

MANITOBA AND WESTERN EDITION

J. G. Rutherford, V. S. Oct. 92

THE FARMER'S ADVOCATE

AND HOME



MAGAZINE

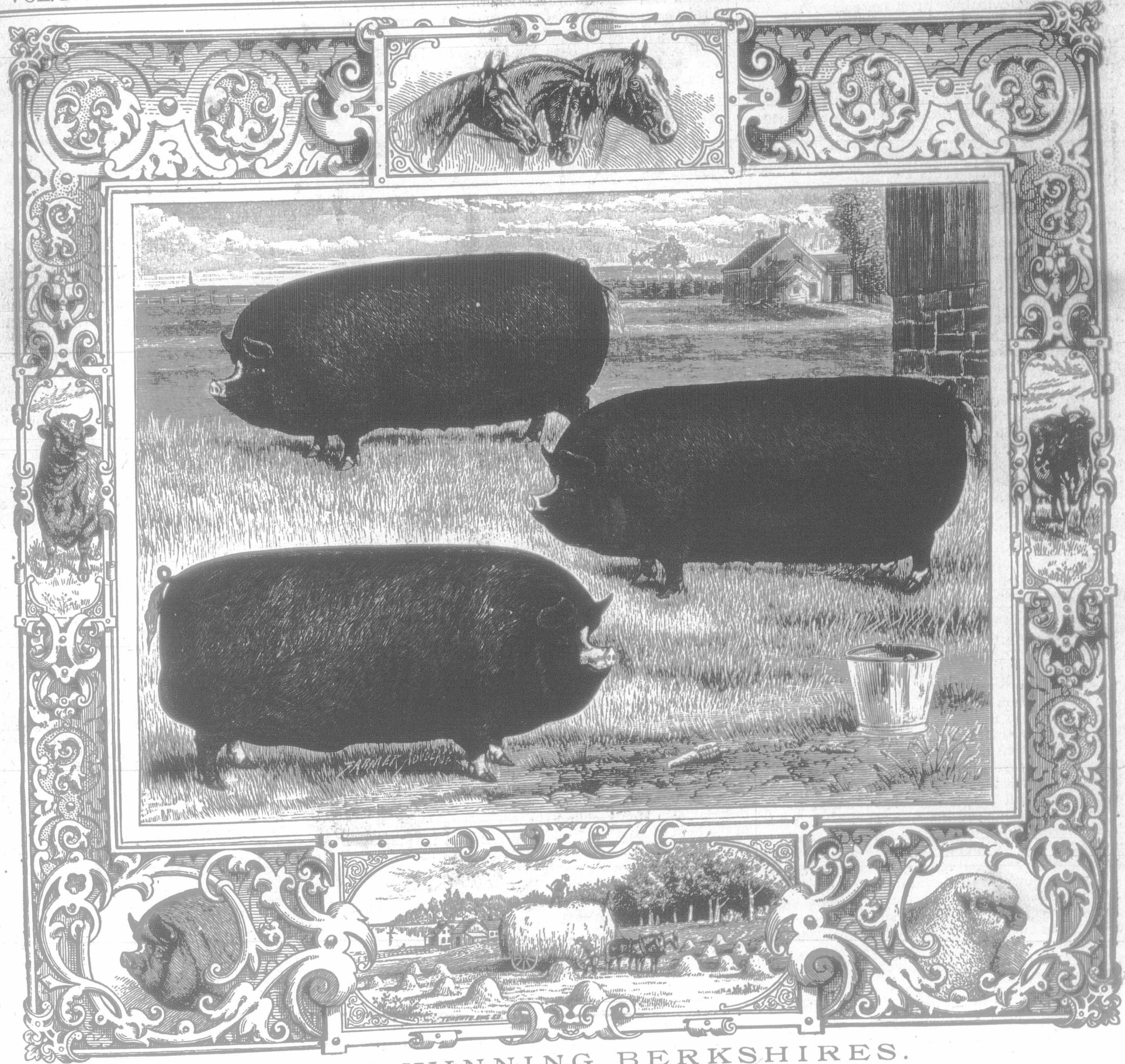
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VOL. IV.

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 5, 1893.

No. 39.



PRIZE-WINNING BERKSHIRES.
THE PROPERTY OF MR. S. COXWORTH, CLAREMONT, ONTARIO.

The Continent of Europe appears to be still suffering from foot and mouth disease among the herds there. Throughout the whole Empire of Germany there are reports of outbreaks, and in the northern part of France over 3,000 outbreaks occurred during the one month of October.

Quite recently there were shipped from Melbourne (Australia) to London, by the P. & O. steamer Ballarat, no less than 1,600 cases of butter. The consignment amounted to 500 tons, and is said to be the largest ever made to any part of the world. Our Antipodian cousins are awake concerning their export trade, and their vessels are thoroughly equipped with refrigerator space, by which perishable products are placed in the best shape possible on the British markets. When will Canada seek like advantages as regards shipping facilities, in which she is now so deficient.

It is reported that the dreaded foot and mouth disease has broken out in the South African Colonies. It is feared it has already become firmly seated, as outbreaks as far back as last September are reported in some parts of the territory. The disease has already appeared at different points, the latest being near the Natal border. It is difficult to estimate the immense loss that is likely to be sustained in a pastoral country such as this, where innumerable flocks and herds are scattered over immense areas of country, and where there is no means at hand for suppressing it. The loss will be more severely felt in that cattle and sheep constitute the principal wealth of the country.

Still the agricultural press of Great Britain continues to discuss the existence of pleuro-pneumonia among Canadian cattle as though it was an established fact, although infection has never existed in our herds. It is now certain that no amount of evidence to the contrary will satisfy the editors of these journals that Canada never had the disease, except the once in our quarantine station in 1886, at which time it was brought over with British cattle, when it was immediately stamped out. "There are none so blind as those who won't see," runs the old adage; but he who undertakes to remove the scales from the eyes of these gentlemen undertakes a contract in which the pounds, shillings and pence popularity of their supporters cuts a greater figure than a disposition to get at the true state of the case.

The present high price of pork is one of the topics on every tongue interested in farm products, and it seems to have struck all alike, as few had made preparations approaching anything that showed expectations like the present to be realized. It is quite a long time since fancy prices for marketable live stock have been obtained. There is, however, a certainty that the scarcity and high price of pork will lead to more beef being consumed, and prospects appear to favor better prices for the latter product before the present feeding cattle are ready for shipment. For years, as long as prices remained firm, there was a general disposition to add more and more cattle to the herds of the great west, until the demand was over supplied; but of late years it has been all the other way, and there is likely to be as great a dearth in cattle in the near future for the opposite cause. Those who are preparing for the rise when it comes will be fortunate.

The recent outbreak of foot and mouth disease among the cows of London, England, is ascribed by the Times to infection through hay in which eggs from Austria were packed. "The whole continent of Europe is," says the Times, "affected with foot and mouth disease, and from its various countries we are receiving produce and merchandise in large quantities, while many thousands of visitors from them are coming here every month. If there is danger in every package and every visitor, the outlook for the breeder and grazer is very serious, and all the trouble and expense to which we have gone to stamp out and keep out this disease may be in vain." By which it appears that trouble in a new form besets the path of the British farmer. With disease breaking out in many of the countries from which the great dumping ground of Britain receives her supplies, surely Canada may hope, sooner or later, to gain an advantage by her perfect immunity from infectious diseases, if the British press could only be reconciled to the fact that trumping up diseases can only affect Canada for a season.

There are many items of interest for Canadians in the "Trade Returns" for 1892, especially those relating to the exportation of live stock products to Great Britain. Thus, while the value of exports of live animals has decreased from \$9,165,000 in 1891 to \$8,035,

000, partly due to the sudden termination of the export cattle trade, on account of scheduling Canadian cattle, yet the increase in two items of live stock export products much more than counterbalances this item. Thus butter has increased from \$935,000 in 1891 to \$1,275,000 in 1892, and cheese has increased from \$9,657,350 in 1891 to \$12,091,050, and Canada now holds the proud position of being the largest exporter of the latter product to British markets, leaving the United States far in the rear. That she will strive to maintain and strengthen this position, there is no room for doubt. In other articles, such as apples, eggs, bacon and hams, poultry, there has been a substantial increase, but the figures for which are not yet to hand. Altogether, the exports from Canada to Great Britain show an increase of nearly \$15,000,000, which is most satisfactory at a time when so much is heard on the score of depression.

Mr. Coxworth's Berkshires.

A particularly fine herd of Berkshires has been established within the last few years at Claremont, and has already become widely known and justly celebrated. Mr. Coxworth's farm is conveniently situated for the fine stock trade, at Claremont, his railway station, on the Canadian Pacific Railway. Visitors who have omitted to notify the proprietor of their intention of viewing the herd, may be easily transported from the station to the farm by a bus, which meets all trains.

In the illustration, which decorates our plate page for this issue, we are enabled to show a sample of the very excellent class of pigs that are bred on this farm.

The boar to the left in the foreground is Highclere Prince 2017, sire imported Parry Lad (1854), his dam being Imp. Highclere, a very celebrated sow in her day. Highclere Prince is one of the best boars that has been exhibited for a number of years, as his winnings in the best company testify. During last season he won first both at Montreal and Ottawa shows in the class for aged boars, beating the boar that, for some reason of his own, the judge at Toronto had placed before him. Highclere Prince is now at the head of the herd, and to him the majority of the sows have been bred. Mating such a pig with the grand lot of breeding sows which this herd contains should give the most satisfactory results, if high quality in the parents has any influence in breeding.

The two-year-old sow to the right in the foreground is Duchess CXIII. 27542, which was purchased last spring of her breeder, Mr. N. H. Gentry, of Sedalia, Mo., being selected by Mr. Coxworth, and she belongs to one of the best winning strains owned by that celebrated breeder. This sow, like many other good ones in the herd, has wonderful length and carries her size well back, with very deep sides and heavy hams well let down, while her head is well nigh perfect, with remarkably short dished face for so long a pig. Duchess won third at Toronto, Montreal and Ottawa last fall, when in quite lean condition after her recent sojourn at the quarantine station.

Lady Stanley 2183 in the back ground was bred in the herd. She was sired by Imp. Rising Star (1807), dam Imp. Lady Shaftsbury 3rd (1875). This sow also has great length of sides, very deep ribs, and heavy, well-developed hams, like the above mentioned boar and sow; she is exceedingly deep and thick at the flank, which is now the aim of advanced breeders in order to form a side of equal thickness throughout. Altogether this trio are very difficult to improve upon, so well is each point developed. All of them are exceedingly smooth and well finished, and possess quality in the highest degree.

Among other good ones are five remarkably fine imported breeding sows, every one of which have distinguished themselves in the show rings in the past, including the Royal of England, Toronto Industrial, also Montreal and Ottawa, and inspection of the herd reveals the fact that it has been the aim of the proprietor to select the highest breeding strains, together with the best individuals obtainable, retaining only such as have great length of body, deep sides, heavy, well developed hams, together with short dished faces, and the highest type of smoothness in finish. How hard these characteristics are to combine only the foremost breeders realize.

When the points above mentioned are being developed we are sure to find heavy weights attained at wonderfully early ages. With good feeding there is no difficulty in producing pigs of this type weighing 250 lbs. at five to six months. By such means only can pork be profitably produced when prices are low. At present rates there is plenty of

money in it if good feeding sorts are introduced. Altogether twenty-five sows have been bred, in order to furnish pigs for the coming season's trade. Three breeding boars have been used upon the herd, in order to enable the proprietor to furnish pigs not akin to those who may require trios or pairs. Of these boars, besides the already mentioned Highclere Prince, is Royal Hero 3rd, a pig of immense length, depth and size. He was sired by Royal Hero -891-, his dam being Cornflower, a very superior individual.

Lord Lorne -2161-, the remaining one, is a very neat yearling boar. He was sired by Imp. Enterprise -1378-, dam Imp. Lady Lorne -2464- (25653), which also descends from a celebrated strain of prize-winning sows.

We also noticed a lot of particularly handsome young sows that have been bred to Highclere Prince, which possess length and depth, together with development in ham, smoothness and quality—a combination that would satisfy the most fastidious judge of Berkshire pigs; these are the types that the present trade demands, and when mated with such excellent sires should produce the best results. Customers who take the trouble to inspect them will be pleased with what they see, while those who order without previously seeing may rest assured that they will obtain satisfaction if they order by letter, as we have every confidence in Mr. Coxworth's integrity and good judgment.

A Farmer's Ideas on the Proposed Winnipeg Elevator.

To the Editor of the FARMER'S ADVOCATE:

Dear Sir,—I have been asked by others, as well as the ADVOCATE, for an expression of opinion re the proposed elevator in Winnipeg. I must confess that I fail to see where the elevator will benefit the ordinary farmer—that is, under existing systems, customs and circumstances. I would like to ask the promoters what benefit it will be to the farmer as a mixing and sorting elevator. It appears to me that indirectly it would be detrimental to their interests, because different soils produce different grades and qualities of wheat, and different seasons have the same effect, and the produce of the country would always be bought at its grade value, and not its milling value, after sorting and mixing. More than that, take our present crop, and 60 or 70 per cent. of it would command the highest quotation in the British market, if placed there in its purity. But it does not get there, and never will so long as we calculate to make the good sell the poor by mixing and manipulation.

I know that prices to farmers at country points are based upon values ascertained by quotations in European markets for wheat that is well known to be of inferior milling value to our production. I know that our No. 2 hard wheat of this year is of as good milling value as the No. 1 hard south of the 49th parallel, and yet the prices at provincial points are based upon their No. 1 northern, with a difference, even in that, of from 3 to 5 cents, between Fort William, our lake port, and Duluth, their lake port; though why it is must be one of the mysteries of the trade. Now, I simply mention these things because they are a farmers' grievance, and it does appear to me that the proposed elevator in Winnipeg, instead of remedying the evil, would tend to perpetuate it, unless, as I said before, existing systems and customs were changed.

Now I will try and tell your readers how, in my opinion, this elevator could and would be a benefit to the farmers of our country. First, Winnipeg would have to be made a terminal point. Second, the different railways of the country would have to be allowed access to the elevator. Third, it would have to be a public elevator, and no one class or company have privileges to the exclusion of any other. This would mean an independent management, without any possible coalition with or on behalf of any company or class. This would be necessary to prevent suspicion. Fourth, it would be necessary that all grain passing into, or out of, or by the elevator should be inspected by an inspector, duly qualified, whose certificate should be accepted as final, with, of course, the necessary provisions for arbitration to protect; all these provisions to be so simplified as to be easily applied to any case or by anyone feeling aggrieved. Fifth, a public officer should be appointed as weigh master in such elevator, and car platform-scales provided at or near the elevator; this weigh master to weigh all grain passing through the elevator or passing by the terminal; his weights to be accepted as final between shipper and carrier and buyer and seller, with, of course, some reasonable and just means of arbitration, simple and effective, in case of dispute. Farmers, by a representative, to have the same privileges and use of elevator at same rates as others.

These are a few of my ideas on this scheme.

Yours truly,

CHAS. BRAITHWAITE,
Portage la Prairie.

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Our Progress in Road Reform.

In our struggle for reform, we are following the history of European nations, where, in the beginning, the same objections were urged, and the same obstacles interposed which we meet at the present time.

Macauley makes graphic reference to the difficulties of travel upon English country roads, at the time when the English farmers indulged in the same periodical diversion of working out their road taxes that is provided for in our old-fashioned Ontario Statutes, which we still keep in force for the maintenance of our highways. He states:—"Not so are the English roads of to-day. By experiment, and by the better light of experience, the English people and their neighbors all over the European continent have learned that true economy in the construction and repair of the common roads, as in the construction and repair of the great railroads, consists in the scientific making and the systematic maintenance of these roads according to fixed rules, and under the direction of an intelligent head."

In the perfection of this enlightened system, it is probable that France leads the world. The government maintains a large body of trained engineers in its special department of roads and bridges, to whom is entrusted the practical work of constructing and repairing the common roads. No part of the road system of France escapes attention, and every road is divided into sections, varying in length according to its importance, each section being placed in charge of a man who is held responsible for the constant excellence of its condition.

But our conditions differing in some respects from those of the European nations, I deem it wise to deal with the matter more from a local standpoint than from a general. And having said sufficient to convince any one of the necessity of putting our roads in a state of greater efficiency, I will try to point out how I think it can possibly be done without increasing the cost very materially. And, in order to do this, it will be necessary for me to give you an illustration, from which I can submit figures and draw comparisons. And to do this, I will take the Township of Blanshard, in which I live, as a typical one, convinced that what is here said in regard to this township will be applicable, with slight variations from local circumstances, to most of the townships in this province.

Generally speaking, this township presents few difficulties in the way of road-making, it being traversed from north to south by the Thames, which has several small creeks running into it. This gives ample opportunity for drainage. Entirely within the limits of this township we have the town of St. Marys, which is the grain market for the surrounding neighborhood, which causes much heavy traffic over its roads, rendering it necessary to keep in good repair its main entrances. All the main roads of the township lead in the direction of the town.

The sideroads are little used, and, consequently, need little attention. The main roads are those on which nearly all the expense occurs, and it is of them I will speak principally.

All the roads of this township, with the exception of seventeen miles of company road that was built under the turnpike and toll-gate system, have been built and maintained by what is known as the Statute Labor System, a proceeding well known to you all, and which it would be superfluous for me to describe here. Although possessing some good features, this system is not the most suitable for the construction and maintenance of good roads, and should give place to a better.

Perhaps it would be necessary for me here to make some reference to the way in which our roads have been constructed. Most of you have had some experience in building, corduroy, and grading. A width of about twenty feet was left in the middle of the road allowance, the earth on each side was loosened with a plow to a depth of six to nine inches, and conveyed to the centre by scraper and shovel to a depth of from eight to twelve inches, and about eight feet wide. In places where the ground was high, no grading was done at all, the longitudinal slope being depended on to keep the surface dry. The traffic soon compressed the clay, and pressed it down so that in the majority of cases it was only from two to five inches above the original level of the land, and where no grading was done the track became passable only in dry weather. On the other hand, the narrow roadway was raised, where the ground was low and wet, to a height of fifteen to twenty inches, making a dangerous place for teams turning off when meeting. This is what was known as the clay, or more commonly and appropriately as the mud road, for many years in use. On this, as a road-bed, pit gravel was hauled and spread loosely to a depth of from eight to twelve inches, according to the fancy of the man doing the work. When the foundation of the road-bed interfered with the natural course of the surface water, culverts were put in. These were usually built of logs, with a plank covering, but sometimes stone sides were built up, without mortar, and a plank covering put on that. The defects of this condition of things are obvious. The superintendence of the work is placed in the hands of parties who have no training or experience in the best methods of work, who have given the matter no attention or consideration, and who are, consequently, unskilled and incompetent to make the best use of the time and money spent.

No good roads of any kind can be made and kept without a proper system of drainage, and this fundamental fact is almost entirely neglected by pathmasters. In many places no side drains exist at all,

and when they do exist, they are always too shallow.

In the wet weather of spring and fall (the seasons when traffic is greatest) the road-bed becomes softened and saturated, and unable to support the covering. Heavy wagons cut through the gravel and bring up the clay, mixing it with the covering, permanently ruining the road where it occurs, and rendering reconstruction necessary the following summer.

Too great a depth of gravel is put on at one time, and it is a long time before it is possible to go over it with a heavy load. In this condition the traffic seeks the side of the road when possible, cutting it in and bringing the clay on the gravel.

The gravel is taken from the nearest pit, with no regard to its quality, and always contains too much clay or large stones to make a good road. The large stones are the worst, as they cause ruts on either side from the concussion of the wheel as it drops over them.

Wooden culverts are a constant source of danger, being generally in a state of ill repair. The foundations, as a rule, are not put deep enough, and the water soon undermines them, allowing the walls to fall in, in which condition they are usually allowed to remain until someone complains or the township becomes liable for an accident. Moreover, they are not economical, decaying as they do so rapidly from the alternate wetting and drying to which they are subjected.

The cost in this township for repairs to culverts alone for the year 1889 amounted to almost \$360, and this without any road commissioner's salary, which, if added, would amount to almost another \$100. This, of course, does not include a dollar spent for new ones.

To effect an improvement in these roads through drainage is a prime necessity. This can be provided by an open drain on each side of the road, with slopes of one to one and a-half feet and a width of one foot in the bottom. Culverts should be made to last as long as possible, and for this reason they should be built of stone, where stone can be got so conveniently as it can be here. It will always be found to repay the extra cost of construction by its solidity, permanency and consequent safety.

The floor should be made of concrete, to provide a bed that the water will not wash out and render the cleaning out easier. The walls should be built on a solid foundation got by digging down to the solid clay, and should always go below the flooring. The mortar used should be made of cement, as it best resists the action of water. A culvert properly built will never need repairing, will be always perfectly safe, and of no expense save for cleaning out once or twice a year.

In order that the road covering should be maintained so that extensive repairs will never be needed, minute repairs should be made to the surface systematically, in small patches, as soon as ruts and depressions appear. The road should be constantly undergoing repairs. To have this done the road should be divided into lengths, on each of which an intelligent laborer should be placed, who thoroughly understands his business, to attend constantly at all times to the condition of the road, and for which he should be held accountable.

[TO BE CONTINUED.]

Manitoba Cattle Breeders and the World's Fair.

The committee appointed at the recent meeting of the Manitoba Cattle Breeders' Association to bring before the government of Manitoba the question of having the cattle interests of the province properly represented at the World's Fair waited on Premier Greenway and presented the following memorial:—

To the Honorable Thomas Greenway, Premier of Manitoba and Minister of Agriculture and Immigration:

We, the representatives of the Manitoba Cattle Breeders' Association, after mature and lengthy consideration, beg leave to bring the following suggestions to the notice of yourself and your government:

We respectfully urge that immediate steps be taken to ensure a suitable exhibit of Manitoba's live stock at the Columbian Exhibition of 1893, and that Manitoba at once follow the course pursued in Ontario, and that suitable persons be at once appointed to select worthy specimens of cattle; that experienced men only be appointed as selectors.

We beg to suggest the following as suitable judges of beef cattle: John Sharman, Souris; John McTurk, Elkhorn; Walter Lynch, Westbourne; Lester Smith, Wawanessa. Judges of dairy cattle—W. J. Young, Emerson; James McLenaghan, Portage la Prairie; James Bray, Portage la Prairie; James Glennie, Portage la Prairie, and David Steele, Glenboro.

We pray that the expenses of selecting animals may be borne by the Manitoba government.

We would also respectfully request that your government ask the Dominion Commissioner to extend to Manitoba live stock the same liberal treatment promised Ontario breeders, viz.: That all the expenses of transportation and maintenance from the time the animals leave the owners' stables until they return thereto be borne by the Dominion Government, and that the cost of sending herdsmen with exhibit, and the maintenance thereof, be borne by one or the other government. Inasmuch as the exhibit is of national and provincial importance, and will not be of real benefit to the exhibitor, therefore we feel justified in asking these privileges. The first two requests have been granted to On-

tario breeders; the last is now being considered, and will doubtless be granted.

All the expenses of selecting, collecting, and caring for fruits, grains, etc., etc., are being borne by the State. Why should our live stock be put on a different footing?

We further contend that it is of great importance that our fertile plains be advertised to the world as capable of producing superior animals very cheaply, therefore we consider the exhibit of live stock of national importance. The expense of such an enterprise should not be borne by private individuals.

While we speak for the cattle breeders, we would also respectfully call your attention to the pressing need for immediate action in the matter of selecting suitable specimens of the various breeds of horses, sheep and swine, and also that a suitable exhibit of range cattle be selected.

We believe that a preliminary selection of stock should at once be made, and that space be immediately applied for, and that a final selection should be made next May or June. Animals selected in the preliminary selection may at the final selection be rejected, if they have not advanced as fast as desirable; others may then be taken in their stead.

We further humbly pray that your government will take steps to at once officially declare Manitoba herds free from pleura-pneumonia (as they have ever been), and that you will at once issue a formal protest against the action taken by the British government in scheduling Canadian cattle.

We, your petitioners, are alarmed at the reports now current, to the effect that the Dominion Government are again contemplating the advisability of allowing American cattle free entry into Canada that they may be here killed and exported. We as a body formally protest against thus receiving American cattle into Canada to be slaughtered for export, or put up as canned meats, believing that such a course would be very detrimental to the interests of Canadian cattle breeders.

We further pray that a Commissioner be appointed who is well versed in agricultural and stock matters, and whose sympathies are with the agricultural classes.

That there be an advisory board appointed to act as advisers and assistants to him, and that this board number at least ten persons, and that the live stock breeders and farmers be given a fair representation on said board, and that the members of said board be appointed and called together as soon as possible.

Timely Notes for February—No. 1.

"HARD UP."

Just now we are treated to various sermons on the "present agricultural depression," from implement men, storekeepers, and even farmers, just as if any observant man in the country did not know that the almost universal condition of the farmers in Manitoba has been one of "hard-ness" for the last four years—ever since '89, at least—that last and worst "dry year." It is, however, only now that we are beginning to speak "right out in meet-in'." "Open confession is good for the soul," and also for the financial salvation of more people than farmers.

Mr. Elder, at Brandon Institute, and Mr. Graham, in his letter to the ADVOCATE a little while ago, both make good points, and just what your humble servant has been abused for pointing out before—that credits, mortgages and chattel mortgages are not the readiest ways to affluence in farming—but better methods and a strict adherence to the motto of "Pay as you go,"—and don't go until you *have paid!*

I must join issue with Mr. Elder when he advises reciprocity with the States. I believe in "Free Trade," and free trade only. Reciprocity, I contend, would place us almost completely in the power of the "screaming eagle," and as their manufacturers are so much richer than ours, they could run the Canadians out of their own markets, and then we would indeed be between the "devil and the deep sea." No! Don't let us give away our birthright in any such fashion. Better—far better—to put up with the N. P.—No Progress—policy a while longer, till we can compel our government to give us free trade with the world. Then, indeed, would we progress as we should. That's enough of politics for this issue!

IMMIGRATION.

The agriculturists of this country are threatened with a great and impending danger in the expected immigration of the rejected of the United States and Europe—those whom the States have discovered at last to be altogether too free—with other people's lives and property—even for that much-vaunted "land of freedom." Let us, as Canadians, take warning from our neighbors, and rigorously exclude the gaol-birds, gutter-snipes and other riff-raff of Europe. Our country bears an enviable reputation for freedom from crime—let us keep it so. We want population, but not to fill our reformatories. No—we need farmers—the rural population of Northern Europe—a hardy, thrifty and vigorous class.

THE SURPLUS OF HORSES.

It is high time that the importation of horses from the East should cease. We have enough and to spare of nearly every kind of horse required in this country. Take a drive out from almost any town in Manitoba for from ten to twenty miles, and you will find teams, dozens and scores of horses for sale; many good, a few very good, an odd one first-class, and some indifferent ones. The prices asked, in nearly every case, are half what the same class of

beast is sold for in the livery stables. It is alleged by many breeders that the dealers will only give them very small prices for really good stock, and then want them on long time. Surely this is killing their own business, for there is no risk in buying a Manitoba-bred horse as compared with one from Ontario, and but very little fitting up is necessary to get them into saleable condition. The Manitoba horse is generally sound every way, and will last longer than the one reared in a milder climate. Go out into the country, ye dealers, and buy from the Manitoba farmers, and keep the money here.

Again, I would urge upon the directors of every agricultural society to hold a horse and cattle fair this spring, where buyers may congregate, and breeders may have an opportunity to dispose of their surplus stock. Advertise it well, and if Mr. Grand's (of Toronto) plan of giving prizes for the best of each class were adopted, it would create a healthy rivalry. In the Old Country—in both England and Scotland—animals are sold by auction at stated times at fairs,—why not here? Of course, owners could put a reserve price on their stock, or not, as they pleased.

GENERAL.

Give those pigs more straw, and keep them dry. Keep off rheumatism—a pig kept in a cold and damp pen will surely get it, if not something worse.

Keep your expenses within the limits of the family pocket-book.

Give the cows a little bran twice a day for a fortnight before calving. Roots are better, but how many have them now?

If you have a heifer calf from a cow that is a poor milker, wouldn't it pay you to make veal of it rather than rear it to perpetuate its unprofitable race?

Lard is a good remedy for frosted teats; sulphur is good for vermin on cattle; a little coal oil is excellent on your poultry perches. Are you using them?

Plan out your farming operations for the coming season. What seeds do you want for the garden? Are you going to try ensilage this season? If not, why not?

Did you learn anything at last week's institute meeting?

Have you bought your fencing for the season? What do you intend to use? The old barbarous barbed wire or one of the new and harmless fences? Or do you consider a blemished animal—one that has "only run into the wire"—a more valuable beast than one that is free from scars? Think it over—a word to the wise is sufficient. "INVICTA."

Answers to Veterinary Questions.

DEAR SIR.—Can you, through your columns, give me a remedy for scours in calves. I have just had one die from that disease. It was born in November, and seemed a bony fellow, eating hay and drinking like the other calves; one day I noticed its stool loose, next day more so, finally it got nearly white, and the animal died in a week. For fear of it being catching I burnt the litter.

ANSWERED BY W. A. DUNBAR, V. S., WINNIPEG.

At the commencement of this ailment, administration of the following dose will usually be found beneficial: rawlinseed oil or castor oil, eight ounces; sulphuric ether, two drachms; tincture of opium, four to six drachms. In the more advanced stages give three times a day until scouring ceases: Tincture of catechu and tincture of opium, of each two drachms; prepared chalk and bi-carbonate of soda, of each one drachm; brandy, one ounce; mix in one pint of very thin flour or starch gruel. Injections of starch gruel will also be useful. The above doses are for a calf two or three months old. The sick animal should be separated from those in health, and kept in a well littered, warm, dry and properly ventilated stall. If inclined to eat straw or other coarse food, it should be prevented from doing so by the application of a muzzle. Milk should not be forced into its stomach, nor should it be allowed to drink large quantities if disposed to do so.

Care and Treatment of Jersey Cattle.

BY MRS. ELLA ROCKWOOD.

Perhaps no breed of cattle possesses in a greater degree susceptibility to treatment, kind or unkind, than the Jersey. The peculiar nervous temperament so essential in a perfect dairy cow is one of her strongest characteristics.

Look at the bright, intelligent face of a true specimen of this breed, and note the large fawn-like eyes, bright and glistening. Look at the thin, dilating nostrils, with their orange lining, which seem to scent danger like a deer, and seeing know that this queen among cows demands and well deserves the most careful handling and kindest treatment to bring out her good qualities and keep them at their best.

No cow, from the scrub to the thoroughbred, can do her best unless under circumstances conducive to quiet and content; and although cows of more sluggish temperament may bear ill-usage with little apparent regard, it is not so with the sensitive Jersey, and she soon depreciates in value.

From calfhood she should have reason to regard her master as her friend. No blows or harsh words should teach her to fear him; but she should expect and receive only caresses and kind words. Undersuch treatment she will develop a gentle, kind disposition.

She should be taught to lead by a halter, to stand quietly as for milking, and to bear handling of the udder long before she reaches maternity; so

that she may be quiet and easily handled, instead of being wild and unmanageable, as heifers often are at that time. No breaking-in will be necessary, and if it is desirable to dispose of her she will bring a better price than one that has never been trained.

Do not make the mistake of thinking that when she drops her first calf is time enough to begin feeding her; she should have been fed from her birth with this in view.

No supplemental food is better than ground oats as a help in developing the heifer calf. As soon as she begins to eat hay she should have a little, night and morning, fed dry. Begin with half a pint of feed, or even less, and gradually increase the quantity until bossie will take a pint at a feeding. Keep her thrifty and growing. A calf once stunted by insufficient or improper food will never make so good a cow as she would otherwise have been.

The grain ration should be increased as the heifer grows, and at the arrival of the milking period she should, after the first few days, be given a generous quantity of such food as is best suited to assist her in producing milk.

While there are various grain foods recommended by dairymen as excellent for milch cows, for the general feeder and the average cow nothing is better than a mixture of one part cornmeal, one part oatmeal and two of wheat bran. Of this, feed as much as after experimenting with your cow you find gives best results in milk and butter.

Each cow is a law unto herself as to the amount of food she can profitably consume. It takes more to produce a like result with one than another. Up to the extent of her capacity the greater the amount consumed the greater the returns at the pail and churn; but when a cow is fed beyond her capacity to convert the food into milk and butter she is fed at a loss; the extra food goes to make fat.

A liberal allowance of coarse fodder should also be fed. Clover hay, corn fodder, ensilage—all are good. Roots are valuable as a food for milch cows. Carrots are perhaps best, with sugar beets next. Turnips and ruta-bagas will flavor the butter.

Pure water should always be within reach of the cows. No other domestic animal requires so large a quantity, and a shrinkage of the milk will follow if she is deprived of it in abundance.

While Jerseys as a breed are unsurpassed as butter-makers, there is a wide range in their value in this respect. Each cow should be tested and the best only kept. In regard to testing, it is not always that the cow showing the highest test of butter-fat is really the best cow. Other things should be taken into consideration—quantity of milk and length of milk period during the year. These should be considered before deciding, as a cow showing a medium amount of butter-fat may make up in quantity of milk during the year what a single test of her milk may lack.

Not all of us can have cows making a thousand pounds of butter in a year; but any one owning a single Jersey cow may, with judicious breeding and careful feeding, combined with the kind treatment and care which all animals should have, in a few years possess a herd of cattle which will be a source of profit as well as pleasure.

How the Jersey Strikes Our Poet.

BY G. HOPPER.

"The Jersey Cow," so neat of limb,
So gentle, thoroughbred and trim,
Inspires both poetry and prose
(E'en when no "Prize" shines at the close!)
Her fine ideal dairy form.
Her speaking eye, liquid and warm,
Her pleasing color, royal air
That marks her one beyond compare—
All of the attributes of grace
Betokening an illustrious race—
These charm the poets in their dreams,
These lure the artists to the streams.
By which she browses, fresh and fair,
And sweet as summer-scented air.
But all these things to nothing tend—
Behold her at her business end!
Bred ages back for milk that's rich,
She gives it still without a hitch—
Only more so. And more and more
She pushes up the wondrous score.
Such milk, that, coddled in our churns,
To golden butter quickly turns!
Such butter, solid through and through,
Renowned from York to Timbuctoo!
Butter, flavor of which exceeds
The wildest dreams of other breeds!
'Tis tasted by the epicure,
And then no other he'll endure.
'Tis tasted by the farmer too—
The farmer who was always blue—
And soon we view his Jersey tubs
And lose sight of his heavy scrubs,
The while upon his face we see
The glad dawn of Prosperity.
He tells unto his neighbor's wife
The happy change made in his life;
And then, sown in this fertile ground,
The Jersey's "tale" goes 'round and 'round.
So may e'er spread the worthy fame
Of this unrivaled bovine dame!
So may her genuine merits spread
Till every prejudice is dead,
Till Ignorance, with blinded eyes,
Shall no more vent her senseless cries,
But freely to this truth accede:
"The Jersey is the butter breed!"

How to Feed Our Horses.

Not many farmers take into account what it costs to winter the horses necessary for their farm work. If this and other items that go to make up the expenditure in keeping up a fairly well equipped working stock were minutely detailed, there are few that would not be surprised at the result. Certainly the proper management of horses on the farm is one of those particulars which demand serious attention. There is a large proportion of horses worn out on the farm. If we take a percentage of the loss thus incurred, it is one of the departments that adds materially to the drain on the credit side of the ledger account. For instance, a farmer buys a pair of already broken young horses, which do his work to his satisfaction, and, consequently, if they are good he values them much more highly than any buyer is likely to offer; he therefore keeps them on until they are too old for sale and are worth considerably less money for any commercial purpose than the price paid. He still asks a high price, and the upshot of the matter is he either wears them out or sells them, when nearly done, at a figure not exceeding twenty-five per cent. of first cost. On the other hand farmers breed their horses, and after they are sufficiently educated the same course is pursued. Now in both these instances there is a yearly loss on account of depreciation in value. Spring is usually the best time to sell this stock. Work that will not stand delay is close at hand, and rather than sell them at their value and run the chance of replacing them they are retained. The difficulty is partly due to farmers not keeping their horses in condition for sale. When the winter season comes the feed is taken off and horses are fed hay without grain in order to curtail the expense, as well as to prevent further trouble from feeding horses that have not sufficient exercise. The grain ration is stopped short, or so lessened that a hearty horse has to satisfy hunger by filling up with more hay than is good for him, and which he generally has dealt out to him *ad libitum*. He consequently spends his idle hours in gorging himself with hay, the value of which his owner does not take into consideration. If the yearly value of keeping a horse in proper shape is taken into account, it is found to make the horse labor one of the heaviest expenditures on the farm. In these days, when hand labor is not attainable, the only resource is to keep a sufficient number of horses of such a stamp that may be required to horse the improved implements of the day. In fact, at present a fully equipped set of implements and machines in which horses are utilized is the only solution to the farm labor question, therefore how to feed horses cheaply and always have them in saleable and good working condition will have to be made more and more a study of.

The opinion that hay and oats are the only kinds of feed suitable to the every-day horse ration has been so well handed down by old writers that it is in a measure dangerous to suggest a substitute. The convenient form of both these articles, and their well-known suitability for horses that have to perform arduous work, also have the effect of keeping these two standard staples in continued use. But the fact that this condition is only suitable for hard worked horses must not be overlooked, and that the farm horse of necessity must stand idle for a large proportion of the winter.

In order to economize, and at the same time provide suitable diet, the mixture that all practical horse breeders use in their breeding studs is much in advance, and although all do not agree quite as to what sort of grain is best and cheapest, they all agree that cut feed, hay and straw, bran and ground grain can be fed with much greater advantage and at about half the cost. If a feed room is provided in which water does not freeze, the mixing can be done by wetting the chaff and adding the bran and ground grain; and if mixed twelve hours previous to feeding all the better. Another good plan is to heat the grain and bran or meal and bran in a chaldron, and then mix with whatever chaff is intended to be fed. It then forms a most savory and nutritious food, and at very little expense and trouble after the required appliances are once in place. By either of these methods not only are all the nutritious elements in the ration made the most of, but in this form it is much easier on the digestive apparatus than when long hay and whole oats are fed. At the same time this mixed food is not as heating to the blood of horses not being worked.

Everyone knows that pork and fat meat of any kind is both relished and conducive to health in the case of a man at work out of doors, but place the same man on the same diet inside in an office, without exercise, and he would quickly suffer. Exactly the same principle applies to animals on the farm, and by studying and testing the different modes only the best methods may be practically worked out. What in this case applies to the idle work horse is still more applicable to young colts, as a properly balanced ration, properly prepared as above, will develop them more quickly, and at the same time keep them in the best possible state of health.

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THE FARMER'S ADVOCATE & HOME MAGAZINE

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Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

1.—No award will be made unless one essay at least comes up to the standard for publication.

2.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling.

3.—Should any of the other essays contain valuable matter, not fully covered by the one awarded the first prize, or should any present different views of the same topic, and we consider such views meritorious, we will publish such essays in full, or extracts from them as we may deem best, and allow the writer ten cents per inch (one dollar per column) printed matter for as much of such articles as we publish. By this rule each writer who sends us valuable matter will receive remuneration for his labor, whether he be the winner of the first prize or not.

4.—We invite farmers to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch (one dollar per column) printed matter. Criticisms of Articles, Suggestions How to Improve the Advocate, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

5.—Replies to circulars and letters of enquiry sent from this office will not be paid for as provided by rule 4.

6.—No anonymous communications or enquiries will receive attention.

7.—Letters intended for publication should be written on one side of the paper only.

A prize of \$5 will be given for the best essay on the method by which the Manitoba and Northwest farmer may better his condition and home life. Essays to be in this office by February 15th.

A prize of \$5 will be given for the best essay on the reasons why Arbor Day should be observed at Manitoba and the Northwest public schools, with suggestions for the programme of the day. Essay to be in this office by March 15th.

Our Scottish Letter.

BRITISH BREEDS OF DAIRY CATTLE—THE SHORTHORN AND AYRSHIRE.

If we were called on for an answer to the question, What is the best method of relieving the pressure which weighs on British agriculture—what class of products affords the most likely method of making the capital invested in farming remunerative? there would, I think, be only one answer possible—at least in so far as the West of Scotland is concerned. That answer would be: Dairy-farming and the production of the best and purest quality of fresh milk. It needs no proof that there is no more natural food than milk, because, of all goods, it contains the best balanced proportions of flesh-forming and heat-producing elements. In its primary form of sweet milk it is the ideal food, and in its secondary form of cheese, when coupled with wheatbread, the essential balance of flesh-forming and heat-producing properties is maintained. It has been computed by competent authorities that 1 lb. of cheese + 1/3 lb. of bread contains a higher sum of good properties than 2 lbs. of flesh meat; and that the necessary relative percentages of albuminoids, or flesh-formers, to fat and heat-producers is better preserved in the bread and cheese than in the meat, while the cost of the former would only be about half the cost of the latter. Primitive man lived on milk, and those whose habits are simple and unsophisticated find in it as food a satisfaction which is impossible to those who have long acquired a relish for flesh meat. There cannot be much doubt that the consumption of meat is in many cases excessive, and to some extent this may be attributed to the fact that up to within a comparatively recent period it was not possible to secure a pure milk supply in the great centres of population. The fact had been forgotten that, while pure milk could not be surpassed as a wholesome food, impure milk as a deleterious substance is difficult to beat. It is the undoubted interest of the milk-producer to send it out absolutely pure. In proportion as the great consuming population have the confidence that it is so will the demand for the product of the dairy increase.

It is not the purpose of this paper to discuss the general question of our milk supply and its importance for farmers, but to direct attention to one of the chief factors in successful dairy-farming, namely, the character of the source from which the milk is drawn. It is a trite saying that it will cost as much to keep a bad or unprofitable cow as a good one, and cattle that are not intrinsically worthless may be wholly so for dairy purposes. The cow to the dairy farmer is a milk-producing machine. Like all other kinds of machinery, she can only produce something beyond herself after her own wants have been supplied. As Professor Sheldon puts it: She is like a steam boiler. The boiler cannot produce any steam until it has itself first been heated; and the most profitable boiler is that which heats most rapidly, because it is that which will generate steam in the shortest time. The most valuable dairy cow is she that requires the smallest proportion of the food she consumes for the upkeep of her own frame, and devotes the larger portion to the production of milk. There are many breeds of cattle in Great Britain and Ireland, and all of them are, in a sense, dairy cattle; all of them give milk, be the quantity less or greater, and the quality better or worse. But there are, in our opinion, but five breeds of distinctly dairy cattle—that is, cattle whose chief value consists in their dairy properties, and which would not be bred but for these. The breeds that come under this category are the Ayrshire, the Jersey, the Guernsey, the Red Polled, and the Kerry. The omission of the Shorthorn from this list may at first seem strange, for Shorthorn cows have made milking records; but it will be observed that the cosmopolitan breed will not come under our definition of a dairy breed, because, as a whole, the breed is not reared because of its milking properties. If there had been no Durham ox, we may safely conclude that there would have been no improved Shorthorn breed. If there were no famous to be won at Smithfield in December, the laudable Teeswater breed would have remained in its primitive glory as a dairy breed, but in that form it could not have been the Shorthorn as we know it. I am the more anxious to emphasize this distinction, because I think it can be reasonably argued that one factor in the composition of the modern Ayrshire was the Shorthorn, but not the improved Shorthorn of the Collings and the Booths and the Bates.

A visit to a lovely vale on the borders of Westmoreland and Cumberland, and not far from the confines of Durham, made us acquainted with a beautiful race of dairy cattle—Shorthorns—but not the Shorthorns of Coates' Herd Book. They were a magnificent race, the remains of a splendid stock of dairy cattle to be found in the dales and on the fells of the ancient province of Northumbria; of kindred clearly to the mammoth Shorthorn of the show ring, but of more ancient race, and in all likelihood more like to his ancestors than he is himself. This is the breed or class known as unpedigreed Shorthorns, which in the main supplies the town dairies of Edinburgh, and the dairies conducted on the "soiling system" in the eastern counties. Some of them have more of the Shorthorn appearance than others—a result due to the more extended use of the modern Shorthorn in their production; but as we saw them in their native dale, collected by an enthusiastic lover of dairy cattle, who purchases them from the smaller dairy farmers in these uplands whenever opportunity offered, their resembl-

ance to the type of our larger-sized Ayrshires was very marked.

There can be little doubt that these Westmoreland cattle are the representatives of the celebrated Holderness breed of cattle—a tribe famed before the era of the modern Shorthorn, and specially famed for their milking powers. The gentleman in whose hands we saw the cattle keeps a daily record of their milking powers, and 40 lbs. per day is a usual average. The cattle are larger and heavier than the average Ayrshire, but they are of the same type, and have the characteristic dairy features of the west country breed. The Holderness breed, of which I believe these to be the remnant, had their habitat in the West Riding of Yorkshire, and are generally regarded as having much in common with the deep-milking breeds of Holland. As a breed they have been preserved from extinction in America under somewhat peculiar circumstances. During the first quarter of this century cattle of this class were imported into the State of New York, and Mr. Lewis L. Allen, the writer of a very interesting book on "American Cattle," was, about 1835, well acquainted with their characteristics. He describes them as cattle having a close resemblance to the unimproved Shorthorns, being chiefly dark red in color, with lined or white backs and bellies, and somewhat less in size than the modern Shorthorn. The cows were excellent milkers, and useful for the dairy. Mr. Allen lost sight of the breed for a number of years, when his attention was called to a herd of about thirty of them, owned by a Mr. Cole, in Madison Co., New York. This herd was founded in 1855 by purchase of a cow then in calf by a bull of the same breed from a farmer in Oneida Co. This cow produced a bull calf, which, when a yearling, was mated with his own dam. The fruit was a heifer calf, which, in the following year, along with her dam, was mated with the same bull, at once the brother, sire and son of one or other of the females. By continual breeding in this close fashion the Holderness race was resuscitated, and from this single cow hundreds of phenomenal milking herds to be found scattered over the State of New York are descended. My object in calling attention to this remarkable chapter in cattle-breeding is to point out that milking power is inherent in the old Northumbrian breed, and was intensified by the in-and-in breeding, which resulted in the formation of the modern Holderness breed of America. It was from the old Holderness that the Shorthorn was evolved, and so the Shorthorn is naturally a milking breed. Although not now entitled to rank as a dairy breed, there are in the breed dairy families with remarkable reputations as milking animals. The same gentleman who owns the Westmoreland dairy cows, to which reference has already been made, also owns a splendid herd of pedigree Shorthorns, in which the milking powers are greatly developed. One of his cows has a record of 9500 lbs. for ten months between calving, and another has an average record of 50 lbs. per day when grass is at its best, her lowest figure being 40 lbs. and her highest 60 lbs.

If a breed of cattle which, when history opens, was not specially famed for milking powers, can be shown to have been influenced by a foreign breed, with the result that it has taken rank as, on the whole, the most successful dairy breed of the world, it is not a wild conjecture that that alien cross was one in which the qualities of a dairy breed were strongly developed; and I think the facts already advanced go far to show that the dairy properties are inherent in the old Northumbrian or Holderness breed.

The testimony of unprejudiced witnesses is that the modern Ayrshire is, taken all in all, the most profitable dairy cow of the time in which we live. Mr. Allen, already quoted, is a Shorthorn fancier, and excusably eloquent in their praise. His testimony regarding Ayrshires is therefore all the more valuable. He acknowledges that the quantity of milk produced by them in America is not equal to their Scottish records, but, fairly enough, points out that this is due to the drier climate, and the extremes of cold in winter and heat in summer to which in America they are subject. "Nevertheless," he says, "their thirty-six years' trial in America has been successful. They are hardy, healthy, well fitted to our climate and pastures, and prove good milkers, both in the imported originals and their progeny. Their flow of milk is good in quantity and fair in quality." Another American writer, Mr. Henry Stewart, the author of the Dairyman's Annual, writing in 1888, says: "The Ayrshire has been greatly improved by careful selection, and is now a model dairy cow. Without depreciating any other breed of cows, she may easily take this position. She will not displace the Jersey in the fine butter dairy, nor the Dutch cow in the milk dairy, but she will fill the place of both of these in the cheese dairy; and while she will not compare with the latter in amount of milk product, she will greatly surpass the former. She is THE farmer's cow." When we turn to English testimony we find it equally complimentary. Professor Sheldon, in his handbook, "The Farm and the Dairy," says: "As milk producers Ayrshires are very superior, though their milk is not specially rich like that of the Jerseys and Guerneys. Some Ayrshire cows have yielded as much as 1000 to 1200 gallons of milk in a year, and this yield, considered in relation to the size of the animal, is quite wonderful. Their milk seems to be specially adapted for cheesemaking purposes, being rich in casein; but I once had an Ayrshire cow that yielded for a time two pounds of butter per day, besides milk and cream used in

the house." Professor Wrightson, in his handbook on "Live Stock," says: "The Ayrshire cow is the very type of a milking animal, being long and narrow in the head, angular in form, thin of flesh, and is deservedly popular;" and Professor Long asserts in his book, "The Dairy Farm," that "three Ayrshires can certainly be kept for the cost of two Shorthorns." This cumulative testimony from various sources—all of them outside Scotland—sufficiently warrants the position in which we have placed the Ayrshire, as the foremost of the distinctively dairy cattle of the British Isles. Let us now consider the history of the breed.

William Aiton's "Survey of Ayrshire," published in 1811, is the standard work of reference as to the origin of Ayrshire dairy cattle. Aiton was a native of Ayrshire, who practised as a writer in Strathaven. His work is valuable and interesting; but in dealing with live stock he has a favorite theory which he pushes to the front on all occasions. Briefly stated it is this: Outside crosses have done little or nothing to improve the breeds of live stock. At one place he strongly argues against the notion that any foreign cross had done much towards the improvement of the Ayrshire. His words are: "The dairy breed of Ayrshire is in a great measure the native breed of the country improved in size, shape, and quality, chiefly by judicious selection, crossing and coupling, feeding and treatment, principally carried on by the inhabitants of Cunningham," or the northern section of the county. The breed is known first to history as the Dunlop breed, and the oft quoted adage,

"Kylie for a man,
Carrick for a cow,
Cunningham for butter and cheese,
And Galloway for 'oo."

plainly points to the existence of a superior dairy breed in Cunningham at a comparatively early time. A district famous for dairy products must have been favored with a superior race of dairy cattle. The cows of Carrick referred to in the rhyme were not dairy cattle, but the beef-producing Galloways. While, therefore, I am not disposed to quarrel with Aiton's main contention that the influence of improved methods of selection, mating, feeding, and treatment by the farmers of Cunningham had had a most beneficent effect in improving their cattle, I would be disposed to expand the theory, and contend that farmers and breeders who were so enlightened were the very men likely to avail themselves of the service of an imported cross when it came their way, and to secure its full advantage by the adoption of all the means of improvement specified by Aiton. In other words, I believe the correct view to be that both instrumentalities were employed to form the celebrated west country breed of dairy cattle, and that the use of stock of a superior character for crossing would have been of but transitory benefit, had it not been followed up by the means which the Cunningham farmers are said by Aiton to have adopted. It was a local proverb: "The cow gives her milk by the mou'," and this is a saying which clearly points to an appreciation of the benefits accruing from generous treatment of the milking stock.

The outside influences which Aiton says were introduced were probably English or Dutch cows and bulls of a size greatly superior to the native breed in the country; and he argues that better results were secured by crossing imported cows with native bulls than by crossing native cows with imported bulls. There is no reason to believe that the native cows of North Ayrshire were in any way different from the pre-historic cattle of the West of Scotland, and it is in accordance with the analogy furnished by the history of other breeds to conclude that the Arran cow—a reduced and deteriorated example of the Kyloe, perhaps not quite extinct—gives a fairly good idea of what the native breed of Ayrshire would be like. It has been pointed out that the formation of the Ayrshire horn suggests a Kyloe affinity, and Aiton says that until about the year 1780 the prevailing color of the Cunningham cows was black, with some white on their face, belly, neck, back, or tail. This is as nearly as possible the description of an Arran cow whose portrait, taken about 1820, we remember to have seen. At the same time there is much good sense in the suggestion of Professor Wallace, of Edinburgh, that the wild white cattle whose remnants browse in the Cadzow forest may have mingled with the native cattle of North Ayrshire, and that to this influence may be referred the presence of those superabundant white colors which have cropped up in the breed and are not wholly desirable. The recurrence of such examples in atavism is not unknown in the history of breeds, and indeed it is one of the best instruments at the disposal of the breeder, as its possibility affords him a ground on which to work should he wish, by the use of suitable means, to recover a quality once possessed by a breed, but now dormant. It is at least certain that white colors predominate in Ayrshire now, because there is something in the early constituents of the breed of this character which responds to an affinity at present active in its constitution. The white cattle of Cadzow were not always confined to their present narrow limits; they once roamed at will in the Strathclyde forests, and there is no reason to doubt that there may have been intercrossing between them and the early Kyloes of North Ayrshire. This theory is strengthened by the fact that while the remains of the wild white cattle which are to be found at Cadzow, Chillingham, and Chartley are, as is the case with all wild breeds, deficient in milking pro-

erties, an intermediate breed exists at Somerford Park, in Cheshire, which bears a striking resemblance to the wild breeds, but differs from them in this—that the members of it are polled, and that they are remarkably deep milkers. The average yield of milk for each cow in the herd is three gallons per day, but individual cows appear now and then which give when in bloom as much as fourteen quarts at a milking, or three and a-half gallons in the day. There are also remains of a somewhat similar breed possessing the same characteristics in Norfolk, and the conclusion to which the possession of these qualities point is, as Professor Wallace remarks, that there existed a superior power of milk-production in the aboriginal races of our islands. To what this may be attributed we do not at present stay to inquire. The facts adduced, I think, warrant the conclusion that the breeds specified may have had something to do with the creation of the Dunlop breed, whose products were proverbial, and whose modern development into the Ayrshire breed it is now our purpose to trace.

In 1750, or thereabout, the Earl of Marchmont, who held estates in Berwickshire and in Ayrshire, purchased and imported several cows and a bull from Durham or Yorkshire, which were of the Teeswater, or, in other words, the Holderness breed. These were brown and white in color, and their superiority was such that to them Aiton traces the popularity of these colors amongst the improved Dunlop cows. Bruce Campbell, who was factor on the Marchmont estates, in Ayrshire, brought some of the Durham cows to Sorubeg, in Ayrshire. They there proved themselves to be superior to the native breed, and a bull of the stock, after crossing with many cows about Cessnock, was bought by Mr. Hamilton, of Sundrum, and left a numerous progeny in that part of Ayrshire. This piece of history, therefore, clearly points to an improvement having been affected by means of cattle of the same breed as that which formed the foundation of the improved Shorthorn. In Ayrshire their properties were developed in the line of milk production, whereas in the Teeswater district they were developed with a view to the production of beef.

SCOTLAND YET.

Chatty Letter from the States.

The dearth of really prime beef cattle at market these days is a subject of general comment. Farmers and feeders have been so many times disappointed that they are doing less feeding than usual, and so if there is an increase in prices it will, as usual, redound to the benefit of the few.

Distillery cattle feeders are of the opinion that they will find money where they lost it last year, and a good deal more than they lost, too.

Native "beef cattle" were extremely low a year ago, the bulk of the 1050@1250-lb. steers selling at \$3.35@3.75, and most of the 1300@1500-lb. steers at \$4.10@4.50. Considering quality, present prices are about \$1 per 100 lbs. higher than a year ago, when plenty of 1450@1530-lb. steers sold at \$4.10@4.40, good 1256-lb. Kansas steers at \$3.75, and 1195-lb. beef cattle as low as \$3.00.

The London and Liverpool cattle markets do not act to please the cattle shippers. The recent advance was all too quickly lost.

Hogs are the highest they have been since 1883. Ten years is a long time, but it has been that length of time since hogs sold above \$8, and \$8.10 was the top notch then. The cause of the high prices for hogs is not far to seek. The supplies are running far short of the previous years, and, above all, the quality is way below the usual run. That is illustrated by the records of one firm:—Squire & Co. bought about 13,000 hogs here one week that averaged 230 lbs. and cost \$7.59 per 100 lbs. During the month of January, 1892, their hogs averaged 290 lbs., and the average cost price that month was \$4.24. February, 1892, their hogs averaged 278 lbs., and cost \$4.75. Farmers who have nerve enough to feed hogs now are paying far more for store pigs than they would realize at market, but there are thousands of farmers who believe it will pay them better to take the current fancy prices for pigs than to feed them and take chances on letting the market go back on them. However, as a stockman said recently:—"Prime hogs ought to sell for \$8.50, the way this trash is selling. Farmers are getting \$1.25 per bushel for their corn at the prices for fat hogs, and there is plenty of corn in the country."

The sheep feeders are doing a fairly satisfactory business. There is quite an impression about that the sheep feeding business is being overdone, but it remains to be seen. Odbert & Winnett, sheep feeders at Lincoln, Neb., marketed a consignment of sheep which averaged 108 lbs. and sold at \$5.40. It is their first shipment this season. Last year they marketed the first on Feb. 26, and sold them at \$5.60. About the first of April they sold sheep at \$6.30. Mr. Odbert says sheep in Nebraska are looking splendidly, but he thinks that hardly as many are being fed as last year. He feeds largely on wheat which is worth about 25@30c, now in Nebraska. Screenings are also fed quite freely, but not a great deal of corn.

How I Feed Dairy Cows.

BY C. P. GOODRICH.

INTELLIGENT FEEDING.

I believe that the true way to feed dairy cows for profit—and profit is what we are all after—is to feed the proper food for the production of milk to the full capacity of the animal's power to digest, assimilate and manufacture these foods into milk. This way of feeding or "forcing," as some term it, is objected to by some on the ground that this cow machine will sooner be worn out. Suppose for a moment that position is correct. Is there a sensible man who would think of running any other machine that takes a certain number of hands to attend, and a certain amount of power to get up speed enough to do any work at all, who would run his machine at one-fourth or one-half its capacity, for the sake of making his machine last a little longer?

PROFITABLE FEEDING.

Then suppose you had a steam thresher that could do first-class work up to 1,500 bushels a day as its limit. Is there any man who would think it economy to run such a machine with only steam enough to thresh 500 bushels a day for the sake of prolonging its life a year or two? It would take nearly as much fuel to get up steam, the same engineer, the same feeder and other attendants, but his machine might last 11 years instead of 10. Such a man you would unhesitatingly pronounce foolish; but in my opinion he would be wise indeed compared with the man who would run his cow machine at anything less than its full capacity. The cow, unlike the thresher, improves by use, for animal nature has the faculty to adapt itself to the uses to which it is put up to a certain limit. In other words, the more and better milk you manage to make a cow give, the more and better milk she can give until that limit is reached, as you develop her capacity to do so, and this improvement will be, in a measure, transmitted to her progeny, so that the heifer calves of a cow will be better than those produced before such development has taken place. In that way each generation will be better than the preceding one. These facts I have demonstrated to my satisfaction in my own experience. Others have done the same thing, and I cite you as very high authority on this subject Prof. E. W. Stewart. You will find this subject quite fully treated of in his work on "Feeding Animals." But it is not true that high feeding of cows if judiciously done, so as not to impair their digestive organs, will tend to "wear out the machine." More cows are "worn out" by under feeding than by high feeding. I have had them last with high feeding, with scarcely any diminution of their powers, till they were 15 years old.

MILK PRODUCING FOOD.

To make the greatest profit in dairying the cow should be fed and managed in such a way as to make her consume as much as possible of good milk-producing foods. To do this she should have the greatest possible variety of foods. Her appetite—her like and dislikes—should be catered to as much as can be consistently. In summer her pasture should contain a great variety of grasses. And when my cows are put in the stable to milk twice a day they have some good clover hay, and they never fail to eat some, no matter how good the grass in the pasture is. They also are fed in summer, except some of them that are dry a short time at that season, all the grain—corn and oat meal or bran—they will eat, which, of course, is not nearly as much as they eat in winter. In winter they have as great a variety of fodder as possible each day—clover and meadow hay, corn fodder and straw, with a grain ration, in two feeds, of from 12 to 15 pounds. I observe the greatest regularity possible in feeding, having the same kind of food given at exactly the same time each day, so that they are never worried or disappointed by having one kind of food thrust before them when they are expecting another kind.

ECONOMY.

To produce milk as economically as possible, I try to provide the necessary elements in that food which will cost the least, having due regard all the while for the likes and dislikes of the cow herself, for I believe her pleasure should be consulted as much as the housewife consults the pleasure of her family when providing food for them. If oats are cheaper than corn meal and bran, I feed oats mainly for a grain ration; but if two tons of oats will buy three tons of bran, then I make the exchange. Chemical analysis seems to indicate that good clean wheat bran is fully as good as oats for milk production, but my observation seems to prove that oats are, at least, a little better. Corn is usually a very cheap grain food, but it is too carbonaceous and should not be used for more than about one-third of the grain ration. Corn ensilage made from well eared corn is the cheapest food I can provide for my cows; but it is not of itself a perfect ration, and needs to be balanced up with bran or oats and clover hay.

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Injurious Insects--No. 11.

BY JAMES FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA, ONT.

WINTER WORK FOR THE HORTICULTURIST.

There is no time of the year, not even in the winter, when the thermometer is fluctuating about the zero point, that the careful fruit grower can afford to call a truce with his insect enemies. Indeed this is the time when he must prosecute his warfare energetically, because many of them are then at his mercy. The truth of the assertion frequently made by entomologists concerning the importance of learning the life-histories of insect pests is now proved, for those which pass the winter in some form upon the trees are now easily detected, and steps can be taken for their eradication. Insects pass the winter in all stages of their development, either as (1) an egg, (2) a larva or caterpillar, (3) a chrysalis, or (4) the perfect state. They hibernate in all kinds of positions, on branches of the food plant, in crevices of bark, beneath moss or leaves, or beneath the surface of the ground. As a general rule, but not invariably, the individuals of any one kind of insect pass the winter in the same manner—for instance, the caterpillars of most of the Owllet Moths, better known as "cutworms," hatch late in summer, and pass the winter half grown; others, however, do not hatch until the following spring, or the species hibernates as chrysalis in the earth. I purpose, on the present occasion, to draw attention to some of those injurious insects which may be found now in the orchard, and for which it will well repay the fruit grower to be on the look-out.

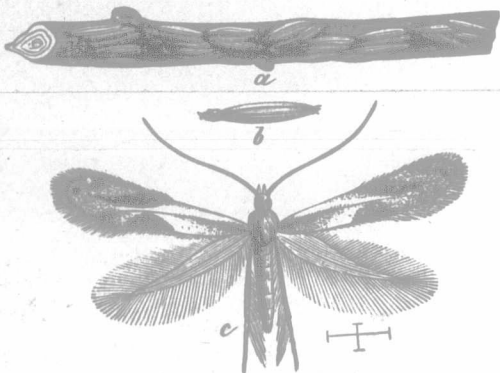
THE APPLE-LEAF BUCCULATRIX (*Bucculatrix pomifoliella*). Fig. 1.

Fig. 1c shows an enlarged figure of a beautiful little moth, the caterpillars of which occasionally occur in sufficient numbers to injure apple trees seriously. There are two broods in the year, the second of which passes the winter inside white ribbed cocoons upon the twigs (Fig. 1a, natural size; b, enlarged). These are reported in large numbers from St. Catharines this winter. The best remedy is, probably, to take note of the trees which are badly infested during the winter, and then destroy the caterpillars by spraying the trees thoroughly, just after the flowers have fallen in spring, with Paris green, 1 pound in 200 gallons of water. From small trees the cocoons could be removed in winter with a stiff brush.

THE EYE-SPOTTED BUD-MOTH (*Metocera ocellana*).

This troublesome enemy of the apple grower may now be found in the caterpillar state upon twigs in the orchard. The eggs are laid about midsummer, and by October the caterpillars are half-grown. They then leave the foliage, and spin silken shelters in any small depressions on the twigs. Here they remain until the following spring, when they emerge and commit great havoc by boring into the bursting buds. Spraying the trees as soon as the leaf-buds burst, and before the blossoms open, with Paris green, 1 pound to 100 gallons of water, or with Kerosene Emulsion, has given good results.

THE APPLE-TREE TENT-CATERPILLAR (*Clisiocampa Americana*).

A very successful method of clearing orchards of this pest is to collect the egg-masses (Fig. 2) during the winter. These masses are easily recognized after a little practice, and as they are nearly always placed upon the small twigs at the ends of branches the work of looking for them is much simplified. The egg clusters are laid in the month



of July by an active brown moth (Fig. 3), and each cluster contains from 200 to 300 eggs. The caterpillars when full grown are nearly two inches in length, and when undisturbed the brood of a single cluster of eggs is able to entirely strip a tree of considerable size.

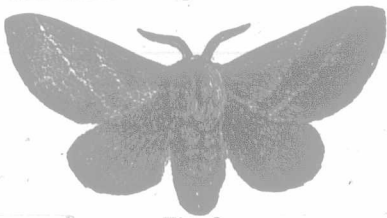


Fig. 3.

THE CECROPIA EMPEROR MOTH (*Platysamia Cecropia*).

Cocoon of Emperor Moth.

In going through an orchard in the winter time, a large, elongated, irregular cocoon, three inches or more in length, may frequently be found firmly attached to a twig of an apple or cherry tree. This is the winter home of our largest and most conspicuous Canadian moth. It will be well worth the while of anyone who may find one of these cocoons to take it into the house to see the magnificent creature which will emerge from it about March or April. The caterpillar is very large, nearly four inches, and naturally consumes a large amount of foliage every day; but it seldom occurs in sufficient numbers to be considered very injurious. Besides the apple, cherry and plum it feeds upon the pear, the maple, the willow, the elm, the butternut, the hickory, and several other trees. Gathering the cocoons in winter or handpicking the caterpillars in summer are usually efficient means of keeping this insect in check.

FIRST PRIZE ESSAY.

The Breeding, Care and Feeding of Hogs for Profit.

BY JAMES GLENNIE, PORTAGE LA PRAIRIE.

With hogs selling at \$6 per hundred, dressed, and peas worth 50 cents per bushel, Ontario farmers believe there is money in feeding hogs. If experiments recently made at the government farm at Ottawa are to be relied on, Manitoba farmers are this season losing a good deal of money in disposing of their frosted and damaged wheat at present prices. That anywhere from 50c. to 80c. could be realized by turning it into pork, there can be little doubt. It is true the hogs are not in the country the present season, but that state of things will not long exist if the farmers can be made to see the utter stupidity of paying the C. P. R. for carrying their grain to the east to be converted into pork and returned to the country. Farmers of Manitoba, think of it; the hundred bushels of wheat for which you are now receiving \$20, and which will get you next summer at your grocers about 150 lbs. of cured pork, would, if fed to hogs, make you at least 500 lbs. of pork equally good, and by judicious management in breeding and feeding, still more could be made. How long is this wholesale waste going to continue?

How often one hears the remark made, that if all were to go into hog raising the country would become so overstocked as to bring down the price. This objection would apply with equal force in regard to any product to which the farmer could turn his attention. But it is likely to be many years before we can supply even the home demand, and even then it would be many years before our surplus would have much effect on the markets of the world. To make the most out of hog raising, two litters a year should be produced. Spring litters should be disposed of in early winter, when they should weigh 200 lbs. at eight months. There is a great loss by sows overlying their young at farrowing, especially with old and heavy sows. This can be guarded against by fastening a wide board or plank along the side of the pen where the sow lays, about six inches from the floor. The little ones seem instinctively to go under cover, and will soon go in to sleep. It is a good plan to pick up the young ones as they are dropped, and put them into an empty box or barrel until labor is over, and it will sometimes be advisable to keep them away for a day or two, allowing them to suck every two hours during the day and two or three times at night. In this way I have raised whole litters that, if left with the sow, would probably have been killed.

Opinions differ as to the time of weaning. If they can have plenty of milk they may be taken away at a month or better six weeks, but they should be given warm milk, not much at a time, and often adding a little shorts or chops of some kind as they get older. When they are about three months old I know of no better way of feeding than keeping dry chop continually within their reach, giving plenty of water in a separate trough. A very good feeding trough, and one which I have used for many years, is a flat box, three to four feet square, sides about four inches high, four boards about a foot wide nailed together and set upright in

the centre, held in place by two cross pieces nailed to the sides. Openings must be cut at the bottom to allow the chop to work out; the upright may be any height to hold several bushels. The advantages of this plan are, they chew well, eating leisurely, all get an equal chance and very little of the food is wasted. A trough of the above dimensions will do for a pen of six or eight. I have now twelve in one pen, about five months old, with only one trough as above. They are doing splendidly, and will, I am sure, return me at least 50 cents per bushel for wheat which I bought from a neighbor for 20 cents. Of course they cannot all get to the table at once, but that does not seem to put them to any inconvenience, as a few of them are having a sleep while the others are taking a lunch.

The most critical time is the first month after weaning, and this is especially true of fall litters. They must be kept warm and dry, and if kept perfectly clean and well littered with dry straw, they may be confined to close quarters. It will pay well to warm all their feed, for if kept in a cold place, given cold drink and allowed to lie in damp straw, they will soon get archbacked, big bellied and gouty. When they get into that condition it may be said that "their usefulness is gone."

As with all other stock, the profit depends a good deal on the breeding; scrub pigs are as bad as scrub cattle. Only a pure-bred boar should be used. With perhaps few exceptions, the pigs with which Manitoba and the Northwest is now stocked are fairly good, as those coming to this country and bringing a few with them brought mostly good ones. As to the breed that will be most suitable for the general farmer, the Improved Yorkshire seems at the present time to be pretty well to the front. They undoubtedly make an excellent cross on the Berkshire. The pure-bred Yorkshires are somewhat slow of maturity, that is, they cannot be got as fat as the Berkshires at six or eight months, but they are rapid, thrifty growers, very prolific, are excellent mothers, and have undoubtedly come to stay.

The Breeding, Care and Feeding of Hogs for Profit.

BY H. NEWMARCH, STRATHNEWEN, MAN.

In the Northwest of Canada we have special advantages in making pork cheaply, owing to the ease and certainty with which coarse grains can be grown for feeding. Before commencing the raising of pigs on a farm it is well to provide a supply of food and a shelter for the animals. Barley I consider as the best single grain, crushed and fed with skim-milk, potatoes and other roots. After barley, wheat, oats, middlings, etc. Commence with a couple or three good, strong sows from a healthy stock—good grades of Berkshire, Chester Whites, Yorkshires or Poland Chinas. Then procure a pure-bred boar of whichever breed you fancy. A sow that has had a litter of pigs and brought them up well is better to buy than a young, untried one; but this is often governed by the purse of buyer. At all events buy the best your means will enable you. Better to start with one good sow than three poor ones. Mate your animals so as to have young pigs in March or beginning of April, and then again in end of August or September. A good brood sow should rear not less than eight even pigs twice each year. If your sows prove good mothers keep them until they are eight or ten years old, and they will produce better pigs than young, half-grown sows possibly can. The spring litter of pigs should weigh from 125 to 175 lbs. each in the following October and November, and the September pigs from 125 to 150 lbs. each in the following April and May—just the times when prices of pork are dearest. The price will range from 7½ to 8 cents in fall to 9 and even 10 cents per lb. in the spring. I find, for the sucking pigs, nothing so good as crushed oats, barley and skim-milk—all they will eat up clean. A good big run is essential for young growing pigs. To finish off, barley meal and middlings are both economical foods. But I do very little fattening, as I aim to keep my pigs in such a condition that they are always ready to kill, and the present demand is in favor of leaner pork than of old. By using good parents on both sides—sows that give plenty of milk and generous feeding from the start—it is easy enough to keep your pigs in good flesh at all times, and such pigs always sell themselves. I would emphasize the importance of using only thoroughly good male animals, as the increased cost is far more than repaid in the first litter of young pigs. The cry of light-shoulders, heavy sides, etc., is not borne out by experience, for the Chester White is as good a pig as any; the Berkshire is just as saleable, and the Poland China is a profitable pig to rear. A good run on a piece of grass or clover will cheapen the grain feed, and will keep your pigs healthy and clean. For breeding sows exercise is absolutely essential, and a little care at the time of parturition is really all the need, so long as they are healthy and vigorous. To sum up, I consider, to reap the largest possible benefit from pig-rearing here, we should have healthy, vigorous parents in the prime of life, obtain two litters per sow per year, feed them generously all the time on cheap, coarse food, and market them in late fall and early spring, when prices are best. In conclusion, I may mention that I soak all my grain for forty-eight hours before feeding, and only give crushed grain, keep only three or four in a pen, as nearly of a size as possible, and give plenty of bedding, and find I can make a good profit every year on pigs. They are safe stock—sure money—and I have never had a sick pig in all the years I have been in Manitoba.

The Requirements of Our Home Trade.

[Read by Mr. Moyer at Creameries Convention, Harriston.]

In dealing with this subject I scarcely know where to begin, for it includes almost everything in connection with dairying. What is wanted for our home trade is a well-made, sweet, rich flavored butter, and the one who succeeds in making a butter to suit the home demand is all right to make butter for any part of the world. It is like the good old advice, "Take care of the cents and the dollars will take care of themselves." Take care of the home trade and the foreign trade will take care of itself. Year after year we hold this Convention, Farmers' Institutes are held all over the country, the Traveling Dairy is in operation, all to proclaim the old story—that our butter is bad. While we admit this, we should not lose sight of the fact, that our work is done in other lines of labor as well as in butter-making.

It may look very discouraging when I say that I do not believe that one farmer out of every ten makes good butter; but how does that compare with men in mercantile life, where only one in every twenty succeeds? It is only a very small proportion in all trades and professions that are up to the highest standard attainable, and why should we expect better things from the butter-makers? It has been said by one who knew what he was talking about, "that a man must learn a great deal before he finds out how little he knows."

The cry all over the world now is quality—better quality in everything, and improvement in all things is necessary. The time was when quantity, more quantity was demanded, and quantity was what swelled the pocket. This great demand for quantity has brought forth machinery, through which one man produces as much in quantity as ten did years ago, and the consequence is, that we have supplied that demand to excess, and now the demand is for better quality.

Now, if this is the case, and I believe you all agree with me that it is, what machinery can we bring into operation, or what system can we adopt, that will enable the farmer to produce the quality demanded? I think there are some in this audience who heard me say ten or twelve years ago, that the time will come when the churn will be as little used in a farm house as the spinning-wheel, and with them will be honored, for valuable services rendered, by giving them a corner in the garret for spiders to operate on. This prophecy has not yet been fulfilled, but it is sure to be.

To produce a better quality, this is essentially necessary. As I said before, improvement is the watchword in all things, and to do better work we must expect to do less. Where the most perfect work is done is where one man does only a small part of the whole. For instance, what sort of a reaping machine would you expect when one man made the whole? Take the tailoring business for instance—where the best clothes are made, the cutter may not know how to thread a needle, but he gives his whole time and attention to that particular part of the work, and success follows. Much has been said by dairymen about the general purpose cow. The idea of farmers a few years ago was to combine a milk and beef cow in one animal. It has, however, been proven that a cow must either be one or the other, or she is nothing. Now, I believe that the same rule holds good with men and women. A general purpose man or woman is not a success. He or she has only time to do certain parts of a whole, if he or she expects to do it as well as the requirements demand.

The time was when a farmer boasted of the number of acres he had under cultivation; now it is more how many bushels he can raise to the acre. Time was when the farmer talked about the quantity of butter he made, but the time is at hand when he will talk of the quantity of butter fat he produced, and of its high quality. His great aim and study will be to get cows that will pay to feed, and how to feed them to the best possible advantage, and how to handle the milk so as to attain to the highest possible standard as material to produce the finest kind of butter. Without having to give attention to all the details of dairying, he can learn to understand this part to perfection, and the creamery will shoulder what comes after this. By cutting up in parts and systematizing the whole work, we can expect to accomplish the highest possible results, and obtain the highest place in the world as a butter-producing country.

Having already shown that we, with our common failings, are all on the same level, and as such we need the help of each other, sympathy and confidence in the universal brotherhood are essential features to success in all lines of industry, and particularly so in dairying. I have no room for a man

that tries to be a farmer, dairyman, merchant, exporter, importer and a railroad. With the speed we are moving in now, the farmer cannot afford to drive forty or fifty miles with his wheat to market, but he takes it to the nearest mill, or station, where the railway takes it off his hands. This convenience is now acknowledged and admired by the farmer, but the speed is constantly increasing; instead of steam we have now electricity, and the farmer has to still cut his trips shorter, so that he can more properly attend to the duties which lie nearest his door, and in which his pocket is most interested.

I know that a great deal is said of middlemen, how they take a profit to which the farmer is entitled, and how the farmer is robbed through them. I believe that there is reason for this kind of talk, but if my idea of doing only a part of any work in order to produce the best results is correct, then they are a class of men as necessary to the system as every link in a chain, and if necessary, then they deserve your confidence and generous treatment.

I have no interest in saying a word in favor of middlemen, but when I am asked to give a paper before a meeting of this kind on this much-out-of-shape butter question, I must state where in my long experience I found the greatest difficulty. Want of confidence in each other, and want of co-operation for the general as well as individual good, are the greatest hindrances to success. This obstacle was so monstrous that it was beyond the strength and power of man to remove it, and so a little machine steps in as judge and says, "Your milk or cream contains so much butter fat and no more." This stern ruler would not admit of any argument, and all submitted, and the greatest obstacle is removed. I hope some one would invent a machine that would show the exact value of each parcel of butter as it is offered for sale.

And as long as butter is made by farmers, and bought without this needful machine, it will be as unsatisfactory as buying cream without the tester; and as this is not likely to be invented, I have no hopes to offer for the butter industry, except it is carried on in the co-operative creamery system. But as this may still take years, and the principal part the farmer has then to take is in the care of milk, and as that part is also an important factor in making butter for the home market, I will now confine myself to that part of dairy work. I am more than ever convinced that the principal reason that so much of your winter butter is not good is the want of proper care of the milk and cream before it reaches the churn. If this part is neglected, the best maker cannot make good butter. Very few farmers have the facilities necessary to produce cream to make good butter. I think I have already said that the time is past for a general purpose cow, and a general purpose man or woman, and I will now venture to say that the general purpose stove and kitchen must be dispensed with. No milk or cream can be brought to the necessary temperature for ripening by the same stove and in the same kitchen where the cooking, baking, washing, etc., is done. I will give you an instance. We have a patron who for a long time sent us very good butter. One week it came far below its usual quality. The flavor was wretched. On inquiry we found that one in the family was ill, which necessitated a sort of herbs to be constantly kept on the stove to be applied to the patient. The smell of this was absorbed by the butter. This is an extreme case, but we have more or less of this all the time. We scarcely ever find the same flavor in butter made by the same person at different times, and this in most cases is due to what has been done by this general purpose stove and kitchen, and perhaps the old man and his tobacco pipe. What can be done? Will it pay the farmer to have a special room and keep it warm for his cream? For the small quantity that is made by a great many this would not pay.

Years ago, when I introduced the Cooley milk cans, I strongly urged the importance of setting milk under water—that is, completely covered over with water. At that time, having had an interest in the patent, I was suspected of selfishness, and even such men as Prof. Brown and others took strong grounds against me. To-day, sirs, I have no interest in the said patent, but I believe if we had continued to practise that system our butter would be 50 per cent. better than it is to-day. Knowing that a great many, in fact nearly all the farmers, were not supplied with a proper place to keep their milk and cream, I saw the great importance of this being done. If the farmers would now keep their milk and cream submerged in water, and in that way exclude the impure and offensive odors, I believe that they could make a butter of a natural and pleasant flavor, instead of it being loaded with the odors from cooking, smoking, etc.

One other matter I wish to speak about, and then I have done. I think scarcely enough has been said and is said about the importance of cleanliness in milking. Through the long years when the cow was looked upon as a necessary evil, and a bill of expense, farmers grew into the habit of shamefully neglecting her. A man would be considered almost a criminal if he did not clean his horses; but the same man expects his wife to milk the cows literally covered with filth. It is impossible to get the milk from such a cow in a fit condition for human food of any kind. Cows should be cleaned every day, or, better still, every time before they are milked, and if the farmer has not time to clean both horses and cows, let the horses go and clean the cows.

Economy in Production of Milk.

[A paper read before the last meeting of the Ontario Creamery Association by John Sprague.]

Economy, the subject of my address, to stand off and look at it, seems to be worn out when we consider the length of time it has been in use, and the large numbers of people that use it. Economy, like many other things, has two sides. That is the reason it wears so well, to use a common expression. We have what we call good economy—that is one side of it, and we also have what is termed poor economy—that is the other side. We all use economy of some kind, poor or good, in our business and farm management. We recommend it to others, and to preach economy to others is as easy as it is to find fault with other people's management, and to ask questions that we ourselves cannot answer. It is much easier for us to recommend economy to others than it is to practise it ourselves. The man that talks economy to his wife and family is not always the man that makes use of this commodity. Webster says economy is internal arrangement, system, disposal, and a judicious management of money concerns. Economy avoids all waste and extravagance, and applies money or worth to the very best advantage. Economy is virtue. I say that if good economy is virtue, poor economy must of necessity be a vice. To illustrate, to compare, to contrast, we will talk along this line. The farmer that is so economical that he can't afford to take a dairy, a county or a city paper, or let me say all three of them, is using poor economy. The dairyman that can't afford to spend time and money to improve the quality and breed of his cows, and in securing the best utensils for his business, is also using poor economy. Again, the dairyman that sells his hay and grain in the city or other markets, is feeding his cows on straw, is using the very poorest kind of economy. Milk produced from straw of any kind is too dear, it costs too much, it's too dear at any price for feeding the dairy cow. I need not speak of the many kinds of straw that we grow on our farms, and I think it is not necessary that we should discuss its value as food for the dairy cow. Straw, I think, has ruined the reputation, and broken the heart of many an honest dairy cow. The man that selects his cows by guess, that feeds and milks by guess, that runs his dairy on the plan of let the tail go with the hide—he is using poor economy, he is sure not to make money. It is not my intention to lay down a cut and dried rule as to what breed or kind of cows a man should select. It is not my purpose to fix a ration for other people's cows. Milk to the dairyman is money, it is money's worth, it costs money, it also brings money, it is an article of value. The difference between cost of production and the amount realized from the sale of it is the farmer's profit or loss. The farmer that is producing milk at the cost of one dollar per hundred pounds, and is only getting eighty cents per hundred pounds, is practising poor economy, he is losing money. Having said this much on poor economy, we will now talk on the line of good economy in the production of milk. The central thought and aim of every dairyman to-day should be how he can produce the largest amount of good milk at the very lowest possible cost. Next, that he produce the milk at seasons in the year when it is worth the most money. To begin with the cost of production of milk. You, as farmers, all know that the cost of milk is caused by the many different surroundings:—The cost of land, the cost of cows, and last but not least, the cost of feed. Let me say here, that I do not know of any fixed rule or law that will apply to all sections of this Province, regarding breed of cows or kinds of feed, alike. Allowing this to be so, I claim that there are certain fixed methods and laws that apply to the good management of all our dairy farms the same.

I do think that it is a fixed fact that corn is our cheapest and best feed; cornmeal, corn fodder and corn ensilage. Corn ensilage for quantity and for cheapness. By the judicious use of ensilage in connection with our other feeds, we can obtain large quantities of milk, and are enabled to continue our dairies the whole year.

You all will, I think, agree with me in one thing, that is, that it is time that the summer dairy was a thing of the past, so to speak, and further agree that the time has come when we should give winter dairying a good share of our attention.

It is possible to produce milk in autumn and winter as cheap as at any other season of the year, and it is also possible to get larger cash returns for it.

Judging by the past, I must be correct. Taking ten years, 1878 to 1887, as a basis of calculation, we find that the price got for milk for the months of May, June, July and August, for the ten years named, was under sixty-four cents per hundred pounds to the farmer. We find that the average price got for milk for the months of September and October for these same years was eighty seven-cents net per hundred pounds to the farmer.

Comment or argument on this matter to me seems out of place and uncalled for.

The dairyman that builds himself a good silo, selects with care good cows, grows his own feed and plenty of it, runs his dairy the whole year round, that uses diligence and good economy in all his labor, I will liken him to the man that built his house upon a rock, and the hard times came and the McKinley Bill got in its work; barley got cheap, and the horse became a burden; the shiftless farmer got poor, but this man, he prospered.

FAMILY CIRCLE.

Saved from the Sea.

BY S. M. STUDDERT-KENNEDY, BLACKROCK, IRELAND.

Mother, come here quickly! What can this be rounding the creek? It is like a raft with a long basket on it. Bring the field glass, I do not like to lose sight of it. Yes, it is a raft. I will run down to the shore. A shawl, thanks, and away my Marjorie flew—thru' the open window. I followed, and when I came up with her, she had already dragged the raft up on the beach, and was tugging away some wraps which were round a little bundle in the long basket. I proposed carrying it as it was up to the cottage. She assented, and between us we did so, laying it on two hall chairs. She ran for a knife, and in a moment cords were cut away, wraps pulled down, and there lay a dark haired baby boy—just awakening—and blinking a pair of dark grey eyes towards the light. Sewed on the little wrapper we saw a strip of paper on which was scrawled:—

"Lancelot—born in wedlock—given to Marjorie—by his mother."

For a moment or so neither of us spoke. Then Marjorie, stooping down, kissed the little one and said, "Mother, I accept the trust."

Three years have passed. I think I see the sun glinting on the steep rocks at either side of the narrow bay, as we look at the "message from the sea." Then, as we turn towards our home, the sun again catches the long, white coast guard station, and the lion's couchant which rest themselves on the pillars of the gate which shuts out my nephew's fine house from the open sea view—a view I so delight in looking at from my unpretending cottage windows.

I made elaborate notes of everything which could bear upon this "message from the sea," at the time. Marjorie and I kept separate diaries, and, as there are barely nineteen years between her age and mine, and she was then only eighteen, my readers must judge for themselves whether our joint, rather curious story results from dotage or otherwise. My nephew, Fred had been an ever welcome visitor to us. I knew, though nothing had passed between us on the subject, that Marjorie's love for him had grown with her growth; I also felt that his father had remained as it had ever been—brotherly. His father had made his home chiefly in Italy, where he had met and married a delicate Italian lady. She had tried to live in this country for his sake, so that their boy might learn to love dear old Ireland better than his father had done. But she did not succeed. She asked to be taken home to die. I wished to keep Fred, but she could not part with him so long as she lived. So nurse and boy all went together. My brother wished me to take up his place for him, but I preferred my own "home, sweet home." I offered to put a competent housekeeper—a lady (widow) whom I had known in years gone by—in charge, and take the trouble of seeing that she did her duty by him in every particular, but I would do no more. My own little one, Marjorie, had been sent to me, after her dear father's death, and I could not neglect her interests even for Robert's, so he was obliged to be content. My poor sister died, and, in due course, Fred was brought back to Portacloy, where he lived with a private tutor. His father never settling, it was not a surprise to me that Fred grew more and more restless every year; his love of "travel" was an inheritance. However, when the time came for him to go to Eton, he was sent, and the tutor dismissed. Then the hall was empty for many a long year. My poor brother died very suddenly at Spa. We heard of it by telegram. Fred had just entered Cambridge, and was going to see his father before his term had begun, when the telegrams to him and me arrived. He went off at once, brought his father's remains and laid them alongside his mother's, saw all business claims settled and came home—a very rich young man, with, to all appearance, no care in the world. A year or so passed, he running over to see us as usual, and nominally to look over his place and receive rents; he had certainly a faithful agent and steward in one—none more so. One summer he had a much longer vacation than usual, or he took one, I know he seemed to be in Portacloy for months, during which time he reminded me more and more each day of his father, who never settled. He had a habit of going away for days, taking it out of himself by long walks and sleeping in country hotels, so he expressed himself. He usually came home tired and gloomy. I have known the reason of this conduct now for a long time; but then it was passing strange. After one of these home-comings, when he had been away longer than usual, he led us to believe he had been in London; he looked as if he had been in hospital; utterly miserable looking and delicate. Oh how I did sorrow then for his having no father to help him. I saw that he was passing through a trouble, but was powerless to help him. Poor Fred! Marjorie kept away from him as much as possible. She had now two burdens to bear—her own and his—because she saw, as I did, that he had one. One day he told us he intended going abroad for a long travel, perhaps a year or more. He would go in a few days, did not know where, but thought he should have lessons in painting, a talent he as certainly possessed as he had neglected it. It came to him from mother and father. His mother had been an artist's daughter, and he thought he would like to find out her people, and if any of them were poor help them in whatever way they liked best. He had plenty of money, and it had suddenly come home to him that he had not been of any use in the world so far. God helping him, he would turn a fresh page and begin anew. I did not look at Marjorie while he talked in this way, but after he had gone, as he did in a day or so, I watched her growing quieter and sweeter every day, and I felt that her life's work had begun.

During the next spring (it is curious that both Marjorie and I forgot to enter the month, week or day in our diaries) the "message from the sea" came to us. I wrote, telling Fred of our new care. He merely answered that nothing kind which I or Marjorie did ever surprised him. Our little Sea Bird grew into a large one. Marjorie never tired teaching him of all things and all people, but his chief delight was modelling all the soft masses of mud he could pick up into curious images. Then he disturbed the cook by scheming them into the oven to bake. An unhappy effort of this kind was the beginning of a new life to him. He had copied an image which Marjorie kept in her own room, a little one that Fred had modelled for her long ago. He did not tell of doing this—made it, and put it in the oven to bake. Cook did not know of it, and when making use of the oven crushed the clay treasure. When Lancelot went for it, fancy the poor boy's horror to find it in atoms. He cried so bitterly and seemed to feel his loss so, that it came upon me then for the first time that he, too, would find his life in other lands. I talked to him after a little while and asked what profession he would choose, had he power to choose any. His quick answer came, "I would rather be a sculpture than be King of England." I determined then to do all in my power to cultivate this gift for him before he had learned how to idle it away. I wrote to Fred, told him of all my difficulty, of how clever our Bird was, and I asked him to help him with masters. I was afraid I could not manage to do all myself. Marjorie agreed with me in all this. He answered by telegram: "Coming home. In a few weeks he arrived—much altered. He was

worn-looking to a degree. Marjorie was quieter than evening even than usual, but I could see her hands trembling as she tried to knit. Lancelot was out when he came. I sent for him, and I shall never forget Fred's expression when the lad walked into the room. His eyes dilated and he became pale as death. Lancelot was naturally a little nervous looking, so much (to him) depended on Fred's decision, but there was nothing in the meeting that we could see to account for Fred's evident excitement. However, it passed off and the question of Lancelot's future was propounded. We talked for some time, then Fred proposed the boy's going home with him; wished him to remain until to-morrow, when they would come down to us again with something decided to talk over. As they went down the short avenue together—I can recall my sensation to this hour—one tall, broad and bronzed, the other smaller, slighter and darker, yet with a indescribable likeness to each other. It bewildered me.

They came together next morning. Fred at once made his proposition, viz., to take our boy to Italy, have him perfected in the art he loved, so far as in him lay to be perfected; told him in our presence that he should expect him to do his utmost to achieve independence. If he (Fred) saw that after doing his utmost he failed in being able to do so much, he would continue to assist his efforts; but he should expect him, for his own honor's sake and ours, to let nothing interfere with his work, and by telling him that he had not been such a useless man as he most certainly was, had he been obliged by circumstances; what he hoped Lancelot would do of his own honest wish. So, in a very few weeks, he took our Sea Bird from us. Sad, yet glad, we heard from him, Lancelot, regularly. His was a grateful nature. He spoke glowingly of his work. Fred also wrote of his perseverance and great quickness of appreciation. We were very lonely—and so the years sped on.

I shall take up the thread of my story after many years—quite six. I need not look up our diaries for anything to fill in the interim with. Our lives were full of sameness. Still our wanderers stayed away. Once they came home to see us, but went away just when the New Year was coming. In Lancelot's nervous wish to be constantly with us I could read the dear boy's gratitude, and yet I plainly saw he wanted to be back with his clay and his models. He brought us several lovely little things, but would not hear our praise of them. He bade us wait. When he next came he might have something we could admire. He meant to repay us with success. Loving ambition such as this is a very sweet thing to meet with. When they had been away for another long time, one morning I received a letter. Strange direction, strange stamp, stranger enclosure, which was directed to Frederic Lindsay, to be forwarded to him at once, if alive; if dead, to be opened and acted on by me or mine. I sent Fred the letter by first mail. As soon as I could expect it the following letter arrived:—

MY DEAR AUNT,—I shall tell you my story. Ask Marjorie to listen to it and weigh her answer well. I deserve a decisive no, but somehow I dare to hope it may be otherwise.

Years ago—she will know how long—I had no other object in life than to make myself deserving of the love I believe I possessed—her love. My reason for confessing to this knowledge is that she may realize my degradation. I want to lay myself morally at her feet. I loved her better than anything in the world, and yet I fell. A vision of beauty crossed my path, a perfect type of Irish loveliness. Black haired, grey-eyed, innocent, uneducated, and as pure as my dear Marjorie. I was young, she younger; I rich, she poor; I a gentleman, she a mountain maid. Yet I loved her and I married her. Yes, thank God, I married her. I could only see her occasionally; and as I want to confess all my cowardice, I must acknowledge that her belongings only appalled me. When it was too late to remedy what I had done, I was then hourly brought into contact with them, her coarse father and brothers, her querulous, discontented mother, and the abject poverty of all. It is passing strange how such a pure creature existed among them. But human nature towards one's own almost always asserts itself. The coming home to you and Marjorie after these visits was almost unbearable. One day I slipped, sprained my ankle, and had to be carried to the cottage, where my poor girl nursed me day and night. No murmur ever crossed her lips. And yet one night I must have been feverish in my sleep and wandering, as the next day she asked me, What is Marjorie? Who is Marjorie? I cannot recall what I answered, but I know that in a day or so, when I felt able to go home, and proposed doing so, she could be found nowhere. I came away, ungrateful dog that I was, and I never saw my girl again. When I came home you may remember believing I had been in London, while I was so near you being nursed by my wife. Oh, what shame I cry on myself for all this deceit! Marjorie, can you forgive? I went to bid her good-bye; in a few days I meant to go to Rome and from there write and confess all, but I found she had gone to stay, for an indefinite time, at Rosport, with her grandmother, an old woman who "needed her." I did not go to see her there, but I wrote, sending her a large sum of money, and telling her I would write to her. Her family did not know my name. I passed amongst them as a sportsman, travelling everywhere for amusement. Oh, Marjorie, can you ever forgive me? I spent months and months going about; I could find no peace for mind or body. At last the letter came telling me of your message from the sea. I did not understand then, but the instant I saw your Sea Bird I felt that he was our child—mine and poor Annie's. I have made every enquiry, but could glean nothing. The country people about seemed to forget her name, so I brought him away with me. And now, Marjorie, the letter you sent to me was written by a clergyman, in whose house my poor girl had been all these years a trusted, valued friend and servant. She was then very ill, and had told her story. He asked me to come, if possible, to see her before she died, and bring the boy if I could. I am on my way now, Marjorie, to do so. Good-bye!

The letter ended here, but it was taken up evidently after some time had passed. I shall quote the words as they were written:—

Marjorie, we arrived too late. My wife (oh, thank God, I have had the courage to write them even at the twelfth hour) had gone home, as her friend had beautifully expressed it, two days before. We could only bear her remains to its last resting place. She had sent me her last love and full forgiveness. It was only when she went out into the world that she knew how impossible it would have been to burden "such as I was" with "such as her." These were the sweet, uncultured words she asked her friend to write down and repeat. Oh, Marjorie, can you forgive?

I shall be away for a year. Lancelot will return to his loved art. If we come home for Christmas in 1894, will my patient darling, Marjorie, come to me—forever? Just one word—YES—I want no other answer. Good-bye!

Tabby Cat.

Sent free of postage for one new subscriber to the FARMER'S ADVOCATE. The novelty of this season. Printed in colors on cloth, so that any child that can sew may make a perfect representation of a cat, life size, 13 inches high. Send in your name and post office, accompanied by \$1.00.



THE QUIET HOUR.

Oh, for a Perfect Trust!

ISAIAH XXVI., 3. PHILIP., IV. 6, 7.

Oh! for the peace of a perfect trust,
My loving God, in Thee;
Unwavering faith, that never doubts,
Thou chooseth best for me.

Best, though my plans be all upset;
Best, though the way be rough;
Best, though my earthly store be scant;
In Thee I have enough.

Best, though my health and strength be gone,
Though weary days be mine,
Shut out from much that others have;
Not my will, Lord, but Thine!

And even though disappointments come,
They too are best for me,
To wean me from this changing world,
And lead me nearer Thee.

Oh! for the peace of a perfect trust
That looks away from all;
That sees Thy hand in everything,
In great events or small;

That hears Thy voice—a Father's voice—
Directing for the best:—
Oh! for the peace of a perfect trust,
A heart with Thee at rest!

The Road of Life.

The road of life is not a turnpike road. It is a path which every one must find out for himself, by the help of such directions as God has given us; and there are so many other paths crossing the true one in all quarters, and the wrong paths are so well beaten, and the true path in places is so faintly marked, so many persons, too, are always going the wrong way, and so few are walking straight along the right, that between the number of wrong examples to lead him astray, a man, if he does not take continual heed, is in great danger of turning into a wrong path a most without perceiving it. You know how hard it is for a stranger to find his way over the downs, especially if the evening is dark and foggy. Yet, there, the man is at liberty to make out the path as well as he can. No one tries to mislead him. But in the paths of life there are always plenty of companions at work to mislead the christian, to say nothing of his own evil passions and appetites which all pull him out of the way. One neighbor says to him, "Take this road, it is almost as straight as the other, and much pleasanter." Another says, "Take this road, it is a short cut, and will save you a world of trouble." A third says, "Walk part of the way with us for company's sake; you cannot be far wrong if you keep with us; at worst, it is on your crossing back into your narrow, lonely path if you don't like our way after trying it." A fourth cries to him, "What makes you so particular? Do you fancy you know the road to heaven better than anybody else? We are all going there we hope, as well as you, though we do not make such a fuss about it." Is it a wonder that, with so many bad advisers and bad examples to turn him a-tray, with so many wrong paths to puzzle him with so many evil passions, as man has naturally pulling him out of the straight and narrow path, it is a wonder, I say that, with all these things to lead them wrong, men should so often go wrong? It is no wonder; nay, were it not that God's Word is a lantern to our feet and a light to our path—were it not for the Spirit of God crying to us, "This is the right way," when we turn aside to the right hand or to the left, we should all of us go wrong always.

AUGUSTUS HARE.

Everything which God has set apart in any way for His own and put His mark on, everything which in any way belongs more particularly to Him—His word, His ordinances, His house, His people—are things which God has cleansed, therefore we must not call them common. He has set them apart for His own service; He has fenced them off, as it were, from the waste of the world, and has enclosed them for His own use. Hence there is the same sort of difference between them and all merely worldly and common things, as there is between a garden and Salisbury Plain. No one who knows how to behave himself would bring a horse into a garden, or walk over the strawberry beds, or trample down the flowers. But in riding from here to Salisbury everybody would feel himself at liberty, while crossing the downs, to gallop over the turf at pleasure. Well, the same difference which there is between common down and a cultivated garden, the same is there also between worldly days, worldly books, worldly names, worldly people, and God's day, God's book, God's name and God's people. The former are common, and may be treated as such; the latter are not common, because God has taken them to Himself, and brought them within the limits of His sanctuary, and thrown the safeguard of His holiness around them.

AUGUSTUS HARE.

The Test of the Home Life.

The truly religious man will be as sweet in irritating gnat-stings as in crushing calamities, as self-denying for a child as for a crowd; as patient over a spoilt or late meal as over an operation which summons all his manhood to the front. "My grace is sufficient for thee," is the one answer of Jesus Christ to all inquiries; the one reply to all excuses and complaints about trying circumstances. This home life was chosen for thee by the unerring skill of One who knows thee better than thou knowst thyself, and Who could not mistake. It has been selected as the best school of grace for thee. Its burdens were poised on the hand of infinite love before they were placed on thy shoulders. Its pressure has been carefully measured by scales more delicate than those which chemists use. And now, looking down upon thee, the Master says, "There is nothing in thy life that may not be lived in Me, for Me, through Me, and I am willing to enable thee to be sweet and noble and saint-like in it all."

F. B. MEYER, B. A.

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MINNIE MAY'S DEPARTMENT.

Fashionable Furs.

Among the new fashions which come to us this year in furs, the two shown in our cut, are perhaps the prettiest, introducing the head in one case as a muff, and in the other as a pretty finish for the neck.



Minnie May offers a prize of \$2.00 for the best article on "Home Dressmaking." All communications to be in our office by the first of March.

The Home of Cholera.

"PHYSICIAN" IN HOME QUEEN.

It is in the East, of course. We have only to go far enough eastward to find the origin of all the terrible maladies that have decimated the countries and cities of the civilized world. The plague, which has swept off millions of human beings, had its origin in Egypt. It was not so much the Nile that overflowed, but the filth of every description that was thrown into the river as the water subsided, that made the pestilence; and from Egypt it was carried into other parts of the world.

La grippe has its abiding place in Russia, originating among the beggars of that country. This, too, is a filth disease, and its germs have been carried westward across two continents. Cholera has all along had its starting point in India, amid conditions so vile and putrescent that we can hardly conceive of anything so terrible. The yellow fever is another of the filth disorders, and it flourishes in warm climates, where general sanitation is neglected. Have we forgotten Memphis, with its scores of acres covered with garbage, its open sewers and its lack of sanitation generally? A revolution in these important matters has put an end to the fearful ravages of "Yellow Jack," so far as Memphis is concerned; and in time, no doubt, the other Southern cities will fall into line.

But how shall we clean up Egypt? or India? or even Russia, which is nearer at hand? It will perhaps be hundreds of years before the valley of the Ganges can be made sweet. So long as this river is made the burial place of their countless dead, a place of bathing for millions of the filthiest of human beings, and its water is used for household purposes, pestilence must stalk through the land. One can not read the account given by Dr. Simmons, chairman of Yokohama board of health, without mingled feelings of pity and disgust. He tells us that the drinking water of India is derived from wells, artificial ponds, and the water courses of the country. The tanks or artificial ponds contain surface water collected during the rainy season, and are little less than stagnant pools. In these ponds the natives wash their clothes, bathe, and also use the water for drinking and other purposes. The water of the Ganges, with all its dire pollutions, is similarly used. The banks of the streams flowing into it are studded with towns, and filth of the worst description is washed into the public water supply with every rainfall.

The habitations in which these wretched people dwell are vile pest-holes. The description of them can hardly be given in these pages. Then there are the pilgrimages, when thousands of people flock to the temple, some of them dying on the way, and others reaching their destination in the most filthy condition. These people are fed from the temple kitchen, and so are thousands of beggars. Under the intense heat the food, which may have been wholesome at first, is in a putrefactive state, half rotten. And yet this so-called sacred food, all that is left of it, is carried home by the pilgrims or consumed on their return journey. The pilgrims that die on the way, or before the return journey is commenced, are buried in holes scooped in the sand; and the hillocks are covered with bones and skulls, washed out by the tropical rains.

The lodging of these pilgrims is also something terrible; they are put into cells without windows or other apertures for ventilation; this, too, with an atmosphere that ranges in temperature from 85° to 100° Fahrenheit. Think of lodging eighty persons in an apartment thirteen feet long, ten broad, and six and a-half feet high! In lodgings such as these, three hundred thousand pilgrims are packed together for a week, in a single season. No wonder that on their return home the points by the wayside are thickly strewn with corpses. In a single pilgrimage Bishop Wilson estimates a loss of fifty thousand; and there is said to be a dozen of these pilgrimages annually, to say nothing of those who visit the smaller shrines in the country. Thousands of these wretched people fall victims to cholera; and from its home in India it is carried all over the world. To root it out from its native soil is practically impossible, at least in this day and generation. Whether it can be kept out of more civilized countries is a question to be considered.

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES :-

Have you never felt sorry for boys and girls in the city who get no chance to ride a horse bareback to the brook? Some one says the best way to start life is astride a farm-horse with a rope halter, and my experience tells me I can agree with him. From the farms come the strong men of our country, the men who have the brains and the body, and who lead other men. Who would not rather lead than be led? Who would be ever under another's small mind, if he felt that within him were the power to do and the soul to dare far higher, nobler and better things.

Riding horseback is not unlike life; you have rough and smooth, you have to sit straight, balance yourself, be ready for jolts, and you soon learn to jump off or on at ease. I do not say that all who ride a horse well make life a success, but while you ride, just think, and find for yourselves other resemblances between riding and life. As I saw you out on the pond skating the other day, your rosy cheeks and straight shoulders, and hearty talk and laughter, made me wonder if you ever pity the boy or girl who walks along the street to the skating rink for exercise there, with its crowd, and its steam and dampness, and its lack of freedom. Then there's your sleigh riding down hill. No danger of a policeman making you stop when you make a bee-line for the bars, and out to the meadow and creek beyond; no danger of running into a team or a train or frightening a lady. Oh, no, just to go on with full loads and merry hearts and voices, and spirits that could laugh with their own joyousness. But you leave the moonlight and the echoes and the well-worn track, haul your sled home, hang up your cap, put mittens to dry and join the family group—mother knitting, father reading, sister studying, brother looking over the ADVOCATE, or coming from the barn with his lantern. How much of your joy and fun are you going to give out to those who are so much interested in you, and who have cared for you every day since you were born? Tell them of your fun, put a little more coal on the hall stove, brighten up the kitchen fire, and do whatever you can to make things bright without waiting to be asked. Then when family worship comes, let me hear your hearty voice beside your sister at the organ in the evening hymn of praise, your undivided attention as God's Word is read, and let me feel you join in silently while father gives thanks and asks for further blessings.

UNCLE TOM

P. S.—You will not forget to send your photographs. Boys and girls we must try and have it all complete by the spring. I want as many as possible of those who have taken any interest in the puzzles during the last few years, and especially all the prize-winners. Let me have more selections of poetry, too. I'm sure the "Poet's Corner" is a most interesting and instructive department, enjoyed by many. A word, too, about the puzzles; I am sorry more do not enter into the contest for prizes, and I would like to know the reason why they don't. Now, let me add a lot of new nephews and nieces to our list. Plenty of time yet to come out first. I hope some of my nephews and nieces will try and get a new subscriber, and secure one of these cats, as they will be pleased with it.

POET'S CORNER.

First Prize for Selected Poetry.

BY SARA HUFF, FLORENCE, ONT.

John Greenleaf Whittier.

John Greenleaf Whittier, the Quaker poet of America, was born near Haverhill, in Massachusetts. The early surroundings of the New England poet is thus described by Whittier himself:—"Our home was somewhat lonely," he says, "with no house in sight, with few companions and few recreations. Our school was only for twelve weeks in a year, in the depth of winter, and half a mile distant. On first-days father and mother, and sometimes one of us three children, rode down to the Friends' meeting house, in Amesbury, eight miles distant. We had only about twenty volumes of books, most of them the journals of pioneer ministers in our society. Our only annual was an almanac. Now and then I heard of a book of biography and travel, and walked miles to borrow it." A copy of Burns' poems was lent to him by a preacher. This aroused the genius in his own soul, and he began to write verses. To earn money he made shoes, selling twelve pair for one dollar, but persevered until thirty dollars were raised, which he spent in attending the academy at Haverhill for one year. He then taught school. Whittier was an ardent advocate, in prose and verse, of abolition, poetizing republican themes with great energy. The Freeman, an anti-slavery paper, was edited by him. For at least seven years he and his friend Garrison toiled in the interests of the slaves, although persecuted and ill-used for it. During this period he wrote a number of stirring poems—"Ichabod," "The Burial of Barbour," "Hunters of Men," "The Branded Hand," and "Our Countrymen in Chains." No poet is a better companion for the young. He has written many poems and published two books of selections for children. Whittier's birthday on the 17th of December was generally observed in the public schools of the country. An English review has pronounced Whittier's poem on "Hampton Beach" the finest short poem in the language. "Snow Bound," "The Eternal Goodness," and "At Last," are beautiful poems. Much of his poetry is pathetic and full of inspiration; but he rises to his best in his anti-slavery songs. "The Virginia Slave Mother's Lament," wrote John Bright, the English Quaker, "has often brought tears to my eyes. These few lines were enough to arouse the whole nation to expel the odious crime of slavery." When Lincoln's proclamation liberated eight million slaves forever from bondage, then Whittier, while sitting in the Friends' meeting-house, hearing the bells ringing the jubilee of freedom all over the land, wrote his song of triumph, "Laus Deo." At his funeral in Amesbury, a great number gathered to pay the last tribute of respect. The account given by Dr. Bowen in

the Independent says:—"On the casket was the gift of a brother poet—Oliver Wendell Holmes—a wreath of eighty-five roses and carnations, another form for expressing the words:—'John Greenleaf Whittier, born December 17th, 1807; died September 7th, 1892.'"

The Slave Mother's Lament.

Gone, gone—sold and gone,
To the rice-swamp, dark and lone.
Where the slave-whip ceaseless swings,
Where the noisome insect stings,
Where the fever demon strews
Poison with the falling dews;
Where the sickly sunbeams glare
Through the hot and misty air,
Gone, gone—sold and gone,
To the rice-swamp, dark and lone,
From Virginia's hills and waters;
Woe is me, my stolen daughters!

Gone, gone—sold and gone,
To the rice-swamp, dark and lone.
There no mother's eye is near them,
There no mother's ear can hear them;
Never, when the torturing lash
Seams their back with many a gash,
Shall a mother's kindness bless them,
Or a mother's arms caress them.

Gone, gone—sold and gone,
To the rice-swamp, dark and lone.
Oh, when weary, sad and slow,
From the fields at night they go,
Faint with toil, and racked with pain,
To their cheerless homes again—
There no brother's voice shall greet them—
There no father's welcome meet them.

Gone, gone—sold and gone,
To the rice-swamp, dark and lone.
Toiling through the weary day,
And at night the spoiler's prey,
Oh, that they had earlier died,
Sleeping calmly, side by side,
Where the tyrant's power is o'er,
And the fetter galls no more!

Gone, gone—sold and gone,
To the rice-swamp, dark and lone.
By the holy love He beareth—
By the bruised reed He spareth;
Oh, may He, to whom alone
All their cruel wrongs are known,
Still their hope and refuge prove,
With a more than mother's love.

From "The Eternal Goodness."

I long for household voices gone,
For vanished smiles I long,
But God hath led my dear ones on,
And He can do no wrong.

I know not what the future hath
Of marvel or surprise,
Assured alone that life and death
His mercy underlies.

And if my heart and flesh are weak
To bear an untried pain,
The bruised reed He will not break,
But strengthen and sustain.

No offering of my own I have,
Nor works my faith to prove;
I can but give the gifts He gave,
And plead His love for love.

And so beside the silent sea
I wait the muffled oar;
No harm from Him can come to me
On ocean or on shore.

I know not where His islands lift
Their fringed palms in air;
I only know I cannot drift
Beyond His love and care.

William Shakespeare.

William Shakespeare, born at Stratford-upon-Avon, in 1564, died 1616, was the greatest of English poets. In 1582 he married Anne Hathaway, and at the age of twenty-two went to London, where he became first an actor, then a writer for the stage, and soon distinguished himself in both tragedy and comedy. He is remarkable for his great command of language. No writer has ever exhibited such an insight into human nature and the power of depicting character in so many forms. From his works may be gathered precepts adapted to every condition of life, and to every circumstance of human affairs. Under Shakespeare the drama reached its highest perfection. He wrote in all thirty-seven plays, one hundred and fifty sonnets, and the poems "Venus and Adonis," "Lucrece," "The Passionate Pilgrim" and "A Lover's Complaint." A few of his dramas are: "Hamlet," "King John," "King Richard II.," "King Richard III.," and his Roman plays, "Coriolanus," "Julius Caesar" and "Antony and Cleopatra." The "Merchant of Venice" is the best of Shakespeare's comedies, and shows the depth, sublimity and creative power of this great author. The following extract, "A Plea for Mercy," forms part of Portia's address to Shylock, the Jew, in the Merchant of Venice.

A Plea for Mercy.

The quality of mercy is not strained;
It droppeth as the gentle rain from heaven,
Upon the place beneath. It is twice blessed;
It blesseth him that gives, and him that takes.
'Tis mightiest in the mightiest; it becomes
The throned monarch better than his crown.
His sceptre shows the force of temporal power,
The attribute to awe and majesty,
Wherein doth sit the dread and fear of kings;
But mercy is above this sceptred sway;
It is enthroned in the hearts of kings;
It is an attribute to God himself;
And earthly power doth then show likest God's
When mercy seasons justice. Therefore, Jew,
Though justice be thy plea, consider this,—
That, in the course of justice, none of us
Should see salvation: we do pray for mercy;
And that same prayer doth teach us all to render
The deeds of mercy.

Hamlet's Soliloquy on Death.

Act III., Sc., I.

To be, or not to be: that is the question:
Whether 'tis nobler in the mind to suffer
The stings and arrows of outrageous fortune,
Or to take arms against a sea of troubles,
And by opposing end them? To die,—to sleep,—
No more; and by a sleep to say we end
The heartache, and the thousand natural shocks
That flesh is heir to,—'tis a consummation
Devoutly to be wish'd. To die, to sleep;
To sleep! perchance to dream:—ay, there's the rub,

For in that sleep of death what dreams may come
When we have shuffled off this mortal coil,
Must give us pause: there's the respect,
That makes calamity of so long life:
For who would bear the whips and scorns of time,
The oppressor's wrong, the proud man's contumely,
The pangs of despised love, the law's delay,
The insolence of office, and the spurns
That patient merit of the unworthy takes,
When he himself might his quietus make
With a bare bodkin? who would fardels bear,
To grunt and sweat under a weary life,
But that the dread of something after death,
The undiscover'd country from whose bourne
No traveller returns, puzzles the will;
And makes us rather bear those ills we have
Than fly to others that we know not of?
Thus conscience does make cowards of us all;
And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought;
And enterprises of great pith and moment,
With this regard, their currents turn awry,
And lose the name of action.

Good name in man and woman, dear my lord,
Is the immediate jewel of their souls:
Who steals my purse, steals trash; 'tis something, nothing;
'Twas mine, 'twas his, and has been slave to thousands;
But he that filches from me my good name,
Robs me of that which not enriches him,
And makes me poor indeed.

Robert Burns.

Robert Burns, born 1759, died 1793. Scotland's greatest poet has given to the literature of the English race some of its most precious jewels. His songs will endure while the language lasts. His lyrics have a wonderful union of thrilling passion and melting tenderness. Holy Willie's Prayer is a matchless satire. Most of his poems are written in his native Ayrshire dialect which, however, he frequently exchanges for English, as in the strange tale of Tam o'Shanter is found the stanza:

"But pleasures are like poppies spread,
You seize the flower, its bloom is shed;
Or, like the snow-fall in the river,
A moment white, then melts forever;
Or like the borealis race,
That fit ere you can point their place;
Or, like the rainbow's lovely form,
Evanishing amid the storm."

For A' That and A' That.

Is there, for honest poverty,
That hangs his head, and a' that?
The coward slave, we pass him by,
We dare be poor for a' that!
For a' that, and a' that,
Our toils obscure, and a' that;
The rank is but the guinea's stamp,
The man's the gowd for a' that.

What, though on hamely fare we dine,
Wear hoddin'-grey, and a' that;
Gie fools their silks, and knaves their wine,
A man's a man for a' that!
For a' that, and a' that,
Their tinsel show, and a' that;
The honest man, though e'er sae poor,
Is king o' men for a' that.

A prince can make a belted knight,
A marquis, duke and a' that;
But an honest man's aboon his might,
Gude faith, he mauna fa' that!
For a' that, and a' that,
Their dignities, and a' that,
The pith o' sense, and pride o' worth,
Are higher ranks than a' that.

Then let us pray that come it may,
As come it will for a' that,
That sense and worth, o'er a' the earth,
May bear the gree, and a' that,
For a' that, and a' that,
It's coming yet, for a' that,
That man to man, the world o'er,
Shall brothers be for a' that.

Second Prize.

BY LOTTIE KETTLES, RAMSAY'S CORNERS, ONT. Lowell.

James Russell Lowell, born 1819, is an American poet and essayist. He is much better known as the author of "The Biglow Papers", a collection of humorous satirical poems on political subjects written in the Yankee dialect. His more serious poems are noted for their tender sentiment; through many of them runs a pensive strain. He has also written many scholarly essays and criticisms. Mr. Lowell has been editor of the "Atlantic Monthly" and of the "North American Review". In 1855 he succeeded Longfellow in the Chair of Modern Languages and Literature at Harvard. He was appointed Minister to Spain in 1877, and to England in 1880.

The Heritage.

The rich man's son inherits lands,
And piles of brick and stone and gold,
And he inherits soft white hands,
And tender flesh that fears the cold,
Nor dares to wear a garment old.
A heritage, it seems to me,
One scarce could wish to hold in fee.

The rich man's son inherits cares;
The bank may break, the factory burn,
A breath may burst his bubble shares,
And soft white hands could hardly earn
A living that would serve his turn.
A heritage, it seems to me,
One scarce could wish to hold in fee.

The rich man's son inherits wants,
His stomach craves for dainty fare;
With sated heart he hears the pants
Of tolling hands with brown arms bare,
And wearies in his easy chair.
A heritage, it seems to me,
One scarce could wish to hold in fee.

What doth the poor man's son inherit?
Stout muscles and a sinewy heart,
A hardy frame, a hardier spirit;
King of two hands, he does his part
In every useful toil and art.
A heritage, it seems to me,
A king might wish to hold in fee.

What doth the poor man's son inherit?
Wishes o'erjoyed with humble things,
A rank adjudged by toil-worn merit,
Content that from employment springs
A heart that in his labor sings.
A heritage, it seems to me,
A king might wish to hold in fee.

What doth the poor man's son inherit?
A patience learned by being poor,
Courage, if sorrow come, to bear it,
A fellow-feeling that is sure
To make the outcast bless his door.
A heritage, it seems to me,
A king might wish to hold in fee.

O, rich man's son! there is a toil
That with all others level stands
Large charity doth never soil,
But only whiten soft white hands.
This is the best crop from thy lands.
A heritage, it seems to me,
Worth being rich to hold in fee.

O, poor man's son! scorn not thy state,
There is worse weariness than thine,
In merely being rich and great;
Toil only gives the soul to shine,
And makes rest fragrant and benign.
A heritage, it seems to me,
Worth being poor to hold in fee.

Both, heirs to some six feet of sod,
Are equal in the earth at last;
Both, children of the same dear God,
Prove title to your heirship vast,
By record of a well-filled past.
A heritage, it seems to me,
Well worth a life to hold in fee.

Third Prize.

BY M. A. CLEMENTS, WINNIPEG, MAN. Frances Havergal.

Frances Ridley Havergal was born in 1836, in the village of Astley. Her father, the clergyman of the village, was a man of rare musical talent, and Frances, the youngest daughter of the house, early showed that she had inherited a portion of this high gift.

Her first sorrow was the death of her mother. The sad and unexpected blow was felt deeply by the child of only twelve years. After the lapse of a few years, Mr. Havergal married again. His second wife was a beautiful type of Christian womanhood, whose sweet influence in the house was felt and readily owned by Frances.

Frances was sent to a school in England for awhile, and afterwards to one in Germany, where she learned to speak the German language perfectly, and also became familiar with German literature.

When Frances had left school, her father took the living of St. Nicholas, near Worcester. In this large parish, by the power of her active Christian work, she made a mark for God, which lasts to this day. At an early age she began to show signs of delicate health, and her work was often stopped by attacks of illness. But suffering and weakness of the body strengthened her spiritually, and her nature never became warped by selfishness or discontent. She soon became known as a poetess, by contributions in verse to different magazines. Her musical talent also developed with cultivation, and published compositions soon made her a name in this art. Her gift of a singularly rich and powerful voice was used, as were all her other talents, as a way by which to glorify and serve her King.

The women in Indian Zenanas, the cause of temperance, the slaves of sin and poverty in crowded English towns, the private troubles of thousands who showered letters upon her, the cry of editors and publishers for more printed matter—all these things laid claim on her time and sympathies, and she tried to let none lay claim in vain. Books of sacred song and music, stories for little ones, and volumes of devotion for older souls, were sent in quick succession to editor and publisher. And her literary earnings were used for the most part for missionary purposes.

But the weak, delicate body was growing less and less able to bear the many burdens which the active spirit laid upon it. To secure quiet, Frances and her sister retired to a village in Wales. But even here she saw much to be done for God, and she could not remain idle. While holding an open air meeting, on temperance, with the men of the neighborhood, she caught a severe cold and chill, from which she never recovered. Internal inflammation set in, and shortly after, at the age of forty-three, this glorious Christian woman took her place in the mansion which the Lord Himself had prepared for His faithful servant.

Consecration.

Take my life and let it be
Consecrated, Lord, to Thee;
Take my hands and let them move
At the impulse of Thy love.

Take my feet and let them be
Swift and beautiful for Thee;
Take my voice and let me sing
Always, only, for my King.

Take my lips and let them be
Filled with messages from Thee;
Take my silver and my gold,
Not a mite would I withhold.

Take my moments, and my days,
Let them flow in endless praise;
Take my intellect, and use
Every power as Thou shalt choose.

Take my will and make it Thine,
It shall be no longer mine;
Take my heart, it is Thine own,
It shall be Thy royal Throne.

Take my love, my God, I pour
At Thy feet its treasure store;
Take myself, and I will be
Ever, only, all for Thee.

Be Not Weary.

Yes! He knows the way is dreary,
Knows the weakness of our frame,
Knows that hand and heart are weary;
He, "in all points," felt the same,
He is near to help and bless;
Be not weary, onward press.

Look to Him who once was willing
All His glory to resign,
That, for thee, the law fulfilling
All His merit might be thine:
Strive to follow day by day
Where His footsteps mark the way.

Look to Him who ever liveth,
Interceding for His own;
Seek, yea, claim the grace He giveth
Freely from His priestly Throne.
Will He not thy strength renew,
With His Spirit's quickening dew?

Look to Him, the Lord of Glory
Tasting death to win thy life;
Gazing on that "wondrous story,"
Canst thou falter in the strife?
Is it not new life to know
That the Lord hath loved thee so?

Look to Him, and faith shall brighten,
Hope shall soar, and love shall burn,
Peace once more thy heart shall lighten;
Rise! He calleth thee, return!
Be not weary on thy way,
Jesus is thy strength and stay.

Puzzles.

1-CHARADE.

Are you going to be in the puzzle group?
If so, hustle yourself along,
For if you don't you'll be in the soup;
So hustle yourself right along.

Won't it be a pleasant band,
With Uncle Tom in the middle;
All the bright ones of our land,
And who are they? Now I will tell.

If we start down by the sea
H. A. Woodworth, he of great fame,
And his sister Mattie we shall name.
Next A. Russel and Morley Boss we shall see.

Miss Lily Day is last but not least
Of those who hail from away down east.
In Eastern Ontario next we'll see who worthy be,
And Miss Armand is of course at the top of the tree.

Then Lanark has another not unknown to fame;
Almer Borrowman is the fellow's name;
And Russell county has also got its wonder,
Its Edwards, C., over whose puzzles we have to ponder.

In Miss Elinor Moore and the two Misses Fox,
Middlesex county will have a good share
Of ye lady solvers fair,
And Amos Howkins, Lorneville P. O., should in the group
also appear.

In Floradale we have two trusty workers,
I. Irvine Devitt and that clever solver, A. Snider.
And George Blyth must also be there;
He from the group we could not spare.

Of course the king of puzzlers, E. A. F., will have a place,
So that we all shall see his clever face,
And his sister, too, who once with us did toil
Now from the group must not recoil.

So now all ye puzzlers gay
Get on your best bibs and tucker,
Send Uncle T. your photo right away,
But be sure your face you do not pucker.

In the TOTAL let us all
Help the "Dom" up to perfection;
If we all TRY and PRIME to do it;
In short LAST will succeed—then satisfaction.

HENRY REEVE.

2-ENIGMATICAL STORY.

12, 5, 3 was a very good boy about 4, 10, 13, 7 years old. His parents took him with them to London. He thought it very funny that they should hire a "11, 14, 15" to take them to the 2, 5, 8, 3, 14. He saw many interesting sights in London, but he wanted to return to his home in America. The 1, 7, 6, 8, 9 was, he was anxious to get back for 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.

LILY DAY.

3-CHARADE.

Nothing venture nothing have,
More true or wonderful words ne'er were spoken;
It COMPLETE would be a surprise
If it happened otherwise.

Then if FIRST this world
Something thou don't crave,
A LAST of some kind thou must do,
Or that craving will remain with you.

HENRY REEVE.

4-SQUARE WORD.

- 1—A small number of persons closely united in some secret intrigue, usually so effect some party or sinister purpose.
- 2—A place of public contest.
- 3—To obscure.
- 4—Aged.
- 5—A thin plate or scale.

FAIR BROTHER.

5-CHARADE.

I hardly think that I need try
To win a prize this year,
For the puzzles are all so good
I'm "unmeet to be their peer."
But puzzling I find is such good fun,
I'll send along my mite,
And try to win a place among
The other puzzlers bright.
I'm sorry Miss Ada can't compete,
And our good friend Fairbrother;
But I hope they'll send FIRST more good puzzles,
And write to one another.
"I would be COMPLETE more sense, I think," a friend was telling me.

"To give up puzzling," but that is not
LAST thinks your cousin C. E.

CHARLIE EDWARDS.

6-ENIGMA.

- In Shakespeare's "Hamlet."
- In "The Brook" by Tennyson.
- In Cowper's "Boadicea."
- In Longfellow's "Resignation."
- In "The Bells," by Poe.
- In Bulwer's "Richelieu."
- In Wordsworth's "Ode to Duty."
- In "The Bard," by Gray.
- In Moore's "Oft on a Stilly Night."
- In "The Coliseum," by Byron.
- In Goldsmith's "Deserted Village."

Here we have a good array
Of famous poets and their works.
Now if this puzzle you read aright
You shall find what we all appreciate.

HENRY REEVE.

Answers to January First Puzzles.

- 1—Welcome.
- 2—One.
- 3—1, 3, 9, 27, 81.
- 4—Listen.
- 5—Cloud, Coud.
- 6—Elate, Late.

Names of Those Who Have Sent Correct Answers to First January Puzzles.

Charlie Edwards, Lily Day, Charlie Palliser, A. R. Borrowman, Addison and Oliver Snider, Henry Reeve, Josie Sheehan, Fred Hall, Minnie Harley, Thos. Andros, G. B. Kilme, Thos. W. Banks, A. Howkins, Geo. W. Blythe, G. Gamache.

Manitoba Dairymen's Association.

The annual meeting of the Dairymen's Association was held on January 18th, in the city hall, Winnipeg. The business meeting in the afternoon opened at 2.30 o'clock, with Prof. S. M. Barre in the chair. After calling the meeting to order and expressing pleasure at seeing so many members present, he called on the secretary to read the annual report, which was then adopted, as was also the financial statement. The report of the Society's representative on the Industrial Exhibition Board was then read and adopted. The election of officers for the ensuing year was then proceeded with, and resulted as follows:—President, Prof. Barre; 1st Vice-President, Wm. M. Champion; 2nd Vice-President, John Hettle, M. P. P.; Sec.-Treasurer, R. Waugh; Directors, James Glennie, Portage la Prairie; Robert Jackson, Bird's Hill; W. A. Farmer, St. James; J. E. Thompson, Emerson; Mr. Greenwood, Douglas; E. A. Struthers, Russell; S. A. Bedford, Brandon; G. H. Greig, Winnipeg; Robt. Scott; Auditor, Wm. Bathgate.

The following resolutions were then put to the meeting and carried:—

Moved by W. M. Champion, seconded by E. A. Struthers, that the Association request the Industrial Exhibition Board to make an addition to the present dairy building, to serve as a lecture room, etc.

Moved by R. Waugh, seconded by W. A. Farmer, that this Association offer to defray the expense of those who read papers at the meetings.

Moved by W. A. Farmer, seconded by R. Waugh, that this Association would suggest that a dairy exhibit be made by this province at the Columbian World's Fair, Chicago, and that this Association would be glad to assist the government in any way in their power, and would suggest the following as suitable men to make the selection of dairy products, and to take charge of exhibits at Chicago, if necessary: S. M. Barre, W. M. Champion, E. A. Struthers, J. H. Rockett, Mr. Greenwood.

Moved by Dr. Hinman, seconded by W. A. Farmer, that the President, the Vice-President and Secretary be a special committee to present the foregoing resolution to the government.

At an adjourned meeting held on the forenoon of the 19th, it was resolved to ask the local government to grant the Association \$1 per member.

At the evening meeting there was quite a large turn out, and animated discussions followed some of the papers read. The president, after extending a cordial welcome to those present, read his address, which was a concise summary of the lessons taught by the present depression, the chief of which he said was exclusive grain farming, and the shipping of all the cheap grain out of the country instead of feeding it here and shipping the manufactured product, which could be placed on eastern markets with a great saving in freight rates. For instance, the freight charges on \$100 worth of cheese to England was only \$15, whereas on \$100 worth of fifty cent wheat it was \$70. And besides this, we are importing carload upon carload of pork, mutton and poultry. Surely we ought now to be able to feed our own people. He did not mean to imply that we should stop growing wheat, but that mixed husbandry, including dairying and stock raising, is one of the surest means of redeeming Manitoba farming from its present position. He then outlined the work which might be undertaken by the Association with the valuable assistance of the provincial and federal governments: 1st. The improvement of dairy cattle, including breeding, feeding and selection. 2nd. Improvements in the construction of

stables. We should try to make them comfortable, labor saving and cheap. 3rd. The culture of corn, fodder plants and roots for fall and winter feed. 4th. The improvement in farm butter-making, comprising the organization of travelling dairies, and the dissemination of all the latest and most reliable information on the subject. 5th. Improvement in factory cheese and creamery butter, including the organization of syndicates and factory inspection. 6th. The establishment of dairy schools.

When the above-mentioned programme is properly carried out, we shall have made a great step in the right direction.

Mr. Bedford, of the Experimental Farm, Brandon, was next called upon and gave a short and very interesting account of his experiments in fodder and ensilage. He had tested sixty varieties of corn, and North Dakota Flint had proved most satisfactory, yielding twenty-two tons per acre; and by allowing it to wilt for two or three days after cutting had made most perfect ensilage, which he was now feeding to all the stock on the farm, mixing it with wheat straw and chopped grain, without any hay whatever, the results being entirely satisfactory. He had also tried peas and oats for fodder, Triumph oats and Multiplier peas proving the most profitable. They had done well, but did not make as nice ensilage as corn. Roots had done well, especially purple top swedes, mangolds and sugar beets, but were a more expensive crop than corn ensilage.

Great interest was manifested in the subject, and Mr. Bedford answered the many questions put to him, throwing much light on this interesting question of furnishing succulent food for stock during the winter months.

E. A. Struthers, manager of the "Barnardo Home" at Russell, next read a very instructive paper on cream separation, describing the various methods in use, from the shallow pan to the centrifugal butter extractor, and then showing how much more perfect was the separation by the centrifugal separator (in use on the farm during 1892) over the shotgun system that had been in use the previous year, other conditions being as nearly as possible equal. He made his comparison much plainer by using a chart which he had prepared.

W. M. Champion read a short paper describing the working in "Our Cheese Factory", showing for it a very creditable balance in favor of the patrons, and also making some good suggestions regarding dairying in general.

James Glennie read a paper on the "Special Purpose Dairy Cow", pointing out under what conditions she was more profitable than the general purpose cow. He said he had some Jersey heifers now making \$3 worth of butter from \$1 worth of food. He suggested that the government should have dairy farms in various parts of the province, to show the farmers how to make dairying pay.

H. McKellar, of the Department of Agriculture, next read a forcible paper on the "Care of Dairy Products after Reaching the Market", suggesting having all dairy butter from country points packed in uniform tubs and sent in refrigerator cars every few days to a cold storage depot in Winnipeg, there to be graded by government inspectors.

This was discussed by Messrs. Champion and Barre, the latter suggesting having the butter sent in in rolls, to be re-worked and tubbed in the cold storage, so as to make more uniform samples.

Some thought this was losing sight of the fact that the creamery system was the only system by which butter, to meet the demands of export trade, could be manufactured.

This closed the evening meeting, and at the meeting held next forenoon the secretary read a very excellent paper on "More Dairying", prepared by John Hettle, M. P. P., but who was unavoidably absent.

Mr. Waugh read an essay on "Cheap Buildings", and said that although stone was the best and most durable, still very serviceable stables could be built of sod, where cost had to be considered.

Mixed Farming.

BY ARTHUR C. HAWKINS, SWAN LAKE.

It has always been a matter of surprise to me since we have had a certain market in this province for beef, mutton and pork, that so much attention has been paid to wheat raising and so little to mixed farming. As far as my observation goes, raising wheat as a specialty can never be a success, even in the most favored districts. It is only on the lightest lands that wheat can be ripened every year without frost, and on these very light soils it requires high farming to ensure an average yield of 20 bushels to the acre after the first two crops have been taken from it. By careful calculation I find that the cost per bushel is about 50c. in the granary, which, at present prices, shows a dead loss of 2c. per bushel allowing all your wheat to grade 2 hard. On nearly all the big wheat farms we hear of the first crop or two as a tremendous success; the next crop or three are not heard of at all, and the next we hear is that the property has changed hands. It seems to me strange that good money should be thrown after bad year after year in the endeavor to grow an article which is already a drug on the market, when our factories are calling for more wool and our butchers for more mutton and pork; and not finding them in Manitoba, the factories are closed and the meats imported. In stock breeding we are wonderfully favored; with ordinary care we can confidently reckon on raising 95 per cent. of our calves; we have no contagious diseases to contend with, and our severe winters are not by any means the terrible drawback that many suppose. On well-sheltered homesteads I have seen many splendid steers turned off fat at two and a-half years old that had never seen the inside of a stable or a bite of hay; but shelter, artificial or natural, is an absolute necessity—a necessity, however, which need deter no one from keeping a good head of stock, as a good framework of poles and one of those strawstacks would take the place of a good poplar bluff, till a belt of maples had been planted and grown up. It is not the long, cold winter that ruins your young stock; it is the three-day storms, when they stand shivering round the buildings and look longingly at a strawstack a quarter of a mile away, or the days they stand round the well or a frozen water hole waiting for a good Samaritan to come along and give them a drink. If any of the weaker constitutional ones begin to go down the hill, put them in somewhere for a while at nights, and feed them some of those oats you are hauling ten or twelve miles and selling for 14c. a bushel. Look carefully through the herd every day, whether they are stabled or not. If there is a *bully* amongst them, cut the tips off his horns; if it does not stop his tyranny, it will save the skins of the others, and the butcher won't look at his horns. If you want your calves to go into winter in extra good order, sow two or three acres of rape handy to your buildings, and let them have the run of it, instead of rustling bare pasture all fall. I have not tried it myself, but I have seen it tried this year, and have been calling myself an ass ever since seeing the benefit of it, for not having adopted the same plan myself. Fence it for the calves, and let the older cattle have some turnips on your summerfallow. I always grow a good patch of turnips, and feed my milk cows night and morning in the fall and spring. I feed them just at milking time, and they never affect the milk or butter, and my cows never miss a milking; no matter how good the grass is, they come home as regular as clock work.

[ED. NOTE.—We can hardly agree with all our correspondent says on wheat raising, as we think, with thorough cultivation, careful selection of seed, and the application of blue stone, wheat raising, carried on in conjunction with mixed farming, can be made profitable and as sure as in any other country; and it is not likely to remain for all time a drug on the market. He does not point out the necessity of using pure-bred males, which is the starting point in stock raising for profit; but the two-year-old steers he speaks of were evidently good grades.]

NOTICES.

The January number of THE COLONIST, of Winnipeg, Man., comes to hand in a cover, and with other improvements, which give it a much better appearance. This excellent monthly is steadily gaining in favor with the people of Western Canada.

BUCKWHEAT STRAW FOR FODDER.
Not many of our breeders have much confidence in buckwheat straw as a food for prize animals. Yet many beasts would thrive well on buckwheat straw and what they can pick up on the barn yard, if given Dick's Blood Purifier, because it gives good health, good appetite, good digestion. Try a box on your horse which is not thriving.

Waghorn's Guide for January contains a very useful map, showing the new County Court Districts, which, together with the tables, gives the names of the officers and dates of holding County Court throughout the province for 1893. The new post offices opened are given, and all changes of C. P. R. time card to date recorded. Full information is given re-municipal districts and officials, land and registration offices. Atlantic steamship sailings, maps of the province and city of Winnipeg also accompany the issue.

THOROUGHbred STALLION,
"INSPECTOR,"
FOR SALE.

Twice Winner of 1st Prize and Diploma at Western Fair, London. Warranted sound and a sure foal getter.
327-1-d-om ROBT. McEWEN, Byron P. O.

DISPERSION SALE
OF
Shorthorn Cattle
ON TUESDAY, MARCH 7th.

Promptly at 1 o'clock I will sell by public auction, at my farm, 2 1/2 miles west of Niagara Falls, 23 HEAD OF SHORTHORN CATTLE, comprising 17 cows and heifers and 6 bulls. This herd was started in 1861, and has been carefully bred.

TERMS OF SALE:—Eight months' credit on approved joint notes with interest at 6 per cent., or 6 per cent. off for cash.
Conveyances will be at Waverly Hotel, Niagara Falls, on arrival of 11 o'clock a.m. train, G. T. R. Lunch 12 to 1 o'clock. For further information and catalogues, address
327-1-b-om C. PETTIT, Southend P. O.

MANITOBA FARMS.
TWO CHOICE FARMS
FOR SALE.

320 Acres of the very best land, with house and other improvements, 4 1/2 miles from Summerberry, on the main line of the C. P. R. Also 120 Acres about one mile and a-half from Silver Plains Station, on the Z. P. R., about 30 miles from Winnipeg.
Apply to

JOHN WELD,
London, Ont.

ATTRACTIVE PUBLIC SALE
OF
High Class SHORTHORN CATTLE
AT MAPLE LODGE STOCK FARM,
ON
WEDNESDAY, MARCH 8, 1893.

On the above date we will sell by public auction 18 CHOICE SHORTHORNS, consisting of 12 cows and heifers and 6 young bulls. A very superior lot. Fourteen of the number were got by Conqueror—8227—, a grand Cruickshank bull and wonderfully uniform sire. Several show animals are in the offering, and most of them from our best milking strains. Bates and Cruickshank and other Scotch families represented.

TERMS:—Nine months' credit, or eight per cent. per annum off for cash.
TRAINS:—The morning and evening trains from both ways on G. T. Railway, and also on L. H. and B. Railway, will stop at Lucan Crossing Station, one mile east of our stables. The one o'clock mail train from the east on G. T. Ry. will stop at our farm on day of sale to let passengers off.
Send for a catalogue and come to our sale.

JAS. S. SMITH,
Maple Lodge P. O., Ont.
327-1-b-om

SOLD.—Mr. J. Kennedy, of Orillia, having disposed of his entire flock of Cheviot Sheep to Mr. Wilbur, of New York State, the sale will not take place as advertised last month.—JOHN KENNEDY, Orillia. 327-a-om

FOR SALE.

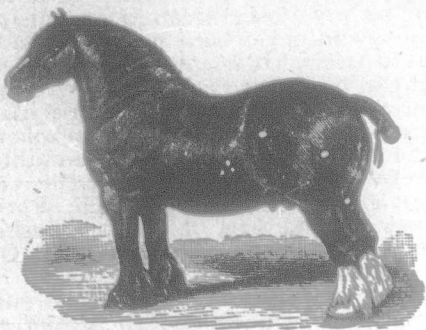
THE FINE THREE-YEAR-OLD
IMPORTED CLYDESDALE STALLION
"McNab's Hero" (1590),
Winner of Second Prize at Winnipeg Show, 1892, and First at Elgin, Scotland, when a Yearling.

McNab's Hero is got by McNab (3824), by McGregor (1487), by Darnley (222), both too well known as famous Clydesdales to require further explanation.
Owing to dispersion of Mr. Martin's stock of horses in spring, this most excellent young stallion is offered for sale by private bargain. Mr. Martin will also sell by public auction, early in spring, his whole stock of brood mares, horses, grade cattle, etc., also a full line of farm implements, of which particulars will be given later.

There will also be a few choice, young, pure-bred Galloway bulls and heifers for sale by private bargain. Particulars from
J. G. BROWN,
Hope Farm, St. Jean Baptiste, Man.,
or **WM. MARTIN,**
39-a-m Grain Exchange Building, Winnipeg.

ADVERTISE IN THE ADVOCATE

OCT., 1892. OCT., 1892.
J. D. MCGREGOR & CO.,
 Box 183, Brandon, Man.,
 have just imported their annual shipment of
STALLIONS



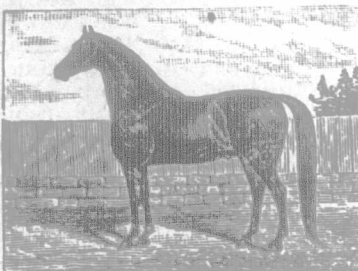
COMPRISING
 English Shires, Cleveland Bays, Thoroughbreds,
 Yorkshire Coach and Hackneys.
 This magnificent shipment contains many
 prize winners in various breeds, and has JUST
 ARRIVED. Terms very favorable. Prices low.
 Come and inspect them before buying else-
 where.

W. H. MANDERVILLE CO.
 28-1-y-m



Breeders of Clydesdales and Carriage Horses.
 Also a FEW SHETLANDS FOR SALE.
 Address correspondence—W. H. MANDERVILLE
 Co., Box 1017, Winnipeg, Man. 36-1-y-m

"RED CROSS STOCK FARM"



Standard-bred Trotters
ACACIA 11522, chestnut, 154
 hands, weighs 1,130 lbs., sired by Balaklava 1833
 (trial 2.24); by Onward; by Geo. Wilkes; by
 Hambletonian 10. Balaklava's dam, Kate Tar-
 lton, by Kentucky Clay; by Cassus M. Clay,
 jr. Acacia's dam, Zoe K. 2.30, by Egmont; by
 Belmont; by Abdallah; her dam, Flaay, by
 Flaxtail; by Blue Bull. \$35.00 to insure. Re-
 mains at home and is being trained. Is sure to
 beat .30 this fall, barring accidents.
JAMES CRONIN, W. J. ANDREWS,
 Trainer. Manager.
 Address—B. J. MCCONNELL, M.D.,
 Send for card. 29-1-y-m Morien, Man.

FOR SALE.
 IMPORTED
STALLIONS AND MARES.

H. A. MUSK, - Souris P. O.
 39-1-tf-m Opposite Menteith Junction.



MAPLE GROVE STOCK FARM.
 This month I offer a plum
 in the shape of my richly-
 bred, prize-winning Hol-
 stein Bull, Tempest's Cap-
 tain Columbus, No. 17430,
 calved July 15, 1890, winning
 first at Winnipeg Indus-
 trial, 1891, as yearling, and
 '92 as two-year-old. In size he is large but of
 very symmetrical form, well-marked skin,
 mellow, and of rich color; has four large, well-
 placed teats; is very gentle and well broke.
 This bull is a direct descendant of a long line
 of great record cows, such as Echo, Crown
 Princess, Regis, Dowager, etc. Price low.
 29-1-y-m Address—W. J. YOUNG, Emerson.

PURE-BRED -:- BULL
For Sale.

Numerous applications having been received
 from stockmen wishing to purchase the pure
 bred bull TROPHY (60078) presented to DR.
 BARNARD by LORD POLWARTH, it has been
 decided to ask for written offers from the
 parties interested. Sealed proposals will there-
 fore be received by the undersigned up to Feb.
 1st, 1893. Copy of Pedigree and full particulars
 as to terms of sale furnished upon application.

E. A. STRUTHERS, Manager
 RUSSELL, MAN. 37-a-m

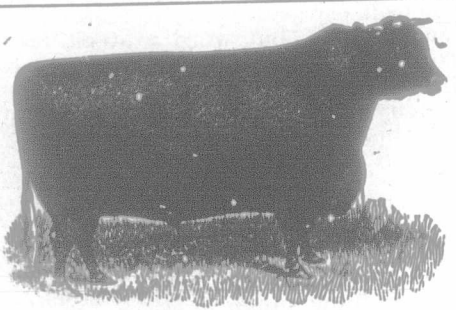
Fairview Stock Farm.
 Choice Milking
SHORTHORNS



37-1-b-m **JOHN G. BARRON, Carberry, Man.**

HEATHER LODGE STOCK FARM
 Glenboro, Man.,

STEEL BROS., Proprietors.
 Breeders of Ayrshire Cattle of No. 1 milking
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SHANKS BROS., RAPID CITY, MAN.
 Breeders of Shorthorn Cattle, Leicester Sheep
 and Berkshire Pigs. A choice lot of males or
 females for breeding purposes always on hand,
 and on reasonable terms. Parties wishing to
 see stock met at the train. 29-1-y-m

FOR SALE.
 The Fine, Roan Shorthorn Bull
ECLIPSE No. 10223,
 Calved October 19th, 1886.

Address—
Geo. Rankin,
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"RAVENS CRAIG" STOCK FARM
 DAVID MARWOOD, PROPRIETOR.
 Treherne, Manitoba.

BREEDER OF
 Improved Large White Yorkshires and Hol-
 stein Cattle from Imported Stock.
 A good number of Spring Litters will soon
 be offered at low rates. 2 1/2 miles from Station.
 Correspondence solicited. 39-1-y-m

JAMES GLENNIE,
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 Breeder of

Holstein Cattle and Improved Large York-
 shire Swine.
 Now for sale a choice lot of boars and sows
 farrowed last September, also sows to farrow
 in spring. A choice pedigree Holstein Bull,
 one year old next March. Write for particu-
 lars. 27-1-y-m

IMPROVED LARGE YORKSHIRES
 My herd now consists
 of 17 Sows, 3 Boars and
 20 young Pigs. Have
 recently imported fine
 young boar from J. E.
 Brethour, Ontario. Brood sows and young stock for
 sale at hard time prices. Also A. J. C. Jersey Bulls and
 Heifers for sale. Write for full particulars, or come and
 see for yourself. **JAMES BRAY,**
 29-1-y-m "Oak Grove Farm," Portage la Prairie.

BRANDON POULTRY YARDS
 keep the Felch pedigree
 strain Light Brahmas; fam-
 ous for distinct markings,
 uniform type, true Brahma
 outline, and great egg-pro-
 ducing qualities. In keeping
 with their world-wide rep-
 utation they were prize-win-
 ners at Brandon Summer
 Fair and Winnipeg Indus-
 trial, 1892. Eggs per setting,
 \$3.00; two settings, \$5.00. Orders booked as re-
 ceived. Correspond with **J. C. HARRISON, Box**
416 Brandon, Man. 37-1-y-m

PLYMOUTH ROCKS - -
FOR SALE

A few more Choice Birds Cheap.
 WRITE FOR WHAT YOU WANT.
J. B. LOKIER,
 36-c-m **Dugald, Man.**

McCLURE'S POULTRY YARDS.
 Not one bird in this yard
WHITE LEGHORNS.— which was in it last season.
Hens, Munger Strain; Cockerels, Knapp Strain.
LIGHT BRAHMAS.— On the departure of Mr. Han-
 nigan for Chicago we bought his
 young stock. Mr. H. won 1st prize at Winni-
 peg Industrial.
PEKIN DUCKS.— A few eggs to spare from a choice
 yard. Get particulars and prices.
 37-1-y-m **J. McCLURE, 448 Carey-St., Winnipeg.**

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Everything in
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 Sole Agent in Mani-
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THE INVINCIBLE CONDITION POWDERS.
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 costs nothing to those who
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All money refunded for Specialties mentioned
 that fail to do
ALL THAT IS CLAIMED.

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SEND YOUR POULTRY, ETC.,
 -TO-

G. L. CHARREST,
 AND GET PROMPT RETURNS.
 37-1-f-m No. 304 Main Street, WINNIPEG.

HARNESSES!

HARNESSES!

HARNESSES!

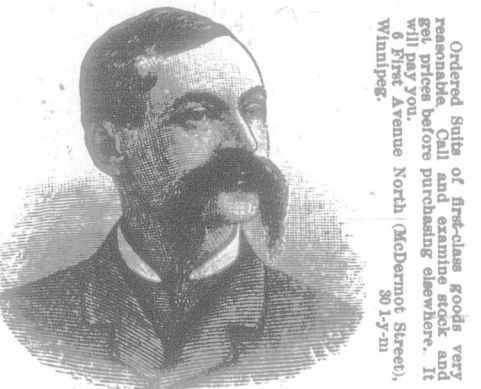
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Cheapest House in Manitoba. . .
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ALL KINDS OF FARM PRODUCE
 HANDLED ON COMMISSION.
Beef, Pork & Poultry Grain Sold in Car Lots.
 SPECIALTIES. Car Lots.
 I transact all kinds of business for farmers, such as
 buying Groceries and Dry Goods, and attending to
 private business intrusted to me. In fact, act as agent
 Correspondence solicited.
 REFERENCES:
R. P. ROBLIN, ESQ.,
DUNCAN McARTHUR, Mgr.,
 Commercial Bank, Cor. Market Square &
HON. D. H. McMILLAN, William Street,
MUNROE, WEST & MATHERS, Solicitors. 35-1-y-m

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Merchant Tailor.
 Ordered suits of fine-
 quality goods very
 reasonable prices
 and prompt fitting.
 Will pay you.
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 HEALTH, WEALTH.
 Electric Appliances for all
 parts of the body. Cures
 Rheumatism, Dyspepsia, Sore
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When it can be done at moderate cost, and afford more comfort for scholars and pleasure for teachers than the old home-made forms.

Write us for catalogue and prices. All sizes always in stock.

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SAVE YOU MONEY
 On Press Drills and other

FARM MACHINERY.

WATSON MFG. CO., Ltd.
 WINNIPEG, - MANITOBA. 38-1-y-m

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The best Bedroom Commode in the World

Awarded Diploma at Winnipeg Industrial Exhibition.

You can have all the comfort and convenience of the most elaborate water closet, without the deadly sewer gas. Price brings it within the reach of all. Can be placed in any room having ventpipe passing through it, or an ordinary chimney hole; perfectly healthy, and ABSOLUTELY INODOUROUS; endorsed by medical profession; a boon to women and children.
 Manufactured of hard wood, panelled and beautifully finished in antique, with galvanized-iron buckets which do not corrode, piping, elbows and thimble all ready to set up. Shipped to any address in Manitoba or Territories on receipt of \$12. No charge for crating or packing.
EVERY CLOSET GUARANTEED.

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MANITOBA VENTILATED CLOSET CO.,
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The finest Illustrated Catalogue ever issued in Winnipeg of Flower, Field and Vegetable Seeds.



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AND
Vegetable Plants,
Canary Birds, Bird Novelties & Bird Seeds

One cent will buy a post card, place your name and address on it, and simply say that you want a catalogue for '93, AND YOU'LL BE ALL SOLID. See January 15th issue.

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Royal Greenhouse,
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FRESH FOR 1893.

SEND TO
KEITH & CO., SEEDSMEN,
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Box 333.
for complete Catalogue of Flower, Garden, Field and Grass Seeds. Best assortment in the market. 39-1-b-m

SEEDS.—FRESH AND RELIABLE.
More Extensive than ever.
Send address for large, handsome & useful 1893—Catalogue—1893.
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PORK PACKERS AND PROVISION MERCHANTS.

Highest market prices paid for Hogs throughout the season—either live or dead.
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ARCHITECT.
Plans & Specifications Prepared
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Schools and Churches a Specialty.
Brandon, 37-1-y-m Man.

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STOCK GOSSIP.

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

In another column will be found the advertisement of Mr. B. Carter, referring to employment on a good farm or as engineer, to which we call the attention of those desiring help of this kind.

D. Honeywell, of Carman, writes that it pays to advertise in the ADVOCATE; he has sold four farms during the last seven days.

Shanks Bros., of Rapid City, say their Short-horns are coming through the winter in good shape, and they have seven young bulls for sale.

Errata—Dr. Dunbar's article, page 32, No. 37—“And afterwards in a solution of carbolic acid; (one oz. of the acid to twenty-five of water).”

A large sale, comprising upwards of 500 head of horses and cattle, will be held at Rapid City, under the auspices of the Rapid City Institute, and it is expected to have monthly sales as they have in England.

At a meeting recently held by the Board of the Winnipeg Industrial Exhibition, the question of holding a Dominion exhibition here next year was considered, and Messrs. Sprague, Boyd, Searth, Drewry and Burrows were appointed a special committee for the purpose of securing a grant from the Dominion Government, so that it would give the exhibition of the current year the charter of a Dominion exhibition.

The Lorne Agricultural Society have bought from Mr. Martin, of Hope Farm, the young Galloway bull, Frost King 8524, for use in the Swan Lake district this summer. Mr. Martin reports a good enquiry for Galloways this spring. He has not quite so many bulls as he had last season, but has still four very promising yearlings to dispose of. At the sale of stock at Hope Farm in March, the Galloways are the only portion of Mr. Martin's stock that will not be offered by public auction.

Mr. Harry Delf, of Indianford, Manitoba, purchased last spring the noted Shire stallion, Chieftain 2nd. He is sixteen hands three inches in height, and weighs nineteen hundred pounds; short legged, of good quality, with splendid action. The very special quality of this animal is fully substantiated by the fact that at the Royal Show at Newcastle-on-Tyne, one of the first exhibitions of Great Britain, he was awarded second prize at three years old. He was very highly appreciated through the Treherne District in 1892. A subsequent notice in our columns will inform our readers of his location during the coming year.

John E. Smith and Thos. Harkness have been fortunate enough to secure from S. L. Head, of Rapid City, that wonderfully well-got-up Clydesdale stallion, Sir Arthur (8993). One of our staff who recently saw this horse, reports him an extra good one, having superb action and lots of quality. He is four years old, and weighs 2,000 pounds. Messrs. Smith and Harkness are anxious to have this horse go to the World's Fair, as they consider that he can't be beaten. We hope to present an illustration of Sir Arthur in issue of March 20th, and we will then give a full description of him, and also of the magnificent barn Mr. Smith has just completed on his Brandon farm.

We are in receipt of a handsomely illustrated catalogue from J. D. McGregor & Co., the well-known horse importers of Brandon, Man. The catalogue includes a large number of Shire, Cleveland Bay, Yorkshire Coach and Hackney stallions, giving an interesting description of each breed, and containing pedigrees in full. A herd of newly imported Tamworth pigs are also catalogued. These hogs are very highly recommended for crossing purposes. A large herd of Polled Angus cattle of the most fashionable strains are also kept by the Company, and Mr. McMillan also advertises his recently imported Shropshire sheep. Parties interested should send for a copy of this very neatly gotten up catalogue, as it contains a lot of interesting matter regarding the different breeds of horses.

The extensive and well-equipped stock ranch of Mr. N. Boyd M. P., situated about ten miles south of Carberry, and comprising some 23,000 acres, was recently visited by one of our staff. As we cannot give in detail at this writing all that would be of interest to our readers, we will confine ourselves to a few things from which something practical may be gleaned by those interested in stock raising. In Mr. Boyd's stud are some very fine horses, comprising standard-bred Thoroughbred and Clydesdales, and a careful inspection of the individuals will evidence the care that has been given in their selection, while their size and form gives the impression that utility has been fully considered. The number of horses at present is about 130, among which some fine heavy draft as well as Kentucky-bred mares are to be seen. The young stock were looking exceedingly well, which is largely due to the fine system of caring for the suckers, and proper attention during the first winter, thus giving them a start which is easily retained. The advantage of this was clearly demonstrated at the time of our visit by a band of yearlings, among which were standard-bred and Clydesdales, which came in for the first time this winter in excellent flesh and fine appearance. A special mention of the individuals would be interesting, and where such fine animals as Freeman D (3636), and the Thoroughbred Davidson are concerned, would afford pleasure to the writer as well as our readers, but this must be left for a future time. The horse has first place, but there is also a nice flock of sheep and some fine Berkshires, as well as 125 head of cattle, which, by the way, cannot be called “horned,” at least part of them, as Mr. Boyd has been disarming some of his herd, to his complete satisfaction. He informs us that no loss of milk was perceptible, and that some of them that spent a good share of their time in using their horns to the annoyance and discomfort of the others, are now as quiet and peaceful as could be desired. The operation had been performed about three weeks prior to our visit, and in every instance they were doing well. Much might also be said in reference to the growing and preparing food for this large stock in ways Mr. Boyd has found profitable, as well as preparations for adding a supply of roots. A visit to Mr. Boyd's ranch will be found profitable to those interested, and the genial proprietor will be found ready to communicate pointers from his experience, as well as make the time enjoyable.

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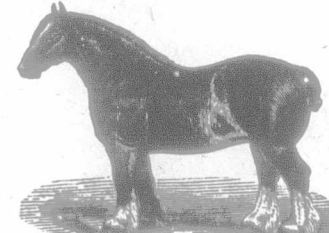



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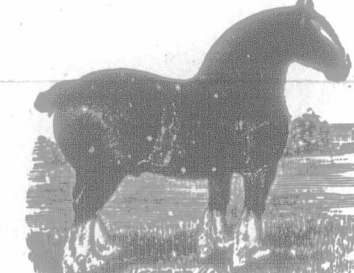

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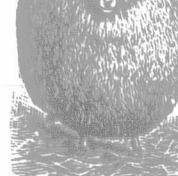
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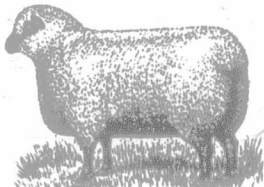
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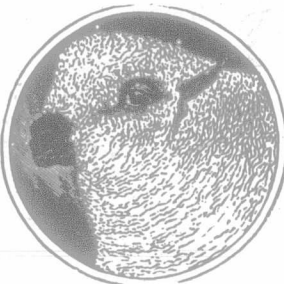


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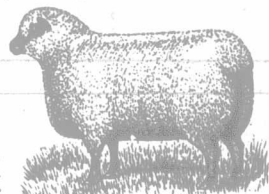
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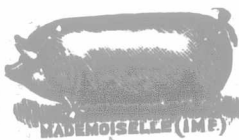
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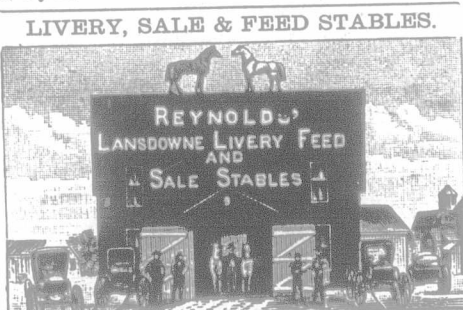
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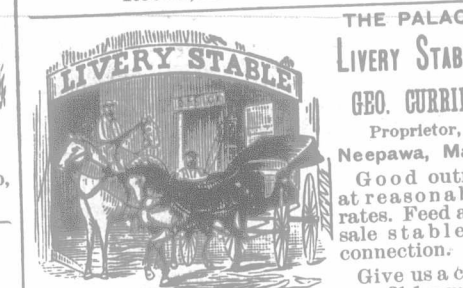
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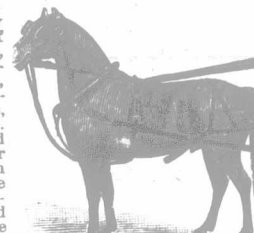
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Applications for shares will be received until February 15th, 1893, at any of the offices of the Canadian Bank of Commerce, at the offices of the Union Bank of Halifax, and at the head office of the company, N. Y. Life Building, Montreal.

Forms of application for shares may be obtained at any of the above places, or they will be sent by mail on request.

Should no allotment of stock be made to any applicant for shares, the amount paid will be returned in full, and in the event of the Directors finding it impossible to allot the full number of shares applied for, the surplus of the deposit will be credited toward the amount payable on allotment.

The right is reserved of withdrawing the offer in whole or part at any time before allotment, and of allotting to any applicant any less number of shares than the number applied for.

As the dividends of the Company are payable quarterly, beginning with the first day of March next, allottees of stock will be entitled to receive a proportion of the quarterly dividend as declared, corresponding to the amount paid upon their subscription.

It is proposed to apply to the Stock Exchanges of Montreal and Toronto for official quotations of the shares of the Company.

The Consumers Cordage Company was organized in June, 1890, with a Capital of one million dollars, to operate several of the largest Cordage and Binder Twine Factories in Canada. It at first operated these under leases, but its operations having been successful, the Capital Stock was subsequently increased to Three Million Dollars, and the leased properties were purchased.

The Company has no mortgage indebtedness; and, according to the law under which it was incorporated, none can be created without the consent of two-thirds of the shareholders, represented at a meeting called for the purpose.

The Company has placed in the hands of its Bankers:—

(a) Full statements of its affairs, certified to by Messrs. Caldwell, Tait & Wilks, Chartered Accountants.

(b) The following letter from Messrs. Abbotts, Campbell & Meredith, advocates, Montreal, upon the legality of its incorporation, and the issue of its stock:—

MONTREAL, January 5, 1893.

GENTLEMEN.—We have examined the books and documents connected with the organization of the Consumers Cordage Company, Limited, and are of opinion that it has been properly incorporated, and that its capital stock of \$3,000,000, as issued, is fully paid up and non-assessable, according to the provisions of the "Companies Act." We are, yours truly,
(Signed), **ABBOTTS, CAMPBELL & MEREDITH.**

(c) A report from Messrs. Macmaster and McGibbon, Solicitors of the Company, that the titles to its Mills have been duly examined, and that no encumbrances exist.

Applicants for shares may examine these documents, copies of which may be seen at the Company's offices, and at the various offices of the Banks mentioned above.

The Consumers Cordage Company is probably the second largest Manufacturer of Cordage and Binder Twine in the world, and claims the following very material advantages over its competitors:—

1st. Ample capital to conduct its business which enables it:—

(a) To buy its raw material in larger quantities, and at lower prices.

(b) To use only the latest and most improved machinery, thus keeping its mills in the highest state of efficiency.

2nd. Economy in selling and distributing its manufactured product.

3rd. The business covers so wide a territory (its manufactured goods go to almost every civilized country in the world) that it cannot be seriously injured by local troubles; and its Manufacturing establishments are so scattered that the danger of severe loss by fire is very slight.

4th. Lower cost of production.

(a) By maintaining the sharpest competition between its several mills, it is enabled to introduce in all the best methods found in each.

(b) By spreading its commercial expenses over a large output.

(c) By placing in one hand the purchasing of the Raw Materials and Manufacturing supplies for the several Mills, thus securing lowest prices.

(d) By manufacturing for themselves many of their supplies.

The Company has always found it in its interest to divide the economies effected in production and distribution with the Consumer, and since its existence the Consumer has, upon the average, had a better article at a lower price than previously.

The Company does not claim to have any monopoly, or to earn monopoly profits; in fact, it has not done so. Since its organization it has been able, owing to the advantages above referred to, to earn a net return on its present capital of not less than 10 per cent. per annum (as statements in their Bankers' hands will show), and the Directors believe that these profits will be maintained in the future, as the cost of production and distribution shows each year a marked decrease.

The Dividend for the year ending 31st October, 1892, was at the rate of 8 1/2 per cent. per annum. The past record of the Company and its present position justify the Directors in believing that quarterly dividends of one and three-quarters per cent. can be paid, and should the profits for the present year be as large as the outlook promises, the final quarter's dividend might be increased.

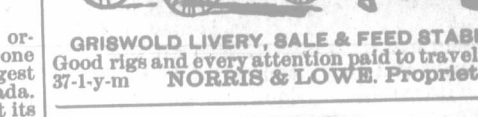
Any further information may be had at the head office of the Company at Montreal. 337-a-om

ARMSTRONG'S TEMPERED STEEL BOB-SLEIGHS.



No. 1, with 1 1/2-inch Runners, capacity 1,200 lbs. No. 2, with 1 1/4 inch Runners, capacity 2,000 lbs. Send for circular giving particulars of wearing capacity, lightness of draft, etc., of tempered steel (used in these sleighs) compared with raw steel. Prices right.

J. B. ARMSTRONG MFG. CO., Ltd.
Quehph, - Canada. 37-1-c-m



GRISWOLD LIVERY, SALE & FEED STABLES.
Good rigs and every attention paid to travellers.
37-1-y-m **NORRIS & LOWE, Proprietors.**

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WE ARE IN A POSITION TO GIVE YOU THE BEST VALUE IN TOWN.

WHEN IN WANT
Of Dry Goods, Groceries, Boots and Shoes, Hats, Caps, Furs, Clothing, or anything in our line, give us a call. You will find us opposite the Ogilvie & Ironside Elevators.

FULLERTON & ROSS,
34-1-y-m **Manitou, Man.**

ONE PRICE FALL AND WINTER GOODS GALORE.

When wanting Clothing, Furs, Boots and Shoes, or anything in Dry Goods or Groceries, give us a call. Bring CASH STORE along your produce.

I. M. MENARY, Cartwright, Man.
35-y-m

A. W. CLARK,
Barrister and Attorney-at-Law.
Money to loan at current rates of interest.
Farms for sale. **GLENBORO, MAN. 37-1-**

GOOD CROPS OR POOR CROPS, Which Shall it be for 1893?

Niagara, Jan. 27th, 1893.
 W. A. FREEMAN, Esq.:—Having given your "Bone and Potash" a fair trial with most satisfactory results, I have much pleasure in adding my testimony to its excellence as a fruit producing fertilizer. I have used it at the rate of 5 lbs. per tree in full bearing. I have placed in the hands of Mr. Gage my order for eight tons, an increase of two tons on order of last year. Respectfully,
 (Signed) J. H. BENN.

Niagara, Jan. 27th, 1893.
 W. A. FREEMAN, Esq.:—Used your potato manure last year, and am well pleased with it. We used on one piece one sack with manure per acre, on another two sacks with manure, and a small piece without manure, but with fertilizer at the rate of three to four bags per acre. The manure plots had at the rate of twelve to twenty loads per acre. The largest yield was received from the plot where fertilizer alone was used.
 (Signed) A. C. HOWE.

Send for **FREEMAN'S NEW CATALOGUE**,
 Treating on Manuring and how to grow large and paying crops.
 — SENT FREE BY ADDRESSING —
W. A. FREEMAN, HAMILTON, ONTARIO.
 Please mention this paper. 335-a-om



J. G. MAIR, Howick, P. Q., Importer and Breeder of Imp. Large Yorkshire Pigs. Young pigs (imp. in dam) and bred not akin, for sale at the lowest possible prices. Now is the time for parties starting herds to obtain good foundation stock cheap. Write for prices at once.
 325-1-f-om

Improved Large White Yorkshires.
 The undersigned offer for sale this month a few young boars suitable for spring use. Also a few sows bred to farrow in April and May; also a few sows, October pigs. Prices reasonable. Apply to **WM. GOODGER & SON, Woodstock, Ont.**
 Box 100. 327-1-e-om



Seventh Annual Provincial Spring Stallion Show
 DRILL SHED, TORONTO,
MARCH 5th & 6th, 1893

Premiums will be offered for the following breeds:—Thoroughbred, Carriage or Coach, Standard-bred Roadsters, Hackney, Shire and Clydesdale. Increased prizes in all departments. Horses will be inspected for the World's Columbian Exposition. Prize lists and further information may be had on application to the Secretary.
NICHOLAS AWREY, HENRY WADE,
 327-g-om President, Hamilton. Sec'y, Toronto.

FRUIT AND TREES | ORNAMENTAL

Grape Vines and Berry Plants.
 Planters will find it to their interest to patronize a Canadian Nursery. Varieties are offered most suitable to our climate; useless sorts discarded. My stock is graded with scrupulous exactness, and is true to name. Everything new and old in the nursery line deemed worthy of distribution. Having seventy-five acres in fruit here I can, and will give freely, good advice to customers. Send now for a free and useful catalogue and price list to **Heldersleigh Farms Nursery, E. D. SMITH, Prop.,**
 325 Winona, Ont.

THE VERY BEST SEEDS AT LOWEST RATES.
 Business Established 40 Years
 Our Descriptive and Priced Catalogue of **GENUINE GARDEN and FIELD SEEDS** is now ready and will be mailed free to all applicants and to customers of last year without solicitation.
MARKET GARDENERS who have once used our selected seeds will not use any other. Send orders to
JOHN A. BRUCE & CO. HAMILTON, ONTARIO.
 327-1-b-om

5,000 Acres of Land for Sale
 From \$5.00 to \$10.00 per acre.
British Columbia, THE CALIFORNIA OF THE DOMINION.
 This is a young and rising country, with productive powers for grain, fruits, vegetables, stock and poultry raising, second to none in America.
 We offer lands on the water front of Mainland, where there are no cold winters, no snow and no frost, with good facilities for marketing. For further particulars address
MACKINNON, MACFARLANE & CO.,
 39-1-y-om P. O. Box 926, VANCOUVER, B.C.
 Settlers located on Government lands.

NOTHING SUCCEEDS LIKE SUCCESS

Our trade during the last three months is over \$7,000 ahead of the same three months last year. Every
GRANGE, PATRONS' LODGE
 And Farmers in General,
 should investigate this Company, and co-operate with us. It is the

ONLY Farmers Co-Operative Store IN CANADA,

and should be patronized by every farmer. We have splendid values in
Groceries of all Kinds.
 — OUR —
HARNESS
 is excellent value, and our
BOOTS AND SHOES
 AT MANUFACTURERS' PRICES.

We Pay Freight, or allow a discount in lieu of freight, according to advertised regulations. We handle almost everything a farmer needs. Send for our list of prices and co-operate with us

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GET THE BEST.
 Do not buy reprints of obsolete editions. Send for free pamphlet containing specimen pages and FULL PARTICULARS.
G. & C. MERRIAM CO., Publishers,
 Springfield, Mass., U. S. A.
 327-a

THE GARDEN OF MANITOBA.
 I am making a specialty of selling large Grain Farms at prices from \$3.00 to \$20.00 per acre. District: Carman, Roland and Miami, rising towns attracting great attention. Lots of wood, water and good railway competition in districts rapidly settling. Easy terms and special bargains for cash. Speculators' land sold on commission. Correspondence solicited.
D. HONEYWELL, box 32, Carman, Man.
 34-1-y-om

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Use Mica Roofing on all your buildings. It is cheaper than Shingles. Water Proof and Fire Proof.

Use Mica Paint To Repair Leaky Roofs. Shingles, Iron or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.
 Is put up in rolls of 108 square feet each, 36 feet long by 3 feet wide, and cost 2 1/2c. per square foot, thus affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing about 75c. per square cheaper than shingles. Special terms to dealers who buy our Mica Roofing to sell again. Orders and correspondence answered promptly.

HAMILTON MICA ROOFING CO.,
 321-1-y-om Office—124 James Street North, HAMILTON, ONT.

RENNIE'S FARM SEEDS

NOTE.—23 out of 26 First Prizes won with the product of our Famous Field Root Seeds at Toronto Exhibition in 1892.

Rennie's Prize Swede Turnip now stands at the head of the list. 1 lb., 30c.; 5 lbs., \$1.20; postpaid. Finest Quality. Grand Keeper. Great Yields. Leads all other Swede Turnips. First Prize Toronto Industrial and other leading Exhibitions in 1892. Try it this Season.

NEW FIELD PEA, "CANADIAN BEAUTY." Novelty, 1893. Never before offered. Can only be obtained direct from Toronto, bearing our stamp on every label. This entirely new White Pea was selected by a farmer residing in Eastern Ontario, who states that he found one mammoth pod on a Multiplier vine, and being attracted by the very large size of both pod and peas, took care of the few grains and sowed them the following spring. From this small beginning a stock has been produced which enables us to offer it this year for the first time. The grain is large, bright and a clear color; immense sized, well-filled pods, frequently containing 12 peas. The straw is not coarse, but of fine quality, in this respect differing from almost all other varieties. In point of productiveness, we say without any hesitation whatever, that it is undoubtedly the greatest yielding pea yet introduced. A new Oat of great promise, found to be far ahead of all old varieties in point of productiveness. The seed was imported from France, and after being thoroughly well cleaned and hand picked was placed with Hon. Jno. Dryden and other farmers to grow for us. The Oats heavy, black in color, and the heads, which are of the class known as spanned, are long and well filled with grain. For several years it has taken first place amongst all the varieties tested at the Agricultural College, Guelph. Try this famous Oat this year, and surprise the neighbors with your crop. As stock is limited, early orders are requested.
 Prices for 1893—Per lb., (postpaid) 20c.; 5 lbs., (postpaid) 60c.; Peck, 40c.; 1/2 Bush, 60c.; Bush, \$1.00; 2 Bush, at 90c.; 10 Bush., at 85c. (Bags 20c. each extra.)

NEW BLACK OAT "GOANETTE"
 Immense Yields. Leads all others.

WM. RENNIE, TORONTO, CAN.

HAZELTON FRUIT AND POULTRY FARM.
 Plymouth Rocks.—This strain is noted for prolific laying, large size, distinct markings. Their show record is unequalled. Eggs from best pens (birds scoring from 90 to 95 points, mated to produce Sure Prize Winners), \$3.00 per 13; \$5.00 per 26. Other grand pens (selected, high scoring birds), \$2.00 per 13. Fowls have unlimited range, and eggs are guaranteed. Elegant, illustrated catalogue for '93 contains all particulars, and much information; it is sent free. Address **C. W. Eckardt, Ridgeville, Ont.**
 U. S. BRANCH—Brookside Poultry Farm, Columbus, N. J.

Sweepstakes at Chicago, 1891.
 131 birds scoring 90 to 96. B. and W. P. Rocks, W. and S. Wyandottes, W. and Br. Leg. horns, and Bronze Turkeys. 500 selected birds, pairs, trios and pens, mated for best results. 300 Toms and Hens sired by 44 and 47 lb. Toms. 25 years a breeder. Valuable illustration. Circular free. **F. M. MURGER, DeKalb, Ill.**
 Editor of the "Poultry Chum"—26 cts. per year.
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 A new invention for duplicating copies of writings or drawings.

From an original, on ordinary paper, with any pen, 100 copies can be made. Fifty copies of typewriter manuscripts produced in 15 minutes. Send for circulars and samples. **AGENTS WANTED.**
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The Best INVESTMENT!

AND WHERE TO GET IT.

The man aged 30 who invests, say \$216 per annum for seven years in a building association which is honestly managed, which meets with no losses, will in case of death, say after seven years, have provided for his estate to the extent of possibly \$4,000. The man who invests \$216 in the MANUFACTURERS' LIFE will in case of death, the moment the premium upon his policy is paid, have provided for his estate to the extent of nearly \$15,000, if insured on the ten-twenty plan, and the same sum invested in a twenty-year endowment will add \$5,000 to his estate at death, and if he lives to complete the payment of his twenty yearly premiums he will then have in hand very nearly as much money, IN ADDITION TO HIS POLICY OF \$5,000, as if he had taken the building association stock!

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CREAMERY SUPPLY CO.,

MANUFACTURERS OF AND DEALERS IN
Hand and Power Butter Workers,
Hand and Power Churns,
Cream Vats,
Latest Improved Hand and Power Cream Separators,
Butter Printers, Butter Shipping Boxes, &c.
Improved Gathering Cans, double lined with air space; best in use. Also Oil Test Churns of most improved patterns, and General Factory Supplies. All information given in regard to organizing and fitting up factories. Send for prices and catalogues. Address—

CREAMERY SUPPLY Co.,
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THE Best White Oat IN THE WORLD.

JOHN SHARPE & SON'S
ROYAL DONCASTER

This magnificent White Oat was introduced by Messrs. John Sharpe & Son in 1892, and has given the greatest satisfaction at home and abroad. It surpasses all others for earliness, while its productiveness may be realized from the fact that on several farms last season it yielded 12 to 14 quarters (96 to 112 bushels) per acre. The straw is frequently 6 feet to 6 feet 4 inches in height; of splendid quality; large, close panicle, completely clothed with grain of the finest quality, and very hardy. It has a wonderfully thin skin, and is consequently much appreciated by breeders of pure-bred stock.

From Wm. Saunders, Department of Agriculture, Ottawa (to whom we shipped a quantity last season)—"I find Royal Doncaster Oat is much thinner in the skin than any of the oats we have been growing. From its appearance and character it will be a valuable addition to the varieties we have now in this country."

PRICE, 88. PER BUSHEL, FREE AT LONDON OR LIVERPOOL.

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Or **Mr. J. H. MILLARD,**
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A partner in an oatmeal mill at Portage la Prairie, with about \$3,000 capital. Apply to
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MENTION THIS PAPER. 323-1-tf-om

YOU HAVE STOCK TO FEED
THEN DO IT ECONOMICALLY.
CHOP YOUR GRAIN
— WITH A —
WATEROUS CHOPPER
It Elevates the Grain; Shakes out Nails, Straws, Bolts, Etc.; Grinds 20 to 40 Bushels per hour, and BAGS THE CHOP.
GRINDING SURFACES,
BEST FRENCH RUHR STONES.
Unequaled for Durability.
WATEROUS, - Winnipeg, Man.
33-y m

GET OUR NEW CIRCULAR.

BUY ONLY
PEARCE'S SEEDS!
PLANT ONLY
PEARCE'S SEEDS!
A SURE CROP FROM
PEARCE'S SEEDS!
BIG MONEY IN



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It will give and take, but never sag. Is a smooth fence. Will turn all kinds of stock. Is made of coiled-spring wire. Will be shipped subject to your approval after it is properly stretched on the posts. Address
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Ferry's Seed Annual, for 1893, contains all the latest and best information about Gardens and Gardening. It is a recognized authority. Every planter should have it. Sent free on request.
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USED IN TORONTO CONSERVATORY OF MUSIC.
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SUPERIOR TO ALL OTHER CANADIAN PIANOS.

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The High Speed Family Knitter
Will knit a stocking heel and toe in ten minutes. Will knit everything required in the household from homspun or factory. Coarser or finer yarns. The most practical knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. Satisfaction guaranteed or no pay. Agents wanted. For particulars and sample work, address,
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Please mention name of paper. 321-1-y-om

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HAS THE LARGEST SALE IN CANADA.
One energetic agent wanted in every county. Terms liberal.
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Every owner of a horse or cow wants to know how to keep his animal in good health while in the stable on dry fodder. **DICK'S BLOOD PURIFIER** is now recognized as the best Condition Powders, it gives a good appetite and strengthens the digestion so that all the food is assimilated and forms flesh, thus saving more than it costs. It regulates the Bowels and Kidneys and turns a rough coat into a smooth and glossy one.
Sound Horses are always in demand and at this season when they are so liable to slips and strains **DICK'S BLISTER** will be found a stable necessity; it will remove a curb, spavin, splint or thoroughpin or any swelling. Dick's Liniment cures a strain or lameness and removes inflammation from cuts and bruises. For Sale by all Druggists. Dick's Blood Purifier 50c. Dick's Blister 50c. Dick's Liniment 25c. Dick's Ointment 25c.

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Send a postal card for full particulars, & a book of valuable household and farm recipes will be sent free.
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NEW GREAT FODDER PLANT, IMPROVED LATHYRUS OR FLAT PEA.
Price of seed reduced to 10s. 6d. a pound. Cash with order. Twelve pounds sow one acre. Land for May sowing should be prepared as if for lucerne cultivation.
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BRINGS
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WITH poor soaps and old fashioned ways of washing, it is cruel and hard upon women of advancing years to attempt laundry work. But with the world-famed, labor-saving

Sunlight Soap,

Anybody can do a Wash with comparative ease by following the simple directions. With "SUNLIGHT" there's no hard rubbing, sore knuckles, hot steam, or tired backs. A trial will astonish you.

Works: Ft. Sunlight Lever Bros., Limited
Near Birkenhead Toronto

HARNESS!

•15 PER SET.—Full nickel, fancy mounted single harness, made from best oak-tanned leather and by the best workmen. Overdraw or side check bridle, double and stitched tugs, double and stitched breast collar and breeching. Everything complete for \$15. Either in nickel mountings or dark mountings.

•20 PER SET.—Our Nancy Hanks single strap harness, mounted throughout with genuine rubber.

•23 TEAM WORKING HARNESS.—Best team harness without breeching. Tugs 1½x3-ply (or Manitoba, 2-inch x 2-ply). Good strong backbands. Everything complete. If breeching is wanted, add \$3.50 per set. In ordering send size of collars.

•28 DOUBLE DRIVING HARNESS.—Best value of all, full nickel mounted, plated harness and patent leather collars, fancy back bands.

•30 DOUBLE DRIVING HARNESS.—Same as the last, but mounted throughout with brass.

Our free twenty-four page catalogue explains everything.

The single harness we are willing to send by express, C. O. D., on approval. The team harness is too heavy to send by express.

STANLEY MILLS & CO'Y,

WHOLESALE MERCHANTS,

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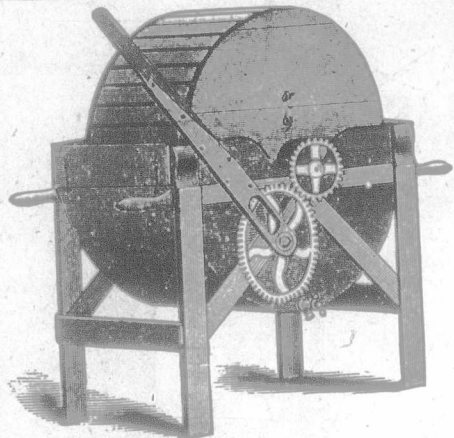
FARMERS!

Here is a great snap. I will send to any address, freight prepaid,
25 lbs. Finest Black Tea, - - \$8 75
25 lbs. Finest Japan Tea, - - \$8 75
The above Teas are the finest I ever offered for the money. They are worth 50 cents a pound; now you can have them at 35 cents. Send and get a \$12.50 box for \$8.75.

J. E. ACTON, - TEA MERCHANT,
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Samples sent free. 33-1-y-m

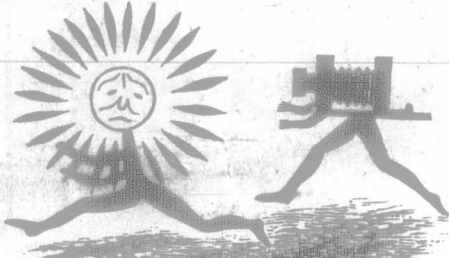
No Wear on the Clothes. A Little Boy with One Hand can Operate it.



THE MANITOBA WASHER cleans perfectly clean in ten minutes sixteen shirts, or equal to ten sheets, saves the boiling also by giving the clothes a second suds with boiling water six minutes, making in all sixteen minutes' operating to complete about a tubful of clothes, washing and boiling. A little boy can operate it with one hand. You cannot afford to be without this machine.

Rev. John Semmens, President of the Manitoba Methodist Conference, says of it:—"Gives us perfect satisfaction. We do our washing now in one-third of the time it formerly took." Rev. A. W. Ross, of Fortage la Prairie, Chairman of the District, says of it:—"Have used one of your Manitoba Washers for six months; gives us perfect satisfaction; would not be without it for any consideration." Mr. J. K. Elliott, of the firm of E. J. Whitlaw, says of it:—"It is really the best article that ever came into my house." They are recommended by Laundrymen, Hotelkeepers, as well as private families using them. All are loud in their praises, and the unanimous opinion is that the clothes are whiter and cleaner than the usual hand washing. The Tribune, Free Press and Farmer's Advocate of Winnipeg, the Globe and Empire of Toronto, have made special mention of the work done with this machine both at Winnipeg and Toronto, their representatives being present at the public tests given at different times. Money refunded if not satisfactory in every respect within thirty days after receipt of the machine. Agents wanted for every county in the Dominion. Would like one merchant at least in every town to handle them.

Messrs. McCrossan & Co., Dry Goods Merch'ts
554 MAIN STREET WINNIPEG. 36-1-c-om



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BROCK & CO'S PHOTO STUDIO,
BRANDON,

and have your PICTURES well taken. 31-1-y-m

Climax Grocery Farmers' Trade Specialty.

Choice Groceries, Provisions, Canned Goods, Fruits, &c., at bottom prices.

Highest price in cash or trade for **Butter and Eggs.**

Don't fail to try our 40c. Black and Japan Teas. Special offer for January. 3 lbs. for \$1.

T. E. WILLIAMS,
35-1-y-m 278 Market St., WINNIPEG.

Fleming & Sons, DRUGGISTS,

Proprietors of
Fleming's No. 9 Tonic.
Fleming's Syrup of Tar and Wild Cherry for Colds.
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MAIL ORDERS PROMPTLY ATTENDED TO.

FLEMING & SONS,
DRUGGISTS, 30-1-y-m BRANDON

FORT ROUGE GREENHOUSES
WINNIPEG.

Braxton & Bowyer, Props.

All kinds of bedding outplants, choice table plants, and all kinds of cut flowers. Funeral designs at short notice. Country orders promptly attended to. Well-grown vegetable plants a specialty. Awarded several first prizes at Winnipeg exhibition. Send address for our FREE Catalogue. 37-1-m

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DEALER IN
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AND
COMMISSIONS EXECUTED - CORRESPONDENCE SOLICITED
H.S. WESBROOK, WINNIPEG, MAN.

38-1-y-m

Royal Crown Soap!

LADIES,

By using this soap you use the purest, longest-wearing, therefore cheapest soap made. And, by sending to the Royal Soap Co., Winnipeg, 25 Royal Crown Soap Wrappers, with your name and address, you will receive by mail a beautiful picture

33-1-y-m

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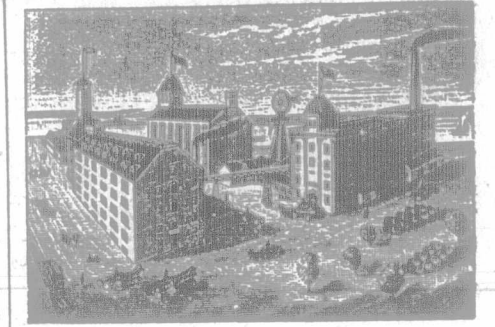
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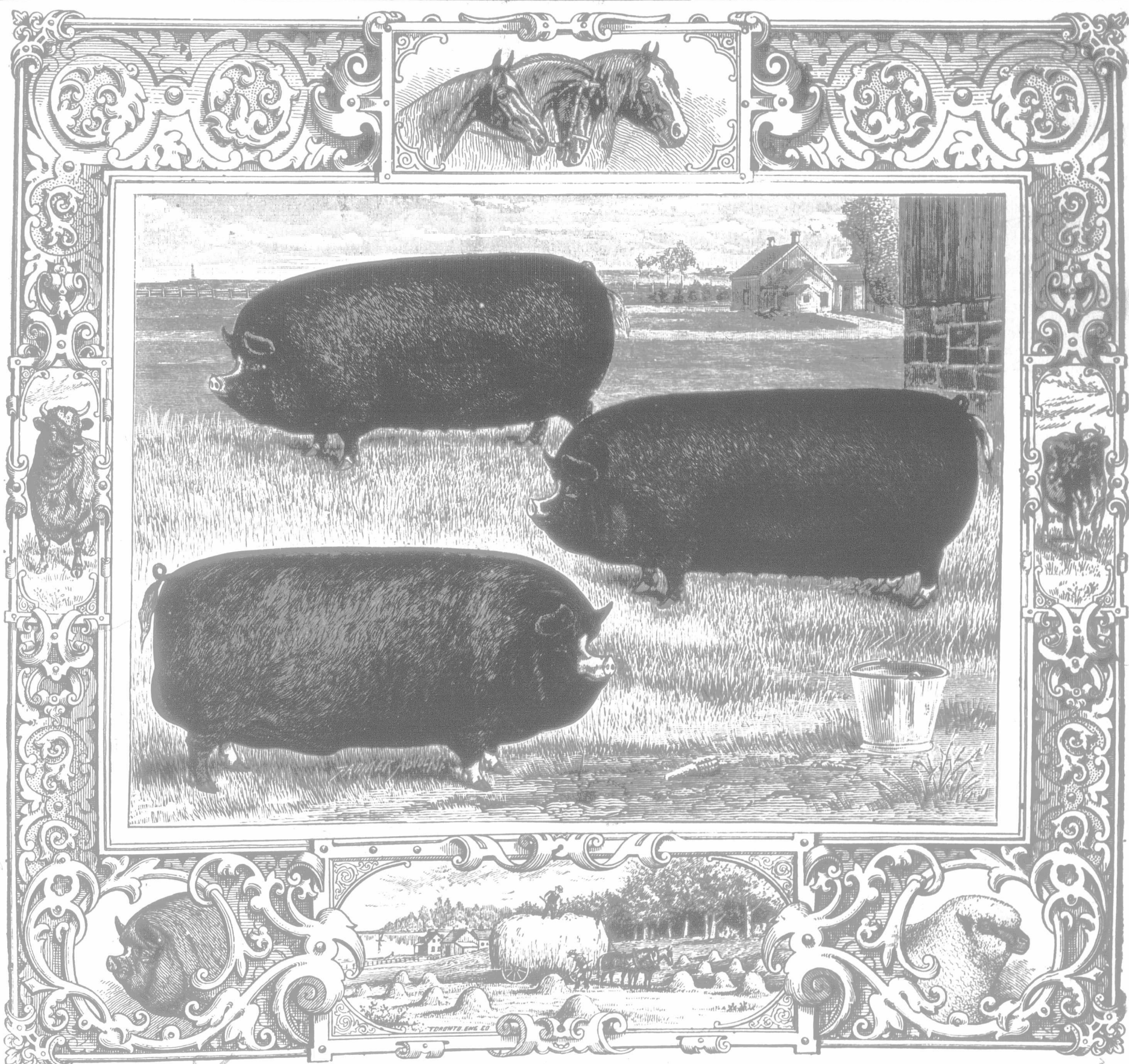
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VOL. IV.

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 5, 1893.

No. 39.



PRIZE-WINNING BERKSHIRES.
THE PROPERTY OF MR. S. COXWORTH, CLAREMONT, ONTARIO.

The Continent of Europe appears to be still suffering from foot and mouth disease among the herds there. Throughout the whole Empire of Germany there are reports of outbreaks, and in the northern part of France over 3,000 outbreaks occurred during the one month of October.

Quite recently there were shipped from Melbourne (Australia) to London, by the P. & O. steamer Ballarat, no less than 1,000 cases of butter. The consignment amounted to 500 tons, and is said to be the largest ever made to any part of the world. Our Antipodian cousins are awake concerning their export trade, and their vessels are thoroughly equipped with refrigerator space, by which perishable products are placed in the best shape possible on the British markets. When will Canada seek like advantages as regards shipping facilities, in which she is now so deficient.

It is reported that the dreaded foot and mouth disease has broken out in the South African Colonies. It is feared it has already become firmly seated, as outbreaks as far back as last September are reported in some parts of the territory. The disease has already appeared at different points, the latest being near the Natal border. It is difficult to estimate the immense loss that is likely to be sustained in a pastoral country such as this, where innumerable flocks and herds are scattered over immense areas of country, and where there is no means at hand for suppressing it. The loss will be more severely felt in that cattle and sheep constitute the principal wealth of the country.

Still the agricultural press of Great Britain continues to discuss the existence of pleuro-pneumonia among Canadian cattle as though it was an established fact, although infection has never existed in our herds. It is now certain that no amount of evidence to the contrary will satisfy the editors of these journals that Canada never had the disease, except the once in our quarantine station in 1886, at which time it was brought over with British cattle, when it was immediately stamped out. "There are none so blind as those who won't see," runs the old adage; but he who undertakes to remove the scales from the eyes of these gentlemen undertakes a contract in which the pounds, shillings and pence popularity of their supporters cuts a greater figure than a disposition to get at the true state of the case.

The present high price of pork is one of the topics on every tongue interested in farm products, and it seems to have struck all alike, as few had made preparations approaching anything that showed expectations like the present to be realized. It is quite a long time since fancy prices for marketable live stock have been obtained. There is, however, a certainty that the scarcity and high price of pork will lead to more beef being consumed, and prospects appear to favor better prices for the latter product before the present feeding cattle are ready for shipment. For years, as long as prices remained firm, there was a general disposition to add more and more cattle to the herds of the great west, until the demand was over supplied; but of late years it has been all the other way, and there is likely to be as great a dearth in cattle in the near future for the opposite cause. Those who are preparing for the rise when it comes will be fortunate.

The recent outbreak of foot and mouth disease among the cows of London, England, is ascribed by the Times to infection through hay in which eggs from Austria were packed. "The whole continent of Europe is," says the Times, "affected with foot and mouth disease, and from its various countries we are receiving produce and merchandise in large quantities, while many thousands of visitors from them are coming here every month. If there is danger in every package and every visitor, the outlook for the breeder and grazer is very serious, and all the trouble and expense to which we have gone to stamp out and keep out this disease may be in vain." By which it appears that trouble in a new form besets the path of the British farmer. With disease breaking out in many of the countries from which the great dumping ground of Britain receives her supplies, surely Canada may hope, sooner or later, to gain an advantage by her perfect immunity from infectious diseases, if the British press could only be reconciled to the fact that tramping up diseases can only affect Canada for a season.

There are many items of interest for Canadians in the "Trade Returns" for 1892, especially those relating to the exportation of live stock products to Great Britain. Thus, while the value of exports of live animals has decreased from \$9,165,000 in 1891 to \$8,035,

000, partly due to the sudden termination of the export cattle trade, on account of scheduling Canadian cattle, yet the increase in two items of live stock export products much more than counterbalances this item. Thus butter has increased from \$935,000 in 1891 to \$1,275,000 in 1892, and cheese has increased from \$9,657,350 in 1891 to \$12,091,050, and Canada now holds the proud position of being the largest exporter of the latter product to British markets, leaving the United States far in the rear. That she will strive to maintain and strengthen this position, there is no room for doubt. In other articles, such as apples, eggs, bacon and hams, poultry, there has been a substantial increase, but the figures for which are not yet to hand. Altogether, the exports from Canada to Great Britain show an increase of nearly \$15,000,000, which is most satisfactory at a time when so much is heard on the score of depression.

Mr. Coxworth's Berkshires.

A particularly fine herd of Berkshires has been established within the last few years at Claremont, and has already become widely known and justly celebrated. Mr. Coxworth's farm is conveniently situated for the fine stock trade, at Claremont, his railway station, on the Canadian Pacific Railway. Visitors who have omitted to notify the proprietor of their intention of viewing the herd, may be easily transported from the station to the farm by a bus, which meets all trains.

In the illustration, which decorates our plate page for this issue, we are enabled to show a sample of the very excellent class of pigs that are bred on this farm.

The boar to the left in the foreground is Highclere Prince 2017, sire imported Parry Lad (1354), his dam being Imp. Highclere, a very celebrated sow in her day. Highclere Prince is one of the best boars that has been exhibited for a number of years, as his winnings in the best company testify. During last season he won first both at Montreal and Ottawa shows in the class for aged boars, beating the boar that, for some reason of his own, the judge at Toronto had placed before him. Highclere Prince is now at the head of the herd, and to him the majority of the sows have been bred. Mating such a pig with the grand lot of breeding sows which this herd contains should give the most satisfactory results, if high quality in the parents has any influence in breeding.

The two-year-old sow to the right in the foreground is Duchess CXIII. 27542, which was purchased last spring of her breeder, Mr. N. H. Gentry, of Sedalia, Mo., being selected by Mr. Coxworth, and she belongs to one of the best winning strains owned by that celebrated breeder. This sow, like many other good ones in the herd, has wonderful length and carries her size well back, with very deep sides and heavy hams well let down, while her head is well nigh perfect, with remarkably short dished face for so long a pig. Duchess won third at Toronto, Montreal and Ottawa last fall, when in quite lean condition after her recent sojourn at the quarantine station.

Lady Stanley 2183 in the back ground was bred in the herd. She was sired by Imp. Rising Star (1307), dam Imp. Lady Shaftsbury 3rd (1875). This sow also has great length of sides, very deep ribs, and heavy, well-developed hams, like the above mentioned boar and sow; she is exceedingly deep and thick at the flank, which is now the aim of advanced breeders in order to form a side of equal thickness throughout. Altogether this trio are very difficult to improve upon, so well is each point developed. All of them are exceedingly smooth and well finished, and possess quality in the highest degree.

Among other good ones are five remarkably fine imported breeding sows, every one of which have distinguished themselves in the show rings in the past, including the Royal of England, Toronto Industrial, also Montreal and Ottawa, and inspection of the herd reveals the fact that it has been the aim of the proprietor to select the highest breeding strains, together with the best individuals obtainable, retaining only such as have great length of body, deep sides, heavy, well developed hams, together with short dished faces, and the highest type of smoothness in finish. How hard these characteristics are to combine only the foremost breeders realize.

When the points above mentioned are being developed we are sure to find heavy weights attained at wonderfully early ages. With good feeding there is no difficulty in producing pigs of this type weighing 250 lbs. at five to six months. By such means only can pork be profitably produced when prices are low. At present rates there is plenty of

money in it if good feeding sorts are introduced. Altogether twenty-five sows have been bred, in order to furnish pigs for the coming season's trade. Three breeding boars have been used upon the herd, in order to enable the proprietor to furnish pigs not akin to those who may require trios or pairs. Of these boars, besides the already mentioned Highclere Prince, is Royal Hero 3rd, a pig of immense length, depth and size. He was sired by Royal Hero -891-, his dam being Cornflower, a very superior individual.

Lord Lorne -2161-, the remaining one, is a very neat yearling boar. He was sired by Imp. Enterprise -1378-, dam Imp. Lady Lorne -2164- (25653), which also descends from a celebrated strain of prize-winning sows.

We also noticed a lot of, particularly handsome young sows that have been bred to Highclere Prince, which possess length and depth, together with development in ham, smoothness and quality—a combination that would satisfy the most fastidious judge of Berkshire pigs; these are the types that the present trade demands, and when mated with such excellent sires should produce the best results. Customers who take the trouble to inspect them will be pleased with what they see, while those who order without previously seeing may rest assured that they will obtain satisfaction if they order by letter, as we have every confidence in Mr. Coxworth's integrity and good judgment.

A Farmer's Ideas on the Proposed Winnipeg Elevator.

To the Editor of the FARMER'S ADVOCATE:

Dear Sir,—I have been asked by others, as well as the ADVOCATE, for an expression of opinion re the proposed elevator in Winnipeg. I must confess that I fail to see where the elevator will benefit the ordinary farmer—that is, under existing systems, customs and circumstances. I would like to ask the promoters what benefit it will be to the farmer as a mixing and sorting elevator. It appears to me that indirectly it would be detrimental to their interests, because different soils produce different grades and qualities of wheat, and different seasons have the same effect, and the produce of the country would always be bought at its grade value, and not its milling value, after sorting and mixing. More than that, take our present crop, and 60 or 70 per cent. of it would command the highest quotation in the British market, if placed there in its purity. But it does not get there, and never will so long as we calculate to make the good sell the poor by mixing and manipulation.

I know that prices to farmers at country points are based upon values ascertained by quotations in European markets for wheat that is well known to be of inferior milling value to our production. I know that our No. 2 hard wheat of this year is of as good milling value as the No. 1 hard south of the 49th parallel, and yet the prices at provincial points are based upon their No. 1 northern, with a difference, even in that, of from 3 to 5 cents, between Fort William, our lake port, and Duluth, their lake port; though why it is must be one of the mysteries of the trade. Now, I simply mention these things because they are a farmers' grievance, and it does appear to me that the proposed elevator in Winnipeg, instead of remedying the evil, would tend to perpetuate it, unless, as I said before, existing systems and customs were changed.

Now I will try and tell your readers how, in my opinion, this elevator could and would be a benefit to the farmers of our country. First, Winnipeg would have to be made a terminal point. Second, the different railways of the country would have to be allowed access to the elevator. Third, it would have to be a public elevator, and no one class or company have privileges to the exclusion of any other. This would mean an independent management, without any possible coalition with or on behalf of any company or class. This would be necessary to prevent suspicion. Fourth, it would be necessary that all grain passing into, or out of, or by the elevator should be inspected by an inspector, duly qualified, whose certificate should be accepted as final, with, of course, the necessary provisions for arbitration to protect; all these provisions to be so simplified as to be easily applied to any case or by anyone feeling aggrieved. Fifth, a public officer should be appointed as weigh master in such elevator, and car platform-scales provided at or near the elevator; this weigh master to weigh all grain passing through the elevator or passing by the terminal; his weights to be accepted as final between shipper and carrier and buyer and seller, with, of course, some reasonable and just means of arbitration, simple and effective, in case of dispute. Farmers, by a representative, to have the same privileges and use of elevator at same rates as others.

These are a few of my ideas on this scheme.

Yours truly,
CHAS. BRAITHWAITE,
Portage la Prairie.

Our Progress in Road-making.

In our struggle for reform, we are following the history of European nations, where, in the beginning, the same objections were urged, and the same obstacles interposed which we meet at the present time. Macaulay makes graphic reference to the difficulties of travel upon the English country roads, at the time when the English farmers indulged in the same periodical diversion of working out their road taxes that is provided for in our old-fashioned Ontario Statutes, which we still keep in force for the maintenance of our highways. He states:—"Not so are the English roads of to-day. By experiment, and by the better light of experience, the English people and their neighbors all over the European continent have learned that true economy in the construction and repair of the common roads, as in the construction and repair of the great railroads, consists in the scientific making and the systematic maintenance of these roads according to fixed rules, and under the direction of an intelligent head."

In the perfection of this enlightened system, it is probable that France leads the world. The government maintains a large body of trained engineers in its special department of roads and bridges, to whom is entrusted the practical work of constructing and repairing the common roads. No part of the road system of France escapes attention, and every road is divided into sections, varying in length according to its importance, each section being placed in charge of a man who is held responsible for the constant excellence of its condition.

But our conditions differing in some respects from those of the European nations, I deem it wise to deal with the matter more from a local standpoint than from a general. And having said sufficient to convince any one of the necessity of putting our roads in a state of greater efficiency, I will try to point out how I think it can possibly be done without increasing the cost very materially. And, in order to do this, it will be necessary for me to give you an illustration, from which I can submit figures and draw comparisons. And to do this, I will take the Township of Blanshard, in which I live, as a typical one, convinced that what is here said in regard to this township will be applicable, with slight variations from local circumstances, to most of the townships in this province.

Generally speaking, this township presents few difficulties in the way of road-making, it being traversed from north to south by the Thames, which has several small creeks running into it. This gives ample opportunity for drainage. Entirely within the limits of this township we have the town of St. Marys, which is the grain market for the surrounding neighborhood, which causes much heavy traffic over its roads, rendering it necessary to keep in good repair its main entrances. All the main roads of the township lead in the direction of the town.

The sideroads are little used, and, consequently, need little attention. The main roads are those on which nearly all the expense occurs, and it is of them I will speak principally.

All the roads of this township, with the exception of seventeen miles of company road that was built under the turnpike and toll-gate system, have been built and maintained by what is known as the Statute Labor System, a proceeding well known to you all, and which it would be superfluous for me to describe here. Although possessing some good features, this system is not the most suitable for the construction and maintenance of good roads, and should give place to a better.

Perhaps it would be necessary for me here to make some reference to the way in which our roads have been constructed. Most of you have had some experience in building, corduroy, and grading. A width of about twenty feet was left in the middle of the road allowance, the earth on each side was loosened with a plow to a depth of six to nine inches, and conveyed to the centre by scraper and shovel to a depth of from eight to twelve inches, and about eight feet wide. In places where the ground was high, no grading was done at all, the longitudinal slope being depended on to keep the surface dry. The traffic soon compressed the clay, and pressed it down so that in the majority of cases it was only from two to five inches above the original level of the land, and where no grading was done the track became passable only in dry weather. On the other hand, the narrow roadway was raised, where the ground was low and wet, to a height of fifteen to twenty inches, making a dangerous place for teams turning off when meeting. This is what was known as the clay, or more commonly and appropriately as the mud road, for many years in use. On this, as a road-bed, pit gravel was hauled and spread loosely to a depth of from eight to twelve inches, according to the fancy of the man doing the work. When the foundation of the road-bed interfered with the natural course of the surface water, culverts were put in. These were usually built of logs, with a plank covering, but sometimes stone sides were built up, without mortar, and a plank covering put on that. The defects of this condition of things are obvious. The superintendence of the work is placed in the hands of parties who have no training or experience in the best methods of work, who have given the matter no attention or consideration, and who are, consequently, unskilled and incompetent to make the best use of the time and money spent.

No good roads of any kind can be made and kept without a proper system of drainage, and this fundamental fact is almost entirely neglected by pathmasters. In many places no side drains exist at all,

and when they do exist, they are always too shallow.

In the wet weather of spring and fall (the seasons when traffic is greatest) the road-bed becomes softened and saturated, and unable to support the covering. Heavy wagons cut through the gravel and bring up the clay, mixing it with the covering, permanently ruining the road where it occurs, and rendering reconstruction necessary the following summer.

Too great a depth of gravel is put on at one time, and it is a long time before it is possible to go over it with a heavy load. In this condition the traffic seeks the side of the road when possible, cutting it and bringing the clay on the gravel.

The gravel is taken from the nearest pit, with no regard to its quality, and always contains too much clay or large stones to make a good road. The large stones are the worst, as they cause ruts on either side from the concussion of the wheel as it drops over them.

Wooden culverts are a constant source of danger, being generally in a state of ill repair. The foundations, as a rule, are not put deep enough, and the water soon undermines them, allowing the walls to fall in, in which condition they are usually allowed to remain until someone complains or the township becomes liable for an accident. Moreover, they are not economical, decaying as they do so rapidly from the alternate wetting and drying to which they are subjected.

The cost in this township for repairs to culverts alone for the year 1880 amounted to almost \$300, and this without any road commissioner's salary, which, if added, would amount to almost another \$100. This, of course, does not include a dollar spent for new ones.

To effect an improvement in these roads through drainage is a prime necessity. This can be provided by an open drain on each side of the road, with slopes of one to one and a-half feet and a width of one foot in the bottom. Culverts should be made to last as long as possible, and for this reason they should be built of stone, where stone can be got so conveniently as it can be here. It will always be found to repay the extra cost of construction by its solidity, permanency and consequent safety.

The floor should be made of concrete, to provide a bed that the water will not wash out and render the cleaning out easier. The walls should be built on a solid foundation got by digging down to the solid clay, and should always go below the flooring. The mortar used should be made of cement, as it best resists the action of water. A culvert properly built will never need repairing, will be always perfectly safe, and of no expense save for cleaning out once or twice a year.

In order that the road covering should be maintained so that extensive repairs will never be needed, minute repairs should be made to the surface systematically, in small patches, as soon as ruts and depressions appear. The road should be constantly undergoing repairs. To have this done the road should be divided into lengths, on each of which an intelligent laborer should be placed, who thoroughly understands his business, to attend constantly at all times to the condition of the road, and for which he should be held accountable.

[TO BE CONTINUED.]

Manitoba Cattle Breeders and the World's Fair.

The committee appointed at the recent meeting of the Manitoba Cattle Breeders' Association to bring before the government of Manitoba the question of having the cattle interests of the province properly represented at the World's Fair waited on Premier Greenway and presented the following memorial:—

To the Honorable Thomas Greenway, Premier of Manitoba and Minister of Agriculture and Immigration:

We, the representatives of the Manitoba Cattle Breeders' Association, after mature and lengthy consideration, beg leave to bring the following suggestions to the notice of yourself and your government:—

We respectfully urge that immediate steps be taken to ensure a suitable exhibit of Manitoba's live stock at the Columbian Exhibition of 1893, and that Manitoba at once follow the course pursued in Ontario, and that suitable persons be at once appointed to select worthy specimens of cattle; that experienced men only be appointed as selectors.

We beg to suggest the following as suitable judges of beef-cattle: John Sharman, Souris; John McTurk, Elkhorn; Walter Lynch, Westbourne; Lester Smith, Wawanessa. Judges of dairy cattle—W. J. Young, Emerson; James McLoughan, Portage la Prairie; James Bray, Portage la Prairie; James Glennie, Portage la Prairie, and David Steele, Glenboro.

We pray that the expenses of selecting animals may be borne by the Manitoba government.

We would also respectfully request that your government ask the Dominion Commissioner to extend to Manitoba's live stock the same liberal treatment promised Ontario breeders, viz: That all the expenses of transportation and maintenance from the time the animals leave the owners' stables until they return thereto be borne by the Dominion Government, and that the cost of sending herdsmen with exhibit, and the maintenance thereof, be borne by one or the other government. Inasmuch as the exhibit is of national and provincial importance, and will not be of real benefit to the exhibitor, therefore we feel justified in asking these privileges. The first two requests have been granted to On-

tario breeders; the last is now being considered, and will doubtless be granted.

All the expenses of selecting, collecting, and caring for fruits, grains, etc., etc., are being borne by the State. Why should our live stock be put on a different footing?

We further contend that it is of great importance that our fertile plains be advertised to the world as capable of producing superior animals very cheaply, therefore we consider the exhibit of live stock of national importance. The expense of such an enterprise should not be borne by private individuals.

While we speak for the cattle breeders, we would also respectfully call your attention to the pressing need for immediate action in the matter of selecting suitable specimens of the various breeds of horses, sheep and swine, and also that a suitable exhibit of range cattle be selected.

We believe that a preliminary selection of stock should at once be made, and that space be immediately applied for, and that a final selection should be made next May or June. Animals selected in the preliminary selection may at the final selection be rejected, if they have not advanced as fast as desirable; others may then be taken in their stead.

We further humbly pray that your government will take steps to at once officially declare Manitoba herds free from pleura-pneumonia (as they have ever been), and that you will at once issue a formal protest against the action taken by the British government in scheduling Canadian cattle.

We, your petitioners, are alarmed at the reports now current, to the effect that the Dominion Government are again contemplating the advisability of allowing American cattle free entry into Canada that they may be here killed and exported. We as a body formally protest against thus receiving American cattle into Canada to be slaughtered for export, or put up as canned meats, believing that such a course would be very detrimental to the interests of Canadian cattle breeders.

We further pray that a Commissioner be appointed who is well versed in agricultural and stock matters, and whose sympathies are with the agricultural classes.

That there be an advisory board appointed to act as advisers and assistants to him, and that this board number at least ten persons, and that the live stock breeders and farmers be given a fair representation on said board, and that the members of said board be appointed and called together as soon as possible.

Timely Notes for February—No. 1.

"HARD UP."

Just now we are treated to various sermons on the "present agricultural depression," from implementation men, storekeepers, and even farmers, just as if any observant man in the country did not know that the almost universal condition of the farmers in Manitoba has been one of "hard-upness" for the last four years—ever since '80, at least—that last and worst "dry year." It is, however, only now that we are beginning to speak "right out in meeting." "Open confession is good for the soul," and also for the financial salvation of more people than farmers.

Mr. Elder, at Brandon Institute, and Mr. Graham, in his letter to the *Advocate* a little while ago, both make good points, and just what your humble servant has been abused for pointing out before—that credits, mortgages and chattel mortgages are not the readiest ways to affluence in farming—but better methods and a strict adherence to the motto of "Pay as you go," and don't go until you *have* paid!

I must join issue with Mr. Elder when he advises reciprocity with the States. I believe in "Free Trade," and free trade only. Reciprocity, I contend, would place us almost completely in the power of the "screaming eagle," and as their manufacturers are so much richer than ours, they could run the Canadians out of their own markets, and then we would indeed be between the "devil and the deep sea." No! Don't let us give away our birthright in any such fashion. Better—far better—to put up with the N. P.—No Progress—policy a while longer, till we can compel our government to give us free trade with the world. Then, indeed, would we progress as we should. That's enough of politics for this issue!

IMMIGRATION.

The agriculturists of this country are threatened with a great and impending danger in the expected immigration of the rejected of the United States and Europe—those whom the States have discovered at last to be altogether too free—with other people's lives and property—even for that much-vaunted "land of freedom." Let us, as Canadians, take warning from our neighbors, and rigorously exclude the gaol-birds, gutter-snipes and other riff-raff of Europe. Our country bears an enviable reputation for freedom from crime—let us keep it so. We want population, but not to fill our reformatories. No—we need farmers—the rural population of Northern Europe—a hardy, thrifty and vigorous class.

THE SURPLUS OF HORSES.

It is high time that the importation of horses from the East should cease. We have enough and to spare of nearly every kind of horse required in this country. Take a drive out from almost any town in Manitoba for from ten to twenty miles, and you will find teams, dozens and scores of horses for sale; many good, a few very good, an odd one first-class, and some indifferent ones. The prices asked, in nearly every case, are half what the same class of

beast is sold for in the livery stables. It is alleged by many breeders that the dealers will only give them very small prices for really good stock, and then want them on long time. Surely this is killing their own business, for there is no risk in buying a Manitoba-bred horse as compared with one from Ontario, and but very little fitting up is necessary to get them into saleable condition. The Manitoba horse is generally sound every way, and will last longer than the one reared in a milder climate. Go out into the country, ye dealers, and buy from the Manitoba farmers, and keep the money here.

Again, I would urge upon the directors of every agricultural society to hold a horse and cattle fair this spring, where buyers may congregate, and breeders may have an opportunity to dispose of their surplus stock. Advertise it well, and if Mr. Grand's (of Toronto) plan of giving prizes for the best of each class were adopted, it would create a healthy rivalry. In the Old Country—in both England and Scotland—animals are sold by auction at stated times at fairs,—why not here? Of course, owners could put a reserve price on their stock, or not, as they pleased.

GENERAL.

Give those pigs more straw, and keep them dry. Keep off rheumatism—a pig kept in a cold and damp pen will surely get it, if not something worse.

Keep your expenses within the limits of the family pocket-book.

Give the cows a little bran twice a day for a fortnight before calving. Roots are better, but how many have them now?

If you have a heifer calf from a cow that is a poor milker, wouldn't it pay you to make veal of it rather than rear it to perpetuate its unprofitable race?

Lard is a good remedy for frosted teats; sulphur is good for vermin on cattle; a little coal oil is excellent on your poultry perches. Are you using them?

Plan out your farming operations for the coming season. What seeds do you want for the garden? Are you going to try ensilage this season? If not, why not?

Did you learn anything at last week's institute meeting?

Have you bought your fencing for the season? What do you intend to use? The old barbarous barbed wire or one of the new and harmless fences? Or do you consider a blemished animal—one that has "only run into the wire"—a more valuable beast than one that is free from scars? Think it over—a word to the wise is sufficient. "INVICTA."

Answers to Veterinary Questions.

DEAR SIR.—Can you, through your columns, give me a remedy for scours in calves. I have just had one die from that disease. It was born in November, and seemed a bony fellow, eating hay and drinking like the other calves; one day I noticed its stool loose, next day more so, finally it got nearly white, and the animal died in a week. For fear of it being catching I burnt the litter.

ANSWERED BY W. A. DUNBAR, V. S., WINNIPEG.

At the commencement of this ailment, administration of the following dose will usually be found beneficial: raw linseed oil or castor oil, eight ounces; sulphuric ether, two drachms; tincture of opium, four to six drachms. In the more advanced stages give three times a day until scouring ceases: Tincture of catechu and tincture of opium, of each two drachms; prepared chalk and bi-carbonate of soda, of each one drachm; brandy, one ounce; mix in one pint of very thin flour or starch gruel. Injections of starch gruel will also be useful. The above doses are for a calf two or three months old. The sick animal should be separated from those in health, and kept in a well littered, warm, dry and properly ventilated stall. If inclined to eat straw or other coarse food, it should be prevented from doing so by the application of a muzzle. Milk should not be forced into its stomach, nor should it be allowed to drink large quantities if disposed to do so.

Care and Treatment of Jersey Cattle.

BY MRS. ELLA ROCKWOOD.

Perhaps no breed of cattle possesses in a greater degree susceptibility to treatment, kind or unkind, than the Jersey. The peculiar nervous temperament so essential in a perfect dairy cow is one of her strongest characteristics.

Look at the bright, intelligent face of a true specimen of this breed, and note the large fawn-like eyes, bright and glistening. Look at the thin, dilating nostrils, with their orange lining, which seem to scent danger like a deer, and seeing know that this queen among cows demands and well deserves the most careful handling and kindest treatment to bring out her good qualities and keep them at their best.

No cow, from the scrub to the thoroughbred, can do her best unless under circumstances conducive to quiet and content; and although cows of more sluggish temperament may bear ill-usage with little apparent regard, it is not so with the sensitive Jersey, and she soon depreciates in value. From calfhood she should have reason to regard her master as her friend. No blows or harsh words should teach her to fear him; but she should expect and receive only caresses and kind words. Undersuch treatment she will develop a gentle, kind disposition.

She should be taught to lead by a halter, to stand quietly as for milking, and to bear handling of the udder long before she reaches maternity; so

that she may be quiet and easily handled, instead of being wild and unmanageable, as heifers often are at that time. No breaking-in will be necessary, and if it is desirable to dispose of her she will bring a better price than one that has never been trained.

Do not make the mistake of thinking that when she drops her first calf is time enough to begin feeding her; she should have been fed from her birth with this in view.

No supplemental food is better than ground oats as a help in developing the heifer calf. As soon as she begins to eat hay she should have a little, night and morning, fed dry. Begin with half a pint of feed, or even less, and gradually increase the quantity until bossie will take a pint at a feeding. Keep her thrifty and growing. A calf once stunted by insufficient or improper food will never make so good a cow as she would otherwise have been.

The grain ration should be increased as the heifer grows, and at the arrival of the milking period she should, after the first few days, be given a generous quantity of such food as is best suited to assist her in producing milk.

While there are various grain foods recommended by dairymen as excellent for milch cows, for the general feeder and the average cow nothing is better than a mixture of one part commeal, one part oatmeal and two of wheat bran. Of this, feed as much as after experimenting with your cow you find gives best results in milk and butter.

Each cow is a law unto herself as to the amount of food she can profitably consume. It takes more to produce a like result with one than another. Up to the extent of her capacity the greater the amount consumed the greater the returns at the pail and churn; but when a cow is fed beyond her capacity to convert the food into milk and butter she is fed at a loss; the extra food goes to make fat.

A liberal allowance of coarse fodder should also be fed. Clover hay, corn fodder, ensilage—all are good. Roots are valuable as a food for milch cows. Carrots are perhaps best, with sugar beets next. Turnips and ruta-bagas will flavor the butter.

Pure water should always be within reach of the cows. No other domestic animal requires so large a quantity, and a shrinkage of the milk will follow if she is deprived of it in abundance.

While Jerseys as a breed are unsurpassed as butter-makers, there is a wide range in their value in this respect. Each cow should be tested and the best only kept. In regard to testing, it is not always that the cow showing the highest test of butter-fat is really the best cow. Other things should be taken into consideration—quantity of milk and length of milk period during the year. These should be considered before deciding, as a cow showing a medium amount of butter-fat may make up in quantity of milk during the year what a single test of her milk may lack.

Not all of us can have cows making a thousand pounds of butter in a year; but any one owning a single Jersey cow may, with judicious breeding and careful feeding, combined with the kind treatment and care which all animals should have, in a few years possess a herd of cattle which will be a source of profit as well as pleasure.

How the Jersey Strikes Our Poet.

BY G. HOPPER.

"The Jersey Cow," so neat of limb,
So gentle, thoroughbred and trim,
Inspires both poetry and prose
(E'en when no "Prize" shines at the close!)
Her fine ideal dairy form.
Her speaking eye, liquid and warm,
Her pleasing color, royal air
That marks her one beyond compare—
All of the attributes of grace
Betokening an illustrious race—
These charm the poets in their dreams,
These lure the artists to the streams
By which she browses, fresh and fair,
And sweet as summer-scented air.
But all these things to nothing tend—
Behold her at her business end!
Bred ages back for milk that's rich,
She gives it still without a hitch—
Only more so. And more and more
She pushes up the wondrous score.
Such milk, that, coddled in our churns,
To golden butter quickly turns!
Such butter, solid through and through,
Renowned from York to Timbuctoo!
Butter, flavor of which exceeds
The wildest dreams of other breeds!
'Tis tasted by the epicure,
And then no other he'll endure.
'Tis tasted by the farmer too—
The farmer who was always blue—
And soon we view his Jersey tubs
And lose sight of his heavy scrubs,
The while upon his face we see
The glad dawn of Prosperity.
He tells unto his neighbor's wife
The happy change made in his life;
And then, sown in this fertile ground,
The Jersey's "tale" goes 'round and 'round.
So may e'er spread the worthy fame
Of this unrivaled bovine dame!
So may her genuine merits spread
Till every prejudice is dead,
Till ignorance, with blinded eyes,
Shall no more vent her senseless cries,
But freely to this truth accede:
"The Jersey is the butter breed!"

How to Feed Our Horses.

Not many farmers take into account what it costs to winter the horses necessary for their farm work. If this and other items that go to make up the expenditure in keeping up a fairly well equipped working stock were minutely detailed, there are few that would not be surprised at the result. Certainly the proper management of horses on the farm is one of those particulars which demand serious attention. There is a large proportion of horses worn out on the farm. If we take a percentage of the loss thus incurred, it is one of the departments that adds materially to the drain on the credit side of the ledger account. For instance, a farmer buys a pair of already broken young horses, which do his work to his satisfaction, and, consequently, if they are good he values them much more highly than any buyer is likely to offer; he therefore keeps them on until they are too old for sale and are worth considerably less money for any commercial purpose than the price paid. He still asks a high price, and the upshot of the matter is he either wears them out or sells them, when nearly done, at a figure not exceeding twenty-five per cent. of first cost. On the other hand farmers breed their horses, and after they are sufficiently educated the same course is pursued. Now in both these instances there is a yearly loss on account of depreciation in value. Spring is usually the best time to sell this stock. Work that will not stand delay is close at hand, and rather than sell them at their value and run the chance of replacing them they are retained. The difficulty is partly due to farmers not keeping their horses in condition for sale. When the winter season comes the feed is taken off and horses are fed hay without grain in order to curtail the expense, as well as to prevent further trouble from feeding horses that have not sufficient exercise. The grain ration is stopped short, or so lessened that a hearty horse has to satisfy hunger by filling up with more hay than is good for him, and which he generally has dealt out to him *ad libitum*. He consequently spends his idle hours in gorging himself with hay, the value of which his owner does not take into consideration. If the yearly value of keeping a horse in proper shape is taken into account, it is found to make the horse labor one of the heaviest expenditures on the farm. In these days, when hand labor is not attainable, the only resource is to keep a sufficient number of horses of such a stamp that may be required to horse the improved implements of the day. In fact, at present a fully equipped set of implements and machines in which horses are utilized is the only solution to the farm labor question, therefore how to feed horses cheaply and always have them in saleable and good working condition will have to be made more and more a study of.

The opinion that hay and oats are the only kinds of feed suitable to the every-day horse ration has been so well handed down by old writers that it is in a measure dangerous to suggest a substitute. The convenient form of both these articles, and their well-known suitability for horses that have to perform arduous work, also have the effect of keeping these two standard staples in continued use. But the fact that this condition is only suitable for hard worked horses must not be overlooked, and that the farm horse of necessity must stand idle for a large proportion of the winter.

In order to economize, and at the same time provide suitable diet, the mixture that all practical horse breeders use in their breeding studs is much in advance, and although all do not agree quite as to what sort of grain is best and cheapest, they all agree that cut feed, hay and straw, bran and ground grain can be fed with much greater advantage and at about half the cost. If a feed room is provided in which water does not freeze, the mixing can be done by wetting the chaff and adding the bran and ground grain; and if mixed twelve hours previous to feeding all the better. Another good plan is to heat the grain and bran or meal and bran in a chaldron, and then mix with whatever chaff is intended to be fed. It then forms a most savory and nutritious food, and at very little expense and trouble after the required appliances are once in place. By either of these methods not only are all the nutritious elements in the ration made the most of, but in this form it is much easier on the digestive apparatus than when long hay and whole oats are fed. At the same time this mixed food is not as heating to the blood of horses not being worked.

Everyone knows that pork and fat meat of any kind is both relished and conducive to health in the case of a man at work out of doors, but place the same man on the same diet inside in an office, without exercise, and he would quickly suffer. Exactly the same principle applies to animals on the farm, and by studying and testing the different modes only the best methods may be practically worked out. What in this case applies to the idle work horse is still more applicable to young colts, as a properly balanced ration, properly prepared as above, will develop them more quickly, and at the same time keep them in the best possible state of health.

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Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

- 1.—No award will be made unless one essay at least comes up to the standard for publication.
 - 2.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling.
 - 3.—Should any of the other essays contain valuable matter, not fully covered by the one awarded the first prize, or should any present different views of the same topic, and we consider such views meritorious, we will publish such essays in full, or extracts from them as we may deem best, and allow the writer ten cents per inch (one dollar per column) printed matter for as much of such articles as we publish. By this rule each writer who sends us valuable matter will receive remuneration for his labor, whether he be the winner of the first prize or not.
 - 4.—We invite farmers to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch (one dollar per column) printed matter. Criticisms of Articles, Suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
 - 5.—Replies to circulars and letters of enquiry sent from this office will not be paid for as provided by rule 4.
 - 6.—No anonymous communications or enquiries will receive attention.
 - 7.—Letters intended for publication should be written on one side of the paper only.
- A prize of \$5 will be given for the best essay on the method by which the Manitoba and Northwest farmer may better his condition and home life. Essays to be in this office by February 15th.
- A prize of \$5 will be given for the best essay on the reasons why Arbor Day should be observed at Manitoba and the Northwest public schools, with suggestions for the programme of the day. Essay to be in this office by March 15th.

Our Scottish Letter.

BRITISH BREEDS OF DAIRY CATTLE—THE SHORTHORN AND AYRSHIRE.

If we were called on for an answer to the question, What is the best method of relieving the pressure which weighs on British agriculture—what class of products affords the most likely method of making the capital invested in farming remunerative? there would, I think, be only one answer possible—at least in so far as the West of Scotland is concerned. That answer would be: Dairy-farming and the production of the best and purest quality of fresh milk. It needs no proof that there is no more natural food than milk, because, of all goods, it contains the best balanced proportions of flesh-forming and heat-producing elements. In its primary form of sweet milk it is the ideal food, and in its secondary form of cheese, when coupled with wheatbread, the essential balance of flesh-forming and heat-producing properties is maintained. It has been computed by competent authorities that 1 lb. of cheese + 1/2 lb. of bread contains a higher sum of good properties than 2 lbs. of flesh meat; and that the necessary relative percentages of albuminoids, or flesh-formers, to fat and heat-producers is better preserved in the bread and cheese than in the meat, while the cost of the former would only be about half the cost of the latter. Primitive man lived on milk, and those whose habits are simple and unsophisticated find in it as food a satisfaction which is impossible to those who have long acquired a relish for flesh meat. There cannot be much doubt that the consumption of meat is in many cases excessive, and to some extent this may be attributed to the fact that up to within a comparatively recent period it was not possible to secure a pure milk supply in the great centres of population. The fact had been forgotten that, while pure milk could not be surpassed as a wholesome food, impure milk as a deleterious substance is difficult to beat. It is the undoubted interest of the milk-producer to send it out absolutely pure. In proportion as the great consuming population have the confidence that it is so will the demand for the product of the dairy increase.

It is not the purpose of this paper to discuss the general question of our milk supply and its importance for farmers, but to direct attention to one of the chief factors in successful dairy-farming, namely, the character of the source from which the milk is drawn. It is a trite saying that it will cost as much to keep a bad or unprofitable cow as a good one, and cattle that are not intrinsically worthless may be wholly so for dairy purposes. The cow to the dairy farmer is a milk-producing machine. Like all other kinds of machinery, she can only produce something beyond herself after her own wants have been supplied. As Professor Sheldon puts it: She is like a steam boiler. The boiler cannot produce any steam until it has itself first been heated; and the most profitable boiler is that which heats most rapidly, because it is that which will generate steam in the shortest time. The most valuable dairy cow is she that requires the smallest proportion of the food she consumes for the upkeep of her own frame, and devotes the larger portion to the production of milk. There are many breeds of cattle in Great Britain and Ireland, and all of them are, in a sense, dairy cattle; all of them give milk, be the quantity less or greater, and the quality better or worse. But there are, in our opinion, but five breeds of distinctly dairy cattle—that is, cattle whose chief value consists in their dairy properties, and which would not be bred but for these. The breeds that come under this category are the Ayrshire, the Jersey, the Guernsey, the Red Polled, and the Kerry. The omission of the Shorthorn from this list may at first seem strange, for Shorthorn cows have made milking records; but it will be observed that the cosmopolitan breed will not come under our definition of a dairy breed, because, as a whole, the breed is not reared because of its milking properties. If there had been no Durham ox, we may safely conclude that there would have been no improved Shorthorn breed. If there were no laurels to be won at Smithfield in December, the famous Teeswater breed would have remained in its primitive glory as a dairy breed, but in that form it could not have been the Shorthorn as we know it. I am the more anxious to emphasize this distinction, because I think it can be reasonably argued that one factor in the composition of the modern Ayrshire was the Shorthorn, but not the improved Shorthorn of the Collings and the Booths and the Bates.

A visit to a lovely vale on the borders of Westmoreland and Cumberland, and not far from the confines of Durham, made us acquainted with a beautiful race of dairy cattle—Shorthorns—but not the Shorthorns of Coates' Herd Book. They were a magnificent race, the remains of a splendid stock of dairy cattle to be found in the dales and on the fells of the ancient province of Northumbria; of kindred clearly to the mammoth Shorthorn of the show ring, but of more ancient race, and in all likelihood more like to his ancestors than he is himself. This is the breed or class known as unpedigreed Shorthorns, which in the main supplies the town dairies of Edinburgh, and the dairies conducted on the "soiling system" in the eastern counties. Some of them have more of the Shorthorn appearance than others—a result due to the more extended use of the modern Shorthorn in their production; but as we saw them in their native dale, collected by an enthusiastic lover of dairy cattle, who purchases them from the smaller dairy farmers in these uplands whenever opportunity offered, their resemblance

to the type of our larger-sized Ayrshires was very marked.

There can be little doubt that these Westmoreland cattle are the representatives of the celebrated Holderness breed of cattle—a tribe famed before the era of the modern Shorthorn, and specially famed for their milking powers. The gentleman in whose hands we saw the cattle keeps a daily record of their milking powers, and 40 lbs. per day is a usual average. The cattle are larger and heavier than the average Ayrshire, but they are of the same type, and have the characteristic dairy features of the west country breed. The Holderness breed, of which I believe these to be the remnant, had their habitat in the West Riding of Yorkshire, and are generally regarded as having much in common with the deep-milking breeds of Holland. As a breed they have been preserved from extinction in America under somewhat peculiar circumstances. During the first quarter of this century cattle of this class were imported into the State of New York, and Mr. Lewis L. Allen, the writer of a very interesting book on "American Cattle," was, about 1835, well acquainted with their characteristics. He describes them as cattle having a close resemblance to the unimproved Shorthorns, being chiefly dark red in color, with lined or white backs and bellies, and somewhat less in size than the modern Shorthorn. The cows were excellent milkers, and useful for the dairy. Mr. Allen lost sight of the breed for a number of years, when his attention was called to a herd of about thirty of them, owned by a Mr. Cole, in Madison Co., New York. This herd was founded in 1855 by purchase of a cow then in calf by a bull of the same breed from a farmer in Oneida Co. This cow produced a bull calf, which, when a yearling, was mated with his own dam. The fruit was a heifer calf, which, in the following year, along with her dam, was mated with the same bull, at once the brother, sire and son of one or other of the females. By continual breeding in this close fashion the Holderness race was resuscitated, and from this single cow hundreds of phenomenal milking herds to be found scattered over the State of New York are descended. My object in calling attention to this remarkable chapter in cattle-breeding is to point out that milking power is inherent in the old Northumbrian breed, and was intensified by the in-and-in breeding, which resulted in the formation of the modern Holderness breed of America. It was from the old Holderness that the Shorthorn was evolved, and so the Shorthorn is naturally a milking breed. Although not now entitled to rank as a dairy breed, there are in the breed dairy families with remarkable reputations as milking animals. The same gentleman who owns the Westmoreland dairy cows, to which reference has already been made, also owns a splendid herd of pedigree Shorthorns, in which the milking powers are greatly developed. One of his cows has a record of 9500 lbs. for ten months between calving, and another has an average record of 50 lbs. per day when grass is at its best, her lowest figure being 40 lbs. and her highest 60 lbs.

If a breed of cattle which, when history opens, was not specially famed for milking powers, can be shown to have been influenced by a foreign breed, with the result that it has taken rank as, on the whole, the most successful dairy breed of the world, it is not a wild conjecture that that alien cross was one in which the qualities of a dairy breed were strongly developed; and I think the facts already advanced go far to show that the dairy properties are inherent in the old Northumbrian or Holderness breed.

The testimony of unprejudiced witnesses is that the modern Ayrshire is, taken all in all, the most profitable dairy cow of the time in which we live. Mr. Allen, already quoted, is a Shorthorn fancier, and excusably eloquent in their praise. His testimony regarding Ayrshires is therefore all the more valuable. He acknowledges that the quantity of milk produced by them in America is not equal to their Scottish records, but, fairly enough, points out that this is due to the drier climate, and the extremes of cold in winter and heat in summer to which in America they are subject. "Nevertheless," he says, "their thirty-six years' trial in America has been successful. They are hardy, healthy, well fitted to our climate and pastures, and prove good milkers, both in the imported originals and their progeny. Their flow of milk is good in quantity and fair in quality." Another American writer, Mr. Henry Stewart, the author of the Dairyman's Annual, writing in 1888, says: "The Ayrshire has been greatly improved by careful selection, and is now a model dairy cow. Without depreciating any other breed of cows, she may easily take this position. She will not displace the Jersey in the fine butter dairy, nor the Dutch cow in the milk dairy, but she will fill the place of both of these in the cheese dairy; and while she will not compare with the latter in amount of milk product, she will greatly surpass the former. She is the farmer's cow." When we turn to English testimony we find it equally complimentary. Professor Sheldon, in his handbook, "The Farm and the Dairy," says: "As milk producers Ayrshires are very superior, though their milk is not specially rich like that of the Jerseys and Guernseys. Some Ayrshire cows have yielded as much as 1000 to 1200 gallons of milk in a year, and this yield, considered in relation to the size of the animal, is quite wonderful. Their milk seems to be specially adapted for cheesemaking purposes, being rich in casein; but I once had an Ayrshire cow that yielded for a time two pounds of butter per day, besides milk and cream used in

the house." Professor Wrightson, in his handbook on "Live Stock," says: "The Ayrshire cow is the very type of a milking animal, being long and narrow in the head, angular in form, thin of flesh, and is deservedly popular;" and Professor Long asserts in his book, "The Dairy Farm," that "three Ayrshires can certainly be kept for the cost of two Shorthorns." This cumulative testimony from various sources—all of them outside Scotland—sufficiently warrants the position in which we have placed the Ayrshire, as the foremost of the distinctively dairy cattle of the British Isles. Let us now consider the history of the breed.

William Aiton's "Survey of Ayrshire," published in 1811, is the standard work of reference as to the origin of Ayrshire dairy cattle. Aiton was a native of Ayrshire, who practised as a writer in Strathaven. His work is valuable and interesting; but in dealing with live stock he has a favorite theory which he pushes to the front on all occasions. Briefly stated it is this: Outside crosses have done little or nothing to improve the breeds of live stock. At one place he strongly argues against the notion that any foreign cross had done much towards the improvement of the Ayrshire. His words are: "The dairy breed of Ayrshire is in a great measure the native breed of the country improved in size, shape, and quality, chiefly by judicious selection, crossing and coupling, feeding and treatment, principally carried on by the inhabitants of Cunningham," or the northern section of the county. The breed is known first to history as the Dunlop breed, and the oft quoted adage,

"Kyle for a man,
Carrick for a cow,
Cunningham for butter and cheese,
And Galloway for 'oo,"

plainly points to the existence of a superior dairy breed in Cunningham at a comparatively early time. A district famous for dairy products must have been favored with a superior race of dairy cattle. The cows of Carrick referred to in the rhyme were not dairy cattle, but the beef-producing Galloways. While, therefore, I am not disposed to quarrel with Aiton's main contention that the influence of improved methods of selection, mating, feeding, and treatment by the farmers of Cunningham had had a most beneficial effect in improving their cattle, I would be disposed to expand the theory, and contend that farmers and breeders who were so enlightened were the very men likely to avail themselves of the service of an imported cross when it came their way, and to secure its full advantage by the adoption of all the means of improvement specified by Aiton. In other words, I believe the correct view to be that both instrumentalities were employed to form the celebrated west country breed of dairy cattle, and that the use of stock of a superior character for crossing would have been of but transitory benefit, had it not been followed up by the means which the Cunningham farmers are said by Aiton to have adopted. It was a local proverb: "The cow gives her milk by the mou," and this is a saying which clearly points to an appreciation of the benefits accruing from generous treatment of the milking stock.

The outside influences which Aiton says were introduced were probably English or Dutch cows and bulls of a size greatly superior to the native breed in the country; and he argues that better results were secured by crossing imported cows with native bulls than by crossing native cows with imported bulls. There is no reason to believe that the native cows of North Ayrshire were in any way different from the pre-historic cattle of the West of Scotland, and it is in accordance with the analogy furnished by the history of other breeds to conclude that the Arran cow—a reduced and deteriorated example of the Kyloe, perhaps not quite extinct—gives a fairly good idea of what the native breed of Ayrshire would be like. It has been pointed out that the formation of the Ayrshire horn suggests a Kyloe affinity, and Aiton says that until about the year 1780 the prevailing color of the Cunningham cows was black, with some white on their face, belly, neck, back, or tail. This is as nearly as possible the description of an Arran cow whose portrait, taken about 1820, we remember to have seen. At the same time there is much good sense in the suggestion of Professor Wallace, of Edinburgh, that the wild white cattle whose remnants browse in the Cadzow forest may have mingled with the native cattle of North Ayrshire, and that to this influence may be referred the presence of those superabundant white colors which have cropped up in the breed and are not wholly desirable. The recurrence of such examples in atavism is not unknown in the history of breeds, and indeed it is one of the best instruments at the disposal of the breeder, as its possibility affords him a ground on which to work should he wish, by the use of suitable means, to recover a quality once possessed by a breed, but now dormant. It is at least certain that white colors predominate in Ayrshire now, because there is something in the early constituents of the breed of this character which responds to an affinity at present active in its constitution. The white cattle of Cadzow were not always confined to their present narrow limits; they once roamed at will in the Strathclyde forests, and there is no reason to doubt that there may have been intercrossing between them and the early Kyloes of North Ayrshire. This theory is strengthened by the fact that while the remains of the wild white cattle which are to be found at Cadzow, Chillingham, and Chartley are, as is the case with all wild breeds, deficient in milking pro-

erties, an intermediate breed exists at Somerford Park, in Cheshire, which bears a striking resemblance to the wild breeds, but differs from them in this—that the members of it are polled, and that they are remarkably deep milkers. The average yield of milk for each cow in the herd is three gallons per day, but individual cows appear now and then which give when in bloom as much as fourteen quarts at a milking, or three and a-half gallons in the day. There are also remains of a somewhat similar breed possessing the same characteristics in Norfolk, and the conclusion to which the possession of these qualities point is, as Professor Wallace remarks, that there existed a superior power of milk-production in the aboriginal races of our islands. To what this may be attributed we do not at present stay to inquire. The facts adduced, I think, warrant the conclusion that the breeds specified may have had something to do with the creation of the Dunlop breed, whose products were proverbial, and whose modern development into the Ayrshire breed it is now our purpose to trace.

In 1750, or thereabout, the Earl of Marchmont, who held estates in Berwickshire and in Ayrshire, purchased and imported several cows and a bull from Durham or Yorkshire, which were of the Teeswater, or, in other words, the Holderness breed. These were brown and white in color, and their superiority was such that to them Aiton traces the popularity of these colors amongst the improved Dunlop cows. Bruce Campbell, who was factor on the Marchmont estates, in Ayrshire, brought some of the Durham cows to Sornbeg, in Ayrshire. They there proved themselves to be superior to the native breed, and a bull of the stock, after crossing with many cows about Cessnock, was bought by Mr. Hamilton, of Sundrum, and left a numerous progeny in that part of Ayrshire. This piece of history, therefore, clearly points to an improvement having been effected by means of cattle of the same breed as that which formed the foundation of the improved Shorthorn. In Ayrshire their properties were developed in the line of milk production, whereas in the Teeswater district they were developed with a view to the production of beef.

SCOTLAND YET.

Chatty Letter from the States.

The dearth of really prime beef cattle at market these days is a subject of general comment. Farmers and feeders have been so many times disappointed that they are doing less feeding than usual, and so if there is an increase in prices it will, as usual, redound to the benefit of the few.

Distillery cattle feeders are of the opinion that they will find money where they lost it last year, and a good deal more than they lost, too.

Native "beef cattle" were extremely low a year ago, the bulk of the 1050@1250-lb. steers selling at \$3.35@3.75, and most of the 1300@1500-lb. steers at \$4.10@4.50. Considering quality, present prices are about \$1 per 100 lbs. higher than a year ago, when plenty of 1450@1530-lb. steers sold at \$4.10@4.40, good 1256-lb. Kansas steers at \$3.75, and 1195-lb. beef cattle as low as \$3.00.

The London and Liverpool cattle markets do not act to please the cattle shippers. The recent advance was all too quickly lost.

Hogs are the highest they have been since 1883. Ten years is a long time, but it has been that length of time since hogs sold above \$8, and \$8.10 was the top notch then. The cause of the high prices for hogs is not far to seek. The supplies are running far short of the previous years, and, above all, the quality is way below the usual run. That is illustrated by the records of one firm:—Squire & Co. bought about 13,000 hogs here one week that averaged 230 lbs. and cost \$7.59 per 100 lbs. During the month of January, 1892, their hogs averaged 290 lbs., and the average cost price that month was \$4.24. February, 1892, their hogs averaged 278 lbs., and cost \$4.75. Farmers who have nerve enough to feed hogs now are paying far more for store pigs than they would realize at market, but there are thousands of farmers who believe it will pay them better to take the current fancy prices for pigs than to feed them and take chances on letting the market go back on them. However, as a stockman said recently:—"Prime hogs ought to sell for \$8.50, the way this trash is selling. Farmers are getting \$1.25 per bushel for their corn at the prices for fat hogs, and there is plenty of corn in the country."

The sheep feeders are doing a fairly satisfactory business. There is quite an impression about that the sheep feeding business is being overdone, but it remains to be seen. Odbert & Winnett, sheep feeders at Lincoln, Neb., marketed a consignment of sheep which averaged 108 lbs. and sold at \$5.40. It is their first shipment this season. Last year they marketed the first on Feb. 26, and sold them at \$5.60. About the first of April they sold sheep at \$6.30. Mr. Odbert says sheep in Nebraska are looking splendidly, but he thinks that hardly as many are being fed as last year. He feeds largely on wheat which is worth about 25@30c. now in Nebraska. Screenings are also fed quite freely, but not a great deal of corn.

How I Feed Dairy Cows.

BY C. P. GOODRICH.

INTELLIGENT FEEDING.

I believe that the true way to feed dairy cows for profit—and profit is what we are all after—is to feed the proper food for the production of milk to the full capacity of the animal's power to digest, assimilate and manufacture these foods into milk. This way of feeding or "forcing," as some term it, is objected to by some on the ground that this cow machine will sooner be worn out. Suppose for a moment that position is correct. Is there a sensible man who would think of running any other machine that takes a certain number of hands to attend, and a certain amount of power to get up speed enough to do any work at all, who would run his machine at one-fourth or one-half its capacity, for the sake of making his machine last a little longer?

PROFITABLE FEEDING.

Then suppose you had a steam thresher that could do first-class work up to 1,500 bushels a day as its limit. Is there any man who would think it economy to run such a machine with only steam enough to thresh 500 bushels a day for the sake of prolonging its life a year or two? It would take nearly as much fuel to get up steam, the same engineer, the same feeder and other attendants, but his machine might last 11 years instead of 10. Such a man you would unhesitatingly pronounce foolish; but in my opinion he would be wise indeed compared with the man who would run his cow machine at anything less than its full capacity. The cow, unlike the thresher, improves by use, for animal nature has the faculty to adapt itself to the uses to which it is put up to a certain limit. In other words, the more and better milk you manage to make a cow give, the more and better milk she can give until that limit is reached, as you develop her capacity to do so, and this improvement will be, in a measure, transmitted to her progeny, so that the heifer calves of a cow will be better than those produced before such development has taken place. In that way each generation will be better than the preceding one. These facts I have demonstrated to my satisfaction in my own experience. Others have done the same thing, and I cite you as very high authority on this subject Prof. E. W. Stewart. You will find this subject quite fully treated of in his work on "Feeding Animals." But it is not true that high feeding of cows if judiciously done, so as not to impair their digestive organs, will tend to "wear out the machine." More cows are "worn out" by under feeding than by high feeding. I have had them last with high feeding, with scarcely any diminution of their powers, till they were 15 years old.

MILK PRODUCING FOOD.

To make the greatest profit in dairying the cow should be fed and managed in such a way as to make her consume as much as possible of good milk-producing foods. To do this she should have the greatest possible variety of foods. Her appetite—her like and dislikes—should be catered to as much as can be consistently. In summer her pasture should contain a great variety of grasses. And when my cows are put in the stable to milk twice a day they have some good clover hay, and they never fail to eat some, no matter how good the grass in the pasture is. They also are fed in summer, except some of them that are dry a short time at that season, all the grain—corn and oat meal or bran—they will eat, which, of course, is not nearly as much as they eat in winter. In winter they have as great a variety of fodder as possible each day—clover and meadow hay, corn fodder and straw, with a grain ration, in two feeds, of from 12 to 15 pounds. I observe the greatest regularity possible in feeding, having the same kind of food given at exactly the same time each day, so that they are never worried or disappointed by having one kind of food thrust before them when they are expecting another kind.

ECONOMY.

To produce milk as economically as possible, I try to provide the necessary elements in that food which will cost the least, having due regard all the while for the likes and dislikes of the cow herself, for I believe her pleasure should be consulted as much as the housewife consults the pleasure of her family when providing food for them. If oats are cheaper than corn meal and bran, I feed oats mainly for a grain ration; but if two tons of oats will buy three tons of bran, then I make the exchange. Chemical analysis seems to indicate that good clean wheat bran is fully as good as oats for milk production, but my observation seems to prove that oats are, at least, a little better. Corn is usually a very cheap grain food, but it is too carbonaceous and should not be used for more than about one-third of the grain ration. Corn ensilage made from well eared corn is the cheapest food I can provide for my cows; but it is not of itself a perfect ration, and needs to be balanced up with bran or oats and clover hay.

