

# the FARMER'S ADVOCATE

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## THE FARMER'S ADVOCATE & HOME MAGAZINE

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### Quarantine on Sheep and Swine.

The Order-in-Council by the Department of Agricultural, Ottawa, imposing fifteen days quarantine on sheep and swine arriving in Canada from the seaboard, has been brought about by the late regulation of Hon. J. M. Rusk, Secretary of United States Bureau of Agriculture, it being plainly stated in the U. S. regulation that the absence of an order of this kind in Canada was why the imposition of a quarantine against Canadian sheep and swine was imposed by the department at Washington.

### Ontario Agricultural College Farm.

The annual report for 1890 of the Ontario Agricultural College, and the Experimental Farm attached to it, is instructive in many particulars. The experiments between the different breeds of live stock are of necessity unsatisfactory, as nothing conclusive can be gained from a trial of this kind between a few animals. A difference will always occur between individuals of the same breed. With seed grain this should be entirely different, and five or ten square rods, if correctly carried out, should give nearly as accurate a test as that of ten acres. Appended to the financial statement for the above year, and with Mr. John S. Hobson overlooking the accounts of both expenditure and revenue, Prof. Shaw claims a net gain of \$1,709.25.

## Editorial.

### The Cattle Shipping Trade.

A few months since, while the enquiry was going on relative to the treatment of cattle during ocean transit, the ADVOCATE spoke out freely as to the manner in which the carrying trade was being conducted. Those that were familiar with this trade well knew how necessary, for the well being of this industry, that a change should be made. Since that writing steps have been taken that will naturally assist the better arrival of Canadian cattle at British ports. This much good has been attained by the agitation brought about by Mr. Plimsol who, although considered a crank in these matters, has considerable knowledge of shipping in all its branches.

The bill lately brought before Imperial Parliament through the interference of the Marine Insurance Co. of Canada will have a good effect as far as the fitting up of the vessels engaged are concerned. The further management while on board, in which a vast difference is to be found, in the captains employed, some of which take every pains during heavy weather so often encountered. By laying too for a short space of time, or changing the course of the vessel, a whole cargo may often be saved from disastrous loss. Parliament is the only body that can deal with matters of this kind, and it is only through bringing these measures before the House that the representatives of the farmers that advantageous changes can be made.

The same is also true of our railway accommodation; in the hurry of loading at the different ports each of the railway tracks should in all cases run close up to the wharfs, and cattle yards and sheds situated as near as practicable. The bulk of Canadian cattle are shipped in the hottest weather, and driving cattle a distance before loading on shipboard, not only occupies a lot of valuable time, and entails unnecessary expense, but the cattle are heated to such an extent that when subjected to their allotted space on board the heat is almost unbearable, and the cattle are in bad shape at the very outset, and in anything but a proper state to commence their voyage across. This trade deserves the best accommodation that can be accorded to it. Millions of money annually, and the welfare of the whole of our farming operations, depend on fostering this industry. Canada has the inside track if those in authority choose to keep it. Further relief is necessary, in order that the detentions that several cargoes have already been subjected to on their arrival at British ports, thereby discouraging and crippling those engaged. That there is not the slightest trace of infectious

disease among our cattle is to be accounted for by the stringent quarantine measures, that, although irksome to those that are importing, are perfectly necessary to the life of the export trade. Our cattle are steadily gaining ground and becoming more popular in British markets, and too much attention cannot be paid to assisting those who are engaged in this commercial work.

### Manitoba Notes.

The Winnipeg Free Press, of the 15th inst., speaking of the Manitoba crops, says:—"There is every promise of a yield even more abundant than that of last year. A pleasing feature is the steady growth of the areas under cultivation, indicating an equally steady growth in population and an abiding confidence in the country by the older settlers."

The June excursions to Manitoba, to enable Ontario farmers to see the country for themselves, were very largely patronized. Other excursions will likely be run in August.

Notwithstanding the McKinley Bill, with its prohibitory duty, the area of barley in Manitoba has increased 36 per cent. over last year.

Bulletin No. 28 of the Manitoba Department of Agriculture was issued on the 15th June. The total acreage put under crop this season is shown to be 1,350,201 acres, being an increase of 267,407 over that of 1890. Of this increased area 170,707 acres are devoted to wheat, 70,110 to oats and 23,793 to barley.

The areas of land under cultivation in Manitoba this year, compared with last, is as follows:

	1890.	1891.
Acres under wheat	746,068	918,664
" " oats	235,534	305,644
" " barley	66,935	89,828
" " peas	1,170	555
" " potatoes	10,812	12,710
" " roots	7,977	9,351

### The Tolton Pea Harvester.

As years roll on many changes and vast improvements in the methods of handling the different crops are yearly brought before the public. Pea pulling by hand was a quick enough way of getting through with harvesting this crop when the cradle was the most expeditious implement used in cutting the other grain crops. The horse rake of different builds was thought greatly in advance of the scythe, but now in the Tolton Pea Harvester the Canadian farmer has an implement that will not only cut all around the field, but where peas are grown for canning the machine will cut them green. When the land is properly prepared by rolling no more trouble is experienced than in cutting any other crop, and less waste than by any other mode of harvesting.

## Stock.

**American Southdown Association.**

The annual meeting of the American Southdown Association was recently held in the Illinois National Bank, Springfield, Ill., President J. H. Potts presiding.

The reports of officers show the Association in good working order, and it was the expressed intention of the members to forward the interests of the Southdowns by every possible means. To this end the offering of liberal prizes at the World's Columbian Fair will probably be made.

The additions to membership during the year are:—Walter A. Wood, Hoosick Falls, N. Y.; H. D. Libby, Oakland, Maine; D. C. Graham, Cameron, Ill.; H. Simenton & Sons, Black Heath, Ont., Can.; Robert Shaw & Sons, Renton Station, Ont., Can.; Peter Metler, North Pelham, Ont., Can.; Wm. A. McCoy, Mercer, Penn.; L. H. Benjamin, Haskinville, N. Y.; J. M. Peck, Hornellsville, N. Y.; John Miller, Markham, Ont., Can.; John A. Irion, Gallipolis, Ohio; A. M. Kent, Jamestown, N. Y.; D. W. Evans, Venedosia, Ohio. The deaths among members since last meeting were:—W. A. Wood, East Smithfield, Penn.; N. R. Bontelle, M. D., Waterville, Me., and Phil. M. Springer, Springfield, Ill. Messrs. D. W. Smith, C. F. Mills and S. E. Prather were appointed a committee to present resolutions on the loss of these coworkers, and on account of the especial loss sustained by the Association in the death of Phil. M. Springer, the secretary was directed to set apart one page in Volume IV. of the record in memoriam of him. Messrs. J. H. Potts, Jacksonville, Ill.; T. W. Harvey, Chicago, Ill., and G. J. Hagerty, Hanover, Ohio, were re-elected members of the board of directors, and Frank K. Springer was elected to the board to fill the unexpired term of Phil. M. Springer, deceased. Messrs. J. H. Potts, as President, S. E. Prather, as Secretary, and D. W. Smith, as Treasurer, were re-elected for the ensuing year. In accordance with previous action, the awarding of the following prizes offered by the Association was approved: At the Detroit International Fair, Detroit, Mich., 1890, to John Jackson & Sons, Abingdon, Ont., Can., for pen of recorded Southdowns, ram and two ewes, a silver cup valued at \$30; and for recorded Southdown ram and ewe, a silver medal each. At the Sangamon Fair, Springfield, Ill., 1890, to J. H. Potts & Son, Jacksonville, Ill., for pen of recorded Southdowns, ram and two ewes, a silver cup valued at \$30, and for recorded Southdown ewe, a silver medal; and to S. E. Prather, Springfield, Ill., for recorded Southdown ram, a silver medal. At the American Fat Stock Show, Chicago, Ill., 1890, to J. H. Potts & Son, for Southdown wether, sire and dam recorded, a silver cup valued at \$50. The secretary placed before the Association the correspondence had in regard to the registry of Southdown sheep owned in or imported from Great Britain. The matter was, after discussion, referred to a committee for future action, it being the disposition of the Association to encourage the importation and registry of purely bred animals for the improvement of American flocks, as opposed to the indiscriminate registry of animals having no other distinction in their favor than that they were bred in Great Britain.

At a previous meeting of the board of directors the following resolution was passed:—

*Resolved*,—That to the end there may be, without further delay, some recognized authority in England in matters of pedigree in Southdown sheep, we will for the time recognize as such authority any three of the leading breeders who will agree to act as a committee of examination, and will pass upon the pedigrees we may from time to time submit for their inspection; and that all animals whose pedigrees have thus been passed upon and found correct shall be eligible to registry in the American Southdown Record at the same rates charged for American bred animals, upon receipt of the pedigrees properly certified by the examining committee in England.

On motion it was ordered that the Secretary be instructed to write to Mr. Henry Webb, Strutly Hall, Cambridgeshire, England, enclosing to him a copy of the foregoing resolution, and request him to act as chairman of the committee therein suggested, associating with himself any two of the leading breeders he may think best for the accomplishment of the object had in view.

Mr. Webb has replied to the above resolution stating his willingness to comply with their wishes, and has requested Mr. Geo. Jonas to assist him in the work. This action we hope will meet the wishes of Canadian breeders who will doubtless record their Southdowns in the American Record.

**Our Scottish Letter.**

The month of May is always a busy one here with exhibitions of all classes of stock, and the shows of Clydesdales this season, at Glasgow, Hamilton and Dumbarton, have brought out almost all the best we have here to show. For mares at Glasgow, Mr. Sinclair Scott, the Vice-President of the Clydesdale Horse Society, secured all but two of the principal honors. He was first with his fine brood mare, Scottish Marchioness, first with his yeld mare, Scottish Rose, and first with his three-year-old mare, Scottish Snowdrop. The last was also the champion female of the show, her chief opponent being the first prize two-year-old filly, Lady Louisa, owned by Mr. John Watson, of Earnock, like Scottish Snowdrop got by Prince of Wales, out of a Darnley mare, and also like her, up to this date, unbeaten. The first prize yearling filly was Mr. Lunsden's Balmedie Enchantress, which was also first at Kilmarnock, so that of the first prize winners in all five classes, one, Scottish Rose, was by Darnley; two, Scottish Snowdrop and Lady Louisa, were out of Darnley mares, and two, Scottish Marchioness and the Balmedie filly, were by sons of Darnley. This, however, did not complete the tale of victory achieved by the Darnley line. The first prize yearling colt, owned by Mr. Geo. Alston, was by Prince of Kyle, out of the celebrated prize mare, Vanora, by Darnley, and the first prize two-year-old colt, Prince Alexander, the champion male Clydesdale here as well as at Dundee last year, was by Prince of Wales, out of the prize mare, Jeanie Black, by Darnley. The only first prize winner at the show not closely related to Darnley was the three-year-old stallion, Williamwood, owned by Mr. Peter Crawford, which was also first at Ayr. He was got by what is now your Canadian horse, St. Gatien, and an uncommonly good horse he is.

Perhaps the most interesting feature of the Glasgow Show was the family group competitions, and this interest was increased by the fact that the competing sires are living and breeding. No fewer than four groups of five yearlings each appeared in the arena, representing Lord Ailsa, Prince Gallant, Sir Everard and Flashwood. Of these it is noteworthy that Sir Everard and Prince Gallant are by Top Gallant; Flashwood is by Darnley, and own brother to the well-known Macgregor, and Lord Ailsa is one of the best of the sons of Lord Erskine. There was no disputing the right of Flashwood to first place, and there is no question at all about his popularity this season. It is an open question, with a strong balance to an affirmative answer, whether he be not the best Clydesdale stallion of the century. His progeny have a strong family likeness, and are marked by uniform excellence of a high order. Sir Everard was second with the first group of five yearlings, got by a Glasgow premium horse that has ever successfully entered in this competition. There were four strong, useful colts, two of which had been third and fourth in their class, and one filly in his group, while Flashwood's group consisted of four fillies, three of which had been second, third and sixth in their class, and one colt. Prince Gallant was third. His group was not as strong as it might have been, Mr. Park's yearling colt, that was first at Kilmarnock, Maryhill and Rothesay, and Mrs. Lamont's filly, out of the dam of Sir Everard, that was first at Rothesay, being absent. The best in the group as it appeared was Mr. Love's colt that was second in his class at Glasgow, and occupied third place at Kilmarnock. The competitors in the class for the best group of five two-year-olds were Lord Erskine, Duke King and Lord Ailsa, and the old horse, Lord Erskine, was first, with his son, Lord Ailsa, second, and the Duke King third.

The Bute County Show, held at Rothesay on 5th May, the Lanark County Show, held at Hamilton on 15th May, and the Dumbarton County Show, held at Alexandria on 16th May were all good exhibitions, in which were found superior representatives of the breed. All the first prize winners at the first named show were above the average. The first two-year-old colt was the celebrated Rosemont, owned by Messrs. McAlister, and got by Prince of Albion, out of Rosebud, the dam of Moss Rose. He was second this season both at Glasgow spring and summer shows, and at Kilmarnock, and is rapidly improving and growing into a superior horse. He was also awarded the cup at Rothesay as the best Clydesdale of either age or sex exhibited. The first prize yearling colt at Rothesay was Mr. Walter S. Park's colt, by Prince Gallant, out of the dam of Lord Erskine, that was first at Kilmarnock and Maryhill, and second at Ayr. He was purchased by Mrs. Simpson for £1,300, to compete with Rosemont, which, however, as we have seen, beat him. The first prize brood mare, Kathleen, owned by the gentlemen who own Rosemont, is a useful, short-legged, breeding-like mare, got by Gilderoy 1438. The first prize yeld mare, She, is a particularly good mare, got by the celebrated Sanquhar, and winner of many prizes. She is owned by Mr. Daniel MacIntyre, Dunallan, Rothesay, and is so good that she was kept by the judges for a long time as a competitor with the two colts for the championship. A better mare is not too easily found. The first

three-year-old filly is owned by Mr. Robert Crawford, Kilchattan, and was got by Chestlar. She is an evenly, well-balanced sort. The first two-year-old, owned by Mrs. Simpson, and got by Sirdar, was considered by the judges to be as good an animal as any in the field, but was not quite in form. She has first rate feet and legs, and is well built and well colored. The first yearling filly, as has already been mentioned, is by Prince Gallant, out of the dam of Sir Everard. She is owned by Mrs. Lamont, Millellan, Toward, and is a superior youngster.

The Lanarkshire Show, as might be expected, was a splendid affair. The first prize brood mare was the fine young beast, Elsie Marley, got by St. Lawrence, and one of the finest animals ever seen after that sire. She is owned by Mr. Richard Dunn, Udston, who took high honors with his stock at this show. The first yeld mare, Lady Corsewall, owned by Mr. Robert Murdock, West Hallside, Newton, is a big, well-colored good mare, whose sire is indicated in her name. The first three-year-old mare was My Aggie, a typical Clydesdale, got by Ardncraig, and owned by Mr. James F. Murdoch, E. Hallside. Mr. Robert Murdoch was first with his two-year-old filly Duchess II., a very strong, big mare, got by the renowned breeding sire Prince Lawrence; she was awarded the female championship, her chief opponent being Elsie Marley. Mr. Dunn was first with an excellent yearling filly Sousie Lass, got by the Lesmahagow Buchan, and this season's Kintyre premium horse Loyalist. The same owner was also first with his three-year-old horse Master Robin, the Duke of Hamilton's premium horse for this season, and a beautiful animal he is. Messrs. J. & J. Wilson, Westburn, Cambuslang, were first with one uncommonly fine two-year-old horse named Royal Stewart, got by Lord Blackburn. He was second at Ayr, and can give a good account of himself anywhere. Yearling colts by Sir Everard gained first and second prizes. The first was third at Glasgow, and is owned by Mr. Robert Spittal. His dam is the Prince of Wales mare, Mary Gray, whose neighbor the Darnley mare, Bessie Bell, the Graham Bros. imported last season. The Messrs. Findlay, Springhill, owned the second prize colt, a promising animal, and the same owners were also second in the two-year-old class, with a grand, big colt named Caledonia, after Cairnbrogie Stamp, and out of Chrystal. Master Robbin got the championship as the best male Clydesdale exhibited.

As at Hamilton so at Alexandria, a three-year-old daughter of St. Lawrence was first in the brood mare class. She is named Lass O'Campsie, and owned by Mr. Hosie, Kirkintilloch. A black mare by Lucknow 3810, and owned by Mr. James Robertson, Duntocha, was first in the yeld mare class. She is quite a useful kind of mare. Mr. Archibald Bulloch, Milliken, was first with a fine, big three-year-old mare, got by Top Gallant. This is an animal of much strength and substance. The first two-year-old is owned by Messrs. Douglas, Kirkintilloch, but her breeding was not made known. She is a handsome mare, and was awarded the championship as the best female. The first yearling filly was bred in the north of Scotland and got by Glenfiddoch. She is owned by Mr. Duncan Fraser, Auchintoshan. Mr. Riddell was first with a nice two-year-old colt of good quality. He was awarded the championship as the best

male Clydesdale, and is understood to be got by Prince of Wales, out of a Darnley mare. The yearlings were chiefly got by the premium horse Top Knot 6360, and the first prize winner was a strong colt by him, and owned by Mr. Wm. Stewart, Milton, Duntocha.

These three local shows are good indications of what is being done in Scotland towards the maintenance of the quality of our Clydesdales. On the whole it must be acknowledged that greater progress was manifested by the Bute and Lanark shows than by the Dunbarton show. The first named is doing very well, and Lanarkshire also is improving its quota of the breed to which it first gave a name.

SCOTLAND YET.

#### Canadian and American Stud Books.

In last month's issue I noticed an article on the above subject by a Clydesdale breeder, and as the event he foretold has come to pass, and pedigree certificates issued by the Canadian Clydesdale and Shire Stud Books have been refused at the lines, on the ground that they were not sufficient guarantee of the purity of the animal's breeding, perhaps a few words on the subject may not be inappropriate. That certificates from Goderich, or even from the Canadian Draught Horse Stud Book, should be refused is, I think, not at all surprising, as in the case of the first the standard of the record is undoubtedly such as to render it of no value whatever, while in the case of the second, although the standard calls for as many top crosses as either the Clyde or Shire Book, still the fact remains that horses registered in it, although they may show a great deal of individual merit, are not *pure-bred horses of any recognized breed*. But when our neighbors over the line commence to tell us that our Clydesdale and Shire Books are N. G., and that they cannot accept our certificates of registration, I think it is quite time for us to let them know exactly how the standard of the Canadian book compares with that of the American. When the American Clydesdale Book was founded animals were accepted for registration in Vol. I. that were of mixed breeding, *i. e.*, whose pedigrees contained crosses of both Clyde and Shire blood. This, it is true, occurred only in the first volume, as in succeeding volumes no animals were accepted unless out of registered sires and dams, or having the requisite number of top crosses of pure Clydesdale blood. But just as any taint of hereditary disease that is found in a parent is liable to be transmitted to the child, so I would point out to American Clydesdale breeders that the "bad drop" in Vol. I. is liable to taint later volumes, for although where an out cross exists in a mare's pedigree it is more or less an easy matter to breed it out by the continued use of pure-bred stallions, what is to be said about those stallions registered in Vol. I., whose pedigrees contain out crosses? *e. g.*, I know of a stallion purchased from a friend of mine by a past president of the American Clydesdale Association; this horse's pedigree contains more Shire blood than it does Clyde, yet he is registered in Vol. I. American Clydesdale Stud Book, and consequently his get from a registered mare is eligible for succeeding volumes. Now, let us suppose that this horse should be bred to a mare also registered in Vol. I., and having a similar pedigree, and the produce a horse colt; this colt is eligible to register in Vols. II. or III., although

he is really more Shire than Clyde, and once he is registered his produce from registered mares is also eligible; and so, from the fact of animals of mixed breeding being admitted to registry in Vol. I., it cannot be denied that a taint of this mixed breeding is liable to linger round many of the later volumes. Now, when the Canadian Clydesdale Stud Book was first started by the Agriculture and Arts Association, animals of similar mixed breeding were accepted, but at a large meeting of representative Clydesdale breeders, held for the object of forming a Clydesdale Breeders' Association, this way of doing business was, I am glad to say, condemned by a majority of those present, and no animals were admitted into Vol. I. of the Canadian Clydesdale Stud Book that could not show the requisite number of top crosses of pure Clydesdale blood, thus laying a foundation from which every trace of Shire blood has been rigidly excluded; and yet our neighbors in the adjoining republic shrug their shoulders when the Canadian Clydesdale Stud Book is mentioned, and decline to accept our certificates on the ground that they are not sufficient guarantee of purity of blood, and when unable to deny the plain fact that our standard is higher than theirs, they fall back upon the assertion that our methods of registration are too loose to insure the absolute correctness of all pedigrees accepted for registration, and on several occasions it has been hinted pretty plainly through the American press that Canadians were too handy at fixing up a pedigree, etc. With regard to these two statements I would suggest as to the first that there is an old saying to the effect that "those that live in glass houses should not throw stones," and it might be as well for Friend Jonathan to adopt a standard equal to ours before he commences to find fault with the way our stud book is conducted, while in the second case I can only say that it is a curious fact that in almost every case where a false pedigree has been presented for registration in the Canadian Clydesdale Stud Book the parties by whom the applications have been made have been Americans, and in several instances members of the American Clydesdale Association, although they have not always given evidence of Yankee cuteness in their attempts to make fraudulent entries, *e. g.*, the gentleman from Michigan who sent in a pedigree of a stallion alleged to have been bred in Ontario and bought from the breeder by the then owner, although, strange to say, not a single stallion mentioned in the pedigree had ever left Scotland. No! Friend Jonathan, such flimsy excuses as these won't do, and the putting forward of them does no credit to Americans.

If American breeders are afraid of the competition from Canadian horses let them act like men, and first acknowledge that we breed better horses than they do, and then put on all the duty they want to, and in such a case we must try to find other markets for our draught horses. But in the name of common fairness do not first declare that breeding stock with registered pedigrees are admitted free and then refuse our certificates of registration, when it is patent to the world that the Canadian Clydesdale Stud Book is, like the Canadian Clydesdale horse, of a much higher standard than the American.

BLUE BLOOD.

"Plant your peach orchard on a hillside sloping north and west," says J. H. Hale, of Connecticut.

**Studs, Herds and Flocks.**

## FAIR PLAY FARM.

One mile and a-half from the picturesque village of Grimsby, on the stone road leading to Hamilton, is situated Fair Play Farm, the property of Messrs. G. Smith & Son, the well-known breeders and importers of Jersey cattle and Welsh ponies, and, indeed, a more charming spot it would be hard to find than these gentlemen have chosen on which to build their present residence. The home farm, which contains about 100 acres, slopes down from the foot of the mountain towards the lake, while the balance of their land, about 600 acres in all, lies on the top of the mountain, stretching away towards the adjoining township of South Grimsby.

The principal stock bull in use now at Fair Play Farm is Nell's John Bull, winner last year of first prize and silver medal at the Industrial Fair, Toronto, and so far never beaten in the show ring, a son of Canada's John Bull, undoubtedly the most famous bull Canada has ever seen, and out of Nell of St. Lambert, a daughter of Ida of St. Lambert, the heaviest milking Jersey in the world. Messrs. Smith have made a wise choice in placing such a bull at the head of a herd in which the production of quantity, as well as quality, has been constantly aimed at, for when we remind our readers that not only is Ida of St. Lambert the largest milking Jersey in the world, but her full sister Allie of St. Lambert has the second largest record, these two sisters having the largest combined record ever made by two Jerseys, it will be seen that, if pedigree goes for anything, Nell's John Bull should prove a successful sire, more especially when mated with such cows as we were shown in the stables at Fair Play. To attempt to give anything like a description of these would take far longer than we have space for, but we cannot pass over them without giving the milk records of one or two of them, viz.: Hugo's Victoria gave 55½ lbs., Miss Stoke Pogis 50½ lbs., and Polly of St. Lambert 53 lbs., an average daily yield of 53 lbs., or about 21 quarts for each cow, while Hugo's Victoria gave in seven days 373½ lbs., an average daily yield of over 21 quarts. All the young things, upwards of 30 in number, are sired by Nell's John Bull, and a grand lot they are, among them being some very choice young bulls, and a lot of yearling and two-year-old heifers that promise to do credit to their sire, it being Messrs. Smith's intention, we understand, to test a number of them. Before leaving the Jerseys we would mention one more point that struck us very forcibly, and that is, the uniformity shown by the cattle, a greater amount of size than is ordinarily seen in Jerseys being combined with characteristic dairy points.

The herd of Welsh ponies numbers in all over 50 head, with the imported pony Glendower at head of the stud. Glendower was imported by Sir Jos. Hickson, and was purchased from him by Messrs. Smith. He is a very handsome pony, rich bay in color, stands 44 inches high, and weighs 500 pounds; he shows a wonderful lot of bone, with clean flat joints and good feet, while his head and neck are simply perfect. Glendower's colts, shown at Buffalo in 1889, although in competition with the largest studs of ponies in America, won every prize they showed for, and amongst those shown us by Messrs. Smith we picked out several colts that we think could

hold their own anywhere. One of these, Glendower Boy, a three-year-old chestnut with a silver mane and tail, standing 42 inches high, is a perfect model of symmetry, while his full brother, two-year-old, promises to make one equally good. Both these ponies are very breedy-looking and show capital action, their dam being a very fast trotting mare. That these ponies are handsome and breedy-looking we saw for ourselves, and Messrs. Smith tell us that they are very gentle and free drivers, being in their opinion very much superior to Shetlands, while they are quite as easily kept, the colts we saw having all wintered out round a straw stack with a little hay towards spring. Parties needing Jerseys or ponies should read Messrs. Smith's advertisement in another column.

## LANSDOWNE FARM

is situated about three miles east of Grimsby, on the south side of the stone road. It consists of 100 acres of rich, level land, running down to within one mile of the shore of Lake Ontario. A large part of the farm is planted with the choicest varieties of fruit, while around the house is laid out tastfully with various ornamental shrubs. Here the proprietors, Messrs. J. C. McNiven & Son, have laid the foundation of a herd of Holsteins, and acting on the principle that the best are none too good, they have got together some of the choicest specimens of the breed that they could find in Ontario.

At the time of our visit the herd comprised some eight or ten females and two bulls, the older of these being the yearling bull Siepkee 3rd Mink Mercedes Baron, bred by Messrs. Smith Bros., of Churchville, Ont., a very useful looking animal, showing prominently the dairy points characteristic of the breed, and with a skin like a glove, so beautifully soft and mellow, while the other, Baron of Helderleigh, is a very promising calf, dropped last fall and sired by Smith Bros.' famous bull Mink Mercedes Baron, out of Margaret 4th, a very promising young cow with a milk record of 1,387 lbs. in 30 days as a two-year-old. With the older cows, all of which were purchased from Smith Bros., we were very favorably impressed, every one of them showing very distinctly the dairy points of the breed. Indeed, one of them, Lady Maveinga 2nd, struck us as being one of the best three-year-olds we have ever seen. Wide across the hips and light in the shoulder, she shows the wedge shape, so indicative of a good milker, while her prominent milk veins and well-shaped udder, with the teats large and well placed, all seem to say the one word, *milk*. We understand that Messrs. McNiven refused a long price last fall for the cow, and well they might, if she continues to breed such calves as the heifer we were shown in an adjoining paddock, while her milk record as a two-year old is 61½ lbs. in one day.

Another plum secured by the enterprising owners of Lansdowne Farm is Maud Tensen, a daughter of the famous Cornelia Tensen and a prize-winner wherever shown. This heifer has given close to 40 lbs. of milk a day for 30 days, the third month after calving, while her milk shows 16 per cent. of cream.

Altogether Messrs. McNiven's Holsteins are a credit to the breed, and their owners are now reaping their reward for money well laid out. The herd, we are told, will be exhibited at Toronto this fall, and parties looking for young stock of choice breeding and individual

merit will do well to see them. Their advertisement will be found in another column.

## INGLEDALE FARM.

Horsemen, like poets, are born, not made, and we presume the same applies to horsewomen, for a more thorough horsewoman than Mrs. Carpenter, of Ingledale Farm, it would be hard to find. A successful breeder of Jerseys for many years, Mrs. Carpenter has of late devoted more of her attention to trotting stock, and at the time of our visit two youngsters from Ingledale, viz.: Fides Stanton, a son of General Stanton, and Belle Howard, by Almont Wilkes, 2.28, were in training for the St. Catherine's colt stakes. Mrs. Carpenter's rule has always been to breed only to the best, and as a result the brood mares at Ingledale are principally got by such horses as Brown Douglas, General Stanton, Winfield Scott, etc., while the stallions chiefly used the last few years have been Almont Wilkes, 2.25, a son of Wilkie Collins, and consequently a grandson of the famous Geo. Wilkes, and Superior, by Wood's Hambletonian, he by Hambletonian 10. The only two stallions at home when we paid our visit were Pogis Stanton and Amber Stanton, both, as their names imply, sons of the famous General Stanton. The first, a big dark chestnut, standing over 16 hands, is a pacer, out of Winona Maid, by Winfield Scott, 2nd dam by Tempest, 3rd dam by Marshall's Durock. Although never trained Pogis Stanton shows a very promising gait, having done quarters several times in less than 40 seconds; the other, a four-year-old, is out of Clara P, a full sister to Amber, 2.25½, exported a few years ago to Vienna, where he has gained the distinction of being the fastest two mile horse in Europe. Of the brood mares it is sufficient to say that they do credit to their breeding, being from such sires as before mentioned and all registered in Wallace's Stud Book, while amongst the youngsters growing up are several very choice fillies, two especially by Almont Wilkes, and out of Stanton mares, struck us as being very promising, showing size, style and action, with clean, flat legs and good feet.

As Mrs. Carpenter does not believe in working young horses to any extent, so far none of the colts at Ingledale have been trained; it is, however, the intention in the future to develop some of the youngsters, for which purpose a half-mile track has been laid out.

Besides her trotters, Mrs. Carpenter still maintains a herd of richly bred Jerseys. Among them we noticed the grand cow Allie of St. Lambert, and a very nice lot of young things of both sexes. Mrs. Carpenter's advertisement of road horses and Jerseys will be found in our columns, and we would recommend all in search of such stock to pay a visit to Ingledale, where we can guarantee a hearty welcome, and a sight of something good in both horses and cattle.

## VINE VALE FARM.

About five miles from Hamilton, and between that city and Stony Creek, lies Vine Vale Farm, the property of J. W. Jardine, Esq., and known in former years as the home of some of the best Ayrshires Canada has ever seen, but now devoted to fruit growing and the breeding and raising of trotting horses.

This year, in addition to a large quantity of strawberries and other small fruits, Mr. Jardine has eighteen acres of hops and sixteen acres of grapes.

The principal stallions used at Vine Vale have been Dillard Wilkes, Superior and Almont Wilkes, while the mares comprise the get of such noted sires as Gen. Stanton, Harkaway, Caledonia Chief, etc. Among the mares we particularly noticed a grand brown mare by Harkaway. This mare had a colt running by her side by Superior, a son of Wood's Hambletonian, that, to our mind, was the best we have ever seen of its age. A grand, big, breedy-looking youngster, with a capital set of legs and big, clean, flat joints. In our advertising columns will be found Mr. Jardine's advertisement of a young stallion from this mare, and by Dillard Wilkes, a son of the great Red Wilkes. If he is anything like what his half brother promises to be he is well worth going to see.

MR. BURLAND'S COLLIES.

Mr. A. Burland, of Grimsby, who places his card with us in this issue, is well known as the

Manor, Kent, who states that his shepherd considers him one of the best trained dogs he has ever had. Among Mr. Burland's bitches he showed us a number of prize-winners imported at considerable expense. Several of these have been mated with Moonstone, and we would advise all who wish to get an A1 Collie pup to write Mr. Burland for prices.

MEADOW LAWN FARM.

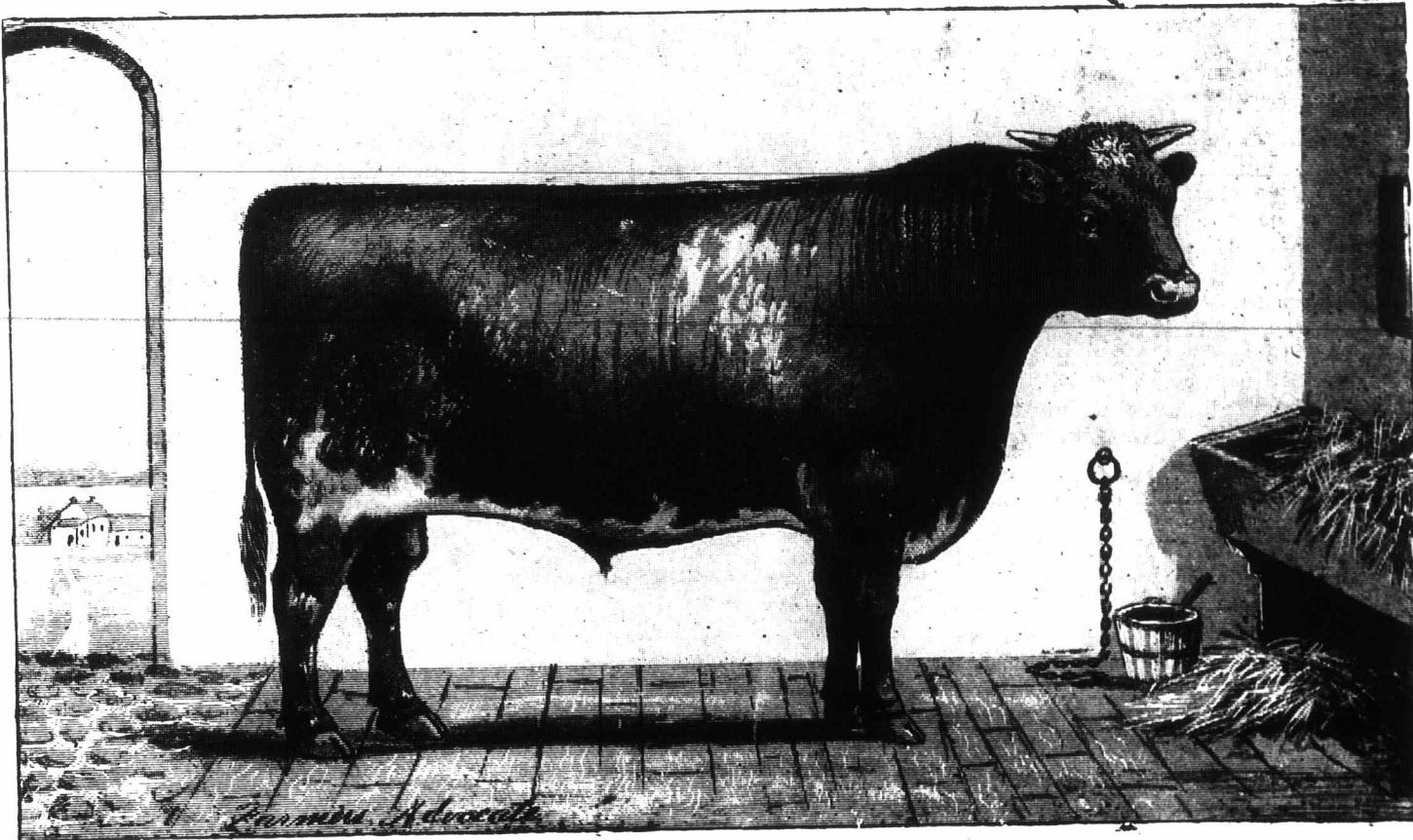
Among Shorthorn breeders the names of John and Robert Ireland were at one time very prominent as breeders of Bates cattle, and in the person of their nephew Mr. M. G. Ireland, the present proprietor of Meadow Lawn Farm, we found a worthy successor to these gentlemen. At the date of our visit Mr. Ireland's herd was headed by the bull Halton (5047), bred by Mr. Geo. Ballachey, of Brantford, Ont., a thick-fleshed, useful looking animal, while the cows are principally from the herd of the late Mr. R.

#### Our Illustration.

*A propos* to the recent dispersion sale of Mr. A. J. Alexander's Duchesses, we give in this month's issue an illustration of the Duke of Lyndale of the same celebrated tribe. The bull before us was bred by Col. King, Minneapolis, and now the property of Greig Bros., Kingswood Stock Farm, Otterburne, Man., and is of the Duchess of Airdrie's branch of the Duchesses. His sire is Grand Duke of North Oaks 2nd, bred by Mr. J. J. Hill. On the dam's side the cows have been in many valuable herds, and gone through the hands of many celebrated breeders, his dam being bred at Bow Park, and by the celebrated 4th Duke of Clarence; the grandam, 10th Duchess of Hillhurst, bred by Hon. H. M. Cochrane, Compton, P. Q.; and the great grandam bred by A. J. Alexander, Spring Station, Ky.

#### Auction Sales.

Messrs. Green Bros., Innerkip, Ont., advise us that they will hold a public sale of their entire studs and herds on August 27th. The



DUKE OF LYNDALE, THE PROPERTY OF GREIG BROS., OTTERBURNE, MAN.

Secretary of the Ontario Collie Club, and a successful breeder of Collies of the very best strains. Among the many good dogs imported by Mr. Burland is the well-known Turk II., O. C. C. 219, he by Champion Chance, winner of over 100 prizes, cups and medals; dam Tibbie, by Champion Tramp. The present stud dog is the imported dog Moonstone, by Scotson, he by the Champion dog Dublin Scot, purchased by the Chestnut Hill Kennels for the enormous sum of \$10,000, Moonstone's dam Moonlight being by Champion Eclipse, one of the greatest winners of his day. Moonstone is a very handsome dog, a beautiful rich dark sable in color, with tremendous wealth of coat, magnificent feathering and a simply perfect head and ears. Moonstone, after winning at Boston last year, was sold for a very large sum to go to England, where he won numerous prizes, being purchased by his present owner at the Agricultural Hall, Islington, from Wm. Ruste, Esq., Resling

B. Ireland, of Nelson. Among them Highland Mary, by the well-known Mazurka Duke, and out of Rosabelle, by Oxford Languish, struck us as being just the pattern to produce bulls of the short-legged, beefy type. Another smooth, even, heavy-bodied cow is Queen of Trumps, by Wentworth, out of Pink 2nd, by Mosstrooper, while her daughter, Sweet Briar, by Wonderful, is a very promising heifer, now carrying her first calf to Halton 5047. Running in the straw yard were a pair of heifers sired by Waterloo Duke 16th. Of these, Rosina Vokes, out of Fancy Girl, by May Duke, is a really choice heifer of that beautiful rich roan color so much fancied by some breeders. The other, Hettie, red and white, out of Meadow Lark, by Wentworth, is a neat, smooth heifer. Both of these are now carrying calves to Halton 5047. Besides these heifers Mr. Ireland has one or two young bulls which he is offering at really low figures. His advertisement will be found in our columns, and to intending visitors we would say that Meadow Lawn Farm is only about two miles from Copetown station on the G. T. R.

sale will comprise shire mares (which were imported by themselves) and their produce. The Shorthorn herd is descended from and composed of importations selected by one of the firm from among the most noted herds of Aberdeenshire, Scotland, and representatives will be found from the herds of W. Duthie, Collynee; W. S. Marr, Upper Mill; A. F. Narres, Bructor; A. E. Hector, Collyhill; Alex. Scott, Towie Barclay, and include some of the choicest families of the north country. A number of the now popular Improved Yorkshires, of which the Messrs. Green have been liberal importers of late years, will also be included. As this is a dispersion sale, the proprietors intending to leave for England, a grand opportunity will be afforded for purchasing choice specimens of the above breeds. Representatives of both studs and herds have figured successfully in the show yards. This, and the fact of a steadily increasing demand for improved stock through the present rising markets, should prove a good opportunity to invest.

**The Pork Packers' Want.**

You are aware that the bacon made from Canadian pea-fed hogs ranks very high in England as to the quality of the meat, *i. e.*, the firmness of texture as compared with the corn-fed hogs of the Western States; but we lack one thing yet in order to attain perfection, as the following letter will show. This has just been received by us from our London agents, entirely unsolicited by us. It speaks for itself, and we hope Canadian farmers will lay it to heart. Should anyone suppose that the style of hogs described are suited only for the English market, we would assure them that the tastes of consumers in Canada are precisely in accord with John Bull's:—

"Wiltshire Bacon Curing Co.,  
Plymouth, Stone House and Davenport, Eng.  
Messrs. J. Wheeler, Bennett & Co., London:  
GENTLEMEN.—In reply to yours of the 29th please forward two boxes pea-fed sides, averaging 42 to 44. We tried the pea-fed some time since, fatness being the only fault. Your people on the other side ought to use the long Yorkshire White amongst the herds they have at present. We would then get the shaped side we want, instead of the short, fat things we are getting now.

"Yours truly,  
Per Wiltshire Bacon Curing Co.,  
"N. BRENDON."

We again express our satisfaction with the marked improvement in the above regard this season, and we confidently hope for continued progress.

Thanking you for facilities furnished toward this end, we are,  
Yours truly,  
WM. DAVIES & CO.

**The Wonderful Record of the Famous Jersey Cow Masena.**

Mrs. E. M. Jones, Brockville, Ont., who is the most widely known breeder of Jersey cattle in America, kindly sent us the following record of her famous cow Masena, which is now in her 16th year! and after nearly 1,000 miles by rail, the grand cow Masena has, I think, made the largest test of any cow living of same advanced age, and has demonstrated her ability, not only to "get there," but to "stay there."

1. She dropped her calf first week in March, just after journey. Began test March 12th.
2. She had been three months in quarantine on lowest possible feed, and latterly no grain whatever.
3. All through the test reported she has not averaged over 17 lbs. feed daily, one-fifth of that being wheat bran.

Under these circumstances here is her two months' test:—

In 61 consecutive days Masena yielded 1,822½ lbs. milk, which made 145 lbs. 8½ oz. butter of unrivalled firmness, color and quality. For 9 consecutive weeks the old cow has averaged 16 lbs. 10 1-12 oz. butter a week. Also, for same time, 30 lbs. milk daily. It is possible that other cows have done as well in their 16th year, but, if so, I have not heard of them, either among Jerseys or any other breed.

Masena is, at present date, a perfect picture of splendid health and condition. She is the ideal dairy cow in form, being a perfect wedge shape, with immense udder and milk veins. She is broken color, has a capacious body, on short, fine legs, a gentle, placid temper, an insatiable appetite, and a skin as yellow as gold. Her four-year-old son, Masena's Son, now in my herd, is, as far as my opinion goes, the most valuable bull

living, in this or any other country, especially as he is sired by a pure St. Lambert bull, thus uniting these two famous strains. Individually he is perfect.

Below is given a detailed statement of test:

	LBS. MILK.			BUTTER.
	A. M.	P. M.	TOTAL.	
March 12	15	14	30	4 4
" 13	18	14½	32½	4 9
" 14	18	14	32	4 11
" 15	18	15	33	5 2
" 16	18½	14½	33½	5 2½
" 17	18½	15	33½	5 4
" 18	19	15	34	5 4½
" 19	18½	15	33½	5 5
" 20	18½	15	33½	5 5½
" 21	18	14½	32½	5 6
" 22	18	15	33	5 6½
" 23	18	14½	32½	5 7
" 24	17	14½	31½	5 7½
" 25	18½	15	33½	5 8
" 26	18½	15½	34	5 8½
" 27	18	15	33	5 9
" 28	18½	14½	33½	5 9½
" 29	18	15	33	5 10
" 30	18	14½	33½	5 10½
" 31	11½	15	26½	5 11
April 1	18	15	33	5 11½
" 2	17	14	31	5 12
" 3	16½	14	30½	5 12½
" 4	17	15	32	5 13
" 5	17½	15	32½	5 13½
" 6	18	14½	32½	5 14
" 7	17	14	31	5 14½
" 8	17	14	31	5 15
" 9	16½	14½	31	5 15½
" 10	15½	14	29½	5 16
" 11	15	14	29	5 16½
" 12	14½	13	27½	5 17
" 13	15	13	28	5 17½
" 14	15	14	29	5 18
" 15	15½	14	29½	5 18½
" 16	16	14	30	5 19
" 17	15½	13½	29½	5 19½
" 18	15½	13½	29½	5 20
" 19	15½	14	29½	5 20½
" 20	15½	14	29½	5 21
" 21	15½	14½	30	5 21½
" 22	15	14	29	5 22
" 23	14½	13½	28	5 22½
" 24	13½	10	23½	5 23
" 25	12	10	22	5 23½
" 26	10½	10	20½	5 24
" 27	12	10	22	5 24½
" 28	14	12	26	5 25
" 29	14½	12	26½	5 25½
" 30	14	12½	26½	5 26
May 1	14½	11½	26	5 26½
" 2	14	12½	26½	5 27
" 3	14½	12	26½	5 27½
" 4	14	11½	25½	5 28
" 5	14½	14	28½	5 28½
" 6	16	13½	29½	5 29
" 7	15½	14	29½	5 29½
" 8	16	14½	30½	5 30
" 9	16½	14½	31	5 30½
" 10	16	14½	30½	5 31
" 11	16½	14	30½	5 31½

Total for 61 days ..... 1822½ ..... 145 8½  
\*Feed raised to 18 lbs. +21 lbs. †Reduced to 15 lbs.

**Cattle Values.**

From the great cattle producing plains of the west, and all through the cultivated lands in the east comes word that cattle are in short supply. All those who are intimately connected with handling cattle, whether for feeding or shipping, find them scarcer than a year ago. Particularly is this the case with those who are on the lookout for choice cattle for grazing. This will, sooner or later, effect the value of pure-bred cattle, on which depends the improvement and quick production of cattle suitable for the export trade. Already there has been a satisfactory demand for young Shorthorn bulls, and although the prices have not been so high as in former years, there is a steady awakening to the fact that the best beef bulls must be used, or the highest prices cannot be expected for steers, whether they are intended for feeding or slaughter. With the low prices for beef cattle, and the lessening demand that consequently attended the sales of feeders and stockers, farmers were careless in breeding and rearing calves, therefore pure-bred bulls stood wanting buyers, and prices lowered below the actual cost of production. This has had the effect of driving a very large percentage of the pure-bred herds to

the shambles, for which end they sold for more money than they would bring for breeding purposes. If this had caused a steady culling out of the worst cattle, which is as needful among pedigreed herds as anywhere else, the result would have been most advantageous to the breeding interests of the country at large. Unfortunately this was not the case. Shrinking values are universally followed by careless management, and numbers of those, among whom were new beginners, as well as old stock breeders, had become discouraged by the slow demand and low prices, and consequently neglected their herds. When prospects are bright, and sales come quickly breeders are ready to expend large sums for bulls to head their herds, which of necessity brings into demand superior cows and heifers, and slack sales of bulls are just as certain to have a contrary effect on the enquiry for females, hence the indifference found in keeping up the standard of the pure-bred herds throughout the country. It is in those close periods that the breeding of many a choicely bred herd is injured by the use of a bull that is not only defective in individual quality, but is sadly deficient in breeding, circumstances appearing to warrant a false economy through a temporary stagnation in trade. A careful scanning of the situation shows the necessity of breeders being more careful during seasons when the demand is slack. Just now due care should be given in order to replace those herds that have been weakened. We are confident that it will take several years of careful breeding to place our cattle breeding on as good a footing, as regards quality, as it was five years since. Through the last two or three years there has been too great a disposition to sell everything that was fit for slaughter, therefore the wholesale marketing of numbers of cows and heifers that should have been held for breeding.

**Cattle Improvement.**

[Continued from page 214.]

It seems among some to be thought that pure-breds must naturally be poor milkers; such is hardly true. Did our beef breeds get the same treatment as, for instance, the Jersey or Ayrshire, they would no doubt develop like milking qualities; but the object of breeders of any class is to obtain perfection in the animals they raise, whether beef or milk. I might mention an instance of what can be done with careful training. The dam of a Durham bull in my possession made, without forcing, 18½ lbs. of butter in 7 days. She stood challenged to beat any butter record in Manitoba, and I need hardly add the offer was never accepted. Still this cow raised a bull that will compare with any beef.

Every stockman should know exactly what he is going to do with his calf from the time it is born, and be governed, as to the method of raising it, by the object in view. Nothing less should satisfy us than a steer at two years to weigh from 1,000 to 1,200 pounds.

I anticipate some objections, the principal one being the supply of hay. Well, I think I am safe in saying that there is enough straw wasted in Manitoba to feed double the quantity of cattle at present in the province, assuming that it is chaffed and fed in conjunction with bran, shorts and crushed grain. A little long hay once a day with the above ration would keep our cattle growing all the time, other conditions being equal. There are gentlemen here who have

obtained, I believe, excellent results from the above ration.

I had no intention of touching on the question of feeding at all, but I have found it necessary to do so in order to better illustrate my arguments. One salient feature of the above course is that it would enable us to go into a system of rotation. This will soon be necessary when the land fails to grow wheat in paying quantities. Another advantage would be that of taking a great deal of our crop to market on four legs, after leaving behind a grand legacy in the shape of a doubly enriched manure pile, which, at the lowest possible estimate, would be a good offset for the labor bestowed in caring and feeding during our long winter. In dealing with this subject I have found it simply impossible to go into details; even now its discussion must be curtailed by reason of so many other subjects engaging our attention in so short a time. In conclusion, I would say if you have only a scrub calf, feed it well, give it a good warm bed; if you see it is not growing as it should, alter its diet, give a little chop feed and ground linseed now and again. Remember a good bull is half the herd. That however good your cows, a scrub will bring their offspring down to his own mean level. That where you have one poor calf you can weed it out, whereas, if all be poor you will soon be poor, too. Read good agricultural papers, attend our farmers' meetings regularly and punctually, giving your attention to the subject under discussion. We are not here to criticise your style. We want your experience and advice in your own way, remembering that every step we advance in our pursuits brings us nearer the goal we all desire to reach.

#### American Berkshire Association.

At a meeting of the Executive Committee of the American Berkshire Association, held in the Illinois National Bank, Springfield, Ill., on the 15th of June, communications were read from absent members and patrons of the American Berkshire Record in regard to the death of Phil M. Springer, Secretary of the Association, expressing regrets at the loss sustained by the breeders of Berkshires and other pure-bred live stock. A committee was appointed to draft resolutions in respect to the memory of the late Secretary, and it was ordered that in the next published volume of the American Berkshire Record one page be set aside in memoriam and one page for a likeness of the deceased.

Financial and other matters pertaining to the business of the Association were found in a satisfactory condition.

John G. Springer, who for a number of years has been associated with his brother, Phil M. Springer, as clerk in the office of the Association, was elected to fill the unexpired term as Secretary and member of the Executive Committee, left vacant by the latter's death.

#### Machine Oils, Belting, Threshers' Supplies, Etc.

All who wish to buy machine oil, grain scales, road carts, threshers' supplies, belting, etc., we would refer to the advertisement of S. Mills & Co., 94 John street south, Hamilton. We have bought considerable goods of these gentlemen and so far they have proved satisfactory. Considering the quality of the goods, the prices are low.

#### Western Fair, London, September 17th to 26th, 1891.

The Directors of the Western Fair Association, through their Secretary, Mr. Thomas A. Browne, forward the following summary of how they propose to cater to their exhibitors and visitors for the year 1891. The Directors have so arranged the prize list for this year as to assist in the improvement of live stock, and have decided that only registered animals in all the principal breeds shall be permitted to contest for prizes, and feel that all breeders and stock raisers will heartily agree with their action. In the horse department the so-called agricultural stallions have been struck out, on the recommendation of the horse committee, as worthless for breeding purposes, and, therefore, should not be encouraged. Also that all stallions two year's old and upwards must be registered in their respective stud books in order to be eligible to compete or win a prize. Two specials have been received in the department; one from the Clydesdale Association for the best brood mare, and the other from the Ontario Agriculture and Arts Association for the best stallion in Blood, Carriage, Roadster and Hackney classes, owned in East Middlesex. In the cattle department the prize list remains much the same as last year, except the special prize given by the American Shorthorn Breeders' Association, of \$150 (divided) for the best three-year-old Shorthorn cow making the most butter in two days' test on the grounds, and another of \$50, by this Association, for the same test, open to any breed. These prizes should be an incentive to dairy breeders to come out in large numbers, and be an interesting and instructive feature of the fair. In the sheep department we have adopted many of the suggestions of the Dominion Sheep Breeders' Association, and have added the pen sections to each class; also reserve number and commended cards as the fourth and fifth awards. A special has also been received from the Shropshire Association of England, to be divided in this class; also a medal from the Ontario Agriculture and Arts Association for the best pen of registered sheep in East Middlesex.

Through the suggestion of the Dominion Swine Breeders' Association there has been a separate class opened for the Chester Whites and Poland Chinas, instead of showing along with the Yorkshires, as formerly, so the two additional classes have been made.

In the poultry department the prizes have been reduced to two (first and second) in each section throughout, and an increase made to the first prizes in the chicks, turkey, geese and duck sections, making them equal to that of the fowls.

Slight changes have also been made for the improvement of the agricultural and horticultural products' department, by striking out some sections and adding others of more modern date, and be in keeping with the advancement in quality of grain, vegetables, fruits, etc. In the dairy department special inducements are being offered, and a large amount has been added by interested persons to be divided into prizes in the cheese and butter sections, viz.: The Western Dairymen's and Ontario Creameries' Associations give \$100 and \$25 respectively; Toronto, Montreal and Molsons banks, \$75; cheese buyers, \$50; D. H. Gowing, \$50; D. H. Burrell & Co., \$25; Cornish, Curtis & Green, \$20; J. S. Pearce & Co., \$20. The above were presented

through the instrumentality of Mr. J. S. Pearce. More suitable quarters will be provided to keep and display the dairy products—a place where they will be fresh and cool, and where people can get a better view. This exhibit will greatly exceed anything of the kind heretofore displayed at any of our exhibitions.

The process of manufacture in the main building last year proved such an attraction to our many visitors that a special effort is being made to extend and improve the feature.

As you are aware, the demand for seating accommodation last year was much in excess of our facilities, and the Board have commenced to build a long stretch of extra seating, which will add about 3,000 seats to our present stands. It is the aim of the Association to do everything within their means to improve the Western Fair, please their exhibitors and visitors, and impress upon the world at large the importance of London as the centre of a business, agricultural and stock-raising country, and ask the hearty co-operation of everyone having the best wishes of the city of London and its surrounding country at heart, and a cordial invitation to visit us next September between the 17th and 26th.

#### Chatty Letter from the States.

Among recent notable sales of live stock were some 1,416 lb. steers at \$6.30; 1,270 to 1,364 lb. stillers at \$5.85 to \$5.90, and six fancy Shorthorn heifers, 773 lbs., \$5.40; 768 lb. yearling steers \$5.05; 90 lb. Texas grass sheep at \$4.75 to \$4.90; 79 lb. Kentucky sheep, \$5.30, and 115 lb. Illinois sheep, \$5.70. While there is no boom in the live stock market there is a good healthy feeling all around, and prices are good compared with last year. There are a good many persons who have for some months been looking for a tremendous boom. It may come, but if the ideas of live stock men had not been worked up so high they would certainly be in very good spirits over the present condition of the markets. Prices are fairly remunerative, and prospects are that they will not be less so for a good while to come. Calves are being slaughtered at a rate that ought to bring about a cattle famine. Six thousand a week at one market, against less than 4,000 a year ago, is quite an increase, and yet they sell well. For some years past the tendency has been among cattle and sheep men to get out of breeding and raising young stock, and handle only well-grown animals ready to fatten for market. This tendency can only have the effect of causing, sooner or later, a reaction in favor of breeding on business principles. Such breeding will pay handsomely in the future. The decrease of cattle receipts at Chicago for the first six months amounted to about 200,000 head, and as the decrease in June has been at the rate of 20,000 per week it looks as if the year's marketing would show at least 500,000 of a falling off.

At the Woodburn sale of Shorthorns the cows sold at an average of \$289.44 per head, and the bulls at \$372.20. It was the general feeling that the tide had turned, and there was more spirit and life in the bidding than we have seen at a fine cattle sale for several years. It is a long lane that has no turn, but the law of depression in the market for good, well-bred Shorthorns has commenced to turn. The market for such stock, however, is bad, and it must be confessed that many breeding herds of considerable note contain "pedigreed scrubs."

### The Dairy.

#### Feeding Value of Whey.

In the Canadian cheese factory system sufficient attention has not been paid to the profitable utilization of the by-product—whey. What is its feeding value? or, how can it best be handled? are questions entirely ignored as a rule. At the Wisconsin Experiment Station, during the fall and winter of 1890-91, four trials were conducted for the purpose of ascertaining the value of sweet whey for pig feeding. Director W. A. Henry draws the following conclusions as the result:—

1st. We were not successful in maintaining pigs on whey alone.

2nd. Pigs fed on corn meal and shorts with water required 552 lbs. of the mixture for 100 lbs. of gain.

3rd. When whey was added to the corn meal and shorts mixture, it produced a marked saving in the amount of grain required for good gains. This was true for mixtures varying from two pounds of whey to one of grain, up to ten pounds of whey to one of grain.

4th. It was found when using whey as a partial substitute for grain, that 760 lbs. of whey effected a saving of 100 lbs. of the corn meal and shorts mixture.

5th. Using these figures, if corn meal and shorts are valued at \$12 per ton, when whey is worth 8 cents per hundred pounds, at \$15 per ton for the corn meal and shorts, whey would be worth 10 cents per hundred weight.

6th. Shorts, pea meal and oil meal, or like feeds, should be mixed with whey for growing animals. Some corn may be fed at all times, the proportion increasing as the animal approaches maturity.

In 100 lbs. of average milk 12 or 13 lbs. are solids, the balance water. In cheese-making the casein is coagulated by the rennet, so that nearly all of it is recovered; most of the fat is also supposed to go into the cheese. The albumen, a valuable food product, remains in the whey, as does most of the ash and sugar, also a trace of casein and a small percentage of fat. Though the bulk of whey is water, yet the solids which it does contain are almost perfectly digestible, according to Prof. Henry, and have a high nutritive value. Judging from its composition it is an incomplete food in itself. Hence it is necessary to combine with it other foods, as the experiment shows. Assuming 100 lbs. of milk, containing about 13 per cent. of total solids, there would be about 90 lbs. of whey remaining, 10 pounds going into the cheese. The solids contained in that whey would be about as follows:—

Casein .1, albumen .7, fat .4, sugar 4.3, and ash .6.

Prof. Henry suggests, with apparent reason, that the whey fed with the meal increased the availability of the ration more than the solids of the whey added. That is, if the meal has a certain value itself, and the whey a certain other value itself, the combination of the two has a higher value in feeding than the sum resulting from adding the value of the whey to the value of the meal. At the rate coarse grains have been selling in Ontario the past season it would probably be a fair valuation to put it at 10 cents per 100 lbs. But that is in a perfectly sweet condition, and not further diluted with factory washings or left in the filthy whey tank, as is too commonly the rule, until sour, if not half rotten. The bulletin before us contains no information as to the value of sour whey, though that is the condition in which 99 out of 100 farmers use it. That its value is greatly reduced may fairly be assumed from the factory washings, if not from the souring. It, therefore, seems clear, apart from the pollution of

milk cans used for carrying home sour whey, and consequent injury to the quality of milk and cheese, that to secure the full value from whey it should be fed in the vicinity of the factory, but at such a distance and under such conditions, as will not contaminate the factory atmosphere. At the Tavistock cheese factory, now the seat of the Western Ontario Cheesemakers' Dairy School, this problem is completely solved. Messrs. Ballantyne & Bell, who own the factory, manufactures the cheese at so much per pound (2 cents), and retain the whey, with which they fatten from 400 to 450 hogs every summer. It is run through pipes to a large tank at the end of a long, well-lighted, well-ventilated, and clean swine building. Ordinarily the pigs are fed all they can drink in the morning and at 4 p. m., with a mixture of bran, shorts, ground peas, and oil cake, alfalfa (green) being also fed in season. When whey is plentiful they get a drink at noon as well. The system works very well. Cheese of the finest character are turned out, commanding a high price. The net return to the patrons for their milk last year was nearly 73 cents per 100 lbs. All the manure produced in feeding the hogs is given to the farmers of the vicinity for hauling it away. The plan is worthy of consideration by factorymen and patrons in other localities. The hogs fed are usually fall or early winter litters purchased in spring, or as the factory season goes on, and Messrs. Ballantyne & Bell, no doubt, realize a good profit in feeding them.

#### "Non-Exercise" of Dairy Cows.

In view of the prominence that has been given lately in certain quarters to the idea of "non-exercise" for dairy cows, the FARMER'S ADVOCATE deemed the question of sufficient importance to secure an expression of opinion regarding it from a number of our readers. City milkmen may deem it profitable to run a cow simply as a milk-producing machine without special regard to the ultimate effect of continuous housing upon herself or her progeny. Farmers and breeders must view the case from a different standpoint, and in order to present the subject before our readers in the light of practical experience as far as possible, the following questions were sent out:—

1. Do you practice "non-exercise" of dairy cows, and to what extent?

2. From experience or observation, what has been the result?

3. Considered as breeding animals, and also for use in practical dairying on the farm, do you approve the continuous housing of dairy cows? If so, under what conditions?

4. Can the daily exercise of a cow in pasturing be considered as a safeguard against possible evil effects arising from being tied in stable continuously four or five winter months?

At the time of this issue going to press the following replies had been received, indicating that the question is likely to excite no little interest, but no more than its importance warrants. Whatever may be said *pro* and *con*, this much is certain, that the constitution of the cow must be well-guarded, for if that be destroyed her usefulness, either for breeding or practical dairying, is gone. We bespeak for these letters a careful perusal:—

MRS. E. M. JONES, JERSEY BREEDER, BROCKVILLE.

I am so situated that I have no opinion in the matter whatever. My pasture is a great deal too far away, added to which it is not very good, but I have no alternative but to use it.

1. I do not believe total absence of exercise conducive to the health or well-being of a dairy cow, nor do I practice it.

2. Have had no experience, as I always turn my cattle out every day in winter that weather will admit, and while in stable they are so tied as to allow them the utmost possible freedom in the way of moving about.

3. Not approving of the continual housing of cattle, I have not tried it. I do not mean that my cattle are out all the time, far from it. In summer they are out day and night; in spring and fall are out all day and housed at night; in winter are housed all the time, but we endeavor to turn them all out once a day to stir round and exercise their limbs. This period of exercise varies from half an hour to three or four hours, according to weather.

4. The summer's exercise of a cow going to pasture should not be considered a safeguard against absolutely close confinement all winter. It would be a feast or a famine. Cows do not require

much exercise, but they do need some. I think, however, that most people walk their cows to death. If pasture is so very good that cows can soon fill themselves they can afford to go a longer distance to it than to a poor pasture where they have to keep on their feet all day hunting for food.

R. J. GRAHAM, BELLEVILLE, SECRETARY CREAMERIES ASSOCIATION.

In reply to yours of 6th inst. would say have had some experience with dairy cows in nearly every form. *Re* "non-exercise," I am not in favor of it, but prefer during the housing season to let my milking cows have exercise in the yard every fine day for about two hours. Do not allow beefing cattle out at all. A milking cow will not have the same bright, healthy appearance, nor will their appetite be as good when constantly housed, also they will become stiff in front, and their hoofs will get long and sometimes break off up in the quick of the foot. Have tried soiling cows against pasturing; divided herd equally (30 in each) for one season. The cows that were soiled were kept considerably cheaper, but did not thrive or milk as well, and I have discontinued the practise. Can not say from personal knowledge whether a cow would fully recover on pasture from six months confinement or not, but certainly would prefer not to get her in that condition.

JAMES DRUMMOND & SONS, MONTREAL, AYRSHIRE BREEDERS.

1. I always let my cows out in winter on fine days once a week from half an hour to an hour, according to the weather, but give them no water outside.

2. From experience I find that they are much healthier and feed better when they get a little run out.

3. For breeding I believe in giving them a good deal of exercise, but not on too cold days. They don't require so much exercise when giving milk. I do not approve of continuous housing, for I do not consider they are so healthy nor the milk as healthy as when getting a little exercise and fresh air once or twice a week on fine days.

4. I don't think that the exercise cows get on pasture is a safeguard against any evil that may arise from cows confined for four or five months in winter.

SMITH BROS., CHURCHVILLE, ONT., HOLSTEIN BREEDERS.

1. We have practiced non-exercise of dairy cows with some half dozen head for a period of from two to four months at a time.

2. The results in producing milk and butter were better than we ever obtained with exercise. However, we prefer exercise in a comfortable, well-ventilated place.

3. We do not approve of the continuous housing of breeding animals or of dairy cows, because (1) it requires too much work in summer when so much other work must be done; (2) it is not so healthy, as stables in summer are not so easily kept clean and sweet; (3) it tends to lessen the breeding qualities of cows.

4. Some cows are of a roaming disposition, and with such confinement is injurious, and pasturing for some months can make up only in part for the injury received while continuously stabled. Others stand it without any noticeable injury and seem contented and satisfied, and the pasturing seems to make up fully any injury they may have received. Good pasture with plenty of shade, fresh water and pure air, with the privilege of quietly roaming about is far the healthiest place for any kind of animals.

W. C. EDWARDS & CO., ROCKLAND, ONT.

1. Our dairy cows are Ayrshires and Jerseys. We put them in stables in November, and do not let them out at all during the winter excepting for an hour or two a day on very fine days.

2. The result is that our cows milk very much better than if allowed to run out every day irrespective of the condition of the weather.

3. Our reason for letting our cows out for a short time on the very fine days is because we keep them for breeding as well as for dairy purposes, and our opinion is that breeding cows are the better of some exercise when it can be had. If we need our cows for dairy purposes only we would tie them in at the time of regular housing in the autumn and would not let them out till spring, and we are sure, with much greater profit than if we allowed them to go out daily.

4. We cannot see how summer pasturage and the exercise resulting therefrom could overcome the evil results of being tied up for five or six months in winter. But our opinion is that there are no evil results, except, possibly, on the score of breeding.

JOHN GEARY, "BLI BRO STOCK EARM," LONDON, ONT.

1. Yes; during the past five years I have kept from 100 to 150 dairy cows continuously housed from November 1st to middle of May.

2. In favor of the course which I have been pursuing.

3. Yes; in comfortable, warm, clean and well-ventilated stables. Each animal ought to have plenty of room to lie down comfortably, well-bedded, and I consider it essential to health that the curry comb be used at least three times a week.

4. Yes.

We would be pleased to hear from other readers of the ADVOCATE who have had practical experience bearing upon the foregoing questions. Make your communications to the point, and brief, such as the foregoing.



**Starting a Creamery.**

In starting a creamery the first point to be secured is a sufficient supply of milk or cream within a reasonably limited area. Whether run by an individual or a corporation the question of plans and cost must then be considered. For this purpose it is well to take ample time and make the fullest enquiry. Within a few years Canada will doubtless see many butter-making establishments started, and to aid our dairy readers in that work we present a plan prepared by Prof. J. W. Robertson, the Dairy Commissioner. It provides capacity for the milk of from 500 to 700 cows to be handled on the centrifugal separator system, which in Denmark and elsewhere has demonstrated its utility in a most remarkable manner.

For a creamery such as set forth in the plans Professor Robertson gives the following list of utensils:—

One skim-milk tank of 6,000 pounds capacity. One inspirator or pump for elevating skim-milk. Probable cost, \$3,000, including the building.

As to the site, it should be: 1. Suited for easy and effective drainage; 2. Supplied with an abundance of pure cold water; 3. Easy of access by good roads. Where the cow population is very scattered the cream gathering plan might be more economical, but all points considered the separator plan has most to commend it. A study of Prof. Robertson's plans and furnishings, valuable as a starting point, indicate that additional suggestions on the part of the FARMER'S ADVOCATE may be useful.

We believe it would be prudent to equip factories both for the manufacture of butter and cheese, at least till such time as a steady and remunerative export butter trade be established. With a possible glut of summer butter, prices may drop to 15 and 17 cents for butter, and if at the same time cheese goes from 8 to 10 cents,

plan would likely be found too warm for working the butter, but "E" could be used for that purpose, being kept at about 50 degrees.

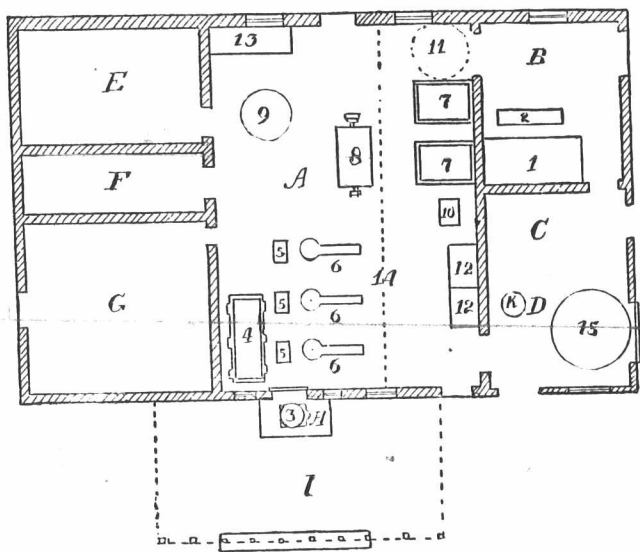
Instead of the three heaters marked "5" a large can arranged to be heated with steam and suspended over the milk vat, might be found an improvement. A small tin pump will readily elevate the milk from the vat to this heating can, from which, when at the proper temperature, the milk will run by gravity to the separators. The can should have three taps.

To cool the cream en route from the separators to the cream vat, run it through a conductor with a corrugated bottom holding ice underneath.

In order to avoid any interference with the perfect working of separators through jarring of the engine, set them on posts that run through the floor deep into the ground.

An improvement might be made by turning the rooms "E" and "F" the other way, putting a window in "E" and a door between the two. Each would then have ice against the end partition.

In a combined factory the receiving vat must be kept reasonably low down for cheese-making,

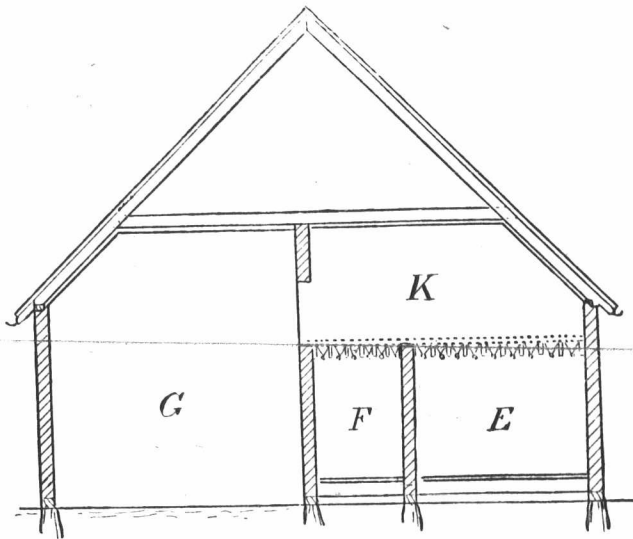


GROUND FLOOR.

- A.—Working Room, 36 ft. x 26 ft.
- B.—Boiler and Engine Room, 16 ft. x 14 ft.
- C and D.—Shed for fuel and Skim-milk Tank, 19 ft. 6 in. x 14 ft.
- E.—Butter Store-Room, 18 ft. x 12 ft.
- F.—Refrigerator Room, 18 ft. x 6 ft.
- G.—Ice House, 18 ft. x 17 ft.
- H.—Milk-weighing Platform, 3 ft. 6 in. x 7 ft. and 4 ft. 6 in. high.
- I.—Covered Roadway.

- 1. Steam Boiler; 2. Engine; 3. Weighing Can and Scales; 4. Milk Receiving Vat; 5. Heaters; 6. Centrifugal Separators; 7. Cream Vats; 8. Churn; 9. Butter-worker; 10. Milk Tester; 11. Water Tank, placed overhead; 12. Hot and Cold Water Tanks; 13. Table; 14. Line in floor towards which it falls from both sides; 15. Skim-milk Tank; 16. Buttermilk Tank in D.

CENTRIFUGAL CREAMERY PLAN.



END VIEW.

- E.—Butter Store-Room. F.—Refrigerator Room. G.—Ice House (no floor). K.—Ice Box over E and F.

NOTE.—The ceiling in E and F is 7 ft. 6 in. high and is finished with joists, 2 in. x 10 in., placed 12 inches apart; between the joists, V-shaped galvanized iron troughs are laid; they are soldered over the top of every joint to prevent leaking; to the troughs at the lowest points are attached small troughs, 1 1/2 in. wide, to receive the drip from the condensation of water which takes place on the E and F side of the galvanized iron; the troughs all have a fall of 1 inch to one side of the building, where the water from melted ice, and the water from the drip in the small under-troughs is received and conducted out. One door between G and K serves for the putting of ice into the Ice Box K. The partition between E and F prevents the butter in the Store-Room E from being affected by the changes in temperature, which are consequent upon the frequent openings of the door, between F and the Working Room, during working hours.

- Steam boiler of ten horse-power.
- Steam engine of ten horse-power.
- Water injector.
- One weighing can of 500 pounds capacity.
- One milk conductor.
- One milk receiving vat of 3,000 capacity.
- Centrifugal cream separators of total capacity of 3,000 to 4,000 pounds per hour.
- One Babcock milk tester, or one Fjord's controller.
- Strainers for cream vat, for churn, and hair sieve for buttermilk.
- One churn of 200 pounds capacity.
- One butter worker.
- Weighting scales—one pair platform scales for butter, one pair of counter scales for butter, one pair for salt.
- Two butter spades, butter paddle, two butter laddles.
- Two thermometers, two floating thermometers.
- Butter printers.
- Graduated measuring glass, 8 oz.
- Stencil plates and brush for branding.
- Butter trier.
- Three tin pails.
- One large dipper, one small dipper, and one strainer dipper.
- Shafting, belting, steam pipes and water pipes connected with hose.
- Two floor brushes and rubber scraper.
- One water tank of twenty barrel capacity.
- One cold water tank, one hot water tank, and one buttermilk tank.
- One skim-milk heater and cooler.

then it is a losing game to put milk into butter. Some of our creamery men have found that out before now. Hoard's Dairyman estimates that 17-cent butter means about 52 cents net per 100 lbs. milk containing 3.75 per cent. butter fat, and cheese at 9 cents from the same grade of milk would mean 75 cents net to the patron. Therefore, the maker who is going to do the best for his patrons must be prepared for the emergency of low prices in butter, because for the farmer to part with his milk for 52 cents per 100 means a dead loss. There is no reason why first-class cheese and first-class butter cannot be made in the same establishment and by the same man. About \$300 would supply the extra furnishings. The capacity of the 3,000 lb. receiving vat should be doubled, besides which a curd sink, gang press, curd grinders, knives and other articles would be needed, together with a small curing room.

For summer making the room "A" on the

hence there is a special reason for the suspended can over the vat and the small pump.

A word in conclusion: Aim to produce as much butter in winter as possible. It is easier handled then and brings the best price. Summer butter is always plentiful.

**A Lesson from Denmark.**

The New Zealanders are pushing boldly forward in hope of building up a profitable butter trade with Britain. Last year Denmark exported nearly 90,000,000 lbs. of butter, of which 83,000,000 went to England. Canada, with all its splendid natural capabilities, exported less than 2,000,000 lbs. Denmark is not one-tenth the size of the Province of Ontario. The astonishing development of Danish dairying is attributed to the centrifugal separator system, by which much more butter can be got from the same quantity of milk, and enables the operators to work greater quantities than was possible under the old system. Associated dairies are increasing, and old ones are being enlarged and improved. Canada must move forward.

### Instruction in Butter-Making.

Recognizing the great necessity of, and the advantages that may arise from an improvement in our Ontario butter, the Hon. John Dryden, Ontario Minister of Agriculture, has suggested a plan and given instructions towards its being carried out, whereby it is hoped that much good will result. He has planned what may be called a travelling dairy department, a practical butter school or institute. Prof. H. H. Dean and an assistant will, towards the end of June, start out from the Ontario Agricultural College, Guelph, equipped with a set of tested, simple butter-making apparatus. They will go to such dairy sections as may desire their presence, meet in some suitable place the farmers, their wives and daughters, and by addresses and practical experiments give instruction in the best methods of handling milk, cream and butter. Those who are interested and desirous of having such a meeting or convention should at once communicate with President Mills or Prof. Dean at Guelph, as only a limited number of sections can be visited. This is of course an experiment, a venture, but we believe that the farmers will co-operate with the Hon. Mr. Dryden in this effort, by providing suitable quarters, plenty of cream for the experiment, a large crowd of interested learners, and not turn a cold shoulder upon the enterprise with the remark, "What can they teach us about butter-making?" Good butter-makers can meet and compare notes and make friendly suggestions, indifferent butter-makers can improve, and these who may recognize their ignorance can certainly pick up valuable information. If successful this year the scheme will be more fully developed next year. The success of it, to a great extent, will turn upon the co-operation of the farmers and their wives. Here is the opportunity for the women of our Farmers' Institutes.

### The Influence of Foods.

Interesting feeding experiments with three Jersey and two native cows were conducted during two years past at the Geneva, N. Y., Experiment Station. It was found that when fed hay alone the yield of milk, and butter as well, was always lowest. The addition of eight pounds of corn meal per day increased both the flow of milk and the yield of butter over that of hay alone, but the butter fat did not increase in proportion to the milk yield. The substitution of five pounds per day of linseed meal for six pounds of corn meal, making the grain ration two pounds of corn meal and five pounds linseed meal, gave a smaller yield of milk than when corn meal alone was fed. The yield of butter fat, nevertheless, was increased in every trial with linseed meal, and in the case of two cows with the same relative increase, would amount to more than 70 pounds of butter per year for each cow. Replacing the five pounds of linseed meal with eight pounds of wheat bran, the milk yield was rather less on the whole, but in one case more than when linseed meal was fed. The yield of butter was considerably diminished. The substitution of oats for linseed meal was followed by less milk and less butter, but of superior quality to that from linseed meal. With ensilage the chief difference noted was the more efficient recovery of the fat in butter-making, and the butter under cotton-seed meal was of much better quality than when linseed meal was fed. Some of these butter experiments were not tried a sufficient number of times to warrant definite conclusions. Of all grain foods tried, gluten meal gave the largest flow of milk, but the fat percentage was exceptionally low.

Dry feed (a waste product from the manufacture of starch and glucose from corn) ranked next to gluten meal. Corn meal followed these for producing flow of milk. Linseed meal gave the largest amount of butter, but the quality was not of the best, being too soft. Oats gave the best colored and hardest butter, but somewhat crumbly. One obvious conclusion that might be drawn from these results is that a combination of foods would be the most satisfactory butter ration, and experiments tried so proved. Summing up, Director Collier says: "We find that the character of the food *did largely influence both the yield of butter and the quality.*" This strongly verifies conclusions reached by other experimenters and the experience of many practical dairymen in feeding their herds. Much depends, however, on the individual cow. Some respond much more noticeably to generous feeding than others. That the butter yield can be increased by judicious feeding admits of no doubt; but there is a question as to the extent of the possible increase and the relative profits when the cost of food is taken into account. As far as the record of the Geneva experiments before us indicates, that most important consideration (the profit) does not appear to have been determined, and it is the profit that the dairyman is after. The good dairy cow should greatly enhance the value of what she consumes to her owner, and whether she will best do this on a "high," "medium" or "low" ration is a problem demanding the most accurate study.

### Dairy Observations.

The sudden death of Col. F. D. Curtis at Cuba, Allegany, N. Y., where he had gone to conduct a dairy school, removes one of the most gifted and steadfast friends of progressive agriculture, live stock breeding and dairying in America.

Germany is said to have about 700 co-operative creameries in operation.

It is not enough to have a large flow of milk, the quality must be there also when the farmer aims at winter butter-making and summer cheese-making.

By a judicious system of feeding, with practically the same herd, Hon. Zadock Pratt, of Greene Co., N. Y., in five years reduced the quality of milk required to make one pound of butter from 39.3 to 21, or about one-half what it did at first. The amount of butter increased in the same proportion.

Danish butter is sold in England at an average of a shilling per pound, while the average selling price of butter produced in Great Britain and Ireland is estimated by the Agricultural Gazette at under 11 pence.

Having thoroughly tested the Babcock method of determining the fat percentage of milk, Mr. Frank T. Shutt, Chief Chemist at the Central Experimental Farm, Ottawa, reports as follows: "We may safely conclude that when the Babcock test is made according to the instructions given with the machine, *strictly reliable results are obtained*, and that the percentage of fat so found, allowing for the greatest error possible under such circumstances, will be well within one quarter of one per cent. (.25) of the amount of fat actually in the milk.

## The Farm.

### The Great Northwest.

ITEMS OF INTEREST ON PRINCE ALBERT AND RED DEER.

Those of our readers who are thinking of establishing a home in the Canadian Northwest for themselves or their boys will be interested in hearing something about two new districts which until recently have been to most people little more than geographical expressions, but which, owing to the construction of new railways, are now brought within easy reach. The first of these districts is that lying between the north and south branches of the Saskatchewan river, extending from Saskatoon to the Forks, and includes the Prince Albert settlement. The Qu'Appelle, Long Lake and Saskatchewan Ry., which was completed to Prince Albert last year, runs through this district, and round some of the stations, which are situated at every nine miles or thereabouts, small towns are being formed. Prince Albert of course has been an important point for several years, but now that it has at last got the long looked for railway facilities its prospects are greatly enhanced, and its business men are confident of a most prosperous future for their town, which is beautifully situated on the banks of the mighty Saskatchewan. This district comprises some forty townships, each of which contains thirty-six square miles, and is in general admirably adapted to the requirements of mixed farming, having good soil, good water and plenty of it, and bluffs of timber, affording an abundant supply of fuel to the settlers.

The second district referred to is in Alberta, and lies between Calgary and the Red Deer river, and has recently been opened up by the construction of the Calgary and Edmonton Railway which was completed to the Red Deer last fall. The district thus opened up is an exceptionally fine one. It is situated at the foot of the eastern slope of the Rocky Mountains, and is watered by numerous streams which rise in the mountains and flow northeasterly. There is abundance of fuel here, and the climate is much less severe than in Manitoba. The soil is rich and fertile, and as for the grasses, Alberta is famous the world over as the finest country out of doors for stock-raising purposes.

In both the above districts we understand that free homesteads of 160 acres can still be obtained within a few miles of the railways, the even numbered sections being all reserved for homesteading purposes by the Government. A number of land hunters are going into these districts this year. The odd numbered sections belong to the railway companies, and Messrs. Osler, Hammond & Nanton, of Winnipeg, who are the general agents for both roads, are doing all they can to get these districts settled up by a good class of men, and are always ready to give any assistance and advice to any one making inquiries concerning them, whether their intention is to take up a homestead or to purchase railway lands. We are trying to make arrangements to have articles descriptive of these new fields for settlement written by men residing on the spot, whose information and advice may be relied upon, as we think such articles will be useful to many of our readers, and instructive to all.

It is proposed to have a working dairy of 800 cows at the World's Fair in Chicago.

Chapter Act," is drainage Works. to \$300,000 taken a very mu The mon security lands be eight do the debt lands in drain, by cial co by part

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**Drainage and Drainage Laws.**

(Continued from page 225.)

Chapter 36, R. S. O., called "The Ontario Drainage Act," is an Act providing for the construction of drainage works under the Department of Public Works. For this purpose the amount was limited to \$200,000, and some rather extensive works undertaken a number of years ago must have reduced very much, if it did not absorb the whole sum. The money was advanced by Government upon the security of the municipality and paid back by the lands benefitted in twenty annual payments of eight dollars on the hundred which extinguished the debt. The amount was distributed over the lands in proportion to the benefit derived over the drain, by three assessors appointed by the municipal council, to which an appeal was to be made by parties dissatisfied with the assessment.

We now come to the law relating to Municipal Drainage, and by far the greater portion of the drainage of the large level tracts has been done under this law. No one can deny that it has been a great benefit, and yet we are sometimes in doubt whether it has been a benefit or a curse.

The law as at first understood seemed simple enough and intended to do much good. It was understood that the cost of the work should be borne by the lands benefitted, and in proportion to the benefit. This was simple common sense, and an interpretation which any disinterested person would approve of, but lawyers, and engineers, and courts, and judges have twisted and tortured and interpreted it in so many different ways that the only certainty about it is that it is both uncertain and expensive. Lawyers who have grown up among drainage suits, and a large percentage of whose business is drainage law, seem wholly at a loss to understand it, but they are making money out of it just the same.

A strong feeling is growing up amongst those who are placed under the operations of this law that some other method must be found, or some other machinery to do this work.

Like the reduction in the number of County Councillors, everybody admits the necessity but as yet no satisfactory scheme has been propounded. It seems better that every one should be compelled to dig through his own property than to be subject to this law. To be sure this would be an injustice in some cases, but cheaper by far than the justice often obtained by the law, which after all is often unjust to nearly every one.

A brief outline of this much befogged law is as follows: In case a majority of the owners of land through which the drain is wanted petition the municipal council to that effect, the council may order an examination of the locality by a surveyor (commonly called "the engineer" in drainage parlance), and also plans and estimates and an assessment of the property upon which is to be levied the cost of the work, and if in their opinion it is desirable they may pass a by-law to provide for the construction of the work and raising the money.

This by-law is published, setting forth the report of the engineer, and also the amount of assessment proposed to be made against the several lots and parts of lots, and appointing a day upon which the council will sit as a Court of assessment. But just here let me remark that having incurred the expense of the survey and plans the council nearly always think it desirable to proceed with the work because if it stopped there the expense could not be collected from the lands of the petitioners, but would have to be paid from the township funds.

At the Court of Revision nearly every one is found to have appealed against the assessment, and each comes forward and testifies on oath that not he but some one else should pay the assessment made against his lands. And when the Court has closed against his lands, and generally appears from the hearing appeals it generally appears from the evidence that no one has been justly assessed, and out of this jumble of contradictory evidence the council have to decide how the money is to be raised for the construction of the drain.

They having decided this, if any one is dissatisfied they can appeal from the decision of the council to the County Judge, whose decision is final, unless some point of law is raised, which is frequently the case; upon this they can carry it into the courts, and there from one court to another until they have become satisfied that the law is a poor profession for a farmer, but a good one for a lawyer.

The council have authority to raise money by the sale of debentures for the construction of drains, which is payable in annual instalments, collected in taxes spread over a number of years from the lands which the drains are said to benefit. But in lands which the drains are said to benefit, and many cases lands are taxed for the construction and maintenance of drains which lie miles from the drain and many feet above its level, lands which were as well drained if it should become filled up. Certainly such lands derive no benefit from the drain, whatever be the reasons for assessing them, and which under such circumstances are compelled to pay for nothing. This is surely compelling the payment of money without an equivalent.

The drain having been constructed the next thing heard of it is that some one's hogs or cattle have been filling it up, and this perhaps before the debentures are all paid off for the first construction. Upon complaint of any one person, who has been assessed for the construction, that the drain is out of order, the council meet, send on the engineer to assess for the construction, that the drain is out of order, the council meet, send on the engineer to examine and report upon its condition, and if he finds that it is in need of cleaning out or improving the council must order it to be done. Or perhaps

he finds the drain insufficient and recommends its enlargement, and perhaps from some cause there is a change in the flow of water which finds its way into the drain. Then a new survey has to be made, new levels taken, new plans and estimates. A new by-law must be published, and another Court of Revision, and appeals are again in order, and so on, but not to the end of the chapter, for this drainage chapter has no end; once into it always into it, for there is no way provided by which you can escape, and any man who owns land may be brought under its operation at any time when a majority of those living along a stream or watercourse between the outlet and any given point, petition to have such stream or watercourse improved.

But the heaviest expense incident to this municipal drainage is when a drain is carried from one municipality into another, and arbitrations and law suits follow where the municipalities cannot agree about their respective shares of the expense, which is the rule rather than the exception.

There is surely reason to hope that some simpler and cheaper way will be found of accomplishing this very useful work than the means at present provided. Far too great a percentage of the costs go to engineers, arbitrators and lawyers.

The engineers have too much power and latitude, and a thoroughly organized system seems to have grown up and become legalized to enable this class of professionals to enrich themselves at the expense of the poor struggling landholder, who has been placed almost hopelessly in their power. No one should have the power to compel the council to clean out a drain. It should in any case require a petition from taxpayers representing at least twenty-five per cent. of the amount required to do the work. This change in the law was asked by the Grange, but not granted.

As previously noticed the amount of water which falls upon the surface of the earth is removed in three different ways. First, by flowing over the surface until it reaches the large streams; secondly, by evaporation; and thirdly by percolation, or sinking into the ground.

The result of the first of these is that the surface of the land is washed and the richest of the soil is carried by the torrents from the higher lands into the flats and marshes where it cannot be recovered, or mixed with the turbid floods is carried onwards until lost in the body of the great lakes or perhaps in the ocean itself, thus not only depriving the land of much of its richest plant food but of the valuable properties which descend with the rainfall, which might be arrested by the soil and detained for future use by the growing crops. What does not escape by the first means, or by drainage of some kind, remains standing in pools or ponds upon the surface of the ground and becomes the breeding grounds of countless myriads of insect pests, which spring forth in clouds to torment and prey upon both man and beast; or spread miasma and the germs of disease broadcast over the country, carrying misery and death to many a home, until removed by the second means, namely evaporation, or the third, percolation, or sinking into the earth, where the excess of moisture renders the land cold and sour, destroying or retarding the vigorous and healthy production of vegetable growth, and delaying agricultural operations until late in the season, the evil results of which are so well known to every farmer.

We know that a week in the ripening of a crop often makes all the difference between success and failure, between profit and loss, when the crop is struck with rust or shrivelled by a few days' excessive heat, or perhaps caught by an early frost.

It requires but a few such losses to amount to a sum sufficient to thoroughly obviate all such risks and which to a great extent advantage in many ways. And this brings us to the question of underdrainage which is one of great importance to most farmers in Ontario. Professor Stephens says, in his treatise on underdrainage: "Where the soil is shallowest it is injured by the stagnant water remaining constantly beneath it; and where deepest it is injured by the chilly exhalations arising from the water below. The direct injury done to soil by stagnant waters may be estimated by these effects: Manure, whether putrescent or caustic, imparts no fertility to it; the plow and harrow and even the roller cannot pulverize it into fine mould. The new grass contains little nourishment for live stock, and in old the finer sorts disappear and are succeeded by coarse sub-aquatic plants. The stock never receives a hearty meal of grass, hay or straw, being always hungry and dissatisfied, and of course in low condition. Trees acquire a hard bark and stiffened branches, and become a prey to parasite plants. The roads are constantly soft, and become rutted. The air always damp and chilly, from early autumn to late spring the hoar frost meets the face like a damp cloth. In summer mosquitoes, green flies, gnats, midges and gad flies torment both man and beast from morning to night. These are no exaggerated statements but such as I have observed in hill, valley and plain."

Further he says of underdrainage: "It makes sour land sweet and productive; heavy land light and tractable to work, and the pecuniary effects are not less remarkable than the physical benefits." And he goes on to show the advantages by giving the proceeds of certain lands before and after underdrainage, showing the great advantage of drainage from a pecuniary point.

But the length this paper has already reached must prevent anything but the most hasty glance at the subject.

The cost of underdrainage is what stands in the way of its general adoption, and this must vary in different localities.

Though underdrainage consists in putting in a sufficient number of underdrains to carry off the water as fast as it can filter into them from every part of the surface. The expense of this depends upon various circumstances. The price of tile where it is used; the nature of the soil to be drained; the distance apart and depths of the drains, and the cost of the labor. And here let me say that none but a careful man who understands properly how to take out the bottom of a drain should be employed for this purpose, for if this part of the work is not carefully and properly done the money expended on the work is wasted.

Experiments made in Britain some years ago seemed to prove that the depths of the drains had much to do with the efficiency of the drainage. A field was drained the soil and sub-soil of which did not perceptibly differ throughout, one-half, being six acres, was drained three feet deep, the drains being fifteen feet apart; the other half was drained three and a-half feet deep and thirty feet apart. These drains discharged into two separate main drains; at the mouth of these main drains self-registering meters were placed, which remained from June to the following April, when it was found the six acres drained three feet deep and fifteen feet apart had discharged 35,711 gallons per acre, while the six acres which was drained three and a-half feet deep and thirty feet apart had discharged 46,510 gallons per acre. Showing that half the number of drains put down six inches deeper discharged 10,799 gallons more per acre. The portion of the field which discharged the most water produced the most grain, and the other produced the most straw.

The same authority relates a circumstance of a very peculiar nature which happened in Fifeshire, Scotland. A farmer had a 10-acre field which he intended to drain, the soil being wet and cold, but he was induced to sink a shaft near the centre of the field with the expectation of finding coal. He had some trouble in sinking the shaft and eventually had to abandon it, but he found thereafter the field did not require draining; the shaft had accomplished that. He constructed a deep drain from the abandoned shaft, from which a stream of water flowed continually and seemed to effectually drain the whole field.

I was much interested some years ago with some letters from a farmer which were published in an agricultural paper I was taking at that time. He was a native of that part of Scotland called the Lothians, and came to the state of New York comparatively poor, but a man of energy and shrewd observation. He became a recognized authority on matters of practical farming, and particularly underdrainage. His advice and opinions were much sought, and so numerous were enquiries that he could not find time to answer them all, and he adopted the plan of writing letters in a general way to the Genesee Farmer and Country Gentleman.

Mr. Johnson, for that was his name, was strongly impressed with the benefits of underdrainage in Scotland, and when he came to America he settled on an old exhausted farm which had ruined several previous occupants. The neighbors expressed much sympathy with the poor emigrant and predicted that he would soon go the way the others had gone. But Mr. Johnson was made of different stuff, his methods were different and different results followed. He found the land was foul, stiff and sour. He commenced by summerfallowing. No tile being made in this country he imported a quantity from Scotland as soon as he could. The result was so encouraging that he induced a man who understood the work to commence the manufacture of the near him, and this was probably the first tile manufactured in America. His neighbors seeing his success began to follow his example, and tile kilns were started in various localities, and the poor emigrant who had been the object of so much sympathy for settling on the old exhausted farm became celebrated for his industry, and his success may in some degree be an example to us.

The depth of drains and distances between must to some extent depend upon the soil and sub-soil. In stiff tenacious soils some have doubted the advantage of underdrainage, and it is necessary to put the drains closer together, and, therefore, they need not be so deep. But the tendency in this country is to make them too shallow, and, no doubt, much of the advantage of underdrainage is lost by this practice. Mr. Mechi put his drains in strong clay four feet deep and forty feet apart, and in more porous soils from six to seven feet deep and from seventy to ninety feet apart, and claimed to drain his land satisfactorily. But in this country it is doubtful if any drains are put to the depth of six feet, unless it be a cutting through some high ground for the purpose of getting an outlet, and in some kinds of soil such a depth would be of no advantage. The general depth of drains in this country is from thirty inches to four feet, and seldom more, unless through a knoll or rise of ground. Thirty inches is not deep enough unless it be in some exceptional cases, such as a stiff tenacious clay, where it is possible it might be more suitable than deeper drainage. The distance between the drains must depend upon the nature of the soil and the depths of the drains, for the deeper the drains the further they will draw the water, unless there be some condition of the sub soil to prevent it.

The cost of underdrainage, and the scarcity of tile and skilled drainers prevents many people from attempting it, but those who do generally continue it, for the benefits are immediately felt. Cases are numerous where the cost has been repaid by the first crop after drainage; but this cannot be taken as

the rule, for the best effects of underdrains are not felt at first, but as time goes on the water seems to form channels, and finds its way to them from greater distances.

The more thoroughly land can be underdrained the better, but if the work cannot be thoroughly done let it be partially done, for it is a work which need not be complete before it becomes useful. Let no one be deterred from commencing because he feels unable to finish the job, because if there is a proper outlet for the water every rod of drain which is properly put in is a complete work as far as it goes. Its work will be done, and its benefits felt quite independent of its further extension, which may be done whenever it is convenient. If the whole field can be completed at once so much the better, but if this be too expensive, commence by putting in a drain or two where they are most needed, say along some hollow or small run where a plow furrow is generally made; this will save that annoyance and trouble in the future, and make this the driest part of the field, and fit it for cultivation as soon as any other portion of the field. If there is any springy places put a few drains in them and lay them dry and sweet, and they will be the best parts of the farm thereafter. But in commencing to put in draining through the hollows and runs, be sure to make them large enough, not only to carry the water which would naturally come down that run, but to carry all the water which it may afterwards be found necessary to bring into them. Branch drains may then be brought into them at any time, and by degrees the work may be extended until the whole is perfectly underdrained. If the work is properly done with good tile it is a permanent work, and will improve with age, unless choked with extraneous matter, and unlike open drains will never have to be done again. The writer once saw an eight inch tile which had become completely filled for several rods with a fibrous growth from the roots of a willow tree in thirteen months from the time the tile was laid, which proves very conclusively that underdrains should not be laid within reach of the roots of trees.

#### A Trip in Manitoba.

It is pleasant travelling in the spring-time when the fields are getting their first coat of green, but it is more especially so in Manitoba, where the view is not marred by zigzag fences, and where the boundless prairie rivals the grain field in verdure. I know of no better place to start from than Brandon, as you can take a train to almost any part of the province. The southwest is looked to with more than usual interest this season on account of the construction of the Souris branch of the C. P. R. through it to the coal fields, which are about 150 miles distant. As Brandon is located in the valley of the Assiniboine river the grade west is heavy for seven miles, therefore the main line is used for that distance out to Kenney. Here the branch to the coal fields begins, coming straight south for twenty miles, touching the town of Souris. This is a bright little town built at the junction of Plum Creek with the Souris River. It is a pleasant situation. The valley in which the river runs is about seventy feet deep and wooded. When the Glenboro branch of the C. P. R. is extended twenty miles it will form a junction here with the Souris branch, further assisting the growth of the town. The farms surrounding this town for many miles are all occupied, and most of the farmers have large areas cultivated, some having for sale last season as high as ten thousand bushels of wheat—five thousand bushels per farmer being common.

Seven miles southwest of the town of Souris the railroad crosses the Souris River, following its banks more or less closely for forty miles. Eight miles from the crossing is the town of Hartney, so called after a prominent farmer of the district on whose farm the town site was first located. Although the site was only laid out in August last, and the rails were not laid that far until December, yet a prosperous business is already being done and a number of good buildings have been erected. Two elevators, with a capacity each of 35,000 bushels, were built last fall, through which were shipped during the winter some 250,000 bushels of grain.

This amount would have been largely increased had the train reached the town earlier in the winter. The district surrounding Hartney on the east side of the river is all well adapted to grain-growing, the land being clean and of such a nature as to be easily cultivated. The soil is warm and early, which induces the farmers to cultivate large areas, some cropping as high as 500 acres of wheat. Hartney is as far as the road is being operated at present, but the road-bed is graded for thirty-five miles farther to the town of Melita. Men are now at work on that portion building the bridges and laying the track.

In driving from Hartney to Melita the country is open, and nothing obstructs the view for miles; when the day is clear you get a view of the Pembina Mountains off to the southeast, and comfortable farm buildings are seen dotted here and there on the prairie between. Night overtook us on our journey, so we called on a farmer and asked the privilege of remaining with him during the night, which was readily granted. It was the home of Mr. J. W. Alcock, who came from Ontario in 1889 and purchased 640 acres, just east of the river, for \$4 per acre. He was just marketing the last loads of a large crop of No. 1 wheat, having completed his seeding of 110 acres. Some of his teams were busy breaking up the virgin prairie, thirty-five acres being already turned at the time of our visit, May 15th, and calculation made to complete 160 acres during the season. Mr. Alcock says he is much pleased with his venture in Manitoba and considers his farm to-day worth \$10 per acre.

Melita is built close to the Souris River and on its west bank. It is a pleasant situation for a town, being fully sixty feet above the level of the water, and the subsoil being of a gravelly nature, the streets will always be dry. The town site is surveyed on property belonging to the C. P. R., and the lots are being sold on the front streets at \$200 each, and on the side streets at \$100, all being fifty feet in width. The prospects are that this may be one of the principal towns in Manitoba, as it is located in the centre of a good agricultural district, built at the junction of the Manitoba Southwestern and Souris branches of the C. P. R. It is located just eighteen miles from the boundary, and within easy reach of the Great Northern road, on the south side of the line. Much confidence is being shown in the future of this new town by people throughout the province, who are investing in property and erecting buildings. Some forty new buildings were in course of erection when we visited it, and as soon as the train is able to reach the town and bring in building material, many more buildings will be erected.

The valley of the Souris, at the foot of the town, is more than a half mile in width, the river bending gracefully toward the town, forming a peninsula on the opposite side, which has scattered over it large elm trees. This has been secured by the town, and will be fenced and otherwise improved, and will make a beautiful park. The river here is still and deep, making it well adapted for boating. The railroad line west for fifty miles has been located, and will be constructed this summer. Tests are being made for coal, and it is fully expected sufficient quantities will be found; if so that is as far as the road will be built this season. Should coal not be found there the road will be pushed on twenty-five miles further where coal is abundant.

#### Advanced Agriculture.

By the methods usually practised, from the first breaking up and clearing of the land for farm crops, a steady but sure exhaustion of the fertility of the soil has been going on. This applies to the whole country at large, whether originally forest or prairie, heavy clay or lightest sand, from the richest alluvial or the strongest loam. "Run out" is the too general cry whenever land has been in cultivation for anything over two or three decades, and in many instances much shorter periods. This cannot be the fault of the soil itself from any mechanical cause or natural condition, for many notable exceptions are to be found where land of only mediocre quality naturally is now even producing better crops than when first worked. The deficiency must, therefore, be ascribed to the lack of proper method in the cultivation of the soil, or rather lack of management that causes the show of exhaustion by decreasing production. When nature is left to herself fertility increases. The soil or loose material of which the surface of the earth is formed, from the crumbling of the rocks, by the formation of vegetable soil, mostly created by the trees and herbage from materials taken up in solution by the roots from the soil and absorbed by the leaves from the air, and has gradually accumulated from the decay of the leaves, or the trees and plants themselves. By this means our forest lands are always abounding in fertility when first cleared. The same may be said of prairie and grass lands. Instead of the production of grass on the prairie or cultivated fields exhausting the soil, it is invariably enriched while producing large crops of grass. Then, may be asked, what is the difference, and the cause of grain crops diminishing fertility, and the opposite effect while the land is in grass? The immense growth of forest trees may not be produced by the surface soil alone, but when we consider the immense production of timber forests that are universally known to leave newly cleared lands rich in fertility, which invariably produce large crops of grain, why should a few years grain-growing exhaust the fertility when enormous timber growth leaves the surface soil rich in fertilizing elements? The reason must be ascribed to the moisture and mellowness of the soil being preserved by the shade of the trees which prevents the sun and action of the air from drying up the surface. Both the soil and the vegetation it willingly nourishes undergo slow but natural changes. Lay down a piece of land to grass, and after the lapse of years the soil, originally, perhaps, a stiff clay, is found to have a surface of rich vegetable mould, bearing a thick sward of grass. This, on being broken up with the plough, and properly worked and mixed with the clay, forms a soil that is in the proper mechanical condition to absorb the fertilizing gases contained in the rain that falls, and also to absorb dampness from the air itself. How is it that the skilful agriculturist makes the elements help the soil to produce what crops he wishes to grow? The great factor in crop production is moisture, in the case of an entire absence of which the richest soils would become a barren waste. As it is by moisture that all plant life obtains its sustenance, therefore is found the necessity of obtaining the proper mechanical condition that will add to and retain the moisture in the land. From the first draining becomes a necessity, by which earlier seeding is the first step toward covering the

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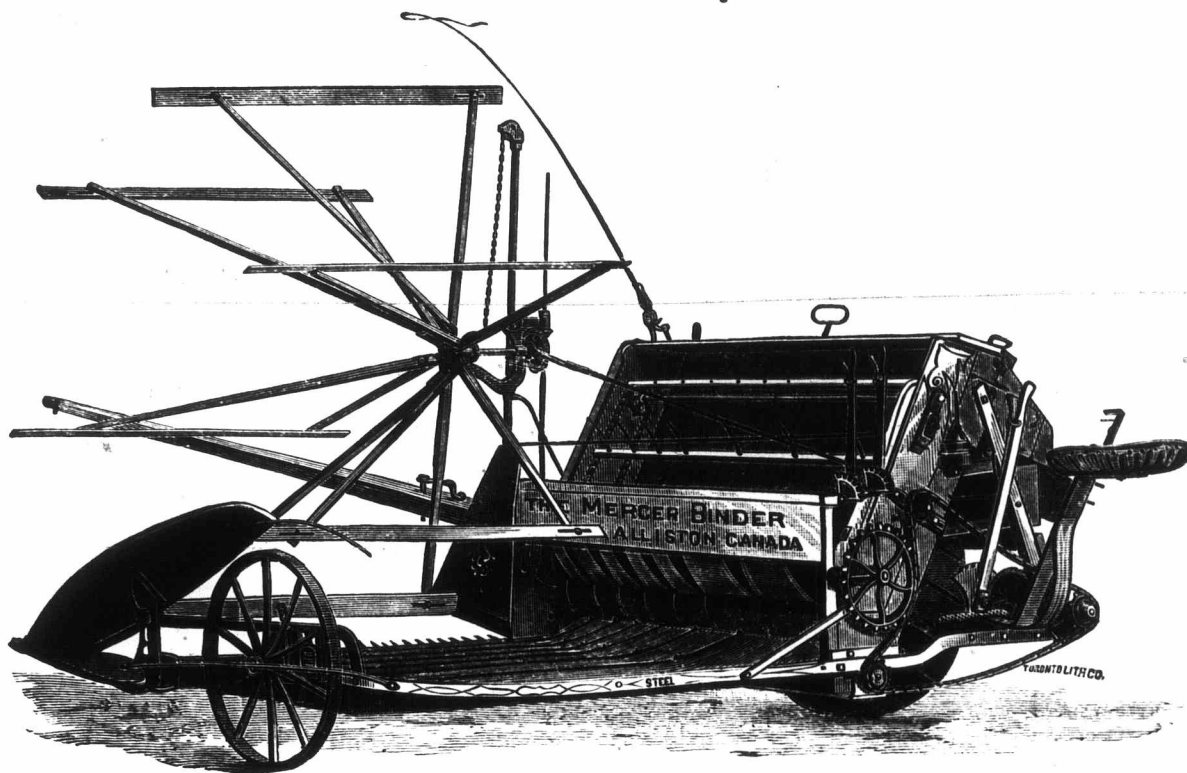
ground by the crop before longer days and hotter suns dry out the surface. It also allows the water from the rains, instead of running over and injuriously washing the surface, to make its way through the soil; and thus, while filtering through, the rain water imparts to the soil those substances useful to vegetation, or rather, sets free such elements as are needed for plant food. Deep cultivation must follow draining, and thus preserve a moist and mellow condition of the surface soil during the season of plant growth. A well ordered rotation is necessary, as excessive cropping not only reduces the productiveness of the soil, but brings on a chain of evils that are sure to follow a succession of crops such as wheat, even should manure in abundance be applied. For instance, a field had been sown with fall wheat for a number of years in succession, the soil in the first place being of the very best, and each year a plentiful supply of manure was supplied, yet the last crop was not worth cutting through the ravages of hessian fly which had been produced by the too often repetition of the crop, while in

#### A Visit to Alliston.

During the past week we have had the pleasure of visiting the large and extensive agricultural works of Messrs. Mercer Bros. & Co., of Alliston, Ont., where we were more than surprised to find built the latest improved self-binding harvester, which is shown in the accompanying illustration. The works are crowded with first-class mechanics, and the latest improved tools and machines, and the whole institution is run like clock-work. Probably no manufacturers of agricultural machinery, either in Canada or United States, has ever, in the same time, achieved such success, or become so widely known, as this energetic and rising firm. Though only manufacturing to a large extent for the past three years, they are to-day known in a number of the best foreign markets; last season they shipped to Australia alone thirty-six car loads of their celebrated and world-renowned binder, The Mercer, which in actual work in the field met and defeated the leading binders of the world. Its great

#### French Settlement in Manitoba and the Northwest.

The readers of the FARMER'S ADVOCATE in the Eastern Provinces may be glad to know something of those who have left the province of Quebec, and gone out to establish new homes on the western prairies. In townships six and seven, range twenty-four, Manitoba, a colony has been formed by Rev. Father Gaire. Previous to July, 1888, those townships only contained some four or five families, or about fifteen souls. At that time Rev. Father Gaire began to colonize the district, and has since placed there some sixty French-Canadians, one hundred Belgians and one hundred and thirty French, making a total of three hundred and fifty. Although the soil is not considered to be of the very best quality, being somewhat light and sandy, still it is adapted to mixed farming, and those who settled there some three years ago have now made themselves comfortable homes. As their stock increases, an effort will be made to establish creameries and cheese factories in the district,



a field near by, where a suitable rotation was practised, none of this trouble appeared. But while studying what may be attained by properly working and improving the mechanical condition this alone will not avail. Every well ordered rotation seeks to replace by some means the elements of fertility that each crop has removed. Thus plenty of soils that were not naturally rich have been improved so as to bear the most productive crops. For example, Aberdeenshire, Scotland, through the success of turnip culture and feeding cattle that section has been long noted for its productiveness, the high character of the cattle they produce, as well as the enviable reputation of being successful agriculturists. In this way occupants of any given locality should make a study of what crops are most suitable to grow for feeding, in order that the fertility may be increased by these being consumed on the farm.

Four parts of dry slaked lime, and one part of flowers of sulphur, well mixed, and dusted on melon or cucumber vines, will prevent damage by the striped beetle. Dash it on while the dew is on the leaves, so that some of it will get upon the under side.

success is, no doubt, due to the fact that this binder has entirely done away with the use of all canvas for conveying and elevating the grain to the knoter, which we understand makes a very convenient machine for the farmer. It may interest our readers to know the principal of this binder, which we took great pleasure in examining. The method for conveying and elevating the grain on The Mercer consists of two series of rakes attached to sprocket chains, the teeth of the conveyer rakes passing up through slots from below, and those of the elevating rakes down through the slots from above. The teeth of the elevating rakes, after delivering the grain to the packers, withdraw from the slots, and return by the action of the sprocket chains, to which they are attached to the conveyer.

From the number of testimonials shown us from purchasers, it is evident The Mercer has given the best of satisfaction in all kinds of grain, and the question of doing away with canvas on binders is at last satisfactorily solved, which will be hailed with delight by farmers of every country.

the bluffs and ponds affording an excellent run for cattle. We give one instance to show how two or three years changes a man's circumstances—it is that of Mr. Francis Barbot, who arrived in 1888 with very little capital. He and his two sons now have clear deeds to 480 acres of land, and have a comfortable home and stock, besides, they have opened a blacksmith shop and do the work for their neighbors in the settlement. Count Roffignac visited the settlement last spring, and induced several of the farmers to plant and cultivate chicory which he has agreed to purchase. If it is found that it is successful it will be grown largely in the future. There are a number of French farmers located farther west, near Oak Lake, who are also doing well. Although most of the land has been occupied in these settlements, still there is land farther west on the Pipestone which may be obtained. Those who are now here will be glad to welcome any of their friends in the east who may wish to make homes for themselves in Manitoba.

When a queen commences to lay, she deposits a few eggs on one side of the comb, and then goes to the other side and lays in those cells exactly opposite. This she continues to do till the entire comb is filled.

### Constitution of the Dominion Grange.

Several of our readers in various parts of the Dominion have written asking that the Constitution of the Dominion Grange be published. On looking this over, we find it is far too long to be published in one issue of the *Advocate*. We have, therefore, decided to divide it into several chapters, publishing a chapter each month until all is completed. We will commence by giving the

#### PREAMBLE.

Human happiness is the acme of earthly ambition. Individual happiness depends upon general prosperity and the adoption of right principles. The prosperity of a nation is in proportion to the value of its productions.

The soil is the source from whence we derive all that constitutes wealth; without it we would have no agriculture, no manufactures, no commerce. Of all the material gifts of the Creator, the various productions of the vegetable world are of the first importance. The art of agriculture is the parent and precursor of all arts, and its products the foundation of all wealth.

The productions of the earth are subject to the influence of natural laws, invariable and indisputable; the amount produced will consequently be in proportion to the intelligence of the producer, and success will depend upon his knowledge of the action of these laws, and the proper application of their principles.

Hence knowledge is the foundation of happiness. The ultimate object of this organization is for mutual instruction and protection, to lighten labor by diffusing a knowledge of its aims and purposes, expand the mind by tracing the beautiful laws the Great Creator has established in the Universe, and to enlarge our views of creative wisdom and power.

To those who read aright, history proves that in all ages society is fragmentary, and successful results of general welfare can be secured only by general effort. Unity of action cannot be acquired without discipline, and discipline cannot be enforced without significant organization; hence we have a ceremony of initiation which binds us in mutual fraternity as with a band of iron; but although its influence is so powerful, its application is as gentle as that of the silken threads that bind a wreath of flowers.

#### DECLARATION OF PRINCIPLES.

##### MOTTO.

1. We heartily endorse the motto: "In essentials, Unity; in non-essentials, Liberty; in all things, Charity."

##### SPECIFIC OBJECTS.

2. We shall endeavor to advance our cause by laboring to accomplish the following objects:

To develop a better and higher manhood and womanhood among ourselves.

To enhance the comforts and attractions of our homes; and strengthen our attachments to our pursuits.

To foster mutual understanding and co-operation.

To reduce our expenses both individually and corporate.

To buy less and produce more, in order to make our farms self-sustaining.

To diversify our crops, and crop no more than we can properly cultivate.

To condense the weight of our exports, selling less in the bushel, and more on hoof and fleece.

To systematize our work, and calculate intelligently on probabilities.

To discountenance the credit system, the mortgage system, the fashion system and every other system tending to prodigality and bankruptcy.

We propose meeting together, talking together, working together, buying together, selling together, and in general acting together for our mutual protection and advancement, as occasion may require.

We shall avoid litigation as much as possible by arbitration in the Grange.

We shall earnestly endeavor to suppress personal, local, sectional and national prejudices, all unhealthy rivalry, all selfish ambition.

We shall constantly strive to secure entire harmony, good will, vital brotherhood among ourselves, and to make our Order perpetual.

#### BUSINESS RELATIONS.

3. For our business interests we desire to bring producers and consumers, farmers and manufacturers into the most direct and friendly relation possible. Hence we must dispense with a surplus of middlemen, not that we are unfriendly to them, but we do not need them.

Their surplus and their exactions diminish our profits.

We wage no aggressive warfare against any other interest whatever. On the contrary, all our acts and all our efforts, as far as business is concerned, are not only for the benefit of the producer and consumer, but also for all other interests that tend to bring these two parties into speedy and economical contact. Hence we hold that transportation companies of every kind are necessary to our success; that their interests are intimately connected with our interest, and harmonious action is mutually advantageous, upon the principle that individual happiness depends upon general prosperity.

We are opposed to such spirit and management of any corporation or enterprise, as tends to oppress the people, and rob them of their just profit.

We are not enemies to capital; but we oppose the tyranny of monopolies.

We long to see the antagonism between capital and labor removed by common consent, and by enlightened statesmanship.

We are opposed to excessive salaries, high rates of interest, and exorbitant per cent. profits in trade. They greatly increase our burdens, and do not bear a proper proportion to the profit of producers.

We desire only self-protection, and the protection of every true interest of our land, by legitimate transactions, legitimate trade and legitimate profits.

#### EDUCATION.

4. We shall advance the cause of education among ourselves, and for our children, by all just means within our power. We especially advocate for our agricultural and industrial colleges and public schools that practical agriculture, domestic science, and all the arts which adorn the home, be taught in their courses of study.

#### POLITICAL RELATIONS.

5. We emphatically and sincerely assert the oft-repeated truth taught in our organic law, that the Grange is not a political or party organization. No Grange, if true to its obligations, can discuss partizan or sectarian questions, nor call political conventions, nor nominate candidates, nor even discuss their merits in its meetings, nor permit any discussion upon questions on which we stand divided by party lines.

Yet the principles we teach underlie all true politics, all true statesmanship, and if properly carried out, will tend to purify the whole political atmosphere of our country.

For we seek the greatest good to the greatest number. But we must always bear in mind that no one, by becoming a Patron, gives up that inalienable right and duty, which belongs to every citizen, to take a proper interest in the politics of his country.

On the contrary, it is the right of every member to do all in his power, legitimately, to influence for good the action of any political party to which he belongs.

It is his duty to do all he can to put down bribery, corruption and trickery; and see that none but competent, faithful and honest men, who will unflinchingly stand by our industrial interests, are nominated for all positions of trust; and to have carried out the principle which should always characterize every Patron, that "the office should seek the man, and not the man the office."

We acknowledge the broad principle, that difference of opinion is no crime, and hold that "Progress towards truth is made by difference of opinion," while "the fault lies in the bitterness of controversy." We desire proper equality, equity and fairness, protection for the weak, restraint upon the strong, in short, justly distributed burdens and justly distributed power.

It is reserved by every Patron, as his right as a free man, to affiliate with any party that will best carry out his principles. Ours being peculiarly a farmers' institution, we cannot admit all to our ranks. Many are excluded by the nature of our organization, not because they are professional men, or laborers, or artisans, but because they have not a sufficient direct interest in tilling the soil, or may have some interest in conflict with our purposes. But we appeal to all good citizens for their cordial co-operation to assist in our efforts towards reform.

#### CONCLUSION.

6. It shall be an abiding principle with us to relieve any of our oppressed and suffering brotherhood by any means at our command.

Last, but not least, we proclaim it among our purposes to inculcate a proper appreciation of the abilities and sphere of woman as is indicated by admitting her to membership and position in our Order.

#### CONSTITUTION OF DOMINION GRANGE.

##### ARTICLE I.—ORGANIZATION.

##### Seventh Degree—Ceres (Faith).

Section 1.—The Dominion Grange of Canada shall be composed of one delegate and his wife from each Subordinate and Division Grange within the Province of Ontario, and one delegate and his wife from any Provincial Grange which now exists, or which may hereafter be formed under the authority of the Dominion Grange.

Section 2.—All delegates to Dominion Grange shall be elected annually.

Section 3.—No Subordinate or Division Grange shall be entitled to representation in Dominion Grange which shall be in arrears for more than one quarter's fees and dues, and no delegate, though he may represent more than one Grange, shall be entitled to more than one vote. And the Secretary of Dominion Grange shall furnish each Subordinate Grange with blank forms of Certificates for delegates to Dominion Grange, which shall certify that such Delegate was duly elected, and that all returns, and all fees and dues required by the Constitution, have been duly paid to the Secretary of their Division Grange (or Division and Dominion Grange), as provided for by Section 4.

Section 4.—Should the Secretary of any Division Grange refuse or neglect to forward his returns, together with the proper amount of fees and dues, to the Secretary of Dominion Grange, the Delegate from such Division and the Subordinates within such Division shall be entitled to their seats upon furnishing certificates from their respective Secretaries, under the seal of their Grange, that their fees and dues have been duly paid to the Secretary of their Division.

And in event of any default on the part of the Secretary of the Division Grange as aforesaid, or forwarding the annual "Word" to the Subordinates within his division, such Subordinate Grange or Granges may make their returns in duplicate, forwarding one copy to the Secretary of Dominion Grange, and one to the Secretary of their Division Grange, enclosing one-half of the fees and dues with each such copy of the reports.

Section 5.—All Division Granges in Ontario and all Subordinate Granges not connected with a Division Grange, either in Ontario or any other province, not having a Provincial Grange, shall make their returns direct to the Secretary of the Dominion Grange.

Section 6.—Dominion Grange shall set apart one-half of all the moneys received for capitation tax and initiation fees, and also one-half of all the actual profits realized upon the sale of all supplies, as a fund, to be called the "Sessional Indemnity Fund," which shall be used exclusively for the payment of the expenses of delegates attending the sessions of Dominion Grange, and the remaining one-half of all receipts to the Dominion Grange to be funded for all other legitimate purposes of the Grange, except the payment of the expenses of delegates.

Section 7.—The expenses of delegates attending the sessions of Dominion Grange, shall only be paid as follows, viz.:—First. The actual and necessary railway fare, or any equal percentage thereof as the Sessional Indemnity Fund will permit. Second. The hotel expenses, or an equal percentage thereof as the fund will permit, but in no case to

exceed one dollar per day. These allowances only to be made to delegates from Subordinate Granges. Delegates from Division and Provincial Granges shall not be entitled to any allowance from the funds of the Dominion Grange.

Section 8.—The Maritime Provincial Grange, or any Provincial Grange hereafter to be organized, shall have the control of its own affairs, including the framing, altering, or amending its own Constitution and making its own laws, but shall not change the Manual, the names of the officers, or the unwritten work; shall pay no capitation tax or initiation dues to Dominion Grange, but shall pay the nominal sum of two dollars for each charter granted for the organization of Subordinate or Division Granges within its jurisdiction, and shall procure its Manuals from Dominion Grange, at a price that will cover the cost of printing and binding the same, and may send one delegate to the Dominion Grange.

ARTICLE II.—OFFICERS.

*Their Duties, Powers and Privileges.*

Section 1.—The officers of the Dominion Grange shall consist of and rank as follows, viz.: Master, Overseer, Secretary, Treasurer, Lecturer, Chaplain, Steward, Assistant Steward, Gate-keeper, Ceres, Pomona, Flora and Lady Assistant Steward, also two Auditors and an Executive Committee of three members, one of whom shall be the Master.

Section 2.—The officers shall be elected annually, at a regular meeting of the Dominion Grange. All nominations and elections shall be by ballot.

Section 3.—Vacancies by death, resignation or otherwise, to be temporarily filled by the Executive Committee until the first meeting of Dominion Grange, when an election shall take place.

Section 4.—It shall be the duty of the Master to preside at all meetings of the Dominion Grange or Executive Committee; to see that all officers and members of committees properly perform their respective duties, to see that the Constitution, By-Laws, Principles, Rules and Usages of the Order, and also the resolutions of the Dominion Grange, are observed and obeyed, to properly take and announce the results of all ballots and other votes of the Grange, to sign all orders drawn upon the Treasurer subject to instructions of the Grange or Executive Committee, and to perform all other duties usually devolving upon a presiding officer.

Section 5.—It shall be the duty of the Secretary to keep a record of all proceedings of Dominion Grange; to keep a just and true account of all moneys received by him, and to pay over to the Treasurer monthly, taking his receipt therefor; and to make a full report of all transactions to the Dominion Grange at each session; he shall also prepare and issue a quarterly circular containing all items of information from the reports from all Granges reporting to Dominion Grange and all other matters of interest to the Order, and publish the same in such form as the Executive Committee shall direct; he shall conduct all correspondence of the Dominion Grange and Executive Committee; he shall keep the account of all Granges reporting to Dominion Grange, and a complete register of the names, numbers and locations of all Granges under the jurisdiction of the Dominion Grange, with the names and addresses of the Masters and Secretaries of each, and perform all other duties pertaining to such office as required by Executive Committee or Dominion Grange.

Section 6.—It shall be the duty of the Treasurer to pay all orders drawn upon him by the Secretary and approved by the Master; to keep an accurate account of all moneys received and paid out, and present a detailed statement of the same to the regular meetings of Dominion Grange, showing the balance on hand; he shall keep his books open to the inspection of the Executive Committee and Auditors at all times, and shall deliver up at any time all moneys, books, papers or other property pertaining to his office, in his possession, upon the order of the Master, under the direction of the Executive Committee, and shall be the custodian of all moneys and other assets of the Grange.

Section 7.—It shall be the duty of the Executive Committee to exercise a general supervision over the affairs of the Order, having authority to act on all matters of interest when the Dominion Grange is not in session; may appoint deputies and business agents as occasion requires, and shall direct

the payment of all moneys from the Dominion Grange Treasury; and shall present a detailed account of their acts to the Dominion Grange on the first day of its Annual Session.

Section 8.—It shall be the duty of the Auditors to audit all books and accounts of the Secretary and Treasurer, and report the same to the regular meeting of the Dominion Grange, on the first day of the session; and shall report oftener to the Executive Committee should it be deemed necessary, having authority to inspect said books and accounts at any time; and shall report any irregularities in the same to the Executive Committee.

Section 9.—The duties of the Overseer, Lecturer, Chaplain, Steward, Assistant Steward, Gate-keeper, Ceres, Pomona, Flora and Lady Assistant Steward, shall be the same as the duties prescribed for those officers by the Constitution of Subordinate Granges, Article IV., Sections 4, 7, 8, 9, 10, 11, and 12.

Section 10.—Such compensation for time and services shall be paid to the officers of Dominion Grange as the Grange may, from time to time, determine, and other persons in the employ of the Dominion Grange, as the Executive may, from time to time, determine, unless otherwise provided for by the Grange.

Section 11.—All questions of Administration or Jurisprudence, arising in and between Provincial, Divisional and Subordinate Granges, and appeals from the actions and decisions thereof, shall be referred to the Master and Executive Committee of the Dominion Grange, whose decisions shall be respected and obeyed until overruled by action of Dominion Grange, whose action thereon shall be final.

Section 12.—That all ex-members of any representative Grange, Division, Provincial, or Dominion shall continue to be honorary members so long as they remain members of the Order, in good standing, and be at liberty to take part in all its deliberations; and all fourth degree members in good standing who may be present at the meeting for the election of officers, shall be eligible for election to any office in any representative Grange. NONE BUT DULY ACCREDITED DELEGATES SHALL BE ENTITLED TO VOTE IN ANY REPRESENTATIVE GRANGE. None but duly accredited delegates shall be paid any portion of their expenses in attending any meeting of any representative Grange, unless they hold the office of Master, Secretary, Treasurer or Member of the Executive Committee.

Section 13.—The Secretary and Treasurer of all Granges, Dominion, Provincial, Division and Subordinate, shall give bonds to the satisfaction of the Executive Committee or the Grange, for the faithful performance of their duties, and shall present their reports to the Grange upon the first day of each annual session.

Section 14.—It shall be constitutional for the Dominion Grange to elect a standing Legislative Committee, not exceeding five members, whose duty it shall be to carefully watch the Legislation of the country effecting the Agricultural and Horticultural interests, and act under the direction of the Executive Committee of the Dominion Grange and report from time to time, to the Executive Committee, or the Dominion Grange in session, or those functions may be discharged by the Executive Committee themselves.

Section 15.—The duties of the Dominion Grange shall be to deal exclusively with questions effecting the interests of Patrons of Husbandry generally throughout the Dominion of Canada, or any matter coming up from Granges of any of the provinces; and to carry into effect the desires and wishes of any province or provinces having no Provincial Grange, as directed by their delegates in Dominion Grange assembled; and to revise from time to time the constitution of all Granges of the Order, subject to the control of Dominion Grange, provided always constitutional notice of such changes shall have been given.

ARTICLE III.—CHARTERS.

Section 1.—All charters shall be issued directly from the Dominion Grange upon application of deputies or direction of the Executive Committee of Dominion Grange, and shall contain a blank for the names of the parties who have applied for the same.

Section 2.—Nine men and four women having signed an application, and paid the required fee,

shall, if application is approved, receive the four degrees and be entitled to a charter.

Section 3.—Applications for charters must be signed by persons applying for same, accompanied by a fee of (\$20) twenty dollars, and shall be made direct to Secretary of Dominion Grange, with the accompanying fee, in the Province of Ontario or any province or territory having no Provincial Grange, but to the Secretary of Provincial Grange in provinces or territories having a Provincial Grange, and through him to the Secretary of Dominion Grange.

Section 4.—Deputies organizing Subordinate Granges shall be remunerated by the Grange to which they make their returns, upon order of the Executive Committee.

Section 5.—Charter members are those whose names are upon the application, the fees being paid at organization. Charters shall be issued to Subordinate Granges by Dominion Grange, upon application of the deputy, and where Provincial Granges exist the application shall be made through and endorsed by the Secretary of such Provincial Grange, accompanied by the necessary fee.

Section 6.—When it is desired to form a Division Grange in any section where there are five or more Subordinate Granges and no Division Grange, application for authority must be made to the Executive Committee of the next superior Grange under whose jurisdiction the proposed Division is situated.

Section 7.—In case of forfeiture or suspension of a charter, the members have a right to join any other Grange in the province by producing satisfactory evidence that they were members of the defunct Grange, without any additional fee, but must submit to a ballot.

ARTICLE IV.—MEETINGS.

Section 1.—The Dominion Grange shall meet annually at such time and place as the Grange may from year to year determine. Should the Dominion Grange adjourn without selecting the time and place of meeting, the Executive Committee shall appoint the time and place and notify the Secretary of the Dominion Grange, who shall give at least 30 days' notice to the Secretary of each Provincial Grange, and all others entitled to a voice in proceedings of Dominion Grange.

Section 2.—Special meetings of the Dominion Grange may be called by the Executive Committee, one month's notice of such meeting being given to all members of the Dominion Grange and others entitled to a voice therein.

Section 3.—The Dominion Grange, at its annual session, shall frame, amend or repeal such laws as the good of the order may require, provided notice shall be given of any of the desired amendments six months previous to the annual meeting. All laws of Provincial, Division and Subordinate Granges must conform to the Constitution and By-Laws adopted by the Dominion Grange.

Section 4.—No delegate shall be allowed to leave until the Grange finally closes its sittings, without special permission, and shall forfeit his expenses by so doing.

Section 5.—The actual and necessary disbursements only of members and officers entitled to payment under Sec. 12 of Art. II., attending sessions of Dominion Grange shall be paid by Dominion Grange funds.

Corn Culture.

From extensive tests made at the Hatch Experiment Station with artificial manures in the growing of this most valuable crop, the application of potash gave much the greatest average increase both in hard corn and stover. The conclusions arrived at forcibly impress the fact of the widely varying requirements of different soils, and the great folly, resulting in loss and wasteful expenditure, by the indiscriminate and blind use of fertilizers. The only remedy for this is by local tests, and the best method of ascertaining what is needed in any given case to produce a particular crop, is to put the question to the soil itself. This method, though requiring care at all points, and caution in forming conclusions, is not in reality difficult. Such experiments should abundantly repay the investigator in the practical money value of the results. Our own experience confirms the above, and if our friends would take the trouble to prove the great benefit to be derived from the application of potash in the form of wood ashes we feel certain that the shipping from our country of this most valuable plant food would soon cease, to the great advantage of all interested.

At Cornell University Agricultural Experiment Station trials were made of the effect produced by the removal of the tassels of alternate rows of corn, and it was clearly shown that fifty per cent more corn could be produced by thus husbanding the plant vitality required for the unnecessary production of pollen, which of course was applied from the rows from which the tassels were not taken.

### Forage Plants.

**TIMOTHY** (*Phleum pratense*).—It is but right that in a discussion of our most common grasses we should begin with that which is, perhaps, the most useful and most universally distributed through the whole country.

As a pasture grass it has been known in this country since sometime before 1760, at which time some seed was taken to England; but many authors assert that it is native in Europe, as well as in America. Certain it is that it is found very widely distributed in this continent, for it is found in a condition believed to be native in Alaska, Labrador, the Eastern States, and the Rocky Mountains—a wideness of distribution hardly so surprising when we see that it now grows in pastures and meadows throughout Europe, North Africa, Siberia, and Western Asia. The honor of its introduction and name is disputed, some attributing it to one Timothy Hanson, who cultivated it in Carolina and Virginia; and again, on the other hand, it was said to have been first found in New Hampshire by Mr. Timothy Herd, and it is true that for many years it was known as Herd's Grass. No date being given to this fact, except that it was only introduced for cultivation into England fifty years later, we must infer that it was found very early in the eighteenth century. At any rate, from one or other of the Timothys it took its name. In Britain it is known quite commonly as Meadow Cat's-Tail, an exact translation of its botanical name, *Phleum pratense*.

Every reader will of course be acquainted with the appearance of this grass, which grows in compact tufts, has a moderately leafy stem, and a thick, stout head, which may be any length, from one and a-half to eight inches, according to the richness of the soil. The flower, which is very minute, gives to the head a peculiar slaty-blue color, which, communicated to a whole field, lends a rich accompaniment to the landscape. Botanically two or three varieties can be separated, but the distinction is one of no importance from an economic standpoint. Long cultivation has shown that it is particularly adapted to moist, heavy, loamy soil, and endeavors to grow it on light, sandy soils have been rather unproductive; but once well situated it will produce annual crops with great vigor, instances being given of thirteen successive crops being raised. But in this connection it should be particularly noted that late mowing exposes the bulbous root to the action of frost. Its value to the farmer is certainly great, especially if it be for sale hay,—perhaps due to its uniformity in appearance, and little waste in handling. As a fodder, it is excellent horse food, but cattle frequently show preference for other grasses; it is stated in this connection, that milch cows dry up quickly if fed on dry timothy alone, and also, that in the overdry state, it tends to constipation, and is, then, not suitable to young stock. To guard against this it should be harvested early. There is a general tendency in this country to cut timothy late, which all farmers should avoid. While there may be more weight, yet early cutting will yield more nutritive value, and in the long run will be more economical. If cut late the stem will be found hard, woody and dry. In harvesting, therefore, timothy should be cut just before the spikes are appearing; and it should not be cut too close, as by that means the tender root may

be injured. Timothy has a few disadvantages which must be set against its good qualities; for example, its lateness in spring, and the ease with which the straw becomes hard, besides which it is a crop very exhaustive to the soil. In view of the last quality a good top-dressing of stable manure should be applied and evenly spread in the fall, which protects the roots and gives a stronger growth. It is unsafe to turn sheep on a timothy meadow immediately after cutting, and seems to be injudicious to do so with cattle on account of the injury done to the crown of the plant by its being laid bare. On account of the sparseness of the growth of timothy it is generally advantageous to mix a quantity of red clover, which gives weight to the hay and makes a more even covering for the pasture. It is usually sown at the rate of about ten pounds pure seed to the acre; when sown with fall wheat half this quantity; but when a mixture is used the amount is determined by the quality of the mixture. For temporary grass-land 5 per cent. to 20 per cent. timothy is used, but for permanent pastures 10 per cent. is quite high enough, because in a few years it becomes very thin. The seed should be sown on the top, although in some soils a slight covering is often of great advantage. While timothy has a number of disadvantages, yet if cut early and given fair trial, it will uphold the position it has already won as the most generally popular grass of our country. But, on the other hand, we do not wish to be understood to characterize it as the best, necessarily, for we should remember that practically timothy has held undisputed sway in this country as the staple grass; it is only of late years that the true value of many of our grasses has been discovered, and there may be among these, some one which shall unite timothy's good qualities with fewer disadvantages. But till such a one shall be discovered timothy bids fair to retain its old prestige.

D. M. C.

### A Model Farm System.

(Continued from Page 223.)

There are virtually no inside fences excepting those each side the pasture, which are movable. The great advantages gained are the utilizing of every inch of ground, the entire absence of a lodging place for weeds, with no repairs to inside fences, the division fence between the pasture the only one to move, and this a step forward once a year. By this method the labor is not only reduced to a minimum, but fences are always in shape to turn stock, and yet all the land that can be pastured to any advantage is utilized. Under this system the land is always in the best possible state for each succeeding crop. The manure is put out as it is made, therefore there is no waste—it goes to produce a crop that requires an abundance of rich manure. If it is slightly rank it will yet answer, as corn is a particularly gross feeding crop. The land still retains all that is required to produce a crop of wheat, and a single trial will convince that this treatment is far in advance of applying the manure fresh for wheat, as the corn has removed the superabundance of nitrogen which is so liable to make wheat weak in the straw. We have seen the tallest and heaviest wheat standing erect when grown after a corn crop, while in the other way, of freshly applied manure, the crop would be all lodged, and consequently damaged and difficult to handle. Where fall wheat is not successfully grown spring wheat or barley would then answer the same purpose in the shift, seeding to grass in this case, as is done with fall wheat. Plenty of strength to produce

the highest yield of hay, after which the field passes into pasture, with the green crop growing close beside it, and in readiness to be fed on the pasture field, thus saving the double work of drawing the green feed a distance, and drawing the manure back to the field, the droppings being left on the field in readiness to be ploughed under for the succeeding green crop, the land for which is prepared in the fall, and in the case of the portion allotted to rye is also sown at that season, that part being more early prepared, care being taken in the earlier part of the soiling season to feed on the part of the field that is to be sown to rye. Any manure made or left at barnyard is also now applied for this purpose. The rye being sown early in September of course all cattle have to be removed from this field during this month, but as the corn is removed early, in order to sow wheat, that field is also at liberty, and the cattle are allowed for a short space of time to feed off the new seeds as well as the second crop of clover, which has been mown for hay earlier in the year, the fence being placed between these seeds and clover later on. It has been found that feeding off seeds before the ground gets soft, and for a short period, is a benefit.

The pasture field is dragged before being broken up, in order to spread the droppings, which of themselves are quite a coat of manure. The field in green crop for soiling is divided into rye, which is ready to cut before the pastures are well up; the rye ground being sown later on to rape and white turnips; oats and vetches are sown at different periods for soiling. The first of these that are cut are also sown to rape. Southern sweet corn is sown for soiling, and gives an immense weight of fodder for this purpose, and continues to be cut until the end of September, when rape is cut and fed, or white turnips are ready to be fed, this field being prepared for oats to be sown the next spring, which completes the rotation. Labor, which would appear by the whole arrangement the greatest drawback, is easily arranged. Each morning a sufficient quantity of green feed is cut for the use of the day, the largest quantity being fed early in the day, the pasture being counted on to help out the feed ration. Everything on this farm is done systematically, therefore there is no hurrying matters. The best possible use of all the land is brought out. The dry season for grazing is prepared for by crops that do not fail, as the land is strong and each crop is prepared for and duly sown at the right season. The rent of the land that is occupied by fences, and worse than wasted under the ordinary farm system, is of more value than the cost of the removal of one fence of eighty rods per year, while a great saving is effected in fence material on which there is a vast wear and tear through decay each year. The immense quantity of feed for summer and winter thus produced enables the land to carry double the amount of stock ordinarily kept by the all-pasture system. The stock department is kept in the same thorough shape, and, therefore, on this depends most of the resources obtained from the farm. The vast advantage of having large fields with a long furrow for ploughing and general cultivation, and a long stretch for mowing and harvesting by the modern machinery, has to be once practiced to be appreciated, and after working in such fields one would be very loath to return to the short turnings in square fields that are so disadvantageous when finishing with machinery. On too many farms the everlasting patching and changing without any calculation or system keeps the work and workmen in a broil with no show for the labor performed nor any adequate yield for the money invested.



## Veterinary.

### Diseases of Animals

IN RELATION TO THE PUBLIC HEALTH, AND THE DUTIES OF HEALTH OFFICERS IN RELATION THERETO: BY T. V. HUTCHINSON, M. D., MEDICAL HEALTH OFFICER, LONDON.

[Read Before the Holstein Breeders' Association.]

When we take into consideration the extremely high death rate among children, especially of those under one year of age, and that milk forms a very large portion of their food, the importance of having a wholesome supply from clean, healthy animals cannot be over estimated. London, I believe, was the first city in the Dominion to establish a system of periodical inspection of herds, cow byres, and places where milk is kept for sale, and to control and regulate the sale thereof in the city.

For this purpose the City Council enacted a by-law which provides for inspection and examination by the inspector, that any person offering milk for sale shall first obtain a certificate from the health officer that his animals are clean and healthy, that his stables and premises are also clean, that his wagon has his name and number painted upon it, and that he has complied with the requirements of the by-law. Upon this certificate a license is issued by the city treasurer for one year, subject to be withdrawn any time for infraction of the by-law. The fee paid for the license is one dollar annually. Like liberty, eternal vigilance is the price of wholesome milk, and in order to accomplish this the health officer or other sanitary expert should make periodical inspection of the animals, their stables, food and water, also frequent examination of milk taken from the wagons, the places where it is kept, and the people who keep it. The health officer or a competent veterinary surgeon should visit the herds twice a year, preferably in the spring and autumn; he should see that the stables are well ventilated and clean, and the drainage good; examine each animal carefully for tuberculosis, tumors, or cancers, especially in the spring of the year. The herd should have daily exercise; no cows can give wholesome milk that are tied up for weeks and months in the year, as is frequently the case. Many herds near cities are fed almost wholly upon brewers' grains, which produce a large quantity of watery milk; such animals become feverish, the milk unwholesome, and in two or three years are fattened and killed. Pure water is absolutely necessary, and milk from cows having access to foul pools, or streams contaminated with sewage, should not be permitted to be sold. The health officer should keep a register in which to enter the names of all vendors, their places of business, the number of cows, their condition, source of water, kinds of food used, with column for entering the specific gravity, the percentage of butter fat of the samples from each wagon, and a very good way also is to take samples from the herds and compare the genuine with that obtained from the wagons and shops, and a column for remarks, with the date of inspection. He should see that no milk is allowed to be sold from dairies or dwellings where there is any infectious disease, and lastly, to make assurance against tuberculosis and other diseases doubly sure, the milk should be boiled before using, as there is probably nothing which has a greater affinity for disease germs. To give an instance: A milk

vendor in one of the suburbs of London, a few years ago, had five customers to whom he carried the previous night's milk every morning. This man had scarlet fever in his family. Of the five families to whom he sold the milk, scarlet fever appeared in four, with two fatal cases, and one in his own family. There was no scarlatina anywhere else in the village or neighborhood. It might, perhaps, be supposed that he carried the disease germs in his clothing to these families, but he did not. Having to go to his work early, he left the milk in vessels placed outside their doors, before the people were up. This system of inspection has been followed in London with the result that for two years no case of infectious disease has been traced to impure milk. That impure milk has much to do with infant mortality will easily be seen from last year's mortality statistics. In one of the large cities of Quebec, where there is no system of inspection, or at least a very imperfect one, out of every one thousand deaths, four hundred and seventy were of children under one year, while in London, under a rigid system of inspection, the ratio per one thousand of infants under one year was only two hundred and thirteen. A few weeks ago thirty cases of typhoid fever occurred in the town of Waterbury, Conn., which caused an examination of the milk to be made. It was found that all the cases had been purchasing milk brought into the city from the farm of one man. This man was ill with typhoid fever—his hired man was sent to the hospital, where he died of the disease. A small stream ran by the house, into which it is quite possible some of the germs were washed, and as the cattle drank from it, and the milk cans were washed in it, that stream was an excellent channel for spreading the disease. The facts in this case show again that the dairy herds and farms from which milk is brought into a city to be sold should be inspected frequently by sanitary experts. The owner of the cows, or some member of his family, may be ill with an infectious disease, or the cows themselves may have tuberculosis, or the milk may have been exposed to infection from polluted streams or wells. Cattle are raised in vast numbers in South America, yet there is no part of the world where less milk is used. Cattle are raised almost entirely for beef, as it appears that consumption among cows is more common in tropical countries than in temperate or northern climes, and the germs or bacilli of consumption have given rise to so many cases of this disease that the people have almost ceased using it. The Waterbury case has been taken up by some of the Montreal papers as accounting in a great measure for infant mortality in that city, and the heavy death rate annually reported. One writer says the mortality is high, but if it were not for the large number of infants who die under one year their death rate would be as low, or lower, than any other city. What kills so many of these young children? Milk kills them. They are fed principally upon milk fresh from the cow, and of these cows which supply Montreal with milk a large number are fed indoors the year round. Considering how largely milk enters into the food of the people, particularly of children, the necessity of periodical inspection by competent persons, of the cow byres, and bringing the vendors within the pale of proper control, is self evident. Municipalities should take the matter in hand, and see that the purveyors of that class of food are licensed, and compelled, under pain of having their license cancelled, not only to keep their cows clean and sweet, the animals in good health and condition, but that the fatty matter which constitutes the chief nutritive part of milk should be ample in quantity. The diseases of cows, which the health officer should look for and guard against, are the following, given in the order of frequency: Tumors, tuberculosis, anthrax, actinomycosis,

and other diseases not so dangerous to man, such as scarlet fever, small-pox, pleuro pneumonia and blood poisoning. Tumors should always be regarded with suspicion, until such time as a correct diagnosis can be made. Tuberculosis bovis is far from being a rare disease. Those of you who remember the struggle and hardships of our fathers thirty or forty years ago, while clearing the land, may call to mind the number of cattle that died of the "hollow horn," the same disease under another name; and no matter how well the animals were fed, toward the spring emaciation steadily progressed, till one day the herd would return from the woods, for there was no pasture in those days, with the weak one missing.

### Quarantine Again.

At the last moment, as we were closing, word was received that Mr. Secretary Rusk had removed the quarantine against Canadian sheep and swine.

## Poultry.

### The Cure for Roup.

Mr. Robert Wightman, chemist, druggist and seedsman, Owen Sound, Ont., writes as follows:—"In looking over your journal for last month I noticed an article headed 'Lice on Hens and Chicks,' in which you recommend coal oil and blue ointment as the remedies to be used against the ravages of these pests. At the same time you warn the public of the great danger that might occur by applying either too freely, as it might be death to the chick as well as the lice. Now, I am advertising in your journal a preparation which is a certain cure for these pests, and will not injure either hens or chicks, but rather improve them, viz., 'Little's Patent Fluid Sheep and Cattle Wash.' It is just as good for fowls as it is for sheep and cattle, and perfectly non-poisonous, so that it is perfectly harmless to the birds themselves, and a thorough eradicator of all classes of vermin. It will also cure roup in its worst form, which is a very infectious disease in fowl. I may say I have sold large quantities to breeders; they use it in their coops, wash the perches down, and apply it to the birds themselves. I drop you these few lines thinking you may not have thought of the preparation, or not have known it was as good for birds as for animals."

Mr. J. C. Benner, Owen Sound, Ont., sends the following:—"It affords me great pleasure to testify to the good qualities of 'Little's Sheep and Cattle Wash' for diseases in fowls. I keep a large stock of thoroughbred Brown Leghorns. This last spring they were attacked with roup in its worst form, caught from some imported birds. I tried all the old remedies, such as kerosene, turps, roup pills, and everything I could think of, but found nothing to give relief, until I was persuaded to try a tin of 'Little's Sheep and Cattle Wash,' which I used with water, injected into their throats, and gave it them to drink, bathing them in it. In two or three days I noticed a great change for the better. In ten days a thorough cure was effected. Had I known of this remedy before it would have saved me \$50. I cannot speak too highly of it, and can strongly recommend it to all breeders."

### A Fat Stock Show.

At a meeting of the Agriculture and Arts Association, held on June 24th, the above Board was waited on by a deputation from the Dominion Live Stock Association, asking them to use their influence in promoting a permanent live stock exhibition to be held in the city of Toronto in the spring of each year, providing the accommodation be furnished. The objects and aims of such an exhibition to be similar to the Chicago Fat Stock Show. The deputation withdrew, and a resolution was passed embodying the above.

## Garden and Orchard.

### The Cultivation of the Orchard.

BY G. C. CASTON.

Ontario has just passed through one of the most extraordinary droughts ever experienced at such an early season of the year, no rain having fallen of any account over the greater part of the province from the first week of April till the second week of June. Both fall and spring grain, meadows and pastures have suffered severely, and orchards standing in sod or sown with grain have, no doubt, suffered to a greater extent than the crops. If there ever was a strong, practical argument for the cultivation of an orchard, it has been furnished this year by the early and severe drought. The difference will be noticed, not only in the foliage and growth of the trees, but in the quantity and quality of the fruit. The results may not be so apparent just now, but will certainly be apparent later on, as where not cultivated the rain has not yet reached the roots of the trees. While, where the ground is kept well cultivated moisture is always found present and near the surface. We have had some fine showers lately, but it takes a great amount of rainfall to penetrate uncultivated ground after long and severe drought. Where fruit trees are growing in sod no moisture is found for eighteen or twenty inches below the surface, and the roots are surrounded by a parched and dry soil, which cannot furnish the nutriment required, and this just at a critical time when the tree needs the greatest amount of nourishment, when growth of foliage and wood is rapid, and in the case of bearing trees, when they are just setting their crop of fruit. Most people claim that they cannot plough near the trees when they get large enough to bare without breaking the roots and barking the limbs; besides, it is very troublesome, and for these reasons the orchard is first seeded down, probably with clover, but is finally allowed to lapse into a tough twich grass sod, which, during a long drought, becomes like a sheepskin, and will keep out rain nearly as well. In countries where rain is abundant this would not be such a great evil, but in this country, where we are subject to frequent droughts, it is not only advisable but necessary, in order to obtain the greatest success, to keep the orchard always cultivated, and never sow it with grass or any kind of grain. This is not such an onerous task as some seem to think, as two ploughings in the year will be sufficient—once in the spring and once in the summer or early fall, going over it once or twice between times with a spring-tooth harrow or cultivator. I once seeded a part of my orchard with clover when, the trees had grown so large that it was a difficult matter to get near them with the plough, but I would never do it again. The second year after seeding the evil effects were so apparent that I ploughed it up again, and have kept it cultivated ever since. The trees made very little growth of wood, and the fruit became much smaller, with a larger proportion of culls, and the foliage became pale in color instead of a dark, rich green. After ploughing it up and getting the soil mellow again, the trees began to make a good growth of wood, the fruit was larger and much better in quality, and the foliage resumed its dark green, healthy color. If we were to put on sufficient mulch about the trees to keep down all grass

and weeds, and retain the moisture about the roots, and prevent evaporation, it would answer very well without cultivation; but where this is tried it is not often thoroughly done. The amount of mulching material required is not always available, the grass gets in and the moisture gets out. The mulch also makes a harbor for mice during the winter. A large number of fruit trees have been destroyed in this district this year by these pests. I did not have a single tree injured, simply because the ground was clean, and nothing was left to harbor them. While my orchard was in grass I had some trees injured every year by mice. I use a one-horse plough, and everyone who has an orchard should have one of those implements; they are light and handy, and yet strong enough for the purpose. They are made with very strong clevis, with a brace attached to it, so that the horse can walk in the furrow, or the clevis can be reversed, so that if ploughing toward the trees you can get the plough quite close to them, and have the horse walk quite a distance out to avoid low limbs that may be in the way. By ploughing both ways a very small square will be left at each tree, which should be carefully spaded if grassy, otherwise it may be hoed with a sharp hoe, but as the plough leaves so little this will not be a very formidable task—a man will do quite a number of rows in a day. One thing must be strictly observed in ploughing: it should be done by a careful person, and with a steady horse; great care should be taken to plough lightly near the trees, merely skimming it near the trunks, to avoid breaking the roots. A great number of small fibrous roots are always found near the surface; these are the principal feeders of the tree, and should not be broken when possible to avoid it. Another point is to use a pair of hames with round tops, or take an old pair and cut the tops off, so they will not reach any higher than the top of the collar; this will prevent the horse from rubbing the bark off the limbs when passing under the trees. With such an outfit the cultivation of an orchard will not be a very difficult task. And now I might give some of what may be called scientific reasons for cultivation. Nature is a grand and thorough workman, but often secures the greatest results by a little assistance from the hand of man. It takes the manure and vegetable mould of the soil, and manufactures those materials into nitrates, or, in other words, available plant food. To do this successfully it requires air, moisture and warmth in the soil. By cultivation we secure all these aids. Scientists tell us that during a drought there is plenty of moisture in the air, but it is held in suspension and requires to come in contact with some cool surface before it is precipitated. For example, if on a dry hot day we place a pitcher of ice cold water on the table, it is soon covered on the outside with drops of water. This is simply the warm air striking the cool surface of the pitcher and precipitating moisture. In like manner, when the soil is open and porous, the air circulates through it, and coming in contact with the cool earth below the surface precipitates its moisture where it is needed. Plant food is manufactured or made available more rapidly during the warm months than at any other time, hence the necessity of cultivation at this time. We are also told that where a soil is left undisturbed and not covered by mulch, it loses much of its moisture by capillary attraction. Take, for example, a brick and dip it in water, and immediately the moisture rises in it; or a better example is an oil lamp, as the oil rises up through the wick by the same means—capillary attraction. The soil is full of those small capillary tubes, but when cultivated the tubes are broken off below the surface, and the moisture, instead of passing off, is distributed about the roots, just where it is needed, and further, the air coming in contact with this cool moisture from below causes it to precipitate its moisture, as already stated, and thus a double benefit is secured. I believe that with varieties suited to the climate, with careful pruning, liberal manur-

ing and good cultivation, we can grow in this Canada of ours the best apples in the world. We stand at the head in the Old Country markets in point of quality, and Canada apples are as famous in Britain as Canada cheese, and we should try to emulate the cheese-makers in their efforts to keep at the head, and to do this we should give our orchards plenty of manure and good careful cultivation.

### Spraying Fruit Trees.

BY W. H. VAN TASSEL.

I was pleased to see by the June number of the FARMER'S ADVOCATE that you were bringing before the farmers of Canada the necessity of spraying fruit trees for the destruction of insects that are destroying so much of our fruit. Although the most of our large fruit growers see clearly that something must be done, the large bulk of our farmers are seemingly asleep, and do not realize the tremendous loss which they and the country generally must suffer unless this matter is attended to. Some farmers need almost an earthquake to awaken them. I trust the ADVOCATE, and every agricultural paper, will continue to sound the alarm.

### For the Gardeners' Library.

"How to Make the Garden Pay" is the attractive title of an attractive book written by Mr. T. Grenier, whose many years of study, experiment and successful practice qualified him to a pre-eminent degree for the task of which its pages are the product. It was prepared at the suggestion of Mr. Wm. Henry Manly, of Philadelphia, and by him published. Its 275 large, well-printed and amply illustrated pages deal exclusively with vegetable gardening, and are just as applicable to the wants of the farmer or townsman who gardens for his own kitchen, as the man who aims to supply the market with the freshest and the best of vegetables. The author alludes to the "astonishing and deplorable fact that a majority of American farmers have no garden worthy to be called a 'family garden' unless so named because it is entirely given into the care of the already overworked farmer's wife and other members of the family, especially of the half-grown boys, if they, in true appreciation of the good things to be had in compensation, consent to spend an extra working hour now and then hoeing and pulling weeds." He very properly emphasizes the necessity of fresh fruits and vegetables to health on the farm, and the delights of the strawberry patch are pictured in bright colors. He says also:—

"The man who willfully and needlessly deprives his family of the privileges of a good vegetable garden fails in one of his foremost duties. He certainly cannot be a good husband, nor a good father, and he certainly is not a good Christian."

Mr. Grenier lays it down as an important and undeniable fact that "an acre of vegetables or fruit garden properly taken care of will be the most profitable acre on the farm." The book gives advice on the selection of the garden site, arrangement of the beds, stable manures; and how to manage fertilizers, garden implements, cold frames, hotbeds, vegetable houses, forcing houses, drainage, irrigation, insects and other foes; fungus diseases, seed sowing, rotation, weeds, thinning and transplanting, general direction on the selection of varieties and cultivation, with a special chapter on strawberry culture.

### Life of the Late Right Hon. Sir John A. Macdonald.

For the past three years E. B. Biggar, of Montreal, has been gathering anecdotes and facts relating to Sir John A. Macdonald, and the result is an anecdotal life of Sir John, which will be issued in a short time. Before going to press Mr. Biggar will be glad to receive any authentic anecdotes or reminiscences on the subject that have not yet appeared in print. Mr. Biggar's address is the Fraser Building, Montreal.

**Family Circle.**

**"Don't Fret."**

"Oh, I am so tired," a good wife said,  
 "With washing dishes and kneading bread,  
 And sweeping floors and mending clothes,  
 From ragged jackets to ragged hose!  
 There's Tommy has torn his coat to-day,  
 And Nellie's best frock begins to fray,  
 And Bennie's stockings are out at the toes—  
 Dear, dear! my trials there's no one knows."

"It is sew, sew, sew, and cook, cook, cook,  
 With never a minute for paper or book;  
 A drudge, drudge, drudging from day to day,  
 Till 'tis wearing my very life away;  
 And I get so tired I sometimes sigh  
 For the rest we sing of beyond the sky,  
 And I almost wish—come in Mrs. Brown,  
 What's the best news from your side of town?"

"No best at all, but worse than bad,  
 The very thought of things makes me sad.  
 Sam Bunce is still down sick in bed,  
 And his wife is washing, to earn their bread;  
 Mrs. Jones' baby will die, they say,  
 Ned Parks was drunk all yesterday,  
 And they say went home in this beastly state,  
 And beat his wife at a terrible rate."

"With our healthy children, our husbands kind,  
 And our homes of plenty, it seems to my mind,  
 Though little vexations may daily annoy,  
 We can't be too thankful for what we enjoy,—  
 Your babe's such a sweet little love, I declare,  
 He has your blue eyes and your soft sunny hair;  
 Can't you bring him along, please, and call very soon?  
 I must really be going now, good afternoon."

The good wife, left alone, sat with down-drooping  
 head,  
 And mused on things that her neighbor had said,  
 Till somehow her burdens appeared to grow light,  
 The day seemed less weary, the sunshine more  
 bright,  
 And next morning the good wife arose with the  
 day,  
 And she sang and she smiled as the work rolled  
 away,  
 And was filled with surprise, at the set of the sun,  
 To think with what ease all her tasks had been  
 done.

Said her husband one day, "Will you tell me, my  
 Kate,  
 What makes you so young and so handsome of  
 late?  
 For a long while, a month or six weeks, I should  
 say,  
 You've grown younger and handsomer every day."  
 "I believe," she said smiling, "to tell you the  
 truth,  
 I've discovered the fount of perpetual youth;  
 In the vale of the soul, like a well spring 'tis set,  
 And contains equal parts of 'Be patient,' 'Don't  
 fret.'"  
 Harriet A. Chute.

**IT WAS REVERSED.**

"Jack, Davy and I went out for bear once," said  
 my friend Bob Arcaster, as we reclined on a bed of  
 boughs watching the stars through the light cloud  
 which rose from the camp-fire. "Never told you  
 about it, did I?"

We had been talking about our two young friends,  
 who had a day or two before left home to take  
 places in the East Indian Civil Service. Bob had  
 seen more of them of late years than I, and had  
 been amusing me with stories of their adventures  
 together. So it was with the expectation that he  
 had something to tell worth listening to that I re-  
 plied, "No, what about it?"

"Well, we went out for bear once," he repeated,  
 and began in his peculiar, slow way to poke the fire.  
 "You said that once. Did you get any bear?"

He had an annoying way of beginning a story,  
 and breaking off without the slightest warning.  
 He paid no attention to my question, but went on  
 with his occupation with provoking slowness.

When he had completed this performance to his  
 satisfaction, he lay back upon the boughs, closed  
 his eyes, and remained silent so long that I had  
 almost forgotten that I had asked him anything.  
 After a long interval he answered, "Oh yes, we got  
 one," and relapsed into silence.

There was no use in trying to get him to tell a  
 story except when he was in the mood for it, and  
 then he would not be stopped. So I held my peace  
 until such time as it might please him to go on with  
 his story. It came at last.

"Jack, Davy and I went out for bear once. You  
 remember what Jack was like when he left college.  
 Green! he knew every thing about Greece, Rome  
 and such places, but about real things, such as  
 salmon, trout and bear, he knew no more than a  
 baby."

"Why, he was greener than Davy, and he had  
 never been out of sight of a clearing until we went  
 out for bear. And conceited!—there's no use in  
 denying it! He was a thoroughly good fellow, but  
 he had the experience that has since made him  
 manly, stong and modest."

"Well, we were up in Madawaska, and a French-  
 man told us that bears were as plenty as black-  
 berries up Green River. Jack, who had a beautiful  
 Winchester with him,—we were just loitering  
 through the country, you know, fishing here and  
 there in the streams, and had brought our guns  
 along more for their company than for any other

reason,—Jack, I say, was impatient to get were he  
 could shoot a bear.

"Davy was not quite so eager. In fact the little  
 fellow seemed more than half-afraid, but when I  
 climbed in with Jack, he made no further objection,  
 and we got a Frenchman to pole us up the stream  
 in his canoe. Ever been on Green River?"

"Yes."

"Well, then, I need not tell you what a splendid  
 stream it is, and what trout-fishing we had. At the  
 close of the second day we reached the ground  
 where the bears were said to be waiting to be shot.  
 Seeing a nice, grassy spot, we built a lean-to hut  
 with poles and bark, made a fire, and had supper."

"We were a jolly party, although I noticed that  
 Jack did not seem to care about going far from the  
 fire, and he questioned the Frenchman very closely  
 about the habits of bears in general, and Green  
 River bears in particular."

"The Frenchman did not know much more than  
 Jack, but taking it for granted that I knew as little  
 as the others, he bestowed upon us a marvellous  
 mass of misinformation. According to our genial  
 guide, we were in imminent danger of being charged  
 upon at any moment by a dozen or so of ferocious  
 bears of assorted sizes and patterns, and the boys  
 were about half-frightened out of their wits."

"I interrupted Jean Baptiste's flow of horrors  
 with a vehement denial of the state of things."

"Ah!" said he, "I only mak' de little fun."

"Reassured, the boys consented at last to turn  
 in, but, as you will understand, it being their first  
 night in camp, they did not go to sleep very readily.  
 There was an owl somewhere near us, and it kept  
 up an unceasing hooting. Of course, when its dis-  
 mal notes first came out of the darkness, the boys  
 were startled. Jack's teeth chattered, and little  
 Davy, looking as pale as a ghost in the fire-light,  
 got up and seized his gun."

"Come back to bed Davy," I said. "It's only  
 an owl."

"Yes, that's all, Davy," said Jack; but his voice  
 had its tremolo stop on, whereat the Frenchman  
 laughed.

"You know the thousand and one unaccountable  
 noises you hear when you are in a strange place  
 and can't get to sleep, especially if it is your first  
 night in a camp."

"The boys heard them all, and kept up a constant  
 fire of, 'What's that? What's that?' until after  
 midnight, when they fell asleep."

"Next morning they were up bright and early,  
 feeling like old campaigners. It is wonderful how  
 one night in camp seasons you, isn't it?"

"The Frenchman started off down river after we  
 had breakfasted, promising to come back in two  
 days, and we set out to look for bear."

"We did not see any, though we found some  
 tracks, some of them quite fresh. The fresher the  
 tracks, the less anxious were the boys to go on.  
 This was especially the case with Davy, who frank-  
 ly owned that he should much prefer fishing to bear  
 hunting."

"I knew perfectly well that we might tramp  
 about for a week without coming in sight of a bear,  
 unless by pure accident, for one seldom sees bears  
 when he is looking for them; so I readily agreed to  
 Davy's suggestion that we should return to the  
 camp."

"It was quite early in the afternoon when we got  
 back, but the boys were tired and lay down to rest,  
 while I went down alone to the river, seated myself  
 on the root of a green birch tree, and dropped my  
 flies over a little pool just below."

"I had not been there long, and had just hooked  
 a fine fish, when I heard a shout. Being busy land-  
 ing my trout, I did not look to see what was the  
 matter, and it was only when I turned to find a  
 place to put my fish that I noticed Jack climbing a  
 small maple tree as if for his life."

"What is it Jack?" I shouted. "Where's Davy?"

"He made no reply."

"Davy!" I called, without getting an answer.

"Springing up the bank, I saw what at first  
 seemed very amusing."

"Before the camp was a small fire, and within  
 the hut, at the corner, was our bag of provisions.  
 The front of the hut was not more than four feet  
 wide; and across the entrance, busily engaged in  
 testing the quality of our larder, was a huge black  
 bear!"

"Jack was, as I have said, well up in the branches  
 of the maple; but Davy was nowhere to be seen."

"Where's Davy, Jack?" I cried.

"Jack had by this time recovered his presence  
 of mind and answered, in a tone of horror:

"In the hut?"

"Then the brave fellow began to descend from his  
 perch. He was somewhat given to boasting, per-  
 haps, and was very excitable, but he was full of  
 real pluck. The way he came down the tree  
 showed the stuff that was in him."

"Looking within the hut, I saw that Davy was  
 there, and likely for the present to stay there. The  
 only place where the roof was high enough for a  
 person to stand up was now occupied by the bear,  
 who had forced himself part way into the hut.  
 Davy was crouched at the back part, with a look  
 upon his face that I shall never forget."

"He was badly frightened, but the look was not  
 of fright only. He told us afterward that although  
 he expected every moment to be engaged in a life  
 and death struggle with the bear, he could hardly  
 keep from laughing at the way Jack had dis-  
 appeared when the brute poked his nose around the  
 corner of the tent."

"It seems that the boys had been talking about  
 what they would do if they saw a bear, and Jack,  
 with his Winchester in his hand, was telling just  
 how he should bring him down with a shot."

"Under the ear, Davy," he said, "is the vital  
 spot."

"At that moment the bear's head had appeared.  
 A better chance to try the affect of a bullet behind  
 the ear would probably never occur again; but  
 Jack was better in theory than in practice."

"Dropping his rifle, he gave a scream, sprang  
 over the fire and took to the tree, while the bear,  
 without so much as a glance toward him, stalked  
 slowly across the front of the hut and began help-  
 ing himself to our pork."

"But Davy was really in danger, and we must  
 help him. I called to him to crawl out under the  
 back of the hut. But that was more easily said  
 than done, for the poles were very close together,  
 and must be moved before he could get through.  
 Moreover, there was no telling what our four-footed  
 visitor might do if his attention was especially  
 drawn to Davy, as it would be if the latter began  
 to move about the hut."

"Tell you what, Bob," said Jack, who had joined  
 me, "you go behind the camp and move the poles,  
 while I occupy the brute's attention in front."

"The suggestion was as good as any that could  
 be made, and I ran around to the back of  
 the camp, while Jack went off to one side  
 and stood directly in front of the bear, not more  
 than twenty feet off him. The bear eyed him, but  
 went on eating the pork."

"I was not long in moving the poles so that Davy  
 could get through, and had told him to hurry and  
 come out, when to my utter amazement he reached  
 for my hunting knife, which was sticking in the top  
 of the hut, and seizing it firmly, gave the bear a  
 fierce thrust in the side. Then he sprang out  
 through the hole I had made."

"The bear gave a frightful growl, and seeing Jack  
 straight before him, leaped directly upon him.  
 Jack was watching Davy so intently that he did  
 not think of running until it was too late. When  
 we came from behind the hut, poor Jack and the  
 bear were lying in a struggling heap together."

"He has killed Jack," cried Davy, "and it's my  
 fault!"

"Before I could stop him, Davy sprang toward  
 the struggling pair and began to kick Jack's  
 antagonist. I ran into the hut, picked up the  
 Winchester, and made toward the group."

"The bear was lying upon its left side, and  
 endeavoring to tear Jack with his hind feet, but  
 the boy was too close to him for that. The ex-  
 pression upon Jack's face was no longer one of  
 fear. He had a firm grip upon his huge antagonist,  
 and kept his head well below the terrible jaws."

"Shoot him, Bob!" he cried. "I'll take the  
 chances."

"As Davy still continued his kicking, and con-  
 sequently was in the way, I told him to get to one  
 side, and drew near so as to make my aim certain.  
 When suddenly the bear's struggles ceased. His  
 hold on Jack relaxed and he rolled over, or as  
 Jack was on his feet in an instant, little  
 the worse for his tussle. There was amazement in  
 every line of his countenance, but he was no more  
 astonished than the rest of us."

"What had killed the bear? Could it have been  
 Davy's thrust with the knife? It did not seem  
 possible, yet it might be so. Before proceeding to  
 investigate, to make assurance doubly sure—or as  
 Jack put it to show him that there was punishment  
 after death for stealing pork—I placed the muzzle  
 of the Winchester close to the beast's forehead,  
 and sent a bullet into his brain."

"Clearly it was a cartridge wasted, for there was  
 was no sign, in even the slightest tremor, that there  
 had been a spark of life remaining."

"Where did you stab him, Davy?" asked Jack.

"Just behind the foreleg."

"What did you do with the knife?" I asked.

"Left it sticking in the wound. I did not think  
 he'd appreciate an effort to remove it as a favor."

"Here, boys!" I said, "let's turn him over."

"We seized the legs, turned the body over from  
 the left side to the right, and found the knife buried  
 to the handle in the animal's body."

"Here was the explanation of the sudden collapse  
 of the enemy. What Davy's arm had not been  
 strong enough to do, the struggles of the beast had  
 completed; and the knife, left in the wound, had,  
 by the animal's own weight, been pressed into his  
 heart."

"So it was Davy's bear, without a doubt. We  
 did not give the Frenchman more particulars than  
 were necessary. Jack, looking at the maple tree,  
 said there were certain features of the adventure  
 which possessed no special interest to the public at  
 large."

"When we returned to the settlement, the  
 Frenchmen told the story in his own way, and  
 spread the fame of little Davy's achievement far  
 and wide, with sundry embellishments."

Ivy poisoning can be cured by bathing the  
 parts two or three times per day with sweet  
 spirits of nitre.

Little Edith—"Mamma, did you say that we  
 should all know each other in heaven?" Mam-  
 ma—"Yes, my child." Little Edith—"You  
 can play that you're out, though, can't you,  
 mamma, when people call that you don't want  
 to see?"

"Mother," said a prattling child as he climbed  
 upon her knee—"mother, who was Lo?" "Lo  
 was a poor Indian," replied the mother, as she  
 stroked the little one's hair back from the beauti-  
 ful high forehead. "Mother?" "What is it?"  
 "Were High, Jack, and Game poor Indians  
 too?"

### Minnie May's Dep't.

MY DEAR NIECES:—

Patience goes a long way towards smoothing the rough places down. In home life we are called upon to exercise it almost every step we take. If not, what is the result? Tart replies, abrupt answers, and actions that speak louder than words, cross faces and wounded feelings. In the proper performance of our duties it is most essential if we wish to do them well. In sewing, crooked seams, buttonholes and buttons awry, shirts hanging in scollops and every part betokening haste and carelessness. I am sure after contemplating such a piece of work we feel deeply regretful we had not more patience and done it right, even though it would have taken longer, for every time we behold it it is a vexation. In dusting our room we feel impatient to go into that bright sunshine to set out our plants, so we give a wipe here and a flop there. Lo! a visitor comes in the afternoon, and in the bright sunlight our carelessly done work of the morning is exposed to her gaze. Does not the mortification we feel make us vow it shall never be done so badly again. A few minutes more would have done it properly, and made our pretty parlor look, as we intended it should, a pretty, dainty, lady-like abode. In cake-making we are apt to become impatient to see the results. We hurry over the whisking of the eggs, and hurriedly stir the other ingredients together, rush into too hot an oven to "hurry it up." What is the result? A blue smoke and suspicious smell issues from the oven. Our cake is burning, and running over the pan on the floor of the oven! We feel angry and disappointed, for that cake was to be *par excellence*; but far from it. It is a one-sided horror. Not a thing of beauty by any means. Now we are sorry so much haste was indulged in, but too late. Never think time is lost in preparing materials for food. Any waste of food is sinful, and should be avoided. Never put up your hair "just any way" to come to breakfast in. The "just any way" will most likely be left so for the whole forenoon, and what a slovenly, unloveable object you do look to be sure; and you must feel so as well. An untidy head of hair betokens lack of personal neatness, and we can glance from the head to the foot, and there behold a holey stocking or a stringless shoe. Speaking of hair, I shall leave off scolding to tell you how you may have soft, glossy hair with little or no trouble. Never wash your hair with soap; it renders it harsh and dry. Boil one quart of bran in two gallons of rain water for half an hour, strain through a kitchen towel, and wash the hair in the bran water while hot, rinse in more, wipe well and dry in the sun or before a fire. Your hair will be soft and silky, and will not turn grey so soon. Once each month will be enough.

Does not the bright summer sunshine make you long to be out of doors? And well we have so much to occupy us in flower garden and poultry. Here again comes in our exercise of patience. The little waddling ducks cannot advance quickly, so we must let them take their own time. And poor wee chickens are easily scared, and will waste more of our time gathering them together again than if we had exercised a little patience, and not hurried them.

"How poor are they who have not patience?"  
"What wound did ever heal but by degrees?"

MINNIE MAY.

Minnie May offers a prize of \$2 for the best essay upon "Travelling as an Educator." All communications to be in our office by the 15th of August.

### Kitchen Furniture.

By kitchen furniture I do not mean chairs or tables, but some of those labor-saving articles that should be in every woman's kitchen. The first on the list must come the washing machine, a real labor-saver, for the washing of a family is no small matter, taken with the other work of the busy housekeeper. Many makes are on the market, but do not buy until you have tested it, for half of them are worthless as cleansers.

Then comes a carpet sweeper. Get the best from a reliable hardware man, and the original expense will be the only one, as the brush can be renewed when worn out; the frame will last for years. This is another labor-saver of aching arms and back, besides being a time-saver, doing the work in half the time of a broom.

A small shovel, with a short handle, should hang by every stove, to shovel out ashes when lighting the stove.

Chain dish-cleaners are the most useful accessory to the sink, and pots, pans and gridirons can be readily cleaned with them, saving the scouring with sand or salt, which always is so difficult to clear away.

A meat-mincer is an essential in a kitchen; with it can be made numbers of dainty dishes, from cold-meat croquettes, rissoles, and such like.

A small wire basket for boiling eggs; larger ones for boiling potatoes and vegetables.

Whisks—A large one for cake, a small one for eggs.

Toast-forks, with large handles.

A basting spoon.

A steamer, one of the most useful of modern inventions.

These are necessary to the comfort of every woman who cooks, be she amateur or professional.

### Our Library Table.

A departure from the monthly journals lies on our table this month; it is a copy of a new book, "A Teacher's Life", with extracts from diaries, essays and letters. The "Teacher" was at one time a contributor to the FARMER'S ADVOCATE, and much that came from her gifted pen will be interesting, if not a blessing, to the readers of the book. It is in clear print, on good paper, and the author has spared no pains in making it a readable book. Price \$1.25. Address, Miss H. M. Robertson, Strabane, Ont.

The Quarterly Register of Current History, published in Detroit, at the small sum of \$1.00 per year, contains a large amount of interesting reading matter. The Behring Sea dispute is presented afresh in all its aspects, both British and American. Italian politics are discussed in all their subtlety, and one gets an insight into almost all the political workings of every country in Europe. The Quarterly Register is just the reading for train, boat or summer holiday.

Good Housekeeping for this month is as welcome as ever, and will always furnish the way out of the many difficulties housekeepers find themselves involved so often. Such contributors as Maria Parloa is sufficient to recommend it to all. Published in Springfield, Mass., for \$3.40 per year.

Demorest's Family Magazine, price \$2.00 per year. A beautiful colored picture adorns the first page of this number, besides numerous

illustrations on fashions. Summer out-door games, badminton, tennis, and the new game of "colors" are all explained at length, and the rules given for playing. China painting is being explained in a series of articles. Kindergarten work is given for home teaching. Hundreds of recipes for making dainty dishes, and numbers of hints how to beautify our homes. This "daisy" of a household can be had from the publisher in New York.

L'Art de la Mode contains all the latest styles in dresses for morning and evening. Dinner and theatre toilettes are shown in all materials, and some are most artistically colored. Mantles, bonnets and hats are profusely illustrated, and fully described besides. No lady can be badly dressed who takes this beautiful fashion paper. It is published in New York for only \$3.50 per annum.

### The Girl Who is Ever Welcome.

The welcome guest is the girl who, knowing the hour for breakfast, appears at the table at the proper time, does not keep others waiting, and does not get in the way by being down half-an-hour before her hostess appears.

The welcome guest is the girl who, if there are not many servants in the house, has sufficient energy to take care of her own room while she is visiting; and if there are people whose duty it is, she makes that duty as light as possible for them, by putting away her own belongings, and in this way not necessitating extra work.

The welcome guest is the one who knows how to be pleasant to every member of the family, and who yet has tact enough to retire from a room when some special family affair is under discussion.

The welcome guest is the one who does not find children disagreeable, or the various pets of the household things to be dreaded.

The welcome guest is the one who, when her hostess is busy, can entertain herself with a book, a bit of sewing, or the writing of a letter.

The welcome guest is the one who, when her friends come to see her, does not disarrange the household in which she is staying that she may entertain them.

The welcome guest is the one who, having broken the bread and eaten the salt of her friend, has set before her lips a seal of silence, so that when she goes from the house she repeats nothing but the agreeable things that she has seen.

This is the welcome guest, the one to whom we say good-bye with regret, and to whom we call out welcome *with the lips and from the heart*.—[Ladies' Home Journal.

Cover a nail with soap and it will drive in hard wood easily.

Creaking boots may be prevented by driving a peg into the sole.

The fumes of a brimstone match will remove berry stains from the fingers.

Bee stings can be relieved by applying soda, either baking soda or washing soda, ammonia, or vinegar.

Disinfect all drains, sinks, and places where stagnant water lies with lime water, salt, or copperas; dissolve the copperas in hot water and pour into privy-pits, or any places where bad odors may come.

## PRIZE ESSAY.

**Are the Mental Faculties of Women Equal to Those of Men.**

BY MISS ALICE CASSELLS, MONTREAL, P. Q.

Why doubts still exist upon this subject will ever remain a mystery, but so it is, and ever will be, one of those subjects that cannot be settled to man's satisfaction. It has been proved beyond a doubt that the mental capacity of women equals man's, and when put in competition often surpasses them; but the bare assertion will not prove it.

As wives' and mothers' awful responsibilities are given us, and few have been unfaithful to the trust, and in guiding and governing a household requires intellect as well as peculiar executive ability. In the bible a sufficient number of names of women are mentioned to show they took no insignificant part with the Apostles in the great work of Christianity, and they were acknowledged as a power.

Ancient history records enough of woman's deeds to show they were not inferior in mental force to the men of that time; and the last century seems to have been particularly calculated to bring women to the front in many different ways. A few names will suffice: Madame de Stael, the literary wonder of that period; the gentle, learned and patriotic Madame Roland; the brave Grace Darling; Madame de Maintenon, who worked so hard for higher education; Maria Louisa of Austria, of masculine intellect, with all the womanly attributes of gentleness and mercy; Louisa of Prussia, almost chivalric in the cause of her country; Lady Norton, of brilliant literary attainments; the pious and studious Elizabeth Burnett; Queen Elizabeth, with all the strong characteristics of right and wrong, good and bad; and Charlotte Lordery, who saved France from a civil war by her daring assassination of Marat. This list will compare favorably with the masculine celebrities of that day.

In the present century their does not seem to be the same need for women taken such an active and conspicuous part, owing to better national and civil government, but did the need arise they are just as willing to give their best services as then, and man cannot do more. Many will adorn the pages of future history by the influence they have wielded for good, by their quiet courage and determination in the cause of right. The mighty moral works of Charlotte Bronte will be read where English language is spoken. George Eliot has been an educator of the human race in every line she has written, and the influence of her last work was apparent in the return of thousands of Jews to their native land.

Few of the works of women but are written for an object, either to correct an abuse, expose an oppression, or adjust some existing wrong, social, moral or national, and draw public attention to it. Mrs. Stowe's works had the effect of removing one of the blots on the escutcheon of the public, and Helen Hunt Jackson brought the attention of civilization to the abuses the Indians were suffering. It is by intellect the world is governed, and surely it may be claimed woman does possess her share.

Since opportunities have been offered women of obtaining better education by opening universities for their admission, they have come

rapidly to the front showing they can absorb the higher branches that have been so long reserved for men alone, and they make diligent students, coming well to the front in examinations, and surpassing the men in many of them, as the result at Cambridge last year proved it could be done.

In arts, sciences, professions of all kinds, business which women have engaged in, a proportionate amount can be pronounced a success, which is as much as can be claimed for men.

In literature thousands besides those I have mentioned can claim that they have honorably won a place in the world's army of busy workers.

**Some Tested Recipes.**

## FIG PUDDING.

One-half pound figs, one-half pound suet, one-half pound bread crumbs, all mixed very fine; half a cup of sugar, a spoonful of salt, a handful of flour; treacle enough to mix the ingredients; boil one hour and a-half. To make the sauce put one tablespoon of sugar in a small sauce pan; stir until it boils and turns brown; add half a pint of boiling water, a teaspoonful of corn-starch mixed smooth with water and a squeeze of lemon.

## APPLE PUDDING.

Make a batter with a pint of milk, three eggs, a teaspoon of baking powder and flour enough to thicken; peel six apples; pour the batter into a pudding dish, and put the apples in it; bake in a slow oven. Serve with sugar and butter beaten to a cream.

## LEMON AND TAPIOCA.

Put one cup of tapioca to soak for one hour, then boil thoroughly until no white grains appear; stir in a little sugar, and squeeze one lemon in; stir, and serve in a glass dish. Serve nice sweet cream with it.

## DRESSING FOR SALAD.

Beat together three raw eggs and six table-spoons of cream; three table-spoons of melted butter; one teaspoon of salt, one of mustard, one-half of black pepper, and one teacup of vinegar. Heat, stirring it constantly until it thickens like custard. Do not let it boil.

## STRAWBERRY SHORTCAKE.

One quart of sifted flour; a teaspoon of salt; a tablespoon of sugar; a level teaspoon each of soda and cream tartar; six ounces of butter rubbed into the flour. Mix all well together; make a hole in the centre and stir it up with sour milk or cream, with a knife; do not make it too stiff; divide in two, and bake in a slow oven. When done, split through the centre and butter; cover with strawberries; put on plenty of sugar; lay the cover on and cut through six times before sending to table.

## WEDDING CAKE—(BY REQUEST).

Eight pounds of stoned raisins, 2 lbs. of currants, 3 doz. eggs, 3½ lbs. butter, 3½ lbs. of sugar, 1 tin of mixed spice, 1 pt. treacle, 1 cup sour cream, 1 cup whisky, 3 lbs. of almond nuts, 2 lbs. mixed peels, 1 dessert spoonful of soda, and flour to stiffen; blanch the nuts and slice the peel and nuts rather fine. Put in the tins in layers of cake, peel and nuts.

## WHITE CAKE—(BY REQUEST).

Two and a-half cups flour, one and a-half cups sugar, one scant cup sweet milk, whites of three eggs, four table-spoons butter, two teaspoonfuls baking powder.

## CREAM SPONGE CAKE.

1 cup white sugar, 1 cup flour, two teaspoonfuls of baking powder. Beat two eggs in a cup and fill it up with thick, sweet cream; flavor to taste.

**Fashion Notes.**

Lace capes are so cool and suitable for warm weather every woman should have one of those stylish garments, and when you buy a pattern and make it at home the cost is about one-half what it would be to buy it ready-made; and all the directions are written on the pattern so plainly there can be no going astray.

Parasols which are no longer "first best," can be made quite dainty by covering with fish-net. Gather it close around the top and tack at each point, leaving about three inches to hang for a flounce; do not hem it.

The five-gored skirt will be found useful for cutting a dress over by. There being no back drape on it, the drape of your old dress will cut over for the breadths. Face the bottom. Do not bind it, and you will find it neat-fitting and comfortable. It may be trimmed down each seam if desired.

Hose have at last made their appearance cheap, and of a serviceable variety, black and colored, but black looks always the best, and the quality now shown washes beautifully.

Embroideries of all varieties make effective trimmings for washing-dresses, and small washing-buttons are shown of several colors.

Prints are made up in all styles, from the most elaborately trimmed to the plainest; but velvet on print does not accord, and it is in better taste to finish in embroidery or a serviceable lace of crotchet or knitting.

Hats and bonnets are not different from the spring styles. Flowers are the favorite garniture, combined with all kinds of fancy net, ribbons, or gauze. Gold cord is seen in some, but flowers, flowers everywhere. And what can be prettier, from the lovely rose to the long wreath of daisies and grass?

Gloves can be had of so many serviceable textures, from grey and brown to black, and are cool and suitable for warm days. The popular taste in dress materials seems to be cashmere, and there are scores of different textures to choose from, all pretty. Some delicate shades are too pretty to last the wear and tear of sun and weather, so would not be a discreet investment.

**Harm From Decayed Teeth.**

Incalculable harm is done to both the health of a child and to the integrity of a second set of teeth in allowing the temporary teeth to become decayed and abscessed, carrying pain and suffering, and frequently indigestion and all its accumulated evils.

**Girls in Alaska.**

In Alaska a girl is ready for society as soon as she enters her teens. It does not require many years in that country for a girl to grow up. The dress of the average Stickeen river maidens is not very elaborate. A plain cotton garment, long and loose, envelops her person, and a Turkish bath towel is wound about her head. When she goes out a blanket of bright colors is thrown around her shoulders. The wife of a missionary in that section says the young women often go bare-footed, but that after they see the boots and shoes of the white women their great desire is to have a pair.

**Uncle Tom's Department.**

MY DEAR NIECES AND NEPHEWS:—

The long June days have gone forever away for 1891, and July, with burning sun and occasional shower, is ours. The school door is closed and all around looks dead. The grass, so lately trodden by little feet, is growing up again; the testers and the swings are still; the bell is quiet; the wind, among the leaves of the tree by the window, makes its moving embroidery on the empty desks and across the floor, but all is quiet—quiet. Teacher is away for vacation, and the boys and girls, where shall we find them? As they pass the school-room, and that feeling of loneliness steals over them, do their thoughts go forward to the days when they shall be strangers to that familiar room, when they shall have taken on them the work of life—this one, only life—which no one gets a second chance to live? But now, where shall we find the little busy-bodies? Some, fathers' help in the weeding and the haying, going with messages, carrying cool, fresh water from the spring, or picking berries, in the garden, driving home the cows, washing milk pans or creamers, sweeping to make home tidy, ironing the clean clothes—smelling as pure as the country air and water cleanses; baking for the coming picnic. Yes, a variety of things I see them at, busy as the bees, and improving, like time, I trust, each sunny hour. Not that I would have them work all the time. O, no, Uncle Tom has not forgotten the old rhyme, nor does he wish his young friends to forget to practice it:—

"Work while you work, and play while you play,  
That is the way to be happy and gay."

Go to your work with your whole heart. Half-hearted work with one's thoughts on something else, how it wastes time! A spirit of unrest gets into boys and girls, men and women, and they begin to pity themselves, and that is enough to make anyone miserable. They look through blue spectacles, or else they manage to find the dark side of everything, especially the work they are at. If a room is gloomy, and the sunshine comes in and falls on one spot, making it warm and shiny, a dog will go there and rest and be happy. Some of my boys and girls do not always show so much good sense. They think their work dull, their home quiet, their fields rough, their machinery old-fashioned, their organ out of tune, their—well, a grumbling spirit makes everything wrong. Now, Uncle Tom likes a sharp hoe, and a good fork, and a fine barn, and all the improvements which make farm work a pleasure; for all that, there is no use in letting things, which cannot be remedied at once, shut one's eyes to the beauty of field and tree and scented flower, shut their ears to singing birds and murmuring waters, or to the music of loving voices all around us. And in these things there are none so rich as the boys and girls of the farm. Think long and well before you decide to leave it and the loved ones. Do some city chaps who come to the country for a day or two call you "green"? Do not mind that. They are green about your work, and doing honest, manly work in open air, with strong limbs and sinewy frame is far beyond perspiring behind a counter trying to please customers, with weary limbs and aching head. No, if an honest opinion could be obtained from

the boys who have gone to the city they would say, stay where you are, you are more independent. We all look to you for our support. Without you we could not live. So you see the rest of the world are to the farmers what those lichens are which in our northern woods swing from and live on the trees, drawing their nourishment from them.

"Ho, ye, who till the stubborn soil,  
Whose hard hands guide the plough,  
Who bend beneath the summer sun,  
With burning cheek and brow,  
Ye deem the curse still clings to earth  
From olden time till now.  
O, while ye feel 'tis hard to toil  
And labor long hours through,  
Remember, it is harder still,  
To have no work to do."

UNCLE TOM.

**FIRST PRIZE STORY.****My First Visit to Westminster Abbey.**

BY MISS JESSIE BYFORD, WIMBLEDON, SURREY, ENGLAND.

One bright April morning in the year 18— I visited for the first time that grand and imposing building—Westminster Abbey. For centuries it has stood, its solid walls secure from the elements. To ensure its preservation continual additions to the walls and roofing are now made. It stands on the site of an ancient temple erected to the honor of the Roman God Apollo. It was consecrated about the year 1066.

I had long wished to see the famous Abbey, and at last my desire was gratified. Crossing Westminster Bridge, I caught the first glimpse of the sacred building, and a few steps farther brought it in full view. The bell was tolling for morning service, and I, accompanied by a friend, entered with the rest of the congregation. As we walked up the aisle I noticed the numerous statues. The interior of the Abbey consists largely of woodwork, beautifully carved, testifying to the skill and patience of those whose hands had helped to raise the noble and beautiful structure. Certainly they, with the modern poet Longfellow, believed that "nothing useless is or low," and in every detail of their work a scrupulous care is very noticeable. As we waited for the commencement of the service thoughts of the good and great buried within the walls filled my mind. While the Abbey stands their memory will be kept green in the hearts of those who frequent the building. Soon the mellow notes of the powerful organ pealed forth, and with slow and measured steps the surpliced choirsters and clergy entered and took their places noiselessly. Then the familiar words of the beautiful English liturgy came to our ears. The Abbey was filled with a reverent congregation. A peculiar sense of peace prevailed, partly the result of the silence which fitly reigned. Then in a hymn of praise the voices of the congregation soared upward, led by the well-trained choir. I was attracted by the face of one little fellow, whose whole soul was apparently in his work. This was followed by a short sermon. As the preacher pronounced the words of his text, his tones echoed through the building. At the conclusion of the service, during a beautiful voluntary on the grand organ, the congregation dispersed. My friend then led the way to the outside of the building known as the cloisters. Here the clergy and other officials connected with the Abbey reside, and in the vicinity is situated the famous Westminster

School. That part of the building containing the precious relics of bygone ages was closed. It is open to the public certain days of the week. The windows of the Abbey are very beautiful; on them are depicted various scriptural scenes. The walls are in certain places decorated with similar illustrations. One special feature in the management of the Abbey pleased me greatly, namely, that the seats were free and open to all. After spending a short time in the cloisters I returned home, desiring at some future time to make further acquaintance with the beautiful edifice. On describing my various impressions to one who has resided during the whole of his life in the vicinity of the metropolis, he declared the Abbey to be "the pride and glory of London."

**SECOND PRIZE STORY.****Pete.**

BY JOHN B. DUNLAP, LANGUALE, MANITOBA.

This is about a sandhill crane captured by a party living near hear, and a very interesting bird he was. He was called Pete, because this is what he was all the time saying, interrupted now and then by the loud croaking call which every boy in Manitoba is so familiar with. Pete was rather ferocious when taken, but being young he very soon became so tame that he would follow his owners around like a dog, and, indeed, he seemed even more attached, as he would fly around (quite high in the air) till he espied those for whom he was searching, even when five miles distant from home, when he would immediately alight close beside them with a triumphant shout. His favorite pastimes were pecking and splashing around in a stream or pond of water, and going through various gymnastic feats with a small piece of wood or a stone. He would sometimes continue these amusements for fifteen or twenty minutes at a time. Being particularly fond of mice, he would very often go with the men to the hay-meadow, where he sometimes succeeded in catching a dozen or more in a day. His food was principally composed of bread (which he always soaked), mice and insects.

Pete did not like children or dogs at all, and if a child was allowed out in the yard alone he (the crane) invariably made for him. I never saw a wild bird so tame as Pete. He would remain in the house half the time if allowed, but he was very meddlesome, wanting to have a hand, or rather a beak, in everything done. Very often when the family were at their meals, Pete would march up to the table, and without the slightest ceremony be off to his water-trough with a piece of bread or potato.

This crane was one of the more common kind, rather more slate colored than brown, but he was very large, being about four feet high. At the end of two years Pete was accidentally killed, and his owners were very sorry, they missed him so much. He was valued so highly that his owners had refused the price of ten dollars for him.

A Calamity.—Mr. Bingo—"I have terrible news. While I was in Cousin Flint's hardware store to-day getting a mouse trap, he said that the old homestead had been burned, your Aunt Maria had perished in the flames, and the children were coming down to the city to live with us." Mrs. Bingo—"You don't mean to tell me that you have seen a mouse in this house!"

**Cows and Sheep.**

Jerome K. Jerome has written on *cats* and *dogs*. Burroughs has studied *birds* and bird language so well as to make his readers find new friends and new interests in every country walk. J. Fennimore Cooper has woven *bees* in with his history of early Canada, when the waters of our

quieter thoughts, or more feeling than the picture before us! The quiet country scene, the shady trees, the fresh, green grass, the gurgling stream, to which the sheep and cattle come to slake their thirst or to stand in its cooling flow.

When Longfellow sought for a smile to express the sweetness of *Evangeline's* breath, he

They are thought of, cared for, patted and petted; they give the milk, and the butter is made, not only for use, but often to supply the wants of the house.

The dear old cows of the farmer, what memories they bring with them as they come the homeward path at the milking time down



COWS AND SHEEP.

lakes were strangers to steamboats and white men. Others have followed on monkeys, parrots, hens, beetles, butterflies, and a thousand other of the living things around us; and what school boy has not written a composition on the horse?

To anyone who has a love of the pastoral in their hearts, what can call up sweeter memories,

found it thus:—"Sweet was her breath as the breath of kine that feed in the meadows." Swiss maidens wreath their cows' necks with flowers, and even little Canadian maidens put their arms around their necks and scratch between their horns. How gentle and patient, loving and kind they are when treated gently. In many homes the cows are next to the people.

the long, quiet lane, or by the narrow, well-worn path through the bush. How quietly they come one after the other, now stopping for a bite of grass or a few sweet leaves, to lick or scratch a side where some fly has bitten, but ever homeward treading. On they come to the stream, get their drink, and then back again to the milking place. One more weary than the

rest of the burden of milk she has carried through the long day, bawls loudly and stands ready at the gate to be milked first, and woe to the one who, pail in hand, attempts to pass her. A race follows, and if she is stronger than the one chosen ill-temper is shown, but she is only an animal, and people do as much or more.

Ah, yes, the cows call up old memories, they are all there at the gate, Bell and Aggie, Whitey, Spot, Bett, Blacky, Cherry and Kate. But the years have passed, and the little bare feet that used to go for them go on other messages now, and some who loved the woods and the fields, and going for the cows have left the clear stream to rush over its pebbles from the cedar woods—left the clear spring and the old farm, and have strayed away to other scenes far distant and different, while some are resting quietly—life's work done, with the flowers and daisies overhead. Strangers walk the once familiar paths, and other little feet drive other cattle home, and life goes on; and, one by one, we gather to the grave, placed there by those whose turn shall quickly follow. Is this all of that strange mystery called life? To fill in the time with heart throbs, to sleep, to wake until the end. Ah, no, there is for us the filling up of a wise purpose, there is a work for each one of us, and something for each day, else that day had never been given us.

The sheep, too, with their innocent faces, gentle and graceful, as they nibble the grass, bend to drink at the creek side or lie down to rest. The lambs run and play and are as full of fun as kittens as they jump over the hillocks or try to race in their innocent fun. Man, the superior, may learn much from the brute creation. Did we go through life like Him who was offered as a "lamb for the slaughter," seeking only to imitate His example, how much more should we find of the wine of life, how much more would the world be bettered, how much less strife, how much less friction! Life would be sweeter, nobler, truer and happier. Looking unto Him as our example, as the "One among ten thousand, the one altogether lovely," who is our Creator and theirs, but who set us over them and gave us mind and soul. K. R. McQ.

#### To Soften Wet Stiffened Shoes.

"The women have a new use for vaseline," observed a Fifteenth street drug clerk, as he jerked his thumb over his right shoulder in the direction of a well-dressed lady who was leaving the store after having made a purchase of the petroleum compound.

"What's that?"

"They are using it on their shoes now."

"On their shoes?"

"Yes, and the ladies must be given credit for having made a valuable discovery. The ingredients of vaseline have a wonderful effect on fine leather, and it is fast taking the place of all compounds manufactured for softening the shoes. Take a pair of shoes that have become stiff and uncomfortable by constant wear in the rain and apply a coat of vaseline, rubbing it in well with a cloth, and in a short time the leather becomes as soft and pliable as when it is taken from the shelves of the shoe dealer. Yes, indeed, this rainy weather has caused quite a boom in the vaseline trade."

If the way of heaven be narrow, it is not long; and if the gate be straight, it opens into endless life.

#### The Power of Thought.

BY S. P. BROWN.

Humanity is endowed with powers of various kinds which we may number and classify to suit occasions; but after we have done so, and built, as it were, a vast and noble structure, if we take but this one pillar out the monument will crumble to ruin.

What is this power then called thought, that exerts such a tremendous governing and guiding influence over the whole race? Is it the action of the brain alone, or does it require some other co-operating power to constitute thought? Let us look at it for a few moments. The brutes have brains, and many instances are upon record showing evidence of the most powerful activity, and yet this is not thought, it is simply instinct—the involuntary action of the brain; and why one animal may show this to so much greater extent than another, is simply because it possesses a brain some larger and with many more convolutions in it. But to make thought of it the power of reason requires to co-operate with the action of the brain, and this constitutes the noble power of which we are now speaking.

By it we are transported with the velocity of the electric telegraph from any place to any other place where pleasure or interest of any kind has claimed the attention of our eyes sometime in the past. It may be to cross the wide stretch of the far western prairies to some attractions in the Rocky Mountains, or it may be to visit the scenes of Holy Palestine. Anything that we have ever beheld with pleasure may be viewed with parallel interest while attending our daily avocations without detracting the attention enough to interfere, but, on the other hand, giving variety to the chain of thoughts which must ever be rapidly running through the mind, thus adding to the pleasure of life and dispersing thoughts of drudgery and disagreeable tasks.

Furthermore, any advance that has been made socially, educationally, mechanically, politically, in fact any phase of life or business, has been and ever shall be the product of thought. The electric light, telegraph, telephone, the net work of steel rail lines stamped upon the face of our continent, and the locomotives and carriages with all their vast improvements, which are continually rolling over them, are but the products of thought—most noble power possessed by the human family. 'Twas thought that produced the wonderful Eiffel Tower, and 'tis thought that has projected its great contemporary in Chicago for the World's Fair. It searched the records of the earth's crust, locating the extensive beds of rich minerals, and afterward opened up the coal fields of Pennsylvania, the iron minds of England, Norway and Sweden, the gold of California, and brought the western prairies into a productive state. It refined the iron thus obtained to such an extent that even greater strength can be had from less weight than with wood, thereby supplementing the decreasing usefulness of the mighty forests, which have so faithfully played their part for centuries in furnishing for manufactories and fuel for the world. It is thought that gave the good housewife her highly-prized sewing machine, the husband his valuable auxiliary, the binder, the weaver his loom, and laid the Atlantic cable, thus bringing the old and new worlds but a few minutes apart.

The person who thinks most thinks deepest,

and he who thinks deep reads most of that which is the product of great minds, and hence conducive to the greatest improvement. In this way not only does each succeeding generation advance by its own thoughts, but also by the working out and the practical application of thoughts of the past generations which were not fully developed in their day.

When one stops to think of the power of thought, what it has done and shall do for the advancement of the welfare of mankind, there seems to come in a confused flood, as did the floods of the spring of '90, sweeping everything before it, all that he has ever heard or seen, each to give its portion of credit, till we are at a loss to know where to begin or where to end.

There is, however, one more very important function of this power that we must not lose sight of; we have seen that thought has developed and improved all kinds of industry, from the least to the greatest; so also is it the groundwork of man. It is the foundation of the whole structure of character, and according to a person's thoughts the character will develop. As the helm guides the ship at sea, so thought will guide a man to success or ruin. That person who indulges in much thought of a deep, pure nature wears the stamp of a well-developed character in every movement and in all conversation.

#### To the Boys.

"My feeding was once o' the best corn and hay,  
That ever grew in cornfield or meadow sae gay;  
But now I'm turned out, I've naething at all—  
I'm glad to eat the char grass that grows on the wall—  
I'm a pair auld horse!"

Come here, my lad, and let me tell you something that will save you many a heart-burning and bitter pang in later years. In our stirring young country too many of you lads forget that you owe a debt of love and gratitude, of respect and esteem, to your old father, who watched over you as an infant, worked for you as a child, and pinched and saved to give you a good education and a decent start in life, and is still giving you the benefit of his long experience, now he is getting old and unable to toil like a young man. The old, old law of Divine retribution still holds good, and as you treat your father, now he is old and infirm, so will you be treated by your own boys and girls when your own young strength is gone. Don't let him apply the lines at the top of this article to himself, but rather let him be like one of the smiths in the well-known song:—

"Now these jolly, jolly smiths, when their hair  
turns grey,  
Will gladly sit down and rest,  
And jollily, jollily, each one will say,  
We've done our very, very best,  
And the thought so dear,  
Will each bosom cheer,  
That the young smiths still strike on,  
And feed well the fires of their resting sires,  
Who their work have so nobly done."

INVICTA.

The thinnest, and at the same time one of the toughest, leathers tanned is the frog skin.

Do you ever have any trouble with your "canned fruits" spoiling, especially canned tomatoes! I mean the good home-made kind, put up in glass jars. Just try this: When you put them away wrap each jar in dark blue paper (you can get it from the drug store; they use it for Seidlitz powders). Then put the jars away in a dark place. This is a good thing to remember and put in practice when you want to keep anything from action of the light.



Puzzles.

1-CHARADE.

My first no life no feeling blesses. My second everyone possesses, And nothing more affronts my second Than when it like my first is reckoned. United they a being show, The greatest nuisance that we know.

T. PLANT.

2-CHARADE.

A book and its author. My first did lay a giant low, His name I'm sure full well you know. Since people first my second found, For it they've hunted in the ground. When through the country you do ride You'll see my third on every side. These items three in order place, The name of a well-known book they'll trace. If you the answer do not know Unto the AUTHOR you may go.

ADA ARMAND.

3-CHARADE.

My first with ease we all can do, Sometimes more than we're wanted to. My last a Jew would never eat, Though many here deem it a treat. If you look well in these combine Sir truant Fairbrother you'll find.

ADA ARMAND.

4-PUZZLE.

I am something very precious And of much importance. I have sixty in family, And my children the same. I travel all over the world, And from the earth to the sky. Now, puzzlers, who am I?

ARTHUR MASON.

5-ILLUSTRATED REBUS.



6-DOUBLE ENIGMA.

In "dressing", In "dosing", In "romping", In "jumping" around on the green. In "louding", In "hiding", In "stowing", In "marking" out a ball ground. In "boasting", In "fencing", In "dancing", In "boating" on the calm lake. In "bending", In "carrying", In "loading", In "darting" about in the crowd.

Whole is a lamented statesman and something he loved.

HENRY REEVE.

7-DROP LETTER PUZZLE.

-i-t-r-r-t-t-o-

EDDIE R. DOW.

Answers to June Puzzles.

- 1-Determination. 2-House-cleaning. 3-"Greater than anger is love that subdueth." 4-Friend. 5-"A penny saved is two pence clear. A pin a day is a great a year." 6-Eutychus-Acts, chap. 20, verse, 9. Ehimetech-Ruth, chap. 1, verse 2. Uzziah-Chron., chap. 26, verse 19. Terah-Gen., chap. 11, verse 31. Yoke-1st Kings, chap. 12, verse 4. Claudia-2nd Timothy, chap. 4, verse 24. Huldah-2nd Kings, chap. 22, verse 14. Uzzah-2nd Sam., chap. 6, verses 6 and 7. Seeva-Acts, chap. 19, verse 14.

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

Henry Reeve, Ada Armand, Mattie Woodworth, J. Irvine Devitt, Lucy A. Nicholson, Jane Leggat, Jessie Ellis, Emma Skelley, Fred K. Harris, George Hunter, Emeline Wilson, Gertrude Moore.

Dorothy.

In a low white cottage among the trees, Dorothy lives with her father; 'Midst apple-tree blossoms, and honey bees, His comfort and pleasure looks after, Who, returning from toil, of tilling the soil, Exclaims as he sees his fair daughter, Dorothy, dear, My love, do you hear? I could not do without you.

Through the grass trips her light-springing feet, To attend to the birds, and her flowers, Her supple form bends 'neath the branches sweet, And the blooms fall upon her in showers, They seem to say, in their own sweet way, Dorothy, dear, My love, do you hear? We could not live without you.

The fragrant lilacs down by the gate, Nod their heads in the soft spring breeze, While the robin walks on the lawn, and calls to his mate

In her hidden nest, above in the eaves; The birds on their perches, 'midst cut-leaf birches, Swing, and sing, with the fluttering leaves, To Dorothy, dear, My love, do you hear? We would not live without you.

Through the vine-twined hedge, a form she sees, That is noble, with manly beauty his portion; With a flush on her cheek like pink sweet peas, She hides not her girlish emotion. He clasps her hand, as he repeats again, Oft uttered words of devotion. Dorothy, dear, My love, do you hear? I cannot live without you.

-Good Housekeeping.

Common salt moistened with lemon juice to form a paste, applied to the freckled hands and allowed to dry on the freckles in the sun, is tried by young ladies just back from the sea shore. When dry five minutes, wash off and apply cold cream.

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There will be sold by auction at Eastwood, (next G. T. R. Station, east of Woodstock), on Friday, September 12th, 1891 (in the week preceding the Toronto Industrial Fair), One Hundred and Twenty Head of Pure Shropshire Sheep (Ewes and Rams), all imported or bred by the undersigned, excepting some few bought of Mr. Gibson, Delaware, and at the Ontario Agricultural College, Guelph. Only animals registered in the American Flock-book will be offered. Catalogues on application to

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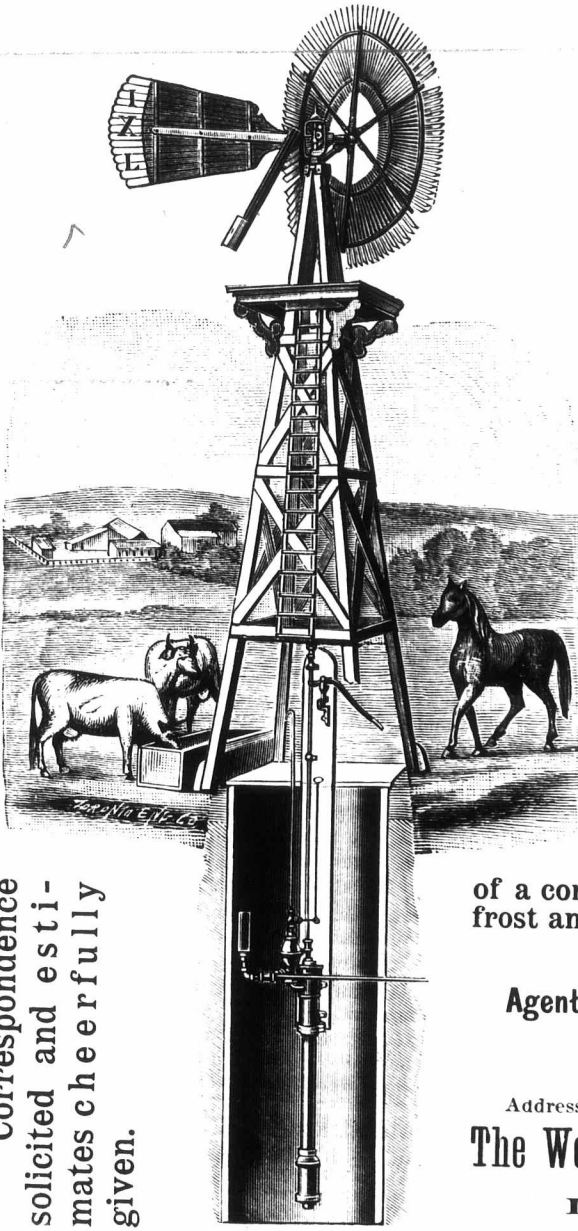
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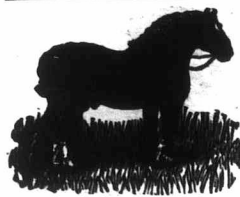
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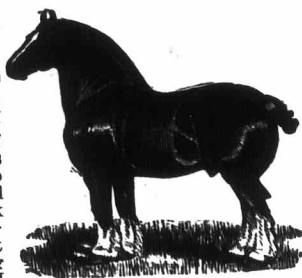
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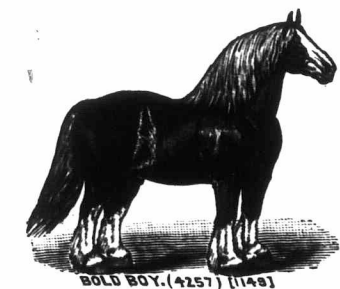
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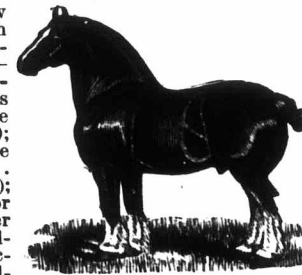
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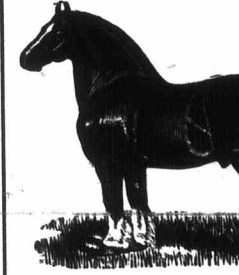


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**NORMAN, PERCHERON, BRETON STALLIONS**  
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Headed by Mambrino Rattler, alias Crown Prince (1247), the best bred son of Mambrino Patchen in the Dominion. Write for his terms of service. Also standard Mares of choice breeding. A grand young Stallion for sale. **A. M. Vansiele,** Jerseyville Stock Farm, Jerseyville, Ont. 305-y-OM

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**JACK DILLARD,** bright bay; a few white hairs round one hind foot; three years old July 10th; a grand, big, open-gaited colt; winner of the colt stakes at Stoney Creek, 1890, as a two-year-old. Whoever gets him gets a mover. Sire Dillard Wilkes, by Red Wilkes. Service fee, \$500. Dam by Harkaway; 2nd dam by Caledonia Chief; 3rd dam by Old Royal George. Price right. Come and see him. Also an A1 Jersey Cow; bred at Oaklands; registered A.J.C.C.; a grand pedigree and a good milker, for less than half her value. **J. W. JARDINE,** Vine Vale Farm, Hamilton, Ont. 307-c-OM

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**Mr. John Ackrow & Son,** Hillside Farm, Highfield P.O., Ont., have been breeding Shorthorns for over thirty years, and now offer a few young bulls and heifers of the richest breeding for sale at reasonable figures. Our cattle are the smooth, short-legged, beefy kind. Imported Scotch bull Reporter heads the herd. Station and Telegraph, MALTON, ONT. 307-y-OM

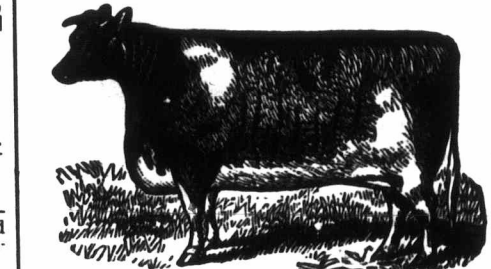
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**PURE-BRED SHORTHORNS.**

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

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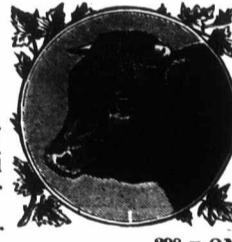
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The imported 2-year-old Aberdeen Hero  
And a choice lot of young bulls of our own breeding. Some No. 1 imported Ewes & Lambs FOR SALE.  
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**Shorthorns, Berkshires.**



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—AND—  
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FOR SALE.



My Shorthorns are well bred, good colors, and have been fine milkers for generations. I have over 100 females and a large number of bulls, from which buyers may select. Prices to suit the times. Satisfaction guaranteed. Correspondence promptly answered. Visitors welcome.

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But times are hard, and money still scarce. I will sell a few well-bred bulls and heifers of Bates blood, and an aged bull at hard-pan prices. Write me, or come and see them. **M. G. Ireland,** Meadow Lawn Farm, COPESTOWN, ONT. 308-y-OM

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My Shorthorns are bred from stock imported by such noted breeders as Arthur Johnson, J. C. Snell and Green Bros. I have a few choice heifers for sale. My Improved Large Yorkshires were imported directly from the famous herd of C. E. Duckering, Kirton, Lindsay, England. I have some young pigs imported in their dam, for sale. Prince Regent, bred by Snell Bros., heads my Berkshire herd. Times are hard and my prices are right. Write or call. **A. F. MCGILL, Hillsburg, Ont.** 302-y-OM

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**PURE-BRED A. J. C. C. JERSEYS**  
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Prince of Oaklawn (imp.) 12851, heads the herd. Young stock for sale. Also a few choice unregistered and high grade cows.  
Farm one mile from Streetsville Junction. **J. H. SCARLETT, Streetsville, Ont.** 297-y-OM

**Jerseys for Sale.**  
Some of the finest heifers and calves I ever bred, and at lower prices than I ever offered before. Registered, and express paid by me to any reasonable point. Herd headed by the famous pure St. Lambert bull, Canada's Sir George, prize winner every time shown, son of Allie of St. Lambert, 253 lbs. butter in one week; Massena's son, pure St. Lambert sire, dam the great Massena, one of the wonders of the Jersey world, estimated to have made 902 lbs. 2 oz. butter in one year and eleven days—actually yielded 9,069 lbs. milk in one year and eleven days; Signal of Belvedere, inbred Signal, dam the celebrated prize cow, Miss Sate-nella, 20 lbs. 6 oz. butter in one week, on second calf only.

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**GURTA 4th**  
(1181)  
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  
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Imported and Canadian-Bred

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I have on hand a large herd of finely-bred Ayrshires of splendid quality. My Clydesdales are also first-class. Stock for sale. Prices and terms liberal.

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This herd took all the first prizes in Quebec in 1867 and 1868, and in Ontario in 1889, in competition with all the leading herds. Young stock for sale, all of which is from the celebrated bull **ROB ROY** (3971), which is at the head of the herd.  
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I have one of the oldest herds of Holsteins in Canada, founded on the best blood in America; also registered Clydesdales and Carriage horses.  
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**CHOICE HOLSTEINS FOR SALE.**  
I have a few very nice pure-bred registered Holsteins, bulls and heifers, for sale at very reasonable figures. Write or come and see me. Also one or two high grades.—**JNO. A. LINE, Sherwood, Ont.,** Richmond Hill Station. 304-f-OM

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are the most remarkable families and greatest performers. Stock of all ages for sale at the lowest possible prices. Railway Stations—Tavistock and Hamburg, on G. T.R. Post Office—Cassel, Ont.  
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**Holstein-Friesian Cattle.**  
ADVANCED REGISTRY STOCK.  
Netherland Romulus, a grandson of Netherland Prince and Albino the second, heads the herd. Young stock for sale.  
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**THE GREAT MILK AND BUTTER HERD OF HOLSTEIN-FRIESIANS.**  
**SMITH BROS., Credit Valley Stock Farm,**  
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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. 291-y-OM

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When we founded our herd our motto was "Quality and Breeding," and as a result we now offer for sale some choice young things rich in the most fashionable strains of blood. Look for our herd at Toronto Fair. **J. C. McNIVEN & SON,** Lansdowne Farm, WINONA P.O., ONT. 307-y-OM

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STOCK FOR SALE AT REASONABLE PRICES.

All my stock I have carefully chosen for their extra fine breeding and large milk records, and are all registered in Holstein-Friesian Herd Book. A visit, or correspondence solicited.

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Two nicely marked Yearling Bulls of the best milking strains.

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**Holstein-Friesians**

My herd is composed of the choicest individuals obtainable, and belong to the best milking strains. Young stock at the lowest living prices. Communications promptly attended to. **Watford R. R. Station.** 306

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**PURE-BRED REGISTERED HOLSTEIN CATTLE.**

The sweepstakes herd at the Toronto Industrial Fair, where my stock bull Woodbine Prince (6712) also took the first prize and sweepstakes silver medal. I keep no cattle that are not of the highest standard.

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**HOLSTEIN-FRIESIANS**  
THE CHOICEST HERD IN CANADA.

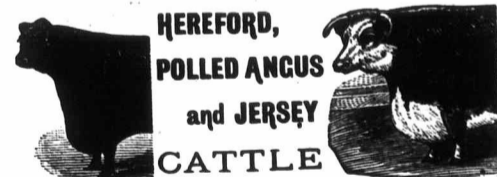
Stock of highest excellence and most noted milk and butter families of the breed. Stock of all ages for sale. Prices right. Railway Station, Petersburg on G. T. R., New Dundee P. O., Waterloo Co., Ont. Send for catalogue. 306-y-OM

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Choice Young Bulls and Heifers of the above breeds for sale at moderate prices at all times. A few fine, young Hereford Bulls, by Cassio, at low prices if taken at once.

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All imported or bred from imported stock. "Sir Mac," of the famous Aaggle tribe, heads the herd.

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



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Imported Breeding and Shearling Ewes; Shearling Rams, Ram and Ewe Lambs from Imported Sire and Dam.

Prices lower than the lowest.

**SHORE BROS.,** White Oak, 298-y-OM

**PURE-BRED : REGISTERED : SHROPSHIRES!**

I can sell six dandy Shearling Rams and some choice Ram Lambs, bred direct from Imp. stock, at prices to suit the times. Come and see them.

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Having reduced my flock by recent sales,

I am now in England

BUYING for the

Fall Trade.

I hope to secure a lot equal to my former importations as regards character and size.

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

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**Improved Yorkshire Pigs.**

A choice lot, imported by ourselves. Sheep from the flocks of H. J. Sheldon, F. Bach, R. Mansell, J. Thonger.

Yorkshire pigs from last year's prize winners.

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

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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



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**Shropshire Sheep**

Now ready for shipment. Imported and Canadian bred Rams, Ram and Ewe Lambs, the get of the choicest imported sires. Good heads, good carcass and good fleece. None better in the Dominion. Write for prices. Address—

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My sheep are imported from the flocks of Henry Webb, Geo. Jones, J. J. Coleman and W. Toop. Will now sell a few ewes from the above in lamb to imported rams, also a few ewe lambs of my own breeding.

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NON-POISONOUS

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.

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"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

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Sole Agent for the Dominion. 308-y-OM

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offer for sale choice Southdown Sheep of all ages, from their well-known flock, which has taken over 2,000 prizes since its establishment. Correspondence promptly attended to. 307-y-OM



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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.

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**WHITE -- YORKSHIRE -- PIGS**

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Entire breeding stock of Yorkshires are imported; specially selected from stock of F. Walker-Jones and Sanders Spencer, Eng. Registered sows and boars supplied not akin. Shipped to order and guaranteed to be as described. **J. E. BRETHOUR,** Burford, Brant Co., Ont. 300-y-OM

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**Improved Large White Yorkshires, Pedigreed.**



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Ridgling horses successfully operated upon; write for particulars. 275-y

**IMPROVED - YORKSHIRE - PIGS**

OF THE BEST QUALITY CAN BE OBTAINED AT MODERATE PRICES, FROM

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the oldest and most successful herd in the country, having gained since 1856 nearly 300 prizes. All pigs supplied either entered or eligible for entry in the herd book. 300-y-OM

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We have animals of all ages for sale, of good breeding and excellent quality.



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**A Good Pig with a Straight Pedigree at a Fair Price.**

The Pioneer Herd of Improved Large Yorkshires still sticks to its old motto and maintains its old reputation for good stock and square dealing. A few very nice young sows, bred to imported boars, and some excellent May pigs, just ready to wean, for sale at reasonable figures. First come, first served, so write soon. Address—**J. Y. ORMSBY,** V. S., Grange Cottage, Springfield-on-the-Credit, Ontario. 307-y-OM

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6 Boars, 4 to 6 months' old, fit to head any herd. Pairs not akin. Chesters a specialty. Prices right. 305-y

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A few grand pigs of both sexes, just weaned, from a first-prize sow. **A. D. ROBERTS,** Walmer Lodge, ANCASTER, ONT. 305-y-OM

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A number of pedigreed Berkshire Sows, of capital quality and breeding; old enough for coupling.

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**BERKSHIRES**

—AND—  
**COTSWOLDS.**

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EDMONTON P. O.,  
Brampton and Edmonton Railroad Stations.

Now is the time to secure young pigs from choice imported sows, and got by the renowned imported boars "Enterprise [1378]" and "Perry Lad [1378]." "Enterprise" won first prize at the two leading fairs in Ontario last year. He weighed just after landing from England 850 pounds. His pigs are coming fine, and are particularly well marked. We have for sale a grand lot of Yearling Cotswold Rams and Ewes which are well worthy the attention of those in want of such. Will be pleased to have visitors come and see our stock. Write for prices. 208-y-OM

**POLAND CHINAS**

All pure-bred and registered. From the very best strains in America. First come first served. Write for prices. I mean business. 208-y-OM W. S. HARRIS, Homer, Michigan, U. S.

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Breeder of Pure-Bred Berkshires of the choicest strains. The imported boars Royal Standard and Prince Albion (1113) head my herd. My Sows comprise some of the best specimens that money could buy from such breeders as Snell Bros. and Geo. Green. I guarantee every pedigree, and furnish to register. Write for prices, and you will find them and the stock right. Satisfaction guaranteed. 304-y-OM

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Imported and home-bred; from the best strains  
**-YOUNG STOCK FOR SALE-**  
at Right Prices. Apply to—  
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Choice young pigs, both sexes, from Geo. Davis' stock, sire a prize winner at Toronto. **Charles Brown,** Drumquin P. O., Ont. 306-y-OM

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**Poland-China Hogs**

Champions and favorites in the U. S. Most pork for food consumed. Docile, mature quick, always fat even on grass. Coming hog of Canada. They must predominate on merits. Best hog in the world for profit. 200 head for sale this season. 1-602  
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**PURE-BRED TAMWORTH HOGS AND GLYDESDALES**

**JOHN BELL,** Clydesdale Farm, L'AMAROUX P. O., ONT.

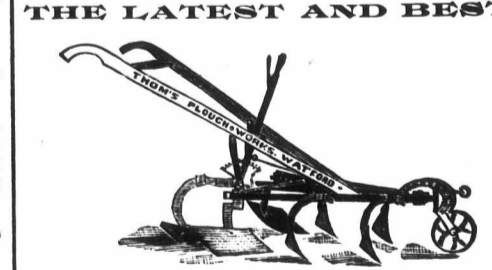
offers for sale young Boars and Sows bred from registered stock, imported from the best herds in England. This famous breed of bacon pigs is recommended by the largest bacon curers in the world. Try them, it will pay you. Orders now booked for spring pigs. Some A. J. Clydesdale Stallions kept for service. Imported and home-bred Coits and fillies for sale. 304-y-OM

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For HORSES, CATTLE, SHEEP, PIGS, DOGS and POULTRY.  
A delicious combination of Tonic, Stimulant, Nutritious and Fattening Food, which Purifies the Blood, prevents and cures Disease, and improves the health of all animals by its use. One trial will prove its usefulness and economy. Send for testimonials, prices, &c., &c. 238-y-MO



**THE LATEST AND BEST**



**CORN & ROOT CULTIVATOR**

The old fashioned set and thumb screw adjustment

**KNOCKED -- IN -- THE -- HEAD.**

The width can be changed by lever while in operation, and crooked rows worked as well as straight, making it the most perfect implement of the kind. We manufacture the very latest

**Improved Riding and Walking Plows** on the market.

Agents wanted. Correspondence solicited.

**THOM'S IMPLEMENT WORKS, - WATFORD, ONT.**  
Established 1875. 304-f-O

**W. G. EDWARDS & CO.**  
IMPORTERS AND BREEDERS.



Pine Grove Stock Farm  
ROCKLAND, ONT.

**SCOTCH SHORTHORNS.**

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.

ALEX. NORRIE, Manager.

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**STOCK & DAIRY FARM**

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Shorthorns, Shropshires and Berkshires

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

HENRY SMITH, Manager.



Laurentian Stock

AND

Dairy Farm.

North Nation Mills, P. Q.

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.

GEORGE CARSON, Manager. 303-y-OM

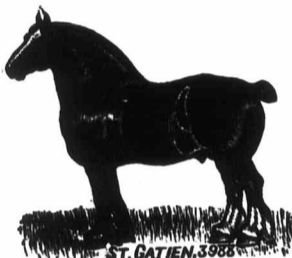
**Imported Clydesdale Stallions and Mares for Sale.**

Highest Prize Winners in the Leading Shows of Scotland and Canada,

AND THE GET OF FAMOUS SIRES

Such as Lord Erskine, Darnley, Old Times, McCammon, Prince Lawrence, Lord Hopton, Bold Maceo, Sir Wyndham, Good Hope and Fireaway.

Prices Reasonable. Catalogues Furnished on Application.



ST. GATIEN, 3963

**ROBT. BEITH & CO.**

BOWMANVILLE, ONT.

Bowmanville is on the line of the G. T. R., 40 miles east of Toronto and 294 west of Montreal.

— IMPORTED AND REGISTERED —

**CLYDESDALE AND HACKNEY**

STALLIONS AND MARES

CONSTANTLY ON HAND, AND FOR SALE AT REASONABLE PRICES



MACREGOR, 673

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

**GRAHAM BROTHERS**

Twenty-five miles east of Toronto, on the C. P. R.

305-OM

CLAREMONT ONT.

**SHROPSHIRE SHEEP**

— AND —  
**COLLIE DOGS.**



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

296-y-O-M

W. H. BEATTIE, Wilton Grove, Ont.

**SECTIONAL VIEW OF WHITE SELF-CONTAINED RETURN TUBE BOILER,**  
SHOWING DRY PIPE.



**GEO. WHITE & SONS,**

LONDON.

This style of boiler is used with all our threshing engines, enabling our customers to produce abundance of steam with long, rough, cheap wood. We utilize water space surrounding and at back end of fire box in connection with our improved internal straw burner.

Manufactured only by **GEORGE WHITE & SONS, London, Ont.**



"Rogers' Peerless Machine Oil" is specially manufactured for Farm Machinery, for lubricating Pittman's Shafts, and all parts of Binders, Mowers, Threshing Machines, Etc. It is most economical. Also Peerless Axle Grease for Wagons and Gearing. Sold by dealers everywhere.

306-d-OM

**THRESHING MACHINES & HORSE-POWERS**  
(ONE, TWO AND THREE-HORSE)



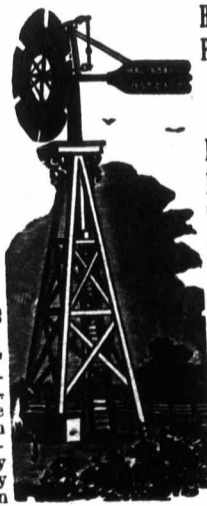
Guaranteed to be "the best" Tread Horse-power Threshing Machine made, and takes the lead wherever introduced. Agents wanted. JOHN LAEMONTH & CO., Manufacturers, Point St. Charles, Montreal, Que. E. G. PRIOR & Co., Agents, Victoria, B. C.; W. F. BURDITT & Co., St. John, N. B.; G. A. LEBARON, Agent, Sherbrooke, Que.

306-f-OM

**HALLADAY STANDARD WINDMILLS**

For supplying constantly pure and fresh water for the following purposes, viz.:

- Pumping Water For Stock.
- Farm Buildings, Mansions, Villa Residences, Public Institutions, Gardens, Green Houses, Town & Village Water-works.
- Hotels, Colleges, Pumping for Railway Stations, Fire Protection, Irrigation, Tanneries, Breweries, Sewage, Mines, Draining Low Lands.



These celebrated Windmills are made from one man to forty horse-power. They are perfectly controllable in gales, and uniform in speed. Catalogue and Price Lists with references mailed free on application to

**ONTARIO PUMP CO'Y,**  
TORONTO, ONT. 301-1f-OM

**STOCK GOSSIP.**

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

Mr. W. H. Beattie, Wilton Grove, Ont., has arrived home with something over fifty head of choice sheep from the flocks of Messrs. Minton Bradburn, Shropshire, England.

Messrs. Tazewell & Hector, who have been importing Dorset Horned sheep in large numbers of late, have secured the winners at the late Bath and West of England Show, which will come over with some fifty others that they have also purchased lately.

Mr. W. S. Hawkshaw, Glanworth, has again landed something over 90 head of Shropshire sheep which he has selected in person from the best flocks of England. In the lot are some extra good ones from the flock of Mr. J. Dixon, Loughcrew, Old Castle, Co. Meath, Ireland.

Messrs. Shore Bros., White Oak, write us that they have sold out all bulls of their own breeding, the last one leaving for Manitoba on June 21st, that being the third sale to go to the Northwest out of the nine sold during this season. They have a choice lot of Shropshires that they now offer. See their change of advertisement this month.

R. H. Harding, of Thorndale, writes as follows: "I have just received from the herd of C. H. Grigg, Krumroy, Ohio, a fine pair of Ohio Improved Chester Pigs - boar and sow. My stock is all thrifty and doing well; have a few fine ones yet for sale, three and four months old, with three sows to farrow in July."

Just as our last forms were closing we received a letter from Mr. W. Kouzh, Owen Sound, Ont., announcing he intends offering the whole of his show herd of Galloways for sale at an early date, which will be made known in the August issue of the FARMER'S ADVOCATE, and that catalogues will be issued at an early date. The lot includes something over thirty head. They will be sold on the farm near Owen Sound, Ont.

D. E. Smith, Sec. Treas. Holstein Herd Book, writes us that breeders from all parts of the Dominion are registering their cattle in the Canadian Herd Book, the Association is receiving every encouragement, and that he has plenty of work registering Holstein cattle, so that he can safely say there is no doubt but that the Holstein breeders will have a very strong Association. The meeting next September, at Toronto Industrial Exhibition, should be a very large one. All lovers of the breed are invited.

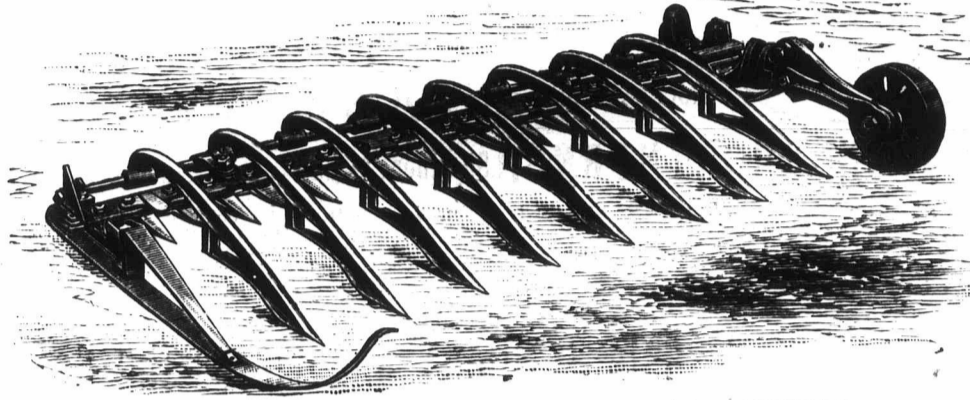
Mr. James Smith, Maple Lodge, writes as follows: "I have recently sold to Mr. Joseph Laurence, Clearwater, Manitoba, two valuable cows, viz.: Rose 11th of Maple Lodge, red; four years old; got by Baron Constance 5th = 1378 =, dam Rose 5th of Maple Lodge, by imp. Marquis of Lorne, and Duchess Jane 7th, a dark roan, got by Baron Constance 5th, dam Duchess Jane 4th, by Earl of Goodness 6th = 1745 =. They have both had a calf, sired by Conqueror = 8227 =, since arriving at their new quarters."

Dr. J. Y. Ormsby writes us that the Imp. Large Yorkshires of the Pioneer Herd have done uncommonly well this spring. The herd is composed of the choicest breeding sows owned by the late firm of Ormsby & Chapman, including both their 1st and 2nd prize winners at Toronto last fall, and headed by their famous champion boar Pat (40). The sales this spring have been numerous, orders having been received from all parts of Canada, and from as far south as the state of Nebraska. A few young sows, bred to imported boars, and some choice young pigs, are offered for sale in this month's ADVOCATE.

Messrs. Smith Bros., Churchville, Ont., write: "Herewith we send a list of Holstein-Friesian cattle sold by us since February last. If 'actions speak louder than words,' then let the sales we have made speak for us as to the quality, richness and breeding of our Holstein cattle. Mountain Princess, Modest Girl 3rd, Heinse, Lady Bonheur, Cecelia Bay, Climie Bay, China Bay, Lady Wedo, Daisy Leake's Queen, Sadie Leake's Queen, Corelia Ykema's Mink Mercedes King, Ventura 2nd, Aaggie Idaline Mink Mercedes King, Hyke 2nd's Mink Mercedes King, Siepkje's Mink Mercedes Baron, Heinsa's King, Mink Mercedes Chief, Cornelia Tensen's Mink Mercedes King, Maid of Clinton, Clinton Mink Mercedes, Hedda 2nd's King, Jessie Church, Maid of Clinton's Mink Mercedes, and Jongste Aaggie's King."

In a recent letter from J. E. Brethour, Burford, he includes the following gossip: "I have recently made the following sales of improved L. W. Yorkshires: Sow and boar, Henry R. Nixon, St. George; brood sow, Alfred Leder, Burford; sow and boar, A. M. Brown, Amberburg; boar and two sows, Thos. A. Keeter, Port Arthur; brood sow, Geo. Ball-achey, Brantford; brood sow, J. & J. Smith, Paris; boar and two sows, Thos. McKay, Prince Albert, N. W. T. The assertion has frequently been made by individuals who are antagonistic to the Yorkshires hog, that they are poor feeders, and will not lay on flesh. I beg to report the increase in weight for one month (from May 11th to June 11th) of four pure-bred Yorkshires pigs which I have been feeding, viz.: 80, 52, 77 and 42 lbs., respectively. Their ages ranged from five to ten months. Had my advertisement in your valuable paper a very satisfactory investment. I have made numerous sales through it in Nova Scotia, Quebec, Ontario, Manitoba and the Northwest Territories. I have also had many enquiries from the States. I wish you success in your work."

**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.

306-b



BAIN WAGON CO.'S

**FARM TRUCK**

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

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

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

288-1f

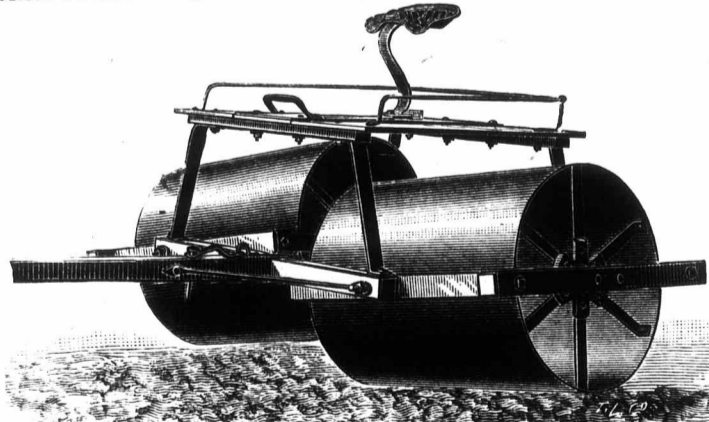
Address, BAIN WAGON CO., Woodstock, Ont.

**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



**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

**R. D. WAUGH,**  
496 Main St., WINNIPEG.  
Or to **JOHN STARK & CO.,**  
307-y-OM 26 Toronto St., TORONTO.

**HARTSHORN'S SELF-ACTING SHADE ROLLERS**  
Beware of Imitations.  
**NOTICE**  
AUTOGRAFPH OF *Stewart Hartshorn* **THE GENUINE LABEL AND GET THE GENUINE HARTSHORN**

**STOCK GOSSIP.**

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

At a meeting of the Agriculture and Arts Association held recently, a resolution was passed to the following effect:—That whereas committees have been appointed by the different live stock associations of the province of Ontario to confer with a committee appointed by this Association to consider what steps should be taken to procure an exhibit of stock, and all other products of the province, at the Columbia Exhibition, to be held at Chicago; be it therefore resolved that this board empower the secretary to notify the different associations with our willingness to co-operate with them for the above purpose and that we arrange for a joint meeting to consider what line of action should be adopted to carry out the desired object of making the Ontario exhibit worthy of the province; and also a committee be appointed to interview the Dominion Government for the purpose of ascertaining whether the same liberal assistance will be granted as in the case of the Centennial Exhibition at Philadelphia; and that the said committee be composed of the following members of this Council:—The President, Messrs. Morgan, Rykert, Rowland, McPherson, Legge, and the Secretary, with instructions to report the result of their mission to the World's Fair Committee of this Association at as early a date as convenient." It was moved by Mr. McPherson, seconded by Mr. Legge, "That the following committee be appointed to meet a committee of the Dominion Live Stock Association to act jointly in the direction of securing the best means of obtaining accommodation for the holding of an annual live stock fair in the city of Toronto:—Messrs. A. Wrey, Rawlings, Rykert, Simmons, Shell and Morgan."

**FIRE PLACES AND MANTELS!**

Marbleized Slate Mantels, Grate and Tiles Complete, \$25 and Upwards, f. o. b. Cars Hamilton.

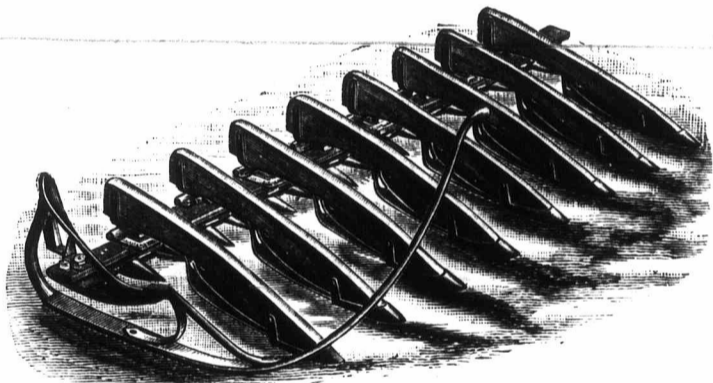
Hardwood Mantels, Finished any Color, with Grates, Tiles and Overmantels with British Mirror Plate, \$35 (complete) and Upwards, f. o. b. Cars Hamilton. Send for Photographs and Estimates.

PLATE GLASS, AND ALL KINDS OF FROSTING AND STAINED GLASS.

**W. A. FREEMAN, Hamilton, Ont.**

Mention this paper. TELEPHONE 521. 303-2y-OM

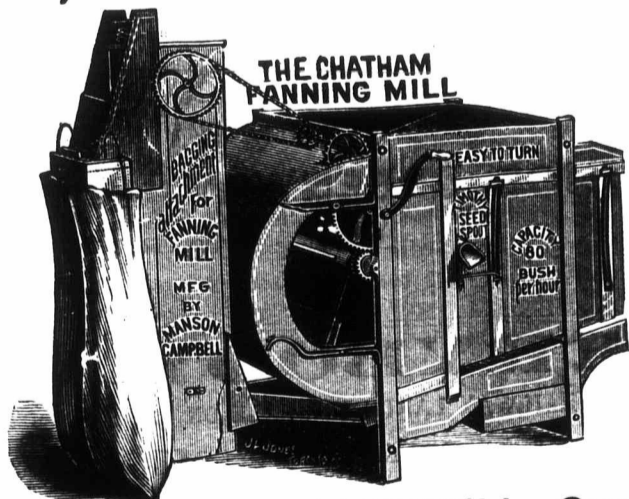
**RICHMOND'S PEA HARVESTER**  
PATENTED 1889.



Can be attached to any ordinary Mowing Machine, and will work on any ground over which a Mower can work. Will cut all around the field. Will work well in Green Peas. Is the simplest and cheapest device for cutting Peas ever invented, and very easily attached or detached. 36-d-O

All communications must be addressed to **JOHN RICHMOND & SON, Blyth, Ont.**

**24,600 CHATHAM MILLS NOW IN USE!**



2,000 MILLS SOLD IN 1886  
2,300 MILLS SOLD IN 1887  
2,500 MILLS SOLD IN 1888  
3,600 MILLS SOLD IN 1889  
4,000 MILLS SOLD IN 1890

More than have been sold by any 10 factories in Canada put together.

Over 4,000 Bagging Attachments now in use.

Bagging Attachment is run with a chain belt that cannot slip. The elevator cups are also attached to endless chain belt that cannot slip nor clog.

The Mill is fitted with screens and riddles to clean and separate all kinds of grain and seed, and is sold with or without a bagger.

SATISFACTION GUARANTEED.

**MANSON CAMPBELL, CHATHAM, ONT.** 305-c-OM

**ADVERTISE IN THE ADVOCATE.**

**THE ONLY PERFECT FENCE.**

**BEST STEEL WOVEN WIRE FENCING**  
64 cts. per Rod and Upward.



**Twisted Wire Rope Selvage.**  
All widths and sizes. Sold by all dealers in this line Freight prepaid. Information free. Write

The **ONTARIO WIRE FENCING CO.**,  
Picton, Ontario, or to our Wholesale Agents,

**The B. Greening Wire Co., Jas. Cooper,**  
Hamilton, Montreal.

**Carvell Bros.,** Charlottetown, P.E.I.

No rigid twists. Wire galvanised before weaving. Perfectly adjusted for extremes of cold and heat. A complete barrier against all animals. No trouble to erect.  
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**LADIES, SEND HALF-A-DOLLAR FOR YARN REEL—Handiest Made—Catalogues Free.** **J. J. HAZELTON, Guelph, Ont.** 300-y-O

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**DEDERICK'S HAY PRESSES.**  
Made of steel, lighter, stronger, cheaper, more power, ever-lasting and competition distanced.



Address for circulars and location of Showhouses and Agents: **P. K. DEDERICK & CO.,** Dederick's Works, Albany, N. Y., or Montreal, P. Q.

Graduated Prices. Recently Furnished.

**LELAND HOUSE,**  
**W. D. DOUGLAS & CO., Proprietors.**  
The Finest Hotel in the Northwest.  
Corner City Hall Square, Main & Albert Streets,  
CITY HALL SQUARE,  
WINNIPEG, MAN.  
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**The Grand Union Hotel**  
WINNIPEG, MAN.

Newly fitted and refurnished. First-class and thoroughly equipped with all modern improvements. Centrally located, and in the vicinity of the Opera House. Cuisine unexcelled in the Northwest, and under the management of an experienced chef. Graduated prices. Free omnibus.  
303-y-O **A. E. J. PERCIVAL, Proprietor.**

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LONDON, ONT., SEPT. 17 to 26, 1891.

## CANADA'S FAVORITE LIVE STOCK AND AGRICULTURAL EXHIBITION!

Arrangements are completed for a larger and more attractive exhibit than ever. Exhibitors should make entries as early as possible. Space and stabling will be allotted in the order received. **ENTRIES CLOSE SEPT. 12th.** Manufacturing in the Main Building will be exceptionally interesting this year. Special attractions, including speeding in the ring, will surpass anything before offered to the public. For Prize Lists and information apply to

**CAPT. A. W. PORTE,**  
307-a  
PRESIDENT.

**THOS. A. BROWNE,**  
SECRETARY.

# MANITOBA THE GREAT GRAIN AND CATTLE PROVINCE

—HAS WITHIN ITS BORDERS—

## HOMES FOR ALL!

Industrious men and women. Manitoba is making rapid progress as shown by the fact that  
In 1890 there were under crop 1,082,794 acres. In 1891 there were under crop 1,349,781 acres.  
Increase - - - - 266,987 acres.  
In 1890 there were under wheat 746,058 acres. In 1891 there were under wheat 916,664 acres.  
Increase - - - - 170,606 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, in fact, MIXED FARMING is now extensively 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 given 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 wonderful fertile Province. Population is moving in, and land is annually increasing in value. In nearly every part 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,**  
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Or to  
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## 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

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LAND OFFICE, 381 Main Street, WINNIPEG.

Calgary and Edmonton Railway, Qu'Appelle, Long Lake and Saskatchewan Railway Company.

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# MERCER BROS. & CO.,

— MANUFACTURERS OF —

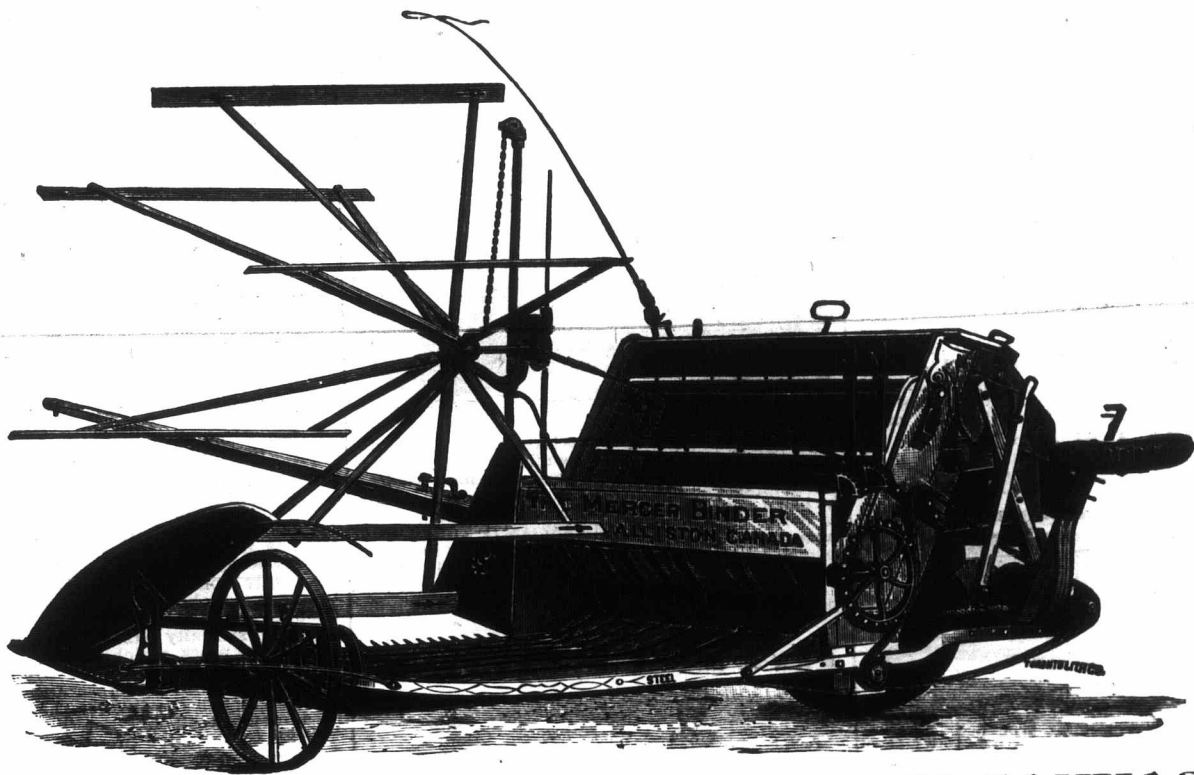
## IMPROVED HARVESTING MACHINERY

HEAD OFFICE AND WORKS, ALLISTON, CANADA.

BRANCHES:

WINNIPEG, MANITOBA, CANADA.  
DUNEDIN, NEW ZEALAND.

BALLARAT, AUSTRALIA.  
KELSO, SCOTLAND.



“THE MERCER BINDER” WITHOUT CANVAS.

This machine embodies the best and most modern improvements in Self-Binding Harvesters. It has entirely and successfully done away with the use of ALL CANVAS. This of itself should recommend it to all farmers who have had any experience in the use of canvas machines.

### THE FARMER SAVES MONEY WHEN HE BUYS THE MERCER!

#### BECAUSE

There is no canvas to buy.  
There are no buckles or straps to break or tear out.  
There are no rollers to wind grain.

The Mercer shells less grain than any canvas binder, for the grain is simply lifted on being elevated to the knotter, not squeezed up between two canvas belts.

There are less journals: thus there are less shaftings to wear out; There are less boxings to replace; There are less places to oil, and consequently will use less oil.

#### TIME IS MONEY,

And with the Mercer there is no lost time. Early or late, wet or dry, rain or shine, the Mercer is always ready for work, for there is no canvas to be affected by the weather or to cover up to protect it from dews or showers.

The oil holes are all easy to reach on the outside of the machine, and have raised oil cups.

## Binders, Mowers, Reapers, Rakes.

THRESHERS' SUPPLIES.

We call attention of Threshers throughout Canada, who are close SPOT CASH buyers, to the following list of supplies. The rubber goods which we offer below are made by the well-known Canadian Rubber Co., of Montreal and Toronto. They need no recommendation from us as their goods are first-class in every respect. We give prices right here. Our terms are very simple. We send no goods unless the money is sent with the order. Send money by registered letter or P. O. order. Our system of doing business is very exact, but our prices are correspondingly low.

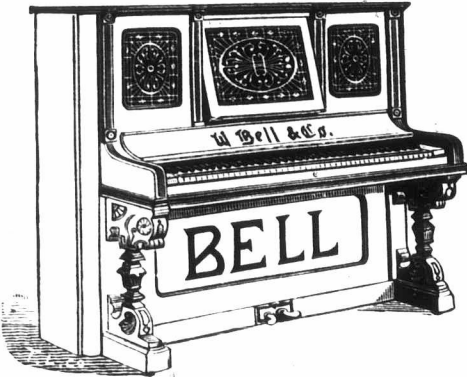
Rubber Drive Belts.

Table listing various rubber drive belts with specifications like '100 feet 6 inch 4-ply Extra Star Belt' and prices.

2 inch 4-ply hard rubber suction hose, in lengths of 12 1/2 feet, price \$3.75 per length; 1 1/2 inch 4-ply hard rubber suction hose, in lengths of 12 1/2 feet, price \$7 per length; 3/4 inch 4-ply suction hose, in any length, 18c. per foot; 1 1/2 inch 2-ply rubber carrier belting, per foot 5c.; 2 inch 2-ply ditto, 7c.; rubber packing, 25c. per lb.; hemp packing, 20c. per lb.; asbestos packing (wicking), per ball 15c.; asbestos rope packing, 50c. per lb.; babbitt metal, 12c. per lb.; best lace leather, 65c. per lb.; best cut belt laces, 75c. per lb.; copper rivets and burrs, 35c. per lb.; tinued rivets and burrs 25c. per lb.; goggles in wire, white, green or blue glass, at 7c. per pair; belt punches (for No. 8 rivets), 13c. each; blue clout nails, 3/4, 1, 1 1/4 inch, 12c. per lb.; turned clout nails, 3/4, 1, 1 1/4 inch, 15c. per lb.; black oil, per barrel, \$4; best American machine oil, by the barrel (about 48 gallons), 30c. per gallon; American machine oil, in 4 gallon cans, price (can included), \$1.75; cylinder oil in four gallon cans, price (can included) \$3.50 each; small machine oilers, 15c.; best threshers' oilers, 50c.; double jack chain for carriers, standard size, 9c. per yard; extra heavy, 11c. per yard; very best threshers' feeding mitts, made of calf skin, for 60c. per pair; best leather belting, per foot, 1 1/2 inch, 8c.; 2 inch, 11c.; 2 1/2 inch, 13c.; 3 inch, 16c.; 3 1/2 inch, 20c.; 4 inch, 23c.; 4 1/2 inch, 26c.; 5 inch, 30c. Try the experiment of buying goods cheap for spot cash. No goods sent unless the money is with the order. We ship promptly, and all goods put on board cars at Hamilton without charge. We pay no freight and allow no cash discount. Send for catalogue of \$16 road carts and 1,000 lb. scales for only \$12.90 each.

S. MILLS & CO.,

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THE STANDARD INSTRUMENTS OF THE WORLD.

Send for Catalogue.

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SUGDEN'S COMPOUND TAR PILLS

CURE BRONCHITIS, ASTHMA, COLDS, HOARSENESS, COUGHS, ETC. Warranted purely vegetable. Will not act on the bowels.

Sent post-paid on receipt of price. Price, \$1.00 per box, 100 Pills.

N. W. SUGDEN, Prop., 130 Lasquet St., WINNIPEG, MAN. Agents: J. H. NAYSMITH & CO., Stratford, Ont. 305-y-0

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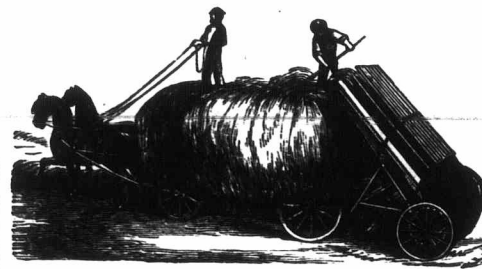
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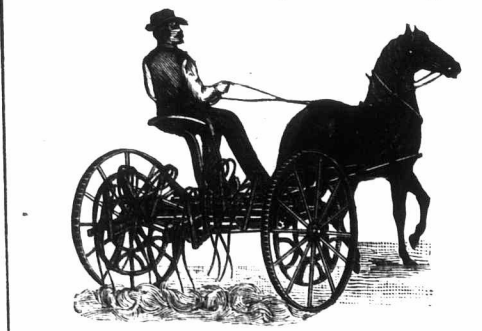
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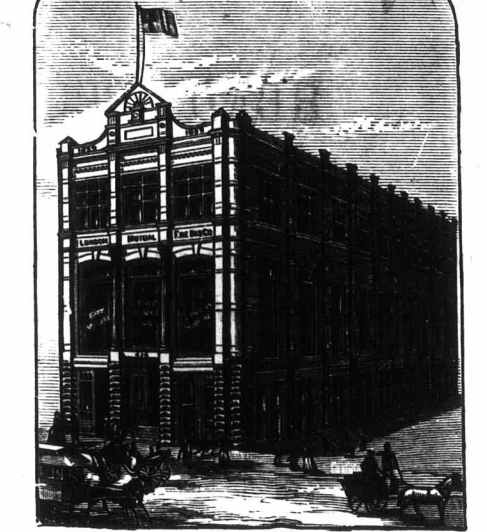
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