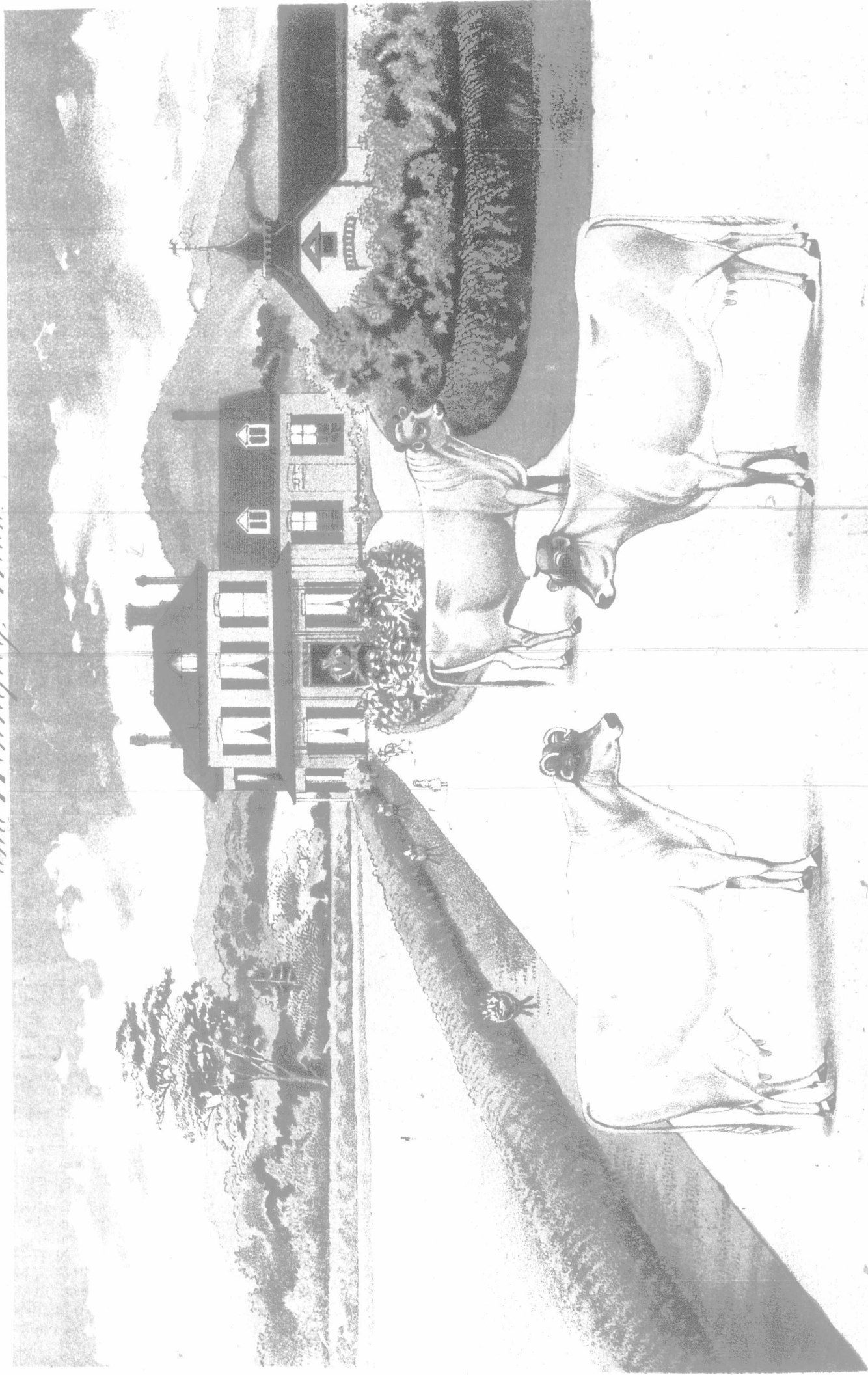


*Supplement to the Farmers Advocate London, Ont.
and Winnipeg, Man.*



J. P. HUNT.

RUFALETTA 42181 A. J. C. C.

COUNT HUGO OF ST. ANNES 28613 A. J. C. C.

THALEY 14299 A. J. C. C.

Residence and Group of Jerseys. The property of WM. JOHNSON, Belmonte, Sweetsburg, P.Q.

THE LONDON PTG & LITHO CO.

MANITOBA AND WESTERN
EDITION

OF THE
FARMER'S ADVOCATE
AND HOME
MAGAZINE

FOUNDED AD. 1866. REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

VOL. I.

LONDON, ONT., and WINNIPEG, MAN., SEPTEMBER, 1890.

No. 9.

THE FARMER'S ADVOCATE & HOME MAGAZINE

WM. WELD, PROPRIETOR.

THE LEADING AGRICULTURAL JOURNAL PUBLISHED
IN THE DOMINION.

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

Terms of Subscription—\$1.00 per year in advance; \$1.35 if in arrears; single copies, 10c. each. New subscriptions can commence with any month.

The Advocate is sent to subscribers until an explicit order is received for its discontinuance, and all payments of arrears are made as required by law.

Remittances should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

The Date on your Label shows to what time your subscription is paid.

The Law is, that all subscribers to newspapers are held responsible until all arrears are paid, and their paper ordered to be discontinued.

Always give the Name of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.

Discontinuances—Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped. All arrears must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given.

Advertising Rates—Single insertion, 15 cents per line. Contract rates furnished on application.

Address—
THOMAS WELD,
Manager Manitoba and Western Edition,
Box 214, WINNIPEG, MAN., CANADA

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, our object being to encourage farmers who have enjoyed few educational advantages.

3.—Should one or more essays, in addition to the one receiving the first prize, present a different view of the question, a second prize will be awarded, but the payment will be in agricultural books. First prize essayists may choose books or money, or part of both. Selections of books from our advertised list must be sent in not later than the 15th of the month in which the essays appear. Second prize essayists may order books for any amount not exceeding \$3.00, but no balance will be remitted in cash. When first prize essayists mention nothing about books, we will remit the money.

A prize of \$5 will be given for the best essay on *The Treatment and Care of Manure During the Feeding Season to Render it Available for Use the Coming Spring or Summer.* Essay to be in this office not later than the 15th day of October.

A prize of \$5.00 will be given for the best essay on *Whether is July or October the better month for holding Agricultural Exhibitions in Manitoba and the Western Territories.* Essay to be in this office not later than the 15th of November.

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

Editorial Notes.

During this month a great many farmers will buy stock rams. Where only a few ewes are kept a large strong lamb will answer their purpose very well, but where the flock numbers twenty-five or upwards, a yearling or two-year-old sheep is to be preferred. Before selecting breeding rams carefully read the article on page 279 entitled *Errors in Sheep Husbandry*, by Mr. John Campbell.

It is our desire that every valuable breed of live stock shall have a fair proportion of space in our columns. It is very desirable that practical breeders honestly set forth the merits of their favorites, frankly giving their experience in a concise way. During the past year we have collected much valuable information concerning various breeds, much of which we have given to our readers, and much yet remains to be printed. In this issue will be found several practical letters written by pony breeders, also a number written by Ayrshire breeders; similar letters will be published in the immediate future. Those on Ayrshires should have appeared some months ago, but were laid by in order to make room for Mr. Rodden's article, which the Ayrshire breeders of Eastern Canada were very anxious should appear, as it gave many important facts concerning Ayrshire cattle.

Cleaning Grain.

Cleaning grain is a simple process but it is a very important one. Not more than one farmer in one hundred does it properly. The majority of the grain sold on the market contains the greater part of the small grains or tailings and more or less dross of all sorts. This mode of selling grain is not profitable to the farmer; it must be bought for a less price when not clean, and is also docked in weight either with or without the knowledge of the seller. Small grain, if ground, makes good stock food and possesses some value when fed at home; in fact, it is much more valuable to the farmer than to the grain buyer. When sold, mixed with good grain, it is generally entirely lost to the grower or miller. A farmer who has the reputation of putting only clean, good grain on the market, can always sell more readily and obtain from two to five cents per bushel more than the man who sells his grain in a poorly cleaned condition, though the general quality may be equal under similar conditions.

Last year a case came under my notice. Two farmers had for sale 1,000 bushels of barley each; one cleaned his grain well and sold by sample, the other used a poor fanning mill and cleaned poorly. Each sold to the same man. Each lot was the same weight per bushel, and the color was also equal when cleaned alike, yet the first man sold more readily and received five cents per

bushel more for his entire crop than the second. Each fanned their grain, but one used a good fanning mill the other a very poor one. Such cases as these are repeated over and over every day, and our farmers lose thousands every year thereby. Seed grain especially should be carefully selected and well cleaned. Crops of all sorts can be increased by so doing.

We have just received a private letter from Mr. Manson Campbell, of Chatham, Ont., who is manufacturing a capital mill, one of which we are using. In his letter he says he is making and selling twenty mills per day, and that his output this season will exceed 4,000 mills and 2,000 baggers. These facts speak volumes concerning the value of Mr. Campbell's mills. The bagger which is attached to each mill, when so ordered, is a splendid device and should be used by every farmer who grows grain for market.

About Our Advertisers.

While no journal can undertake to positively guarantee all its advertising patrons as absolutely without a flaw, we can say that our advertisers are of the very best class, and very many, probably nine-tenths of them, are personally known to us as thoroughly reliable business men. We refuse many hundreds of dollars worth of advertisements every year, simply because we believe their insertion would be detrimental to the best interests of our readers. We request our readers, as a matter of justice to us, to state, when writing our advertisers, that they saw their advertisement in the FARMER'S ADVOCATE. We would also request our readers to report to us any shortcomings of any advertiser with whom they may have had dealings, and if, upon investigation, "crookedness" is found to exist, the advertisement will be discontinued at once. We are determined that no advertisement appearing in our columns shall, so far as it is in our power to prevent it, mislead our readers. On the other hand, we desire to make all the advertisements a guarantee of the reliability of the advertiser.

If any of our readers desire to buy breeding stock or implements of any kind our advice is, look carefully over our advertising columns. In every case purchasers will find it wisest and most satisfactory to buy from enterprising and pushing business men. All such advertise. In this day and generation the man who does not advertise is usually the owner of stock or goods which is far behind the times.

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

Our Jersey Illustration.

During the last few months our readers have read, no doubt, the discussion that has been going on between breeders championing the merits of different breeds of dairy cattle.

In this number our readers will see the beautiful chromo, which we think is a credit to our artist, Mr. J. P. Hunt, and our branch business, the London Printing & Lithographing Co. We feel sure, could our readers see the animals that are the originals of this group, they would fully understand and appreciate the pride which their owner justly feels. Considering the skilful way in which he has selected his animals from the best bred herds the most satisfactory results can confidently be looked forward to.

The bull Count Hugo of St. Anne's 23613, A. J. C. C., is a particularly richly bred one, sired by Romeo of St. Lamberts 2nd, 1st prize yearling at Quebec in 1887, when \$1,000 was refused for him; he is strongly inbred in the blood of Stoke Pogis 3rd, which is said to have been the best Jersey bull living or dead. The dam of Count Hugo, Queen Bess of St. Anne's, is also full of the blood of Victor Hugo and Stoke Pogis 3rd, or over 90 per cent. of the blood of the far famed Mary Anne of St. Lamberts.

Thaley 14299, A. J. C. C., one of the group is a cow of rare breeding, and is of an entirely different strain, inheriting the blood of the justly celebrated Coomassie as well as Capt. Philip Le Broquets Welcomes, through her dam Fauvette.

Rufaletta 42131, A. J. C. C., the other and younger cow has in her veins the blood of St. Helen and Signal. Thus they are a most happy combination of the most richly bred families. As they are distinctly apart in their lines of breeding, the owner has an opportunity of uniting some of the most valuable qualities, which are invaluable to those who prize this, the butter cow, which has become popular alike by her wonderful productiveness in the hands of the professional dairyman, and the pet of gentlemen who prize her for her deer-like appearance in their pasture grounds, as well as for her supply of cream and butter. Their proprietor informs us that those two cows are producing 20 lbs. of butter per week on ordinary keep without any effort to force them. They have at Belmonte a lot of young things which bid fair to be quite equal to any of their ancestors.

Throughout the length and breadth of America Jersey cows have taken a firm hold on the confidence of butter-makers. The fine quality of the product from the Jersey is not approached by any other cow. The cream separates readily from the milk and the butter is firm and of good texture in the warmest weather. This breed was brought to its present state of perfection after many years of skilful breeding. It is over 100 years since it became a penal offence to import anything of the cattle kind into their original home, the Island of Jersey, and the strictest attention has been paid ever since that time for the especial purpose of producing a butter cow.

Our Artist has been very successful in bringing out in the picture both animals and grounds true to the original. To us it is difficult to decide whether the owner, Mr. Wm. Johnson, Belmonte, Sweetsburgh, P. Q., should feel proudest of his cattle, buildings, or grounds. The cattle our readers can judge from the picture. The grounds are tastefully laid out and handsomely kept, and the buildings are in the best of good order, neat and trim.

The fine appearance of the buildings is in no small measure due to the free use of Johnson's well-known paints.

Johnson's Pure Paints.

The question of paints and painting is of great importance to the farmer and deserves a greater consideration than has hitherto been accorded to it by our farming population.

Farm buildings last very much longer when protected by good paints, and when taking into consideration the great cost of buildings it seems to us false economy to grudge them a few coats of good paint, to say nothing of the immense difference in appearance.

Farm implements should also receive far more attention in this respect; wagons, sleighs, horse-rakes, binders, all farm implements in fact, will last twice as long if they are kept well painted. When we say they would last twice as long we are not using a figure of speech, but simply state a well proven fact. The annual loss to the farmers of the Dominion from neglect in this respect is very great indeed.

There are several causes for this neglect, such as lack of knowledge how to mix paints and the consequent necessity of going to the expense of hiring a painter, and also the miserable quality of a great many paints. Everywhere throughout the country, villages, towns and cities these facts are made manifest; in fact it is an exception to see a well-painted house on which the paints are standing well. This confirms us in the opinion already expressed that the majority of paints sold are of a very poor quality, and the question now arises, how are the Canadian people to remedy these evils?

They must first make up their minds to consider quality before cheapness, and when they have overcome the tendency of sacrificing the former to the latter they must buy only goods having a well established reputation. Our advice is therefore buy only from firms who invariably send out well tried paints and who have a reputation at stake. Paints bought from such firms are sure to give satisfaction, being both durable and handsome.

Our illustration will give our readers a slight idea of the quality of the paints manufactured by the William Johnson Co., of Montreal. The house is painted with Johnson's Pure Green Stone, the trimmings and cover of the verandah with Johnson's Pure Pompeian Red, and the roof with Johnson's Magnetic Paint. The colors, you will observe, stand out beautifully. The editor of our Eastern Edition has been using paints to a greater or less extent for the last forty years and has never used anything equal to Johnson's paints. No red paint is standing the test of time in London as that which procured from this company. Many other houses have been painted red in imitation of his, even that of the City Engineer and others, but none appear to be so fast in color or equal in substance. Although these houses were painted four or five years later, his is as fresh as when first painted, while the others are more or less streaked and faded. This firm make a great variety of paint for all sorts of purposes, several of which we have used and found them all superior in color, gloss and durability.

We wish our readers to bear in mind that these paints are all mixed ready for use, needing no other manipulation than simply stirring and applying. As all our readers know the main expense of painting is not in the cost of the paint but in the cost of labor. It requires more labor to apply inferior paints than the best. Even if you are lucky enough to buy the best material in an unmixed state you have then to employ a painter to mix and apply them at high wages, while Johnson's paints can be applied satisfactorily by any intelligent farm hand at one-half the cost charged by a regular painter, who would do the work no better.

We will briefly mention some of the paints put up by this firm. Johnson's Floor Paints

are prepared in six shades, from which a suitable selection can be made. These paints have good body and dry in 24 hours. They contain no benzine alkalies or other deleterious compounds, but are good, old-fashioned paints, brought to perfection after years of experience. Their regular line of paints for outdoor use comprise 30 different colors and shades. Added to those they have just brought out 24 of the newest shades, which are beautiful and most artistic.

This firm makes a specialty of Johnson's Magnetic Iron Paints, owning and controlling the only mines in Canada for the manufacture of this article. Base imitations are being put upon the market and sold as Magnetic Iron Paint. We advise those intending to use it to see that the well known trade mark of the William Johnson Company appears on each package.

It is declared to be positively the finest Iron Paint ever offered to consumers, suitable for any kind of work, especially adapted for roofs and out-buildings.

Speaking of the value of Iron Oxide as a substitute for lead, or other bases in paints, the highest French authorities say:—"This product possesses all the good qualities of lead without any of its inconveniences. It is of a rich brown color, and mixes perfectly with linseed oil. Under equal circumstances it covers 150 per cent. more than lead, and is a better protection against oxidation. It contains no acids, sulphur phosphorus, or other element hurtful to the painter or articles painted. Everything that could be injured by wind, rain or shine has been driven out in the process of roasting, hence it cannot be altered by such influences as act injuriously on all other paints."

We are told by the Chemist Berzelius, "that owing to the protective properties of iron in paint buildings have withstood the ravages of time and the destructive elements of heat, rain and frost for over three hundred years."

The ore from which this paint is made is thoroughly roasted in furnaces built for the purpose. It can resist strong heat, and may be advantageously employed for painting the interior of boilers and preserving them from incrustation.

As its tinting powers are more than double that of other oxides, it is economical to use in coloring mortar, &c. It can be used for any purpose, for either inside or outside work.

It makes a beautiful contrast with stone, brick or any of the artistic shades of paint now in vogue, and is especially valuable for painting farm buildings, iron and agricultural implements, as it is fireproof, almost indestructible, economical, unfading and waterproof.

The manufacturers have sent us a long list of testimonials given by such companies as the Cobourg Car Works, Ontario Car Co., The Rathbun Co., Metallic Roofing Co., Chicago; Rock Island & Pacific Railroad Co., Canadian Pacific Railroad Co., and a number of other reliable Canadian and American firms, all of whom speak very highly of this paint. All goods put up by this firm are warranted to be Pure Linseed Oil Paints, containing no cheap mixtures, and are put up in packages varying in size from 45-gallon barrels to one lb. tins. The majority of hardware dealers and painters will advise you to buy their own wares, declaring them to be better than any other ready mixed paints. This they do from personal interests and prejudices. We would advise all who have anything to paint to send to Wm. Johnson & Co., Montreal, P. Q., for a sample sheet of their colors and price list, or else insist upon their local purveyor supplying them with Johnson's Pure Paints.

A beautiful assortment of cards will be sent on application and full information as to their use.

Sheep could be reared on a great majority of farms to advantage. The range of products—wool, mutton, lambs—gives such a leverage in market that some one of the three can nearly always be handled to advantage in any particular locality, to say nothing of the advantage which sheep are to the farm. The great variety of breeds gives a wide latitude in choice, and a selection can be made which will cover the wants of the specialist, whatever he may desire. Many people need sheep who do not realize that need.

Moving the Crop.

Great anxiety has been experienced during the past few months as to the weather, rainfall, &c., &c., and now that all danger of drought and frost are past the capacity of our railways for transporting the surplus is being discussed. The prevailing opinion is that the surplus will be greatly in excess of even the great crop of 1887, which means a vast amount of handling. We are pleased to be assured by Mr. Whyte, General Superintendent of the Western Division of the C. P. R., that his road is in a position to handle all grain that may offer. This will prove a great advantage to the Province and Territories, as this road must be regarded as the main outlet at least for some time to come.

The Manitoba Poultry Association.

Owing to the busy season and hot weather it was decided to hold no meeting of this Association until September, when it is the intention to hold regular meetings monthly or oftener. These meetings will doubtless prove of great interest, as it is the intention of the Executive Committee to make them exhaustively instructive on various subjects connected with breeding, caring for, exhibiting and judging poultry. Some of the members have promised to give prizes for the best specimens shown as object lessons. It is the intention to take up one breed at each meeting and discuss the points as per the American Standard of Excellence and the score card. Although there have been no meetings recently the membership has increased considerably.

Professor Robertson's Meetings.

As announced in our August issue, Professor Robertson, Dominion Dairy Commissioner, has been holding a series of meetings in Manitoba and the Territories. The Professor has lost none of his old-time earnestness, and is keeping himself fully abreast of the times in dairy lore. The meetings have not been so well attended as they should have been, but a large attendance could not have been expected at this season, when the farmers are engaged in harvesting operations, and in fact, was not expected, Professor Robertson plainly stating that the object of his visit was not so much to impart information as to ascertain the requirements of the country that he might be in a position to aid the dairy interests in the future. Professor Saunders accompanied the Dairy Commissioner to Manitoba and Glenboro, then went west to Indian Head, and will go to the west before returning.

The Veterinary Association of Manitoba.

This Association, although young, having scarcely completed organization, is displaying great vigor and should aid materially in elevating the profession and urging them on to the heights to which it is possible to attain. Dr. Rutherford, of Portage la Prairie, was, we understand, the promoter of the Association, and his untiring efforts have been largely instrumental in making it the success it is. The President, Mr. W. A. Dunbar, is a man of extended experience and great natural ability, and is well qualified to occupy the position to which his fellow veterinarians have been pleased to elevate him. The last meeting of the Association was held at Brandon on the evening of July 23rd, the first day of the Brandon Fair. The attendance was good, considering the great distance it was necessary for many of the members to travel to reach that point. Excellent and interesting papers were read on subjects of interest to the profession, by

the President and Secretary. Too much cannot be said in favor of associations of this kind, as nothing quickens a man's ideas on any subject like discussions on that subject, as it enables him to learn much, and sometimes what is of equal importance, if not greater, to unlearn something.

Show Condition.

At the meeting of the Pure-Bred Cattle Breeders' Association, on the evening of July 24th, Mr. D. F. Boissivain, of Cannington Manor, asked if "a standard of condition for showing" could not be established. This is a question that has been discussed for many years and as yet no practical solution has been offered. Much has been said about showing cattle laden with fat and the danger of rendering them unfit for breeding purposes. On the other hand, who ever saw a herd of cattle of the beef breeds kept constantly poor, whose progeny did not lose to a great extent the ability to lay on flesh readily and which would not produce decidedly inferior animals as beef producers. And who ever saw a dairy herd kept fat from calfood up, whose offspring would not deteriorate in dairy qualities, converting the food into flesh to a certain extent at least, instead of putting it into the pail. It therefore follows that dairy cattle and beefing cattle require, for the best results with each, decidedly different treatment. It is quite possible that in this western country at least, a general purpose cow may be most profitable, and while not admitting that it is or asserting that it is not, this must be admitted on all hands, that the best milking strains are not the best beef strains. It is therefore advisable for the breeder to "take stock" of himself and his surroundings and see which is the more profitable for him, beef or milk and butter. This done, it is certainly wisdom to select the breed or animal that will yield the best returns along that line and both breed and feed for the very best results and that only, accepting returns from other sources as by products only. To make it plainer if under existing conditions beef is considered more profitable than milk, strain every nerve for the greatest yield of beef and accept the milk as a secondary consideration. If, on the other hand, dairying is more profitable, breed and feed for a dairy animal alone, and if the steer from the herd will make a few hundred pounds of beef, well and good, consider it a big product. If, then, a breed is for beef, it should certainly be shown in a condition to prove to spectators that it has extraordinary beef-making powers, and if for milk, in shape to show that they excel as milkers. In the latter instance, a lean, thin neck of at least medium length, fine head, free from any inclination to "meatiness," shoulders thin at the top with good depth and thick through the heart, not too closely "ribbed up," ribs wide apart and not too much sprung, hips wide, twist open and sufficiently wide to show plenty of room for the udder, are all points indicative of a good milker. To show that a cow excels in this respect it is advisable to have her in condition to show these points, and, indeed, if she is a good milker and has been giving milk for any considerable time, they will be prominent in spite of feed, as the feed will have gone into the milk pail. An animal shown in this form, however, would be a poor representative of a beef breed. On the other hand, the best beefers have a comparatively short neck, with shoulders thick and massive, closely ribbed up and ribs well sprung, carrying

a wealth of flesh on the quarter, showing a thick close twist and beef well down to the hock. Now, this animal to be shown at its best and sustain its reputation as a beeper must be in fair condition, or as some people would say, fat. It therefore follows that the animal that shows the greatest ability to produce flesh and carry it on the parts where it is most valuable to the butcher, is the one to which first place should be given. The difficulty to be overcome would seem to be to get the animals properly classified, not for condition, but their respective purposes. The difficulty is not encountered in exhibiting dairy breeds, such as Holsteins, Jerseys or Ayrshires, nor in those breeds whose chief merit is beef production, such as the Aberdeen-Angus or Herefords, but in the Shorthorns, whose owners are not, as a rule, satisfied to admit that they are either the best beef breed, or yet the best dairy breed, but insist on claiming they are both the best beef and best dairy breed. When the Shorthorn men can fully decide and agree among themselves as to this matter the difficulty will have been to a great extent overcome.

While there are many excellent milkers among the Shorthorns, no doubt enough to be moulded into as good a dairy breed as many of the exclusively dairy breeds of the day, yet their owners and exhibitors invariably dilate on their beef-producing capacity at much greater length, possibly not directly in so many words, but by calling attention to their level tops, straight bottoms, well covered crops, excellent neck veins, &c., &c. In view of all these facts, the Shorthorn should be considered a beef breed and judged accordingly, which would necessitate, as Mr. Leslie Smith stated at the time, the carrying of at least a fair amount of flesh, and if it is evenly put on there is seldom reason to object to the amount carried, and if it is uneven and lumpy it will not count for very much in the eyes of a competent judge. The fear of getting the stock in too high a condition for breeding purposes is much greater than is necessary or requisite. There is no greater safeguard in parturition than robust, vigorous health and good condition, and where one animal is lost from being too fat at that time, five hundred are lost from being too poor; in fact the writer, with thirty years experience with cattle, has never known one to be lost from being too fat if carefully fed during the last three weeks of pregnancy. It must not be understood from this that animals cannot be made too fat, as such is quite within the range of possibilities, but there is not a herd of pure-bred cattle to-day in Manitoba that is even approaching that condition. In closing, let me give a few examples. Britisher, the champion Shorthorn yearling, in fact the champion yearling of all breeds at the Chicago Fat Stock Show of 1889, was got by a bull in good flesh, or what would be ordinarily called fat, and a cow in equally good condition. Brant Chief, the champion of the Shorthorns, and which tried for the championship of the same show in the previous year, was got by a bull never known to be poor, Sir Christopher = 3877 =. Clarence Kirklevington, which was the most successful Shorthorn steer ever placed on exhibition, won all the honours for which he competed in the same show in 1884, and was bred and fed at Bow Park where nothing is allowed to be in what we in the west call breeding condition. The animals in good condition will invariably beget healthy, thrifty calves, and not be troubled with retention of the placenta or other parturition difficulties, nearly as often as those kept thin for health sake and hardened by exposure.

A New Implement.

On the 18th August the editor of the eastern edition was invited to the Asylum grounds, near London, to see the new Draper Spade Harrow work. Several implement manufacturers, dealers, and a number of prominent farmers were also present.

The machine was first tried on sown corn stubble, and although in some parts of the field the grass and weeds had grown up and the ground was hard and tough, the machine did good work. It was next put on a heavy clay field in which were a great number of very large hard lumps. Here the machine was weighted with about 300 pounds, besides the driver. Those present fully expected to see it go to pieces, but no, on it went crushing and cutting the lumps in a very satisfactory manner.

They then went to the farm of Mr. Anderson where the harrow was worked on newly ploughed sod; this it left perfectly pulverized and in splendid condition for the reception of seed. From the appearance of this ground, after it had been cultivated, no one could have told that it had recently been sod, as it was thoroughly cut up, and that without tearing up the sod or bringing the grass to the surface.

This implement is an entirely new device, although it resembles the Disk Harrow, but is claimed by its introducers to be much more effective. While the disk has only twelve round disks placed about six inches apart, this machine has fifty-six spades with 156 sharp cutting edges, as will be seen by the cut in the advertising columns. The machine is made up of two revolving cylinders with curved blades six inches wide and sixteen inches long which, when required to dig or work up the ground, are shifted at angle with each other. The more the ground is required to be pulverized the more the cylinders are angled. There is an adjustable spring tooth in the centre of the machine; this feature is of great value to the harrow, for although the spades cut and turn the ground every two inches, the cylinders are not allowed to come quite together in the centre, therefore it leaves a ridge of about four inches uncut. The spring tooth is made to split this ridge leaving the surface level and making a complete job.

Another new and very valuable feature in this machine is the electric evener spring by which the driver can throw his weight on any part of the harrow.

About fifteen years ago the editor had a disk harrow on his own farm and found it a very useful implement, but as the disks were made of cast metal they broke. Steel disks were next used, which were a great improvement. The chief objection then raised to the use of the disk harrow was that it threw the ground in ridges. Later still the disk was made with notches cut out, which was claimed by the inventors to be an improvement over the solid disk. Now we have the spading harrow which the manufacturers claim an improvement over all the others. It is claimed that this implement will not clog, which was a great objection to the old sorts.

In the interests of our patrons we call attention to this machine, and as we learn the makers will exhibit at Toronto, Ottawa and London shows this fall, we would advise all concerned to see it. We believe it is worth a careful examination.

Brandon Summer Fair.

The Fair was held on the Fair Grounds, about a mile south of the city, and must be considered a success, notwithstanding the limited display in the main building. The attendance was good, prominent farmers from all parts of the Province being present. The railways granted liberal rates, the Experimental Farm was at its best, and the meeting of the stockmen for the formation of a Cattle-breeders' Association, were all factors in inducing a good attendance. The sales of the Penketh and Sharman herds were the means of widening the circle of Shorthorn breeders, and the prices realized were fairly satisfactory to those selling. Some very good Shorthorns were shown, Mr. Lister, of Middlechurch, being the largest winner, with Mr. Helliwell, of Ralphon, following closely upon him. Mr. S. Simpson, of Brandon, won a first prize with a fine yearling bull, bred by Jno. E. Smith of the same place. Mr. R. L. Laing, of Sprucebank Farm, won in the class, heifer of 1889, with a magnificent seven months heifer, for which he was offered a long price while on exhibition. This heifer was got by Buchan Laird and out of a cow from the Breeze Lawn Herd. The Shorthorn herd of J. E. Smith was unavoidably absent, much to the regret of all concerned. A few Polled-Angus of fair quality were shown, and some half dozen very good Holsteins. Horses were out in goodly numbers and were perhaps the great feature of the show. In Clydesdale stallions, Charming Charlie, the property of Colquhoun & Dow, of Douglas, took first place, and Bounding Willow, owned by Mr. Everest, of Reaburn, second. In the Shire stallions the contest was keen indeed, the judge hesitating for a long time before making the award. Mr. Barr's Errand Boy was finally given first place and D. McCaig's Sir James Second, leaving Wilson's Spraboro Gobang, who won first last year in the same exhibit, in the cold entirely. Errand Boy, however, is now in the pink of condition and has a little more style and action, but in draught horse points Spraboro Gobang is certainly superior to any with whom he competed. In light horses Mr. Alexander's Cleveland Bay, Grosmont Wonder, was the choice of all, but under the rules could not compete for the sweepstakes, which were awarded to P. D. Rowe, McGregor & Co.'s Comrade, who won first in his class, being also by the same rules excluded. The exhibit of sheep was light, as was that of pigs, while the poultry was almost no exhibit at all. A very interesting exhibit was made by the Experimental Farm, and was an object of great enquiry as to the success of the different varieties and the various methods of treatment.

PRIZE LIST.

BLOOD HORSES—Stallion, any age—1, J. D. McGregor & Co.; 2, P. D. Rowe. Brood mare and foal—1, P. D. Rowe. Foal of 1890—1, P. D. Rowe.

TROTTER HORSES—Stallion, any age—1 and 2, T. F. Kelly. Mare or gelding in harness—1, J. Hume.

ROADSTERS—Brood mare with foal—1, H. Nichol; 2, A. Nichol; 3, Wm. Johnston. Filly or gelding, 1887—1, C. T. Card. Filly or gelding, 1888—1, Wm. Foxhall. Filly, gelding or entire, 1889—1, C. T. Card; 2, Geo. Munroe; 3, Ace Edmunds. Foal of 1890—1, T. F. Kelly; 2, Duncan Shaw; 3, T. Beaubier. Pair roadsters in harness—1, Leeson Bros. Single roadster in harness—1, J. A. Mullen; 2, James Kidd. Saddle mare or gelding—1, E. H. E. Webb-Bowen; 2, J. F. Barrows; 3, D. W. Shaw.

CARRIAGE HORSES—Stallion, any age—1, G. C. Alexander; 2, S. S. Simpson. Single driver—1, Ace Edmunds.

GENERAL PURPOSE HORSES—Team in harness—1, E. Chapman. Brood mare and foal—1, H. Nichol; 2, Jno. Empey. Filly or gelding, 1887—1, A. McGregor. Filly or gelding, 1888—1, C. Shields; 2, J. C. Cousins. Filly, gelding or entire, 1889—1, S. Upper & Son. Foal, 1890—1, J. Hughes; 2, P. D. Rowe.

SWEEPSTAKES, Diploma—Light Stallion—P. D. Rowe.

AGRICULTURAL HORSES—Stallion, any age—1, S. Upper. Team in harness—1, R. Hope; 2, E. F. Darroch; 3, E. F. Haddow. Brood mare and foal—1, D. Cuffery; 2, A. Nichol. Filly or gelding, 1887—1, J. Kidd. Filly or gelding, 1888—1, R. McKean; 2, A. Nichol. Filly, gelding or entire, 1889—1, S. C. Doran; 2, J. F. Barrows. Foal, 1890—1, A. Nichol; 2, W. Foxhall.

HEAVY DRAUGHT HORSES—Brood mare and foal—1, J. M. Blissard; 2, Alex. McGregor. Team in harness—1, A. H. Prowse. Filly or gelding, 1887—1, C. Shields. Filly or gelding, 1888—1, A. McGregor; 2, Thos. Fenwick. Foal, 1890—1, A. McGregor; 2, J. M. Blissard.

CLYDESDALE HORSES—Stallion, 3 years or over—1, A. Colquhoun; 2, A. W. Everest. Stallion, under 3 years—1, Porter & Rogers.

SHIRE HORSES—Stallion, over 3 years—1, J. Barr; 2, D. McCaig.

CLYDESDALE AND SHIRE HORSES—Brood mare with foal—1, H. Nichol. Filly or gelding, 1888—1, H. Nichol. Filly, gelding or entire, 1889—1, H. Nichol. Foal, 1890—1, H. Nichol.

PERCHERON HORSES—Stallion, 3 years or over—1, F. Clegg; 2, W. Mitchell.

SWEEPSTAKES—Best heavy draught stallion—1, A. Colquhoun.

NATIVE PONIES—Mare and foal—1, S. Hopper & Son; 2, H. Wheeldon. Single driver—1, H. Nichol; 2, E. F. Haddow. Saddle pony—1, Alex. Nichol; 2, J. W. Vantassell. Best herding pony—1, H. Wheeldon; 2, A. Nichol. Best boy rider—1, Master Nichol; 2, Master Vantassell. Best walking team—1, R. Hope; 2, E. J. Darroch.

DURHAM CATTLE—Bull, calved prior to 1888—1, W. S. Lister. Bull, calved 1888—1, W. J. Helliwell; 2, W. S. Lister. Bull, calved 1889—1, S. S. Simpson; 2, A. Forsyth; 3, W. S. Lister. Cow, with calf by side—1, W. S. Lister; 2, Sharman & Sharman. Heifer, 1888—1 & 2, W. J. Helliwell; 3, W. S. Lister. Heifer, 1889—1, R. Lang; 2, W. S. Lister; 3, W. J. Helliwell. Heifer, 1890—1, W. S. Lister.

POLLED-ANGUS—Bull, any age—1, R. Hall; 2, Penketh Stock Farm. Heifer, under 3 years—1, Penketh Stock Farm.

HOLSTEINS—Bull, over 3 years—1, W. H. Acton. Bull, under 3 years—1, W. Foxhall. Bull, under 2 years—1, Jno. Empey. Cow, with calf—1, W. H. Acton.

GRADE COWS—1, T. M. Percival; 2 & 3, T. Beaubier.

COTSWOLD SHEEP—Ewe, any age—1, R. Arnott. Leicester Sheep—Ram, over 1 year—1, R. Arnott. Ewe, over 1 year—1 & 2, R. Arnott. Ewe, under 1 year—1, R. Arnott.

SHROPSHIRE DOWNS—Ram, under 1 year—1, R. Arnott. Ewe, over 1 year—1 & 2, R. Arnott.

BERKSHIRE PIGS—Boar, over 1 year—1, J. W. Vantassell. Sow, under 1 year—1, J. W. Vantassell.

SUFFOLK PIGS—Sow, under 1 year—1, W. Casler.

POULTRY—Black Spanish—1, Wm. Jones. Game—1, Thos. Booth; special, Wm. Jones. Buff Cochins—1, F. A. Wilcox. Plymouth Rocks—1, J. W. Vantassell; 2, Jno. Fraser; special, Wm. Jones. Dorkings—1, Wm. Jones. Leghorns—1 & 2, Wm. Jones. Hamburgs—1, J. Rainshaw.

The Winnipeg Exhibition.

The recent defeat of the by-law to issue debentures to raise thirty thousand dollars for procuring a site and erecting buildings has not in any way deterred the stockholders from pushing this matter to a successful issue. The Association has been incorporated and permanent organization effected, as follows:—President, J. H. Ashdown; Vice-President, Stephen Nairn; Secretary, C. N. Bell; Treasurer, J. H. Brock; Directors, Wm. Martin, Wm. Risk, W. B. Scarth, M. P., A. McDonald, G. R. Crowe, Ald. Mather, Ald. Black. The Council will be asked to submit the by-law at the time of the municipal elections which will insure an expression of the citizens on the question. That the by-law will carry is, to say the least, more than probable, and if the Provincial Government can be prevailed upon to renew the grant, and they doubtless will do so, there is every reason to anticipate a successful exhibition next season. It is doubtful if there is a city on the Continent of the size of Winnipeg that has not an agricultural exhibition, and there are certainly few that would receive greater benefit from such an exhibition. Should the by-law carry a special Act of Parliament will be asked for regulating representation which will be granted to the various associations, such as the Cattle-breeders', Dairy-men's and Poultry Associations, as well as others of a like nature. It is also the intention to ask each agricultural society in the Province to appoint a representative. These representatives and the stockholders will elect officers and directors from among themselves. This will prevent any sectional or local predominance and give the Association the benefit of the views of the best men in the Province and make the Board more thoroughly representative than it could by any other means be made. The present organization is necessary to give the Association a status and facilitate preparatory work.

Pure-Bred Cattle Breeders' Association for Manitoba and the Northwest Territories.

This Association, which was organized, as noted in our last issue, at Brandon, on the 23rd of July, is composed of the best breeders and most enterprising men in the Province, and from the interest manifested at its formation, will prove an important factor in forwarding the interests of stockmen in Manitoba and the Territories. The membership numbers thirty at present with every prospect of a large increase in the near future.

CONSTITUTION.

PREAMBLE.

At a meeting of stock breeders of Manitoba and the Northwest Territories, held at the Langham hotel, Brandon, on the 23rd of July, 1890, for the purpose of taking steps to form an association in the interests of breeders of pure-bred cattle, it was decided to draft a Constitution, and the following Articles were approved by a subsequent meeting held in the same place the following day.

ARTICLE I.

SEC. 1.—NAME.—This association shall be called "The Pure-Bred Cattle Breeders' Association for Manitoba and the Northwest Territories."

ARTICLE II.

SEC. 1.—MEMBERSHIP.—Every registered breeder or owner of pure-bred cattle in Manitoba and the Territories shall be eligible for membership.

SEC. 2.—Any person taking an interest in pure-bred cattle, who, having signified to the Secretary his desire to become a member, and paid such fees as may be prescribed by the by-laws, may do so on his name being approved by the Executive Committee.

SEC. 3.—FEES.—The fees shall be ten dollars for a life member and one dollar for an annual member. Additional funds required by the Association may be levied by the Executive Committee; such levy shall not exceed the amount of the annual fees each year.

SEC. 4.—REMOVAL OF MEMBERS.—Members may be removed for cause by a two-thirds vote of those present and voting at any regular meeting of this Association.

SEC. 5.—Any member of the Association who shall have been expelled or suspended from the membership of any regular Cattle Breeders' Association for any other cause except non-payment of fees shall, without any action on the part of this Association, be removed from the membership.

ARTICLE III.

SEC. 1.—OBJECT OF THE ASSOCIATION.—The object of this Association shall be to promote the interests of breeders of pure-bred cattle in Manitoba and the Northwest Territories, and to co-operate with the various established Cattle Breeders' Associations in Canada and the United States.

ARTICLE IV.

SEC. 2.—INCOME OF THE ASSOCIATION.—The income of the Association, from whatever source derived, shall be applied solely towards the promotion and furtherance of the objects of the Association, and no part thereof shall be paid or transferred, directly or indirectly, by way of bonus or otherwise, howsoever, by way of profit, to persons who are at any time or may have been members of this Association, or to any person claiming through them; provided always, that nothing herein prevents the payment in good faith of remuneration to any secretary, editor, officer, clerk or servant of the Association, or other persons, in return for services actually rendered the Association.

SEC. 2.—The rights and privileges of every member of the Association shall be personal to himself, and shall not be transferable.

SEC. 3.—Every member shall be entitled to receive such publications as shall be issued during the year by the Association, either free or at such reduced rate as shall be decided on by the Executive Committee.

ARTICLE V.

SEC. 1.—ENUMERATION OF OFFICERS.—The officers of the Association shall consist of: a President, a Vice-President from Manitoba and one from the Territories, and a Secretary-Treasurer.

SEC. 2.—The term of office for each officer and member of the Executive Committee shall be for one year, and shall expire at the annual meeting following the one at which he was elected.

SEC. 3.—EXECUTIVE COMMITTEE.—The Executive Committee shall consist of ten members, besides the officers mentioned, five members of which shall form a quorum, and shall be composed of one member representing the breeders of each breed of pure-bred cattle, provided such breeders are represented at the annual meeting, and the remainder of the Committee shall be elected by the members present at the meeting.

SEC. 4.—At the annual meeting of the Association the officers and Executive Committee for the ensuing year shall be elected. Retiring officers and members of committee shall be eligible for re-election.

SEC. 5.—In the event of a vacancy occurring in the Executive Committee such vacancy shall be filled at the next meeting of the committee, and the member so elected shall retire at the next annual meeting.

SEC. 6.—None but registered breeders or owners of pure-bred cattle shall be eligible as officers or members of the Executive Committee.

ARTICLE VI.

SEC. 1.—OFFICERS' DUTIES.—President.—The President shall preside at all meetings of the Association, and of the Executive Committee; shall appoint all other committees not otherwise provided for; exercise a general supervision over all the affairs of the Association, and perform such duties as shall be prescribed from time to time by the Association.

SEC. 2.—Vice-Presidents.—The Vice-Presidents shall, in the order of their election, in the absence of, or upon the request of the President, perform his duties.

SEC. 3.—Secretary-Treasurer.—The Secretary-Treasurer shall keep a full and true account of the proceedings of the Association, and of the Executive Committee, receive all moneys paid in for the various purposes of the Association, and attend to correspondence of the office.

SEC. 4.—Executive Committee.—The Executive Committee shall have power to do all that may be incidental or conducive to the objects of the Association, and shall be generally charged with the administration of its affairs, and shall have the power of the appointment and dismissal of the employees of the Association. They shall cause all moneys received by the Association to be deposited in one of the chartered banks, and all payments shall be made by check signed by the President and countersigned by the Secretary. They shall convene special meetings of the Association from time to time as occasion may require. A meeting of the Association shall be called at any time by the President at the request of ten members of the Association. The President and Secretary may call a meeting at any time they may think it advisable to do so.

SEC. 5.—A general meeting of the Association shall be held at such time and place as may be appointed by the Executive Committee, for the purpose of election of officers and members of the Executive Committee, to receive the report of the accounts and to transact any other business for the ensuing year.

All elections at such meeting shall be by ballot.

ARTICLE VII.

SEC. 1.—Members shall receive twenty days' notice of all meetings.

All communications shall be considered delivered if properly addressed and mailed.

SEC. 2.—No member whose subscription is in arrear shall be entitled to vote at any meeting until such subscription is fully paid.

SEC. 3.—The Constitution shall not be changed unless by a two-thirds vote of those present and voting at a general meeting of members called for that purpose.

Black-Leg.

To the Editor of the FARMER'S ADVOCATE, Winnipeg.

Will you kindly let me know through the columns of your valuable paper the symptoms of "Black-Leg" in cattle, also prevention and cure, if any. Yours, etc.

A. M., Campbellville, Man.

ANSWERED BY W. A. DUNBAR, PRESIDENT OF THE MANITOBA VETERINARY ASSOCIATION.

The first noticeable symptoms are dullness, drooping ears, bloodshot eyes, mouth and ears hot and dry, the pulse quick and weak, partial or complete loss of appetite, and the animal will usually be found separated from the herd. Succeeding these symptoms, swellings appear on the legs, loins, back, neck, brisket or on any other part of the body. After these swellings appear the animal will evince much pain and stiffness by unwillingness to move. A very characteristic symptom of "Black-Leg" is the crackling sound produced when these swellings are pressed upon or rubbed with the hand. Rumination is entirely suspended, the bowels are torpid and the urine is voided in small quantities and very dark in color. In a short period, varying from a few hours to a few days, the symptoms of exhaustion become very evident; the animal is unable to rise from the ground, the eyes are fixed and staring, the breathing is rapid and shallow, bloody froth issues from the nose and mouth and convulsions usually terminate the scene.

The treatment of this disease, notwithstanding the great amount of attention that has been bestowed upon it, is yet uncertain and very unsatisfactory. When an animal is noticed in the first, or early in the second stage, he should be put in comfortable quarters, isolated from other cattle. A roomy, well ventilated, clean and well littered box-stall is the best. If the animal is two years old, administer the following drench three times a day, including the night, until the disease or the animal succumbs, viz:—Hyposulphite of soda, one ounce; chlorate of potash, half an ounce; carbonate of ammonia, two drachms; fluid extract of belladonna, one and a half drachms; treacle, four ounces; dissolve all in one and a half pints of hotale. If the animal is one year old, give three-fourths of this dose, and if three years old give one-third more. Insert a seton a foot long and an inch wide, saturated with turpentine or smeared with cantharidine

ointment, into the dewlap; let it remain in for five or six weeks and move it occasionally. Give an injection of warm water and raw linseed oil every four hours until the bowels act freely.

The prevention of this disease, owing to the variety of ways in which its contagion may be transmitted, is not very easily accomplished. I will, however, state most emphatically that as soon as an animal dies, or is supposed to die, of this malady, the carcass should, if possible, be immediately reduced to ashes or buried at least six feet from the surface of the ground and plenty of unslaked lime put over and around it, and everything that had been in contact with the animal, litter, dung, discharges, etc., should be, as far as possible, disposed of in the same manner. It is now, I believe, scientifically demonstrated that there is a malignant and non-malignant form of this disease, but it is safer to treat every case, in the disposal of the carcass, as being of the malignant or most contagious type. If the disease breaks out in a herd that is feeding on low marshy land they should, if practicable, be shifted to higher and dryer pasture. From an ounce to two ounces of hyposulphite of soda should be given to each animal, according to age, once a day for two weeks; it may be given in food or water. Insert setons in the dewlaps as previously described.

Color in Shorthorns.

BY D. T. WILSON, BRANDON, MAN.

Shorthorns, properly speaking, are of but two colors, red and white, the different shades of roan being simply a mixture of the two.

For a number of years red has been the fashionable color, and we never read advertisements where it is held out as an inducement to purchasers that the animals for sale are light roans or pure whites.

At the meeting of the American Shorthorn Breeders' Association, in or about the year 1875 (the meeting was that year held in Toronto, the late Hon. David Christie being President), the question of color was brought up, and it was the unanimous opinion of the breeders present (I speak from remembrance of the reports published at the time) that white and roan were preferable to red, the animals of the lighter colors handling better than the reds. Since then the cry has been for red, although the highest authorities decided that it was the inferior color.

In the Old Country they have not been carried away to the same extent by the craze, for craze it must be called, as they have on this side of the Atlantic, and white and roan are much more common there.

If the lighter color are better feeders than the reds then the lighter the roan the better as there is less red in the coat, and by the same rule white is the best as there is no red.

The bull, Duke of Northumberland, said to be the best Shorthorn bull that ever existed, was, I believe, white. The Bow Park steer Clarence Kirklevington, who carried all before him at the Chicago Live Stock Shows, was white. Within the last year I noticed that the best Shorthorn grades in the vicinity in which I have been living were white animals. Many people are under the impression that white animals are delicate, but I have always been unable to see it, and it is to be deplored that so many are prejudiced against them. Are not Shorthorns naturally predisposed to breed white? If so it is simply reverting to their original color, for the probabilities are that they are descended from the wild white cattle of Britain. If Shorthorn men must have cattle of solid color why not have them white? the breeding for color then having a good rather than an evil effect on their families. Fashion should not be allowed to interfere in this matter, for handling means cheaply produced beef and is therefore the principle point in beef cattle. Nothing among bovines could have a finer appearance, in my humble opinion, than a highly-bred herd of white Shorthorns, and I venture to say that at a show they would be more attractive to the general public than a herd of red ones.

Grosmont Wonder.

Grosmont Wonder, the subject of our illustration, is one of the finest specimens of Cleveland Bays we have ever seen. He was imported in the spring of 1890 by Messrs. J. D. McGregor & Co., of Brandon, and sold to the present proprietor, Mr. G. Alexander, Rapid City, Man. Grosmont Wonder 838, vol. IV., foaled 1887, is by Statesman 662, dam Fairy Land 164 by Barneby 18, is a beautiful bright bay with coal black points; stands a little over sixteen hands high and weighs twelve hundred and fifty pounds. As will be seen, he is of almost faultless symmetry, while his style and action is equally so. Many of our best horsemen are of the opinion that a horse of this stamp is the most desirable for this country on account of the distance many persons have to drive to market, and advise using a third horse to do heavy work on the farm in preference to driving a slow heavy team on the road.

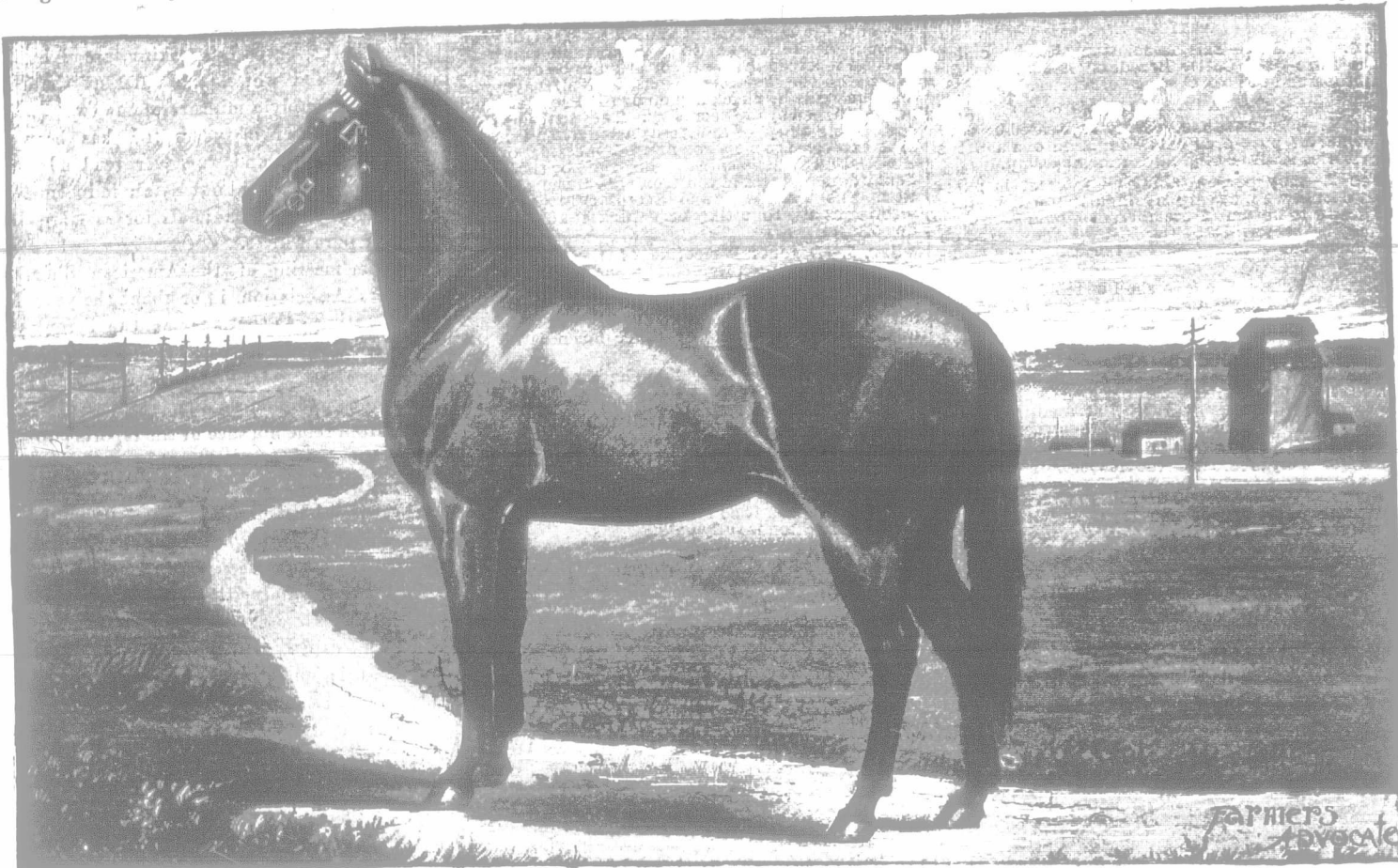
Exhibiting Grades.

The prize lists of our agricultural societies invariably give grade cattle a place, but do not in any way define what a grade is. Since the amalgamation of the Canada Shorthorn and British-American Herd Books there has been a class of cattle, previously considered pure bred, competing for prizes in the grade class. This is being objected to in some quarters, although not generally. That existing regulations at a previous date rendered these cattle eligible for registration and consequently exhibition in company with animals of better breeding has no bearing upon their present status. If at that time a grade was of necessity one ineligible for registration, does it not follow that a grade is still to be described as an animal ineligible for registration? The Association considered they were grades and not pure bred, and as a consequence they were

have no right to exhibit his stock as grades, and the associations be placed in the—for an agricultural society—somewhat anomalous position of placing a premium on poor breeding and consequently poor stock. It must be borne in mind that the primary object of awarding prizes at an exhibition is to encourage the production of good stock and not to secure an equal distribution of the funds of the association among its members.

Our Stock Reviews.

One feature, and we believe a very interesting department of the *ADVOCATE* in the past, has been our stock reviews. These reviews, as any practical man will realize, have been descriptions of the individual animals of the herd just as they appear to the reviewer, and while doing justice to the stock, not colored or overdrawn in any



GROSMONT WONDER, THE PROPERTY OF MR. G. ALEXANDER, RAPID CITY, MAN.

The poorest occupation on earth is to be robbing ones self of intelligence, and of the tools (books and papers) to get it with. The fool has said in his heart he can get more money through the tiring of his muscle and the starvation of his brain; but he can't, nevertheless.

A Winnipeg gentleman recently took a trip up the M. and N. W. road as far as Bisble, Binscarth, Russell and Silver Creek, prospecting for cattle. He says there are plenty of young cattle up there, but they are held at such high prices that no one can touch them, and the farmers are very independent about the matter. The same gentleman remarked that the Binscarth stock had made a marked impression on the stock in the section of country referred to above. This is just what might be expected. The Binscarth stock improved the original, same as such stock will do in every instance, then the farmers found they had good cattle and could sell them at any time they wished to, and as a consequence got quite independent. This is however nothing new, the better cattle a man keeps the more independent he can afford to be.

not accepted by the Dominion Association. If it is advisable to use a pure bred sire to improve the native stock surely the longer that line is followed and the greater the number of crosses the better. If not it is in order for those who think otherwise to show just the number of crosses that it is advisable to make. Again, suppose a man had been breeding pure bred Shorthorns for years and on the revision of the herd book many or all of his cattle were thrown out as grades, would it be fair or just to prohibit him from exhibiting in the grade class? Would not his herd be just as useful as before in improving the native stock of the country and quite as deserving of encouragement? Most assuredly, and if the infusion of Shorthorn blood is beneficial, which it certainly is, then the greater the infusion the better, and if those "rejected pure bred" were not allowed to compete as grades the farmer who started with native stock and bred until the fourth cross was reached would

form or manner, the object being to convey to the reader an intelligent idea of what the animals actually are. This is the only manner in which this idea can be conveyed, as a general reference to the herd or even individual animal such as a grand animal and full of quality, has virtually no meaning other than a desire to "write up" or "puff" the stock. This the *ADVOCATE* has no intention of doing and never has done, neither for love nor money. We give these reviews simply as a matter of news, believing them to be of interest to our subscribers. We repeat, these reviews are not by any means to be classed with writing up stock, as the animals are simply described as they are, the object being to inform our readers as to the quantity and quality of pure-bred stock kept by Manitoba and Northwest farmers.

Leaving farm machinery where last used, does more for the implement maker than all wear and tear in operation can do.

Ponies and Pony Breeding.

For many years ponies of the various breeds have been imported into Canada, but the number brought has been restricted because of a duty of 20 per cent. charged by our Government. As yet they have not been admitted free as other animals for breeding purposes are. Why those in authority thus discriminate against this class of stock, which is now so rapidly growing in favor, is something we cannot understand. Doubtless the duty will remain as it is until a Canadian Stud Book for ponies is started. Breeders can then demand their free admission.

Ten years ago a pony and cart was quite a novelty in nearly all Canadian cities. This condition of things is fast passing away. The pony and the pony cart is the best and cheapest means of locomotion, especially for ladies and children's use, or for any kind of light driving in villages, town or cities or for similar country use. Many persons are under the impression that a pony can do but a very limited amount of work. This is a great mistake. Messrs. John Miller & Sons, Brougham, Ont., who have imported a great many ponies during the last twenty years,

hands high is considered the result of some degenerate foreign cross of the ancient Exmoor breed. From the above we learn what is considered a pony in their native home, Britain. At one time, and even by a certain class now, very small ponies were and are considered more valuable than those of a useful size. This is certainly a fallacious fancy, and if continued in will injure pony breeding in America. What is wanted is a useful, stylish, gentle pony, possessing high hock and knee action and not less than twelve hands high or more than fourteen hands. Anything much smaller than twelve hands is too much of a toy to be useful. Anything above fourteen hands should certainly be looked on with suspicion concerning the purity of its breeding as a pony.

One of the most difficult things to get is a really good

PONY CART.

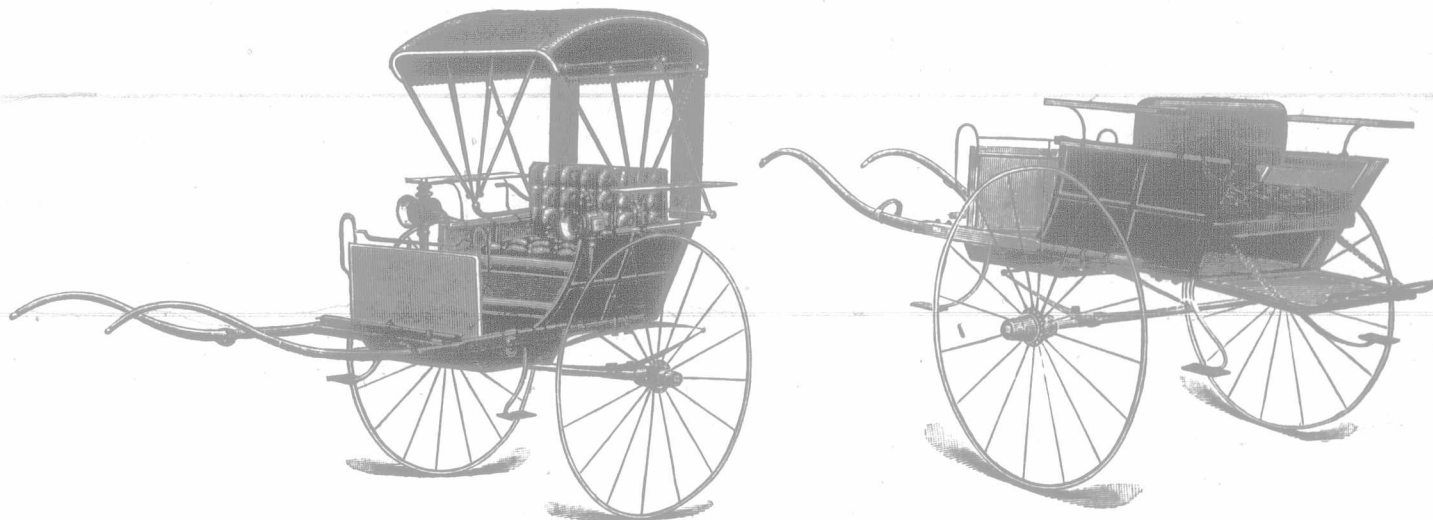
Many of those made in Canada are poor in workmanship and tiresome to ride in. Mr. Wm. Newport, Whitby, Ontario, some years ago introduced an English pattern. His carts, both single and double, large and small are very desir-

and safe for children to ride or drive. The large-sized pony is the most useful, although at present the smaller they are the more valuable they are considered. We would recommend the raising of good, strong, useful ponies, as in the future they will be in more demand, and if crossed with a blood horse bring good, strong drivers that are very desirable. We know one now that is doing as much driving as any horse in this part of the country and standing it well. She is bred from an imported pony and sired by a blood horse. Upon the whole we are very well satisfied with importing and handling ponies, so much so that we intend to keep a few always on hand.

PONIES IN BRITAIN AND CANADA.

BY G. W. ROBINSON, KINGSTON, ONT.

The value of ponies in Canada is from \$100 to \$150. Some old ones sell for less, and I have sold several for \$200 each. They are very valuable in cities, as they will do as much running around as the majority of people do with their large horses; they are stronger, according to size, than a large horse, and it is no trouble for a good 11 to 12 hand pony to start off on a good trot before cart or buggy with two grown people



TWO STYLES OF THE NEWPORT CART.

have owned many that did a great amount of work. One of their importation was sold to a leading grocer in a country town and was used for upwards of twelve years in his delivery cart, and was at the end of that time, to all appearances, a good sound pony. Mr. Miller has now a grey pony mare which his family has driven for upwards of twenty years and she is still sound and active and a remarkably good traveler. Mr. Robert Miller, sr., owns and drives a pony which has few equals as a driver, either among ponies or horses. He stands about thirteen hands and is very handsome. Mr. S. Sidney, in his famous work, *The Book of the Horse*, on page 211, writes thus of the pony:—"Next to, or even before the brougham horse, comes the pony, which is a sort of equine servant-of-all-work; that on which the boys and girls learn to ride and a ready resource in any emergency." The question, What is a pony? is somewhat difficult to answer. In Yorkshire, Leicestershire and Northamptonshire anything under 15 hands 2 inches is called a pony. In Suffolk, famous for its horse breeding, the height of a pony is settled at 13 hands 3 inches and under. In Nottinghamshire anything under 14 hands 2 inches is called a pony. In Devonshire and Somersetshire a pony over twelve

able in every particular—durable, handsome and most comfortable to ride in, and considering the workmanship they are cheap. We have three of them now in use and like them very well indeed. We have seen very flattering reports received from parties in various parts of the Dominion, written by parties who have used these carts.

The following are the views of well-known men concerning the usefulness of ponies:—

THE FUTURE OUTLOOK FOR PONY BREEDING.

BY R. MILLER, SR., PICKERING, ONT.

We would say we have imported a great number of ponies and have also bred quite a number. They have given us good returns for money invested—equally as much as other branches of stock raising. We consider them valuable for city use, as they can be kept so much cheaper than a horse, and for a light load, short driving on good roads they are equally as good. From present prospects we think the demand for them for city purposes will rapidly increase, as all those who have handled them like them. If raised by farmers to a limited extent I think they would have no trouble in disposing of them at good prices. The cost of raising them is never noticed on a farm. We have found them, without exception, quite active, prompt drivers

in. The vehicles also that are used are generally low, making them very desirable for ladies going calling or shopping. For Young Canada what could be nicer than to see several youngsters with ponies out enjoying themselves in the park or on the road. In Glasgow and Edinburgh, Scotland, also London, England, ponies are used by all classes of people and for all purposes—butchers, bakers, huxters,—pulling loads that would surprise Canadian people, while everywhere could be seen ladies and children driving wonderfully little creatures. In Hyde Park, London, one morning I counted over 100 ponies and turnouts with ladies, children or invalids. Six years ago I bought my first. Since then I have raised, bought and sold over 200. All my driving, which is considerable, is done by ponies. I have a team forty-seven inches high that I can drive right along eight miles an hour—have done so many times for thirty miles at a stretch. Last summer a team of my ponies, forty-five inches high, was driven fifty-five miles in twelve hours, including stops, in a four-wheeled trap carrying two grown people. I can feed three ponies on what one horse will consume. They will eat almost anything. I can safely say a Newfoundland dog will cost more to keep than a pony. I had no idea the work that could be

done with those ponies until I saw it on a visit to Europe. At the Shetland Isles many ponies are seen—almost like our sheep in this country. The cheapest that can be bought is £7 or \$35, but a good Shetland pony will cost £10 to £12 or \$50 to \$60. In all my travels I saw no pony that I liked so well as the Welsh. I visited North and South Wales. They are very fine limbed, clean-coated—almost as fine as a thoroughbred—and are fine travellers. My pony, which last year at the Toronto Industrial beat the celebrated trotting dog Dock, was a Welsh pony and has trotted a mile in less than four minutes. I think some farmers could make more money breeding ponies than horses. At 18 or 24 months ponies are ready to work. Many I have sold at eighteen months have been put at once at work and have always done well. They will sell readily at \$75. I always get \$100 or more for mine. I sold one colt five months old, last fall, to a party in Syracuse, N. Y., for \$100. Every year there are several car load of ponies pass through Canada for the United States. I know that we can raise them cheaper than they can be imported.

THE COMMERCIAL VALUE OF PONIES.

BY ROBERT MILLER, JR., BROUGHAM, ONT.

Ponies of any of the following breeds, Shetland, Iceland, Welsh, Exmoor or Highland, if well selected in Britain and imported to this country for sale or for breeding purposes, will pay as well as any other class of live stock. They range in value from \$50 for a foal to \$100 or \$125 for a mare old enough to breed or drive, and much more is sometimes paid for a fancy pony for either purpose. I think they have proved themselves valuable in cities already. They are now being used to a considerable extent to deliver parcels, by children to get the fresh air and for pleasure, a drive behind their pony being the greatest pleasure that any little boy or girl can have. And by no means the smallest advantage attached to this pleasure is the fact that children in this way learn to be expert in handling horses, and this is certainly a valuable accomplishment. I have always noticed that boys and girls who while small have had ponies have been very clever riders and drivers. They could, and no doubt will in time, be used in our cities to deliver all kinds of goods, even to quite heavy merchandise. Many men, otherwise almost helpless, could with a pony make a living by doing anything required in the way of removing goods. Ponies are used to a great extent in this way in Britain. We have imported and kept ponies for upward of twenty years and still have our first pony imported then. She has been very useful and we have raised some of the most useful drivers from her when bred to a trotting stallion. We have different times refused \$250 for a mare bred in this way. She is as good as we have ever seen. We have never had large numbers, having sold nearly always soon after we received them from Scotland. They have paid us very well. We like to do a little business in ponies as well as in any branch of our business, as in every transaction there is some little person made happy. I do not know that anything would be more profitable for many of our farmers than to have a few mare ponies and breed from them. They do not require very good keep, as they will naturally increase in size if well fed. One does not require any more feed than two sheep and they are very reliable breeders. The owner can count on \$50 from each

mare when the foals are fit to wean. They are old enough for small children to ride and drive almost as soon as weaned.

BY W. H. MILLMAN, WOODSTOCK, ONT.

The prices of ponies vary a great deal—from \$75 to \$150 for Shetlands. I have two ponies registered in the Hackney Stud Book (stallions), Cupid, three years, twelve hands high, winner at Royal Show, Windsor, England, 1889; 1st prize at Chicago, November, 1889; he is a black. Lord Man's, registered 2163, Hackney Stud. This is an extra cob pony, 12½ hands high; winner in Europe at several shows; 1st at Buffalo International Show, 1889, in a large class, over all hands. Of course these are extra well-bred ponies; few of this kind are imported. They are very valuable in cities for ladies and children. As a general thing they are very quiet and are easily broken. I have owned and broken a good many during the past four years and keep a pair for my own family. These I would not sell as they are very handy for us. My wife can drive them, also my little boy seven years old. I think they could be bred in Canada at a profit by farmers. Three will cost about as much as one ordinary horse to keep. Yes, there are a good many used in England and Scotland by children, and I believe a great many are used in the collieries hauling coal. I think the best pony is the offspring of a Shetland pony bred to a pony like Lord Mann's. This gives them a little more size, smarter move and breedy blood.

Non-Breeding Cows.

BY F. GREEN, JR.

Some time ago a well-known breeder enquired what our practice was in the case of cows and heifers that would not breed, and at the same time remarked that he had met with very little on the subject in agricultural papers. There are few farmers but have had the unpleasant experience of owning some cows that will not breed, and in most cases they are usually, after several attempts, promptly consigned to the butcher, thus entailing a heavy loss, especially if they should happen to be pure breeds. The subject is one which would be more ably treated on by a veterinary surgeon, but as none have felt disposed to enter upon it, I will endeavor to give what information I have been able to glean, combined with our own practical experience. Non-breeders may be divided into two divisions, (1) barren cows, i.e., cows which, through some natural defect or malformation of the sexual organs, are incapable of reproducing their kind, and (2) cows which are temporarily barren. There is little doubt that many of the latter have been, and are still being, confounded with the former class, for Prof. Tanner, of Queen's College, Birmingham, England says:—"That from the result of the examination of the ovaries of several heifers which, after careful trial, had been condemned and killed as barren, he was strongly inclined to believe that such cows are comparatively rare, and that he believes that we have the conditions of successful reproduction very much under our own control, cases of legitimate barrenness being much more rare than we imagine, and he further states that he knows that animals which are naturally capable of breeding, can be rendered incompetent by adopting a special course of treatment." Such being the case one should not be too hasty in condemning a valuable heifer until every known remedy has been attempted. In the first place one should seek to ascertain what is the probable cause of the sterility. At times it arises from either the males or the

females or both being kept in too high flesh; another cause is an enfeebled condition of the breeding organs. Instead of the females breeding in a regular manner they come into season again and again after most irregular intervals. This results, says Prof. Tanner, from one of the following causes, either the female does not become impregnated, or else the embryo is imperfectly developed. The non-impregnation of the female may generally be traced to an excessive fatness in one or both animals, and an absence of constitutional vigor, the breeding powers being most energetic when the animals are in moderate condition, uninfluenced by extreme fatness or leanness. When the trouble arises from overfatness alone it can usually be remedied by reducing their condition by low keep and plenty of exercise, a dose of epsom salts administered a few days before the ostrum is sometimes of material assistance, while in others bleeding has been resorted to with benefit. As an instance of the success of exercise and change, I may quote the valuable cow Dodona, bought by the late Mr. Jonas Webb, from Lord Spencer at a moderate price in consequence of her being considered a non-breeder. After the purchase she was driven to her new home, a distance of 100 to 120 miles; in a short time she was bred and afterwards produced twin calves, and subsequently another calf, after which, as she ceased to breed, she was sold. A change of climate again brought her back into breeding, and at the time of her decease no less than 160 valuable animals could be traced to this cow, which had been sold on two occasions as barren. Many other instances could be given but space forbids. Again, highly satisfactory results have been attained by a thorough change of climate. When stock have been sent to hilly districts where the air is bracing they have to take plenty of exercise. Barrenness occasionally arises from too close relationship of blood, or from both animals being deficient in constitutional vigor. Frequently the evil is occasioned by the mouth of the womb becoming almost or completely closed, occasioned by too high feeding or other causes, and until this is remedied it is of course impossible that the animal can breed, but our own experience has shown us that the obstruction can be removed without danger, and that, provided the breeding organs are in a healthy condition, the cow with very few exceptions becomes a breeder. It is of course well nigh impossible for one not skilled in veterinary science to ascertain whether a heifer is or is not a total non-breeder. Our own practice, which has the merit of simplicity, may be of some advantage to other farmers, and in most instances it has proved successful. In the event of a heifer not breeding after several trials we (if possible) try another bull, while, if she is in heavy flesh we reduce it and administer a dose of salts; should this not avail we examine her when she is in season and if, as nine times out of ten, we find the orifice to the womb is closed we open it gently and gradually until one can insert one's fingers in the same manner as one takes a mare; she is then again bred, and if she does not hold at that time she usually does at the second or third time following. With regard to cows breeding we have found the following results which may be of interest. (1) That where the os uteræ is not exactly opposite to the entrance to the vagina there is considerable difficulty in getting the animal to breed. (2) That cows and heifers, as well as mares, are not apt to become pregnant immediately after being turned out to grass or immediately after being taken off grass.

Ayrshire Cattle.

In our June number we gave a very interesting article on Ayrshire cattle, written by Mr. Wm. Rodden, the President of the Ayrshire Importers' and Breeders' Association of Canada. Before this date we had made preparations to issue a number of articles on this breed. In the Dominion of Canada, as in Europe, we have a great diversity of soil and climate. The commercial conditions and the wants of our people vary very much. Because of these conditions a certain breed will be found more profitable in one locality than another breed, while in another section, possessing a vastly different soil or subject to different conditions, it may not be a desirable kind to keep. Canadian farmers should consider these facts more than they do and be guided by them in selecting stock of all kinds. We believe it would be interesting and profitable to our readers to know

HOW AYRSHIRES ARE VALUED IN BRITAIN.

Mr. James Buchanan writes as follows concerning them:—

"This heavy-milking and hardy breed of dairy cattle is well suited to the soil and climate of Scotland, where it has been long established and is highly valued. Small in size, short in the legs, and with fine, clean bones, Ayrshires thrive and give a fair share of milk where large and less hardy cows would scarcely live. In the south and west of Scotland where large cheese-dairies are kept it is a rare thing to find any other breed of cows used, and the knowledge of this fact enables us to appreciate the justice of Mr. Scott Burn's remark, in one of his books on the Dairy, &c., where he says: 'For dairy purposes in cheese districts the Ayrshires are justly celebrated; indeed, they seem to possess the power of converting the elements of food more completely than any other breed into cheese and butter.'

"Little is known as to the manner in which this favorite breed was first brought into or bred in Scotland, but it is generally believed that the cows from which they and Shorthorns are descended were the country cows belonging to the district between the Wear and the Tees; and it is probable that some of these cows—which were famous for being good milkers more than a hundred years ago—were bought by Scotch dealers or drovers when returning to their own country, after disposing of their 'drives' of black cattle in England. The mothers of the milky herd being thus introduced into Scotland, there is good reason to believe that bulls of the West Highland breed were used for crossing, for West Highland cows are to the present day good milkers, and we often see a brindled bull or cow of the Ayrshire breed; but, above all, in the size and shape of the horns of a true Ayrshire there is clear evidence of West Highland blood.

"Great attention and care have been bestowed on the improvement and development of this valuable breed of dairy-cattle during the last thirty years in Scotland. An Ayrshire Herd-book has been established, milking competitions, and of late years an annual exhibition of cows called the 'Ayrshire Derby.' This has brought large numbers to the county from which these cattle take their name; and the competition for the thirty-five prizes offered in the 'Derby' is very keen indeed.

"Large numbers of Ayrshire cows are annually bought and sent to England, Ireland

and the United States of America, and the breed is rapidly rising in favor in all those countries, for although they are profitable on poor and inferior pastures, they are much more profitable where grass is rich and plentiful. The returns from individual cows, and from whole dairies of this breed, have frequently been published in the agricultural papers, and from these statistics it is easy to understand why many tenant-farmers and dairymen are anxious to obtain cows of so profitable a kind. The first cost in Scotland being much less than what is paid for large cows, and the fact that a considerably larger number of the small cattle can be kept on a given acreage, induce many men to give the northern breed a trial, especially where milk is the chief desideratum.

"At a Scotch show thirty years ago judges of Ayrshires looked chiefly to very fine bones, thin, soft skins, small deer-like heads and necks, narrow muzzles and prominent eyes, and these points, with large, well-shaped udders (about which the same opinions still hold), were, and are, sure indications of great milking powers. But it began to be felt that more stamina and stronger constitution were desirable, and therefore, at the present time, a cow is thought more of for having a thicker skin, if soft and flexible, stronger bones, and the horns need not now be thin and fine; and if a cow has a light fore end, with a clean, well-veined neck, judges like to see her with a good covering of flesh, believing that although such a one will probably give no more—if as much—milk as her prototype of thirty years ago, yet the thicker and stronger cow is to be preferred, because her appearance indicates strength and hardiness, with a proportionate capacity for resisting sickness, and an improved aptitude to fatten.

"In Cork and Kerry the Agricultural Societies have endeavored to promote the importation and breeding of Ayrshire cattle by offering special prizes for them. In Kerry, particularly, the Agricultural Society there (which is one of the most flourishing of the kind in Ireland) fully recognizes the importance of the breed. One of its members, an extensive land agent, imported a number of Ayrshire bulls for the use of the tenantry on a number of the estates for which he is agent. Lord Ventry also imported and bred some excellent specimens of the breed; while an extensive farmer has informed me that he intends keeping no other breed of dairy-cows on the two farms he occupies in that county.

"When the Royal Agricultural Society of Ireland visited Tralee, there was a fine show of Ayrshire cattle, and although the competition in the cow class was very strong, the cow which was awarded the first prize had been bred and reared in the country."

WHAT CANADIAN BREEDERS THINK OF AYRSHIRES—THE INTRINSIC VALUE OF AYRSHIRES.

BY D. NICHOL.

I have been breeding them to some extent for twenty-seven years, although I have never possessed more than thirty-two at one time. I have raised and sold a number of fine animals. I prefer them to any other breed. I supply city dealers with sweet milk, cream and skimmed milk, all of which must be of good quality. So far I have succeeded in giving satisfaction. I keep cows for strictly dairy business and only good, business dairy cows suit my purpose. I

believe they are the most profitable breed for me to keep. I know that with other breeds there are some phenomenal cows which produce enormously, but I also know that with these breeds one cow differeth very much from another as regards productiveness. I have good reason to believe that there is no breed nearly as uniform in this respect as the Ayrshires. I thoroughly tried the general purpose cow with very unsatisfactory results. Eighteen years ago I hired for a season a first-prize Shorthorn bull of fine symmetry to cross with my Ayrshires with a view of increasing their size. In that matter I succeeded well. Out of nine calves four were heifers, which I carefully raised to be very handsome animals. I also trusted that in productiveness they would, when matured, at least equal their dams, but in this matter I was woefully disappointed, for although they gave good milk lavishly for two or three months after calving, they, in spite of all efforts to keep them milking, dried up in less than seven months, hence the average annual yield of each cow was only about 3,500 lbs of milk, consequently I was obliged to sell them to the butchers when five years old, realizing less for the beef than it cost me.

I had something of the same experience with Polled-Angus, and have been forced to the conclusion that the Ayrshires as a strictly dairy-cow cannot be made more profitable by the intermixture of the blood of any other breed now in existence. With a matured Ayrshire cow properly fed there is no difficulty in obtaining annually 6,000 pounds of good, marketable milk. That is only an average of 20 pounds per day for ten months. I could show you some cows that have not been dry for six years. These are more profitable than any other breed in sections of country where dairying can be made more profitable than beef production, as is the case in Eastern Ontario and all the Eastern Provinces of the Dominion.

Hardiness and healthfulness are two of the qualities they possess in such a remarkable degree which makes them so peculiarly adapted for the business for which they have been specially developed. I have never exposed any of my cattle to intensely severe weather, therefore cannot say exactly what they may be able to endure, but from what I have learned by observation I have no hesitation in saying that, with the exception of the West Highland, a Scotch breed, they are the hardiest of all breeds. I have never seen an unhealthy Ayrshire cow, except some which, being too highly fed just before calving, have been taken off with milk fever.

Additionally, permit me to say that from among the common cattle of the country, although a very large majority of them are poor producers, there may be selected some remarkably useful dairy cows, which, if their pedigree is good (I mean if their dam and grand-dam have been good milkers), can be made to produce good dairy stock by being bred to a pure Ayrshire bull. In the Province of Quebec I have seen many grade Ayrshires doing good business in the dairy. Many more things I would like to say but I know you dislike long articles.

THE AYRSHIRE AS A DAIRY COW.

BY JOSEPH YULLI.

Great difference of opinion exists as to the origin of this valuable dairy breed. Aiton tells us that in the beginning of the 17th century the

cows in Ayrshire were a small, shapeless, inferior breed of cattle, few of them giving more than six or eight quarts of milk per day, and when put to beef they seldom weighed over 400 lbs. In color they were mostly black with white faces and a white stripe along their back. Mr. Howard tells us that about the middle of the 17th century a gentleman by the name of Dunlop brought several cattle of the Teeswater breed from England. These cattle were large sized and great milkers. Whether the Ayrshire cow is directly descended from the Teeswater breed or whether there was any other breed imported to cross them with or whether they were crossed with the native cattle of the country is not definitely known. One thing certain is the improvement must have been very rapid, for Mr. Farrel, writing in 1775, tells us that the improvement was simply marvellous. And in the year 1788 the Laird of Dunlop presented the Poet Burns with a two-year old heifer, said to be the finest quey in Scotland. And again, Rawlin, who wrote in 1794, in speaking of the Dunlop cows says they were the greatest cows to yield milk of any breed in Great Britain or Ireland. The Ayrshire cow was introduced into Canada almost with the first settlers. They were brought out in vessels to supply the passengers and their families with milk during their long voyage and on landing were eagerly sought after by farmers living near Montreal and Quebec. I will now proceed to show some peculiarities of the Ayrshire cow which renders her the best dairy cow for the Canadian farmer. She is very docile, being easily petted. She has a very strong constitution. She is very thrifty, being able to gain a good living where most other breeds would starve. They will give more good milk from the same amount of food than any other breed. The following are five points essentially necessary in a good dairy cow, no matter of what breed she is, and I think the Ayrshire fills the bill fully as well as any other breed:—

1. A large udder is of elastic quality.
2. A soft, mellow, movable skin.
3. A large, roomy barrel.
4. Long, broad rumps and thin hips.
5. A fine, tapering neck, with clean cut face with large, prominent eyes.

I think I will be able to satisfy the most skeptical that the Ayrshire cow has fully sustained in Canada the reputation she has gained for herself in her native land. I will now try to show you how she succeeds when in competition with other breeds.

In the year 1882 W. Weld, Editor of the FARMER'S ADVOCATE, offered \$100 for the best five cows for general purpose and profit at the Provincial Exhibition held at Kingston. The owners were required to give an account of their doings for the last year. This account was taken into consideration by the judges in making their awards. This prize was awarded to five Ayrshire cows owned by Thos. Guy, Oshawa. And in the same year an Ayrshire cow owned by the same gentleman took first place at the Toronto Industrial. And in 1884, at the Industrial held in Toronto, the first prize in the milk test was awarded to an Ayrshire cow, also owned by Mr. Guy. And in the same year, at the Provincial held at Ottawa, an Ayrshire cow, owned by James Drummond, Montreal, took first for the best cow that had calved previous to the first of May. And an Ayrshire

cow, owned by the same gentleman, took first for the best cow calved after the first of May; also an Ayrshire cow, owned by Jas. Callander, North Gower, took 2nd. In 1886, at the Dominion Exhibition held at Sherbrooke, Quebec, three prizes were offered in the milk test and all three were captured by Ayrshire cows. The 1st owned by Thos. Brown, 2nd by James Drummond and the 3rd by Thos. Ervin, all of Montreal.

In the year 1887, at the Grand Dominion Jubilee Exhibition, held at Ottawa, the sweepstake for best milk cow of any breed was awarded to an Ayrshire cow owned by myself.

In the summer of 1884 Professor Brown conducted a test of dairy cows. He commenced his test with eleven different breeds, but before he concluded the test he had discarded all but three, namely, the Ayrshire, Jersey and the Holstein. For weight of milk the Holstein took the lead and the Ayrshire next, and for quality the Jersey took first and the Ayrshire second, and when it came to quality and quantity combined the Ayrshire took the lead. And to make it still plainer, so that any person could understand it, he showed the value of the different cows' milk for a certain length of time. While the Ayrshire cow gave 6,000 lbs. milk the Jersey gave 5,000 lbs., and the Holstein gave 7,000 lbs.; the Ayrshire cow's milk was worth \$47.00; the Jerseys was worth \$46.00, and the Holsteins was worth only \$22.00.

In conclusion, let me say that I could easily have collected still more evidence to show that the Ayrshire cow is not only the best dairy cow in Scotland, her native country, but that she stands unrivalled as a dairy cow in Canada. Since the year 1882 she has come out ahead no less than twenty times. What we claim is that the Ayrshire cow is the best dairy cow in the world, under ordinary circumstances, with such treatment as the Canadian farmer generally gives his cows. She is a very reliable breeder. This is a very great advantage to the dairyman when he can depend on his cows coming in at a certain season of the year. She is also very prolific. I will give you one instance: H. E. Eyre, Esq., of Harlem, purchased a heifer calf from me which gave birth to a calf at two years old and another at three, and in the spring of 1889, a few weeks before she was four years old, she presented her owner with a beautiful pair of twin heifers. Last fall, at the County of Leeds Agricultural Exhibition, the cow and her four heifers took five prizes against strong competition.

We do not claim for the Ayrshire that they are a beef breed, but if bred for that purpose their beef qualities would soon improve for they are good feeders. I will give you my experience with them as beefers: In the year 1884 I killed, "off the grass," a four-year-old heifer which proved barren. She dressed 775 lbs. beef, 120 lbs. tallow and her skin weighed 73 lbs., and last summer I milked an Ayrshire cow till June; dried her off, and fed her on grass alone, and in competition with other breeds she took 1st at Kingston, 2nd at Ottawa, 1st at Renfrew, and 1st at Almonte for beef. About the beginning of December I killed her, she weighed 650 lbs. beef, 112 lbs. tallow and her skin weighed 72 lbs. Last fall I killed an Ayrshire cow that was 19 years of age. The beef was good.

A few good sales of the produce of a stallion will do more to raise a horse in the estimation of breeders than anything else. Owners of stallions should make a note of this.

Berkshires vs. Yorkshires.

BY WILLIAM DAVIES, TORONTO.

In your July number appears an article on Berkshires versus Yorkshires by Mr. Benjafield, Dorsetshire, Eng., and I ask space to reply. That gentleman characterizes my letters on the above subject as "mis-representations" and my style as "bitter." This I deny in toto and appeal to your numerous readers, not fearing their verdict; but what shall we say of the person who thus denounces my writing, and then proceeds to characterize his opponent's statements as "vile assertions," "libels," and "wild unscrupulous and vindictive outbursts of prejudice." But, now, to the subject. Mr. Benjafield and other breeders of Berkshires contend that they are par excellence, the pig suited to the wants of pork packers, while we bacon curers dispute this, contending they are too fat, I presume. Mr. Benjafield will be proud to admit that pigs in all large hog raising countries are more indebted to Berkshires for their improvement than to any other breed. I should suppose from a general knowledge of the subject that Berkshire boars have been kept in the ratio of five to one of any other breed, and probably five to one of all other breeds, and as we pork packers are at our wits' end to get pigs lean enough to suit our customers, is it not clear to any impartial person that we are indebted to the Berkshires for the fat hogs, the product of which we do not know what to do with, for every year, and I might say every month, consumers become more exacting and clamorous in their demand for lean. We are paying regularly a much higher price for long fleshy hogs, about 170 lbs. alive, than for fat hogs 220 lbs. Is it to be credited that we do this for fun, or as Artemus Ward would say "pure cussedness."

Mr. B. intimates that Messrs. Harris & Co., of Calne, Eng., speaks highly of the Berkshires, and that they and other bacon curers offered prizes for the most suitable bacon hogs, one of which was taken by Berkshires and White Cross, a pen of ten pigs, and the first prize for the pen of five by Berkshires. This I do not dispute. Neither my firm or Harris care what breed they are if they fill the bill, and without doubt some young Berkshires suitably fed can be made to meet our requirements, but you will note that the first prize for ten went to cross bred, which is just what pork packers recommend. But I have before me an article by Thomas Harris, one of the firm Mr. Benjafield swears by, in which he says:—"Years ago the Berkshires was much more valuable, but fashion has spoiled them, and breeders will have to alter the present standard if they wish the bacon curers to recommend this breed to the farmers. The middle and small Yorkshires have the same fault as the Berkshires carried to a much greater extent." Further, he says:—"The principal, and I consider the best breeds of pigs, are the Berkshires, Yorkshires and the Tamworths. The first are beautiful animals and everything that can be desired except that most important point leanness."

If I were writing as a breeder of Yorkshires only partiality might lead me to advise farmers to breed and feed the Improved Large Yorkshires, but my interests as a breeder are infinitesimal compared with my interests as a pork packer and bacon curer. Hence, I again urge farmers who read this to cross their ordinary

sows with a Yorkshire boar, and I also urge and advise them to raise and feed twice as many as they ever have done. The demand for mild cured lean meat increases every day, and whatever else is a drug on the farmer's hands prime small hogs are and will be in active demand.

Berkshires vs. Yorkshires.

I rejoiced to see in your estimable magazine for July a letter from Mr. N. Benjafield which is said to have been written because he saw in your April number "one of my productions." The said productions appear to have so irritating effect on Mr. B. that he does not permit himself to give a direct reply to them, but vents his spleen on the devoted head of Mr. William Davies, whom he most unfairly charges with "misrepresentation of Berkshires," and more strangely still with "bitterness of style." I was innocent enough to think that if two estimable points were more particularly noticeable in Mr. Davies' letters than any others these were his fairness and his courtesy. It is true that Mr. Davies had, in giving his experience of Berkshires, to give facts not in favor of these pigs, and he also had to reply to or to suffer from attacks on his bona fides or his disinterestedness.

Mr. Benjafield writes that "he wishes to flatly contradict the statements of your various correspondents that Berkshires are short in the back, too fat, too coarse in the shoulders, too light in the hams, overdone with offal, merely fit to raise stock suitable for mess pork whose destination is the pine woods, where lumbermen can eat blubber, that the best curers have quite thrust them aside as totally unfit for the bacon trade, &c." Well, for my part, he is perfectly welcome to flatly contradict many of the so-called statements when your correspondents are silly enough to make them. It is scarcely necessary to repeat what has been written on the failings of the present style of Berkshire, but Mr. Benjafield will mislead no one but himself when he puts into others' mouths stupid statements to which they have not given utterance, nor will he do his cause much good in the attempt.

Mr. Benjafield says "that Berkshires will thrive where white pigs would almost starve." Will he give us proof of this assertion, the truth of which I have not experienced, and I have done a little pig breeding during the last thirty years? My reasons for giving up the Berkshires were that they reared too few pigs, grow too slowly up to six months old, were not good pigs for bacon curers, and that when the boars and yelts were old enough to sell for breeding purposes no one wanted them. My experience with Improved Yorkshires is exactly of the opposite kind, as I have this year already sold three hundred and forty-five boars and yelts, besides winning seventy-nine prizes worth £296 in eight days, or at shows all held on one or more of the eight days at one time, so that the same pigs could not be shown at the other shows held the same week. I might add that this is the largest number of prizes and of the highest value ever won in England by one exhibitor, and what is of more importance everyone of the pigs I showed was bred by myself, not, as is so common in England, bought at high prices all over the country.

Mr. Benjafield says that the best bacon curers in this country do not object to Berkshires.

What does he call the Harrises, of Calne? Does not this firm occupy, and has it not for years occupied, one of if not the very highest positions in this country? Why did they commence a crusade against the fashionable Berkshire and declare it totally unsuited for the curers purpose, and why did they recommend the Improved Yorkshire? What is the use of quoting the views of one or two curers who are in a district where comparatively few good Yorkshires have been found, but where numbers will soon be bred. On the 26th ult. I received a letter from one of the largest salesmen of bacon in London in which was this paragraph:—"Yesterday I was at the ——— Bacon Factory. I recommended them to introduce your pigs to their farmers." This first-rate man of business had learned from handling some thousands of sides of bacon each week the breed of pigs which made the best baconers, and he knew also whose herd has for years supplied the right kind of pigs to command the highest price when converted into bacon. It is a curious circumstance but the very Mr. Richley, of Corbridge-on-Tyne, whom Mr. Benjafield brings forward as a witness in favor of the Berkshires, has for the last two years been building up a herd of Improved Yorkshires mainly of my strain; the last sow I sent to him, Holywell First Choice (2308), was only farrowed on April 26th, 1889. Of what use is the evidence of the pork salesmen in the London Central Meat Market where the highest price is made of small porkers of about 70 to 80 lbs.? Again, why do foreign curers from all countries buy Improved Yorkshire boars to distribute? On the 26th ult. I had a letter from a Norwegian gentleman who had just returned from his country asking me if I could supply him with 20 to 30 boars such as the manager of a curing establishment being started at Christiania saw at Holywell when he was here, and yesterday I had a telegram to forward the first nine of the consignment. On the same day I had a letter from Mr. Magnus Kjar, about the oldest bacon-curer in Denmark, asking for 30 young boars such as he had two years since from here; and to-day I have a letter from a Danish gentleman who wishes me to send 10 boars to him for distribution.

Facts such as these are of infinite value as compared with the assertions of Mr. Benjafield, who cannot produce evidence of seventy boars being sold from all the English herds during the last seven years to foreign bacon-curers, whereas I obtained orders for seventy of my Improved Yorkshires within a week. It is mere childishness to bring forward the fact that one or two prizes offered in a district where comparatively no good Yorkshires are kept, or where, as Mr. B. asserts, "quite 75 per cent. of the pigs are Berkshires," and, I might add, 20 per cent. black pigs of other strains are kept, that these few prizes were won by Berkshires. If I were to give instances where similar prizes have been carried off in other districts by pigs usually kept in those districts it would prove nothing of value. The question to be solved is, which breed of pigs pays the rearer and feeder the most profit and which breed makes the most money. Nearly all the civilized world declares the really Improved Yorkshire to be that pig.

SANDERS SPENCER.

In the month of June Great Britain imported of cheese 169,369 cwt., against 148,251 cwt. a year ago, including 84,047 cwt. from the United States (Atlantic ports), against 62,207 cwt., and 52,685 cwt. from Canada, against 47,968 cwt.

"The Haras National."

The stable of La Compagnie Du Haras National are situated at Outremont, about two and a-half miles north of Montreal, where may be seen many splendid specimens of Percherons and French Coach horses.

The Haras National Company is composed of French-Canadians and American capitalists, represented in Canada by the Hon. Louis Beaubien, Montreal, and in France by the Baron E. DeMandat-Grancey, in Perche, whose farm is one of the best known breeding establishments in the land of superb horses. At Fremont, Nebraska, the Percheron and Arabian Importing Horse Co. have an extensive sale station where many powerful horses are annually sold to the enterprising western farmers. Near Buffalo Gap, South Dakota, ranging over 40,000 acres, the company own nearly 900 head of horses, including Percherons, Arabians and trotting bred stock.

The Montreal establishment, fourth in order of founding, is becoming the most important point in the business.

The stables of Outremont cost \$21,000; they are 155 feet long, 50 feet wide, and 60 feet high, being three stories, splendidly furnished inside, and provided with large, roomy and well-lighted box stalls. Among over 40 stallions, all thoroughly acclimated, we will speak more particularly of the three which appear in the illustration.

The first, a beautiful black Percheron, July 15168, standing fully 17 hands high, weighs 2,000 pounds; imported in May, 1888, and got by Myrama (15166), dam Garotte (15167); he has gained a most enviable reputation as a prize winner and a sure foal getter, showing to an eminent degree those prized attributes of the Percheron as a breed. He won diplomas and first prizes when two and three years old at Ottawa, Sherbrooke and Hochelaga, P. Q., and is now four years old.

Roi De Bignon (1499), dapple grey, 16 hands high, weighing about 1,600 pounds, got by Cocco, dam Fanchette, is a Breton Stallion (Stud Book of the Agriculteurs de France). He has a splendid neck and a beautiful head; he shows grand action and is full of quality. He is six years old and won at Hochelaga two first prizes as the best heavy draft horse of any breed.

The Marquis De Puisaye is a grand French Coach horse. He is a beautiful bay, 16½ hands high; his fine finish and quality is a proof of his excellent breeding, which is here given:—

Marquis de Puisaye won at Toronto as carriage stallion, three years old (no special class for French Coachers), 3rd prize, 1889; at La Prairie, 1889, 1st prize as French Coach, any size; at Sherbrooke, 1889, as three-year-old French Coach, 1st prize. Bay, 16 hands; weight, 1,500 pounds; foaled March 12, 1886; bred by M. Mauny, of La Cochere, Department Orne, France; got by the Government stallion Tigris, dam Euterpe; chestnut, foaled 1879; by Jactator, dam daughter of Tonnerre Des Indes; imported June, 1889, by the Haras National.

The Percherons have for many years been in great favor in Quebec Province and the sister Provinces have of late shown such interest in them that this Company anticipate disposing of a large portion of their importations in western districts. They intend to assist in the formation of local joint stock associations for the purpose of enabling farmers and others to purchase a stallion for their district, a system that has so far been very successful. Besides, the Company insure against death for a small annual charge, any horse sold. It is the only company in Canada which is willing to take this risk. The particulars of this plan, together with much information respecting French horses, is published in a catalogue issued, free of charge, on application at the company's office. In this catalogue they write as follows:—

"Both stallions and mares of extraordinary excellence are now to be seen in the stables of the

Haras. Their certificates of pedigree will promptly convince those who are acquainted with the Norman and Percheron Stud Books of their racial superiority. We cordially invite all connoisseurs in horseflesh to visit the stables, which have been pronounced without rival in the Dominion, and to there examine Percherons and Normans, and assure themselves by personal inspection of the truth of our assertions. At Montreal they will always find a carriage at their disposal to convey them to Outremont. (The office of the Haras is at 30 St. James St.)

The Haras National was inaugurated May 10, 1890, by his Excellency the Governor-General, Lord Stanley of Preston, who, together with a large number of Senators, Members of Parliament and others had come down from Ottawa by special train and arrived at Outremont at 12.30.

There were present Hon. L. Beaubien, Mon. R. Auzias-Turenne, Count De Sieyes, Baron De Poliniere, of Paris; Hon. J. A. Chapleau, Secretary of State; Hon. Edward Stanley, Hon. L. O. Taillon, Hon. Senators Ogilvie, Girard, Perley, Casgrain, Cochrane, Howlan, Sanford and Thibaudau; Messrs. Jas. Mackay, Ottawa; H. S. Foster, Treasurer Dominion Dairy Association; B. E. Woodward, President Eastern Townships Agricultural Association; Hon. Dr. Ross, Col. Panet, representing the Minister of Militia, etc., etc. Over eight hundred invitations had been issued.

His Excellency remarked that "this establishment would open up an important industry for the Province, and he wished the projectors of it every success."

Professor Robertson at Winnipeg.

Professor J. W. Robertson, Dominion Dairy Commissioner, arrived at Winnipeg on Tuesday, Aug. 12th, and gave lectures in the City Hall on the afternoon and evening of the 13th. He referred to the Manitoba Dairy Association as useful in advertising the dairy products of the country, as the publication of their discussions would have that effect. He referred to the fact that the agriculture of a country passes through three stages, and that Manitoba was now in the first stage, while Ontario was in the second. He explained that in the first stages the pioneers tried to get the greatest amount out of the soil without serious regard for the future of that soil, which was but just and right, as the pioneers of any country were entitled to all they could get, which was not usually too much. The soil, however, to continue productive must have as much plant food given it as the crop takes from it. This second stage, which Ontario is now passing through, is one of struggling to produce a crop at a profit and not impoverish the soil. He spoke of the advisability of having more than one resource, and from the fact that crops are sometimes destroyed by hail, drought and frost it was highly desirable that dairying should receive much greater attention than it does at the present time. A lucid explanation was given, by means of a chart, of the values of plant foods most required, showing nitrogen to be worth 17 cents per lb., phosphoric acid 6 cents and potash 7 cents per lb., and that the farmer's profit consists of the amount of skill sold, and not the amount of plant food sold in a crop. He further explained that in selling \$200 worth of wheat at \$1 per bushel the farmer sold \$48 worth of plant food and \$152 worth of skill and labor: \$200 worth of milk, \$178 for skill and labor and \$22 for plant food, while in producing butter and feeding the skimmed milk on the place less than one dollar's worth of plant food is sold off the farm in \$200 worth of product. Explanation was also given of the different plant foods and their functions. Nitrogen being a muscle former, phosphoric acid, bone and potash furnishing

caloric to the system. In speaking of ensilage, he thought a corn would be found that would mature sufficiently early for the purpose, and that the Sinkenstein now being tested at the experimental farms would, in all probability, fill the bill. He estimated the Shorthorn cattle as numbering three to one of all other breeds the world over. He gave the characteristics of a good cow as long face, prominent eyes, neck rather long and thin; skin mellow, thin and movable; ribs wide apart, loins broad, barrel large, udder elastic and long from front to rear. He recommended the employment of an expert by the Local Government as an instructor to the cheese factories and creameries, and to aid in educating the patrons, thus aiding in the production of a uniform article. Ontario was quoted as an example of what co-operation would do in improving the quality of dairy productions. Ontario cheese is manufactured entirely on the co-operative system, and last season exported to England seven millions of dollars worth of cheese, while in butter less than three per cent. is made by co-operation, and Ontario butter is almost unsaleable in England. One important matter noticed was the feeding of calves. It has long been customary to feed ground feed in milk, but with uncertain results. The Professor recommended feeding the milk alone and the grain alone after the milk was consumed, which he claimed prevented scouring.

[TO BE CONTINUED.]

Can the Silo be Made Profitable Under Existing Conditions?

Ensilage must be understood to be a complete ration for any kind of animal. Stewart, in his valuable work on feeding animals, gives the nutritive ratio of ensilage corn as 1.11.1, which is much too wide a ratio for winter feeding, even in this high northern latitude. All animals must have some succulent food however if the best results are to be obtained, and the question, how can this succulence be most cheaply obtained is one we must take into consideration; or in other words, whether are roots or ensilage cheaper? This question has, during the past decade, caused a vast amount of discussion in our Eastern Provinces and in many parts of the United States, and while some prefer to raise roots the more advanced farmers, and especially those engaged in dairying, have as far as circumstances would admit, adopted the silo. The ever-present question of conditions must be taken into consideration before deciding as to the advantages to be derived from the silo. In the east, land has been high in price in proportion to the returns to be derived from cultivating it, and the question of conserving and increasing its fertility became an important one. The shortest and cheapest route seemed to be via the silo and dairy cow, and that such was the correct view is now attested by the fact that many farms in New York State that were decidedly unprofitable have been made profitable, while many farms that had been absolutely abandoned in the State of Wisconsin have been made profitable by dairy farming with the silo as an adjunct. It will, however, be noticed that in all places where the silo has proved a success corn can be depended upon as a crop. True, in many instances clover has been ensiled, but there has been no instance made public as yet where a silo was made profitable where the climate could not be depended upon to produce a profitable crop of

corn. The idea seems to obtain to a large extent that when corn has become fully grown it is in a fit state for ensiling. This is, however, a great error, as it is not worth one-half what it will be when it has developed ears and these ears have reached the glazing stage. The question of the ensilage freezing has been to some the chief objection to the silo in Manitoba, and this difficulty is the one they have been seeking to overcome, but where that herculean task has been accomplished a still greater one must be overcome, viz., growing a profitable crop for ensilage. Again, were both these objections removed entirely would ensiling be profitable while our lands are as fertile and as cheap, the dairy products as low and labor as high as at present? It certainly would not under ordinary circumstances, and it is doubtful if it would under any that are likely to co-exist with the present generation.

Horse Breeding in Canada.

Formerly the Hackney horses as used in England were recognised as horses for work on the road. Whatever other qualities he had it was necessary that he should have feet and legs of that wearing type that could stand, as the English groom with his pronounced provincialism gives it, the "ammer, ammer on the 'ard 'igh road." He was a horse for harness or saddle wherever hard or quick work was required; he was ridden to cover, to meet the hounds by the road or across the country as the case required, the hunter having been sent ahead by a groom, and if the hunter failed to turn up he took the field with the best of the hunters, and in many cases he was a hunter one day and hack the next. His power of endurance could be obtained only by good breeding, but it is more as a finished harness horse that he is recognised on this side of the Atlantic and it is only of late years that the Hackney has been freely imported.

With English equipages and English style of driving this English horse has naturally come to the front. The English Hackney, like the French Coacher and the American trotter, have all had their trotting actions improved by the Norfolk trotter. Lawrence says:—"The early English horses were improved by horses brought over by the Norse invaders, who had their strongholds in Yorkshire and Norfolk." However horse breeding was paid attention to in England at a very early date, for we read that Athelstan forbade the exportation of their best horses in the eleventh century. The best blood for hundreds of years was brought from abroad; in the long series of wars in which England was embroiled, every opportunity of selection was thus afforded.

The peculiarity of the action, as indicated by the name of Hackney, is the most important difference between him and the thoroughbred.

It is from the original native mares in this case that the trotting habit is derived, as this distinctive trait seems to have been a peculiar feature in the ancient breed. From very early times the trotters of Norfolk and Yorkshire were crossed with the thoroughbred Arabs and Barbs. Thus the Norfolk trotter, through long inherent good qualities, have proved particularly effective, and can claim quite as select breeding as the thoroughbred himself. Crossed with heavy mares, cobs of the highest action were produced; crossed with the thoroughbred he produced the modern English Hackney. Across the channel we find the same blood freely running in the veins of the French Coacher who carries himself in the same

incomparable style. Again, imp. Bellfounder and his descendants, such as Hambeltonian 10, Harry Clay, and others in the American trotting blood owe and display the same manner of going to this source.

As the modern English harness horse he is a combination of stylish action and attractive form, he must appear well from all points. Unlike the English Coach horse, which placed before the high heavy carriage or lighter brougham and driven by the coachman, this horse is all for side appearance. It matters not how plain he may appear from the driver's perch, he must have plenty of style in neck and head, as he moves with a slow and stately step. He is just the horse to draw the family carriage of the middle aged lady or old gentleman.

Far different is the high-stepping Hackney. He must be attractive from all points as he is driven by his owner. He must look as well from the driver's seat on mail phaeton or wagonette, as his brilliant action appears to those who meet him on the street or in the park, and while driving at eight miles an hour should show as though he were going twelve. As he draws special attention everything must be in perfect keeping. He should be well harnessed, showing any amount of spirit while going; he must look as well standing, his legs placed well under him, for our high steppers must be sure footed. His head is carried naturally and well. He is a horse essentially for pleasure, to be used by men of wealth or business men to drive back and forth from residence to counting house. The horse alike for the city swell or the girl of the period. He at once inspires life to the driver and those in the carriage drawn by him. The Hackney horse of past days was used for long journeys—he was more a horse for work than for pleasure. The advent of railways changed the whole requirements of the horse. Short distances to the railway stations, the park, the street—he has to appear in the most attractive form—therefore the high stepper, with probably enough work for exercise, will perform what is required of him, while for long journeys the highest steppers may not be so suitable as a horse with less sensational action. Horses are required to have the same attractive paces for dog cart and tandem teams, or our now popular box carts. When driven single the horse makes the whole display in himself, as there is nothing about the vehicle and appointments which does not derive its appearance from the horse and his manner of going. Just what the thoroughbred has been in improving the quality and endurance of our horses for saddle and harness purposes this breed of Hackneys should accomplish in bringing up the appearances of our horses. We have scores of mares with breeding and endurance and other good qualities that go a long way towards making good carriage horses, but they lack attractiveness in their gaits. In trotting we have been accustomed to see our horses ape the action of the fast trotter, which is for speed. The long quarter, the thin stifle and shoulder, which is quite appropriate for the skimming along the road motion, which in the trotting horse has been developed. This is just as much out of place for an attractive turn out as the high stepper would be for the race track. The Hackney stallion should work wonders in the much needed line of improving the style of going in our horses. A stud book for this horse has been started of late years in which the breeding is as carefully recorded as in any other, and the Hackney is likely to become as popular in Canada as he has been in his native home.

Manitoba Experimental Farm.

The new buildings at this farm are progressing nicely and nearing completion, and will add materially to the appearance as well as convenience of the place. A silo is being built in the west end, or, properly speaking, two silos, as it will be divided, making one small one and one medium-sized one. In excavating for the foundation last fall a spring was found of such dimensions as to necessitate the abandoning of the original site and selecting another. A good foundation was secured, and now, on making a slight excavation near the centre of the large basement, a nice spring has been struck that will furnish a supply of excellent water for the stock and not in any way interfere with the foundation. Some additions and improvements were suggested by Prof. Saunders on his recent visit to the Superintendent's residence in course of erection, which will add materially to the appearance and convenience of it. There is no material change to be noted in the grain experiments referred to in our last issue, all of them, so far as can now be ascertained, turning out as then promised. When the grain has been harvested and threshed, and the exact results known, they will publish in the *ADVOCATE*. In the grasses there is no change, except that the "drop seed" varieties are promising a most abundant yield, and would, if mown even as they now stand, some two feet apart in drills, yield at least one and a-half tons per acre.

Agropyrum Caninum, which had grown two and a-half inches long in the spring by the time the prairies were nicely green, will not be valuable as a late pasture, although invaluable for that purpose early in the season. Bromus Ciliatus grew well in the spring, and while not making an excessive growth later keeps green well, and will afford pasture later than Agropyrum Caninum.

Elymus Americanus promises to be a great acquisition, and would yield close to two tons per acre even in the drills, while Elymus Virginicus is but little behind it. While the practicability of growing abundant crops of these native grasses has been fully demonstrated, their nutritive value has not as yet been ascertained; but, as soon as the chemical analysis at Ottawa is completed their values, as compared with timothy and other hay, will be published in the *ADVOCATE*. A great number of varieties of corn have been sown and a vast amount of stalks have been grown, which would lead the casual observer to suppose the crop a success. That such is the case, however, must not be hastily assumed, as some of the varieties, while making great growth, are such as has been found by practical men to be unprofitable in Ontario, from the fact that they grow stalks only, and do not reach a sufficiently advanced stage to contain much nutriment before the fall frosts, even there.

The corn experiments of this season, while carefully made, can only prove instructive as a matter of comparison, from the fact that the rows are too close and the stalks too thick in the row to allow the crop to develop as it would do under different treatment. This much has been shown, however, viz.: In fairly favorable seasons some of the varieties will reach the milk stage, which will render ensiling practicable. It is to be regretted that a portion at least of the crop was not planted under conditions more favorable to development. But, "Rome was not built in a day," and time is necessary to reach definite results. The millet and hungarian plots will yield from two and a-half to three and a half tons per acre of well dried feed, and some may even exceed that amount.

Raising Hogs.

BY WM. CHAMPION, REABURN, MAN.

I will tell you the method I find most profitable in handling pigs and raising pork in Manitoba. It is an old saying, but only partly true, the breed of the hog goes in at his mouth, and I am glad to find that this old proverb is passing away. I will not try and tell you which is the best breed, further than to say any pure breed that you fancy. The Improved Berkshire is and has been my fancy for twenty years, and I have yet to learn of a more profitable sort before I give up the blacks with their white tips. This subject I will try and explain in such a way that any beginner in pig raising may succeed. First, buy your pigs from the most reliable breeder. I would advise for raising brood sows that they be farrowed in the spring, kept enclosed in such a way that they will have lots of exercise, and at the same time have your enclosure so secure that they never get out, for the habit of fence-breaking is easily learned and never forgotten by the old sow. The treatment I give my brood sows the first year is:—I let her have one litter of pigs, and after that she may have two litters each year, and will, if well cared for, keep up this production for seven or eight years, provided they are well fed and have plenty of exercise, and as good a place for them to winter in is the straw yard, but it is not the place to feed them in our cold winters. As convenient a way as I can devise is to have an empty stall in the cow stable where the sows will come for their meals, and as soon as they are fed are again turned out, either to go to their abundant straw bed or bask in the sun. I think there is no animal that the time of bringing forth their young can be so well calculated on as the pig, 112 days being the time almost to the hour, so we can easily arrange for the young pigs coming almost any time we want them. The sows must all be kept separate at this time. Each sow should have a dry, comfortable, warm place, with level hard floor. I believe in plenty of bedding, if light and dry. Feed the sows liberally with all kinds of food, but not of heating kinds of whole grains, and let nature take its course, and in nine cases out of ten your young pigs will come all right. I leave the young pigs on the sow until they begin to eat out of the trough. At times the young pigs will begin to eat much younger than others, and we always count on having the second litter 116 days from the time of weaning. The main point in raising young pigs is to keep them dry and warm, with plenty (all they will eat) of whatever is the cheapest feed. Get them on pasture until harvest, then on the stubbles, and from the stubble field to their feeding pen. Never let them lose what they have gained, and by doing this we can make pork-raising pay. I have tried many ways of feeding or topping off my pork, and was a long time before I fell in with my present plan of feeding, that of whole barley always before them, the dryer and harder the better, free access to pure water at all times, and I find they will lay on more flesh with less labor than any other way.

Mr. George Rogers, of Plumus, has two fine young blood horses, one yearling stallion and a young mare of two years, both doing well and giving promise of being heard from later.

A correspondent of Hoard's Dairyman says:—We have time to read dairy literature, and sell our surplus butter for twenty-five cents per lb. cash, while many of our friends and neighbors have no such time to read (so they think), and sell butter to the road grocery at eight cents and take it in trade.

Sheep Breeding a Profitable Industry.

BY ALDERMAN FRANKLIN.

Read before the Canadian Sheep Breeders' Association.

Why not followed in Ontario to a greater extent? Grain crops don't pay, and cattle are not as high as they were, yet the Canadian farmer realizes three-quarters of a cent more for his fat cattle per pound than the feeders of the United States.

Sheep are high, and indeed very scarce, but a man may travel all through Ontario for a year and he will never see from out of a railway window 100 sheep in a flock; if he does they are the collection of some drover who has collected them together in twos and threes awaiting shipment to some market. Of late years, owing to the higher price of Down wools, the use of rams of the larger Down breeds upon the Leicesters and Cotswold cross that constitutes the common sheep of the country, has been prevalent, and we must admit there has been an improvement both in mutton and fleece. All, however, are bought up to leave the country and our stock is short. Our farmers should turn their attention to sheep, for sheep demand only little, and very light attendance. Two hundred sheep can be cared for as easily as twenty cattle in the winter; they should have the run of big pens with constant access to an outside run, for sheep, more than any other animal, must have exercise and fresh air, be it ever so cold. They don't like damp weather, but cold weather they do not mind. There are no stalls to clean out, no chaining and unchaining, no milking, no conveyance of milk to the factory. The litter of a sheep pen need not be moved until the spring; they get higher, but no harm is done, and it is the best manure a farmer can put on his land. In summer it is easier to move 200 sheep from one enclosure to another than two head of cattle; they follow readily, and there is no racing about after them. It is calculated that seven sheep eat as much as one bullock eats in five months, whereas the sheep's tread is known as the "golden foot." Our natural June grass or wild pasture is exactly suited to them, and they only want an occasional top-dressing and chain harrowing to make as good and close a sod as is found in Hampshire or Sussex. If farmers would become flock-masters they could do with half the fencing, and sheep follow cattle to great advantage. The "big bite" of grass in early June can be fed off by cattle, finished with some meal on the grass; the sheep follow and bite closer and like a short nibble. They should be driven from one pasture to another at least once a week, for they hate the ground that has been stained by their own species. Then see how quickly they come into profit. A good Down cross will clip 10 lbs. of wool when a year old, and at the same time next year will have one or two lambs and another fleece to dispose of. There is nothing on the farm that pays so quickly or so well. Here we are, free of the diseases that decimated the flocks of England. The liver-fluke and the rot are comparatively unknown as is foot rot, all of them being plagues resulting from them being too thick on the ground in the Old Country. All that we have to guard against is contained in the old legend "Beware of the Dog." I believe this is a principal reason why more sheep are not owned, and the township laws allowing a proportion of

the value for worried sheep is not a method of compensation but makes up for the risk. It is a terrible risk and few owners have escaped heavy loss from this source; but surely it is avoidable if proper precautions are used. Opinions will differ as to the breed of sheep to be adopted, but I am not speaking of the sheep breeders and importers who have select breeding flocks and sell for fifty dollars a head. What we are talking of is why should not flock-masters of 300 or 400 good mutton sheep take the place of the scraggy, wretched, half-dozen crosses that one sees around the outbuildings of most of our farmers, and from which the itinerant drover has to procure his wares. I think no good reason except the dog worry exists, for keep and care are cheap, and so are the buildings. The cheaper and airier these are the better the sheep will do. Costly buildings and frost-proof would be worse than thrown away upon them. Are not all these reasons for trying sheep farming here? Early lambs are in great demand in large cities, and there is no risk having lambs come in dry, cold weather if 24 hours protection is afforded to the little ones. If proper precautions were taken I believe there would be no greater death rate among lambs coming in January than in May, and the ewes will take the ram after the first cool nights in August. But the early lambing is not the only recommendation. Sheep are scavengers and eat away the weed crop in the fence corners and out of them. Nothing but wild grass, natural pasture, can stand the constant bite of sheep and live.

I have shown that they are remarkably free of the diseases that assail flocks in the Old Country; that they take but little attention; come into profit sooner than any other flock; improve the farm rather than drain its resources; subsist on natural pasture; are best housed in the cheapest buildings, and possess every attraction for our farmers. I believe they will yet resort to sheep farming, and we shall see flocks of 100 where we now see ragged, disconsolate half-dozen. There are plenty of good sheep in the country for the propagation of rams that, put to the cheaper ordinary ewes of the country, will suffice for the production of large flocks of mutton sheep, and make them at least as common as the notable little flocks of breeding Shropshires, Southdowns, Oxford-Downs, Cotswolds and Leicesters are now in all parts of the Province. It is foreign to the purpose of this paper to enter upon details concerning the feeding and care of sheep. Nearly every farmer knows enough of that, but I may say that the sowing of rape is employment for a slack season of the year, and sheep are greatly improved by feeding on it before going into winter quarters; they have better carcasses and better fleeces, and it pays, as also does early pasturing of them on rye, which can then be ploughed in time for the summer crop of something else.

What I should recommend would be the establishment of large flocks of ewes and the use of a Shropshire ram. This would improve the mutton and give more size than the cross with the Southdown. Shropshire sheep, too, are very hardy and thrive on land where Leicesters or Cotswolds would not succeed.

If a breeder is dishonest a shrewd man will often detect it in a short correspondence relating to stock, but it is well to remember that a breeder may be perfectly honest in his statements and still his judgment may be faulty from lack of experience or education. Especially is this true of young breeders.

Judging by a Scale of Points.

BY DANIEL F. BOISSEVAIN, HILVERSUM FARM, CANNINGTON MANOR.

At the first meeting of the Association of B. B. C. B., of Manitoba and the Northwest, I had occasion to make some remarks regarding the scaling of animals by points as was customary in the Netherlands (more generally known as Holland), and in Holland, as you well know, only the one breed of cattle exists, generally termed Holsteins on this side of the water. Kept entirely free from admixture of foreign blood, it was plainly evident that the actual practical value of cattle greatly increased, according as they were more systematically bred, and intelligently fed and handled. Individual men, as well as whole districts, plainly evidencing the fact. The live men grasped the situation at length, and realizing the benefits to be derived from concerted action, they resolved to form themselves into Herd Book Associations. Although one in the great outlining characteristics, the difference in secondary aspects is marked throughout the Kingdom, and thus we find a separate family of the universal breed in almost each of the Provinces, and in consequence one Herd Book Association for Friesland, one for Groningen, and another for Holland, Gueldreland, etc., differing, like the cattle, only in particulars.

I will confine myself more closely to the actions of the North Holland Herdbook Association, which was founded somewhere about the year 1880.

The question naturally arose, How are we to decide what cattle shall register as pure bred, or rather models of the breed, and which animals shall be prohibited? The answer was, We shall only register such as give marked proof of excellence and debar the inferior ones.

It was acknowledged that the exterior of a beast gives undoubtedly proof of its real usefulness, and that accordingly as each component part of an animal is developed to a greater degree of perfection, so the functions of these parts will be more fully performed. This could be so clearly demonstrated that a certain value was allotted to each part of an animal's outward anatomy. We find, therefore, a scale of points, the sum of which denotes perfection, for which high standard 100 has been taken.

It was agreed, for instance, that a fine head, thin, smooth, transparent, moderately bent horns, clear bright kind eyes, should each have three points; a dark shining ring around the nose, a thin straight neck; etc., should each have 2; a kind look 4 points; a good udder 8; heavy crooked milk veins 10; great size and weight 6. And then for the escutcheon we find: Yellowish color and oily appearance 5 points; a little fine silky hair thereon 4; large, broad escutcheon, without long hair around it, 6; etc., etc.

In every district, forming part of the Association, inspectors are appointed whose duty it is to determine the number of points attained by each animal for which registration is desired, and to report to the committee, and they strike out all animals, whether of registered parents or not, that do not tot up to the minimum, while all those admitted are classified, as, for instance, will be shown by a few abridged pedigrees.

BULLS.

No. 51, Barrington II., sire Barrington No.

278, N. H. B., No. 2103, H. H. B., dam Pastelijntje, No. 831, N. H. B.; calved February 15th, 1885, etc., etc.; escutcheon class 7th, order 2nd. No. 74, Jacob (sire and dam not recorded), calved, etc., etc.; escutcheon class 2nd, order 2nd.

COWS.

Frijntje (no recorded parents), calved, etc.; escutcheon class 1st, order 5th. No. 1566, Geesje II., sire Barend, dam Geesje I., calved, etc.; Escutcheon class 4th, order 1st.

It is easily seen from the above illustration that such inspectors must be men of whose honor there can be as little doubt as of their efficiency, as they decide, not merely upon the taking of a prize, but upon the whole future of the animal and its offspring even.

In the face of these difficulties registration in the Herd Books is becoming more and more general, putting beyond all doubt that stock can be judged by points accurately and satisfactorily.

Errors in Sheep-breeding and Feeding.

Read before the Canadian Sheep Breeders' Association by John Campbell, Jr., Woodville, Ont.

It has been well said that "he who never makes a mistake never makes anything," yet it is only as far as we are taught how to shun misfortune that the considering of past errors will be useful. I am sure every breeder present can recall some mistake in judgment or practice when dealing with the flock, which, though causing a present loss, has ultimately proved a cheap bit of experience; the lesson taught acted as a guard against more and probably worse mismanagement. No doubt it is more pleasant to think and tell of our hits, but valuable information can be had from recounting our misses, which may show the more fortunate, or beginner, how to avoid disaster.

The want of a definite aim is perhaps as common an error as is to be met with among would-be breeders. Some breed or other is fancied and the foundation of a flock purchased with little knowledge of the breed's characteristics, less consideration of the suitability of their farms for the fancied animals, and still less thought of what market will be found for the expected surplus stock in after years. Time passes and disappointment steps in; the flock is not up to an average standard, so sales have been slow and at low figures, many going to the butcher, and the particular breed is set down as a failure by owner and unthoughtful neighbors, while an experienced eye would readily trace the failure to errors in selection and management.

But the most practical and experienced men do not meet with unbroken success. We have here to-day as careful and successful sheep-farmers as can be got together in this country, yet is there one who has not regretted some time or other a step which was the source of vexation and loss? A ram was used which did not exactly please, but on the score of economy or convenience he was put in the flock with the result of the produce being far from what was wanted. Or a male has been used in form and character as near perfection as it is possible to get them, perhaps carrying show-yard honors, yet the outcome did not prove satisfactory. In this case the mistake was in using a superior animal when out of proper condition to reproduce and transmit his excellent qualities to his get. It certainly is a loss to many breeders that our fairs are held so near the coupling season

when it is necessary to have sheep in too high condition for successful reproduction, because decisions are often given according to plumpness given by excessive feeding.

Placing a ram in the flock which lacks in some feature strongly wanting in the ewes will surely stamp that want more fixedly in the flock. It is well to have any point of excellence lacking in the ewes largely developed in the sire, while he should at least be fairly well proportioned in all points.

Apparently excellent rams in all respects have sometimes proved wretched failures as getters, simply because their good qualities were possessed by some chance, not being fixed by continuous breeding in one direction, so their mixed blood showed itself in offspring of many types. We should therefore pass by a ram of uncertain breeding, let his appearance be ever so pleasing to the eye.

When the increased value of one crop of lambs from twenty ewes, when sired by a choice male, may be many times the difference in price between a good and an inferior one, the error of being too saving of the pocket should be avoided when selecting the head of the flock. What has been said of using rams when out of condition from excess of flesh and fat, applies with greater force to breeding ewes when in show condition, and much more so when fitted for that purpose beyond the sea, where stuffing is practised without any limit, except the disability or death of the sheep.

How many present can report the investing in Old Country show ewes for breeding purposes to be at all as profitable as the use of those in store condition? Is it not an error on our part to continue bringing them here at a great expense for the sake of winning in the show ring? They should not prove a means of building up any one's reputation as a breeder, and the sooner we will ask fair officials to offer the best premiums for breeding animals for sheep bred by exhibitor the better will it be for us, as *breeding pure and simple* will be the more encouraged and not mere speculation.

Rams can with care be gradually reduced in condition from Old Country show fit so as to be useful, particularly if not older than yearlings, but ewes often never.

Though an occasional error in selecting ewes for breeders may not be much noticed it is by having each and every one right that the greatest success can be reached. Uniformity of form and fleece will often result in sales, when the intending purchaser in looking over a lot of varying characteristics, will, if he wants a good article, be satisfied with a short inspection. What an error then to begin a flock, or continue one, having no fixed standard of excellence to take the buyer's eye or contribute to the owner's reputation as a breeder.

At the same time a mistake may be made by discarding a ewe, failing in some unimportant feature, but otherwise of good quality. We should always bear in mind that mutton and wool which will bring the highest prices at the least cost are the profitable products in sheep-raising, so that fancies in the way of a much-covered head in this breed, or a bare head in that, should not be carried to extremes. Here I may say that at the Royal Show at Windsor last year a ram in one of the shearing classes was defective in a point which many judges in this country would so condemn as to leave him without an award, yet there he was given second place among some 140 competitors, and in a two-shear class one with a somewhat similar defect won second place also. But with all due care in selection and mating a very great deal depends on proper feeding. In years gone by I have had serious loss of lambs caused by the liberal feeding of roots to in-lamb ewes. While roots are so beneficial to the growing sheep and ewes after lambing, abortion or the dropping of weakly lambs, follows the feeding of roots, except in moderation, to lamb-carrying ewes, and mangolds are particularly hurtful. Of late years I have met breeders who could not account for the appearance of half-rotten lambs, or weak, puny things, with just a spark of life, which soon died. In every instance the error was in too free a use of roots, and usually mangolds.

Loss of lambs, as well as of ewes, result from

feeding much grain to breeding ewes previous to lambing, but it is a mistake to allow them to fail in condition, so that there is a scarcity of milk at a critical time. Overfeeding, which causes garget and other disorders, and underfeeding, soon seen in stunted lambs, are to be avoided. The alternate stuffing and starving occasionally seen would soon ruin the best flocks. It is the happy medium of so feeding as to secure a continuous growth from the birth to maturity, and maintaining a moderate and uniform condition afterwards, that will give us the best returns for our labor in producing mutton and wool, or sires to be used in pure-bred flocks, or to improve the grade flocks of our own country and other lands.

General Purpose Cattle.

A correspondent of the Holstein-Friesian Register says:—"The low price of dairy products in the West does not justify the average farmer to raise an exclusive dairy animal, neither does it pay to raise an exclusive beef animal." The writer, it is needless to say, makes this statement as a contention that the Holstein-Friesian cattle are the great general purpose cow of the day. We have no quarrel with him on the merits of the Holstein cattle; they are a useful breed, as any one who has watched their progress in America must admit. Booms may help a breed for a short time, but the last end is worse than the first; hence we say the Holsteins must have intrinsic value to have been able to reach the place they hold in the estimation of the American public. But is it as a general purpose cow she excels? Not by any means. While the present system of proving milk is in vogue she is the best of cheese cows to the individual farmer, whatever she may be to the cheese industry at large, and if the persistent efforts of the past five years are continued for a decade there is little reason to doubt that she will be equal to the best as a butter cow. But if a dairy cow, bred and developed for that special purpose, can not be made profitable, and a beef animal, bred and developed along that line, and for that purpose only, must be kept at a loss if kept at all, how in the name of common sense are we to unite these two losing productions and make them profitable. If an animal could be found that would produce as much milk and as good a quality as the dairy breeds and as much beef of as good quality as the beef breeds and at the same time cost the same to feed as one of these animals then we might claim a place for a general purpose animal, but at present they are, as a breed, a mite. True, on our prairies, where the pasture and hay costs usually little or nothing, almost any cattle will yield a profit, but what we claim is, that under any and all circumstances, where a general purpose animal yields a profit, a special purpose animal would yield a greater if the breed best adapted to existing circumstances were adopted. Who are our best mechanics? Are they not men who have made their trade or calling a special study all through life? We find handy men everywhere, but they never make a success of any line. Who are our most eminent divines? Are they not men who have not only studied theology but have thrown the whole energy of their lives into their work? True, there are men following the plough that can preach a very good sermon, but are they not far from the top of the ladder? Who are our best doctors? Is not the same reasoning applicable? There are many quacks or general purpose men, but when we are sick unto death we do not call on them—we want the special purpose man. Quack doctors, quack preachers, quack mechanics and quack cows all must take second place.

Chatty Letter from the States.

[From our Chicago Correspondent.]

After the severe depression in cattle prices, owing to excessive receipts, prices advanced 30 to 50 cents per hundred pounds the middle of August, good 1,400 to 1,600 lb. cattle selling freely at \$4.80 to \$5.00.

The remarkable drought which has extended over so wide a scope of country has had the effect of materially changing the entire situation in the live stock world. It has also served to show how very dependent is our American farmer on the crop which our British cousins, who prepare stock for the shambles, are independent of, namely, Indian maize. Early in the season the general prospects for a big corn crop were excellent, and there seemed to be no good reason why there would not be an unusually large number of animals fattened during the summer and early fall. In most localities there was a goodly supply of old corn on hand, and it was the most natural thing in the world that, in the face of good crop prospects, there should be a free use of it in making early beef, pork and mutton. The scorching rays of the sun poured down and the rain fell not. The pastures dried up and the price of corn went up. Farmers who had old corn on hand began to feel that it was worth more as a cereal than in the form of marketable meat, and those who were dependent upon the stores of their neighbors immediately began to sacrifice the cattle whether one-fourth or one-half fat, or not fat at all. The result has been a very heavy over-marketing of cattle and hogs not at all fit for market and of course a collapse in prices.

Western ranchmen are a little disappointed at the low opening of the markets for their class of stock, but they were unfortunate in starting in just when the dry weather was forcing in such large numbers of unripe native cattle. A good many well informed dealers seem to think the late sales of western range cattle will be the best as they think the panic caused by the drought will be only temporary and that a strong reaction is bound to set in.

While corn feeders are sacrificing their young cattle many of the heaviest cattle and meat dealers are showing their faith in the future of the general market by purchasing freely of cattle to put on feed in the distilleries and glucose factories.

There is more life in the demand for well located cattle ranch properties than for years past, but at the same time some of the heavy companies in the Northwest are at this time sending to the butcher thousands of cows and yearlings. Thus we see the trade is full of anomalies, but if it were not for this difference of opinion there would be less incentive to trading than there is.

The live cattle export trade is not very brisk, but there is a good free movement all the time, and if it were not for this outlet American cattle would be selling much lower than they are.

R. H. Whitsett, Alledo, Ill., had in a load of cattle averaging 1,320 lbs. that brought \$4.75. They were grade Shorthorns.

W. S. Vannatta & Son, Fowler, Ind., marketed fifteen 1,510-lb. Herefords at \$4.75.

D. A. Hancock, Blackburn, Mo., marketed three loads of nearly purebred Polled-Angus, his own feeding, which averaged 1,420 lbs. and sold for \$4.85 and three loads of the same cattle

averaging 1,464 lbs at \$4.92½ the following day when the market was higher.

The western range cattle have sold lately at \$3.10 and \$3.75, for fair to prime 1,075 to 1,240 lbs., wintered Montana Texans. For the week ended August 2nd Chicago received 85,890 head of cattle, not counting 5,380 calves, being the largest week's receipts on record.

Hogs will be scarcer than expected this winter, unless the corn crop is much better than now seems possible. There will probably be no material shortage, but it was expected that the winter crop of hogs would be a large one.

Our Clydesdale Letter.

The season of 1890 will long be memorable as one of the most exciting amongst Clydesdale breeders in Scotland. The show of the Royal Agricultural Society of England at Plymouth in the end of June and of the Highland and Agricultural Society of Scotland at Dundee last week were both remarkable in their way for the Clydesdale representation that was forward on both occasions, and two unexpected, but not therefore erroneous decisions. The two horses bred at Craige, Ayrshire, and own brothers Mr. Gilmour's Prince of Albion and Mr. Kilpatrick's Prince of Kyle, after remarkable runs of success have both had their colors lowered and suffered defeat. Prince of Albion, the older of the two, and possessing the greater balance of Clydesdale characteristics, has performed the unprecedented feat of winning first prize four years in succession at the Highland and Agricultural Society's Shows, viz., at Perth in 1887, Glasgow in 1888, Melrose in 1889, and Dundee in 1890. When passing one his appearance is altogether pleasing, and the beauty of his form and gaiety of his carriage have rarely been equalled and never excelled. He is a bay horse with four white feet and pasterns and a white stripe on face. His weakest points are his back, which is a little plain; his thighs, which are not so well developed as might be, and in his movement he walks rather wide behind. His surpassing balance of merit in every other detail has rendered him perhaps the most uniformly popular Clydesdale stallion of the half century which has intervened since the National Society of Scotland last held a show at Dundee.

But we have said that he has been beaten. The vanquisher was Prince Alexander, a yearling, bred like Prince of Albion, sire Prince of Wales 673, dam by Darnley 222, a cross which seems never to have failed—no fewer than three of the first prize winners at Dundee having been so bred. Prince Alexander was bred by Mr. Alexander Black, Craigenrosh, Stranraer, and his owner is Mr. William Renwick, Meadowfield, Corstorphine. He was never before exhibited but stepped at once into first place, and in competition with all the first prize winners secured the Clydesdale Horse Society's Championship of £25.

Mr. Renwick also owned the first prize three-year-old stallion, Darnley's Last, whose sire was the celebrated Darnley and his dam a Prince of Wales mare. This horse will not be three years old until the 7th of August. He is a richly colored horse with scarcely a speck of white on his uniform coat of deep dark brown, and he moves freshly and with sufficient activity.

Mr. Peter Crawford, Dumfries, is owner of the first prize two-year-old stallion Prince of Carruchan, whose dam was also dam of the champion female Clydesdale Sunrise, owned by

Mr. Riddell. The sire of the dam of these animals was got by the well known horse Old Times 579, and her owner is Mr. John MacCaig, Challock House, Teswalt, who bred the fourth prize yearling filly, the first prize two-year-old filly Scottish Snowdrop, which has never been beaten, and the two animals already specified, Prince of Carruchan and Sunrise, a feat never before equalled in the annals of Clydesdale breeding.

Mr. R. Sinclair Scott, of Craigievar, was also a very successful exhibitor. He was first in the brood mare class with his fine mare Scottish Marchioness; second in the class of three-year-old fillies, with the beautiful Darnley mare Scottish Rose, and first, as we have seen, with Scottish Snowdrop.

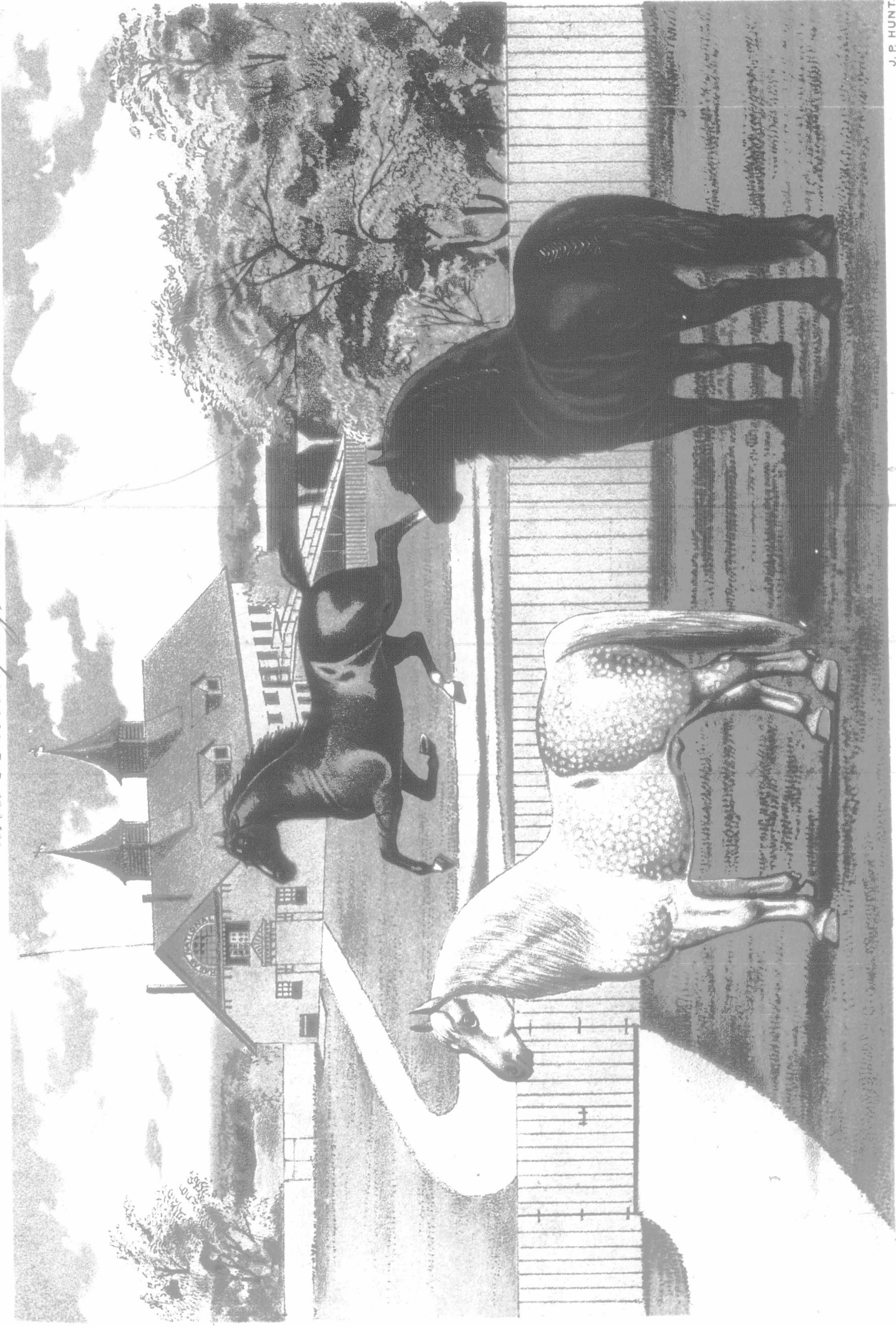
Mr. Gilmour, of Montrave, Fifeshire, the owner of Prince of Albion, had great success. He was first in the class of three-year-old mares with Montrave Gay Lass and in the class of yearlings with Montrave Maud, both of which were bred by himself out of two of the grandest mares ever exhibited. These were Lasso Gowrie, the dam of the first named, and the more celebrated Moss Rose, the dam of the second. The sire of Montrave Gay Lass was Garnet Cross, and of Montrave Maud, Prince of Wales, whose produce were numerous and marvellously successful at this show, as indeed they have been at every show this season.

The great sensation of the Royal was of course the defeat of Prince of Kyle in his class and the victory of Mr. Andrew Montgomery's unknown horse the Macara 7991, a son of the celebrated Macgregor and the champion of the Royal Show. This magnificent horse will doubtless cause a stir in America. He has been purchased by Colonel Robert Holloway, Alexis, Ill., and is a massive, powerful stallion. Mr. Robert Graham, Claremont, Ont., is here at present and does not know how to express his admiration for this great horse, which he would doubtless have tried to take to Canada had not the horse been bought before he arrived.

Great activity prevails amongst breeders in the hiring of horses for next season and remarkably high terms have been agreed on for several horses. Amongst horses owned, by Mr. Peter Crawford, Lord Erskine goes to Dumfries district at £10 per mare with £3 additional for each foal, Prince Robert to the Rhins, of Galloway, on similar terms, and Prince of Carruchan to Perth and Brechire district at £10 each mare with £5 additional for each foal. Mr. Andrew Montgomery has hired the ever famed Macgregor and the young horse Prince Darnley, that was first at the Royal, to the Kirkcudbright district, and he has sold the celebrated Sirdar to the Fortmartine and Garioch Club in Aberdeenshire for £1,400, the highest price, I think, that has ever been paid for a horse of his age. Mr. Galbraith's Lord Ailsa is let to the Gorvan and Ballantrae district at £6 a mare and £6 additional for each foal. Mr. Renwick's Darnley's Last goes to the Machars of Wigtownshire at £10 each mare, payable at service, and his own brother Royalist, owned by Mr. Lumsden, of Balmedie, to Moray and Ross, where Cairnbrogie Stamp has been three seasons on handsome terms.

In my next letter I shall hope to give some details regarding the more notable horses exported to Canada this season. We have had visits from nearly all of our old friends and their purchases have been of high quality. We have missed the kindly face of our tried friend Mr. Robert Beith, Bowmanville, Ont., whom we hope to see later on. SCOTLAND YET.
Glasgow, Aug. 4, 1890.

Supplement to the *Farmers Advocate* London, Ont.
and Winnipeg, Man.



THE LONDON PTG. & LITHO. CO.

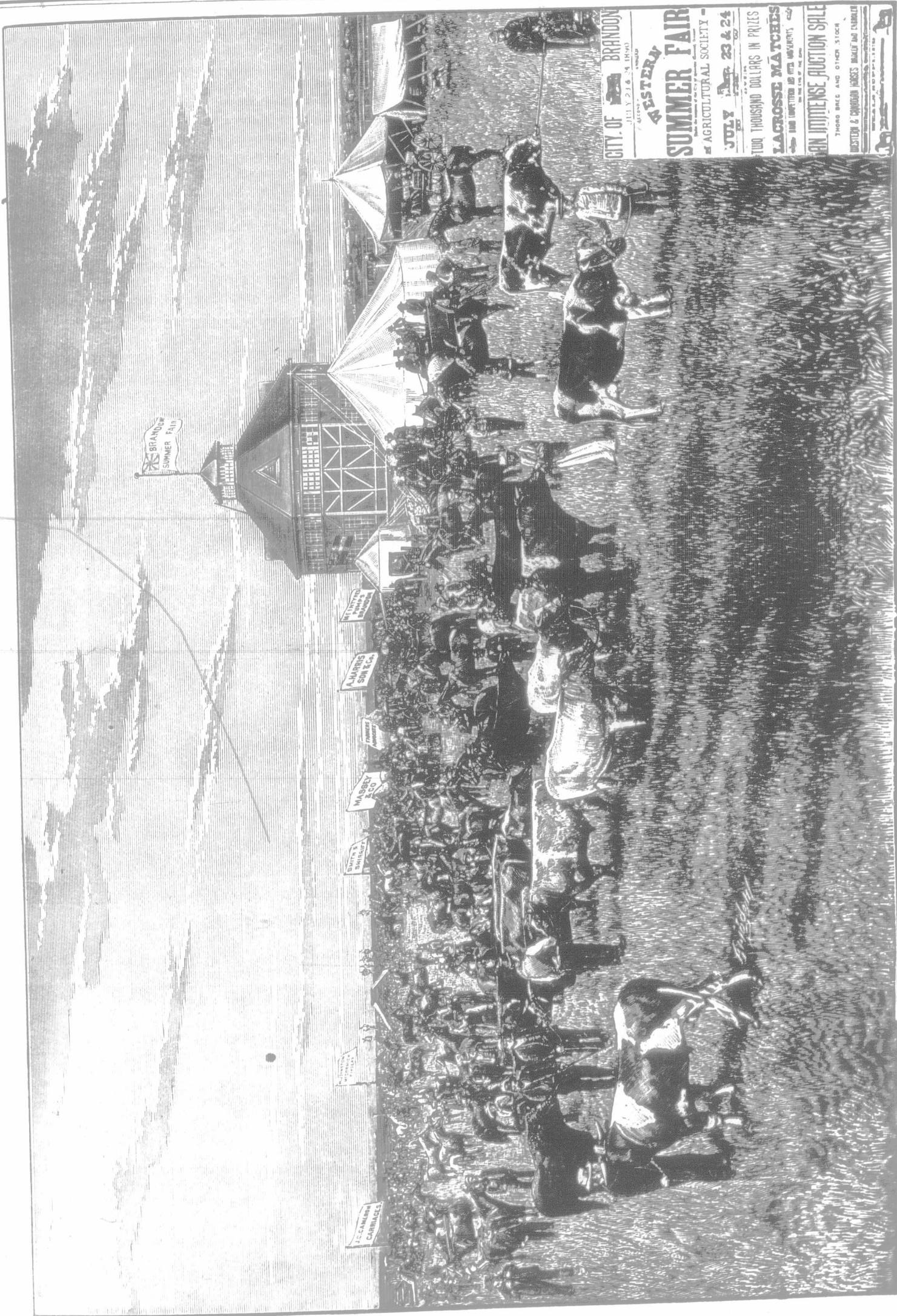
ROI DE BIGNON (1499).

MARQUIS DE PUISAYE.

JULY (15168).

J. P. HUNT.

Percheron and French Coach Stallions. The property of THE HARAS NATIONAL,
30 St. James Street, Montreal, P. Q.



CITY OF BRANDON
JULY 21 & 22, 1890
ASTORIA
SUMMER FAIR
AGRICULTURAL SOCIETY
JULY 22 & 24
TWO THOUSAND DOLLARS IN PRIZES
LACROSSE MATCHES
GOLF MATCHES
CONJUGATE AUCTION SALE
THIRD WINE AND OTHER STOCK
MAYNARD & COMPANY HORSES, BUILT AND FURNISHED

Brandon Summer Fair.

The illustration of the Brandon Summer Show is produced direct from a photo taken on the first day of the fair, and shows plainly that it is quite unnecessary to go to the east or south of our provincial lines to see a good exhibition of fine stock, as there are animals here illustrated that have won honors both in Ontario and in the Mother Country. While the stock is to many the most interesting feature of the show the mechanical exhibits are of great interest as well. The Massey Co. show, as usual, a large assortment of agricultural implements and machinery. Their new binder was much admired, while the old one that has stood the test for so many years had its share of friends, and their traction and portable engines were objects of much attention as well. Messrs. Smith and

cars. Mr. Cameron prides himself on turning out a superior article, and to this end exercises a personal supervision of each department of his work, and the result is the production of an excellent class of goods. Messrs. Redmond & Emmerson had on exhibition one of their neat cottage-roof tents, which they are now manufacturing, as well as everything in that line.

Hope Farm.

This farm, which forms the subject of our illustration, is situated four miles south west of the village of St. Jean Baptiste, a station on the Northern Pacific and Manitoba Railway, forty-seven miles south of Winnipeg in the Red River Valley, and is the property of Mr. Wm. Martin. Hope Farm contains sixteen hundred acres of most excellent soil, as anyone familiar with the

from the east by the time this reaches our readers. The herd consists of twenty-five head of Galloways of choice breeding, and a number of grades. Among the Galloways are three fine bull calves, which will be suitable for service next season, and, which it is to be hoped will be secured by Manitoba men, and thus kept in the country. At the head of the herd is Black Crusader, an animal of superior breeding and individual merit, as indeed are the entire herd. There are at present between two and three hundred sheep at Hope Farm, but as the greater part of the grazing land will be broken next spring, Mr. Martin is desirous of disposing of them before that time. The farm is under the management of Mr. J. G. Brown, formerly manager of the Bow Park Farm near Brantford, Ont., and in his earlier years in the employ of the



A VIEW OF THE HOPE FARM, ST. JEAN BAPTISTE, MAN., THE PROPERTY OF MR. THOS. MARTIN.

Shirriff had on exhibition the Cornell traction and portable engine, and Ohio Leader Separator, manufactured by Messrs. Haggert Bros., of Brampton, Ont.; the all steel binder, manufactured by Wm. Deering & Co., of Chicago, Ill.; wagons and buggies, by Lowrie, of Sarnia, and Dire harrows and plows, manufactured by and for the John Watson Co., of Ayr, Ont. The old reliable firm of A. Harris, Son & Co. showed their light steel binder, mower, rake, combined drill, the Cockshutt walking and sulky plows, Bain wagon, Bungay cultivator, Brantford harrows and sleighs. Mr. McIntyre, of Brandon, exhibited several kinds of wood and iron force and suction pumps, as well as a new patent foot proof pump of his own invention. W. Johnston showed the McCormick binder and mower, Stanton Clipper sulky and walking plows, Clark's Cutaway harrow and the Draden spade harrow. Mr. J. C. Cameron showed a nice two-wheeled pleasure wagon; some fine buggies and

locality must be aware, and at the time of writing promises an abundant crop for this season. There are on the farm this year six hundred and fifty acres of wheat, most of which is now in shock, and promises well for fifteen thousand bushels No. 1 hard, although Mr. Martin estimates it at thirteen thousand. There are also one hundred and seventy-five acres of oats, that will yield ten thousand five hundred bushels. There are also eighty acres of barley, corn and other grains, and ten acres of roots and potatoes. Mr. Martin has had this farm but five years, but has planted in that time twenty-five thousand forest trees, almost all of which are doing nicely, those first planted now forming a nice grove, as may be seen by the illustration. The entire farm, so far as broken, is in a good state of cultivation, and is a credit to the section of country in which it is situated. There are at present thirty horses on the farm, and a carload of Clydesdale mares will have arrived

celebrated Amos Cruickshank, of Sittyton, Scotland, the originator of the Cruickshank cattle, from whom Mr. Brown holds a recommendation in Mr. Cruickshank's handwriting.

Whether fashion be right or wrong, it is a pretty good hobby to ride in breeding horses for money. In breeding trotters fashion follows success, and success follows merit.

A new law in Indiana pertains to the service fee of stallions, and requires registry of stock horses with the clerks of Circuit Courts. One of the requirements of the law is as follows: "That a copy of such license, embracing such sworn statements and pedigrees, with the fee the owner proposes to charge for service, shall be posted by the owner of such sire in two or more conspicuous places in the vicinity of the place where the sire is kept for service, and should any part of said sworn statement be to the knowledge of the owner of such sire, false in any particular, the owner shall not be entitled to collect any fee for such service, and the falsity of such statement, or any part thereof, may be pleaded in the bar to any contract or account for services of such sire."

Ertel Hay Press.

The illustration on this page represents one of the leading hay balers. The name of the Ertel presses have been as common as household words for many years among hay shippers in the United States, where they have been in use for twenty-four years. Messrs. Geo. Ertel & Co., London, Ont., have been manufacturing them during the last year, since which their presses have been in great demand, and are taking the lead for their simplicity and durability. The rapidity with which they do their work, combined with the compactness and smoothness of the bales, make them popular with all who have used them. The proprietors guarantee their "Victor" press to do as represented, or no sale. They offer to ship responsible parties one on five days' trial. Those who contemplate purchasing a press should write them for particulars, and will receive a descriptive circular containing prices, &c., by return mail.

who practice it. In this, as in every other matter, there is a best time for everything and it is of importance for the farmer to know, not only just how, but also when, he should wage war against his insect enemies, so that he may be prepared beforehand and act with precision at the proper time.

During this month the following insects demand attention:—

THE IMPORTED WHITE CABBAGE BUTTERFLY
(*Pieris rapae*).

Just when cabbages are heading and the grower is about to realize a return for his labor and expenditure, a green caterpillar about an inch long frequently injures the leaves and heads by eating into them and destroying their appearance. This is the caterpillar of the imported white cabbage butterfly, so called from the fact that this insect is not a native but was introduced, like many others of our injurious kinds, from Europe. The depredations of this

value even as chicken feed, but frequently a source of much harm from the number of weed seeds and injurious insects, as the Hessian fly and wheat midge, which it contains. Some of these pass the winter in a dormant state and when thrown out with screenings to feed chickens are left, as well as most of the weed seeds, and in the following spring the flies hatch and fly off to the fields of growing grain. Some of the Hessian flies, however, leave the flax seeds in August and September and lay their eggs in volunteer crops of barley and wheat, or fall-sown wheat and rye. Many of these may be destroyed by sowing strips of wheat or barley in August and early in September, which are afterwards ploughed under when the eggs have been laid, or by harrowing the stubbles directly the crop has been cut, so as to start volunteer crops, which will attract the flies to lay their eggs before the fall wheat is up. When the fields are ploughed of course the maggots which



Notes on Injurious Insects.

BY JAMES FLETCHER, OTTAWA, DOMINION ENTOMOLOGIST AND BOTANIST.
"Forewarned is forearmed."

In the constant struggle with the hosts of injurious insects, which every year deprive the farmers of so much of the product of his labors, no motto is of more use than the above, if it be acted upon and the proper precautions be taken beforehand for meeting or averting the attacks of these enemies of the agriculturist. Every crop cultivated has its insect enemies. The life-histories of many of them, however, have been worked out and remedies have been discovered by those who make a study of these matters. Having been invited by the editor of the FARMER'S ADVOCATE to make use of his paper in answering correspondence with regard to injurious insects, I shall be pleased to hear from farmers in all parts of Canada, and trust that through the pages of this widely circulated journal some of the simple and inexpensive remedies which have been discovered may be made known to many who are every year unnecessarily losing a large proportion of their crops. The systematic treatment of injurious insects is a branch of practical agriculture which is much neglected by farmers, but which, nevertheless, is found to pay extremely well by those

caterpillar are so severe in some parts of Canada that the cultivation of the cabbage has been to a large extent given up. We have a simple, safe and effective remedy in Pyrethrum, which is also known as "Insect Powder" and "Buhach." This can now be purchased of any druggist and may be used pure, but for this purpose will be found equally effective if mixed thoroughly with four times its weight of common flour. After mixing it must be kept in a tight-closed vessel for at least twenty-four hours before using. If a small quantity of this powder be now shaken over the cabbages, either by means of the small bellows sold by druggists as "insect guns," from a tin with a perforated cover, or from a small bag made of muslin or cheese-cloth, by tapping it with a short stick, every caterpillar upon which the powder falls will be killed in a few hours.

THE HESSIAN FLY.

During September a great deal of grain will be threshed and it would be well for farmers to examine carefully the screenings and rubbish from beneath the threshing machines to see if there are any of the "flax seeds" of the Hessian fly. This pest is increasing in Canada in some districts to a serious extent. A means of decided utility is the burning of all the rubbish from the threshing machine—itsself of little

hatch from the eggs will be destroyed with the volunteer crop. The burning of stubble as it stands in the field, soon after the crop is cut, is a remedy practiced with good results in the Western States. The "flax seed" is the third stage of the Hessian fly and is so called from its close resemblance to a small grain of flax. It is a smooth, dark-brown object, about one eighth of an inch in length and those of the summer brood generally occur at the first or second joint of the straw, inside the sheath.

CUT-WORMS.

Cut-worms are the caterpillars of a large class of moths known as the "Owlets," which fly at night. The eggs of many of the cut-worms which attack spring vegetables were deposited by the parent moths upon weeds and other low vegetation during the previous autumn. They make half their growth before winter sets in, and then pass that season in a dormant state just beneath the surface of the ground. Two operations will be found useful in keeping down their numbers, the keeping down of all weeds in autumn, so as to deprive them of their food supply, and late ploughing, so as to disturb them after they have gone into winter quarters and expose them to the frosts of winter.

The great binding twine combination, that has had such effect on the price of this article across the lines, will meet its match in short order if Minnesota succeeds in making at its state prison a twine suitable for binding from home-grown flax without the admixture of other fibers.

Parasitic Plants—The Farmer's Microscopic Foes.

(Continued from August issue.)
POWDERY MILDEW OF THE GRAPE.
Uncinula spiralis.

This fungus affecting the grape has some characters not unlike those referred to in the plum knot. It attacks the foliage, the young shoots and also the young berries and seems to flourish in a dry atmosphere, and hence differs much in this respect from the downy mildew of the grape, referred to in a previous article. It appears in June and grows on the outside of the portion of the plant on which it is found and does not penetrate the tissues as other fungi which we have considered. However, it sends down into the surface cells root-like structures (*haustoria*) which nourish it at the expense of the plant upon which it grows. The parts affected present dull, grayish white patches which are never bright as in "downy mildew." Sometimes these appear as blotches of white-wash. At first on the ends of innumerable thread-like structures spores (*conidia*) are borne, these dropping off and finding suitable conditions, become the centres of further development.

When the vegetative part of the fungus (*mycelium*) has fully developed, receptacles (*perithecia*) are formed, and in these flask-like bodies (*asci*) form containing *ascospores*, which serve to carry the trouble into another season. They usually form about September or October. So here we have summer spores (*conidiospores*) and winter spores (*ascospores*), the former for rapid growth of the fungus, the latter for the perpetuation of it from year to year.

REMEDIES—1. Dry sulphur applied two or three times, once when the shoots begin to appear, again when in blossom, and shortly before the grapes begin to turn. Apply in warm and bright weather after the dew is off.

2. Boil three pounds each of flours of sulphur and lime in six gallons of water until reduced to two gallons. When settled pour off the clear liquid. One pint of this in 12 gallons of water gives good results when sprayed upon affected parts.

This destructive fungus is also closely related to the preceding. It usually appears first upon the young leaves, presenting a cobweb appearance. It soon becomes white and powdery from the development of spores (*conidia*).

Soon after this thin patches form on the berries and later on they become covered with brown patches of the growing fungus. When the white and powdery appearance is present spores are being produced as seen represented in fig. 1, which may be termed the summer spores (*conidia*). These spores as they form fall from the tips of the threads which are present at this stage of the fungus. They germinate quickly when they reach a moist place, soon produce new horizontal threads from which arise vertical branches with their spores as seen in fig. 1.

Later on, sometimes in June, the winter spores (*ascospores*) are produced. During this stage receptacles (*perithecia*) are formed of a chestnut color; the older portions of mildew lose their whitish appearance and become of a dirty brown color.

In these receptacles only one *ascus* is developed, but in this eight spores are formed. The appearance of a receptacle, or *perithecium* and the *ascus* it contains, is seen in fig. 2.

There is a third form of spore produced sometimes. These are born in pear-shaped bodies (*pycnidia*) and may be found along with the young *perithecia*. See fig. 3.

It seems that our climate is favorable for mildew, especially upon the foreign varieties, but as the trouble is confined to the surface it can be readily reached by fungicides.

It is evident that the best time to apply a remedy is while the spores are least protected;

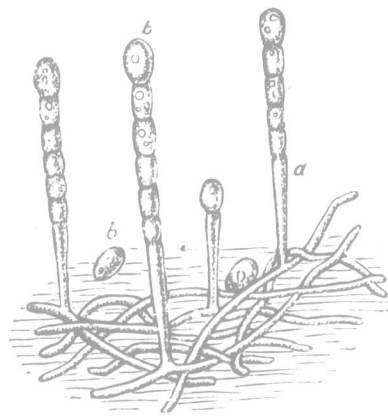


FIG. 1.

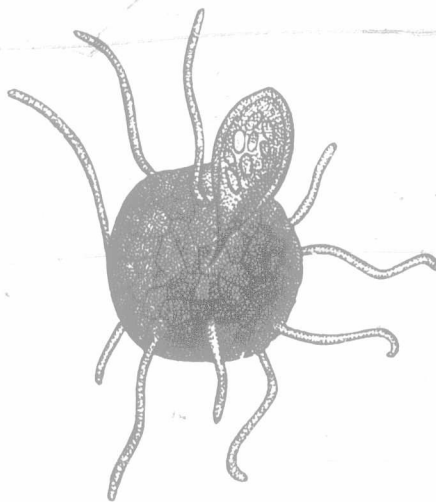


FIG. 2.

POWDERY MILDEW OF GOOSEBERRY.
Sphaerotheca mors-uvae.

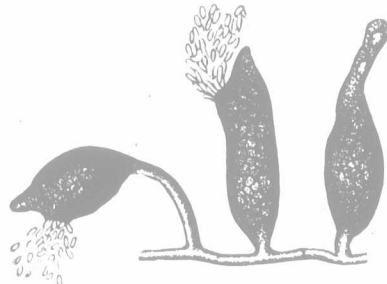


FIG. 3.

the conidial spores, just before they begin to ripen, and for the *ascospores*, before they are surrounded by a thickened wall. A good time, generally speaking, is while the mildew is beginning to establish itself upon the host.

REMEDIES—1. Sulphur thrown upon the bushes as soon as the first leaves are fully formed; repeat the process every ten days during the most rapid growth of the canes, that is till the early development of the fruit.

2. Remedy 2 of the powdery mildew of grapes.

3. Some have obtained good results from using fresh-mown hay, soaked in brine 12 hours, as a mulch, covering the entire surface of the soil about the plant. Watering the plants with strong soap-suds has a good effect. As long as you can keep plants growing vigorously there is but little danger from mildew.

4. Spray at intervals during the season with potassium sulphide, $\frac{1}{2}$ oz. to gallon water.

Small Fruits.

BY A MANITOBA GARDENER.

Judging from the reports of the nursery agents selling in the Province this season there will be a great many small fruits and trees planted this fall or next spring. We shall all be glad that this is the case, as fresh fruit is an absolute necessity for us. Being unable as yet to grow the larger fruits in this northern climate it will well repay our farmers to plant small fruits, which will not only be valuable for their own family use, but will always command a ready sale at profitable prices in our towns and villages.

It has already been demonstrated that the hardy varieties of all the small fruits can be grown here successfully, as we, and probably most of your readers, have seen the loaded currant and gooseberry bushes many of our farmers had this year, and if a few farmers can grow them successfully so can we all if we try, and although we cannot always secure as loaded bushes, yet with the hardy varieties and with proper care and cultivation, it is possible to secure a crop every year, and from the scarcity of wild and other fruits the past two years we all know what a boon this would be.

In commencing to plant out small fruits the first thing to consider is what varieties shall we plant. The common mistake is that most people go in for the size and quality first, but later find that their trees will not live, or, if they live, they yield but little fruit; row, it will certainly be wiser to plant the hardier and more productive varieties first, and to experiment with a few of the choice varieties afterwards. For the benefit of your readers, I will mention a few of the hardiest and best varieties of small fruits which we have seen growing and bearing successfully this season at the Brandon Experimental Farm and other places.

Amongst the many varieties of gooseberries, the Houghton, although not a large berry, is undoubtedly the hardiest and most productive and would prove the most profitable for market, being almost thornless, and easily picked. Smith's Improved and Downing are grown successfully by some, whilst with others the new wood winter kills annually, but possibly they may harden in time.

Among the red currants the following varieties are the most successful:—Fay's Prolific, Ruby Castle, Versailles and Red Dutch. The White Grape currant also does very well. All of the black currants seem to do well, but the best varieties are, Lee's Prolific, Black Naples and Black Champion. In red raspberries the Philadelphia is one of the hardiest and earliest to grow. The Turner, Cuthbert and Hansell are also good hardy varieties. Raspberries should be planted early in spring. There is little doubt the black-cap and blackberry can also be grown here, but so far we can with confidence recommend only one variety, viz., the Hilborn Blackcap, which appears to winter well unprotected, but as the canes grow in an arched shape, success can be made more certain by gently bending the canes to the ground in the fall and covering with earth.

So far the cultivated strawberries have not generally been a success in this Province, but as some few have grown them successfully it is to be hoped we may yet be able to grow this desirable fruit.

Those intending to plant small fruits next

spring would do well to prepare their land this fall. It should be heavily manured with short, well-rotted manure so as to keep the trees well mulched, and ploughed as deeply as possible. If the trees were planted five feet apart each way in a square they could be cultivated both ways with a horse cultivator, which would save much hoeing and would greatly benefit the trees.

It would also be a great protection to the bushes if a wind-break was provided to break the winds in summer and to hold the snow about the trees in winter. This can be done the first season by sowing rows of sunflowers, while a more permanent one can be secured by planting two or three rows of maples — young trees for which can be found in abundance along our rivers; but if this would be too much trouble, there is this year an abundance of good maple seed, and it will well repay our farmers to secure at least a few pounds, even if they have to drive a few miles for it. An orchard of small fruits set out in this manner would help to make our homes far more attractive and homelike, and would also add considerably to the value of our farms.

Summerfallows.

Summerfallowing is an important factor in good farming in Manitoba and the Territories, probably more so than in any other part of the Dominion, and while this is not the season for working the summerfallow, it is an excellent time to look back over the season's work and see if any mistakes have been made. That circumstances materially alter cases must be taken into consideration. For instance, along the Red River Valley, where the omnipresent "stinkweed" grows in profusion, and seemingly spontaneously, a different course is necessary from that which might prove effective at Virden or other western points where a different class of weeds are found; but the one principle obtains everywhere, viz., get the weeds started to grow and then plow them down, harrow them up or by any other means destroy them effectually. In the Red River Valley it is necessary to plow much earlier than in most other parts of the Province to prevent the "stinkweed," above referred to, from ripening its seed. There was enough of this weed ripened in the northern part of Winnipeg this season to seed a Province, without any effort being made to prevent it, and there are numerous summerfallows that have been thoroughly seeded by being ploughed after the seed had ripened enough to grow, and many more ploughed in time, but the tops were left uncovered sufficiently to allow a great amount of seed to ripen. These fields will produce as many weeds next season as though they had not been fallowed at all, and some of those farmers will say fallowing does not kill the weeds. In this section the land must be ploughed before the weeds go to seed, and afterwards harrowed with a disc harrow or cultivator as often as is necessary to keep the weeds in check and prevent them from going to seed. Where this weed does not grow it is doubtless better to have the ploughing later or as long as can be done without danger of the weeds going to seed. Mr. Smillie of the Binscarth Farm, and Mr. Stephenson, of the Lowe Farm, both consider this the better method on their respective farms, although conflicting with their preconceived ideas. This is, however, as it should be, as the difficulty with many people is they will not un-

learn their long cherished and imported methods of cultivation. This point should be borne in mind, however, in every instance, viz., the surface being thoroughly tilled and the weeds destroyed does not present a luxurious crop of weeds if this clean surface be ploughed under, and the soil below where the weed seeds have not had an opportunity to germinate turned up.

Poultry at the Central Experimental Farm Ottawa.

The report of the poultry manager at this farm covers fifteen pages of the general report, and while containing considerable information on poultry keeping is not by any means what we should expect from that institution, and savors more of the learner than the teacher. If the reader of the report is able to reach any definite conclusion as to the best breed of fowls to keep he must have a keenness of perception not accorded to ordinary mortals. A great number of crosses were made between the various pure breeds. Just what the object of this is is not stated. If we assume for a moment that a cross of two pure breeds are equal to the best of breeds used (and there is no reason to assume that they will excel it), it could hardly be expected that farmers would buy pure bred fowls of two different varieties to produce a mongrel; and those who have had experience in this, as in other stock, will not advise breeding from stock thus produced. The Brahmans are referred to, but whether the light or dark variety, is not stated, which is a great oversight as both are popular breeds. Mr. Gilbert tells us that the Plymouth Rock is beyond question the best all round fowl for the farmer, and that the best two breeds are the Plymouth Rock and the Leghorn. Close after them comes the Wyandottes, as an early layer and flesh producer. Just how he reaches that conclusion he does not say, neither does his report afford any clue. Now, actual experiments have never to our knowledge shown that Plymouth Rocks were more profitable than any other breed, but a straight Dr. and Cr. account has shown Brahmans to be more profitable than Plymouth Rocks, and while not in a position to make positive assertions, because we have not the figures to back us, we have the best of reasons for believing the Wyandottes more profitable than either; they will certainly lay more eggs than either, beginning younger and laying more persistently, and while confident that they do not consume as much, have not, as previously stated, kept an account of the food consumed, and it is possible might be as greatly in error as those who jump at the conclusion that Brahmans eat more than Plymouth Rocks. Again Mr. Gilbert says:—"The common barn-door fowl is a good winter layer, when not too old or inbred." How is that conclusion reached? In almost every barn yard in the country may be found a different type of barn-door fowl, chiefly due to the fact that a strain of some standard variety has assisted materially in their formation and to the breed that preponderates. In their make up is due whatever of merit or demerit they may possess. It would be quite as rational and equally definite to say "the grade cow is an excellent milker." When Mr. Gilbert shows that the Plymouth Rocks produce greater value of eggs and meat for the food consumed, then, and not until then, can he say with propriety the Plymouth Rocks are beyond question the best fowl for the farmer. It is to be hoped that the percentage of profit on the food consumed may receive some little attention in future experiments.

Manitoba Fruit.

Mr. T. Frankland, of Stonewall, in writing on the natural fruits of Manitoba and the Northwest, refers to the fact that the Juneberry of the nurserymen is identical with our Saskatoon, except that the Saskatoon is larger and of a finer quality. There seems to be no reason why the Saskatoon should not be planted in thickets or bluffs about the house, being easily transplanted, and Mr. Frankland thinks would prove highly profitable under cultivation. The native plums he also considers would prove successful if planted in thickets, but does not anticipate success if planted according to our early education in Ontario. Many of our native plums are of a decidedly superior quality, and the man who demonstrates that they can be cultivated successfully will prove a public benefactor. At the Manitoba Experimental Farm several varieties of plums came through the winter fairly well. The De Sotto is probably the most promising of all, 90 per cent. having come through in nice condition, and while it is impossible to say what it may do eventually, there is every reason to expect it will prove profitable here. The Russian plums, from which so much was expected, are not proving a decided success. About one half of them lived through the winter, but they are not as promising as the De Sotto.

There is not the slightest reason to doubt that currants of all kinds and gooseberries can be grown with great success. On the farm of a gentleman east of Moosomin, may be seen, or at least might have been seen earlier in the season before they were picked, currants and gooseberries, of almost every cultivated variety, growing side by side with the native fruits, which they excelled in productiveness.

It is well to be very careful in ordering trees or plants from nursery agents; but, if an agent comes along representing a reliable firm, do not fail to secure a few of each of the different varieties of red, white and black currants and Houghton's Seedling gooseberries; but do not be led away by the pictures of larger and handsomer varieties, as there is no variety of gooseberry so entirely free from blight and mildew, nor yet as hardy, as the Houghton's Seedling. So far as they are known to be reliable it is better to cultivate known varieties than to attempt domesticating the wild ones; but where there are no cultivated varieties to fill the bill, as in plums for instance, it is well to try domesticating the wild fruits. Fruits are not simply a luxury, but an absolute necessity to the system in the hot weather of summer, and it is to be hoped that a bountiful supply may soon be produced at a price within the reach of all.

Testing Milk.

The ADVOCATE has long recommended the adoption of a system of milk testing, and regulating the price according to the butter fat contained. Light is dawning, and in several places in the Western States this system has been adopted with excellent results, which leads us to anticipate its general adoption at no distant date. It is really surprising how much better milk is delivered from the same herds than under the old regime. Some still ask, however, has milk no other value than of the fat contained therein? Certainly, the casein is of some value, but it does not vary as much, being seldom worth more than ten or less than seven cents per hundred lbs. of milk, while the value of butter fat varies all the way from thirty to ninety cents in milk that we have tested per-

sonally, and in special instances recorded the variation is even greater. In the city of London, Ont., a standard of twelve per cent. total solids was adopted about three years ago, and a little later it was raised to thirteen per cent., and each year the tests were published, showing what dealers supplied the best milk, and also the state of their stables and health of their cows. The inspector or health officer, as he was termed, had power to stop a wagon at any time or place and take a sample for testing, and the average of these tests was what his milk was graded, and if in any case it went below the standard adopted he was not granted a licence for the next year. These public statements of the value of each man's milk is a much better method than prosecuting for adulteration, and has had the effect of securing for the city a much better quality of milk than is enjoyed by any other city in Canada, as the latest reports prove. A movement is now being made to regulate the price according to the quality of the article, and if carried out will doubtless be productive of excellent results. How would such an arrangement suit Winnipeg dairymen? It would certainly be in the interests of the consumer, and aid him in getting value for his money, and equally so to the honest dairyman who furnishes an honest article. But the mills of the God's grind fine, even though it be slow, and the time will come when milk will be sold in our cities and at our cheese and butter factories for just what it is worth according to the butter fat contained. We are aware of no instance in which this system has been adopted prior to this season, but excellent results are now being obtained in those places. When it is generally adopted people will wonder why it was not done sooner. In the meantime we pride ourselves that the *ADVOCATE* has led the van in this (as in all other matters pertaining to agriculture), being the first journal in Canada to advocate the system.

Essex Dwarf Rape vs. Bird-seed.

For several years past we have urged upon our readers in the east the wisdom of sowing rape as a forage crop; we have also advised our western readers to give it a trial.

Our object in calling the attention of the public to it at this season of the year is not so much on account of its great value as a soiling and forage crop, for its merits are pretty well known, but to warn them against the error that many have fallen into of buying a cheap variety from irresponsible parties, as country merchants, country dealers and others have been selling a so-called rape seed to farmers and stockmen as sowing rape which has been nothing more than the common *bird* rape seed or what is commonly known as German rape. This is perfectly useless as a sowing rape, and those who have sown it are very much disgusted with the result. This has in every instance been the outcome of buying cheap seeds from those who do not know their business. German rape can be sold for about half the price of first class sowing rape, hence the temptation to invest in such. We would warn all our readers against buying anything so important as seeds of any sort from anyone but a first-class seed house. Better pay two prices for the genuine article than get an inferior or worthless one for nothing. The best variety of rape is the Essex Dwarf which can be procured from any reliable seedsman in the trade. We are sorry to say many farmers in the east and some few in the west have suffered heavily from sowing "German rape." When will farmers learn to sow nothing but the best of everything?

The Agricultural College Experimental Farm.

The seed experiments now being conducted at the above Farm are very interesting to those who may have time to pay it a visit during the busy harvest season. The present state of cultivation of the farm itself presents a direct contrast to the thistle-covered, so-called Model Farm of a few years past. To grow seed grain on a farm covered with every variety of noxious weeds would not be likely to be a paying investment for a private individual to enter into, but when a public institution, supported by government funds, could not make a presentable appearance to visitors, there must have been something radically wrong in the management. However, as far as the weeds are concerned, this is a thing of the past. Instead of the foul condition of the fields, as formerly seen, they are now practically clean, and Prof. Shaw is deserving of much credit for the untiring vigilance with which he overlooks this department, and he promises that by the end of another year the farm will not produce a thistle.

The vast improvements of the roads around the farm we must attribute to the same source.

That the soil of this farm is not suitable for what it is intended is easily seen by those competent to judge, for many of the varieties of oats are badly rusted, and the spring wheat was blighted in places and uneven, which would not be the case if the soil was of the right quality. So much has been said on the subject that a writer is loathe to add to the chorus of growls that have issued from those who have viewed this farm in the past. The fact remains true as ever that the soil is unsuitable for the growth of many of our chief crops, such as fall and spring wheat, oats, etc. To our astonishment many of the fields still require tile draining, without which it is perfectly useless to attempt anything in the way of advanced farming. And we hope that the Minister of Agriculture may see his way clear to obtain a grant to do this necessary work.

We spent a most profitable afternoon in viewing the different varieties of spring grain, both in the fields and in the experimental plots.

A field of spring tares, grown for feed, is nicely covered, and should yield a paying crop, although only tried as an experiment to enable farmers to judge if growing their own seed for this soiling crop will pay.

The peas adjoining, both Prussian Blue and the Mummy varieties were exceptionally fine. The experimental seed department should be of untold benefit to the country, and no doubt this branch of the establishment will yet be made to yield good returns. The past year over 100 varieties each of spring wheat and oats, some 60 varieties of barley, and 30 kinds of peas have been sown in plots, those proving most successful are re-sown the following year on one-third to one acre plots, and are again given more space as they yield satisfactorily. These experiments should be of immense value to the grain-growing department in our agriculture industry. Ten bushels an acre all through this Province could easily be added to our oat crop by a proper selection of seed. The same proportion in other field crops. Then how necessary that we should have the most suitable seed of every kind. And there is no place that has such facilities for this work as the experimental farm at Guelph. To add to the otherwise flourishing condition of the different departments, Prof. Shaw fancies that the farm will this year have a balance on the right side of the ledger.

The Town of Neepawa, Man., and Surroundings.

This little town of some 800 inhabitants shows on all sides signs of healthy life and growth. It contains a large number of well-built residences. The Court-house, the English Church and some of the leading stores and offices are of brick. As to places of worship there are the English, Presbyterian, Methodist and Baptist Churches and a commodious Salvation Army hall. There is a good school, consisting of an upper and lower grade, also a well-built post office and hotels and boarding houses. The town at present is made up of two almost distinct divisions—the one part of it lying around the station, the other to the south of this on the hill. There is an open space of about half a mile between the two. When united the town will be of considerable size, and the street running south from the station will be a fine one.

Neepawa is surrounded on all sides by a well-settled, fine agricultural (chiefly wheat) farming country. Water is abundant and can be got at from 14 to 20 feet below the surface. Timber is also plentiful. The soil consists of a black loam, of from 2 to 2½ feet thick, lying above a light to heavy clay subsoil. The crops everywhere (Aug. 21) are looking magnificent. Mr. Skelding showed me specimens of growth of the "Black Mane" oats. The whole piece, of about 40 acres, will average five feet in height, and the heads are from 10 to 12 inches in length. Mr. S. expects to reap from this about 100 bushels to the acre. It is expected that about 500,000 bushels of wheat will be marketed here this fall. The Beautiful Plains Milling Company have a storage capacity in their elevator or warehouse of about 62,000 bushels; the Ogilvie Milling Company of 20,000 bushels, and Roblin & Atkinson of about 15,000 bushels. A new flour mill (owned by the Beautiful Plains Milling Co.) is in course of erection and will be completed for fall trade. The various implement makers are well represented here and report a large season's trade. Harris & Son reports a sale of 55,000 lbs. of cord this season and 60 Bradford binders. Several new dwelling houses are in course of erection and two new warehouses for storage are to be completed by the fall. A new Methodist Church (brick) is expected to be built almost immediately.

Is it so? A pungent writer, who has a keen eye to the way things are done, says: "The wire-pullers can usually get enough help from the farmers themselves to down any practical movement in behalf of agriculture; and a farmer Legislature is more perfectly wax in the hands of a shrewd lobby than any other convocation extant." Here is a deliberate statement for Grangers and all intelligent farmers to think about.

Every farmer is justly proud of his well-broken, stylish-looking pair of colts, but he seems to have no ambition to have his wife and daughters as well provided for. When they want to drive or ride they have no choice, the oldest nag is left for them, not because he is gentle but because his usefulness is gone and he can do no more work on the farm, and is lame or otherwise disabled. Now, considering how much of the rearing and petting of colts is done by the women of the farm house, they are justly entitled to a horse for themselves. Not the old, feeble horse that detains them hours on the road by the slowness of his gait, but a strong, well-broken, gentle animal that will respond to all their gentle care and be at once a pride and pleasure to them. And as the dear old mother is not quite so active as she used to be, a low carriage should be kept for her use. And these two articles should be provided by every well-to-do farmer who takes any pride in his wife and daughters.

Application of Chemistry and Geology to Agriculture.

BY JAMES MILLER, MEAFORD.

(Continued from August issue.)

CARBON—ITS PROPERTIES AND RELATIONS TO VEGETABLE LIFE.

Carbon is the name given by chemists to the substance of wood charcoal in its purest form. It is from the Latin word Carbo coal. When wood is distilled in close vessels, or burned in heaps covered over so as to prevent free circulation of air, wood charcoal is left behind. When this process is well performed the charcoal consists of carbon with a small admixture of earthy saline matters commonly known as the ash when the charcoal is burned in the air.

Charcoal burned in the air produced little flame and with the exceptions of the ash entirely disappears. This flame produces a kind of air known among chemists as carbonic acid, which ascends and mingles with the atmosphere. Charcoal is very light and porous and easily floats upon water, but plumbago or black lead and the diamond, which are only other forms of carbon are heavy and dense, the former is 2½ and the latter 3½ times heavier than water. The diamond is the purest form of color and with a great heat it burns in the air or in oxygen gas, and like charcoal disappears in the form of carbonic acid gas.

Carbon forms a very large proportion of the substance of vegetable matter when it is free from water, amounting to from 40 to 50 per cent., by weight, of all the parts of plants which are cultivated for the food of animals or man, that is, in their dried state. Therefore in nature it will be seen that it performs a very important part, and becomes an important study for the farmer.

The perfect insolubility of charcoal disproves the common idea that it can be used as a fertilizer or as plant food in any manner, but its actions with other substances does give it an indirect agency in this way. It resists the action of the air as well as of the moisture, hence it is almost indestructible; it has the power of absorbing in large quantities into its pores, the gaseous substances and vapors which exist in the atmosphere. Thus of ammonia it absorbs ninety-five times its own bulk of sulphuric acid, fifty-five times of oxygen, nine times of hydrogen, nearly twice its bulk, all of which are of the greatest importance in forming plant food, and on this property the use of charcoal powder as a manure probably in some measure depends. It also separates from water any decayed animal matter which it may hold in solution, hence it forms a very important part in purifying its surroundings. The action of charcoal can readily be seen upon plants by the dark green color of the herbage and the luxuriance of its growth. It has as much as one hundred square feet of surface in its exceedingly fine pores in every cubic inch. It also has the property of absorbing disagreeable odors in a very remarkable manner. Hence animal food keeps longer sweet when placed in or near charcoal. In cellars where potatoes and other vegetables are kept it has a powerful influence in keeping everything sweet and healthy. If thrown in closets it will deprive night-soil of its disagreeable odor and to convert it into a dry and portable manure. The half-carbonized roots of grasses which have long been subjected to irrigation acts on the impure

water by which they are irrigated, and this gradually arrest and collect materials which go to make up plant food for the coming crop.

It changes ammonia into nitric acid, and this serves a most useful purpose as an ingredient of manure heaps and deposits, preventing its loss. Humus is another form of carbon though an impure one. It is the decomposed remains of vegetable matter which has undergone the slow process of decay. It exists in swamps in form of peat and black porous soil. The leaf mold so beneficial as plant food is chiefly humus. It contains various acids of geic, ulmic, and nemic acids. This class of substances is of great importance in agriculture, as by their decomposition they give up carbonic acid to plants, which is the greatest ingredient of plant food.

Testing of Milk.

I see from Hoard's Dairyman there is no subject connected with farming which is receiving so much attention by scientists at experimental institutions and by leading dairymen in the United States as this question of testing milk. The testing of milk is becoming a necessity to determine the value of individual cows milk for the farmers benefit, and also for the determining of the value of different herds of cows milk which is sent to factories and creameries to be manufactured into cheese and butter, as the case may be. There has been good progress made in this direction during the past three years, but there is still much to learn about the cow—her breeding, feeding and produce.

The first simple instrument in use is the Heeren's pioscope, which gives six different shades of color for the same number of different qualities of milk, which gives a fair idea for comparing one quality of milk with another.

The centre of the block is hollow and a few drops of milk is put into it when the shaded glass is put over it, which always gives the same depth of milk, and the shade of cream is a bright, light, solid like color; each shade is darker as the milk is poorer, till very poor milk is a thin dark blue as the block



is a dark ground on which the milk in the centre is shown. Whatever shade of color the milk is that agrees or corresponds with the shade of color on the glass; that gives the quality and character of the milk in the centre of the block; it gives no value to the constituents in the milk, but shows whether the milk is normal.

The next instrument is the lactometer. This instrument is used the same as a densometer, which gives the specific gravity of the milk compared with the weight of an equal volume of water. The starting point to determine a fixed unit in order to make comparisons is one cubic inch of distilled water at 4° centigrade of temperature or about 39° Fahrenheit, put thus, 1,000. The specific gravity of liquids is found by comparison with this unite, thus the specific gravity of pure milk is 1,030 to 1,032, thus it is heavier than water. The lactometer is figured thus, pure cold water at 60° Fahrenheit is 0. Pure milk, which carries the lactometer higher at the same temperature, is marked at 100. The distance on the spindle of the lactometer, between pure water



and pure milk at the same temperature, is divided into 100 parts or degrees, and by this instrument the specific gravity of the milk is ascertained. Whether it carries the instrument at 100, or if water is added the specific gravity will be reduced and the instrument will sink deeper according to the quantity of water which has been added and thereby shows what percentage of water has been added to the milk; or if milk has had strippings of the cows kept out or cream taken off it will have the opposite effect of water.

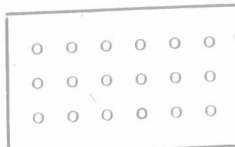
The lactoscope is an instrument which shows the quantity of milk by the amount of butter fat which the milk contains. This is a glass cylinder. In the centre at the bottom is a small porcelain column with black lines drawn across; 4 c. of milk is measured by a pipette and put into the cylinder and water added till the black lines are visible through the milk. The figures on the side of the cylinder give the percentage of butter fat in the milk. This instrument may not give exactly the percentage of fat in some individual cows, but for testing the milk of herds of cows as the milk is sent to cheese factories, for the purpose of detecting adulteration, it is the best known instrument at present,



and for all practical purposes in testing milk for the above purpose is perfectly reliable and satisfactory. Nothing short of a complete analysis can give the various constituents of milk correctly and in detail, but that is impracticable for factories at present and would be too expensive, but the time is not far distant when some means will be found by which milk will be analysed in a speedy and cheap manner which will not be disputed. If these three instruments all agree as to the character of the milk tested they are pretty correct in determining the character and quality of the milk.

At the Dairymen's Association, held in Stratford last January, this subject was fully discussed, and the correctness of the tests made by these instruments by the inspectors was fully sustained, and also the comparisons made by Dr. McFarlane, Chief Analyst for the Inland Revenue Department of the Dominion Government, corresponded very closely with tests of the same milk by the inspectors. These proofs are more valuable than any demonstrative act of evulsion made by those who are opposed to the testing of milk. One reason why there is opposition to testing of milk is, it is too correct and searching for some parties; it sometimes reveals secrets which some parties would rather keep hid.

There is a very useful way of testing milk, which cheese-makers can very easily and cheaply adopt at factories, that is, by cream glasses. A tin box with a loose cover and as many round holes cut in the cover as there are glasses to be used with milk to be tested. A wood box of the same size and the same number of holes cut in the top board, but so deep as one-third of the cream glasses will be above the cover of the box. This is useful to hold the glasses at all times but particularly when they are to be filled with milk for testing. Now, here is where great care is needful:—1st. To



take a true and correct sample of the milk. The best way is to take a dipper and catch, at three or four times, a little milk when it is run into the vat; empty this say twice out of one vessel into another so that it is properly mixed and fill the cream glass, and thus continue till the glasses are all filled, but I would advise to fill the glasses only two-thirds full; have the wood box just made so deep that exactly two-thirds of the glass will be on a level with the top of the cover, and when they are all filled to that extent set the box in a pail or tub of hot water to heat all the glasses to the same temperature; have the water in the pail about 100° and set the box and glasses into it and the temperature of the water and milk will soon equalize to 90° or 95°. Now, take it out of the hot water and fill up the other one-third of the glasses with cold water and set them in the tin box filled with the coldest water to be had, and set them away in a cool place. By treating milk in this way, the cream will rise in much less time and more perfectly than by testing the milk in glasses and set on a shelf, as it might happen to be.

Now, care must be taken to do everything correctly. Normal milk runs about 12% cream; with one-third of water added the percentage would be only 8% of cream; the glasses will show if everything is properly done, and this would give cheese-makers a very good idea as to the purity and quality of the milk they were receiving. Every farmer who keeps cows should have one of these cream testers and have a glass for every cow he milked, and he could test each cow's milk at the same milking so that the conditions would be as near equal as could be. I have no doubt but if every farmer would adopt this plan with his milk cows there would be some strange revelations made to him of a similar nature as was made in Egypt in the days of old when the lean cattle swallowed up the good ones and it did not seem to improve them any. I have no doubt but the day is not far distant when the good cows on the farm will not have the poor ones to carry, nor the good milk that goes to factories will have to pay for the poor milk before its owner gets anything. If farmers who are doing the best for the dairy cows and the dairy interests of the country understood how they were being treated by pooling their milk with others, and saw where their profits were going to pay for all the poor milk that comes into the factory, and the richer the milk from breeding or feeding, or good care, the more the man who owns the cows loses. If they only understood it the men who are putting the best milk into our factories would not submit to it one week, but the time is at hand when they will demand that every patron be paid fair value for what he sends to the factory.

DAIRYMAN.

The Balance of 1890, and All of 1891 for \$1.00

We want to double the circulation of the *ADVOCATE* in every locality, and have decided to present each of our old subscribers who will send in one new subscriber's name, together with \$1.00, a copy of our *Handsome Subscription Picture "Canada's Pride."* You may promise all new subscribers a copy of our handsome mammoth September number. Secure your subscriber's name at once, and send it in so that he will get the September number early.

The Milking Competition at London.

Absence from home in the Maritime Provinces since the end of June has hindered me from writing until now for the comfort of Mr. Guy, and the information of your readers who may have become interested in the milking competition at London and the correspondence which it has evoked. In the course of my journeyings through Quebec and Prince Edward Island particularly, I observed that Ayrshire blood had given form to many of the common cattle on the farms, and I learned from the farmers that the introduction of Ayrshire blood had meant cows yielding larger quantities of milk of better quality than formerly. I am concerned in protecting the reputation of that beautiful and useful breed against the imputation running through that part of Mr. Guy's letter which appeared in the June *ADVOCATE*. Ayrshires, Mr. Editor, will usually give a good account of themselves, even though the water in their milk be counted to have no rateable value. I am prepared to reassert what I wrote before (but I am not to be responsible for what Mr. Guy puts in quotation marks as mine), that "Water in milk has no real or rateable value, so far as I know, whether it be put there by a cow or a man.

Whey is not by any means all water as your correspondent implies. The whey from the milk of Ayrshire cows contains about as large a per cent. of solids, and consequently no larger a per cent. of water, than the whey from the milk of other breeds. I do not quite perceive why Mr. Guy should want to teach that the whey from Ayrshire cows is all water. The solids that give whey its feeding value are the sugar, the casein, the albumen and the ash which the water holds in solution, together with the small quantity of fat which it holds in suspension in the form of tiny globules. The scale of valuation that was adopted and used at London gave credit for all of these solids that were contained in the whole of the milk, which of course included the part that would have become whey, if cheese had been made.

Permit me a quotation from Mr. Guy's letter: "If water is added to milk by a milk vendor it can be detected by analysis and he is liable to be punished for a misdemeanor."

By Chapter 425 of the Laws of 1889 of the State of Wisconsin it is enacted that if it shall be proven that the milk sold or offered for sale or furnished or delivered as pure, wholesome, and unskimmed milk contains less than three per centum of pure butter fat the said milk shall be held, deemed, and adjudged to have been unmerchantable, etc. That would indicate that over there the law-makers desire to keep the cows from being guilty of a misdemeanor.

Again Mr. Guy puts in quotation marks, "the standard of points as given by me from the Ohio Farmer are erroneously calculated and not applicable to this Province," and credits me with having written the sentence. What I did write and what was printed in the *ADVOCATE* was, "the tables of points which he gives are erroneously calculated from standards of valuation, etc." The tables were made up by Mr. Guy, evidently by adding together the percentages of butter fat, and of the solids other than fat, and counting the total sum thus obtained as the total quantity of solids in the milk *without any regard to the quantity of milk given*. I do not understand why Mr. Guy should wish to

have milk valued by its *quality* as shown by analysis only, without regard to the *quantity* of the yield. Ayrshire cows usually give a large enough *quantity* of milk to make even their most blind friends or opponents willing to accord them fair play in that regard.

But then the standards of valuation which Mr. Guy credits to the Ohio Farmer, I presume are those of the British Dairy Farmers' Association. They agree, except in this, that Mr. Guy's letter does not mention the last part of the standard of the British Dairy Farmers' Association, viz.: "If the milk contains less than three per cent. of fat, a reduction is made of ten points." Probably this part of the scale of points was not quoted by the Ohio Farmer, but it exists as part of it, and its application might have convinced Mr. Guy that other standards provided for an "unfair and absurd way of judging" according to his notions. That the last-quoted rule of the scale of points is a fair, though unusually an unnecessary one, may be inferred from the facts brought out by the Dominion Chief Analyst, Thos. Macfarlane, Esq., in his Bulletin No. 11, on Summer Milk. At about the same time during which he conducted the analysis for the *ADVOCATE* milking competition he analysed samples of milk furnished to him at London from many patrons of no less than sixteen cheese factories. He found the average per cent. of butter fat to be 3.80. To claim that milk that has less than three per cent. of fat is specially adapted for cheese making is on a par with the claim of the man who wanted to sell what he called a "coon dog." "Is he good on coons?" asked the intending purchaser. "Of course he is." "Have you tried him much?" "Well, no, but I find he's good for nothing else, so I guess he must be good for coons."

An insignificant error in the copying of figures, with I suppose the slight alterations, gave Mr. Guy a chance to quibble at the figures without trying to gainsay the conclusion. Let me correct the details of my previous illustration, which was merely used to show that Mr. Guy was using figures while evidently mistaken as to their meaning. Take the points, as stated by him, from the Ohio Farmer's standard, at his own figures of 582.06 due to the Ayrshires and 580.63 due to the Jerseys, then if the points claimed by Mr. Guy for each be divided equally merely to bring the figures to something near a cash value in cents for the milk, the Ayrshires will stand with 160.61 (not 160.68 as previously stated), as against 160.21 for the Jerseys. Now, if Mr. Guy will calculate the per cent. of profit on the value of feed consumed by the Ayrshires, \$1 48.8, when their milk is valued at \$1.60.61 (not \$1.60.68 as previously stated), he will find that it shows 7.93 per cent. (not 8 per cent. as previously stated), and if he will calculate the per cent. of profit on the value of feed consumed by the Jersey, \$1.20.07, when their milk is valued at \$1.60.21 (as previously stated), he will find that it shows 33.43 per cent. (not 33 per cent. as previously stated).

Mr. Editor, I would not have taken up so much space replying to the strange statements and reasonings of Mr. Guy, but for my desire to prevent the valuable, excellent, and serviceable Ayrshires from being injured in reputation and misrepresented by the pens of their friends.

A meeting of the Breeders of Dairy Cattle was

held in Toronto to discuss the best standard and scale of points for use in the future. Those who have raised most unreasonable objections to the one adopted last year were conspicuous by their absence. The agitation and discussion is doing good. Indifference and apathy do not imply progress; the opposite may indicate preparation for advancement along the right lines.

JAS. W. ROBERTSON.

The Dairy Test Again.

BY D. E. SMITH.

Dear Sir,—Kindly allow us space to answer Observer. It seems evident that Observer has observed that Stockman could not successfully defend the Shorthorns, else he would not have made such a big attempt to assist him. He has also observed that the Holsteins are rapidly becoming the farmer's and breeder's general favorite, hence his misleading and ill-disposed remarks about them.

He says that what we said about the origin of Shorthorns was not true, and then expects your many intelligent readers to believe that the blank assertion of one who styles himself Observer should be taken without question. Let us consider the matter without prejudice and get at the truth.

In a previous letter we quoted from the Consular Reports, which are prepared by the United States government.—Albert D. Shaw, U. S. Consul, in England, says, at the introduction of this Report, dated Manchester, Feb. 19th, 1884: "I was most fortunate in securing the services of James Long, of Netchin, England, a well known authority, both in England and on the Continent * * *. It will be found that great care and attention have been given to this report, and that its impartiality and fairness are beyond question." Further on he says, "prepared by one who is perfectly free from bias in any respect."

We took our quotation from Mr. Jas. Long's report, and will quote it again for Mr. O.'s consideration, as we believe it to be *impartial, fair and free from bias*: "These cattle (from Holland) were of larger bulk, and the cows better milkers than were then known. The new breed formed by the admixture and crossing of these imported animals soon asserted their superiority over all other races. Such was the origin of the Shorthorn." In these same reports we find that Holland, the home of the Holsteins, sent to England alone \$4,342,002 worth of cheese and \$124,924,128 worth of butter in a year, and in these products beat the world. Yet, Mr. O. tries to leave the impression that their milk is not good.

Mr. O. next quotes from a speech of Prof. Robertson's: "The cow that was most profitable to a farmer was an animal that produced first calves, second milk, third beef." We thank Mr. O. for making more widely known the above quotation, as it very well suits the Holsteins. First, calves: For strong, healthy and thrifty calves, we think every one who has seen or owned a Holstein calf cannot help admitting that they are all that any farmer or breeder could desire. Second, milk: Everyone now admits that Holsteins are the best milkers in the world, except, perhaps, a few such persons as Mr. O. or Mr. S., who would object to anything that was not a Shorthorn. Third, beef: Hitherto, we have not strongly claimed much for the Holsteins in beef production, as we believe they are pre-eminently a dairy breed, and we are anxious to see them remain so. But, as Mr. O.

has forced us to speak out we will do so, though briefly. Holsteins have been developed in the hindquarters—that is about the udder—and hence are strongly wedge-shaped, so when they are fattened they put most beef on the hind-quarters, just where it is best.

We will quote from the Breeders' Gazette of Nov. 20th, 1889, about Holsteins at the Fat Stock and Dairy Show, Chicago: "The heifer, Spot, showed the remarkable weight of 1,010 pounds at 322 days, an average gain per day of 3.13 pounds, one of the very largest developed by the entire show, and she was as smooth and neat as she was ripe. The steer calf, Ohio Champion 2nd, with a weight of 765 pounds at 125 days, had to his credit a gain per day of 4.13 pounds."

Milk Legislation and Standards.

BY WM. THOMPSON.

From Provincial and Dominion official quarters come recommendations to establish a legal standard of fat and other solids in milk. What are the objects of milk legislation? Three occur to me:—1st. To secure *honest* milk; 2nd. *Wholesome* milk; 3rd. Milk of *good quality* for whatever purpose used. Existing legislation in Canada, such as the Dominion Milk Act, the Ontario Act to "provide against frauds in the supplying of milk to cheese and butter manufactories," and municipal milk control under local Boards of Health, is not based upon an arbitrary standard of "legal limits" or a percentage of total solids or fat alone below which, if a vendor's milk fell, he would be liable to fine or imprisonment. Is it wise that such a principle be adopted? Will it best tend to secure the three objects in view?

Now, in the first place, as a gauge in valuing milk, the percentage of butter fat seems to be the most readily measurable. Hence it is the element to which experts naturally turn, many methods more or less simple for determining it being in vogue. Fat is moreover conceded to be the most variable element in milk. The percentage varies in different cows and with different foods, treatment, health and conditions of weather. In 133 samples of pure milk analyzed by Dr. MacFarlane, Dominion Analyst, the fat ranged from 2.67 to 6.13; solids, other than fat, from 8.10 to 9.61, and the total solids from 10.86 to 15.54. The variations in fat, for example, in the product of the same cow, under different conditions or feeding, are remarkable and may often be beyond the owner's control. At Cornell University Experiment Station two lots of good cows, well bred, well cared for and well fed were in an experiment to test the effect of grain rations on pasture. Now, while the analyses for a certain period showed the average for both lots to be 13.56 per cent. total solids and 4.58 fat, on one day the milk of one lot fell below the 12 per cent. standard and on several others this percentage came dangerously near the "dead line." Had a sample been taken on the one day specified the State authorities might have fined the Station people \$200 and subjected them to six months' imprisonment. A citizen of one State was imprisoned because his milk was below the legal standard. Manifestly such laws are unjust. Prof. Roberts admits that. Prof. Ladd says:—"A law that declares any milk falling below an arbitrary standard as having been adulterated is unwise." Prof. E. W. Stewart warns Canada against falling into the error that States have made in this matter. Mr. Geo. Abbott, before the American Guernsey Cattle Club, said:—"No legal limits should be estab-

lished; to do so is unwise, impractical, unjust and worse than useless."

There is another objection. Such a law affords no encouragement to the man who keeps good cows, treats them kindly and feeds them well, producing milk containing 4.25 per cent. fat, when he has to pool it or sell it at the same price as a neighbor whose fluid is just up say to 3.25 per cent. standard. The only incentive he has is to dilute his rich milk down to the legal limit or else be imposed upon.

The Provincial Milk Act, sustained by the Court of Appeal, prohibits watering, skimming, or keeping back strippings and authorizes the owners or managers of cheese or butter factories to take samples from the cows when such practices are suspected, for purpose of test. In this way each cow or herd is its own standard and no "legal limit" is necessary in such a case. This act also prohibits milk tainted or partly sour being sent to factories.

The enlightened dairy thought of the day is converging to this idea—to *pay for milk according to its contents in fat or total solids*. Ontario creamery men use the oil test churn to determine the quantity of churnable fat in every patron's cream. If a Butter Extractor, or a DeLaval Separator with butter-making attachment is used the patron's milk goes in and the butter comes out to tell its own story on the scales. No "standard" needed there.

The Medical Health Officer of London, Ont., whose first aim is to secure wholesome milk, after several inspections yearly of every milk vendor's premises and cows, and analyses of his milk, publishes the result in the city papers, scaling the milkmen according to fat percentages, highest coming first. Condition of cows, stables, food, etc., is also reported. Citizens can see who sells the best milk and can buy accordingly. In three years that system has raised the average percentage of fat from 3.43 to 3.90. True, the Board named first a 3.25 per cent. fat standard and this year put it at 3.59, but it is merely nominal. The milkmen are educated away above it and find it to their dollar and cent interest to keep above it. If any deluded man is caught watering or skimming he is liable to penalty.

With regard to cheese factories, assuming that the contents in fat were agreed on as a fair measure of the value of milk, then by the systematic use of such methods as those of Short, Parsons, Patrick, Filyer and Willard, Cochran or Babcock the pay of patrons could be equitably divided. Under the pooling system this is not done. The speediest, simplest and most economical test is the centrifuge-sulphuric acid method recently invented by Dr. Babcock, of the Wisconsin University Experiment Station, by which, after samples are taken, 60 tests can be made and bottles cleaned in one hour at a trifling cost.

I recently assisted in testing the milk of over 60 patrons at one factory and the range of butter fat in honest samples was from 3.50 to 4.50 per cent. (rather high range). The intelligent readers of the FARMER'S ADVOCATE can see the injustice of such a pool as that without further comment.

To conclude: Does it not seem clear that a lowest "legal limit" standard, if too low, will be worse than useless, if too high an injustice to some honest men, that it is unnecessary and in the main wrong in tendency? If any legislation be required should it not tend to promote the sale of milk according to the actual value of what it contains of which the weigh scale or quart measure are not complete gauges?

The Milk of Cows.

For the FARMER'S ADVOCATE, by Jas. W. Robertson, Dairy Commissioner.

The milk of cows, as the dairyman needs to know it, is composed of substances partly in solution and partly in suspension. It may be described as a thin emulsion of fat in a serum or watery solution of albuminous matter, sugar, and mineral matters. When obtained from a healthy cow in its normal state, it has a constant tendency towards acidity. It will change the color of litmus paper before lactic acid has commenced to develop. A small quantity of carbonic acid is generated soon after it is drawn if left warm, but that can be taken out of agitation and aeration. The true sourness of milk is caused by the development of lactic acid. The specific gravity of milk varies between 1029 and 1035 at 60° Fahr., that is to say, a quantity of milk equal in bulk to as much water as will weigh 1000 pounds at 60° Fahr. will weigh from 1029 to 1035 pounds at the same temperature. The effect of each per cent. of fat is to decrease the specific gravity, because the fat of milk is lighter than its other parts. The effect of each per cent. of solids other than fat is to increase the specific gravity by .00375 variation in quality. The total solids of ordinary milk vary between 12 and 16 per cent. In some unusual instances the range of variation has been known to be between 11 per cent. and 20 per cent. of total solids, and between 2 per cent. and 10 per cent. of fat. The solids of milk are its only constituents that have any real or rateable value. The water that is put into the milk by the cow, while the process of elaboration is proceeding in her udder, is worth no more per pound or per gallon than the water that may be put in by a man when it has come into his hands for use or sale. The limits of variation of the solids, other than fat, are usually within one-half of one per cent. in the same cow at different periods in her milking season. Different cows of the same breed rarely show a variation of more than one per cent. in the solids, other than fat, contained in their milk; the greatest difference exists between cows of different breeds; it will sometimes reach as much as two and a-half per cent., as between the milk of cows giving extra rich milk and those yielding a very poor quality. The solids, other than fat, or the solids in the serum of the milk also increase slightly during the milking season. The rate is about .04 per cent. of solids not fat per month.

COMPOSITION OF MILK.

The average composition of milk from cows may be stated as:—

	COLOSTRUM per cent.	NORMAL MILK per cent.
Water.....	75.8	87
Fat.....	2.6	3.75
Casein.....	1.5	3.80
Albumen.....	3.6	.75
Sugar.....	3	4
Ash.....	3	.70

The strippings of milk designate the last portion drawn from the udder of the cow at each milking, and they are richer in fat than the milk first obtained. The first milk may contain less than one per cent. of butter fat, while the last milk usually yields more than ten per cent.

CREAM.

Cream has no definite or unvarying composition. It is a word used to define that part of milk into which a large per cent. of its fat has been gathered by setting or by centrifugal force. It is composed of the same constituents as milk, but they are not in the same or in any constant

relative proportion. Frequently the cream of hotels is of a beautiful blue color, but that liquid does not belong to the products of the dairyman. The results of a great many analyses show that the cream of commerce may contain anywhere from 8 to 70 per cent. of fat. All the fat of milk is held in suspension in its liquid or serum part in the form of tiny globules which have no coverings of an organic nature, but are present in the form of an emulsion. The different constituents of milk have different values, according to the ultimate purpose for which they are to be used. The fat is mainly valuable for giving cream its quality, butter its main substance, and richness to the body of cheese.

QUALITY OF DIFFERENT ELEMENTS.

The casein is the portion which is coagulated by the action of rennet in the process of cheesemaking. Albumen may be seen as a thin white scum on milk that has been scalded or boiled; it is similar in composition to the white of eggs. Sugar is one of the heat producing and fattening constituents of milk. Lactic acid has no feeding value, but being anti-febrile in its action with properties that slightly aid indigestion, a small quantity of it is not unwholesome in milk for drinking or for feeding in the stables. The ash of milk furnishes the mineral matter taken into the structure of bones and flesh by the animals which consume it. Where the milk is consumed in its liquid form or reduced in bulk to any of its products, such as butter, cheese, veal, or pork, the constituents which are valuable, and aid in any of the life-sustaining products obtained from the cow, are its solids only.

USE OF WATER.

Water is always nature's vehicle for moving things about in the animal and vegetable worlds for the support of different forms of life. The vehicle in itself is for carrying the constituents which the eater seeks to appropriate. The ever changing demands and preferences of markets make it impracticable to attach a definite value per pound to the several constituents of milk. The work of a skilful manipulator may give to anyone of them an increased value. Milk sugar in the raw state in the milk has very little value indeed, as it can be replaced for the feeding of calves by substances that are plentiful and cheap, but in its refined state fit for druggists' use, it is worth perhaps 75 cents per pound.

VALUE OF PARTS.

Judging of milk from a purely dairy standpoint I would estimate that under the present conditions if the butter fat of milk is worth 16 cents per pound in its unprepared or unmanufactured condition, the total solids, other than fat, in the milk will be equally valued at 2½ cents per pound.

TESTING MILK.

For the guidance of cheesemakers and others who desire to make quick and reliable tests of the quality of milk let me suggest the following:—

1. Examine its appearance, color, taste, smell.
2. Examine by the pioscope.
3. Test it by the lactometer.
4. Examine it by the lactoscope.
5. Examine it by the cream gauge.
6. Rule by Mr. E. W. Martin for the use of lactometer and lactoscope to determine the solids in milk: Multiply the per cent. of fat found by the lactoscope test by 0.001 and subtract the result from 1.0000; call this number

"A"; find the real specific gravity from the table of lactometer degrees; subtract "A" from this and divide the result by 0.00375, the quotient will equal the solids not fat.

7. In examining as to its sweetness for cheddar cheesemaking, scald or boil a sample; if it coagulates it is unfit for use.

8. A test for ripeness may be made by adding a few drops of extract of rennet to a given number of ounces of milk.

Picking and Keeping Fruits for Family Use.

BY W. W. HILBORN, LEAMINGTON, ONT.

This article is intended more especially for farmers and others who grow their own fruit and wish to lengthen the period as much as possible through which fruit may be kept in a fresh state for family use.

Apples, first in importance, may be kept in good condition until midsummer, or until the new fruit is ready for use. It is a common practice among farmers to sell all their apples that the packers can be prevailed upon to put up for shipment and keep the culls for their own use. Such fruit is usually either small, imperfect specimens, or injured by the Cedling Moth, and will not keep well; hence, long before the new crop comes in apples have altogether disappeared from their tables. Does it not appear like mistaken economy to dispose of all the first-class fruit? A few bushels of first-class N. Spys, Kings, Greenings, Baldwins, Russets, etc., should be carefully gathered as soon as ripe and packed away for use in late winter and spring. So much benefit and pleasure can thus be derived that it should be the rule, and not the exception, as at present.

Apples to keep well and be of the best flavor must be picked as soon as ripe (this may be known by the stem parting readily from the tree) and kept in a cool, damp place. If a good cellar is available they may be taken directly to it. Shelves may be made any convenient length and width, with sides five or six inches wide. These shelves may be placed one above another with just sufficient room between to handle the fruit, say ten inches. Fruit kept in this way may be looked over often with little difficulty and any decaying apples taken out. Nearly all varieties keep splendidly on shelves. The Russet family, however, does not; they shrivel badly and should be kept in tight boxes or barrels. Another good method of storage is to make boxes about ten inches deep, sixteen inches wide and two feet long. These will hold about one and a-half bushels. Place the fruit intended to be kept longest in the bottom boxes. When one box is filled place another on top, which answers in place of a cover, and continue until the required number are filled. This method has some advantages over the shelves, as the fruit in one box must be used before another is accessible, while with shelves it too often happens that the finest samples disappear too rapidly, leaving the sample inferior late in the season. This is especially true where a family of children have daily access to them.

The conditions required to keep apples perfectly is a cool, damp atmosphere, with the temperature just above freezing and as uniform as possible, and good ventilation. Where a cellar is not obtainable the old fashioned method of burying in the ground may be adopted. It is

doubtful if any other method now practised will keep fruit as perfectly for use in spring. It must, however, be properly done or the results will not be satisfactory. Select a dry spot, place a layer of dry straw to a depth of not less than six inches under the fruit and eight to ten inches deep over it; this will be sufficient to absorb the moisture arising from the fruit and prevent them from having any odor or taste of the soil. Cover the straw with earth to the depth of two or three inches at first, leaving the straw exposed at the top for ventilation. This may be covered with boards to prevent rain penetrating. As cold weather comes on cover with more soil and coarse manure just deep enough to prevent freezing. In the milder sections, where the fruit often ripens up early, it is best to gather as soon as it is ripe and lay in heaps in the shade of the trees with a slight covering of straw, there to remain until there is danger of frost, when it can be placed in pits as directed above.

Pears should be picked as soon as the stem will part readily from the tree by taking hold of the fruit and giving a quick turn upward.

Early varieties can be at once placed in a warm room, where they soon become fit for use. If left on the tree to get fully ripe or mellow they are not nearly so fine in quality as when gathered and matured as above directed.

Winter varieties may be kept in a cool cellar and a quantity taken out at a time and placed in a warm room to ripen as required.

Plums cannot be profitably kept any considerable length of time after they are ripe enough to gather. This, however, is no great disadvantage, as they are used principally for canning and are in the best condition for that purpose when fresh from the tree, just before they begin to turn soft.

Perhaps no other fruit we grow, except apples, can be kept in as fresh state, fit for use, as the *Grape*. They may be kept until May with little trouble, and even much later by special care. Select such varieties as Vergennes, Salem, Agawam, Lindley, Isabella and Diana. They must become perfectly ripe before gathering from the vine and picked when quite dry and left to sweat for several days before packing. This may be done by placing on a table in bulk in any place where there is free access of air, after which they can be placed in baskets in layers, with paper between the layers, and placed in a cool room or cellar, where the temperature can be kept as uniform as possible. Packed thus they will usually keep until mid-winter in fine condition. For those intended to be kept still later, cotton batting can be substituted for paper. Cork dust, such as foreign grapes are packed in, will perhaps keep them still later. It should be thoroughly dry before being used. There is no difficulty in keeping Vergennes or Salem until July in good condition with this method of storing. A friend of mine keeps his grapes by placing them in layers in stone jars, with paper between the layers, and bury them six to eight inches deep in the earth, in some spot where the water will not lie. Cover the corks loosely with a board or stone before putting on the soil. When the earth has frozen to the depth of four or five inches, some mulch, coarse manure or any material should be put on the ground to prevent the frost from penetrating any deeper, the main object being to keep the fruit at as even a temperature as possible. I have not tried this latter method, but have known it to be successful. With either method care must be taken not to injure or in any way break or bruise the skin of the grapes. Any thus injured must be taken out before packing.

Insecticides.

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

(Continued from August issue.)

FOR GRAIN INSECTS.

But perhaps the most important use to which this liquid can be applied, is in the destruction of insects that attack grain. By its use, moths and beetles which attack the various grains in mills, granaries or in sacks, boxes and barrels, can be exterminated.

Several years ago I was employed by one of the leading trunk lines of railroads to investigate their wheat houses, which were infested by weevils and moths, in so much that the grain was seriously damaged.

In these investigations I learned that it was possible, easy and inexpensive to rid even large bins of grain of such pests, simply by the use of this liquid. If the building was close we had only to shut it up closely, throw in this bisulphide of carbon—otherwise we must throw the liquid onto the grain in the bin, and cover with oil cloth or any air-tight covering. As the vapor is so heavy it will sink to the bottom and seek out the insects, and mete out death to them. I usually use an iron tube—gas pipe—to place the liquid down deep into the grain; but now think this was not necessary. A sharpened stick that just filled the gas pipe made it easy to run the pipe into the grain. Then by withdrawing the stick the liquid could be placed near the bottom of the grain, when the pipe was quickly withdrawn. By this method, of course the fumes would be less annoying while we adjusted the cover. Not long after these experiments, my friend Prof. W. W. Tracy, explained to me the great magnitude of the pea industry—raising peas—in northern New York. He said that this entire business was threatened with destruction by the terrible ravages of the pea weevil. Can you not, he asked, give us some cure for this great evil. I said yes, build practically air-tight houses, and use bisulphide of carbon. Prof. Tracy explained to the farmers just how to build the structures, and to use the liquid. And so the industry was saved; and to day these "Tracy houses" are in common use by the pea growers, who produce thousands of bushels of seed peas, and destroy the weevils in this way. D. M. Ferry & Co., of Detroit, have purchased from a single party in Jefferson county, New York, eight or ten thousand bushels of peas on a single contract. Each grower has one of these "bug houses." The houses are made air-tight; even the door is made very close fitting; and is made still closer, by pasting paper over the edges, upon closing it, after filling the house with sacks of peas. An air-tight flue at one end opens at the very top into the building and at the bottom out doors. A sort of chute with an adjustable air-tight valve is arranged to facilitate the turning in of the liquid. The liquid is turned in till the odor shows that the vapor is pouring out at the bottom of the flue. Then of course the air has all been forced out by the vapor, when the valve is closed. It is left closed for three days, then the doors are opened, so that the vapors may escape, when the weevils are all found to be dead. As already stated, the vapor of bisulphide of carbon is about two and one-half times heavier than air, so we easily see how the heavy vapor would settle and force the air up, and finally when the room was emptied of air and filled with these vapors the

vapor would be at the top of the room, and would pour down and out of the flue. Of course, from the law of diffusion of gases, the above cannot be strictly true, though practically it is so. Some of the growers, as Prof. Tracy informs me, do not build the houses, but rely upon a more simple method to use the carbon. Yet from the fact that accidents have occurred, and an occasional failure to kill the weevils, most of the growers now have their "bug houses." Prof. Tracy informs me that the firm of D. M. Ferry & Co. use the carbon to destroy the bean weevils in returned beans from the south, the cabbage seed weevil, and all other grain and seed insects. They simply use an air tight bin. Of course a water tight barrel or cask with a close oil cloth, buffalo robe, or other air-tight cover would suffice as well.

Some years since, one of the most extensive millers of Michigan, whose mills are situated in the very centre of one of the largest cities of the State, came to me with the very dolorous complaint that his mill—just purchased—was swarming with insects. There were caterpillars, and the larvae of several species of beetles. He was discouraged, and said he wished he could burn the mill up, he would do it. I showed him how fatal bisulphide of carbon was to insects, by experiments in his presence; showed him how inflammable it was, by dropping a little in a jar, and in a moment dropping a lighted match into the same jar; explaining to him the possibility of destroying the insects and suggested that with due caution there would be no risk in the use of the liquid to free his mill of the pests. I need hardly say that he left me in a much more cheerful mood. This gentleman cleaned his mill as thoroughly as possible, closed it as completely as he could, and then used gallons of the bisulphide of carbon. He locked his mill and permitted no one to enter. He soon wrote me a most joyful letter. He said he had "utterly cleaned the bugs out." I went to see this gentleman a few days since. He says he regards this use of the carbon of great value to him. Each year since I first gave him the information, he has cleaned up and applied this insecticide, except last year, when the comparative absence of insects made it unnecessary. He uses about twelve pounds at once. He says it is wonderful to note how effective even a little of the liquid often is. He has purchased hundreds of gallons of the liquid, purchases it directly of the manufacturer at Cleveland, Ohio, in one hundred gallon cans at from ten to fifteen cents per lb. He always applies it on Sunday morning, when no one else is at the mill, watches it himself, and lets no one enter till he opens up and thoroughly ventilates the building. He thinks very highly of this liquid; not only because it is so excellent as an insecticide; but, as he says, you can throw it right onto flour, and soon it will vaporize, and the flour is in no wise injured. I asked this gentleman if he had read the account of the moth invasion of the Toronto mills. He said he had. I asked him what he thought of the report that a German had used this bisulphide of carbon with no success. He answered: They did not have me to use it. Use thoroughly enough, said he, and I do not believe any insect could stand it. I said what about the danger in its use? With caution, said he, there is no danger. "You showed me that the gun was loaded, and I keep the muzzle pointed from me."

[TO BE CONTINUED.]

Family Circle.

FOOLING AWAY HIS TIME.

BY FLOYD K. ROYCE.

"Taint no use to talk about it, Phoebe, for I shant consent to fool away enny of my money in sendin' that boy to no hifalutin' schule. All I ever learned I got at the old destrict schule, an' I guess it's good enough for enny of our boys."

"But times have changed since then, father. Fifty years ago a young man could begin life with a smaller amount of book-learning than is now necessary for him to possess, if he would compete with others for the honors and positions we hope to see our boys gain. We have toiled early and late for thirty years on this farm, Joseph, and while there has been much of happiness in our lives, yet the knowledge that we have never been able to gain much to lay aside for a rainy day has caused us anxiety for the future."

"Yes, that is just what I am trying to make you understand. We haint got but a thousand dollars in the bank now, an' I want to buy that piece of medder of Deacon Asher, too; but you want to fool it away in sendin' that boy off to college. I yum, I never could more'n half understand you, Phoebe."

I was an unwilling eavesdropper to this conversation between my parents. I had come in from the yard with a pail of foaming milk in each hand, and to lighten the too heavy burden the care of the dairy placed upon my little mother, I stood in the milk room straining the milk for her, when they came into the garden by the side of the room and I was made an involuntary, yet, I must confess, a most anxious listener. My entire life had been passed upon the farm, and one who has endured the hardships of farm life for a few years knows how irksome such a life can be made, if the main idea is to work more with brawn than brain. I was in my eighteenth year, and the only surcease from labor had been the few winter months passed at the district school. These few months of each year had indeed been an oasis in the hard life, and the grains of knowledge gleaned from the chaff threshed among us by the too often incompetent teacher, who was secured more times because he could be gotten cheaply, than because he possessed any particular ability for a teacher of the young, were eagerly picked up and added to, as opportunity would permit. I had at last, by hard work evenings, after the chores were done, fitted myself to pass the preparatory examination at the State Industrial University, and now desired the consent and assistance of my father to take the four years' course in mechanical engineering.

My father was not an unkind man at heart, but he had become so surrounded with the ideas of his own importance and power that he could conceive of nothing higher and grander in a boy's life than to be able to imitate himself. No one in the whole neighborhood could keep up their "station" in binding grain with him, whilst at barn-raising, corn-huskings, hog-killings, or log-rollings, no one who knew him would for a moment attempt to equal, let alone trying to excel him. It was true that Deacon Asher's new hired man, a stranger in these parts, had attempted to throw him in a wrestling match at one of the raisings; but he was quickly sent to the earth with a bruised head and a chagrined spirit, which raised my father another notch in local fame, although it gained him an enemy in his defeated antagonist. Father was a heavy, muscular man, as may be imagined, and I gave promise of nearly equalling him physically, but there the resemblance ceased. He was light haired, while I resembled by dark-haired mother in complexion and disposition. I was fond of athletic sports, but did not care to indulge in the rough matches of the neighborhood which so frequently engendered ill feeling. My three brothers, all older than myself, took naturally to the farm life; they had grown up uneducated, and while not my equal physically, they resembled my father in more respects than I did. As may be presumed from this, they were seemingly drawn closer to him, while I always looked to my mother for sympathy and needed spending money. She had been better educated than my father in early life, and by insisting upon taking her favorite magazine, a treat always to me, she had kept fairly abreast of the times, and sympathized with my ambition to make something of myself.

We had talked over my hopes and plans the night before, and, like the dear little mother I had always found her, she insisted upon gaining father's consent to our arrangements. And this was the conversation I was overhearing.

I must confess that I leaned my head a little closer to the window to catch my father's reply, and in doing so was afforded a view of his face. From the stern look I could see gathering in his eyes, I knew my hopes were doomed to disappointment, even before his next words confirmed this opinion. My mother had added another in reply, which I did not hear, but I could see him turning nervously on his heel as if anxious to have a disagreeable task ended. "I don't intend to tell it, just yet, but the fact of it is, mother, Jed thinks o' gittin' married this fall, after the work is out of the way, an' we must buy the Deacon's medder to make the farm large enough for another. Jed spoke to me las' night!"

"But, Joseph, you have already helped Jedediah to a thousand dollars, and I should think that in the

spirit of fairness to all of our boys, he should now be willing to wait."

"Taint no use to throw up about what Jed lost in buyin' that race hoss," retorted my father angrily, for my mother had touched him in a tender spot.

My brother had purchased a high-priced trotting horse a season or two before, and he and father had been in high favor at the annual meetings of all of the county fairs for a time, as their horse was a good one and usually won; but one day after a very successful race on Deacon Asher's track, he and Jed had some intoxicants (father declared solemnly that it was nothing but cider, but Jed winked at me when he was telling it, so I knew Deacon Asher's hired man had evened up with him by putting a "stick in it") became mixed up with the race horse and another man's carriage, and the result was that the trotter lay down and died, and when father sobered up he found that he had a thousand-dollar note to pay which Jed had gotten him to sign with him for the horse. He now wanted an excuse to get angry so he could have the better heart to refuse her request and continued:

"Jed has always done the best he could an' I shall help him. The money is mine!"

"Stop, Joseph!"

The voice was that of my little mother, but so changed with the emotions that were stirring her heart that had I not been looking into her pained face, it would have seemed as if it were a stranger who was speaking when she commanded him to stop. The idea of his meek little wife assuming ever to question his right to domineer over her, had never entered my father's head. He had ruled so long and with such a high hand in all family matters that his mere word he regarded as law. Now he stood in open-mouthed silence while my mother, with heightened color on each of her thin cheeks, spoke with a vehemence he never before imagined she possessed:

"You have always assumed to control everything, Joseph Astery. Our boys have, with the exception of Preston, been moulded by yourself into what you consider the true ideal of manhood. My life has been passed in hard work for fifty years, thirty years of them as your wife, and all that I have received in return for this hard, unceasing toil for you and our boys has been my board and the few clothes that have been begrudgingly doled out to me. Don't start, Joseph, you are going to hear the truth for once in your life. Three of our boys, while they have always had an affectionate feeling for their mother, early learned to pattern after their father and have come to treat me with a rough regard such as one might assume toward an obnoxious servant. I have taken this treatment without a murmur, believing the boys whom I had so loved and so toiled and struggled for through the helpless years of infancy, really loved their old mother when once you probed the coat of carelessness they had put on towards me. My heart has been faithful to them all; but, Joseph, if you think that Jed and the other two seem nearer to you, because they are more like you in character, can you blame me if my heart beats with perhaps a deeper love for our youngest son, who, while he resembles you in his physical strength, has always been so tender and considerate of his old mother that while they add to her heavy cares and burdens by their carelessness, he lightens them by his thoughtfulness? You have found me a faithful, uncomplaining wife, Joseph Astery, for thirty years. We have, as I supposed until you spoke, been laboring for mutual benefits. Many times I have thought your decisions not generous ones, but never until now have I rebelled against them. Now, I demand that Preston be given a thousand dollars of our, not your, money before Jedediah is given another like amount."

My mother, usually so sweet-tempered, was now thoroughly aroused and determined to throw off the yoke and assert her independence for once, if she suffered for it. When I now think how she braved the storm of wrath surely expected to follow her words, through love of myself, I can not resist the temptation to stop, even as I write these words, and gently stroke the gray hairs of the one who endured so much for me. Surely one cannot measure the depth of a mother's love. But I digress.

It was the first time my father had stood quietly under rebuke. Perhaps the justice of her remarks forced their way through the years of selfishness, or may be the picture of the little woman, as she so saucily faced him, brought back the memory of the days so long ago when he was wooing the bright-eyed lass, and this tempered the hot words that at first rose to his lips. Whatever the influence, I was compelled to admit that I did not understand the power that controlled my father, for the big, strong man was suddenly subdued; the overbearing air disappeared, as if by magic, and, instead of an angry word, he quietly said:

"You may be more than half right, Phoebe, but I don't know as I would own it except as between ourselves. If it was for enny other purpose—to buy a farm, or a thrashing machine, or anything of enny account, why, I yum, I'd be sorry I promised Jed an' let you have the money for Pres; but I can't reconcile myself to seein' him throw away a thousand dollars, good money, let alone all of his time, in jest gettin' an' education that I don't see ever done ennyone enny good."

"What about the thousand dollars?" questioned my mother, ignoring his protests.

"Taint no use, Phoebe. I can't consent, and I have given my word to Jed."

"Very well, then," replied my mother quietly.

"Preston shall go to school and without the use of your money. I am sorry that I do, you remember the question in the same light that I do. You remember I had a small sum of money left me from my father's estate. This has been out at interest for twenty years. The amount was so small you thought it

was not worth accepting, when you were disappointed because the larger sum was left to my brother. I was thankful for a small sum that I could call my own, and have used neither principal nor interest. The sum will more than answer Preston's needs, and I shall expend it for him freely. You may as freely use the sum now on hand for the other boys and we shall see which brings in the best results in the end."

To say that I was astonished at learning that my mother had so large a sum of money at interest, would be to simply convey the state of my father's feelings at the same time. He felt that he was beaten all around and could not say a word. It was easy to see that he begrudged even this sum to be paid for my schooling, and numerous hints were dropped to me about what a nice payment such a snug sum would make toward a good farm. While I disliked to take my mother's legacy to pay for my schooling, when I felt that I had earned a sum working for my father that honestly belonged to me, I saw that it would give her more pleasure for me to do so, and I thus accepted and was soon in the University, and hard at work.

The four years in school passed quickly for me. While the money my mother gave me was not sufficient to pay my expenses, it proved ample with what sums I could earn during the long summer vacations and at odd spells to pay my way and leave a goodly sum besides at the end of the third year; and during the vacation of the last year I succeeded in perfecting a machine that not only brought me enough to repay my mother in full and with compound interest, but also left me a large sum besides. I had been home once only during the four years, as I could ill afford the time. Caring to see my mother only, I had arranged each year to have her make a visit to her old eastern home, which brought her near the city where my vacations were passed. The first few years, these visits had done her much good, as could be seen in the improved condition of her health, but the last year she came to me I was not a little alarmed at her appearance. Instead of the bright-faced little woman I went to the train to meet, there alighted an old gentleman, stoop-shouldered and dejected, in whom I should with difficulty have recognized my father had he not been accompanied by my mother, whose appearance was no less dejected. One look into my old father's haggard face and all the ill-feeling I had harbored against him had vanished; but it was not until they were with me in my own pleasant home which I had purchased near the suburbs that I learned from him the cause of their sad looks and of my father's appearance with my mother. Then he told me the story:

"I didn't like to come to you, Preston, and burden you with my troubles, but mother insisted on it. When you left the old farm, my boy, I found the head had gone from the place. I didn't like to acknowledge it to mother, even, because I had always been overbearing and self-willed; but I soon found that I could not farm as well after your brains left the place. Though I had always thought that an education was of no benefit to a farmer, I could not help admittin' that it did pay to keep informed through the papers of what was goin' on; for I had stopped the country paper you had always taken because I didn't think I had time to read, and soon got taken in by a lightnin'-rod swindle that cost me three hundred dollars, and this, too, a week after the very same swindlers had been exposed in that paper of yours I had stopped. Then we bought Deacon Asher's medder. We paid the thousand dollars of yours."

"Not mine, father," I smilingly interrupted.

"Yes, my boy, it was yours, and you ought to have had it; but let me go on with my story. We paid that down on the medder lot and I gave a mortgage for two thousand dollars to pay the balance, on the old place. Things since then haint gone right. I had the deed made out in the other boys' names, thinkin' to encourage them, but it was a mistake. Jed took to drinkin' and the other two sold out to him. He has run through the entire place and now, Preston, the old home has got to go to pay off the mortgage, and other debts the boys contracted, an' I signed for, an' your mother won't have a dollar for her old age."

"But, father, I have you left," said the faithful little woman. "You are like you were years ago, and that is better to me than money; but I can't bear the thought, Preston, that your father must begin hard work again at his time in life."

"Tut, tut, mother," replied my father, as he tried to wipe the tears from his old eyes. "Taint for myself I care, but I can't bear to see you left without nothin' when I'm gone. If I'd listened to you oftener, especially that time when you was talkin' to me so sensible by the milk house, things would have been different. That thousand dollars, I wouldn't give to Preston has brought all of our bad luck. It will kill me to see the old place sold under the hammer, an', Preston my boy, I came on here to ask you to forgive me the wrongs I did you. I suppose you haint nothin' saved ahead, but I know you'll look out for mother better than the others, for they haint got nothin' an' mother would feel more like livin' on you, since she helped you, you know, in goin' to school, when I was so mean and wouldn't. If you hadn't fooled away all your time goin' to school, may be you'd have somethin' now to live on, instead of boardin' round. Whose place is this, ennyway, Pres?" he suddenly inquired, for the first time observing the rolling meadows and waving grain in the fields back of the large house.

As I ignored the question, he perhaps thought I had not heard him, and continued:

"I yum, I believe I could live on such a farm as this, but taint for such as I am. Say, Pres, what kind of a man owns this farm, ennyway, so near

the city, yet right out in the country on the other side of the house?"

"Oh, he is a man about your size," I replied.

"Is he—that is—did he—say, did he ever go to college?"

"I believe he did fool away some of his time at a University," I replied, smiling at the look that swept over his face, while the only remark to this he could make was his familiar, "I yum."

In this one expression, all the convictions of years seemed swept away, but it needed one more test to banish them all. I had whispered something to my mother that had driven all care from her dear face, but I was not yet ready to divulge to my father what was said. Neither had I laid away their wraps, but sat holding them in their hands as if expecting soon to leave. At last father said:

"Well, Press, since you have stopped here till I've told our story, maybe we better be goin' up to your boardin' house. The family here don't seem to be comin' home, an' maybe you can run in agin if you were wantin' to see them. I'm 'fraid mother is pretty tired after her long ride on them tarmel cars, an' we better get on."

"Oh, no," I replied smiling. "The family are not away. The farmer is at home. Lay off your things and come out to supper."

"Why, what—I don't understand," he replied, looking helplessly at mother; then seeing her smiling face, he was more astonished than ever, until, to ease his anxiety and bewilderment, I explained:

"This place, my dear father, belonged to me; but when I heard, through one of the neighbors, how things were going out at the old home, I had the deed changed and it is now made out to Mrs. Phoebe Astery. Thinking you would not like to live with mother if she owned all of the property in the family, I have also purchased the old home-farm, and here is the deed made out to Joseph Astery, so you can, in the future, live on just whichever place you please, only if you stay on this one, I may board with you for a few years, while I fool away some more time inventing machinery." His only answer was,—

"I yum."

Tapioca.

Upon your pantry shelves a good supply
Of tapioca keep unfailingly;
For many dainties, wholesome, rich or rare,
You from this starch product may prepare.
First, then, Ambrosia, food meet for the Gods—
They ne'er partook of it, but "what's the odds?"
One cup of tapioca soaked o'er night;
Then when you're stirring with the morning light,
Place it where it will slowly cook till clear—
A double kettle is of value here.

And now one cup of sugar; and meantime
Have one nice pineapple chopped very fine.
On this the boiling tapioca pour,
And stir together; 'twill need nothing more.
Pour into moulds, which shall the shape preserve;
When cold and firm with cream and sugar serve.
This delicate and always welcome dish
You may prepare with peaches if you wish;
Or other fruit, soft, ripe, or even canned,
Such as at any season may command.

If apples you would use, best, pare and core
Enough to fill your baking dish—no more.
The space of cores with sugar fill, and spice;
A dash of lemon juice is very nice!
Bake till the apples tender grow; then pour
The cup of warm, soaked tapioca o'er,
And bake till clear. Most surely you will deem
This "about right," served warm with sweetened
cream.
A little salt the tapioca'll need,
As almost every pudding does indeed.

For tapioca cream, in water swell
Four tablespoonfuls; only cover well;
Then with a quart of milk you'll set it on.
And gently cook till sure it is well done.
Four eggs; the yolks with sugar you will beat—
A cupful will not make the cream too sweet—
Stir in with care and add a little salt;
Vanilla flavor will not prove a fault;
Lastly, the whites well beaten. Serve when cold,
And how acceptably need not be told,

Or, these two recipes you may combine
In apple pudding, if you so incline.
Apples to fill your dish you'll peel and core,
Filling with sugar, then bake as before.
The tapioca you will soak and swell;
Three tablepoons, or four, will do quite well.
Mix with a custard made of milk, one quart,
Three eggs; vanilla flavor (or some sort);
A cup of sugar. O'er the apple pour;
Bake till the custard is well set, no more.

A custard pudding baked is very nice
With tapioca, or with this and rice.
The first—proportions as for "cream" will do;
Cocoanut added may be something new;
Three tablespoonfuls with your yolks you'll beat,
And sugar; 'twill look "good enough to eat!"
The tapioca soaked, and as before
In the milk scalded, you to this will pour;
Lastly the whites, that all may be well done,
For frosting beat, and in the oven brown.

For invalids a jelly may be made,
Quite palatable, too, so it is said.
The tapioca you will cook till clear.
As for Ambrosia, no fruit needed here
Except a lemon; juice and grated rind
A simple nourishment you'll surely find.

—Good Housekeeping.

Minnie May's Dep't.

She Would Sweep Nothing Else.

"How gracefully she sweeps the keys,"
The caller to the mother said.
As o'er the answering ivories
The daughter's nimble fingers sped.
"Ah, yes," the mother's voice replied,
And tremors in her accents creep;
Then to herself she sadly sighed:
"The keys are all she cares to sweep."

MY DEAR NIECES:—

It is the prevailing opinion that no woman can hammer a nail without hitting her thumb, but many a nail has been driven and no thumb hurt. Every girl should know how to use hammer and saw as well as boys, and a small box containing hammer, saw, chisel, screwdriver, tack hammer, pair of plyers, nails of various sizes, an assortment of screws, wire, and picture nails and tacks should be in the possession of every house-keeper. They should be kept sharp and in good order, and exclusively for indoor use, for if they are allowed to be taken to the barn they are never where they ought to be when needed. All small repairs can be done by a woman inside the house. How often we have wished for a box of just a certain size to grow mignonette, or plants for the window sill, and could not have it. The job not being a large one did not interest the mechanic enough to make him hurry with it. It does not require any particular muscular force nor ingenuity to saw and nail a box together, and the work is clean and interesting. When we want to cut a piece of wire our scissors are called into requisition, or twist at it until our thumb nails are broken and our patience out of joint. Picture frames can be neatly made by buying the mouldings and fitting the corners by a mitre joint and finishing with glass and back. Locks can be oiled and the screws tightened, a nail put where required in the pantry shelf that "wobbled" for so long, and all the domestic machinery kept in smooth running order by girls who can handle tools. And there is nothing unfeminine in it either, the frailest of girls hammer at brass and copper and make so many useless things too when they might do much that was of real use if they could use tools. Fret work is considered quite an art, but it is only carpenter work on a small scale. Who does not remember the discomforts and mortification caused by a door not opening smoothly over a carpet, which could be all set right in five minutes with a sharp saw. And many cherish unpleasant memories of a wounded knuckle caused by a window sash "striking," as it is called. How many odd jobs have to be done in glueing, too—and it is quite an art to glue neatly and well—so we must add a glue-pot to our collection. As we become more versed in the use of tools we will want sandpaper, paints, varnish and brushes, and instead of waiting for the mechanic, who often never comes, we can do them ourselves and at far less cost. It seems a simple thing to put a pane of glass in the window, but how often we have stood helplessly by to see our window blind drenched and carpet soaked, and to stop the damage had to resort to a bundle of rags until some one came who could do the job. Paints come prepared in all shades, and it only requires a little practice to lay them on smoothly, and it adds so much to the appearance of a room to see the paint work in good order, besides it saves labor, and should be

eagerly accepted by all if only for that; but neatness observed about our homes has a refining influence, and we should all take that pride in our home that makes it the dearest place on earth and do all we can to keep it so.

While the morning is still cool and dewy is the best time to air the house. Open wide all doors and windows until the sun begins to shine directly into them, then close the sash and draw down the curtains until the close of the day. You will find your room cool and sweet, and just the place to rest in after your work is finished.

MINNIE MAY.

N. B.—Minnie May offers a prize of \$2 for the best article on "Experience in Poultry Raising and the Results; Giving all Details of Profit and Loss." Communications to be in our office not later than the 22nd September. Also a prize of \$2 for the best list of "Easy and Useful Home-made Presents, Suitable for Xmas, and How to Make Them." All articles on this subject must be in by the 15th of October. Minnie May would be glad of a recitation for publication, if any of our readers have a particularly good one.

Recipes.

CUCUMBER SALAD.

Peel and slice thin four well-grown but unripe cucumbers; slice an equal number of well-grown, ripe tomatoes, from which the skin has been removed, lay in alternate rows and pour over it the following mixture:—One tablespoonful of mustard rubbed into two of salad oil and a teaspoon of salt; thin it with vinegar and toss up the cucumbers and tomatoes until all are covered with it.

CHOCOLATE ICING.

Five tablepoons of sugar and half a cup of milk; boil five minutes, then stir in half a cake of chocolate, which has been grated and moistened with boiling water. Use while warm.

BAKED RICE WITH CHEESE.

One pint of boiled rice, half a cup of grated cheese, in alternate layers in a buttered dish; spread crumbs of bread on top and bake twenty minutes in a quick oven. Serve very hot.

RICE AND BERRY PUDDING.

Soften cold boiled rice with milk and stir until all the lumps are dissolved; add three well beaten eggs, a teaspoon of butter, a small cup of sugar, and two cupfuls of blackberries. Bake slowly for one hour in a buttered pudding dish.

CREAM COOKIES.

One cup of maple sugar, one cup of sour cream, one teaspoon of soda, a little nutmeg, one teaspoon of caraway, and flour to make a stiff batter; roll thin and round. Bake in a quick oven.

CORN OMELETTE.

Cut six ears of cold boiled corn from the cob; beat the whites and yolks of six eggs separately; butter a hot pan; stir whites and yolks lightly together, add a pinch of salt, one of black pepper; pour into the hot pan; sprinkle the corn on top when it sets; turn it half over and let it remain in the pan until wanted. Turn it out on a hot dish.

BAKED POTATOES.

Baked potatoes form an agreeable variety to our table and are simply and quickly prepared. Wash clean, dry and rub the skins with a small piece of dripping. Bake one hour in a hot oven.

BAKED TOMATOES.

Select them all of a size, put into a pan with a little water and a pat of butter, a little pepper and pinch of salt on each. When they look shrivelled they are done.

Naming the Baby.

Written for the Illustrated Home Journal
BY EUGENE SECOR.

'Tis a serious and solemn thing, it is said,
When two loving hearts are determined to wed.
Some wiseacres sagely venture to say
That the young folks will open their eyes some day.

Perhaps it may be a matter of weight,
When marriageable people rush to their fate,
But my wife and I got along very well
Till a little boy baby from Paradise fell.
Then trouble began—for what should we name
A cherub like ours—the first one that came
To cheer our abode from the day of his birth,
And bless other folks to the ends of the earth—
For certainly no such boy before
Was sent to this world, and likely no more
Ever would be, that so embodied all hope—
Hence a name must be found to give the bud scope.

A plain common one such as Henry or John
Would be good enough if he had to plod on
In the same old style as his proxy grandsires,
Who lived with few hopes and fewer desires,
But we, in this age of progress and light,
Need some incentive that's always in sight,
Like the name of some general famous in war,
Some poet whose verses are sung near and far,
Or, may be, the name of some statesman would do
For our infant genius, whose exploits we knew
Would add to the splendor of whose ever fame
Was linked to his future by even a name.

So after much worry and much prayerful thought,
And all of our thinking developed but naught,
My wife and I hit upon this clever scheme
To get the advice of our friends who deem
It their duty, yes, their neighborly right
To help us out of our difficult plight.

Our cards were sent out, inviting to tea
All the cousins and aunts this side of the sea.
'Twas agreed by us first that each willing guest
Should add some names to our stock by request.

One very religious old aunty—dear soul—
Wrote Moses and Joshua, Peter and Paul,
Isaiah, and Job, Jeremiah and Gad,
Abednego, Cush, Ben-Hur and Arphad—
Or, if we were partial to good double names,
Suggested Luke Liakim and Jedediah James.

Another nice aunty, whose husband was Squire
In the town where they lived, seemed never to tire
Of building political air castles, in which
Some day should shine, both honored and rich.
Of course she could think of nothing but fame,
And wanted the boy to carry the name
Of Gladstone or Blaine, Abe Lincoln or Clay,
B. Harrison, Reed, Von Bismark or Quay.

A maiden with hope, tho' past her sweet prime—
Like a faded rose—yet dreamed of the time
When a Prince all booted and spurred should ride,
And carry her off to his castle a bride—
She swelled our long list by fully a score.
Orlando, Cuthbert, Rupert, Theodore,
Boniface, Aubrey, Donald, Ivanhoe,
Cyril, Bartholdi, Stuart, Horatio,
Roderic, Lubin, Bardolph and Roy,
Are some of the names she proposed for that boy.

A woman whose husband belonged to the "Post,"
Was an "ex-vice" something, of which she did boast,
She marshaled the hosts of sixty-one,
Not in the order their battles were won,
But mixed them up "a la pot pourri,"
And fired the whole mess at my wife and me.
McPherson and Garfield, Grant, Hooker and Meade,
Franz Sigel, Tecumseh and Hancock to lead,
With a host of others who wore the blue—
Enough to name a regiment or two.

'Twould fall me to give all the names handed in;
(If some be omitted I'm sure its no sin.)
Suffice it to say, the whole universe
Was ransacked for words both ornate and terse,
Of poets, and authors, and painters, four-score—
Of millionaires ten, of editors four,
Of doctors, and preachers, and lawyers—in brief
A list long enough to stagger belief.

When all were gone home, and my wife and I
Had vainly attempted, with many a sigh,
To choose from the list a suitable name,
We suddenly thought of a pious old dame
Who wanted a scriptural one, she said,
That blessings might rest on our conjugal head;
So we then and there, in utter despair,
Said "Alpha Omega's the name he shall bear."

"Never look at your boy when he is speaking,"
writes a father. "It embarrasses him when he
is explaining how he happened to be in school
and out playing ball at the same time."

Said an exasperated father at dinner: "You
children turn up your noses at everything on the
table. When I was a boy I was glad to
get enough dry bread to eat." "I say, papa,
you are having a much better time of it now you
are living with us, ain't you?" remarked little
Tommy.

Long, Silk Purse.

From time immemorial a silken purse has been
considered the acme of elegance as a receptacle
for "filthy lucre." Every lady who values sim-
plicity and beauty must prefer them to the bung-
ling combination of plush and alligator (?) skin
with which the shops are flooded.

A very pretty and easily made, long, silk purse
requires one-half ounce of No. 300 Florence knit-
ting silk.

On No. 18 needles cast 59 stitches and knit
across plain. 2nd row—purl 2 together, throw
thread over; repeat, until only one stitch re-
mains. Knit 1 third row and every succeeding
row until the 65th is reached, the same as the
2nd.

Then follow with 83 rows of garter stitch, after
which knit 64 rows of the open work, as at first;
knit one row plain and cast off. Sew up the
sides of the web thus obtained, leaving an open-
ing of two-and-a-half inches, and finish with steel
trimmings.

Great care should be taken to keep up the
number of stitches. At the beginning of every
row there should be 59 on the needle. I have
never succeeded in picking up a stitch dropped,
though I have contrived to make one without
spoiling the work, rather than ravel it out.

The cost of this purse need not exceed sixty
cents, but if more elaborate trimmings are de-
sired the expense will be increased.

How to Prepare Sheep-Skin Mats.

For the benefit of those subscribers who have
requested directions for making sheep-skin mats,
we print the following taken from *Strawbridge
and Clothier's Monthly*:

Wash the skin in warm water, remove all the
fleshy matter and clean the wool thoroughly in
soft soap and water. Having thus freed it of all
fatty matter, apply to the flesh-side the follow-
ing mixture: Take half a pound each of fine salt
and powdered alum, and half an ounce of borax.
Dissolve these in a quart of hot water, and, after
cooling the mixture to a degree that the hand
may be held in it, add rye meal to make it into
a paste. After spreading it on the fleshy side of
the pelt—and the quantity named is what will
be needed for one pelt—fold the pelt lengthwise
and let it remain in an airy place for two weeks
after which remove the paste, warm and dry.
When nearly dry, scrape with a knife, which
should be crescent shaped; and the softness of
the pelt will depend very much upon the amount
of working that is bestowed upon it. If the
skin is to be used for a mat, then with strong
lather made with hot water—but used when
cold—wash the fresh skin, being careful to get
all the dirt from the wool. It is better to plunge
the skin into the lather, and then wash clean in
cold water. Now, dissolve a pound each of salt and
alum in two gallons of hot water. Put this into
some sort of a tub in which the skin can be
placed, and have the mixture cover it. After
twelve hours soaking, take it out, and hang it
upon a pole to drain. When it has been well
drained, stretch it upon a board to dry, and
stretch it several times during the process of dry-
ing. Before it is quite dry, sprinkle on the flesh
side one ounce each of powdered alum and salt-
petre, rubbed well. If the wool is then found
to be firm on the skin, it can be folded up and
let remain two or three days, turning the skin
over daily. Then scrape the flesh side with a
blunt knife, and rub with pumice stone.

To color the mat, use aniline of any shade de-
sired. Dissolve one pound of aniline in two
gallons of water; strain before using; then float
the skins in a dye-box, wool down. See that
they lie flat, and let them remain till the color
desired is reached. Then take them out
and run them through clear cold water, and
hang up in a hot room to dry. For plain white,
wash the skins well, after tanning. If not white
enough, hang up in a small room and bleach
with powdered sulphur. Set in a pail in the
centre of the room, the burning sulphur. Do
not let the sulphur fumes escape, and have the
room air-tight.

Knitted Knee Caps, for Rheumatic Knees.

Two skeins Saxony or Shetland, or one skein
Provident yarn; steel needles No. 12. Cast on
100 stitches on 4 needles and knit round in ribs
of two plain, two purl, for depth of 4½ inches.
Then knit plain to within 10 stitches of the
other end; this will leave 20 stitches, which can
be slipped on another needle till required. The
other 80 stitches are to be knitted plain, back-
ward and forward, like the heel of a stocking,
for the knee piece. The first stitch of every row
is to be slipped off without knitting, but kept
rather tight, as they have to be picked up after-
ward, and if let loose are apt to make holes.
From the 10th to the 70th row decrease a stitch
at beginning of each by knitting second and
third stitches together, so that at the conclusion
20 stitches only will remain. Then unite again
in a round by picking up 30 stitches from each
side, which with the other 40 will again make
the original 100, which must be knit in ribs for
4½ inches. Then bind off loosely. If wished
smaller size use No. 13 needles, or if larger,
Germantown and larger needles may be used.
M. E. S.

Old and Young Should not Sleep Together.

A prominent medical writer says that no in-
telligent person who loves his children will allow
them to sleep with persons greatly older than
themselves. The nervous vitality of a child
should not be absorbed by any diseased or aged
relative or friend. Children, compared with
adults, are electrically in a positive condition.
The rapid changes which are going on in their
little bodies abundantly generate and as extensiv-
ly work up vital nervo-electric fluids. But when,
by contact for long nights with elder and
negative persons, the vitalizing electricity of
their tender organizations is absorbed, they soon
pine, grow pale, languid and dull, while their
bed companions feel a corresponding invigoration.
It is undeniable that healthful influences are
lost, and to a fatal extent sometimes, by this ill-
advised custom. A woman was prostrated with
incurable consumption. Her infant occupied the
same bed with her almost constantly day and
night. The mother lingered for months on the
verge of the grave, her demise being hourly
expected. Still she lingered on, daily disprov-
ing the predictions of her medical attendants.
The child, meanwhile, pined without any
apparent disease. Its once fat little cheeks fell
away with singular rapidity till every bone in
its face was visible. Finally it had imparted to
the mother its last spark of vitality and simul-
taneously both died.

MRS. PILGRIM: Now these boys air sister's.
Census-taker: No; you mean brothers. Mrs.
Pilgrim: No, sir; I mean jes' what I say. They
air my sister's. She lives nex' door, in the red
house.

Dawning Genius.

It was a mother's kiss of approbation and encouragement which made Benjamin West the artist he was, when with childish hand, but eye of genius, he drew the sleeping baby, in which her fond eye noted a resemblance. Had that been a smile of ridicule or a hastily spoken word to say he might have been better employed, who can tell on so sensitive a plant as a child's unfolding genius what a blighting effect it would have had.

In our illustration another young artist is at work. See the studious and earnest face as he bends over his slate, and the picture grows under his hand. No half-hearted work there; his soul is in it and all his faculties are engaged. The words of a Great Teacher spoken eighteen hundred years ago come to mind, and we think there are many things we older people have to learn, in which we would do well to imitate and receive, even "as a little child."

What else do we note in our illustration? On a wooden chair the boy has his work. No home of wealth, with easels, pallets or flowing fountains, no cradle of luxury does our youthful genius claim. Let elegantly carved rooms and gorgeous upholstery continue to surround those whose brains the world's work may do without, but may our men of genius continue to come from the little cot and the rude hamlet, carrying with them wealth of mind and health of body. Let them come from the green fields and the blue skies, redolent with sunshine and singing birds and beauty, and with "the greatest thing in the world"—as Professor Drummond terms it—love, *love* to man and *love* to God.

And when the world wants wisdom and clear minds and heads, yes, and hearts, in its hours of trouble and difficulty, they will turn aside to meet the men they require, without asking if their coat is worn or if they know certain rules of etiquette. It will take them *as they are* and pass to them their offices of trust.

Let us look again at our illustration and see the power one earnest worker possesses. The little sister, wondering at her playmate's silence, comes to see, and his enthusiasm holds her spell-bound and her dolly lies forgotten on her arm. What does she learn from the picture as she stands there, her face lit up with interest, and watches the strokes one by one as they fill

in and make up the picture? More than one lesson is there taught; a deeper love and respect for the young artist, a lesson in perseverance and an object, an object to be accomplished before we lay our work down. What life lessons these! The man that is to be shines through the boy's eyes and face; the little child will yet be the confidential sister, and with a mother's love and father's pride, what may we not predict for the persevering, studious, loving and loved son and brother; what may we not predict when the development of all these God-given powers is ac-



DAWNING GENIUS.

complished, when

"The shadows are lifted,
When the sands of life are all sifted,
And the well-fought fight is won."

KATE ROBERTSON, Strabane.

How is it possible to proceed in two opposite directions at the same time? By walking from the forward to the aft of a vessel while sailing. What is the centre of gravity? The letter V.

At Sir Ralph's Evening Party—Captain F. (brought by a friend)—"Old Stick-in-the-Mud does the thing well, doesn't he? The supper alone must have cost him a guinea a head." Lady—"Twenty-two and sixpence, sir. I can give you the exact figures." Captain F.—"Why, how, what do you mean?" Lady—"Merely that I am old Stick-in-the-Mud's daughter."

Fashion Notes.

An effort is being made to renew the popularity of the long skirt hems, but the untidiness and awkwardness of over-long skirts tempt us to wonder whether any sensible woman would ever adopt them. Another attempt is that of reviving the all-round hoops, but let us hope without success.

The inclination is to "mannish" styles, but the little jacket is jaunty, and the linen collar and shirt looks like a man's; the little lady who wears it looks very pretty and neat. If there are

little side pockets we need not put our hands into them, and if we do wear a sailor hat it must be worn on top of the head, not a particle to one side. Fashionable travellers are wearing black silk underwear throughout, not excepting night-robes; it is claimed they do not soil so easily. It is yet too early to tell what will be worn for autumn, as only a few new styles are shown, but our summer usually lingers so long there is not much time to get out any distinct mode for autumn, so a little brightening of summer bonnets, a little heavier mantle or a darker dress are all the changes that the majority comply with. What shall I buy for a nice black woollen dress, and how shall I make it at home? are asked constantly by girls who have just so much to spend upon a dress, and black being the most serviceable it should be of good material, Henrietta cord or Russian cashmere being the best. Trim the basque with silk cord passementarie in vandyke designs down the bust, around the cuffs and down one side of the skirt. Another plan would be to have full sleeves of silk or velvet

with a panel of velvet and a border six inches deep around the front hem. You should make it as near the style as possible, a princess back and slightly draped front and high standing collar; the sleeves stand up high at the top, and for turning have one vandyke only pointing upwards for a cuff.

The birds that were used upon summer hats bid fair to reign undisputed, and despite the efforts to renounce caprice of fashion for sentiment the feathered beauties have returned in many varieties.

Shoulder capes in all materials will be worn for autumn; of cloth pinched at the edges, of heavy silk or plush lined and trimmed with fur, or of the material of the dress finished a ruching or fur.

Early Hours of Birds.

The thrush is audible about 4.50 in the morning. The quail's whistling is heard about 3 a. m. At four o'clock the blackbird makes the woods resound with his melody.

Hair Pin Receiver.

A small basket, which may be purchased for a few pennies, is gilded or bronzed to form one of the daintiest of hair pin receivers. It is lightly filled with hair, and covered with a pretty top crocheted or knitted in pretty colored wool. Stripes of ribbon are made into loops and fall over the edge of the basket, finishing each one with a disc or crescent. Ribbons started from opposite sides serve to suspend it.

Practical Hints.

To remove claret stains from table linen, rub on salt as soon as possible, and wash in the usual way. If not entirely removed apply lemon juice and dry in the sun.

What is more disagreeable to use than a rusty flat-iron? Rub them with fine emery dust and sweet oil, or wood ashes.

Save stale pieces of bread, and when an easy day comes dry them in an open oven and roll them fine with a rolling-pin; they are always ready for rolling cutlets or chops in, preparing oysters or croquettes, etc.

Go to bed at night to sleep and not to think over the troubles of the day nor the trials of tomorrow.

When one is fatigued tea is an effective restorative. It forms an agreeable warm drink, which is not heating to the blood nor oppressive to the stomach, particularly if taken slowly when one is sitting quietly. Large quantities induce nervous disorders.

"Here is a paradox with which to grapple, 'Twas the first pair that tasted the first apple."

When furnishing a house do not neglect to purchase pictures; they recall pleasant scenes and have a freshening effect; but do not buy any but good ones.

The importance of letting the sunlight into all parts of our dwellings cannot be too highly estimated. Good health is dependent upon sunlight and pure air. Sunlight should never be excluded except it is too bright for the eyes.

When angels are entertained unawares the entertainment is nothing to brag of. It does not do to aim too high. If you make the zenith your mark the arrows will fall back on your own head.

A paragraph may have as much force as a treatise. If a man can be killed with a darning needle why hire trained elephants to roll over him?

"Style is the dress of thoughts," said Chesterfield. He would stare if he could see the dress of thoughts now-a-days.

Those who seek for perpetual novelty in ideas will soon have none worth keeping. Only as the old ones, that have proved their worth by long experience, are revered and cherished can new ones safely make their way.

The dog days are now over with their long, lazy afternoons, and the feminine heart feels an inclination to begin the fashioning of those dainty trifles that so delight the soul of the artistic needle-woman. With the aid of her bag of odds and ends, basket of silk flosses and sharp scissors she will soon show a goodly array of pretty and useful trifles.

Uncle Tom's Department.**Life's Epitome.**

A burst of light and story,
Of hopes and dreams, and sometimes glory—
Day's begun!
A little praise, a little blame,
A little fleeting breath of fame,
A little sitting in the sun, a little sigh and—
Day is done.

MY DEAR NIECES AND NEPHEWS:—

So your vacation is over, and like a grand army you have marched toward the school-room armed with pencils, slates, books, grammars, geographies and many more, to storm the fortress of knowledge and carry away of her treasures things new and old. To call at will from by-gone ages the great and wise to show you the path which leads to wisdom, is your pleasure.

As does a poet, with whose writings you are already familiar, Uncle Tom would say:—

"Knowledge comes but wisdom lingers,
And I linger on the shore.
And the individual withers
And the man is more and more."

But my little nieces, who timidly clung so closely, as for the first time they entered the school-room, cannot understand that yet. Full of new companions and new surroundings this school life seems like a busy workshop. Not so far astray, little one; there little minds are to be trained and little lives moulded. To the older school girl, with neat apron and collar, earnest eyes and studious face, it has a meaning, though; as she, the teacher's help, the mother's pride,

"Peers into the future far as human eye can see," visions of the future come before her, and with patient endeavor the goal will yet be won. Before leaving school let me say a word for the teacher. One celebrated divine, whose name you would all recognize if I should mention it, has written of his feelings when, as a timid child, he first entered a school-room and was there met by the pretty young teacher, scarce eighteen, who took him by the hand so kindly and did so much to smooth the rough pathway of early life. Some of my nephews, I see, are drawing comparisons, and are thinking how only last night they were kept in and punished. You know you deserved it; and this brings me to a question, why will such nice boys, whom Uncle Tom loves so well and finds so pleasant, why will they, once in awhile, indulge in fun at the expense of making somebody else suffer? How much more enjoyable the fun when there are no bitter dregs of selfishness and unkindness below, and no stings are left behind.

Another harvest is added to the past, and another summer is ended. The heavy sheaves are pitched and the peas are pulled and the threshing is over, and fall ploughing and gathering of roots and fruits remain to be done, and the fall fairs are coming on, and the long evenings and the pleasant winter hours. O, my nieces and nephews—young men and women they call you now, but Uncle Tom looks through privileged spectacles—what are you going to do, how improve these days which come not back again, but once gone are gone forever! Won't you use some of your summer earnings to buy books to improve your minds as well as spend on that which gives you no return? You can have the best of good company this winter if you choose

George Eliot, Dickens, Thackeray, Wordsworth, Bryant and a host of others. You grow like the company you keep, then choose the

best. Your literary, debating, temperance or endeavor society will be raised in tone by your researches, and others too may behold with you these hidden beauties and treasures. As in a dream Uncle Tom has been looking upon you and has seen bright eyes grow brighter, flush-mantled cheeks, as stalwart nephews, manly and true, came by, and a minor chord of music, said or sung:—

"If heaven a draught of heavenly pleasure spare,
One cordial in this melancholy vale.
'Tis when a youthful, loving, modest pair,
In other's arms breathe out the tender tale,
Beneath the milk-white thorn that scents the
evening gale."

There are other pictures too of pained and troubled faces, and tears and burdened hearts and heavy, and cutting words and writhing anguish and jealousies which make hearts bleed; whence come they into all society, to mar and sting when life is so short and farewells soon must follow?

Be true friends, my nieces and nephews, let not the tempter rule you, be open and candid that your lives, pure as the brooks, may reflect the heavens above you and the God you worship. Do be friendly and lovely and of good report, and say and do only noble things. Miss Muloch wrote of Marston, the blind poet:—

"One day,
Phillip, my king,
Thou, too, must tread, as we trod, a way
Thorny and cruel and cold and gray.
Rebels within thee and foes without
Will snatch at the crown. But march on
glorious
Martyr, yet monarch, till angels shout,
As thou still'st at the feet of God victorious,
Phillip, the king."

And so to you says

UNCLE TOM.

The Dessert.

He—"Can you keep a secret, Milly?" She—"Why, have you one you can't keep?"

"What are you doing now, Gus?" said one young man about town to another. "O, I write for a living." "On the daily press?" "No; I write to father about twice a month for a remittance."

Johnny—"I wonder why I can't make my kite fly?" Elder Sister—"Perhaps the caudal appendage is disproportionate to the superficial area." "I don't think that's it. I believe there isn't weight enough on the tail."

Mrs. Wickwire—"If woman was given the credit she deserves, I don't think man would be quite so prominent in the world's history." Mr. Wickwire—"I guess you are right, if she could get all the credit she wanted, he'd be in the poor-house."

Customer—"You sell cracked eggs at half-price, do you not?" Clerk—"Yes'm, we always make a fifty per cent reduction on cracked goods. Anything else to-day?" Customer—"Yes, you may give me a dollar's worth of cracked wheat and here's your fifty cents."

"Is marriage a failure?" asked De Trompy of a former flame, who had been a party to a May and December marriage. "No," she replied with a glance toward her husband in the next room. "Not a failure. Only a temporary embarrassment."

We want Good, Live AGENTS to Canvass for the "Farmer's Advocate" in every locality in the Dominion and United States. Sample copies and subscription blanks free to canvassers who mean business.

A Comparison.

I'd rather lay out here among the trees,
With the singing birds and the bum'l bees,
A-knowing that I can do as I please,
Than to live what folks call a life of ease
Up thar in the city.

Fer I really don't 'xactly understan'
Where the comfort is fer any man
In walkin' hot bricks an' usin' a fan.
An' enjoyin' himself as he says he can,
Up thar in the city.

It's kinder lonesome, mebbe you'll say,
A-livin' out here day after day
In this kinder easy, careless way;
But an hour out here is better'n a day
Up thar in the city.

As fer that, just look at the flowers aroun',
A-peepin' their heads up all over the groun',
An' the fruit a-bendin' the trees 'way down.
You don't find such things as these in town,
Or, ruther, in the city.

As I said afore, such things as these,
The flowers, the birds and the bum'l bees,
An' a-livin' out here among the trees,
Where you can take your ease and do as you
please,
Makes it better'n the city.

Now all the talk don't 'mount to snuff
'Bout this kinder life a-bein' rough,
An' I'm sure it's plenty good enough,
An' 'tween you an' me 't ain't half as rough
As livin' in the city.

JAMES WHITCOMB RILEY.

English Surnames.

The pronunciation of English surnames is very arbitrary and capricious. Here are a few specimens. After each name, the received pronunciation follows: Abergavenny, Abergenny; Colquhoun, Cahoon; Beauchamp, Beecham; Cholmondely, Chumley; Wemyss, Weems; St. John, Sinjin; Fenwick, Fennick; Milne, Miln; Bethune, Beeton; Ruthven, Riven; St. Clark, Sinclair; Gower, Gore; and De Beauvoir, De Beaver!

Mistakes.

It is a mistake to labor when you are not in a fit condition to do so; to think that the more a person eats the healthier and stronger he will become; to go to bed at midnight and rise at daybreak, and imagine that every hour taken from sleep is an hour gained; to imagine that, if a little work or exercise is good, a violent or prolonged exercise is better; to conclude that the smallest room in the house is large enough to sleep in; to eat as if you had only a minute to finish the meal in, or to eat without an appetite, or to continue after it has been satisfied, merely to please the taste; to believe that children can do as much work as grown people, and that the more hours they study the more they learn; to imagine that whatever remedy causes one to feel immediately better (as alcoholic stimulants) is good for the system, without regard to the after effects; to take off proper clothing out of season because you have become heated; to sleep exposed to a direct draft; to think any nostrum or patent medicine is a specific for all diseases.

Wings: Did you find, on your trip to Europe, that all this talk about having to tip the stewards on board ship for everything they do is true? Springley: Oh, I didn't mind the tipping of the stewards. It was the tipping of the ship that annoyed me.

The pastor of a small German town is extremely pleased at having one of his parishioners tell him that he has a nice little roasting pig which he is going to give him. After some time, the pig not making its appearance, he asks one day whether the good man has not forgotten it. "Oh, no," he said very frankly. "I did not forget at all; the pig got well."—*Fliegende Blätter.*

Puzzles.

1-SEPTEMBER, 1890.

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

ACROSS.—1. Rubbish.
2. Chaffy.
3. A sort of rash.
4. More eminent.

DOWN.—1. A ship (M Y T H).
2. The fruit of a certain tree.
3. To surround.
4. An open surface.
5. To peep.
6. A small island.
7. To cauterize.

FAIR BROTHER.

2-CHARADE.

Fair Brother, you again have erred
About that famed physician.
He asked me not what you aver,
Such is not his ambition;
For long ago a maiden fair
He met down by the brook,
And losing his ALL, this maiden
For his "Advocate" FIRST took.
A noble LAST doth he pursue,
Success to him I say;
My gratitude to him I owe
So here the debt I pay.

ADA ARMAND.

3-ANAGRAM.

While boating on the river, (my comrades gay,
and I,
The boat capsized, we tumbled out, and I in fear
did cry;
"O SAM, WHO SINK the third time will rise ah! never
more."
But we all got safely in again and rowed away to
shore.

ADA ARMAND.

4-ILLUSTRATED REBUS.



5-ANAGRAM.

In the sultry days of summer
When the "Ther." shows ninety-three,
A dish of good PURE ICE cream
Goes well for you or me.

ADA ARMAND.

6-SQUARE WORD.

My first is virtuous "hold it fast."
Now for my second "take the last,"
My third is "to refund" "to them,"
My next is "a very precious gem,"
My fifth and last "a stratum" is.
Now you may go about your biz.

SNOW BALL.

7-CHARADE.

I fell in love with a pretty girl,
Her name I will not tell;
She jilted me, and now, alas!
I'm on my way to — well
I hope to find some other girl,
Whose heart is true as life;
And when I do, I'll try to love
And win her FIRST my wife.

My first love I cannot forget,
COMPLETE her, yes I can;
I know its one of Cupid's Tricks,
She loves some other man.
Oh! dear, Oh! dear, it breaks my heart
To think that she, Oh! my,
Would LAST her heart and hand to one
Who loves her less than I.

FAIR BROTHER.

8-CHARADE.

To picnics I would like to go,
"On an average three a week,"
But I'm afraid that if I did,
It would my CONSCIENCE creak.

For when there's any work to do,
And there is plenty of it now;
'Tis wise, I think, to do that first,
Though its behind the plough.

This FIRST, I'm LAST, doth suit you well,
Although picnics I much enjoy;
But work before WHOLE is a rule,
They taught me when a boy.

FAIR BROTHER.

9-CHARADE.

When I first went to school, as a rum little kid
(Said I to myself, said I),
I will certainly do everything I'm bid
(Said I to myself, said I),
I will never become a disgrace to the school,
Or get into hot water for breaking a rule,
Though I lay on a Last and see others a playing
the fool
(Said I to myself, said I).
And now, dear cousins, to you all I would sing
(I sing to you all, sing I)
If you wish to Prime all and live like a king.
(Sing I to you all, sing I)
Pray cherish of Total the tenderest shots,
Love Latin declension and worship Greek roots,
With formula fill from your heads to your boots
(Sing I to you all, sing I).

HENRY REEVE.

10-SOMETHING VERY BAD.

My first is something very, very, very, very
bad;
Behead and leave something very, very, very, very
bad.
Transpose and make something very, very, very
bad;
Behead and transpose and make something very,
very bad;
Behead and curtail and leave something very bad.

MATTIE WOODWORTH.

Answers to August Puzzles.

- 1. PALADIN
- 2. Average.
- 3. Catalogue.
- 4. Cannon.
- 5. Muffin.
- 6. Toronto Carnival.
- 7. Conscience.
- 8. Be slow of giving advice, ready to do a service.
- 9. Forward.
- 10. After T.

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

Henry Wilson, J. J. Devitt, Dorothy Fox, A. Hawkins, Clara Rillance, L. A. Nicholson, Victoria Alberta McCallum, Ed. A. Fair Brother, Mattie Woodworth, Mary E. Woodworth, Bertie McCallum, A. H. Boss, Morley T. Boss, Drusilla A. Fair Brother, Henry Reeve, Elinor Moore, Lewis Montgomery, A. G. Carrie, G. H. Greer, G. Allan, Mary Elliott, Bessie Strange.

NEW ADVERTISEMENTS.

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

TREES FOR FALL PLANTING.

The largest and most complete stock in the U. S. of Fruit and Ornamental Trees, Shrubs, Peonies, Roses, Hardy Plants, Grape Vines, Small Fruits, &c. Illustrated and descriptive priced Catalogue; also wholesale price list ELLWANGER & BARRY, for the trade FREE. ROCHESTER, N. Y. MT. HOPE NURSERIES. 297-b-OM (Mention this paper.)

DRUGS.

W. J. MITCHELL,

394 Main St., - Cor. Portage Avenue,
WINNIPEG, MAN.

Every requisite of the Drug and Patent
Medicine Trade supplied.

MAIL ORDERS GIVEN SPECIAL ATTENTION.

YOUR CORRESPONDENCE AND PATRONAGE
SOLICITED.

Post Office Box 405. 297-a-M

HARDWARE.

Farmers' and Threshers' Supplies,
Harvest Tools, Lace Leather,
Leather and Rubber Belting,
Rabbit Metal, Machine Oils,
Breech and Muzzle Loading Guns,
Rifles and Ammunition,

DAIRY SUPPLIES.

In Stoves of Every Description we Lead.
Eastlake Metallic Shingles
and Siding is the Best.
Call, or write for prices.

CAMPBELL BROS.,
297-y-M 530 Main St., WINNIPEG, Man.

**IMPORTANT AUCTION SALE
DISPERSION OF MOULTONDALE HERD.**

—PURE BRED—
Shorthorns, Holsteins, Clydesdales, Shropshire
Sheep, Berkshire and Suffolk Pigs.

The undersigned intends renting or selling his stock farm on account of other business, and will sell the above without reserve, on
Wednesday, 22nd October next.
T. J. RAMSEY, Dunville, Ont., Co. Haldimand.
Catalogues after 15th Sept. 297-b-OM

**-DISPERSION SALE-
—OF THE NOTED—
SPRINGDALE HERD**

—OF—
Hereford Cattle, Horses, Implements, &c.,
on Wednesday, Oct. 15th, 1890.

Being about to retire from farming, and having leased my farm, I will sell by public auction, at Springdale Farm, 2 miles from Oshawa, my entire herd of valuable Hereford Cattle, comprising 40 Cows and Heifers, and 13 Bulls and Bull Calves, all registered. Parties will be met at Station, on evening of 14th and morning of 15th. Terms of sale, 12 months' credit, on approved notes. For further particulars and catalogues, address
297-a-OM R. J. MACKIE, Oshawa, Ont.

**GREAT PUBLIC SALE
—OF—
PURE-BRED STOCK**

—AT THE—
Exhibition Grounds, Guelph, Ont., Can.,
On Wednesday & Thursday, Oct. 8 & 9, '90.

MR. FREDERICK WM. STONE, of Guelph, one of the oldest importers and stock breeders in America, having decided, owing to advancing years, to reduce his farming operations, will offer for sale, by Public Auction, a large part of the celebrated Moreton Lodge Herds and Flocks, consisting of Pure-bred Hereford and Shorthorn Cattle, 150 to 200 head; also about 200 head of Cotswold and Southdown Sheep and Berkshire Pigs.
Sale at 12 o'clock (noon) Sharp, Oct. 8th
Catalogues, giving particulars of breeding, order of sale, terms, etc., on application to—
FRED. WM. STONE,
42 Gordon St., Guelph, Can.

N.B.—Two Stock and Grain Farms for Sale, of 200 and 250 acres each. The Ontario Agricultural College, Guelph, will hold their Annual Sale of Stock, Feed Grain, etc., on 7th of October, 1890. 297-a-OM

**THE GREAT
CENTRAL - FAIR**

—WILL BE HELD IN—
HAMILTON,
—ON—
Monday, Tuesday, Wednesday, Thursday and Friday,
Sept. 22, 23, 24, 25 and 26, 1890.

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

Roadster, Draught, Pacer, Carriage & Trotter form a most magnificent Horse Exhibit of the very best breeds in the country.

Pacing and trotting by the best horses of Ontario every day of the Fair. Superb display of Fruit. Hamilton is in the centre of the garden of Canada, and has the finest displays of fruit in America. The Management have spared no expense to make the Great Central the Fair of 1890.

W. H. GILLARD, President, C. R. SMITH, Sec.-Treas.
286-b-OM

A. HAGGART. JAMES A. ROSS
HAGGART & ROSS,
BARRISTERS, ATTORNEYS,
SOLICITORS, ETC.,
Dundee Block, Main St., Winnipeg.
P. O. BOX 1241. 290-y-M

Toronto Hide & Wool Co.
WHOLESALE DEALERS IN
H-I-D-E-S
SHEEPSKINS AND WOOL.
JOHN HALLAM, Proprietor
88 Princess-St., WINNIPEG, MAN.
83 and 85 Front Street East, TORONTO.

We will be in the market this season as usual for all classes of Wool, and are prepared to pay the highest market prices. 293-f-M

RAILWAY LANDS.
With the view of securing compact settlement,

The CANADIAN PACIFIC RAILWAY CO.
Are now offering for sale, at special prices to ACTUAL FARMERS, their unsold lands in the well settled District of Manitoba and the Northwest Territory.
5,000,000 Acres
—OF—
The Richest Land in the World to Select from.

Well settled districts. Excellent railway facilities. Good markets and roads. Schools and churches. Payments spread over ten years at only six per cent. interest. Full particulars given and maps and pamphlets supplied on application to
L. A. HAMILTON, Land Commissioner. 292-M

**THE
Northern Pacific**

—AND—
MANITOBA RAILWAY
can now give passengers
THE CHOICE
of going to Eastern Canada or the United States by either

All-Rail or Lake and Rail

According to recent changes in time-tables, passengers can now make a continuous trip to the East via the all-rail route, making better time than by any other route.

It is the only line by which connection can be made with the magnificent steamers of the Lake Superior Transit Co. and Northwest Transportation Co. five days out of the week, affording passengers a pleasant trip through the lakes.

All Baggage destined for Points in Canada checked through, doing away with Customs troubles.

OCEAN PASSAGE & BERTHS SECURED
to and from Great Britain and Europe. All first-class steamship lines represented.

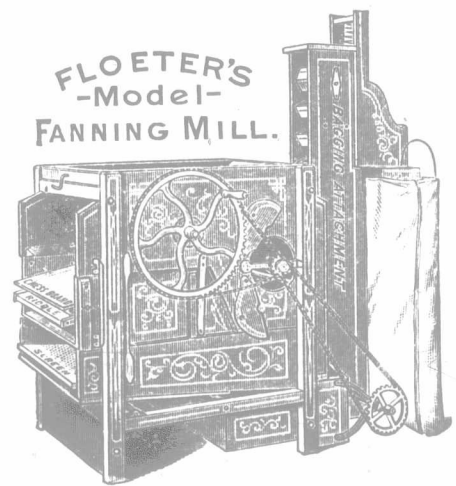
Round Trip Excursion Tickets
To Pacific Coast. Good for Six Months.

For full information call on or write to any of the Company's agents.

HERBERT J. Blich,
City Ticket Agent, 489 Main St., Winnipeg.
HERBERT SWINFORD, Gen. Agt.,
General Office Building, Water St., Winnipeg.

290-y-M J. M. GRAHAM, Gen. Manager.

Floeter's Model Fanning Mill with Bean and Bagging Attachments.



A machine on entirely new and correct principles. Cleans and separates in the most perfect manner all kinds of grain and seed. It turns very easy and cleans faster than any other mill in the market. Our attachment, with rubber rollers for cleaning beans, is the most complete ever manufactured; the rollers are so placed in our mill that all large pieces of clay and other dirt are carried off by the Riddle and not permitted to run through the rollers, thus allowing the rollers to do very much superior work, also allowing the mill to turn very loose, as they are vulcanized on the shaft. Our mill, with attachments, for 1890, will eclipse any mill in Canada. We shall exhibit at all the principal fairs, and ask the intending purchasers to wait and see our mill or send for prices before purchasing elsewhere. Manufactured by R. K. & S. B. FLOETER, Chatham, Ont. 297-a-OM

F. STEELE, Photographer. W. E. WING, Artist.

**—THE—
STEELE AND WING
PHOTOGRAPHIC AND ART ROOMS.**

Portrait Pictures made in any size up to Life, in Water Colors, India Ink, Crayon and Pastels.

474 MAIN ST., COR. BANNATYNE, WINNIPEG, MAN.
Perfect Satisfaction Guaranteed. 297-c-M

FARM HELP

The managers of DR. BARNARDO'S HOMES desire to obtain good situations with farmers throughout the country for the boys they are sending out from time to time from their London homes. These lads range in age from ten to sixteen. The Manager of the Industrial Farm at Russell will also have fifty young men who have had one year's experience of Canadian Farm Life, Dairying and general Farm Work, for distribution.
Write for application forms to

**MANAGER,
Russell, Man.**
293-f-M

**GRATEFUL-COMFORTING
EPPS'S COCOA
BREAKFAST.**

"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—Civil Service Gazette.
Made simply with boiling water or milk. Sold only in packets by Grocers, labelled thus:
JAMES EPPS & CO., Homoeopathic Chemists, London, England. 290-y-O

BRANDON

THE

WHEAT CITY OF THE DOMINION

The CITY OF BRANDON is situated in the centre of a rich agricultural country, and has such a favorable position in the growing PROVINCE OF MANITOBA that her future is assured. Her situation, on the south bank of the Assiniboine river, fifty feet above the level of the water, affords perfect drainage. Although the city is but

EIGHT YEARS OLD

it has a population upwards of 4,000, and has made great progress during these years. The erection of a new city hall and market to cost \$55,000 is now begun, and preparations are being made for the erection of a hospital costing \$14,000. Two ward shools have been built during the past year at the cost of \$15,000, and the School Board purpose erecting, during the coming year, a

CENTRAL SCHOOL

to cost \$30,000, in order to provide for the ever increasing population. The Provincial Government have just completed a handsome brick building, as a training school for boys, costing \$30,000; also a

LANDS TITLES OFFICE

costing \$12,000. The Dominion Government have this season expended \$40,000 in a

Post Office and Dominion Lands Offices and \$30,000 on

EXPERIMENTAL FARM BUILDINGS.

Three prominent banking institutions are erecting magnificent buildings of stone and brick, showing the confidence our monied institutions have in the future of our country. The leading merchants have built large and expensive buildings three and four stories high. The City Council have engineers engaged preparing plans for a system of

WATERWORKS AND SEWERAGE

which are to be undertaken forthwith. The Assiniboine river brings from the forests of the north millions of logs which are here manufactured into lumber and shipped to all parts of the Province and Territories, the slabs going a great way to provide the city with firewood, which is sold at \$2 per cord. Excellent clay is obtained for the manufacture of

WHITE BRICKS

a couple of miles from the city, of which there are large quantities being manufactured and delivered to builders at \$8.50 per thousand. Foundation stones are easily obtained, also all other building material can be procured at reasonable prices, lumber being from \$14 to \$20 per M.

LARGE DEPOSITS OF COAL

are located within 100 miles of the city to the Southwest, and at present both the C. P. R., and the N. P. & M. railways are constructing branches to these mines, which will give an abundant supply of coal at a low rate. Manufacturers should note this fact, as cheap fuel, cheap living for employes, and an abundant supply of raw material for many lines of manufacturing, their enterprises should be carried on in Brandon to successfully compete with the world, especially in articles of home consumption. In this connection we would draw their attention to the excellent

RAILWAY FACILITIES

at this point, having the C. P. R. main line east and west, its Souris branch to the Southwest; the Great Northwest Central to the North, connecting with the M. & N. W at Rapid City; and the Northern Pacific and Manitoba to the Southeast, bringing the whole Province within easy reach of Brandon.

WHOLESALE HOUSES

would find it to their advantage to locate here, as there is no point in the Province so favorably situated for their business. The city is lighted by electricity and has a most efficient fire department. Brandon district is unsurpassed from an agricultural point of view, as the soil is of excellent quality and easily worked; the water clear and pure and easily obtained—good wells being procured at a depth of twenty feet. There is more land under cultivation in this district than in any other part of the Province, and more wheat has been marketed at Brandon in past years than at any other point in the Dominion. Land has increased in value rapidly, and unproved farms in some cases are worth \$25 per acre. Good land can yet be obtained within easy reach of the city at \$6 and \$8 per acre. Instances are given this year where the first crop has paid all expenses and paid for the land. The roads are excellent and the climate is most healthy. Our Eastern farmers should consider well the advantages of settling in a district so well supplied with invaluable advantages, including schools, churches, railway facilities, convenient market, excellent water and inhabited by progressive and intelligent farmers.

For any information regarding Brandon City or district address,

J. C. KERR, City Clerk, Brandon, Manitoba.

Who will be glad to reply to any and all enquiries.

297-a-O.M.

STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate

Mr. Peter McLaren, of Clearwater, reports a very fair season with the thoroughbred stallion Colographm, although not having his own stables. Colographm is the sire of the mare Linda, well-known in this Province.

Grig Bros., Otterburne, Man., in writing the *Advocate*, say—"Darlington 84th brought us a very handsome, almost solid red, heifer calf on the 14th of August, and I hope for equally good luck with the other due this fall."

The arrival of Mr. W. S. Foster, who has settled near Wawanessa, Man., adds one to the list of Jersey breeders. Mr. Foster has a few very nice animals, we are credibly informed, and thinks they are a useful breed for this country.

Mr. D. McNaught of Rapid City, Man., has brought in three Holsteins, including two young cows and a bull which he purchased from Messrs. Hallman & Co., New Dundee, Ont. It is his intention to found a herd of these famous milkers.

AGRICULTURAL EXHIBITIONS.—Oak Lake, Sept. 30 and Oct. 1; Virden, Oct. 2 and 3; McGregor, Oct. 2; Springfield, Oct. 1 and 2; Pilot Mound, Oct. 6 and 7; Glenboro Oct. 7; Killarney, Oct. 9 and 10; Portage La Prairie, Oct. 8 and 9; Carberry, Oct. 9 and 10; Qu'Appelle, Oct. 10; Saltcoats, Assa., Oct. 9; Manitou, Oct. 9 and 10.

Mr. Walter Lynch, of Westbourne, Man., reports the sale of his entire lot of young bulls, some eight in number, at satisfactory prices, although, owing to the prevailing stringency of the times, not quite as good as in some other seasons. Mr. Lynch says his herd is doing nicely, and another lot of young bulls coming on for next season.

The Marchmont herd, the property of Mr. W. S. Lister, Middlemarch, Man., won the following prizes at the Brandon Summer Fair:—First prize and diploma for best herd any age; first for best aged cow, first on aged bull, first on heifer calf. Second on two-year-old bull, second on two-year-old heifer and third on yearling bull.

M. S. Atkinson came from Halton county in 1887, bringing four pure females and two calves of the Bates strain of Shorthorns. His stock has since increased till he has 18 females. Bobby Burns, a fine dark red bull is at the head of the herd. His farm is situated on the Little Saskatchewan, two-and-a-half miles southwest of Rapid City.

Naisbitt Bros., four miles south of Rapid City, have now the foundation for a good herd of pure-bred Shorthorns. Mr. Bright Naisbitt came in 1882, bringing five animals of the Bates family. The herd has increased since, only the males being sold. In the spring of '89, George and William Naisbitt joined their brother, bringing with them six head of the Cruickshank strain. They have erected good stone buildings and are preparing to improve and increase their stock. Their herd now numbers forty.

Mr. Jno. E. Smith, of the Beresford Stock Farm, Brandon, recently bought ten head of Herefords that were offered for sale in Brandon, which gave rise to the report that he was about to give up the Shorthorns and breed Herefords. Mr. Smith wishes us to say that such is not the case, having bought the Herefords merely as a speculation, expecting to dispose of them *en bloc*, and in fact now negotiating a sale with a ranching firm from the Territories. Jno. E. says the Shorthorns are the cattle for him.

Mr. James A. Mullens, of Cypress River, has a pure-bred Shorthorn calf, Farmers' Pride—13250—, that is making an almost phenomenal growth. At four months he weighed 406 lbs., at five months he weighed 521 lbs., at six months he weighed 651 lbs., making 130 lbs. for the last month, or about four pounds, five ounces per day. Farmers' Pride is by St. Patrick—10539—, dam Starlight—15439—, both the property of Mr. Mullens. This phenomenal calf was weighed on the 12th of August, when seven months old, and kicked the beam at 763 pounds.

Shanks Bros. came to Manitoba in 1878, brought their first pure-bred stock in 1880, two Bates heifers bought from Smith Bessy, Esquesing, Halton county, Ontario, and a bull from John Miller, Halton county. The herd has since increased and many sales of both males and females have been made. The number at present on the farm is thirty. At the head of the herd is Sir Ralph of Strathallen strain, bred by Snyder Bros., Waterloo, Ont. They have recently purchased a bull eight months old, dark red in color, of the Cruickshank strain for next year's service. They have twenty-five pure Leicester ewes and a number of Berkshire pigs. Their farm is situated on the Little Saskatchewan, eight miles west of Rapid City.

Mr. R. L. Lang, Oak Lake, Man., recently purchased two or three head of Shorthorns from the Breeze Lawn Herd, owned by Messrs. Sharman & Sharman, of Souris, and made his debut as an exhibitor by showing the heifer, Pride of Sprucebank—18001—. This heifer, being seven months old, was by the prescribed rules of the Association, placed in competition with heifers ten and eleven months older than herself and yet took first place. Mr. Laing is about to import a few choice animals from the herd of Mr. Thomas Russell, of Exeter, Ont., one of the most successful importers and breeders in Ontario. Mr. Laing is a young man and has been very successful in stock and grain farming in Manitoba, and if the older Shorthorn breeders do not look well to their laurels they may find this debutante wearing some before many seasons roll their rounds.

CROSTHWAITE & WHITE,

THE FARMERS' AUCTIONEERS AND STOCK VALUATORS.

Special attention given to pure-bred and other farm stock sales. Sales conducted anywhere in Manitoba or the N. W. T. at moderate charges. Our Mr. Crosthwaite, formerly of Toronto, where he, for many years, conducted a great number of the most important stock sales, and where he was acknowledged to be one of the most successful salesmen and an excellent judge of all kinds of stock, will personally conduct all sales entrusted to us. Sale bills and catalogues prepared. Correspondence solicited.

W. I. CROSTHWAITE, H. S. WHITE, A. R. BINKS.

OFFICE—368 Main St., Winnipeg. 297-y-M REFERENCE—"Farmer's Advocate," Winnipeg.

ESTABLISHED 1881.

ALEX. FLEMING, M.D.
DRUGGIST.

PERFUME AND TOILET ARTICLES,
B. Laurance's Spectacles.

BRANDON, MAN.

The - Weekly - Tribune

A BRIGHT, LIVE, INTERESTING TWELVE-PAGE NEWSPAPER, CONTAINING, IN A CONDENSED AND READABLE FORM, ALL THE NEWS OF THE WEEK.

THE WEEKLY TRIBUNE IS ESSENTIALLY
THE PEOPLE'S PAPER!

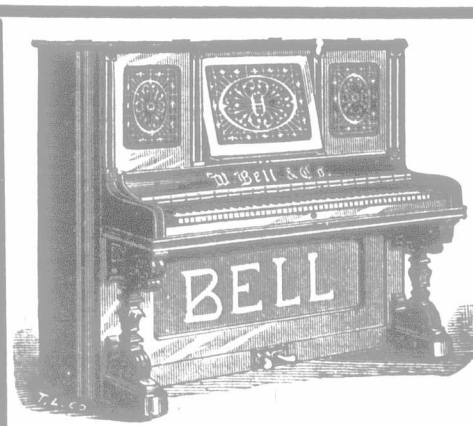
It will be found at all times the true champion of the rights of the people of Manitoba and the Northwest, and will be made specially interesting and attractive for the home and family circle. It is issued at a popular price—\$1.00 per annum—and is within the reach of all. From now to the 1st of January, 1891, it will be forwarded for 75c., or a "trial trip" of three months for 25 cents.

THE WEEKLY TRIBUNE has met with a great reception throughout Manitoba, and subscriptions are pouring in. Sample Copies FREE. Subscribe now.

Address all letters to—

THE TRIBUNE PUBLISHING CO.,
Winnipeg, Manitoba.

292-tf-M

THE GENUINE BELL
PIANOS AND ORGANS

New Williams, White and Household
SEWING MACHINES

Fully warranted. Prices low. Terms easy.

W. Grundy & Co.

294-y-M 431 MAIN STREET, WINNIPEG.

FARMERS' WIVES and DAUGHTERS

USE THE

SOAPS

MADE BY THE

Royal Soap Co.'y
of Winnipeg,

THEREBY PATRONIZING A HOME INSTITUTION.

Our Soaps are the Best Value in the Market

AND QUALITY IS GUARANTEED.

ROYAL CROWN SOAP

is the Purest and Best Article you can buy and is suitable for
Laundry, Toilet and Shaving purposes.

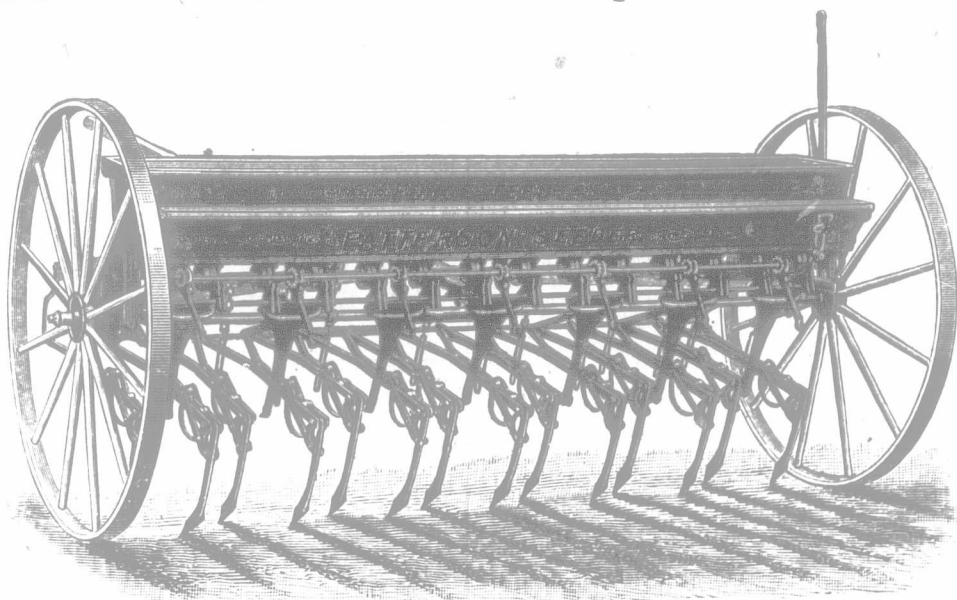
297-a-M

THE PATTERSON & BRO. CO.

(LIMITED.)

MANUFACTURERS OF AND DEALERS IN ALL KINDS OF

Agricultural Implements.



—SOLE AGENTS FOR THE CELEBRATED—

SNOWBALL WAGGONS AND AYR AMERICAN PLOWS.

J. I. CASE THRESHERS & ENGINES & MOLINE PLOWS.

SETTLERS' COMPLETE OUTFITS A SPECIALTY.

Price Lists and Printed Matter sent free.

Agencies at all principal points.

H. S. WESBROOK, Manager,

Winnipeg, Manitoba.

289-y-M

STOCK GOSSIP.

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

Mr. W. S. Lister, Marchmont Farm, recently sold the fine young Shorthorn bull Clement -11084-, to E. Taylor, Bird's Hill, Man. Clement is by Lancet, the Marchmont stock bull, and from Clement's Gem. His cow, Rose of Vermont, has also dropped a white heifer calf to the same sire.

Mr. Musk, of Souris, imported this season a thoroughbred stallion (Falconer), standing 16¾ hands and of size and substance in proportion. Falconer was got by Pergirine, out of Miss Maria by Scottish Chief out of Silver Ring by Blair Athol.

Mr. Arthur Johnston, of Greenwood, Ont., in sending in his special advertisement for this month says:—The demand for young bulls was never better than during the last part of the past season. Females did not sell so rapidly. My Shorthorns were never in finer flesh on the grass. In this issue he advertises for sale nine very superior yearling heifers, as well as an extra lot of two-year-old and three-year-old heifers.

Mr. Stephenson, Manager of the Lorne Farm, near Morris, Man., recently laid the foundation of a Shorthorn herd by purchasing from Mr. W. J. Hillwell, of Ralpbton, the bull Pride of Salem -10483- and the cow, Lady Howard, from Messrs. Sharman & Sharman, of Souris. The bull, Pride of Salem, was bred by Messrs. Watt, of Salem, Ont., and was a winner in Ontario. He was imported by Mr. Jno. E. Smith, of Brandon. The cow, Lady Howard, is a typical Shorthorn, with a grand top and good at both ends, and a handsome head and horns. We are pleased to make this announcement, as Mr. Stephenson has not the reputation of doing things by halves, and will doubtless prove a valuable acquisition to the Shorthorn fraternity.

Messrs. Sharman & Sharman, Breeze Lawn Farm, Souris, Man., writes us as follows:—Our sale of Shorthorns during the Brandon Fair, July 24th, was fairly successful for this time of the year, especially as it followed the short crop of last year. Lady Howard sold to Wm. Stephenson, of the Lowe Farm, for \$230; Princess 3rd, \$200; Belle 4th, \$108; Eva, \$180. To Daniel F. Boissevain, of Cannington Manor, Assa., Ruby Hill, \$145; Gean Blossom, \$65; Belle of B. L., \$60. Heifer calves to T. M. Percival, of Brandon, and Matchless 31st, \$80, to G. L. Smillie, of the Scottish Ontario Land Co., of Binscarth. We were sorry to put up such stock at auction, but owing to the retirement of W. E. Sharman from the firm it was the most satisfactory way to close out the business. The business will still be carried on under the old name and at the same place, Breeze Lawn Farm, Souris, Man. We have already made several purchases with which we feel confident of making show-ring records in the near future and of which you will hear later on.

Mr. J. C. Snell, Edmonton, Ont., writes us, as evidence of the popularity of Berkshire pigs in England, that he was shown the books of Mr. Henry Ruck, of Castle Hill, Wiltshire, which showed that his sales of pedigreed Berkshires in the year 1889 were 816 head, most of which were sold to fill orders received by mail. This is the report from only one herd, whose owner is a modest man, who does not blow his own trumpet in the market places, and yet there are men who have the nerve to place their name over the statement that "Berkshires are not wanted." In the same letter, Mr. J. C. Snell reports the safe arrival of his new importation of Berkshires, comprising a number of young boars and sows from the herds of Mr. Benjafield, Wm. Hayter, and others, and including several of the prize winners at leading shows in England this summer. These are a very meritorious lot, combining size, symmetry and quality in a high degree, and are a valuable acquisition to the herd. He also writes that the demand for Cotswold rams has been greater this summer than for many years, and orders have been received from many of the States, and nearly all of the Provinces. The sheep business is steadily growing, and the numerous enquiries for Cotswolds show that they are wanted all over the Continent.

NOTICES.

Messrs. John Elliott & Sons have done a good business with the Dowagiac Shoe Drill, the Bushnell Rake, and last, but not least, the old reliable Warrior Mower. The Dowagiac Drill seems well adapted to Manitoba soils, and as far as heard from is giving good satisfaction. A few binders have been sold, but this branch of the business has not been pushed.

Mr. McBride, of Massey & Co., reports an unusually good season's business this year. All their haying tools were disposed of by the first of August. They have been very busy through August starting machines and getting matters settled up generally. The Sawyer-Massey Engines have been in good demand and given excellent satisfaction in every respect.

THE ACME HAY RICKER AND MONARCH RAKE.—The Patterson Bros. Co., H. S. Westbrook, manager, are the first to offer this valuable implement for sale in Canada. The first one introduced into Canada was used with excellent results on the large farm of Hiram Walker & Sons, Walkerville, Ont. This one, however, was brought from the factory by Mr. Walker's manager, Mr. Magee. Mr. Alexander Murray, of St. Charles, bought the first one imported into Manitoba, and will doubtless find it a good investment. The Monarch Rake takes the hay from the windrow and carries it to the rick in loads of eight to ten hundred pounds. It is then deposited on the Ricker, which throws it immediately on the stack.

STOCK FOR SALE.**FOR SALE,**

At a very low figure, a grand young Cleveland Bay Stallion.—W. C. BROWN, Cleveland Bay Stock Farm, Meadowvale, Ont. 297-g-OM

Imported Clydesdale Fillies FOR SALE.

A four-year-old mare, second at Toronto last year, now in foal; also a three-year-old, and a few Shorthorns.

John Isaac,
297-a-OM MARKHAM, ONT.

IMPORTED -- CLYDESDALES

I have just returned from Scotland with my last importation, all good, hard-shanked, heavy-boned colts, including prize-winners at several leading shows. I can sell a first-class horse as low as any importer in America. Do not buy till you see my stock. Also a few choice fillies, imported and Canadian bred.

297-g-OM **NEIL SMITH, Brampton, Ont.**

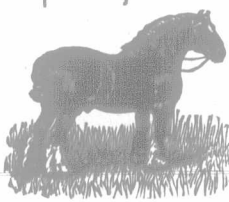
A. B. SCOTT & SON,

VANNECK, - - - ONTARIO,

IMPORTERS AND BREEDERS OF

REGISTERED CLYDESDALES

The get of McGregor, Belted Knight, Good Hope, etc. Colts and fillies, winners at all the large shows, for sale at moderate prices. 293-y-OM

Imported Clydesdale Stallions and Mares for Sale.

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

Visitors always welcome. Catalogue on application.

DUNDAS & GRANDY,

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

FOR SALE.

—IMPORTED—

Clydesdale Stallions,

The get of some of the most celebrated prize winners—such as McCammon, Garnet Cross, Bay Prince and other popular sires.

297-c-OM **HUGH THOMSON, St Marys.**

Prize-Winning Clydesdales FOR SALE.

I have for sale SEVEN HEAD of finely bred Clydesdales. The lot consists of three

Brood Mares

and four

- STALLIONS -

All are IMPORTED or bred direct from imported stock. They have been very successful in the show rings, having won all the honors for which they have competed. The entire lot

MUST BE SOLD

at an early date.

This Sale offers a Grand Opportunity

to parties desiring to BUY reliable breeding stock. They will be sold singly or in one lot.

Write for prices and particulars to

JAMES H. ESDEN, - Bainsville, Ont.

A full description of my stud will appear in the October number of this paper. 297-a-OM

WANTED TO EXCHANGE,

Imported Clydesdale Stallion, five years old, for a pair of farm mares. For particulars address 297-a-O **A. RODDICK, Cote St. Paul, Montreal.**

Pure-Bred Registered Clydesdales & Jerseys

Bred from pure imported stock. Young stock for sale at farmers' prices. 293-y-OM

JOHN PULFER, Springvalley Farm, Brampton, Ont.

ROBT. NESS, Woodside Farm

—IMPORTER AND BREEDER OF—

CLYDESDALES, SHIRES, SHETLANDS, AYRSHIRE CATTLE

The eleventh yearly importation consists of some of the best specimens of the several breeds. Clydesdales from such noted sires as McGregor (1487), Crown Royal (4315), Top Galant (1850), Macfarlane (2988), Macbeth (3817), Sir Hildebrand (4024), Golden Guinea (3660), Old Times (579), Good Hope (1679), Knight of Snowden (2212). The stock is selected by myself with great care. Intending purchasers are invited to inspect.

The farm is situated 40 miles south-west of Montreal, on the G. T. R., and 100 miles east of Ottawa, by C. A. R. Howick Station on the farm.

ROBERT NESS, HOWICK P.O., Que.
291-y-OM

Visitors always welcome.

ENGLISH PEDIGREE LIVE STOCK.

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

E. G. PREECE,

LIVE STOCK AGENT,
SHREWSBURY, ENGLAND,

has choice registered stock for sale at moderate prices, from the best studs, herds and flocks. Foreign buyers assisted in the purchase and shipment of stock. Choice animals of various breeds bought on commission. Special low freights. Highest references. Terms for buying 2½ per cent. All importers should communicate. 296-j

**300 PERCHERONS,
100 FRENCH COACHERS**

Comprising my importations for 1889, are now on exhibition at

**ELLWOOD'S RANCH,
DeKalb, Illinois.**

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

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

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

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

LA COMPAGNIE DU HARAS NATIONAL

30 St. James St., Montreal, Canada.

**40—STALLIONS NOW ON HAND—40
THOROUGHLY ACCLIMATED.**

Stable, Outremont near Montreal. Medavy breeding and sale farm, Perche, France. **SPLendid PERCHERONS** (stallions and mares), French Coach Horses (Normans), all with first-class pedigrees. Our connections in France enable us to import cheaper than anyone else. For terms of sale and for our catalogue apply to the office.



HON. L. BEAUBIEN, President, Montreal, Canada.
BARON E. DE MANDAT GRANCEY, Vice-President,
5 Av. Friedland, Paris, France. 289-y
R. AUZIAS-TURENNE, Manager.

Shorthorns for Sale.

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

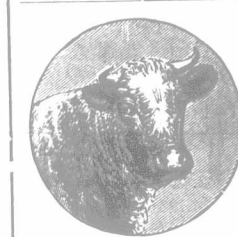
JAMES CRERAR,
294-y-OM SHAKESPEARE, ONT.

BOW PARK HERD**PURE-BRED SHORTHORNS.**

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

JOHN HOPE, Manager,

290-y Bow Park, Brantford, Ont.



D. ALEXANDER,
Brigden, Lambton Co.,
Ontario.

My Shorthorn herd now consists chiefly of Imp. Lady Violet Lustre and seven of her daughters, and two daughters of Imp. Beauty 15th, almost all sired by one bull, and of one character, thick, and fine quality. Can furnish a splendid young herd at reasonable prices. Trains twice daily. Station one mile. 294-y

DAVID BIRRELL, Greenwood, Ont.

Breeder and Importer of First-class

Clydesdales, Cotswolds

—AND—

Scotch Shorthorns.**YOUNG and BREED-****ING STOCK for SALE**

at prices to suit the times. A call or correspondence solicited. Pickering is my station on the G. T. R., and Claremont on C. P. R.

286-y

SHORTHORNS

—AND—

COTSWOLDS**FOR SALE.**

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

JAMES GRAHAM,
290-y PORT PERRY, ONT.

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

SHORTHORNS AND COTSWOLDS.

MESSRS. J & W. RUSSELL,
Springbrook Farm,
RICHMOND HILL, - ONTARIO,

Have for sale a few well-bred Shorthorns, bulls and heifers, got by their sweepstakes bull "Stanley," and out of prize winning imported cows.
Also pure-bred Cotswold Sheep, including this season's importation from the flock of Mr. Robert Jacobs, Gloucestershire, England. 297-a-OM

S. J. PEARSON,

**VALLEY HOME STOCK FARM,
MEADOWVALE, ONT.,**

has for sale some grand young Shorthorn bulls and heifers of a good milking strain and sired by the pure Booth bull Sir Redmond (2453), who, as can be seen by reference to the Herd Book, is one of the purest Booth bulls ever brought to Canada.

PRICES RIGHT.

Write or call.

N.B.—Stock will be exhibited at the Industrial Fair, Toronto. 297-a-OM

**EASTWOOD
HERD AND FLOCK**

—SOME EXCELLENT—
**Shorthorn Heifers,
BOW PARK STOCK.**

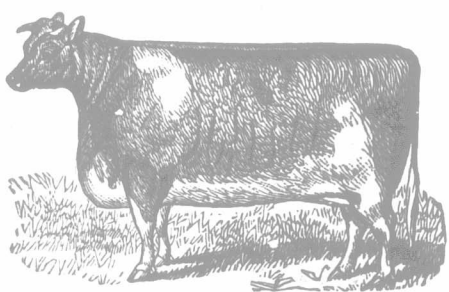
IMPORTED SHROPSHIRE SHEEP
—REGISTERED—

RAMS AND BULLS, CHEAP.

Address **T. C. PATTESON, P.M., Toronto.**

N. B.—Eastwood is next station east of Woodstock, on G. W. R. 297-c-OM

FOR SALE



ARTHUR JOHNSTON,
Of Greenwood, Ont.,

Offers for sale at moderate prices an exceedingly good lot of

= YEARLING =

Two-year-old, and three year old

SHORTHORN :: HEIFERS

OF THE VERY BEST SCOTCH FAMILIES.

All imported bulls, and mostly from imported dams.

Write for particulars.
297-a-OM

C. & C. CHRISTNER,
Haysville P. O., - Ont.,
Breeder of
Shorthorns and Registered Shropshire Sheep.
Stock for sale. Correspondence solicited. 297-a-OM

FOR SALE,

A few Shorthorn and high grade heifers and cows, bred to Silver King 4th, a grand son of (imp.) 4th Duke of Clarence, so long in use at Bow Park. Good colors and pedigrees. Also a few choice registered Berkshires, male and female, six months old. Leicester and Southdown sheep. Prices to suit the times. Correspondence promptly answered.
R. RIVERS & SON, Springhill Farm,
293-y-OM **Walkerton, Ont.**

SIMMONS & QUIRIE

Shorthorns, Berkshires.



Representatives of the Scotch families are MINA'S & STRATHALLEN'S. The sires in use are the Sweepstakes Silver Medal Bull

SIR CHRISTOPHER and RED KNIGHT,
winner of 1st prize at Toronto and London in 1888; also, prize-winning Berkshires. 297-y-OM

5--Grand Young Bulls--5

I have five grand young Shorthorn Bulls for sale, sired by my imported Scotch Bull Goldfinder. These are

A1 Bulls Individually,

And have from one to four

Top Crosses of Imported Scotch Blood.

I can and will sell these bulls at prices that will pay any farmer, even though times are hard. If you want a bull write, or else come and see.

WM. WILSON,

Hadden Hill Farm,

BRAMPTON, - ONT.
Box 192. 297-a-OM

FOR SALE.

—ONE IMPORTED—

Polled-Angus Bull, Aged, Noxon,

No. [89], (6280). Registered Pedigree.

ONE YEARLING

Past, rising two.

Royal Prince.

Pedigree No. [90]. Also

BULL CALF,

Eligible to register. These Bulls will be sold reasonable considering quality of stock. Also a No. 1 lot of Oxford-Down Ram Lambs and Yorkshire Pigs of all ages. Address

ANDREW GILMORE,

OAK DALE FARM,

Huntingdon, - Quebec.
297 a-OM

HILLHURST HERDS

ABERDEEN, ANGUS, HEREFORD,

—AND—

A. J. C. C. JERSEY CATTLE.

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

M. H. COCHRANE,

286-y **HILLHURST P. O., Compton Co., O.**

ADVERTISE IN THE ADVOCATE.

AMERICAN CATTLE CLUB JERSEYS

Bulls, Cows and Heifers of St. Lambert's and other noted imported families.

F. G. BRAMELD,

297-a-OM **OAKVILLE, ONT.**

Riverside Farm.

PURE-BRED A. J. C. C. JERSEYS

—AND—
ESSEX PIGS.

Prince of Oaklawns (imp.) 12851, heads the herd. Young stock for sale. Also a few choice unregistered and high grade cows.

Farm one mile from Streetsville Junction. **J. H. SCARLETT, Streetsville, Ont.** 297-y-OM

MR. A. McLEAN HOWARD, JR.

—BREEDER OF—

REGISTERED - JERSEY - CATTLE

—ALSO—
HACKNEY AND COB HORSES.

Has always a few for disposal. For particulars address,
A. McLEAN HOWARD, JR.,
297-a-OM **Glen Duart Farm, TORONTO, CAN.**

CHOICE

Jerseys for Sale.

All ages and sex, of best milk and butter strains. St. Lambert blood prevailing. This herd has won sixteen medals (gold, silver and bronze), one hundred and forty prizes in money, several diplomas, many discretionary prizes, solid silver cup at Kellogg's New York sale for best prices on five head, silver tea set donated by FARMER'S ADVOCATE at London, 1889, for three best dairy cows of any breed.

MRS. E. M. JONES,

Brockville, Ontario, Canada.

291-y-OM

PARK HILL HERD OF AYRSHIRES.

This herd took all the first prizes in Quebec in 1887 and 1888, and in Ontario in 1889, in competition with all the leading herds. Young stock for sale, all of which is from the celebrated bull **ROB ROY** (3971), which is at the head of the herd.

JAMES DRUMMOND,
291-y-OM **PETITE COTE, MONTREAL, P.Q.**

Prize Winning Ayrshires for Sale.



GURTA 4th
(1181)

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

THOS. GUY,

290-y **Sydenham Farm, Oshawa, Ont.**

W. J. RUDD,

EDEN MILLS,

—BREEDER OF—

Devon Cattle.

A choice lot of

Young Bulls.

—Also—

Cows--in--Calf,

and a particularly good lot

of heifers. Also

COTSWOLD; SHEARLING JEWES.
297-a-OM

HOLSTEINS, CLYDESDALES & CARRIAGE HORSES

I have one of the oldest herds of Holsteins in Canada, founded on the best blood in America; also registered Clydesdales and Carriage horses.
297-y-OM **WM. SHUNK, Sherwood, Ont.**

CHOICE HOLSTEINS FOR SALE.

I have a few very nice pure-bred registered Holsteins, bulls and heifers, for sale at very reasonable figures. Write or come and see me. Also one or two high grades.—**JNO. A. LINE, Sherwood, Ont., Richmond Hill Station.** 291-y-OM

PURE-BRED REGISTERED HOLSTEIN-FRIESIANS.

All imported or bred from imported stock. "Sir Mac," of the famous Aaggie tribe, heads the herd.
HUGH McCAUGHERTY & SON,
297-y-OM Walnut Hill Farm, **STREETSVILLE, ONT.**

Pure-bred Holsteins, Cheap

Having leased my farm I have one or two choice Holstein cows and heifers that I reserved from my sale last fall which I will sell at two-thirds value. Also a grand two-year-old road Stallion got by "Forest Mambrino," dam by "Blucher," the sweepstakes stallion at the Centennial Fair.
Address, **S. SHUNK, Jr., Thornhill Station, Edgely P. O., Ont.** 297-a-OM

BROCKHOLME STOCK FARM.

Holstein-Friesian Cattle.

ADVANCED REGISTRY STOCK.
Netherland Romulus, a grandson of Netherland Prince and Albino the second, heads the herd. Young stock for sale.
R. S. STEVENSON, Proprietor, ANCASTER P. O., ONT. 295-y-OM

H. & W. F. BOLLERT,

Cassel, Ont.,

HOLSTEIN-FRIESIANS,

Comprising Aaggie Barrington, Bountie Queen, Jennie B. Trijntje, Glenburine and Geldertje families. Stock for sale at reasonable rates. Railroad station, Tavistock, on G. T. R. 294-y-OM



HOLSTEIN-FRIESIANS

The Choicest and most Uniform Herd in Canada.

Telegraph and Post Office, New Dundee, Waterloo Co., Petersburg Station, on G. T. R. Send for our new catalogue.
A. C. HALLMAN & CO. 294-y-OM

Prize Holsteins for Sale.

About disposing of my farm, I offer for sale my entire herd of Holstein Cattle. This is the finest herd in Canada, having for the last three years won more money prizes, more gold and silver medals, and more diplomas than was ever won by any herd of any breed at same number of exhibitions in this province. At the Industrial in Toronto last fall, with an American expert as judge, we practically swept the ring, taking first for aged bull, sweepstakes for best bull of any age, first for yearling bull, first, second and third for cows, and first herd prize for best bull and four females. (Breeders will understand what that means.) Whether the herd is sold or not, it will not be exhibited this year. Small breeders will therefore have a chance to get what they have never been able to do since I have exhibited a share of the principal prizes.
JOHN LEYS,
295 a-OM **TORONTO, ONT.**

OXFORD-DOWN RAM

(Eramosa Chief)
FOR SALE.
Eramosa Chief is the winner of 2nd prize at Provincial Exhibition, London, 1889. A number of pure Oxford-down Ram Lambs for sale. **J. T. Harcourt & Son, Maplewood Farm, St. Ann's P. O., Ont.** 279 c-OM



WILLIAM DAVIES,
—Importer and breeder of—
GUERNSEY CATTLE

—AND—
Large Improved Yorkshire Pigs.

The advertiser desires to call the attention of farmers to the great satisfaction purchasers of above have expressed, as per unsolicited testimonials below:—
The calf is a much better animal than I expected to get and certainly all that you represented him to be.
W. J. VEITH,
Halifax, N. S., Nov. 11th, 1889.

We are pleased to say the young bull has proved satisfactory.
KNIGHT BROS.,
Popcum, B. C., July 29th, 1890.

Pigs received in good shape, and truly, Mr. Davies, I was very much pleased with them. They were past my expectations. If you have another old enough, send it to me for one of my neighbors.
J. W. LEE,
Simcoe, Dec. 17th, 1889.

He is a fine pig.
W. C. HEARD,
Manchester, Mar. 17th, 1890.

I am very well pleased with the pig.
GEO. LIVERSAGE,
Carlingford, Feb. 22nd, 1890.

I received pig all right. Am well pleased with him. So is every one who has seen him.
W. M. BREAT,
Raglan, June 26th, 1890.

I like the boar very much.
A. M. TYLEE,
Compton, July 29th, 1890.

Pig arrived in good form and am pleased to say he exceeded my expectations.
JAS. S. WAUGH,
Chatham, July 24th, 1890.

I am very much pleased with the Yorkshire pig I got of you a year ago. He has done well and I have never regretted that I got him. I have made \$40 out of him and won to first prizes.
W. C. HUFF,
Mountain View P. O. 297-a-OM

F. BONNYCASTLE,

Breeder of Pure-bred Shorthorn Cattle, Cotswold Sheep and Berkshire Pigs. Young stock for sale. Post office and railway station, Campbellford, Ont. 297-a-OM

SUFFOLK AND BERKSHIRE PIGS

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

PURE-BRED SOUTHDOWN SHEEP.

My flock was founded in 1870, and has been bred with the greatest care since, none but rams of the choicest strains of imported blood having been used. "Halcon Hero," winner of 8 1st prizes, now heads the flock. I have some grand ram lambs that I will sell at farmers' prices.

JOHN. W. ALTON,
297-f-OM Cedar Grove Farm, **OAKVILLE, ONT.**

Green Grove Stock Farm

Jersey Cattle of the very best butter strains. Choice Southdown Sheep, Berkshire Pigs and Fancy Poultry. Young Stock for sale.
J. W. BUSSELL & SON, LISGAR P. O., ONT.
Stations—Streetsville and Lisgar, on C. P. R. 297-l-OM



SOUTHDOWNS.

To make room for my fresh importation, lately landed, I will sell the whole of my flock, consisting of

Sixty Southdown Ewes and Lambs

of my own breeding. These sheep are large and first-class quality. Prices very reasonable.
DAVID H. DALE,
Glendale, Ont.

DORSET HORN SHEEP

MY SPECIALTY.

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

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



FOR SALE.

SHROPSHIRE SHEEP.

A few Imported Ewes, Ewe Lambs and Ram Lambs, all good ones and registered. Prices low. Also several choice Jersey Heifers and Bulls.

W. D. REESOR, "Elm Park,"

Markham, Ont. 297-a-OM



SHROPSHIRE



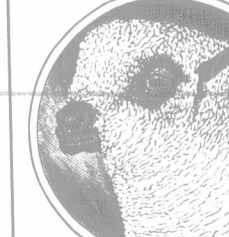
I have on hand a splendid crop of lambs, all from imported ram, and mostly from imported ewes. Shearling Ewes, similarly bred; also Imported Ewes. Sheep in American Shropshire Record; also some very good grades.

S. A. MILLSON,

GLANWORTH, ONT. 295-y-OM

SHROPSHIRE

MY SPECIALTY.

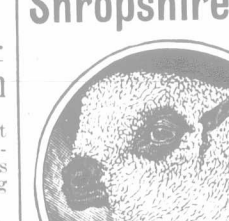


I beg to lay before intending purchasers that my recent importation have proved themselves to be very prolific, fully realizing my expectations, as I have had a very heavy crop of lambs, all of which are by the most noted sires of recent years. Purchasers should inspect this stock before buying elsewhere.

W. S. HAWKSHAW,

GLANWORTH, ONTARIO. 291-tf-OM
Seven miles south of London.

IMPORTED Shropshire Ewes and Rams



I have again secured the pick of the Bulwell Flock and offer the same at prices that cannot be duplicated. Amongst the importation are a very select lot of rams, good enough to put at the head of any flock, and there are also ten very choice show shearing ewes.

Come and see them.

RICHARD GIBSON,

296-a-O, M DELAWARE, ONT.

SHROPSHIRE -- SHEEP.

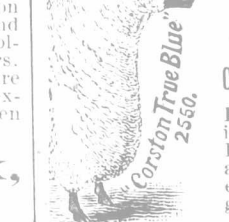


This flock has won numerous prizes in England for the last twenty years, besides America, France and Africa. Has been established over seventy years. Several of the best flocks in England started from this flock thirty years back. Sheep always for sale.

F. BACH & SON,

289-v Onibury, Shropshire, ENGLAND.

SHROPSHIRE SHEEP



DAVID BUTTAR,

Corston, Couper-Angus, N.B., Scotland

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

SHROPSHIRE

Improved Yorkshire Pigs.



A choice lot, imported by ourselves. Sheep from the flocks of H. J. Sheldon, F. Bach, R. Mansell, J. Thonger. Yorkshire pigs from last years prize winners.

W. MEDCRAFT & SON,
SPARTA, P. O.
and Telegraph Station
297-y-OM

FOR SALE.

A Choice Lot of Shropshires.

Shearling Rams and Ram Lambs got by imported rams. Dams all registered.

J. S. HANMER & SON,
Mount Vernon, Ont.
297-a-OM

Improved Yorkshire Hogs and Shropshire Sheep,
All bred from imported stock and registered.

JAS. HALL, Edmonton, Ont.
293-y-OM

IMPROVED -:- LARGE -:- YORKSHIRES!

All bred from imported stock and registered. Imported boar "Holywell Wonder II." heads the herd.

JAMES FIELDS,
Castle Hill Farm, ANCASTER, ONT.
293-y-OM

Improved Large Yorkshire Pigs



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

Apply to **WILLIAM GODGER,**
Woodstock, Ont.
293-y-OM



CECIL FRENCH,

Ightham Court Farm
Truro, N. S.

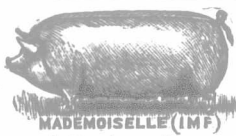
Importer and Breeder of

Improved Large White Yorkshire Pigs

Our herd consists of two importations from F. Walker-Jones, and N. I. Hine, Eng. Registered stock for sale at all times.

J. E. BRETHER, Burford, Brant Co., Ont.
293-f-OM

Improved Large (White) Yorkshire Pigs and Scotch Shorthorns.



Entire breeding stock of Yorkshires are imported: specially selected from stock of F. Walker-Jones and Sanders Spencer, Eng. Registered sows and boars supplied not akin. Shipped to order and guaranteed to be as described.

J. E. BRETHER, Burford, Brant Co., Ont.
293-f-OM

THE - GLEN - STOCK - FARM

SCOTCH SHORTHORNS,

SHIRE HORSES,

Improved Large (White) Yorkshire Pigs.



Our pigs are specially selected from the prize-winning herds of Sanders Spencer, Ashforth, Charnock and F. Walker-Jones, who won upwards of \$10,000 in prizes in three years. Orders now booked for young registered pigs. Shorthorns and Shire horses for sale.

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

H. GEORGE & SONS, CRAMPTON, ONT.,

Importers and Breeders of **Ohio Improved Chester White SWINE.**



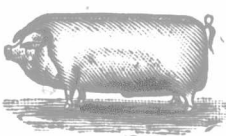
ALSO SUFFOLK & BERKSHIRE SWINE

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

286-y

CHESTER WHITE PIGS

FROM PRIZE IMPORTED STOCK FOR SALE.



Special Rates by Express.

296-tf-OM R. & J. GURNETT, Ancaster, Ont.

DANIEL DeCOURCEY

BORNHOLM, ONT.,

Importer and Breeder of

OHIO IMPROVED CHESTER (WHITE) SWINE.



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

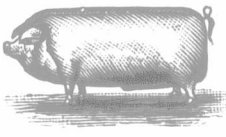
R. H. HARDING,

Mapleview Farm,

THORNDALE, ONT.,

Importer and Breeder of

Ohio Improved Chester White Swine. First-class stock, eligible for registry, always on hand. Prices Right. Correspondence Solicited.



E. D. GEORGE

PUTNAM, - - ONT.

Importer and Breeder of

Ohio Improved Chester White Swine



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

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

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

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

Thoroughbred Horses. Shorthorn Cattle

of the Cruickshank blood. Young bulls for sale, got by Baron Camperdown = 1218 =, imp., (47389) and Baron of the Grange = 10864 =. Also

Southdown Sheep

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



BERKSHIRES

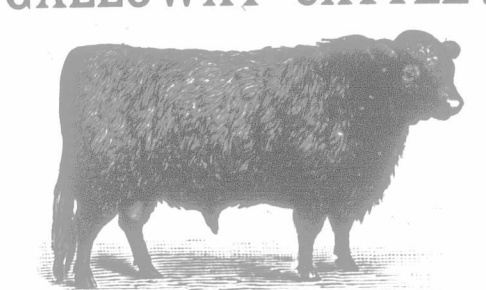
AND LARGE YORKSHIRES

A SPECIALTY.

We are now prepared to book orders for spring delivery pigs of the above breeds. Also for sale a few fall pigs, Ayrshire, Cattle, Shropshire and Southdown Sheep. Call

or write for what you want. **287-y W. H. & C. H. McNISH,** Lyn, Ont.

GALLOWAY CATTLE!



YOUNG STOCK FOR SALE

Address, **J. G. BROWN, Manager,**

Hope Farm, St. Jean Baptiste. St. Jean, N. P. & M. Ry. 4 1/2 miles. Morris, C. P. Ry. 10 miles. **289-y-M**



Imported and Canadian bred CLYDESDALES.

We challenge competition for quality and smoothness in our horses. Imported Stallions and Mares of the most desirable strains. We have been most successful in the show rings with mares, colts and fillies of our breeding. Stock for sale at reasonable prices.

PROUSE & WILLIAMSON,
Ingersoll, Ont.
297-y-OM

MARCHMONT -:- HERD

OF IMPORTED AND CANADIAN BRED

SCOTCH SHORTHORNS.

The Marchmont herd took five first and three second prizes at Portage la Prairie Fall Fair in 1889.

At Brandon Summer Show, 1890, this herd took eight prizes, including three firsts and diploma for best herd.

Inspection invited. Parties wishing to see the stock met at Winnipeg station. Distance from Winnipeg, seven miles north.

YOUNG BULLS AND HEIFERS FOR SALE.

W. S. LISTER,

MIDDLECHURCH, MAN. **293-y-M**

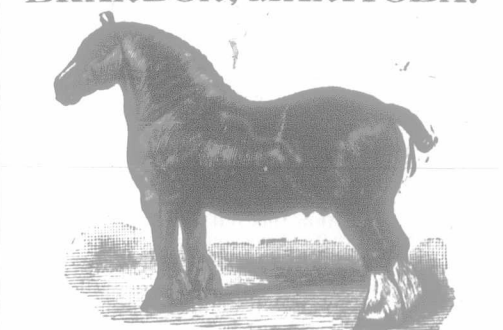
J. D. McGREGOR & CO,

—Importers of—

ENGLISH SHIRES

Cleveland Bays and Blood Horses,

BRANDON, MANITOBA.



Our second importation of Shires, Cleveland Bays and Thoroughbreds arrived direct from England, on Friday, 7th March, and will be offered for sale at reasonable terms. Every horse guaranteed a foal getter. **292-y-M**

Manitoba Farms.

GLINES & CO.

421 MAIN ST., WINNIPEG,

REAL ESTATE,

LOAN AND FINANCIAL AGENTS.

ESTATES MANAGED, RENTS COLLECTED AND LOANS EFFECTED.

SPECIALTIES:

Manitoba Farms in Winnipeg District, Winnipeg City Properties.

Our twelve years experience in Land Business in Manitoba enables us to give valuable information to purchasers, who should see our Lists before buying.

REFERENCES:—Duncan MacArthur, Banker, Winnipeg; Col. D. H. McMillan, Provincial Treasurer, Winnipeg; Col. Scott, Collector of Customs, Winnipeg; Wm. Redford, Esq., Toronto. **297-a-OM**

STOCK GOSSIP.

Messrs. Graham Bros., Claremont, Ont., so well known all over America, have this season again imported twenty Clydesdales of high merit, among which are a number of very fine show horses and mares. These, added to their present stud, make a grand display.

We call the attention of our readers to the sale, advertised in another column, of Mr. R. J. Mackie, of Springdale Farm, Oshawa, Ont., who has decided to sell his entire herd of valuable Herefords. There are forty cows and heifers and thirteen bulls and bull calves, including the two noted bulls Cecil 18469 and Commodore 32943 by Cassio 11353. Mr. Mackie says Commodore has proved a fine stock getter and he has a fine lot of calves from him; also a fine lot of heifers from his silver medal bull Cecil, which will be an acquisition to any herd. Cattle in fine breeding condition. Farmers look out for bargains, as fancy prices are not looked for. Now is the time to improve your stock. Sale on 15th October. Catalogue on application.

Messrs. Wm. Medcraft & Son, Sparta, Ont., have just made an extensive importation of Shropshire sheep and improved Yorkshire pigs. In the lot is a very fine shearing ram, bred by that noted breeder, Mr. H. J. Sheldon, Brailles House, Warwickshire, Eng., sired by Harrington, who was bred by Mrs. Barr. Some shearing ewes are from the same flock. Another lot are from Mr. R. Mansell, Preston. A ram lamb was purchased from Mr. J. Thonger, and a lot of show ewes were purchased of Mr. F. Bach, Onibury, Shropshire. Two improved Yorkshire sows were selected from Mr. R. Mansell's herd, and out of a litter from Woorsley Juna, a winner at the Royal last season, and a young boar from Mr. W. Charles, Wellburn, and sired by his boar that was a winner at the Royal last season, as well as taking seven other first prizes.

In a recent letter A. C. Hallman & Co., New Dundee, Ont., say:—Never since we engaged in the business of importing and breeding Holstein-Friesian cattle were the prospects better for a bright future than at present. Enquiries are pouring in from all parts of the Dominion, many of the enquiries come from parties that had some experience with the breed, some wanting to replace an aged bull, others adding females to start herds, whilst numbers that never had any experience with the breed are now making their first purchase to improve their dairy stock. We sold thirteen head since January 1890, which we consider very good considering the hard times, several of the sales being of more than ordinary importance, such as that to the Ontario Agricultural College, Guelph, Ont.; also several bulls to head herds. Since our last report we sold a pair, bull and heifer, to John Hillgartner, Walkerton, Ont.; a bull to Benj. Beck Esq., Providence Bay, Manitoulin Islands; a yearling bull to Hugh McCauley, Streetsville, Ont.; yearling bull to Mr. Henry Bessett, Hamilton, Ont., and one imported cow and two-year-old heifer to John McGregor, Constance. We have sold all our surplus bulls, and might have sold more if we had had them. We have the finest lot of calves we ever had, quality and choice breeding considered. Some of the stock sold is of more than passing notice, but space prevents of giving any detailed description of them. We have not exhibited since 1887, but if all is well we intend to be at the Toronto Industrial Exhibition this fall, with about a dozen head, and hope to meet our numerous friends there.

Hollett Bros. write, under date of Aug. 18th, that they have received a letter from quarantine stating that their stock is doing and looking very well. Their importation consists of seven head, consisting of three cows, two yearling heifers and two calves. Most notable among these are the imported cow Heimke and the heifer calf Ashtie Posch 6th. Messrs. Lord & Thomas, in their catalogue, say of Heimke—She has a milk record of 65 pounds in a day this season (three-year-old), is not large, but a very promising young cow, and bids fair to make one of the very best. This opinion has been justified by Dr. Sayer of the New York Experimental Station, who made an analysis of her and Ashtie's milk in August 1889. In his report of the analyses he states that the milk of these two cows showed a better standard than the milk of any other cows of this breed he has yet analysed. Heimke has a very strong and fine bull calf at her side. We also have a heifer of Jesse A. H. Smith, Miss. In the catalogue of the Toronto Industrial Exhibition, the following is given:—The following is the record of the milk of Heimke, who is known to the world as the best cow ever known at present, and her daughter Ashtie, who was a winner at the large Western Fair. The following is the record of the milk of Heimke, who is known to the world as the best cow ever known at present, and her daughter Ashtie, who was a winner at the large Western Fair. The following is the record of the milk of Heimke, who is known to the world as the best cow ever known at present, and her daughter Ashtie, who was a winner at the large Western Fair.

NOTICES.

Small text notices at the bottom of the Stock Gossip section.



SHROPSHIRE SHEEP

—AND— COLLIE DOGS.



A choice lot of Ewes bred by Mr. David Buttar, Couper, Angus, Scotland; two Shear Ewes, imported last season, and their produce. Also Collie Dogs just imported. 296-y-O-M W. H. BEATTIE, Wilton Grove, Ont.



SHORTHORNS, OXFORDS.

JAMES TOLTON, Walkerton P.O.

—A large importation of— OXFORD - DOWN - SHEEP,

FROM THE BEST ENGLISH FLOCKS.

Winners at the Royal and Oxfordshire Shows. Also a large flock of my own breeding. 297-a-OM

SHERIFF-HUTTON SHORTHORNS.

BULL CALVES Sired by the Booth (Bright) Bull ROYAL BOOTH 2nd,

From cows of some of the most famous Booth families. Berkshire Pigs of extra quality also for sale. 297-a-OM



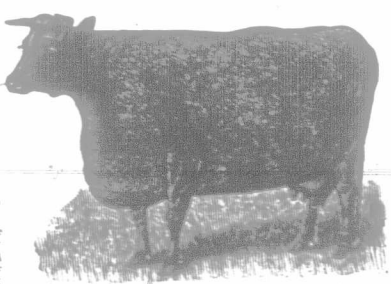
WM. LINTON, Aurora, Ont.

H. CARGILL & SON, CARGILL, ONT.,

BREEDERS OF SCOTCH-BRED

Shorthorn Cattle!

With Campbell, of Kinellar, bull, imp. Albert Victor, at the head of the herd; also several imp. Urys, also bred at Kinellar, and a daughter, and grand daughters of the sweepstakes cow Rose of Strathallan 2nd, and other useful sorts. A nice lot now on hand for sale. 298-y-OM



ELMWOOD STOCK FARM.

T. D. HODGINS,

—IMPORTER AND BREEDER OF—

Thoroughbred Race Horses, Standard-bred Trotters

—AND— CLEVELAND BAY and YORKSHIRE COACH HORSES.

SHROPSHIRE SHEEP 40 imported yearling ewes for sale. Also young stock of the above mentioned sorts.

297-a-OM

T. D. HODGINS, London, Ont.

—THE—

MY HERD

Is composed of the choicest specimens of Herefords that money could buy in England, comprising representatives of the Lord Wilton, Grove 2nd and Cassie families.

PARK HERD

F. A. FLEMING,

WINNER AND BREEDER OF

PURE-BRED HEREFORD CATTLE

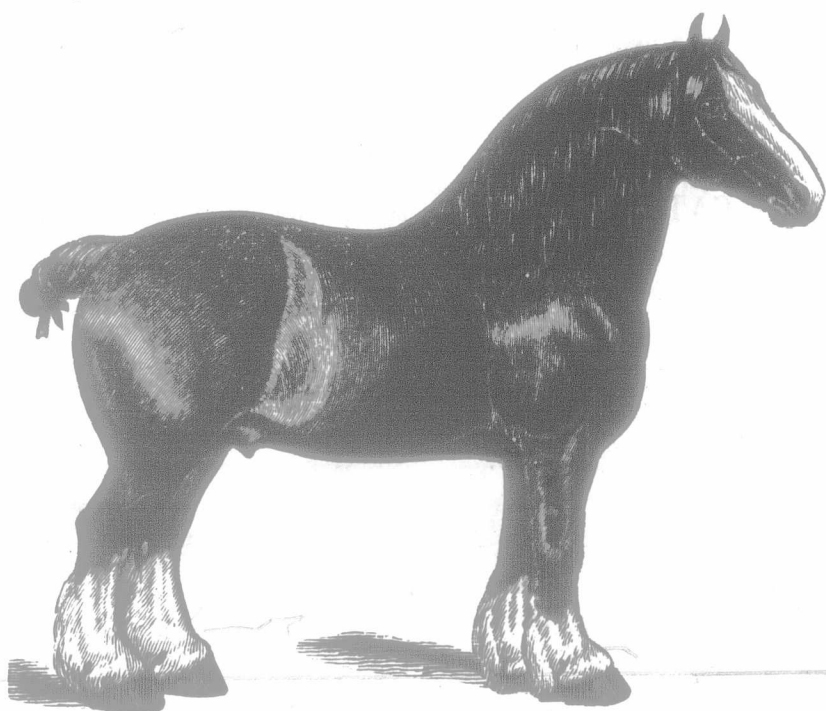
WESTON, ONT.

See reports in the Industrial Fair, Toronto, and the Western Fair 297-a-OM. ASK FOR FLEMING'S HEREFORDS.

FARMERS, ATTENTION!

I have a grand lot of young bulls and heifers that I will sell at very reasonable figures. Times are hard and my motto is: "Live and let live."

— IMPORTED —
Clydesdale Stallions and Mares for Sale.



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

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

PRICES REASONABLE.

CATALOGUES FURNISHED ON APPLICATION

ROBT. BEITH & CO., - BOWMANVILLE, ONT.

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

297-a-OM

THE GREAT MILK AND BUTTER HERD
 OF
HOLSTEIN-FRIESIAN -:- CATTLE.

The accompanying illustration represents
MERCEDES PRINCE,

THE SIRE OF

Mink's Mercedes Baron

The Stock Bull of our Herd.

MILK RECORDS

in our herd (two-year-olds included) run from 6,000 to 13,021 lbs. in a year, and as high as 81 lbs. in a day.

BUTTER RECORDS

run from 13½ to 19 lbs. in a week of all that have yet been tested.

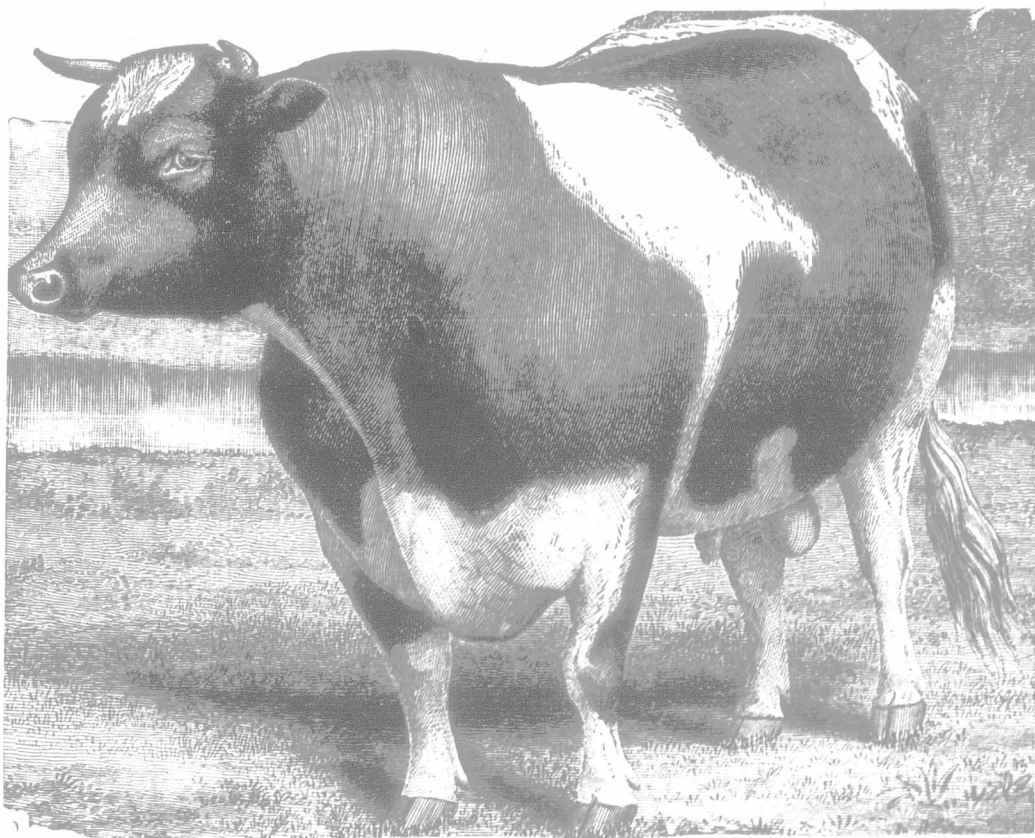
Our Herd have taken most 1st prizes at the Industrial and Provincial Exhibitions, 1888, 1889.

All the best families represented in our herd. Plain feeding and ordinary care is our motto. Prices right and within range of all farmers. Over 75 head in our herd which have been carefully selected and bred for butter and milk.

Catalogues free and visitors always welcome.

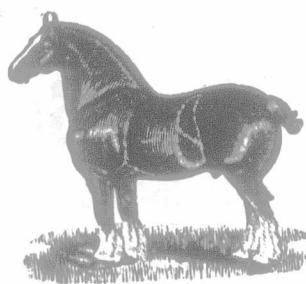
CREDIT VALLEY STOCK FARM.

SMITH BROS., - Churchville, Ont.
 (Peel Co.)



Mercedes Prince 2150, H. F. H. B.

297-a-OM



SHIRES AND CLYDES.

Our stock horse "King of the Castle" (3171) 71, has taken the champion prize at Toronto Industrial Fair for the last three years, also 1st for Shire stallion and 5 of his get at Buffalo last year. We would sell him as well as a choice lot of colts and fillies got by him out of prize winning mares. Also a few graded Clydesdale colts and fillies.

ROSEDALE FARM

HIGHFIELD P. O., MALTON, ONT.

Jas. Gardhouse & Son,

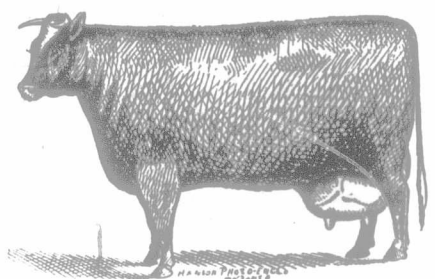
-BREEDERS AND IMPORTERS OF-

Shire and Clyde Horses

-AND-

SHORTHORN CATTLE.

Letters—Highfield P. O.
Station and Telegrams—Malton.
First-class stock at rock bottom prices.
Write or call. 297-a



SHORTHORNS.

The last time exhibited, in 1887, our herd took the champion prize at Toronto Industrial Fair. For the last 20 years we have been using imported bulls. Our stock bull now is "Albert," bred by S. Campbell, Kinellar. We have some grand bulls and heifers got by him and by the imported Duthie bull Eclipse, for sale at very low figures.

THE GRANGE FARM
Springfield-on-the-Credit, Ontario.

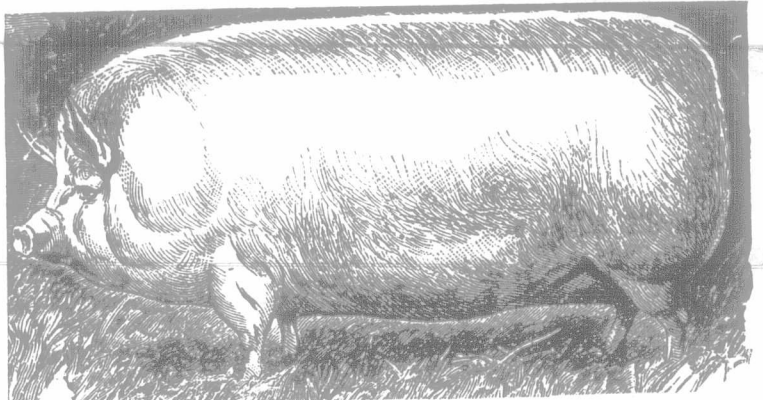
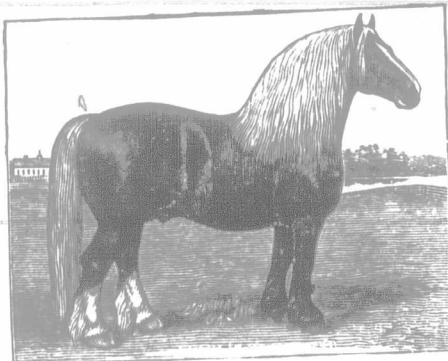
ORMSBY & CHAPMAN

Breeders and Importers of
Shires, Clydesdales & Hackneys,
Shropshire Sheep

-AND-

Improved Large Yorkshire Pigs.

Letters:
Springfield-on-the-Credit.
Telegrams:
Streetsville.
Stations:
Streetsville, on C. P. R.
Port Credit, on G. T. R.



SHIRES, CLYDES AND HACKNEYS

IMPROVED LARGE YORKSHIRES.

Imp. Stallions & Mares for Sale.

Having added a few choice Clydesdales and Hackneys to our stud, we beg to draw the attention of farmers and horsemen to the following facts:

We have the largest stud of Shires in Ontario. We have taken more prizes on Shires than any other importers, at the leading shows in Ontario, in 1888 and 1889. Our stock comprises the get of such noted sires as Big Ben, Blythe Echo, Royal George II., Carleton, Comet, etc. We sell at prices that defy competition. We are enabled to do this as we have a partner resident in England. None of our horses are fattened or pampered for show purposes. Catalogue on application. Visitors welcome.

Our Mr. Chapman has just arrived from England with a choice selection of pigs, from the best herds in England, boars and sows, sixteen in number. As our herd now numbers over seventy head we are prepared to supply imported and home-bred pigs of all ages. No breeding pigs fattened for show purposes.

DO NOT FORGET.

The Largest and Oldest Established Herd IN AMERICA.

\$1,950 worth sold in 1889.

OUR MOTTO:

A good pig, with a straight pedigree, at a fair price.

OUR TERMS:

Satisfaction guaranteed or money refunded.

Write for Price List.

297-a-OM



Dorset Horned Sheep.

Our Dorsets are all imported from the best flocks in England. We spare no expense in making our selections as our principle is—

"Breed only to the Best."

ADDRESS—
JOHN TAZEWELL,

Indian Village Farm, PORT CREDIT, ONT.,

TAZEWELL & HECTOR

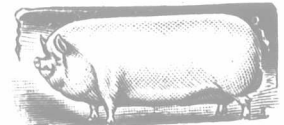
-BREEDERS AND IMPORTERS OF-

DORSET HORNED SHEEP

-AND-

Improved Yorkshire Pigs.

NO STOCK FATTENED FOR SHOW



Improved Yorkshire Pigs.

Our Yorkshires are bred from the best strains of imported stock, representing such herds as those of Sanders Spencer, C. E. Duckering and other noted English breeders.

OR THOMAS HECTOR,

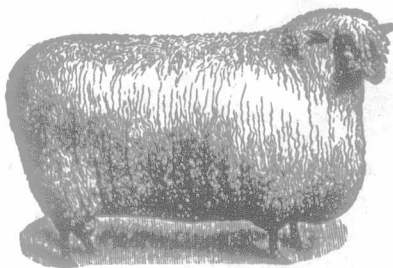
The Cottage, SPRINGFIELD-ON-THE-CREDIT, ONT.

297-a-OM

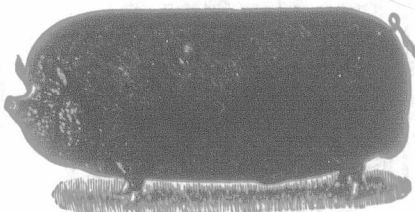
OUR SPECIALTIES:
Cotswold Sheep — Berkshire Hogs

1855-1890.

1866-1890.



We import the best. We breed the best. We invite inspection. We ship to order and guarantee satisfaction. We have special rates by express. Young stock always for sale. A grand lot of ram lambs and young boars now in stock, imported and home-bred. Prices reasonable for breeding and quality. Come and see, or address,



J. C. SNELL,

EDMONTON, ONT.

297-a-OM

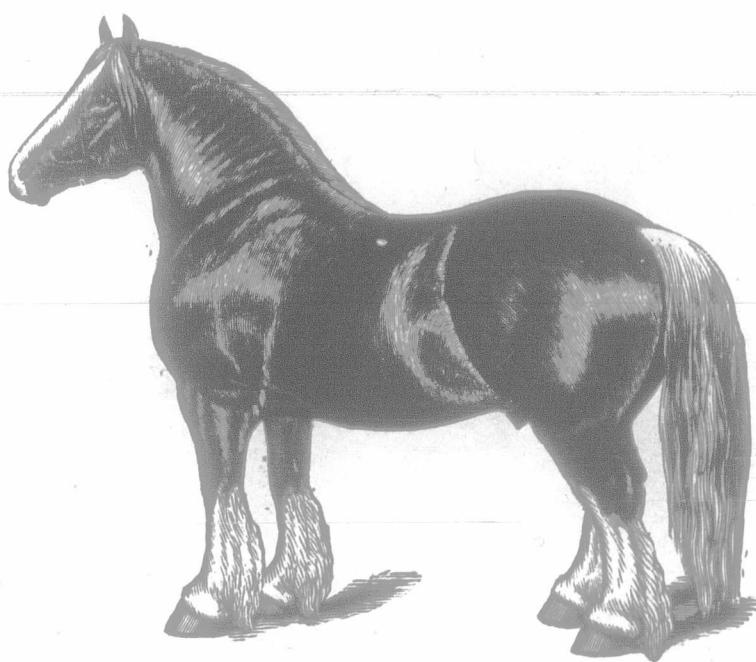
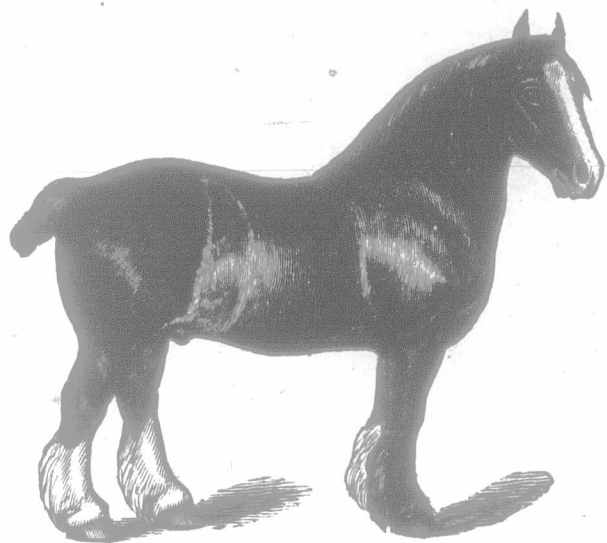
D. & O. SORBY, GUELPH, ONT.

—IN ADDITION TO OUR ALREADY LARGE STUD, OUR NEW IMPORTATION OF—

-CLYDESDALES-
HAS ARRIVED.

Colts and Fillies by such popular sires as Lord Erskine, Flashwood, Darnley Hero, Old Times and Maenab.

Farm is 3 1/2 miles from Guelph.



W. H. MILLMAN,

“THE FIRS” STOCK FARM, WOODSTOCK, ONT., CAN.

CABLE ADDRESS: Firs, Woodstock, Ont. TOWN OFFICE: Two doors south of P.O. Telephone 138. Farm 1/2 mile east of Woodstock.

—IMPORTER OF—

SHIRES, CLYDESDALES, HACKNEYS, COACHERS, THOROUGHBREDS, PONIES, ETC., ETC., ETC.

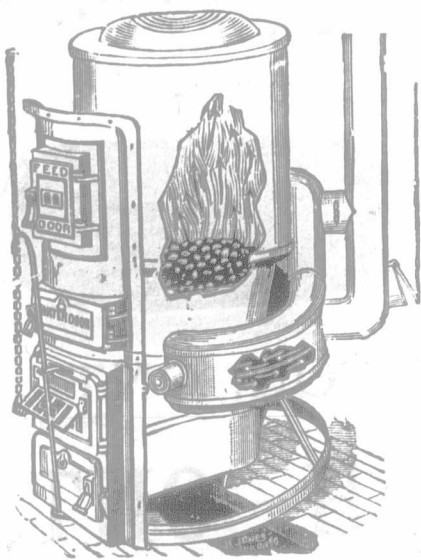
Exporter of Fine Carriage and Saddle Horses.

The following are what I have on hand at present, and all are for sale, and no fancy prices asked. Time will be given for part payment on any of them when required, if security is satisfactory:—
 DANDIE DINMONT 452, imported English thoroughbred.
 GRONE ACCUMULATOR 1340, imported English Coach Horse.
 WALKER SPRAGUE, Record 2.34 1/4, Trial 2.22 1/4, Sire Gov. Sprague, Dam by Capt. Walker, 2.27.
 THE DUDE, Sired by Red Cloud. Very handsome three-year-old.
 LORD MAN 2163, Hackney Cob Pony, 12 3/4 hands high. The handsomest and greatest prize winner in America.
 WARPETH, Five-year-old Clydesdale.
 THE FIRS PRINCE, Three-years-old. Fleetwood King, Two-years-old. Shire colts.
 Two imported Shire mares, great prize winners. Four standard bred mares and some foals. A number of Shetland and other ponies, mostly stallions and prize winners. A number of Carriage and Saddle horses always on hand.
 For pedigree and full particulars, drop a postal card. Will meet any trains on receipt of wire or letter.

297-a-OM

CLARE BROS. & CO.

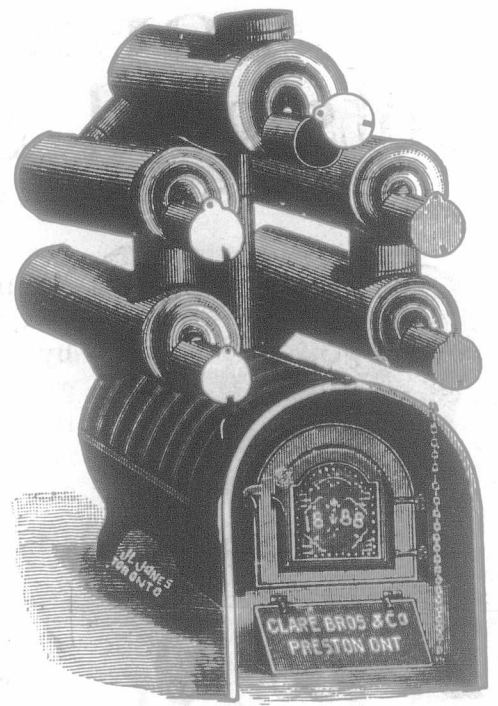
PRESTON, ONT.,



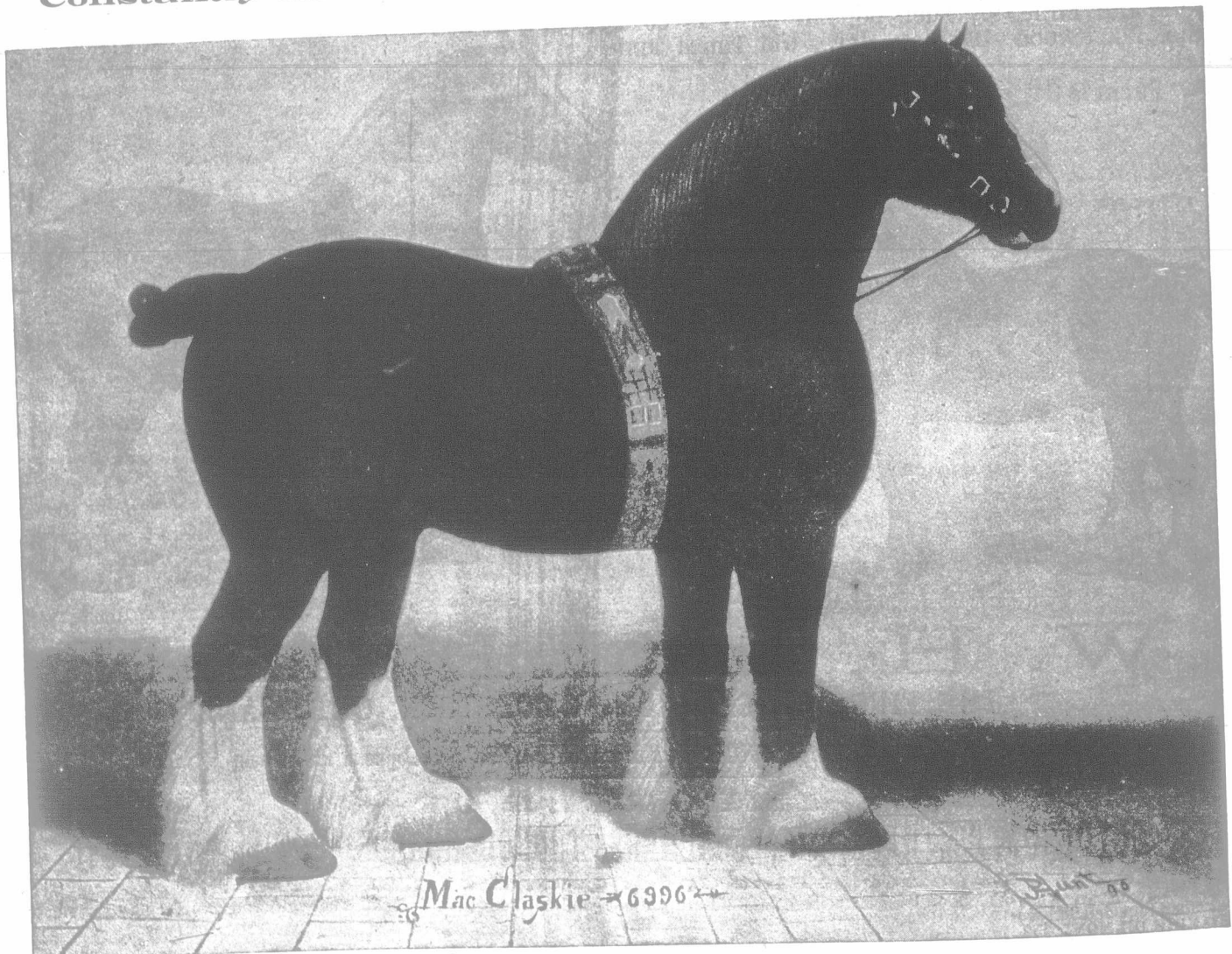
Manufacturers of a complete line of
**COAL AND WOOD
 HOT AIR FURNACES**
 REGISTERS,
 HOT WATER BOILERS AND COMBINATION HEATERS.

We also manufacture a full line of
RANGES, STOVES,
 Hollow-Ware, Etc.

Our "Hilborn" Wood Furnace stands without a rival,
 and has won an enviable reputation throughout the country.
 Please write us for our Illustrated Catalogue and learn
 the merits of our Furnaces before placing your order.
 297-a-OM



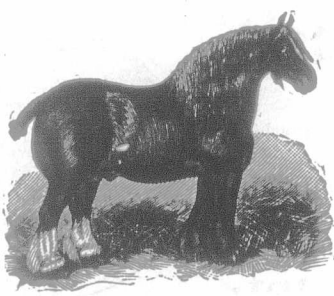
**IMPORTED AND REGISTERED
 CLYDESDALE & HACKNEY STALLIONS & MARES**
 Constantly on hand, and for Sale at Reasonable Terms.



Our last importations, which arrived Sept. 1st, 1890, comprises a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (673). Also a few choice SHETLAND PONIES. Correspondence solicited, and visitors always welcome.

GRAHAM BROTHERS, Claremont, Ont.
 Twenty-five miles east of Toronto, on the C. P. R. 297-a-OM

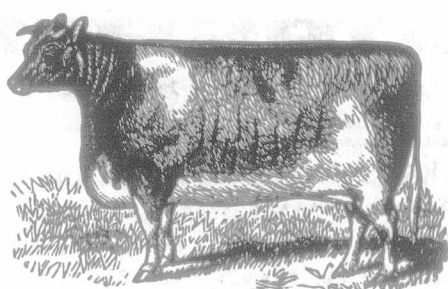
BERESFORD



STOCK FARM.

Imported Clydesdale Horses, Stallions and Mares, Shorthorn Cattle, young Bulls and Heifers, all Registered and of the most fashionable breeding, for sale at reasonable prices. Inspector solicited.

JOHN E. SMITH, Box 274, Brandon, Man.
P.S.—Always on hand high grade Brood Mares, suitable for Agricultural purposes. 289-y-M



PIONEER HERD OF SHORTHORNS.

Walter Lynch, Proprietor, Westbourne, Man.

Fifteen first and one second herd prizes in sixteen years. A choice lot of young bulls for sale. 290-y-M

My Southdown Sheep

Are descended from the well-known flocks of Lord Walsingham, Jonas Webb and Sir William T. Mockmorton, and are thoroughly acclimatized. Prices to suit customers.

J. L. VINING,
POPLAR POINT, - MANITOBA.
289-y-M

DAYTON'S POULTRY YARDS
KILDONAN, MANITOBA.

(Half-mile from North Winnipeg Street Railway.) Breeder of High Class Light Brahmas, Buff Cochins, P. Rocks, Langhans and Wyandottes. Eggs, \$2.00 per set; Pekin Ducks, \$2.00 per 11; Bronze Turkeys, \$3.00 per 10. No stock for sale till fall. The finest stock of Fowls in the Northwest. Call and inspect them. Address, H. W. DAYTON, WINNIPEG. 293-y-M

MAPLE SHADE HERDS AND FLOCKS.



THE OLDEST AND LARGEST HERD OF CRUICKSHANK SHORTHORNS IN CANADA.

Do you need a fine Shorthorn bull to head your herd, or a thick, fleshy bull of the genuine Cruickshank type as a prepotent steer getter? You can be supplied at the most reasonable rates at Maple Shade. And if, in future, you wish to breed your own bulls, choice cows and heifers may be had of the same sorts. The Maple Shade flock of Shropshire sheep are second to none. It is founded on the best blood in England, and has annually furnished first prize winners at all the leading exhibitions. No animals will be entered for competition this year. Shearling rams and ewes supplied on shortest notice. Seventy lambs (rams and ewes) well grown and of choicest quality. Inspection will pay you. Come or write at once to

297-a-OM

JOHN DRYDEN, Brooklin, Ont.

JERSEY -:- CATTLE

In addition to my herd of choice A. J. C. C. Jerseys, I have a number of Bulls, Cows and Heifers, registered in the A. J. H. B., which I will sell at very reasonable figures.

CLAIR HOUSE VINEYARDS,
Cooksville, Ontario.

B. W. MURRAY,

—BREEDER OF—

THOROUGHbred JERSEY CATTLE

—AND MANUFACTURER OF—

Pure - Native - Wine.

PURE NATIVE WINE

Having a vineyard of 30 acres, with large wine cellars, etc., I can supply NATIVE WINE, guaranteed pure and unadulterated, in large or small quantities. 297-a-OM

500 SHROPSHIRE

Imported and Home-bred.

We have lately increased, by a large importation, what was already the largest flock in Canada, and can now furnish anything required at most reasonable prices.

SHOW RAMS, SHOW EWES, BREEDING RAMS, BREEDING EWES, and Rams for Crossing
Cheaper than from any other Flock.

CLYDESDALES and SHORTHORNS of the best types always on hand. Visitors welcome. Correspondence solicited.
297-a-OM JOHN MILLER & SONS, Brougham, Ont.



Graduated Prices. Recently Furnished.
LELAND HOUSE,
W. D. DOUGLAS & CO., Proprietors.
The Finest Hotel in the Northwest.
Corner City Hall Square, Main & Albert Streets,
CITY HALL SQUARE,
297-y-OM WINNIPEG, MAN.

C. D. ANDERSON & CO.,
IMPORTERS,
—Wholesale and Retail Dealers in—
Fine Groceries, Provisions and Cigars.

245 - MAIN ST. - 245
A few doors south of Northern Pacific Depot,
WINNIPEG, - MAN.

DIRECT IMPORTERS of TEAS & COFFEES.
We handle Flour at Mill Prices.

Highest Prices Paid for all Kinds of Country Produce.
Correspondence solicited from those who can supply large quantities of A1 Butter and Fresh Eggs.
297-f-M

The Bishop Furniture Co.
383 Main Street, Winnipeg.
WHOLESALE AND RETAIL

FURNITURE!

The Largest Stock in the Province.
Send for Photographs and Price Lists. Will prepay freight if desired.

Cheap Cash House,
383 MAIN STREET, - - WINNIPEG.
The Bishop Furniture Co. 297-c-M

WELDON BROS.,
33 Market St., Winnipeg,
—DEALERS IN—
GROCERIES, PROVISIONS, CANNED GOODS, &c., &c.
FARMERS' TRADE A SPECIALTY.
Give us a call. 297-d-M

CROCKERY, CHINA AND GLASSWARE.

Farmers when in Winnipeg should not fail to see our stock, which is Complete, Attractive, Cheap. Come and see our stock whether you buy or not.

GOWANS, KENT & CO
430 Main St., WINNIPEG, Man. 297-f-M

ANDERSON BROS. & CO.,

—DEALERS IN AND BREEDERS OF—

HORSES, CATTLE and SHEEP

Also importers of Montana, Oregon and Washington Territory Horses, Sheep, etc. Farmers going into stock breeding, and can take stock by carload, will find it to their advantage to call on or write us. Also parties wishing to dispose of stock, will either buy straight or sell on commission. Purchase ponies for ladies or children, broken to saddle or harness, for sale. Horses, oxen, cattle and sheep for sale, wholesale or retail. All kinds of cattle taken in exchange or part for horses. Correspondence solicited. Ranch address, Clandeboye, Man. G. B. Anderson, Manager. 293-f-M Office and Stables, Princess St., WINNIPEG, MAN.

DR. CARVER 7369, Rideau Stock Farm PALM LEAF 7634,
two-year-old record 2.40. **KINGSTON, ONT.**
Foaled 1887,
BY PANCOAST 1430.

By New York Dictator, (trial) 2.25½.

Dam—Kitty Morgan,

Dam of Nannie Talbot, 2.29¼.
298-y-OM

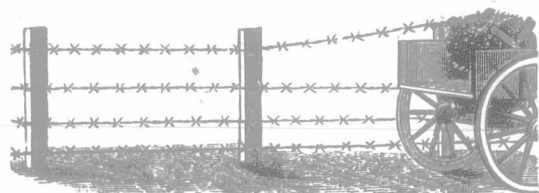
Standard-bred Trotting Horses,
Registered Holstein (H.F.H.B.)
and Jersey Cattle (A.J.C.C.)

YOUNG STOCK FOR SALE.
F. A. Folger, Box 579. Send for catalogue.

Sire of Patron, 2.14¼.
Dam—Augusta,
Dam of Chanter, 2.20¼.
Dam of Shalleross, (trial) 2.23.
2nd dam—Dolly Mills.
Dam of Orange Girl, 2.20.
Walkill Chief, etc.

Manitoba Wire Co.

WINNIPEG, MAN.



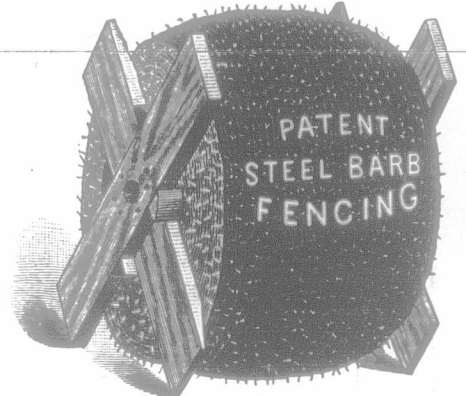
WE MANUFACTURE
BARB WIRE

— AND —

PLAIN TWISTED WIRE

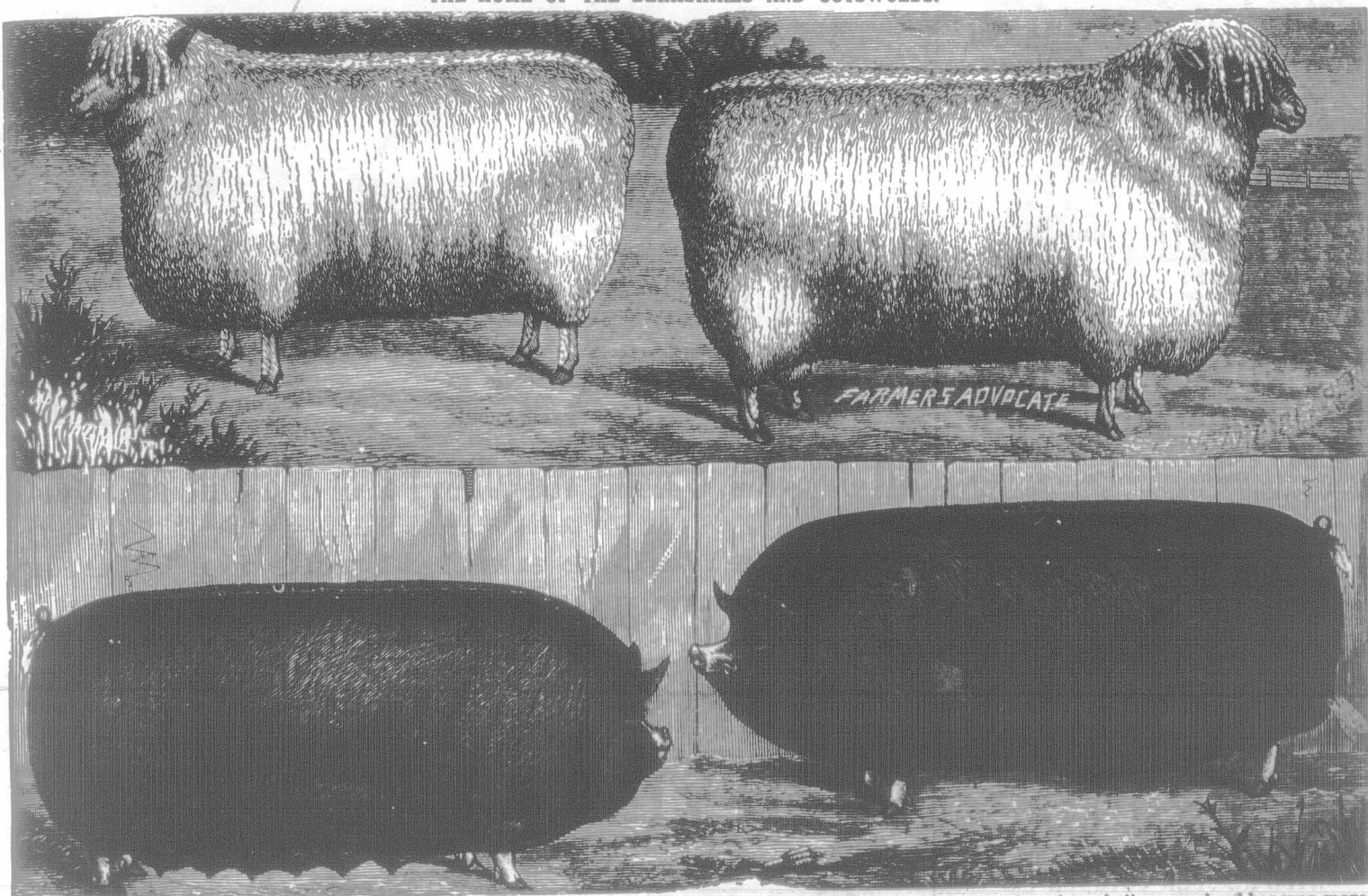
Without Barbs, and we are in a position to Fill all Orders Promptly.

Ours is the only wire manufactured in the Dominion of Canada on which is found the GENUINE LOCK BARB. A personal inspection will convince you of this fact. Quality of wire the best ENGLISH BESSEMER STEEL. Every pound guaranteed. Have sold during the season over 70 carloads (1,400,000 pounds), and have not heard an objection or complaint as to its strength or quality.



MANITOBA WIRE COMPANY
Winnipeg, Man. 297-a-M

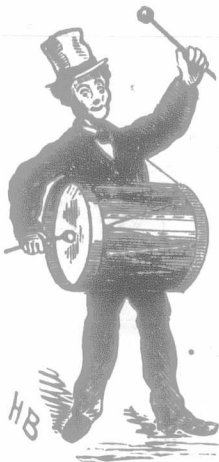
WILLOW LODGE STOCK FARM.
THE HOME OF THE BERKSHIRES AND COTSWOLDS.



"BERKSHIRES"—Our herd contains representatives of the best families of Berkshires produced, and we believe our herd has won more prizes at the leading fairs than any other in the country. Stock for sale at all times. "COTSWOLDS"—Our flock of Cotswolds we think is second to none in Canada, as our record at the leading fairs will show. We have made fresh importations from England almost every year of the very best we could find for sale. We have always used in our flock first-class imported rams. Have now for sale 60 ram lambs, large and good; also, yearling rams, yearling ewes and ewe lambs. Will exhibit Cotswolds at Detroit, Cotswolds and Berkshires at Toronto and London.

J. G. SNELL & BRO., EDMONTON, ONT. (Brampton and Edmonton Stations). 297-a-OM

THE FARMER'S FRIEND!
THE ONE PRICE HOUSE.



JOHN T. SOMERVILLE

(Of the late firm of Somerville, McKelore & Co.),
BRANDON, - - MANITOBA,
—IMPORTER OF—

English & American Ties, Gents' Furnishings, Ready-made Clothing, Furs, Hats, Caps, &c.
Directly opposite our Old Stand. Goods sold for SPOT CASH and CLOSE PRICES.
Orders by Mail promptly attended to. 294-a-M

STEVENS & BURNS,

MANUFACTURERS OF
Portable & Traction Engines and J. I. C. Separators,

—ALSO AGENTS FOR—
THE ERTEL VICTOR HAY PRESS.

Repairs for our goods always in stock. For further particulars apply to local agents or Stevens & Burns,

BOX 657, WINNIPEG.

Geo. H. Brown,

Manufacturer and Wholesale Dealer in
Lumber, Lath, Shingles, Sash,
Doors and Moulding, Wood, Coal
and Lime.

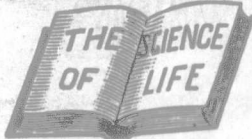
WESLEY STREET,

Opposite St. Mary Street, near N. P. & M. Freight
Offices,

WINNIPEG, - MAN.
TELEPHONE 649. P. O. BOX 69.

**THE GLORY OF MAN
STRENGTH, VITALITY!**

How Lost! How Regained,



KNOW THYSELF.

THE SCIENCE OF LIFE
A Scientific and Standard Popular Medical Treatise
on the Errors of Youth, Premature Decline, Nervous
and Physical Debility, Impurities of the Blood.

**EXHAUSTED VITALITY
AND THE UNTOLD MISERIES**

Resulting from Folly, Vice, Ignorance, Excesses or
Overtaxation, Enervating and unfitting the victim
for Work, Business, the Married or Social Relation.
Avoid unskillful pretenders. Possess this great
work. It contains 900 pages, royal 8vo. Beautiful
binding, embossed, full gilt. Price only \$1.00 by
mail, postpaid, concealed in plain wrapper. Illus-
trative Prospectus Free, if you apply now. The
distinguished author, Wm. H. Parker, M. D., re-
ceived the GOLD AND JEWELLED MEDAL
from the National Medical Association for
this PRIZE ESSAY on NERVOUS and
PHYSICAL DEBILITY. Dr. Parker and a corps
of Assistant Physicians may be consulted, confi-
dentially, by mail or in person, at the office of
THE PRABODY MEDICAL INSTITUTE,
No. 4 Bulfinch St., Boston, Mass., to whom all
orders for books or letters for advice should be
directed as above.

**ONTARIO
Agricultural College**

WILL RE-OPEN OCTOBER 1st.

Full Courses of Lectures on
AGRICULTURE, LIVE STOCK, DAIRYING,
VETERINARY SCIENCE, CHEMISTRY,
and other branches needed by young men on the
farm. For circular giving information as to cost,
terms of admission, etc., apply to

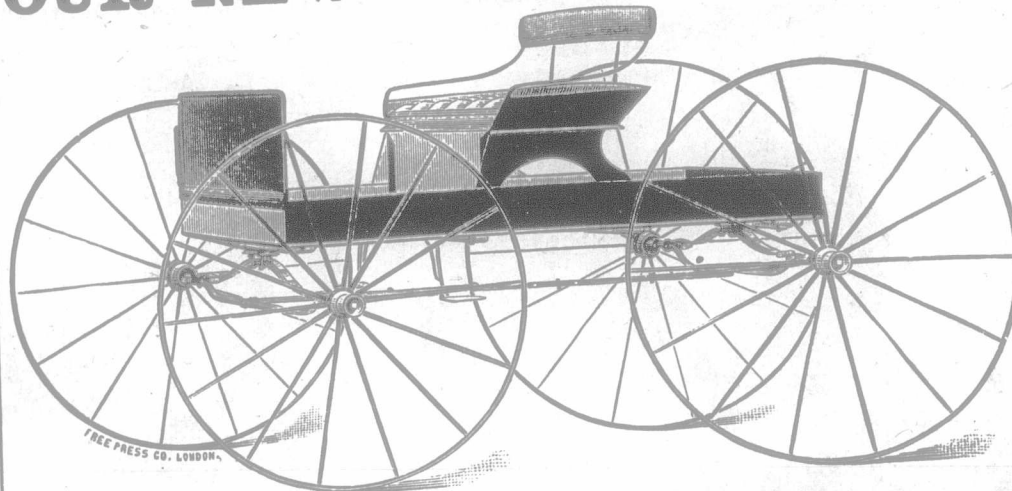
JAMES MILLS, M.A., President.
Guelph, July, 1890. 296-b-OM

THE FOOS MANUFACTURING Co.
SEND FOR ILLUSTRATED CATALOGUE.
REVERSIBLE SELF SHARPENING
GRINDING PLATES.
SAFETY BOTTOM PIN BREAKER
TO PREVENT ACCIDENTS.
NUMEROUS SIZES
ADAPTED FOR
STEAM
HORSE POWER
THE BEST MILL
ON EARTH.
SENTON TRIAL, FULLY GUARANTEED.
SPRINGFIELD, OHIO.

**NAIRN'S
OATMEAL**

WINNIPEG.
Ask your storekeeper for it. If he does not keep
it write
STEPHEN NAIRN,
297-a-M Oatmeal Mills, WINNIPEG, MAN. 297-a-M

OUR NEW HANDY WAGON.



All Buggies, Spring Wagons, Farm Wagons and Carts

BEARING OUR NAME PLATE

Are Reliable and Made to Wear.

WRITE US FOR PRICES AND TERMS.

R. COCHRANE & CO.
WINNIPEG, MAN. 297-d-M

Dairymen, Attention!



Thomson's Milk Aerator!

PATENTED 1888.

EVERY CHEESEMAKER

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

ALEX. THOMSON, General Agent, Gaintown, Ont.

Right for sale for Manitoba and the Northwest. Agents
wanted in every county in the Dominion. 294-d-OM

MICA ROOFING

**USE
Mica Roofing**

On all your Build-
ings.
It is Cheaper than
Shingles.
Water Proof and
Fire Proof.



**USE
MICA PAINT**

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

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of 108 square feet each, 36 feet long by 3 feet wide, and costs 24c. per square foot, thus
affording a light, durable and inexpensive roofing suitable for buildings of every description, and can be
laid by ordinary workmen. One man will lay ten square in a day, which brings the cost of Mica Roofing
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.

Office—108 James Street North, HAMILTON, ONT



GEORGE WHITE & SONS,
FOREST CITY MACHINE WORKS, LONDON, ONT.

SOLE MANUFACTURERS OF THE
Genuine White Threshing Engine,

For wood or straw. Our Straw-burning Engine has given thorough satisfaction. It is the only straw-burner with back water space in boiler. Light and Heavy Traction Engines, Special 16, 20 and 25 H. P. Semi-Portable Engines, strong and compact for saw mill purposes, same style as our Threshing Engines.

We can supply at any time Engines and Boilers, from 5 to 30 H. P., suitable for brick and tile yards, cheese factories, cider mills, saw mills, planing mills, etc.

SEE OUR NEW IRON SEPARATOR

LICENSED BY INSURANCE COMPANIES.

287-tf

To the Farmers of Manitoba and North-West Territories.

I wish to call your attention to the fact that I carry the

HEAVIEST STOCK

Books, Stationery, Fancy Goods, Toys, &c.,

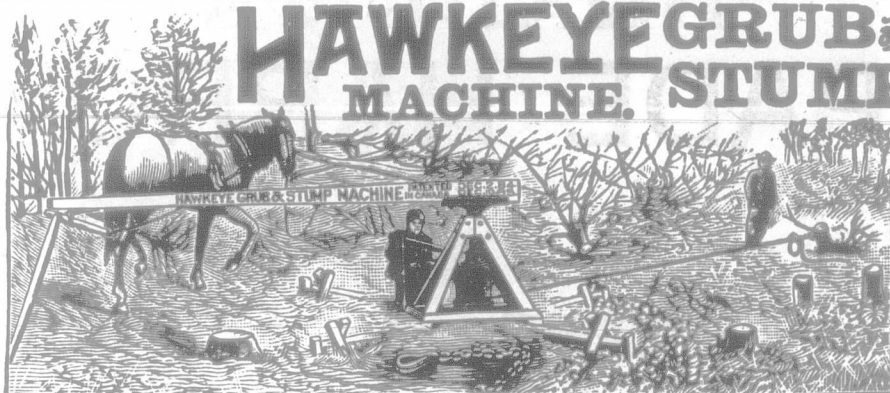
This side of St. Paul. You can save 25 per cent. by buying your supplies from me direct. Write for quotations. Special Discount given to Schools for School Supplies.

ALEX. TAYLOR,

472 MAIN ST.,

297-d-M

WINNIPEG MAN.

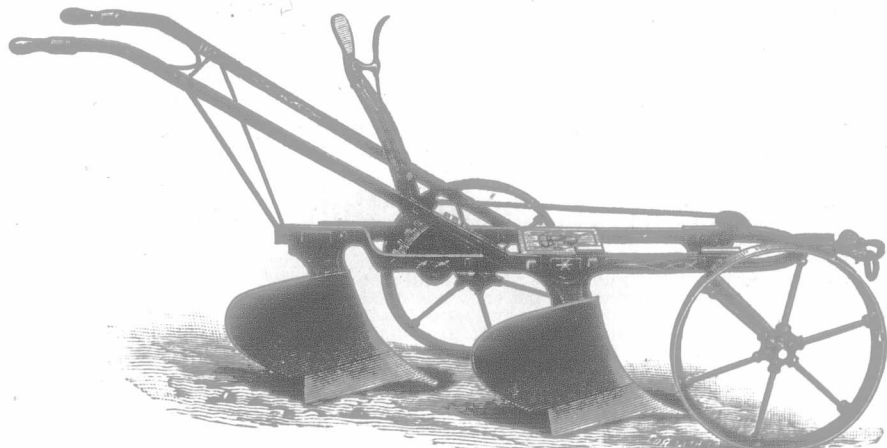


HAWKEYE GRUB MACHINE. STUMP

297-a-O-M

The accompanying cut is from a photograph showing this machine at work. This most complete and powerful machine is rapidly coming into use wherever there is land to clear and its merits are known. It works on either standing timber or stumps. Will pull an ordinary grub in one and one-half minutes. Makes a clean sweep of 2 acres at a sitting. A man, a boy and a horse can operate it. No heavy chains or rods to handle, steel wire rope being used instead. The crop on a few acres the first year will pay for the machine and have the machine and land clear, left. Farmers having timber land to clear cannot afford to be without one, much less to continue to pay taxes on rich land which yields them nothing, while they exhaust their cleared land by constant crops. In timber over six inches in diameter this machine will grub faster than six men can trim, and pile the brush. It will pay those interested in clearing land to investigate the merits of this machine. For handsomely illustrated catalogue, giving price, terms, testimonials and general information, address a postal card to the manufacturers. JAMES WILNE & SON, Scotch Grove, Ia.

OUR PLOWS TAKE the LEAD



Wherever introduced. We manufacture a complete assortment, comprising Two and Three Furrow Gangs, Riding Plows and Single Walking Plows of all kinds. Our No. 4 Sod Plow and No. 21 General Purpose Plow are unequalled; the Mouldboards are made of the best steel, highly tempered. Hand and Horse-power Feed Cutters, having all the latest improvements, with or without carriers, Horse Powers, Fanning Mills, Root Pulpers and Slicers, Agricultural Furnaces, &c., &c.

297-a-O-M

THE GOWDY MANUFACTURING CO., Guelph, Ont.

Real Estate!

CROTTY & CROSS

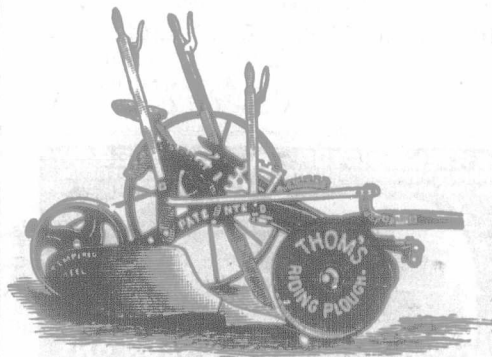
have FARM LANDS in all parts of the Province and WINNIPEG PROPERTY of all kinds for sale.

No. 194 Market Street East,

WINNIPEG, - - MANITOBA.

297-a-M

The Watford Riding Plow.



PATENTED.

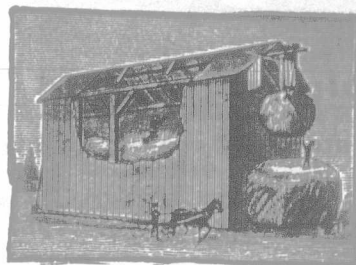
The greatest improvement in Sulky Plows ever seen. We manufacture the Standard Walking Plows of the Dominion, Nos. 4, 5, 7, 8 and 30; also the strongest and best working Twin Gang on the market. Farmers, ask for the Famous Watford Plows. None genuine unless stamped "Watford" on the handle, and "Famous" on the land side.

THOM'S IMPLEMENT WORKS, Watford, Ont.

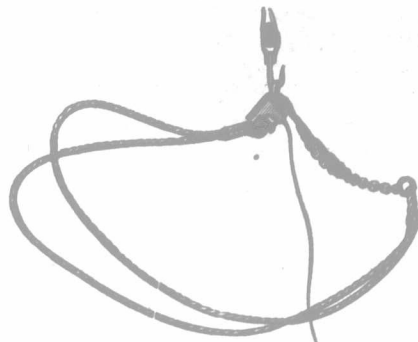
Established 1875. Send for circulars. Agents wanted in unoccupied territory. 292-1

BUCHANAN'S
(Malleable Improved)
PITCHING MACHINE

For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



The Common-Sense Sheaf-Lifter

Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

RESPONSIBLE AGENTS WANTED

Circulars, Prices and Terms on application to
M. T. BUCHANAN. - - Ingersoll.

297-

THRESHING MACHINES & HORSE-POWERS

(ONE, TWO AND THREE-HORSE.)



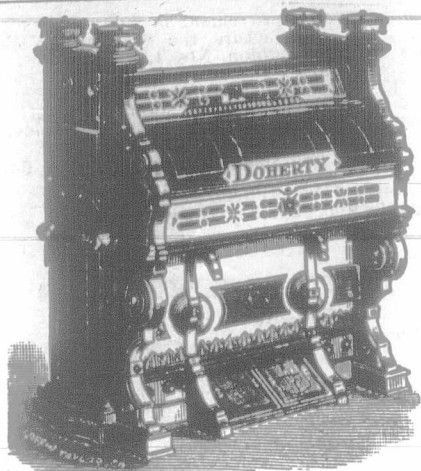
Guaranteed to be "the best" Tread Horse-power Threshing Machines made, and takes the lead wherever introduced. Agents wanted.

JOHN LARMONTH & CO., Manufacturers,
Point St. Charles, MONTREAL, QUE.
TIPPET, BURDITT & CO., Agents, St. John, N. B.;
E. G. PRIOR, Agent, Victoria, B. C. 293-f-OM



ERTEL'S VICTOR HAY PRESS
SHIPPED ANYWHERE TO OPERATE
IN TRUST AGAINST ALL OTHERS
PURCHASER TO KEEP ONE
DOING MOST AND BEST WORK
FOR THE LEAST MONEY

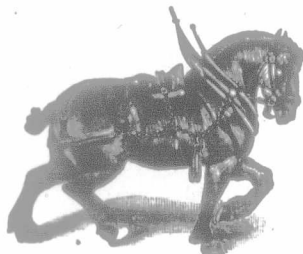
GEO. ERTEL & CO. LONDON, ONT.



The "DOHERTY ORGAN"

maintains its supremacy over all others.

BUY THE BEST. 261-y
CLINTON, CANADA.



FARMERS, ATTENTION!

Who is Your Saddler?

If it is E. F. HUTCHINGS, of the Great Northwest Saddlery House, 437 Main Street, Winnipeg, then you are at the headquarters of the Harness and

Saddlery trade of Manitoba, the first business started in the Province, and the house that stood the test for the past twenty-two years, and to-day stands head and shoulders above all competitors. If HUTCHINGS is not your Saddler, then try him. He will sell you team Harness from Twenty Dollars (\$20.00) and upwards; single Harness at Nine Dollars (\$9.00) and upwards.

We manufacture all our goods, and guarantee them as represented. Our new Viscal Waterproof Finish will be put on all Harness, if desired, without charge.

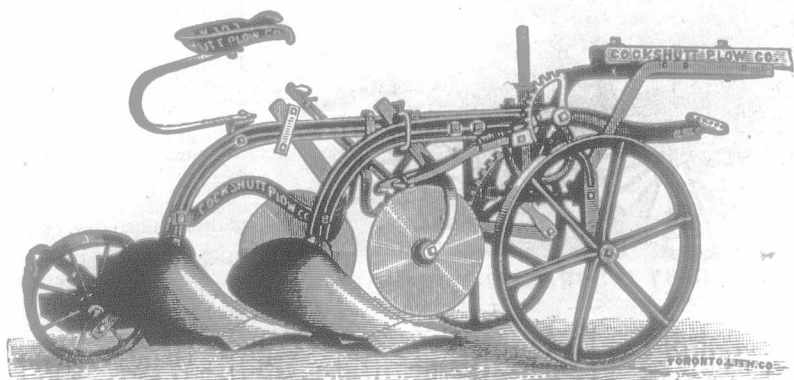
We keep everything for the horse—Blankets, Bells, Whips, Trunks and Valises, &c., &c., at the lowest prices possible. Don't be deceived by importers of ready-made rubbish, but patronize home industry and the old reliable house where you know you will get the worth of your money.

Our Saddles have a world-wide reputation, and we are sure to please you. Mail orders promptly attended to. Don't forget the house.

E. F. HUTCHINGS,
437 Main Street, WINNIPEG.
NEAR POST OFFICE. 285-f-M

COCKSHUTT'S "J.G.C." RIDING PLOW

Is the only Riding Plow built in Canada that, by its continued use by purchasers, has proved its superiority over all competitors.



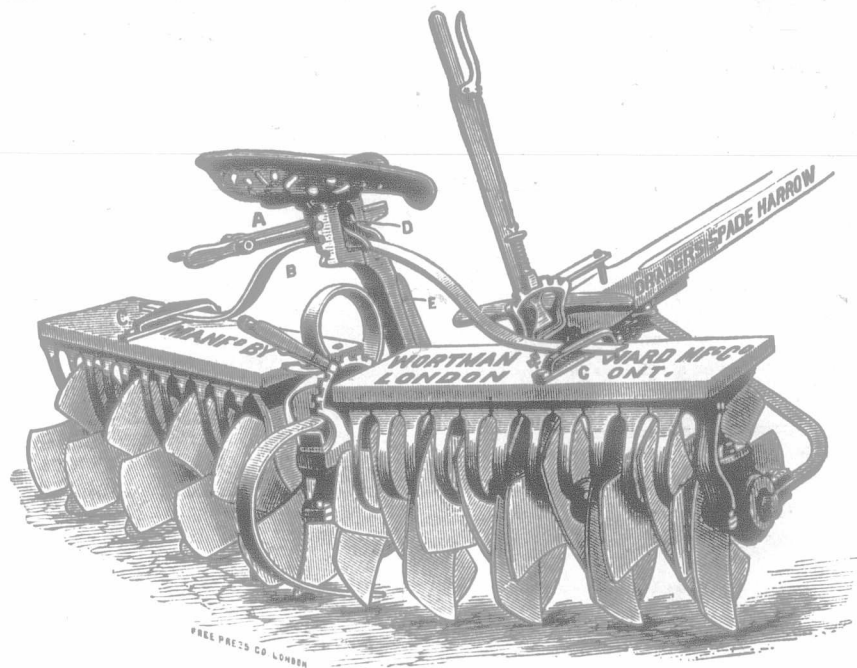
Either Single or Double and perfectly interchangeable for all our styles of bottoms as described in our catalogue. Will exhibit at Toronto, London, Kingston and Ottawa fairs only. Send for catalogue.

COCKSHUTT PLOW CO. (LTD.),

Manufacturers of the highest grade of Riding and Walking Plows,

BRANTFORD, CANADA. 297-a-OM

DRADER'S SPADE HARROW



The Greatest Pulverizer and Cultivator Ever Made.

The Spades are set two inches apart and have 168 sharp cutting edges, which literally chop the ground into a fine soil. The bearings are all hung on pivots, and will swing perfectly free no matter what position the Harrow is in. The boxes keep out the dirt, and each has a covered oil cup. By means of the Evener Spring and Lever under the seat the driver has perfect control of his own weight over the Harrow, and can make the machine work level over any kind of ground. The Disk Harrow ridges the ground; the Spades leave it smooth and level. The Cutaway Harrow Disks break; the Spades never do. The Spade is the only Harrow that will pulverize ploughed sod without turning grass up. The Spade Harrow will not clog in sticky ground: all other rotary harrows will.

Send for Descriptive Circular and Price. Good and responsible Agents wanted everywhere.

—MADE ONLY BY—
THE WORTMAN & WARD MFG. CO.
LONDON, ONTARIO. 297-a-OM

George Clements,
MERCHANT TAILOR
444 Main Street,
WINNIPEG, - MANITOBA.
297-a-M

J. B. CAMERON & CO.,
Merchant Tailors
6 McDermott St., one door from corner of Main,
WINNIPEG, MAN.
All orders executed in first-class style.
Satisfaction guaranteed. Fine work a
specialty. 297-d-M

BOYS FOR FARM HELP!
The managers of DR. BARNARDO'S HOMES desire to obtain good situations with farmers throughout the country for the boys they are sending out from time to time from their London Homes. There are at present nearly 3,000 children in these Homes, receiving an industrial training and education to fit them for positions of usefulness in life; and those who are sent to Canada will be selected with the utmost care, with a view to their moral and physical suitability for Canadian farm life. Farmers requiring such help are invited to apply to
MR. ALFRED B. OWEN,
AGENT, DR. BARNARDO'S HOMES,
279-y 204 Farley Avenue, TORONTO.

KILLEY-BECKETT ENGINE CO., Hamilton, Ont.

SOLE AGENTS IN CANADA FOR THE

SMALLEY GOODS—Including ENSILAGE AND FODDER CUTTERS, SWEEP AND TREAD HORSE POWERS, DRAG AND CIRCULAR SAW MACHINES AND FARM ENGINES are positively ahead of all others in the country, AND SO WARRANTED. Shipped to any responsible farmer in Canada, subject to 30 DAYS' TRIAL, and to return AT OUR EXPENSE if not proving just as warranted. We are prepared to build Carriers any length, guaranteed to run at any desired angle to suit silos, and claim Smalley Carriers positively superior to all others. Our 1889 "Why it Pays Pamphlet" should be read by every intelligent farmer interested in dairying or stock raising. It contains the very latest information relative to economical stock feeding. Will be mailed free to responsible farmers only, upon application, providing MENTION IS MADE OF PAPER in which this advertisement was noticed.

SMALLEY MFG. CO.
MANITOWOC, WIS.

Ask for Special Introduction prices and terms.

THE SMALLEY CUTTER, WITH IMPROVED BUCKET CARRIER.

SMALLEY TREAD POWER WITH GOVERNOR.

297-c-1-M

HALLADAY STANDARD WINDMILLS

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

Pumping Water For Stock, Farm Buildings, Mansions, Villa Residences, Public Institutions, Gardens, Green Houses, Town & Village Water-works.

Hotels, Colleges Pumping for Railway Stations, Fire Protection, Irrigation, Tanneries, Breweries, Sewage, Mines, Draining Low Lands.

These celebrated Windmills are made from one man to forty horse-power. They are perfectly controllable in gales, and uniform in speed. Catalogue and Price Lists with references mailed free on application to
ONTARIO PUMP CO'Y,
TORONTO, - - ONTARIO. 279-y

BUGGIES

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

Our output for 1888 was over 1000.

Agricultural agents will find it to their advantage to send for Catalogue and Price List.

All work is guaranteed.

B. J. NASH & CO.,
We sell only to the trade. 294-e 111 YORK ST., LONDON, ONT.

W. A. DUNBAR
VETERINARY SURGEON,
15½ Jemima St., - - Winnipeg.
Communications by letter, or telegraph, promptly attended to.
TELEPHONE 56. 280-y-M

BAIN WAGON CO.'S
FARM TRUCK

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

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

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

298-1f
Address **BAIN WAGON CO., Woodstock, Ont.**

IMPORTANT TO FARMERS
Farmers' Produce Sale and Supply Agency, 45 Market Square, Winnipeg. We handle Farm Produce of all kinds on Commission, either in car lots or otherwise, and can get highest prices going. Terms for selling - five per cent. car lot, 7½ small lot. We also make a specialty of supplying big farmers, ranches, lumbermen, contractors, boarding houses, hotels and all large consumers with Groceries and Provisions of all kinds at closest wholesale Prices. Write us for quotations. Address
201-y-M **E. CALBREATH & CO.**

ESTABLISHED 1879.
WM. BELL
MAIN STREET 288 WINNIPEG.
(CORNER GRAHAM.)

DRY GOODS!

Ladies' and Gents' Furnishings
Always on hand. A full and varied stock of

STAPLE AND FANCY GOODS.
Orders by letter and in person from our country friends given special attention.
We have everything in stock to suit the farming community.
Our stock will be found most complete, and in prices cannot be undersold.
WM. BELL,
288 MAIN STREET,
290-v-M

THE CHATHAM FANNING MILL and BAGGER ARE THE BEST IN THE MARKET!

Well cleaned grain will always bring from three to five cents per bushel over that as generally sold on the market. Farmers should keep and feed their tailings. Millers don't want them, and won't pay for them. Those desiring the best Fanning Mill manufactured, should order the Chatham Mill, which has all the latest improvements. My sales last season were 3,600 Mills and 1,500 Baggers. This speaks for its popularity. The Bagging Attachment has been greatly improved and put in front of the mill, thus saving considerable room. It works very easily, will bag any kind of seed, from beans and timothy. One man less is required by using my bagging attachment. I have twenty-five teams and wagons at present delivering Mills in Ontario and Quebec, and they will be over most every county in Ontario. Any farmer who intends to buy a mill will find it to his interest to write to Chatham to Mr. Campbell and he will have an agent call and show the Mill at work in the barn. If it works satisfactorily, buy it; if not, no harm will be done. These teams will reach all parts of the country. Don't neglect to write because you are out of the regular travelled roads, as we go all over the country, and will be pleased to call and show you the work we can do.

20,600 CHATHAM MILLS ARE NOW IN USE

"SAY BOYS SHE TURNS EASY!"

NO GRAIN TO SHREDDER TO BAG

MANSON CAMPBELL'S FAMOUS CHATHAM FANNING MILLS AND BAGGING ATTACHMENT

ESTABLISHED 1868

3600 WERE SOLD IN 1889

BEST IN CANADA

25 TEAMS & WAGONS ARE DELIVERING THE CHATHAM MILL IN ONTARIO & QUEBEC

"HOLD ON I WANT A CHATHAM FANNING MILL AND BAGGER"

CHATHAM, ONT.

J.L. JONES TORONTO

I AM MAKING AND SELLING TWENTY MILLS PER DAY
 My Output for this Season will Exceed 4,000 Mills and 2,000 Baggers.

If my Mills are not kept by any agent in your locality, send for descriptive circular and prices, and have a mill shipped direct. Address—

MANSON CAMPBELL, - - CHATHAM, ONT.

MY MILL AND BAGGER WILL BE SHOWN AT THE FOLLOWING FAIRS:

- | | | | |
|---------------------------|---------------------------------|-------------------------|-----------------------------|
| INDUSTRIAL, Toronto, Ont. | WESTERN, London, Ont. | CENTRAL, Hamilton, Ont. | NORTHERN, Collingwood, Ont. |
| OTTAWA, Ottawa, Ont. | GREAT EASTERN, Sherbrooke, Que. | KINGSTON, Ont. | CHATHAM, Ont. |

COME AND SEE IT.

W. & F. P. CURRIE & CO.

100 Grey Nun St., Montreal,
MANUFACTURERS OF
SOFA, CHAIR AND BED SPRINGS.
A LARGE STOCK ALWAYS ON HAND.

IMPORTERS OF
Drain Pipes, Vent Linings, Flue Covers, Fire
Bricks, Fire Clay, Portland Cement, Roman
Cement, Water Lime, Plaster
of Paris, Borax, Whiting,
China, Clay, etc. 277-y

R. J. WOODS.



Horse-Shoeing on the most Approved Principle.
Roadsters a specialty. Satisfaction
guaranteed.
232 Jemima Street, - 297-a-M - WINNIPEG.

Ontario Veterinary College

TEMPERANCE STREET, TORONTO.

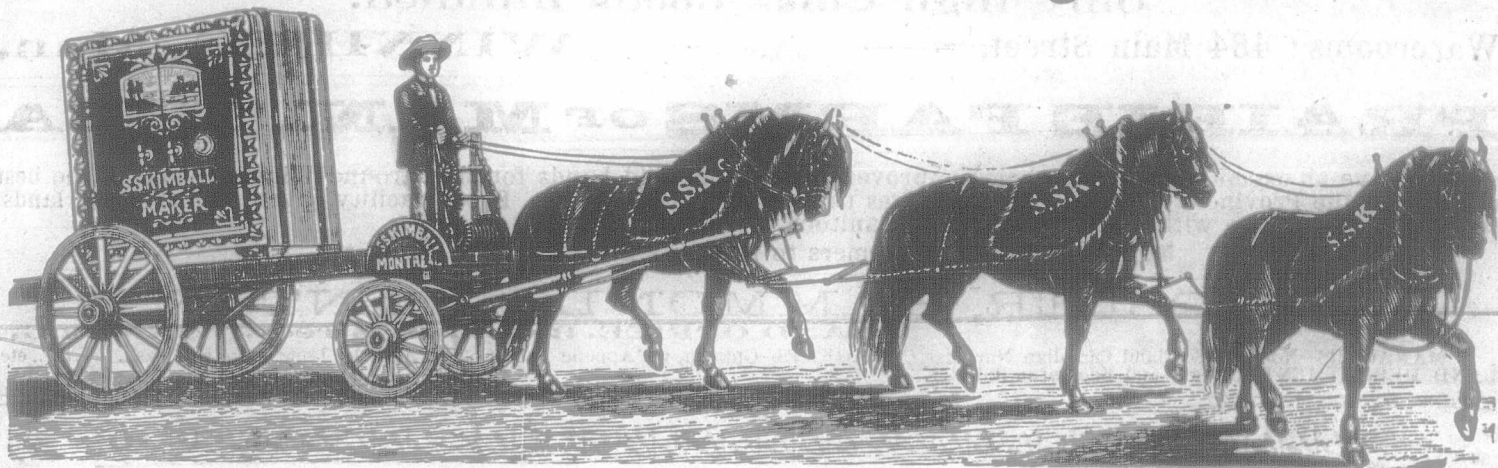
The most successful Veterinary Institution in
America. All experienced Teachers. Session 1887-8
begins Oct. 21st. Apply to the principal, PROF.
SMITH, V. S., Edin. TORONTO, CANADA. 273-y

Selected Farms!

(WESTERN ONTARIO),
FROM \$1,500 TO \$25,000.

—ADDRESS—
EDWARD HARRIS
280-y 23 TORONTO ST., TORONTO, ONT.

Kimball's CHAMPION Fire and Burglar-Proof Safes



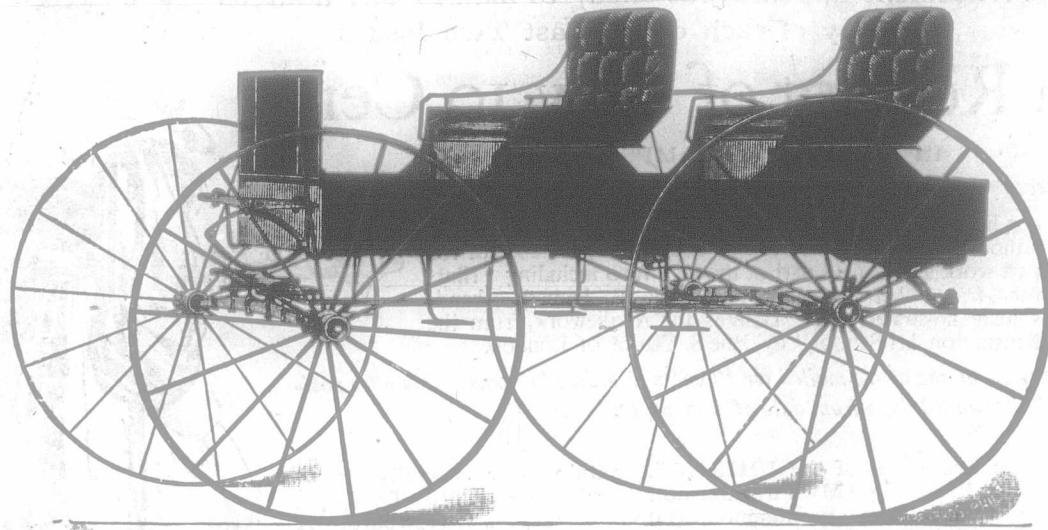
Thirteen Sizes, from the largest Bankers to a very small House Safe. My Farmers Safe, 16 in. high, 14 in. wide
and 14 in. deep, inside measure, with best Combination Lock of 1,000,000 Changes, is the Cheapest and Best Safe made.
Send for Catalogue.

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

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

Boyce's Carriage Works

12 JAMES-ST. WEST, WINNIPEG,



MANUFACTURERS OF

BUGGIES, PHAETONS, DELIVERY AND COMMERCIAL WAGONS, ICE WAGONS, HOTEL BUSES

WE MANUFACTURE ALL OUR OWN GOODS.

A large assortment of Democrats and Buggies always on hand for inspection.

Farmers when wanting anything in this line would do well to write us for quotations.

Correspondence promptly attended to.

ADDRESS,
Boyce's Carriage Works

WINNIPEG, MANITOBA.

297-a-M

W. A. McINTOSH

(Successor to Brydon & McIntosh),

AGENT FOR

PIANOS

MASON & RISCH, TORONTO.

DECKER BROS., NEW YORK.

IVERS & POND, BOSTON.

THE VOCALION ORGAN FOR CHURCHES, ETC.

THE DOHERTY AND OTHER MAKES
OF PARLOR, CHURCH AND CABINET

ORGANS

Only High Class Goods Handled.

Warerooms: 484 Main Street,

297-a-M

WINNIPEG, Man.

PRAIRIE FARMS OF MANITOBA

We have an exceptional list of choice improved Farms and Wild Lands for Sale around Winnipeg and in the best districts of the Province. Local Representatives throughout the country. Every facility given for viewing lands. Descriptive Catalogue with prices and map of Manitoba free.

MONEY TO LEND to Farmers to Purchase Stock, Pay for Land, etc.

OSLER, HAMMOND & NANTON,

LAND OFFICE, 331 Main Street, WINNIPEG.

MANAGERS—North of Scotland Canadian Mortgage Co. AGENTS—Ontario, Qu'Appelle Land Co., Qu'Appelle, Long Lake and Sask. Co., etc., etc. 297-y-0M
LAND DEPARTMENT—Calgary and Edmonton Railway.

THE LADIES' HOME JOURNAL

Has a circulation of nearly half a million copies each issue. We want to place it in the hands of a million families, and,

As an inducement to you to send for copies, we offer for 30 days from the date of this paper (this advertisement appears but once) to mail to any address A Copy of each of the Last Two Issues

On Receipt of only 10 Cents

IN SILVER OR STAMPS.

(Regular Price on the News-stands, 10c. per Copy.)

Also our handsomely illustrated Premium Catalogue, showing over a thousand articles which can be obtained free of cost, or for part work and a small part of money. Also including "Hints for Artistic Needlework," by Mrs. A. R. Ramsey—handsomely illustrated; and "Designs for Needlework, from the Kensington Art School," by Jane S. Clarke, of London.

ALL of the above mailed for 10 cents if ordered at once. This offer positively withdrawn 30 days from date of this paper.

THE last two issues of the JOURNAL contain some specially strong features, including "My First Sermon," by Dr. T. De Witt Talmage; an interesting article on "Promiscuous Bathing;" Gaities of Newport; "A Country Courtship,"—a full-page, handsomely-illustrated poem.

Illustrated stories and articles in these issues by

Mrs. A. D. T. Whitney,	Harriet Prescott Spofford,
Rose Terry Cooke,	Jenny June,
Mrs. Henry Ward Beecher,	Frances E. Willard,
Mrs. Mary J. Holmes,	Kate Upson Clark,
Louise Chandler Moulton,	Maud Howe,
Mrs. Lyman Abbott,	Julian Hawthorne,
Mrs. Frank Leslie.	

CURTIS PUBLISHING COMPANY, PHILADELPHIA, PA.



Twenty-eight pages in handsome cover, filled with original matter for the JOURNAL, and profusely illustrated with the finest cuts, drawn expressly for the JOURNAL by the most eminent artists. Handsomest periodical ever issued for ladies and the family.