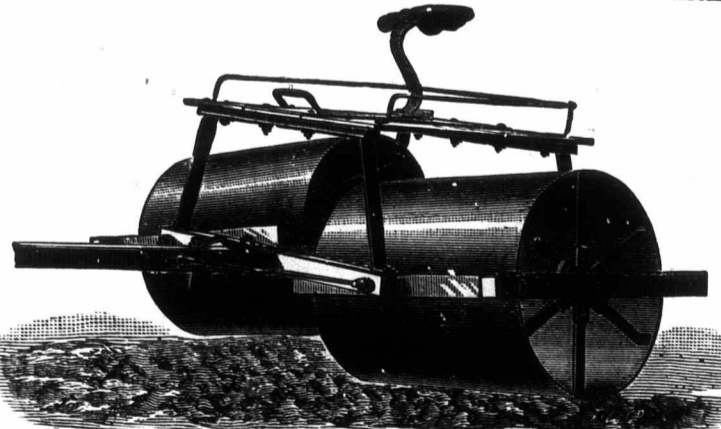
Is put up in rolls of 108 square feet each. 36 feet long by 3 feet wide, and costs 2 1/4c. per square foot, thus affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing 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. 308-y-OM Office - 108 James Street North, HAMILTON, ONT.

THE DALE PIVOTED LAND ROLLER

(Patented.) A STEEL ROLLER, THE DRUMS OF WHICH OSCILLATE ON PIVOTS AND ADAPT THEMSELVES TO THE UNEVENNESS OF THE GROUND.

Its points of advantage are too many to enumerate. Some of them are:



It rolls all the ground, no matter how rough. There is no axle shaft, no strain, and consequently no wear. It is easily rolled between the drums.

The bearings are the only wearing parts and are guaranteed to last from Ten to Fifteen Years, and can be replaced at a nominal cost.

THE DEMAND IS STEADILY INCREASING. IT IS UNANIMOUSLY RECOMMENDED BY THOSE FARMERS WHO HAVE USED IT. Orders are now being booked for the fall trade. Description and price furnished on application to.

T. T. COLEMAN, SOLE MANUFACTURER, SEAFORTH. 307-y-OM