

ember.

shire boar
hire row
ner.....240

at Toronto
Brooklin
.....287

eat North-
llingwood
.....202

acClaskie,
ham Bros.
.....71

and York-
of Mr. Jos.
ngfield-on-
.....270

ch Coach
ry of The
.....280

of Jerseys.
Johnston,
urg, P. Q. 284

.....253

.....221

Wheat.170
Ruby Hill
of Messrs.
Oak, Ont.
and three
property of
M. P. P.,
.....36

port cart. 271
.....329

.....157

.....23

.....171

.....237

.....241

.....105

.....204

.....282

.....33

FARMER'S ADVOCATE

AND HOME MAGAZINE.

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THE FARMER'S ADVOCATE & HOME MAGAZINE

WM. WELD, PROPRIETOR.

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

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

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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.

Our prize of \$5 has been awarded to John Parker, Stamford, Ont., for the best essay on *What Steps Should be Taken to Improve the Quality of Milk delivered at Cheese Factories.*

A prize of \$5 will be given for the best essay on *The Cost of Rearing a Sheep to the Age of Twelve Months, Eighteen Months, and Two Years Old Respectively, and the Profit Realized at the Various Ages.* Essay to be in this office by the 10th of January.

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.

We want all of our old subscribers to send in some new subscribers and get some of our premiums.

Editorial Notes.

Souris wants a cheese factory, and has offered to guarantee milk from two hundred cows to begin with. There is certainly a good opening in Manitoba for cheese makers.

The losses sustained by the Cochrane Ranching Company, in Alberta, at the outset was considered by many to be proof that ranching there would prove a failure, but later returns prove the contrary, as their losses have been made up and ten per cent. paid on the investment, besides a sinking fund of \$100,000 set aside.

Both those who buy and those who grow fruit will be benefitted by reading Mr. T. T. Lyons' valuable paper. Not only is the room described suitable for fruit, but vegetables, fresh meat, and a great variety of eatables can be kept sweet and fresh in it. In his next paper, to be published in February, he will describe another building with a more extended system of ventilation.

At a late meeting of the executive board of American Shorthorn breeders, President Cobb, S. G. Praher, Springfield, Ill., and Richard Gibson, Delaware, Ont., were appointed a committee of three to represent this association in forming an organization composed of committees of this and other live stock associations, for the purpose of holding a national live stock show at some central metropolis.

At the final meeting of 1889 of the Ontario Agricultural and Arts Association, the Board recommended Chicago as the most suitable place to hold the World's Fair of 1892. The report concerning annual ploughing matches was presented. Some discussion took place on it, and several of the members asserted that in many districts the farmers had shown very little interest in the matches. In the end it was resolved that \$300 should be appropriated towards inspecting the prize farms throughout the Province.

It is said that the decrease in the number of sheep in the Eastern States is due to the fact that they cannot be grazed on high-priced lands and compete with free grass and cheap land in the West. There were 3,820,000 sheep in New England in 1840. In 1880 there were only 1,450,000. In 1840 there were 7,403,000 sheep in the Middle States. In 1880 there were only 3,801,000. Illinois had 500,000 sheep less in 1880 than in 1870, and Ohio had 26,000 less. Virginia decreased nearly 1,000,000 in the ten years ending with 1887. Indiana lost 500,000 sheep and Michigan over 800,000. How is it that England with her higher-priced land still keeps large flocks of sheep and yearly is increasing her flocks and reducing her tillage lands?

The late annual and winter meeting of the Ontario Fruit Growers' Association, held at Windsor, Ont., on December 10th, 11th and 12th, was one of the most successful, interesting and best-attended meetings ever held by that body. Nearly all the leading Canadian, and many eminent American horticulturists were present. Some of the papers read are published in this issue. Lack of space forbids us giving a report this month.

At the American Shorthorn Breeders' Association, held in Chicago, Nov. 20th, a resolution was passed urging Congress to take speedy and effective action in the interest of the cattle trade between that country and South America, so that stock might not be required to go by way of Liverpool to get a reasonable rate of transportation. The members of the Association who contributed to a Fat Stock Show prize fund a few years ago to the extent of \$2,700 are, by resolution of this meeting, to be reimbursed from the Association's treasury, without interest. A prize for Fat Stock Show for a calf, yearling and two-year-old bred and fed by the exhibitor was also authorized by resolution. A vote favored a continuation of the dairy prizes at the State Fairs. In this connection the sentiment prevailed that feeding and testing should be done on the fair grounds. The members of this Association were very enthusiastic because their cash balance was \$2,000 greater than ever before.

The English Agricultural Gazette says:—The value of the exports of live stock (from Britain) still keeps in advance of that of last year, the total for the ten months ended October 31st being £1,010,452, against £906,160 in the corresponding period last year. Of horses the value was £850,690, against £727,014 last year. There were altogether 12,095 horses exported, against 11,094 last year. Of stallions the numbers were 2,717, against 3,169, the value being £360,316 against £318,092, so that with a smaller number the value increased. Of these 573 went to the United States, against 584 last year, the value being £46,212, compared with £41,901. There were 1,271 sent to British North America, against 1,782 last year, the value being £102,067, against £155,144. "Other countries" took 784 against 648, the value having risen from £98,528 to £199,417. There were 4,981 mares exported against 4,824, the value being £305,607 against £278,538. Of these 397 went to the United States, compared with 685 last year, while 1,189 went to British North America against 838 last year. Of geldings the number sent out was 4,397 against 3,101, the value being £184,767 against £130,334 last year.

The Vacancy in the Board of the Agriculture and Arts Association.

In our last issue we called attention to the name of Richard Gibson, Delaware, Ont., as one of the candidates for the seat on the Agricultural and Arts Board, No. 11 Division. With many other of our stock men and leading farmers, he has a full belief in the future usefulness of this old institution. Not only is he in the very front ranks of our leading agriculturists himself, but he is thoroughly conversant with their requirements. Our cousins across the lines, knowing his ability, have continually placed him on their executive committees. As will be seen in another column, he has just been selected, with two other prominent men, to form an association for a great national show in the United States.

For several years he has been the only representative from this continent of the Shorthorn Breeders' Society of Great Britain and Ireland. He is especially fitted for the vacant position, because of his intimate knowledge of the modes of conducting the large English and American shows. Having had many years experience in both countries.

Our Subscription Picture for 1890

In our last issue we announced that we would this year give a beautiful new picture as a subscription prize. In it will be illustrated nine famous draught stallions, each of which have won notable prizes at important shows. Their names are as follows:—Sir Maurice (4721), now five years old, imported and owned by R. Beith & Co., Bowmanville, sire Lord Erskine (1744), dam Topsy (509), etc. This is a horse of excellent breeding. He gained second prize at Inverurie when a foal; second at Dalbeattie, and fourth at the H. & A. S. when a yearling; second at Glasgow when a two-year-old; was in the show lot of five at the Glasgow Stallion Show when a three-year-old; and in 1889 was fourth at the same show. Since being imported Sir Maurice won the following prizes:—At the Provincial Exhibition, held in London, first prize for the best Clydesdale stallion of any age; and the Prince of Wales' prize for the best heavy draft horse of any age or breed. At the Industrial Exhibition, held in Toronto, he won the first prize in his class, and the silver medal for the best Clydesdale stallion of any age. At the South Ontario Agricultural Society's show he was awarded first prize for the best aged stallion; and also won first prize at the West Durham Agricultural Society's show.

Sir Walter, vol. xii., now three years old. Imported and owned by the above. Sire, Bold Maghie (4259), dam Jean of Boreland, etc., etc. This well-balanced, short-legged, strong-boned colt has first rate feet and legs, deep ribs, good quarters and thighs, and a very good back. He gained fourth prize at Dalbeattie when a yearling, and fourth at Dumfries Union Show as a two-year-old last year, and this spring he was in the short leet at the Glasgow Stallion Show, where he was awarded the Buchan District Premium. Sir Walter won first prize at the Provincial Exhibition, held in London, September, 1889; first prize at the Industrial Exhibition, held in Toronto, in September, 1889; and first prize at the Ontario and Durham Exhibition, held in Whitby.

Eastfield Chief (6715) is now two years old, also imported and owned by Messrs. Beith & Co.,

sired by Prince Lawrence, dam Belle of Lochroan (6624.) This year he won third at Glasgow summer show, first at Edinburgh, and since being imported he has won first at both London and Toronto, as well as other minor show.

Bold Boy (4257), The Granite, vol. xii., and Homeward Bound, vol. xii., are the property of Messrs Sorby Bros., Guelph, Ont., and were fully described in our December Number, page 377, where the Clydesdales belonging to those gentlemen were fully reviewed.

The English Shire horses are represented by Mr. James Guardhouse's noble horse, King of the Castle (3171), sire Honest Tom (3143), dam Smart, by Honest Tom (3143). This is a horse of capital Shire character, is of nice quality and has plenty of substance. He was the winner of the following prizes:—In 1885, 1st at Provincial Exhibition, held at London, for the best three-year-old stallion, and gold medal for best Shire stallion, any age; in 1886, 2nd at Brampton, Co. Peel, in a ring of thirteen; 2nd at Weston, Co. York, in a ring of six; in 1887, 1st at Clairville, Toronto Gore; 1st at Industrial Exhibition, Toronto, for best imported draught stallion, with five of his progeny, any age or sex; 1st at Woodbridge, Co. York, for the best heavy draught stallion, any age or breed; in 1888, 1st at Clairville, Toronto Gore; 2nd at Brampton, Co. Peel, in a ring of sixteen; 1st at the Industrial Exhibition, Toronto, for the best Shire stallion and five of his progeny, any age or sex; also, 1st for stallion, four years old and upwards, and silver medal for best Shire stallion, any age; in 1889, 1st at Clairville, Toronto Gore; 1st at Brampton, Co. Peel; 1st at Buffalo-International Exhibition, for best Shire stallion, with four of his get, one year old or over; 1st at Industrial Exhibition, Toronto, for the best Shire stallion, four years old or over, and silver medal for the best Shire horse, any age. At the county shows Clydes and Shires have competed together.

Leake Cramp (vol. xi., E. S. S. B.), color, brown, three white feet; foaled, 1886. Bred by Mr. Geo. Hassall, Shelford Manor, Notts. Imported by and the property of Messrs. Ormsby and Chapman, the Grange Farm, Springfield-on-the-Credit, Ont. Winner of 1st for the best three-year-old English Shire stallion, Industrial Fair, Toronto, 1889; 1st, for the best three-year-old imported heavy draught stallion, Great Central Fair, Hamilton, 1889. Sire, Gelding Lion (3667); he by King Tom (1270). Dam, Leak Nance, by Nottingham (2636). Leak Cramp traces his pedigree to the best horses ever bred in Derbyshire and Leicestershire.

Leake Walker (vol. xi., E. S. S. B.), color, bay, three white feet; foaled, 1887. Bred by Mr. James Roberts, High House, Heath, Chesterfield, England. Imported by and the property of Messrs. Ormsby and Chapman, the Grange Farm, Springfield-on-the-Credit, Ont., winner of 1st for the best two-year-old English Shire stallion, Industrial Exhibition, Toronto, 1889; 1st, for the best two-year-old imported heavy draught stallion, Great Central Fair, Hamilton, 1889. Sire, Walker (4148); he by William the Conqueror (2343). Dam, Fan, by Don Carlos (2416). Few colts can show a line of breeding tracing to more prize winners than Leake Walker.

We are sorry we cannot give our readers more of the pedigree of these horses, but space forbids. The engraving will be 17 x 30 inches, and will be a grand and expensive picture. We have had this work done to foster a love of good stock among our subscribers. We will give a copy of this picture to every old subscriber who sends us his own subscription, accompanied by the name of one new subscriber, before February 1st, 1890. New subscribers may also obtain it by sending us an additional yearly subscriber. We hope to send out twenty thousand copies of this illustration within the next three months.

The Duty on Corn.

Several years ago the ADVOCATE invited correspondence, that public opinion might be obtained as to the advisability of conferring with the government in order to procure for the farmers and feeders free corn. At that time, from the tone of the different letters received, there did not appear to be much use of pressing the matter further, as very little interest was taken in the subject. From the feeders' standpoint there can be but one conclusion: if we are to produce cheap beef, cheap dairy products, or any other line that goes to build up our stock interests, free corn is a necessity. For, with it will also come cheap offal from our mills. The day has gone by when grain-growing on the high-priced lands is to be the most important branch of our farm industry. New countries are being opened up with which we cannot compete, but in stock breeding, feeding and dairying, the case is far different. In these lines we are afraid of no competitors. With a clean bill of health on our stock, therefore, free access to all British markets, no monstrous slaughter-house combine, to dictate prices, a name second to none for Canadian cheese, we only ask a free course and no favor. Our lands also demand different management. A vast number of our farms are depleted of their natural fertility; therefore, light crops and poor samples are the prevailing features in grain growing.

The shrinking in values of beef cattle from the extravagant prices of 1883 and 1884, discouraged many of our best feeders, and although our export trade has steadily increased, we have not sent out enough of thick beef cattle. The latter end of the past shipping season has seen a very large number of our best stock steers imported to Britain, and, along with them, a large quantity of American corn, which, going in free of duty and in such bulk, is actually being sold at Liverpool within a fraction of what Canadian feeders can buy it.

Under the present tariff very little corn is brought into Ontario, and is selling too high to be used for feed purposes, viz.: 95c. per hundred; with the duty removed, it could be shipped here this season in large quantities at from 62c. to 65c. This would directly stimulate our stock and dairy interests. Not only would more cattle be fed and exported, but our best stock cattle would be fed here, thereby bringing double the sum per head, and our farmers would have the benefit of the feed consumed.

At the last session of Parliament the government removed the tariff from corn for distillery purposes. This is directly opposed to the interests of farmers and feeders, as free American corn to distillers means no sale of Canadian grain for that purpose. Distillery cattle, also, are Canadian farmer feeders' worst competitors, as they have the same privileges as our other export cattle in landing at British ports; and they certainly do not tend to elevate the quality of our cattle. They are well fattened, but the system of feeding produces a large percentage of cancerous disease and other troubles incident to the kind of feed used.

In a question of this kind, all that is required is a union of ideas and concerted action. Then, any measure that is for our general benefit can be carried. We again invite those interested to consider the question, and let us know their views upon it. This is a question the "Institutes" could profitably discuss.

Farmers and Fairs.

Ever since the Industrial Fair Association announced their intention of compelling all stock exhibited at the Industrial Fair of 1890 to remain on exhibition two weeks instead of one, the *ADVOCATE* has, I notice, been endeavoring to find out the real feeling of stockmen and farmers on this subject; and as I feel certain that an attempt is being made in this case to carry out an innovation that will be very distasteful to a large majority of the exhibitors, I would like to say a few words on the subject. It has often been a source of great surprise to me to notice what very different relations the farmers who are, or at least should be, the persons most interested in an Agricultural Show, hold towards these shows in England and in Canada, and I think that these relations may best be described as follows:—

In England the principal farmers of a neighborhood decide upon having an Agricultural Show; they hold a number of meetings with a view to establishing one, ask and in almost every case receive the willing co-operation of the tradesmen of the neighborhood, and finally if the prospect is favorable towards paying the expenses, they form an Agricultural Society, get out their prize lists and hold a show, which, while it is liberally patronized by all classes, is still recognized as the special property of, and is consequently engineered by farmers.

Now let us look at Canada.—Here we find the principal agricultural shows managed by whom—farmers? Not a bit of it; newspaper editors, manufacturers, storekeepers, etc.; while the farmers, to whom belong at least three-quarters of the exhibitors, and one-half or two-thirds of the visitors are content to put up with just whatever this Board chooses to dictate to them.

Now, this is manifestly wrong, and the first question is, What is the cause of such a state of affairs? I am afraid were the matter thoroughly sifted, it would be found that to a very great extent the farmers are themselves to blame, and the reasons that have forced me to this conclusion are these: I have had the honor for the last two years of being a director of a county agricultural society in Ontario, and my experience as such, has led me to believe that nine farmers out of every ten, look upon an agricultural exhibition, not as a place where they can strive to prove to their neighbors that *brains* as well as *hands* counts on a farm by improving their stock year after year by the use of pure-bred males, nor as a school where, by comparing their experience with that of their neighbors, they can lay by a store of valuable information, but rather as a place where, by expending a dollar in a member's ticket they run a chance, and in their eyes it is, of course, a very good chance, of making five or six dollars in prize money.

Perhaps you will ask me what are the experiences that have driven me to form such an opinion. Well, I will give you some idea of them—one, and a not too pleasant one, is that of driving all day up and down side-roads, concession lines, trying to dispose of member's tickets at one dollar each, and being continually greeted with the same reply, "Well, I haven't anything to show this year, so I guess I won't take a ticket; I can get in to see the show for twenty-five cents, anyway." And so 100 tickets are sold where 500 should be; and then when

the directors are forced to cut down the prize list for want of money, they are met with volleys of abuse on all sides, and are told that they are running the show into the ground.

While speaking of this let me give an instance that I can vouch for: In one of the wealthiest counties in Ontario, owing to continued bad weather at several successive fairs and to the lack of interest taken in the Agricultural Society by the farmers, the Society ran into debt, and a mortgage was placed on the fair ground, hall, etc. The man who holds that mortgage is a wealthy farmer, and yet last year he refused to buy a member's ticket at a cost of one dollar. Now, if this is all the interest that our farmers in Canada see fit to take in their Agricultural Shows, is it to be wondered at that Fair Associations like the Industrial are inclined to act on the principal of "Take care of No. 1;" and if they think that they can benefit themselves by any measure, to take that measure regardless of the wishes of the farmers.

Remember, I am not arguing that Fair Associations are justified in taking such steps, or that they are wise in doing so, but I do say that the farmers of Canada have neglected their own interests and have given all Fair Associations like the Industrial, that are private enterprises, a very great argument to use against them in a case like the present one. Of course I do not mean for a moment to class all farmers in Canada along with such men as I speak of, for I am well aware that we have here in Ontario as broad and liberal-minded men as can be found in the world; but I am perfectly sincere in my opinion when I say that these are the exception, not the rule, and that the general run, or, as they may be termed, the rank and file of our Canadian farmers, are disposed to carry out a very narrow and illiberal policy towards Agricultural Societies, and I warn them that as long as they continue to do so they may expect to be treated in a similar way by those larger Fair Associations that are not dependent on them. In your next issue I hope to point out what steps may best be taken in the present case. **BLUE BLOOD.**

The Exhibition Question.

(Continued from Dec. Number.)

Dear Sir,—For my part I will not attend any exhibition where the stock have to stay two weeks, as it is a great expense. It will not stand a test among the stock men. It is a game of the Toronto shareholders. **P. ANKELL, Teeswater, Ont.**

Dear Sir,—In regard to agricultural shows being held two weeks, my opinion is it is too long. Exhibitors of live stock are quite satisfied with one week at a place, as they want to attend more than one show each season. By being kept two weeks at any one show takes up more time than any farmer can afford, as the next year's crop depends on his properly preparing his land in the fall. Exhibitors of live stock are nearly all farmers, hence the disadvantage of being kept two weeks when one will answer every purpose; it would also add heavily to the expense in hired help, board, etc. The Grand Trunk Railway Company has used us very kindly in the past, not only in properly shipping us from point to point, but by holding our cars that we had fitted up with stalls, and returning us home free of charge. Now could we expect them to hold our cars for two weeks awaiting our return? The refitting would add greatly to our trouble and expense, for it costs from \$4 to \$8 to fit a car at home; how much more at the exhibition grounds! I hope the directors of the Toronto Industrial Exhibition will think this matter carefully over and not ask live stock to remain two weeks when one will suit the majority of exhibitors better. I wish the Industrial every success. It is a grand show and well managed by the different officials. I, as an importer, breeder and exhibitor, still wish to show there, but if required to keep our stock there more than one week it will prevent me, also the majority of stock men from this part of the country, from exhibiting there. I have had a quarter of a century's experience in agricultural shows, and have always been a lover of good stock, but the taste of a two weeks' show we had in London eight years ago made us all sick, and any agricultural society will find they will diminish the numbers of exhibitors by adding another week. **JOSEPH VANCE, New Hamburg, Ont.**

Dear Sir,—As far as our experience has been as exhibitors at the larger shows we have had very little to complain of as regards treatment by the fair associations. The prizes have been liberal, the stabling fairly good, and in most cases the officers have been courteous and obliging. The chief defects in the prize lists is that not enough encouragement is given

the breeders of stock, and too much simply to the exhibitors. By the expenditure of about \$3,000 an exhibitor can buy up a show herd and sweep the province, while the remaining portion of his herd are but indifferent animals, which will place him in a false position before the public, while on the other hand if prizes were given for those bred and owned by the exhibitor it would be a correct index as to the quality of the herds. A herd bred for a number of years from the same class of bulls will assume the same type. I do not say give all the prizes to animals bred and owned, but for them to be encouraged so that purchasers will know who are the breeders of our best stock. Another thing in which they have been remiss is this, an exhibitor for instance taking a carload of stock will require at least three assistants, his shipping bill allowing him to take only one, therefore he has to buy tickets for the other two. If he gets return tickets they expire before he returns, if he goes to more than one show, consequently he has to pay for their returning, and first class fare at that. This adds materially to his expenses. I believe this to be quite unnecessary. I believe that if the railway company were asked by the fair associations to carry necessary attendants free they would do so, or, at least, for a nominal charge. But as far as making exhibitor's expenses as light as possible, it has never given to me that at a fair so least concern. It has been a wonder to me that at a fair so well managed as the Industrial is, the stables should be allowed to be put to the uses they are the first week of the show. The stench of these places when the stock men take possession of them is something horrible, having been used for a whole week by thousands of people for water-closets, etc., while the strip of land back of the stables is used for depositing all the filth from the booths, eating houses, etc. For the two weeks of the show last year the stench that arose from this was enough to bring on an epidemic. If all this disease-breeding garbage was heaped around the main building what a hubbub it would have made, and rightly so. Don't you think, friend, it would have made, and rightly so. Don't you think, friend, that the stock men are as susceptible to the baneful influence of these fever-breeding germs as others? I believe we are. With regard to the Industrial having the live stock on the grounds two weeks instead of one as formerly, we cannot blame them. It will make the show complete from first to last, which will be a great boon to those attending the first week. Of course it will be the means of keeping the best stock from one of the other large shows, but they are powerless to prevent it; they must bow in submission with the best grace they can. **R. & S. NICHOLSON, Sylvan P. O., Ont.**

Closer Relationship Needed.

I have been a reader of your valuable journal for a length of time, and have been much pleased with the interest you have taken in farmers. On them depends the welfare of this country. I am pleased to see that they have awakened to the necessity of banding together through clubs and institutes, for all other trades and professions have their combines and trusts, etc. The last, the millers' grab, only adds one more to the list. At last it seems a necessity that farmers should drop all party feeling and rise as one man to get our rights. Our debt, what with our Dominion, counties, townships and farms mortgaged, as grown a pace, is it not time we should seek a remedy. I would suggest that the Dominion Farmers' Council, or Farmers' Institutes, request the Reeve to call a meeting of the ratepayers of each township through the province to discuss any particular requirement necessary to the farmers, such meeting to be held early in the winter; and when any point has been adopted, let a delegate be appointed to meet in convention at some central place to discuss any point for the public good; and, when adopted, let pamphlets be printed containing such measures and be distributed by the assessor, so that each ratepayer could then have plenty of time to consider said measures; by this time the collector goes his round and has with him a petition for ratepayers to sign, praying the government to grant such request. This, I think, would destroy party; as it matters not from which side we obtain measures as long as it is good. If this were promptly done each year, petitions would be handed in while parliament is sitting (municipalities bearing the expense), and great good would be the result. **LAMBTON FARMER.**

A delegation from Dakota to Manitoba and the Canadian Northwest have selected homes for twenty families at Dunmore. They will move from United States soil to Canadian early in 1890.

Stock.

The Chicago Fat Stock Show.

For several years this show has been looked forward to as one of the best in that line, and the 12th Annual Show recently held was quite up to any previous one. It was feared that the horse show, closed just before it, would have detracted from the interest, but that does not appear to have been the case.

The judges for cattle on foot were Col. Moberly, Kentucky; Mr. John Gosling, with Mr. John Imboden, Decatur, Ill., as referee. The first was supposed to represent the breeders; the second the feeders, and John Imboden the butchers' interest.

In judging, however, they seemed in many cases to judge from a butchers' standpoint, as a light flank, a weak fore-flank and small brisket were points that they often favored, certainly contrary to the rule of all breeders and feeders.

Nine Shorthorn steers, three years and under four, were but a medium class, in which J. H. Potts & Son, Richmond, were awarded first. He was a neat, well-formed steer, but decidedly under size. The second went to W. S. White's London Boy, a larger steer, well fed, but not even. The third went to C. S. Barclay's Liberty, also a light steer, but with more quality than the rest in the ring not awarded places.

Ten two-year-olds came forward and were a decided improvement on the latter class, and the judges had to call in the referee to decide between two steers of D. W. Renick, of Lemington, Ky., both of good quality; the third going to a rather plain steer, better ones than he being left out in the cold.

Yearling steers were much better. Amongst the twelve shown, J. J. Hill's Britisher, a rich mossy roan, with plenty of style, a depth of rib and well filled beef points, proclaimed him the best steer that had yet showed up. He was brought out by the manager, Mr. John Gibson, in fine form. The rest, a nice even lot, but wanting in weight. There was nothing special in the class of six calves; they were just a moderately even lot, and had made fair growth.

BLACK POLLS.

Three-year-olds Munroe and Roxton were all that was entered in this class, both the property of J. J. Hills, and were in fine form. The first was a grandly developed steer, with plenty of size and wonderfully even.

T. W. Harvey, Turlington, showed Alexander Knight, a fairly good bullock, in the two year class. In three yearling black Polls, J. J. Hills was easily first over two shown by A. B. Mathews. The calf Defiance, brought out by Mr. Gibson, was a grand specimen of this breed, full as an egg in all his beef points.

Herefords were represented by five three-year-olds, of nice quality, but in nothing special as to weight for age.

Two-year-olds were a little better lot, and were awarded in the following order: First, to W. S. Van Vatta's Edwin; C. M. Cuthbertson's Star Milton 16th; Adam's Earl, Earl of Shadeland 27th.

Hereford yearlings were nothing extra, either in weight for age or in size or quality, and the calves were just a nice smooth lot, with no especial feature among them.

The Sussex cattle shown by Overton Lea, of Nashville, Tenn., were well brought out, and

were a good type of the breed, their backs being well clothed with a good depth of flesh; they were upstanding and plain below.

Devons were a very ordinary lot, and would not compare favorably with a choice lot of grazing steers.

Holsteins had two two-year-old steers and two calves to represent what they could do as beef producers.

GRADES AND CROSSES.

Sixteen made up the largest ring yet forward, but was not equal in quality, nor anything special in weight for age, size, or any other particular.

Two-year-olds were far superior, and a lot of good ones among fourteen that mustered, and a particularly good one was Elbert & Fall's, Rigdon, a three-quarter bred Shorthorn, quarter native; so, also, was a seven-eighths Hereford, shown by H. H. Clough, and several more in the class not among the winners.

Grade yearlings showed up a lot of good ones, the first being taken by Bonnie Blue Ribbon, shown by Moffat Bros., also three-quarter bred Shorthorn; Mr. Price being second with Sealskin, half Hereford and half Shorthorn.

The next class was the beginning of the real excitement, as all breeds here came against each other as three-year-olds.

J. W. Potts again winning first with his Shorthorn steer Richmond; J. J. Hill's Angus Munroe, second; W. H. Renick's not registered Shorthorn, third.

Twenty head of the cream of the two-year-olds of all breeds sought honor at the hands of the judges, and again the beautiful grade Shorthorn of Elbert & Falls, being heavier than anything else that came against him, except the Hereford grade steer Clem, which lacked badly in his prime beef points.

Among the eighteen yearlings of all breeds very prominent again stood J. J. Hill's Britisher, with his gain of 2.35 lbs. per day, and brought out in highest form, he again winning first, the Shorthorn steer Blue Ribbon taking second.

For grand sweepstakes for all breeds and ages, the Elbert & Falls' two year grade Shorthorn steer Rigdon again came first.

The champion heavy-weight went to the Shorthorn steer Breastplate, that weighed 2,660 lbs., owned by John Sherman, Chicago.

Greater dissatisfaction was caused by the bad judgment of carcasses on the block than in any other department. Two of the judges were from the packing and canning houses of Swift & Co. and Calumet Canning Co., while the third was a driver of a butcher's delivery waggon, all from Chicago. In three year carcasses that of the Devon New Era, which won first both in his class and also sweepstakes, it was decided by all hands that the ribbons must have been changed by mistake, as the carcass was quite inferior to many of the others. The two year carcass was won by Makin Bros., Hereford, and Shorthorn, J. S. Emery; while for yearling carcass the already successful sweepstakes' yearling Britisher again wins.

SHEEP.

The sheep department contained about one hundred fat wethers, spread over six of the pure-breeds and a large class of cross-bred sheep. Southdowns were first on the list, and John Rutherford, Roseville, Ont., here cleaned the platter.

In Shropshires, which was a large and good

class, the honors were divided between Messrs. Allen, Todd and Rundle.

The Oxfords were smaller in numbers—here again John Rutherford, Roseville, Ont., was successful.

Cotswolds only had twelve representatives here again. John Rutherford led off with three first premiums, seconded by F. Wilson, Jackson, Mich., and J. F. Rundle, Mich.

Leicesters and Lincolns were shown together. Out of this class came the heaviest sheep shown, and again John Rutherford led off all the prizes in this class except a Canadian bred lamb, which gained first, shown by J. F. Rundle.

Rundle gained most of the prizes in the Merino classes.

Crosses were a good lot. The heaviest sheep was a cross between a Shropshire ram and Leicester ewe; it was also shown by John Rutherford. On the whole the Canadian sheep were most successful, John Rutherford being the chief exhibitor, other exhibitors won with Canadian bred sheep.

The sweepstakes winner, both on foot and on the block, was a cross-bred sired by a Shropshire ram, dam a Merino ewe.

Yorkshires vs. Berkshires.

Please give me space to correct one or two sentences in my last letter. What I wrote was as follows:—"In conclusion, if I, whose business success as a pork-packer depends on having a supply of the right class of hogs, while my success or failure as a pig breeder is an insignificant matter, am not impartial, is Mr. Snell, the Berkshire breeder and importer for many years, with a business extending over the continent, the person whose statements are to be received as final and unquestioned?" I am pleased to say that since my letter appeared in reply to Mr. Snell, I have had letters from farmers who were incredulous, but are now convinced of the truth of my statements. Mr. Snell, in your last issue, again champions the Berkshires as, of all others, the lean meat or muscle producing hog. This statement I dispute, and further I say that according to Mr. Snell's own theory his opinion is not of any value, because he is an interested witness. I do not wonder, Mr. Editor, that the Berkshire men are alarmed; the Yorkshires have come to stay, and "as every dog must have his day" (dear me, like Mr. Snell, I have written poetry before I knew it), the Berkshires have had theirs, and as "the prudent man foreseeth evil and hideth himself," I would advise Mr. Snell to dispose of his Berkshires and join us, where he would soon be, "if not first, in the very first rank." In concluding this letter I want to say that my object in agitating this matter is to induce the farmers, first, to raise hogs; second, to raise the right sort; third, to feed them judiciously; and last, but not least, to have them ready for sale when they are at the highest price, usually from 1st July to 1st October, and 1st March to 1st May. When I turned farmer it would have been easier for me to go into Berkshires than any others, but the information obtained from Irish, English and Danish bacon curers, coupled with my own experience as a pork packer, led me to "give them a wide berth."

Yours truly, WM. DAVIES.

A breeder of high grade Herefords in Minnesota recently had an auction sale. The prices realized were comparatively low. A neighbor remarked to the breeder that he had not realized fancy prices for his stock. The reply was:—"They brought me twice the price of scrubs, and did not cost me any more. There was sound logic in the reply."

Mr. Kough's Galloways.

Our illustration of group of Galloway cattle in this month's issue is from the herd of W. Kough, of Travertin Farm, Owen Sound P. O., Ont. This group was shown for the herd prize at both the London Provincial and the Toronto Industrial last September, and obtained highest honors.

The animals are bull Claverhouse (4250) 4614, imported. Calved 26th June, 1886; bred by Thos. Biggar & Sons, of Chapelton, Dalbeattie, Scotland; sired by the celebrated Crusader (2858), winner of champion cup as best Galloway at Highland Society Show, Edinburgh, 1884. Claverhouse was shown by W. Kough in 1888 as

airds, Dumfries, Scotland, and was imported in 1887. She gained 1st prize at Kingston, Toronto, and London in 1888; also 1st in the cow class at London and Toronto in 1889.

Mary 4th 3234. Calved 1st March, 1886. On the dam side is of a family known in Canada for many years, and traces back to Heather Bell [12]; imported in 1856 by Mr. Graham, of Vaughan, County York, Ont., from the herd of Mr. Carruthers of Kirkhill, Dumfries, Scotland, and always bred to grand bulls. Mary 4th is by Creochs 673, imported, and one that has left some extra good stock. She gained 2nd prize at Toronto and Ottawa in 1887; was not shown in 1888. She stood 2nd at London and 1st at

capable of producing beef of the very highest order; that will please the most fastidious taste, and yet be fed at the lowest cost, so as to come within the reach of the masses; strength of constitution and hardihood with aptitude to fatten at the same time; the production of the same qualities by crossing the Galloway bull on the common cows of the country. All sorts of experiments have been made, and one of the results is, that for intensive farming as well as for the roughest surroundings, the Galloway bull has proved himself equal to the task of producing the best beef for the least money."

Mr. Kough says the general results of his experiments so far are:—
1st. Some individuals are rare milkers. Miss Steele [523], dam of the bull General Gordon, and of the yearling heifer Miss Steele 5th, gave for a month, after calving, two patent pails of



(1) MARY 5TH 3600. (2) MISS STEELE 5TH 4248. (3) MARY 4TH 3234. (4) COUNTESS OF GLENCAIRN (9501) 4617. (5) CLAVERHOUSE (4250) 4614. A GROUP OF MR. KOUGH'S PRIZE-WINNING GALLOWAYS.

a two-year-old at the Provincial, Kingston; the Industrial, Toronto, and the Western in London, and in each instance gained the 1st prize. In 1889 he was shown in the three year and aged class at both London and Toronto, when in each instance he was placed first; and in the competition for best bull of any age he was awarded 1st prize and silver medal. He also headed the herd to which was awarded the highest honors and championship in company with the Countess of Glencairn (9501) 4617, imported. Mary 4th 3234; Mary 5th 3600, and Miss Steele 5th 4248, which are the other members of the above group.
Countess of Glencairn calved 10th Jan., 1885. Was bred by Alexander McCowan, of Newton-

Toronto in 1889 in the three year-old class, and a member of the champion herd at both Toronto and London in 1889.
Mary 5th 3600 calved 21st January, 1887. Is full sister to the last named. Gained 1st in 1887 at Toronto and Ottawa Provincial. In 1888, 2nd at Kingston Provincial; 1st at Toronto Industrial, and 1st at London Western. In 1889, 2nd each at London and Toronto.
Miss Steele 5th 4248 calved 19th Sept., 1887—a half sister to the two Marys above—all by the same bull Creochs 673. Gained 1st prize at Kingston, 2nd at Toronto, and 1st at London in 1888; 1st at London and Toronto in 1889
This herd is the outcome of experiments by the exhibitor for some fifteen years. Mr. Kough says: "The object being to obtain a breed in itself

milk a day, besides what the calf General Gordon took. The mother of the two Marys is also a deep milker; in all cases the milk is very rich in cream.
2nd. That the early maturity of the breed is unsurpassed, and that the grades for early maturity and quality of beef are equal, and are always without horns.
3rd. That the quality of the pure-bred or grade beef is of the very highest order, and commands the highest price—often two to three cents a pound more than the general best market for horned cattle.
4th. That the pure-breds and grades will stand the rough surroundings of the early settler and the poor farmer better than most: they will graze against the blizzard.
The herd now numbers thirty-six head. Catalogues will be sent to all who apply for them to the owner.

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Yorkshires and Berkshires.

BY FRANCIS GREEN, JR.

Mr. Snell, in his letter contained in the last issue of the *ADVOCATE*, takes exception to certain statements in a paper written by me, on the selection of a breed of pigs, in a previous number. In the first place it is, perhaps, due time to say that this paper was written and read at an institute meeting several months previously, and before we had imported any Yorkshires. It was the result of information gleaned from various sources at a time when we were looking around for a breed of pigs which would be more profitable to an ordinary farmer than any we had previously tried. The statement of our own experience contained in that paper is, I am sorry to relate, perfectly true; and I may here say that we are not alone in that respect, for it has been confirmed by the verbal and unsolicited written testimony of others. In the next place I merely gave my own convictions as to Yorkshires, compared with what experience we had had with other breeds, and in no way singled out for attack Berkshires, or for the matter of that, any other breed. Mr. Snell claims that a proper course of feeding will produce a larger proportion of lean, uniformly mixed with fat, in Berkshires than any other breed. Such is not the testimony of pork-packers and others, who have had a large experience in the carcasses of both breeds; and it is ridiculous to imagine, for a minute, that a pork-packer, who is in a large way of business, is going to advise the rearing of a breed which, according to Mr. Snell, produces an inferior quality of meat, in order to sell a few head of that breed which he may happen to own. Besides the number of pork-packers who prefer Yorkshires, is not limited to one; not only does Mr. Davis advocate the breed, but Mr. Fearman also approves of it; while in England, Messrs. Harris, of Calne, one of the largest bacon-curers in that country, and many others, all bear the same testimony. Again, the large demand for Yorkshires (and I am not referring to this country, but to Denmark, Ireland, Germany, etc.) is, in itself, a sufficient proof of the good qualities of the breed, for the demand in those countries was not started by advertising, but by personal inspection and practical experience. It is true the Yorkshire does not present the rounded appearance of Berkshires; if he did, it is altogether probable that he would not be the favorite he is with the pork-packer, for such rounded appearance is the usual concomitant of an excessive proportion of fat.

Mr. Snell hits the nail on the head when he says, "What is the use of a sow having more pigs than she has teats?" This is one of the points which contributed to decide us in favor of this breed, for the Yorkshire sow has great length and a considerable number of teats. Out of curiosity, I examined several of the young sows in our litters and none had less than twelve, and many had fourteen teats. Another point which also had some bearing on our choice of the Yorkshire was, that a white pig always looks better when dressed than a colored hog. This advantage is exemplified only this last week by an item in the *Breeders' Gazette*, which mentions that on Nov 8th, at the Union Stock Yards, Chicago, two car loads of white hogs sold for ten cents per 100 lbs. more than the best of the blacks. As regards their feeding qualities, I can now give some personal experience of them: The boars are keen servers and good foragers,

but when at service they will not lay on flesh rapidly. I do not, however, consider this a disadvantage, as stock boars, like all male animals, give better results when not overloaded with flesh. The sows are good mothers and heavy milkers, and when dry fatten very easily and rapidly, and, if anything, on less food than some good Berkshire grades we are fattening, while the litters they have produced and raised have averaged considerably more than any other breed we have tried.

Mr. Snell's last remark, that the Improved Large White Yorkshire is not recognized as a pure breed at the Royal, or any other large show, in their prize lists, is calculated to mislead only those who are not posted as to the method of arranging the prize lists, and in respect of which many complaints have frequently been made. It is no criterion whatever that the Yorkshire is not a pure breed. 'Tis but a few years since Shire horses were given a separate class; and if my memory is correct, it is only this very year that Herefords, at first, were either omitted altogether as a separate class, or else were limited to very few sections in comparison with other breeds of similar standing, and no one will contend that either of these breeds is impure. In the strict interpretation of the term there is practically no pure breed of pigs, and it is probable that all breeds have been crossed more or less with foreign breeds; but as comparing the purity of Berkshires with Yorkshires, let us see what the old authorities say: All seem to agree that the color of the old Berkshire was a sandy or white color, some of them were entirely sandy or reddish brown, some with brown or black spots. The *Complete Grazier* mentions that Sir Wm. Curtis exhibited in 1807, at Lord Somerville's Show, some pigs of the Berkshire breed of a reddish color, with brown or black spots, which were universally admired, and goes on to say that some of the best are bred in the neighborhood of Tamworth, the home of the red Tamworth pig, a statement which naturally gives rise to the suspicion that the old Berkshire had a dash of the Tamworth in its veins. The *Farmers' Series* and other writers remark that the Berkshire breed was usually crossed at intervals, either with the pure Chinese or Tonquin race; and in the report of farming in Berkshire, page 403, the opinion of a gentleman who had studied the breed for many years is given, who asserted that if not crossed once in six or seven generations with the Indian stock they would degenerate in shape and quality, from which it is plainly evident that a cross of these foreign breeds was constantly used on the Berkshire. Both Morton and Copland make mention of a herd of white, and also of black Berkshires, the former as owing its origin to a cross of the Chinese, and the latter to the Neapolitan boar. Copland, writing on Yorkshires, says: "The old York-prevalent in many of the counties of England, and different types of the same breed existed in Leicestershire, Shropshire, Gloucestershire and Herefordshire;" and in Lincolnshire, according to Morton, he was known as the wild pig; his color was a dirty white, spotted with blue or black spots, marks which occasionally appear in specimens at the present day. In no work that I have come across have I found any mention made of an extraneous cross, save an alleged cross of the Berkshire, and if this had been the case one would naturally expect that the result would have been a colored pig, just as of which he is now white, and is remarkably persistent in fixing this color on his offspring, which, even on Berkshire sows,

are invariably white, another proof of the purity of the breed.

The extracts from the works of the writers quoted, I have attempted to state as impartially as possible; and I think that it may fairly be contended that, if anything, the Yorkshire is the purer breed of the twain.

Chatty Letter from the States.

[From our Chicago Correspondent.]

Wm. McLean, the live cattle exporter, of Goderich, Ont., is now buying cattle in Chicago.

W. H. Monroe, of Boston, who has long been a conspicuous figure in the live cattle trade, has bought a large interest in the Hammond Dressed Meat Company, and will be the eastern representative of that concern. Thus we see that the system of refrigeration is steadily encroaching upon the live cattle shipping business. The introduction of patent palace stock cars has a tendency to prolong the custom of shipping animals long distances on the hoof, but there is no doubt that the dressed carcass system is on the increase.

It appears that L. E. Montgomery, of Springfield, Ill., who recently exported a boat load of cattle, lost a large number by suffocation.

Fancy Christmas cattle were sold here to shippers and exporters as high as \$5.75@6.35. During December the general cattle market was very bad, as the quality was generally poor; the commoner grades of cattle were to a certain extent made to fill the places of good grades. Indeed, pretty good, 1,200 to 1,400 lbs., commo-fatted cattle have sold in large numbers at \$3.50, which is the lowest in years for such stock.

The cattlemen ranching on the "Cherokee Strip," in the Indian Territory, have been ordered to vacate early next summer. This is considered by them to be a very great hardship, and adds one more burden to the heavy load cattlemen have had to carry.

Range cattle appear to be wintering well. The weather in Montana and Wyoming has been unusually mild.

Hogs have sold at \$3.50@3.75 during December, being the lowest since 1879. The receipts of hogs have been liberal compared with the last year or two, but not compared with four or five years ago, when prices were much higher than they are now.

The death of Mr. John Adams, the well-known Chicago live stock salesman, removed from the live stock trade a conspicuous figure. He always took a great interest in fat stock shows.

Horses are selling rather slowly at present, and the market is over-supplied with inferior to fair kinds.

The late Fat Stock Show proved to be not quite a financial success after all.

Good hogs and pretty good cattle sold during December close down to \$3.50. Good sheep were about \$1.50 per hundred pounds higher. The sheepmen have cause to feel better than any other class of stock growers, and they are making the most of their good fortune. Corn-fed and screening-fed western sheep have sold at \$4.50@5.40 lately, and have made plenty of money. Grass western, suitable for feeding, have never been so scarce, and the demand for them has hardly been half supplied.

Col. J. W. Judy, of Tallula, Ill., is of the opinion that the fine cattle sales of the year have not been so bad as some have seemed to think. He contends that good cattle have sold at good fair prices, though the common "fine cattle" sold at very low prices, as they deserved to do. Choice cattle, he says, cost no more to breed and raise than the scrubs.

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Cotswold Breeders.

The annual meeting of the American Cotswold Association was held in Chicago on Nov. 19, during the week of the Fat Stock Show. Breeders of these sheep report business much more brisk than for several years. According to the treasurer's report there is a balance of \$675 in the treasury. About one hundred paid-up members are now on the books. The following officers were elected:—President, R. C. Judson, Farmington, Minn; Vice-Presidents, E. B. Emery, Md.; J. C. Snell, Edmonton, Can.; C. E. Carothers, Houstonville, Pa.; Sec. Treas., Geo. Harding, Waukesha, Wis.; Directors, E. B. Emery, J. O'Malley, Wannakee, Wis., and J. B. Herkless, Knightstown, Ind.

Cotswold Sheep.

BY J. C. SNELL.

Cotswolds are among the most ancient of the recognized breeds of sheep. It would, perhaps, be claiming too much to say they are "as old as the hills," but it is a fact that the hills upon which they are generally found in their native land take their designation from the sheep rather than the sheep from the hills. They derive their name from *Cote*, as sheep fold, and *wold*, a naked hill. Stowe in his chronicles, states that in 1464 King Edward IV., "Concluded an amnesty and league with King Henry, of Castill, and King John, of Aragon, at the concluding whereof he granted license for certain Cotswold sheep to be transported into the country of Spain, which have there since mightily increased and multiplied to the Spanish profit." This breed, contrary to the habit of most long-wooled sheep, has made its home on bleak uplands. There are few sections of the Old Country where the land is poorer and less productive than upon the range of uplands known as the Cotswold hills, and extending through parts of the counties of Gloucestershire and Oxfordshire; yet it is here that these large and well furnished sheep are principally found, though a few good flocks are found in Norfolk and Hereford, and also in Wales.

We believe the first importation of Cotswolds to Canada was made by the Messrs. Miller, of Markham and Pickering, in 1854. Of these the late John Snell, of Edmonton, purchased one ram and one ewe, which formed the nucleus of the flock, which has since been steadily maintained by himself and his sons as one of the leading flocks in America. In 1855 Mr. F. W. Stone, of Guelph, made an importation of a choice lot of yearlings, which, together with those of the Messrs. Miller and Snell were exhibited at the Provincial Exhibition, held at Cobourg in the same year, and created quite a sensation; their stylish carriage, and long flowing forelocks, as well as their great size and substance proving a passport to public favor which at once placed them upon a firm footing as one of the breeds peculiarly adapted to this country.

For a period of about twenty years from the date of their introduction in Canada they grew rapidly in popularity—and the demand for the classes of ladies' dress goods known as alpacas and lustres, which during those years became very fashionable, and called for the class of combing wool which Cotswolds produce, had the effect of raising the price of this wool to an unprecedented extent, as high as fifty cents per pound having been paid for it. Those were the

palmy days for Cotswolds, and large profits were realized by the importers and breeders of these sheep, while the Americans drew largely upon the supply of Grade sheep in the country having a considerable infusion of Cotswold blood, and the prices paid for such made it a profitable branch of the farmer's income. When the fashion changed and these classes of goods were less in demand, and the boom in the middle woolled sheep was started, a large proportion of those who had been breeding longwooled sheep were led to try the experiment of crossing with the different classes of Downs, but the experiment in the great majority of cases proved a disastrous failure, and men who formerly had flocks of which they felt proud, found in a very few years that they had only a non-descript class of sheep which had gone from bad to worse, lighter in carcass and lighter in fleece as well as shabby in appearance, till in disgust they were sold off to the butchers and drovers for what they would bring, and a large proportion of the farms of the country were found to be destitute of sheep.

The recent advance in the price of wool and mutton, though by no means large or startling, and the fact being brought to the notice of farmers by the agricultural press, that they were doing themselves and the country injustice by not having a few sheep as a factor in a system of mixed farming, has had the effect of creating a general enquiry for sheep, and of leading a large proportion of the farmers to purchase small lots as the nucleus of flocks, and so far as our observation has gone it has been in the majority of cases Cotswolds or their grades that have been sought after, and I am fully persuaded there is no breed of sheep that is better adapted to the conditions of the country and the circumstances of the average farm and the average farmer than are the Cotswolds.

If our circumstances were such that we had a special market and could secure special extra prices for a certain quality of wool or mutton, one can readily understand the wisdom of breeding to meet the demands or requirements of such a market; but what are the facts in regard to our markets? Is not both wool and mutton bought at so much per pound, and is there any considerable extra price paid for quality in either case that will nearly compensate for the difference in weight in favor of the Cotswolds in carcass at any age, or in the annual clip of wool.

We find that the larger sheep are the favorites with buyers and shippers here, and my observations in the markets at Liverpool and London convinced me that there, where they are not bought by weight, the large ones are the favorites with the buyers, and Canadian grade Cotswolds were readily bought at the highest quotations.

For the purpose of grading up, either from common or native ewes, or from pure or cross breeds of any sort, I am convinced that the Cotswold ram has a prepotency that is unsurpassed by any breed, and this is well understood and admitted in England, where the demand at present for Cotswold rams is greater than ever for this very purpose. Many of the farmers who have flocks of Down ewes, preferring to cross them with the Cotswold ram, because their lambs feed so much faster after weaning, and make so much heavier yearlings to go off to the butchers after the first shearing, and producing fully twice as many pounds of wool per head as the pure Downs. So great is this demand that we find

that only a few of the breeders hold any of their ram lambs over for shearing, most of them being sold as ram lambs to be used as breeders the first season. It is admitted that, as a rule, the Down ewes are better nurses than the Cotswolds, and if lambs for the butcher be the object the Downs may have the advantage; but from the time the lambs are weaned the Cotswolds will go ahead, and increase in weight, and put on flesh faster than any other. It has been demonstrated in Canada that lambs of this breed can be made to weigh at seven months old from 150 lbs. to 175 lbs., and yearlings at 18 months from 300 lbs. to 350 lbs., while mature rams at two-and-a-half years have been made to attain a weight of 400 lbs. and 425 lbs.

With regard to weight of fleece, we have known yearlings to shear from 18 lbs. to 21 lbs. of unwashed wool, while 14 lbs. to 16 lbs. is common in well fed flocks, and we have known whole flocks to average 10 lbs. of washed wool. The quality of the wool of Cotswolds has been greatly improved in the last fifteen years by careful breeding and selection, so that the coarse, harsh fleeces, with a hairy tendency on the thighs, has almost disappeared and the fleeces are found of more uniform quality all over the surface of the body, and of much softer and finer fibre. One of the strongest claims of the Cotswolds is that for crossing or grading up cross bred or native sheep, while with many other breeds the first cross is a success; subsequent crosses show a falling off in size and character. The Cotswold cross proves a success almost uniformly, not only in the first cross but in future crosses. The offspring taking on the Cotswold character fell in a few generations; the type becomes thoroughly fixed, and they breed with a large degree of certainty to the desired standard.

Another strong claim which the Cotswolds have for favor in this country, where all classes of stock are pastured together, is their habit of grazing. It will be noticed that they do not cense up their ranks and go in solid phalanx to the destruction of a pasture, but scatter all over a field, and thus only partially reduce the herbage, while most of the finer woolled breeds go in solid column or in the shape of a letter A, and if kept in large flocks are nearly as destructive to a pasture as an army of grasshoppers or locusts. This habit of scattering is conducive to the health of the sheep and freedom from disease, while it also helps to avoid making the land what is called "sheep sick."

The Cotswolds are well adapted to the climate of Canada and that of the Northern and Western States, which is generally comparatively dry. In Canada especially, where in a system of mixed husbandry sheep are not likely to be kept in very large numbers, they succeed admirably.

No class of sheep requires less care or skill in their management. Their wool is of such a nature that the rains and the dew of heaven falling upon them after shearing puts their fleeces in the most desirable condition for looks or for profit, and no professional tonsorial artist is required with comb and brush and scissors to keep them from taking on a shabby appearance and to make them presentable; but with the ordinary care which the average farmer can easily give them they will prove one of the most profitable and satisfactory investments on the farm, as they yield their semi-annual dividends in the shape of a crop of wool and a crop of lambs, while their keep is generally of the least expensive kind and is scarcely missed, and the returns they make may be counted upon with a reasonable degree of certainty.

Annual Meeting of the Dominion D. H. Breeders' Society.

The third annual meeting of this organization was held in the Town Hall, Clinton, on Wednesday last, with a large attendance of members. President John McMillan, M. P., occupied the chair. The financial statements showed the balance on hand at last audit, \$1,491.42; received during the year, \$825.50; disbursements for salaries, printing, postage and other expenses, \$428.47; balance on hand, \$1,888.45. The Secretary's report showed 604 entries received for the second volume—359 stallions and 245 mares.

The report of the Council was read, containing an account of their doings for the year and submitting several important recommendations. The report stated that the Council had ordered the prosecution of two parties for false entries, under sec. 85, chap. 11, 49 Vic., A. and A. Act of Ontario, and these would be decided shortly. They had also decided to close the second volume of the stud book on March 1st.

On the subject of registering animals bred in the United States, from Dominion Draught stock, several letters had been received, but the Council, entertaining doubts on the advisability of such registration, or the power of the Society therein under its letters of incorporation, had consulted Mr. J. T. Garrow, Q. C., and his opinion was submitted to the meeting. It was to the effect that the Society being incorporated under the laws of Ontario, for the declared purpose of "promoting the interests of breeders of draught horses in Canada," it had no authority to extend its business outside of this country, and necessarily would have no control or authority over applicants from the United States where false representations were made in an entry for registry. This opinion was on motion endorsed by the meeting, and the Secretary instructed to give all assistance or information which might be desired by parties in the United States, who might organize a stud book there.

The Council recommended (1), the passage of a resolution declaring the progeny of Dominion Draught stock eligible for any volume of the stud book; (2), that the standard of registration for the third volume should be three crosses of accepted sires; (3), that only one-half the Council retire each year hereafter; (4), that the Secretary be empowered to charge 25 cents for each letter necessary after the first one to complete or perfect an entry presented for registration; (5), that where animals are purchased by shippers or jobbers the entry for registration be required to be made by the breeder or owner of the animal; (6), that where the breeder is dead or his signature not obtainable, an application for registration must be attested to by the statement or affirmation of a responsible party before a notary public. All these recommendations were adopted by the meeting.

The election of officers resulted as follows:—President, John McMillan, M. P., Constance P. O., (re-elected); Vice-President, D. McIntosh, V. S., Brucefield (re-elected); Treasurer, John Aikenhead, V. S., Goderich; Secretary, James Mitchell, Goderich (re-elected). Council—P. Curtin, Adare; Alex. Innes, Clinton; P. McGregor, Brucefield; J. E. Blackall, V. S., Clinton; D. Fisher, Goderich; John McDiarmid, Lucknow; John Busch, Sebringville; James Henderson, Belton; J. J. Fisher, Benmiller; Wm. Sinclair, Chiselhurst; Thomas Green,

Dublin; C. E. Mason, Brucefield; J. H. McRoberts, Lucan.

It was decided that the Council should meet at least once every three months, and the first meeting for 1890 will be held about the time of closing the second volume.

S. Smillie, of Hensall, and Thomas McMillan, Constance, were appointed auditors for the current year.

It was decided that a dam with two crosses must be registered in order to admit her progeny to registration, but that mares not entered as dams must have three crosses to register.

After votes of thanks to the officers of the past year the annual meeting was closed.

COUNCIL MEETING.

A meeting of the new council was then held. Messrs. Innes, McIntosh, and D. Fisher were appointed a committee to receive the bonds of the new Treasurer and the Secretary, and transfer the bank accounts. The following were appointed as the Executive Committee for the revision of entries:—Alex. Innes, P. Curtin, D. McIntosh, James Henderson, and J. E. Blackall.

After transacting other routine business, the Council adjourned.

The Guelph Fat Stock Show.

The ninth annual meeting of the Guelph Fat Stock Club was a decided success, and much praise was deservedly given to the management for the enterprise and energy they have displayed in keeping up this truly instructive and interesting show. With the exception of two steers from St. Marys, one from Stratford and a cow from Hensall, the show was made up by local exhibitors, and much credit is due to all those who contributed to so good a display of well finished cattle, which consisted entirely of Shorthorns and Shorthorn grades. The judges for cattle were Messrs. John Hope, Brantford; S. Moore, Waterloo; Wm. Crealock, Toronto.

Before the labors of the evening were entered upon, the exhibitors, judges and a number of the visitors were invited by the President and Directors of the Fat Stock Club to a dinner got up in capital style by the landlady of the Western Hotel. The room was nicely decorated, with a bill of fare reminding the guests of the approaching festive season.

In the first ring four three-year-old steers came to the call of Ring-master Taylor. Weir Bros., St. Marys, showing two nicely finished steers, on which they were awarded first and second. The first was won by a large, upstanding red steer, but plain in appearance, being rather coarse; he was not quite as even in flesh as is required, but very ripe, and showed the best of care and feeding. The second was of better quality, but not nearly as ripe. Mr. Ross, of Pilkinton, showed two, one of which took third prize, both well-grown steers, but they were not brought out in as good form nor as well finished as they should be at this age.

Only one two-year-old showed up, but he made up for deficiency in numbers by his individual excellence, taking first in his class, also coming out first in two other sweepstake rings. He was bred and fed by T. Ballantine & Son, of Stratford. Sired by the imp. Duthie bull, Methlic Hero; dam, a native cow, thus showing what wonderful feeding quality one cross of good breeding often produces. This steer was remarkably thick and even in his flesh, though hardly as firm as would be liked. He is a profitable beast to both feeder and butcher, weighing close to 1,800 pounds at thirty months.

Four yearlings came to the front, in which a beautiful red steer, bred and fed by W. Sharpe

& Son, Everton; sired by the imp. Campbell bull, Baron; dam, a cow of the discarded Roger strain. He was in grand form, just the type of a Shorthorn steer; full of quality and wonderfully ripe for his age, weighing 1,450 pounds at nineteen months. Duncan Stewart, also of Everton, won second with a nice red steer, also by Baron, the third going to Elijah Searle's roan steer.

No less than eight cows, three years and over, were ushered in, and most unfortunately; by the decision of the club the four best were prohibited from showing, as they were not allowed to compete in this class unless they had produced a calf. Thus at one sweep clearing the ring of three beautiful heifers, bred and fed by Jas. McQueen, of Salem, and another capital good one shown by W. Shillinglaw, Hensall, thus leaving rather a weaker class, made up by J. Atkinson, Utoka; N. Potter, Mono Mills; and John Phin, Hespeler, which were nicely fed and smooth useful cows, but nowhere near those disallowed. Heifers, under three, was rather a poor ring. The first going to heifer owned by Robert Irving, Nassagawega; second and third to Geo. Wakefield, Guelph.

Two very nice even heifers, under two years, the first prize was won by John Atkinson; second, W. West, Guelph.

Best fat animal, any age or sex, by an exhibitor who has never shown at Guelph Fat Stock Show, going to T. Ballantine & Son.

Herd of three cattle, any age or sex, James McQueen, Salem, sweepstakes.

Sweepstakes (a mowing machine, presented by J. Harris & Sons, Brantford), for best fat animal; brought out a capital lot, including all the winners, with the ruled out heifers of Mr. McQueen's counted in, and was finally won by Mr. McQueen's beautiful heifer. She is wonderfully even and ripe. She, like the other two heifers shown by this exhibitor, being from pure bred Shorthorn cows, sired by a bull of the Roger sort.

The ring for best fat beast, any age or size, the "McAteer cup," value \$60, to be twice won by one exhibitor, and with a different animal. Cattle competing for this prize must never have been shown except in classes under a year. For this handsome prize a number came forward, but the pull was between the two-year-old steer of T. Ballantine & Son, and the yearling steer of W. Sharpe & Son, the coveted ribbon again going to the two-year-old. This cup was given by Mr. McAteer, of the Western Hotel, Guelph, who also most generously fitted up his stables at his own expense, and allowed the club the use of them gratis.

A goodly number of sheep, as might be expected, filled up the pens allotted them, John Rutherford, Roseville, Ont., sweeping all before him in the aged and shearing classes, with twelve of his picked champion flock just home from the Chicago Show, where 17 first, and 30 prizes in all, were carried off by him. With these he had placed a monster wether, weighing 402 lbs. The prizes for lambs, which were a remarkably good lot, going to Mr. Waters, the President of the club; also Messrs. Howitt, R. Irving, Parkinson and Rae were amongst the winners.

A few pigs were also on exhibition for the prizes prepared by the club, and given by the citizens of Guelph. Quite a display of poultry helped to add to the attraction of the show, the ladies very properly lending their assistance in awarding the prizes in this department.

1889 Sales of Shorthorns.

A Scotch contemporary of recent date says:— Another sale season of pedigreed Shorthorn cattle may be regarded as over. Although not nearly equal to what has been experienced before the agricultural depression came upon us, it is satisfactory to note that in this important branch a better trade has been done than has been the case for several years past. In all there have been 40 sales, at which 2,085 head have been sold for a total of £73,492 7s. 3d., or an average of £35 4s. 11½d. each, this comparing well with the 1,594 head sold last year, at 39 sales, for a total of £44,013 13s. 6d., or an average of £27 15s. 6d. In 1887 there were 37 sales at which 1,353 head were sold at an average of £27 12. 6d.; while in 1886 the average was £30 9s. 1d. This year's average was not so good as in 1885, when the average price was £37 10s., but it will be seen that there has been a very considerable advance on the prices of each of the past four years. Neither do we as yet approach the values which prevailed during the twelve years which ended with 1879, and during which time the average for the sales during the whole series of years amounted to no less than £54 7s. 7½d. per head. Besides the home trade, there has been a good foreign trade with South America, but that for other countries seems to have been almost nil. In all, the Shorthorn Society has issued 608 export pedigree certificates since January 1, and of these 586 have been for animals going to South America, 12 for Germany, 3 for France, 2 for Belgium, and 1 each for Australia, Canada, Denmark, Sweden and South Africa.

The Shropshire Breeders' Meeting.

The annual meeting of the American Shropshire Registry Association was held at the Sherman House, Chicago, Nov. 19. The roll was called by Mortimer Levering, the Secretary and Treasurer, and was answered to by a large number of members. The Treasurer reported a balance of \$949.52. The following officers were elected:—President, S. H. Todd, Wakeman, O.; 1st Vice-President, John Dryden, M. P. P., Brooklin, Ont.; Sec.-Treas., Mortimer Levering, Lafayette, Ind. Executive Committee, John L. Thompson, Arcana, Ind.; W. H. Beattie, Wilton Grove, Ont.; Prof. W. C. Latta, Lafayette, Ind.; W. J. Garlock, Howell, Mich. Pedigree Committee—John Dryden, John Campbell, jr., Woodville, Ont.; Dr. T. H. Allison, Kittanning, Penn.; J. L. Thompson, Prof. W. C. Latta. Vice-Presidents for Canada—Richard Gibson, Delaware; Prof. Thos. Shaw, Guelph; Robert Miller, jr., Brougham. The rule for entry was changed, so that fees would be charged as follows:—Members of the Association pay for each imported sheep or lamb \$1, if accepted for registry within one year after date of importation. For each American bred sheep, 50 cents, if accepted for registry before Dec. 31 of the year of its birth. Triple fees will be charged for registration of all sheep later than the time of limits above fixed. Non-members charged double fees. The following rule also added:—Infringement of any of these rules, or dishonorable conduct on the part of a member, shall make him liable to forfeiture of the privilege of membership in the Association. It was further resolved, that no Shropshire breeder be allowed to register his sheep if he had any other pure breed of sheep on his farm. This last surely should be reconsidered, and could never have

been properly understood, as this rule would most effectually close one of the main thoroughfares for establishing this already popular breed of sheep, as the majority of buyers have already a flock of some of the pure breeds, amongst which they wish to place the Shropshire on his merits. The sum of \$500 was voted as an appropriation to be offered for premiums to be awarded to Shropshire sheep in the fairs for 1890.

Holstein-Freisian Association

held a meeting at Chicago Nov. 13, and in response to an offer of \$5 made at their meeting March 20, 1889, for each full-blooded bull calf slaughtered or castrated within four weeks of birth, it was announced that \$1,250 had been paid. The registration fee for bulls had also been raised to \$5 for members and \$6 for non-members, which much reduced the number registered. During the year \$4,000 had been paid out in special premiums.

The Dairy.

PRIZE ESSAY.

What Steps Must be Taken to Improve the Quality of Milk Delivered at Cheese Factories.

BY JOHN PARKER, STAMFORD, ONT.

The dairyman must take the first steps towards improving the milk, by taking better care of his cows; his stables, his methods of milking, and the care of the milk after it is taken from the cow.

A word or two in regard to her care first. She should be treated with the utmost care at all times, because, any rough usage will tend to make her hold up her milk, and sometimes make it bloody. Dogs, unless well trained, should never be allowed to come anywhere near the cows, and certainly, never to race them. Thoughtless men or boys who club or stone them when taking to or from pasture, should be sent away along with the dogs until they learn to be more humane towards our dumb animals.

Nine out of every ten cows, I venture to say, are turned out in the spring as soon as the grass will afford them a living, and never fed a bite of grain until the snow flies in November. In the fore part of the season they may do well enough, but towards the last they can scarcely hold their own; and, as a natural result, they either do not give any milk, or so little that it is hardly worth while bothering with it. And who would expect them to do otherwise? Surely, no man of at least ordinary intelligence, if he gave the matter a single thought. It pays, and pays well, to feed a small grain ration every day, even when on the best of pasture, but more especially as the pastures grow short in the fall. If any farmer has any doubts about it, I would advise him to try it for just one season, and I venture to say he will do so ever afterward.

So much for her summer's feed. Now, let us see how she is going to fare during the long winter. After having been half starved all the fall, she is placed in a cold, damp stable, and fed on hay and straw until she is sick and tired of them. Sometimes, of course, she fares better, and gets a little grain. It will take half of the winter to get her in the condition she was in the latter part of the summer. After giving scarcely any milk for two or three months, she cannot be made to give what she otherwise would, had she been well fed all along. So, a cow that should

give milk at least ten months will be dry before eight months. It would be much better to feed her all she will eat of good, nourishing food all the time. Well-cured corn fodder and oat straw cut fine and mixed equally, if a little bran, corn meal and roots be added, will make a very substantial and tempting ration, and will be a change from common hay and straw. Sugar beets will be much relished, and will not taste the milk like turnips, &c. She should also have free access to salt at all times, which will not only increase the quantity of milk, but also greatly improve the quality of it. Pure water at all times is another very important matter, as bad water will make bad milk; so, good, pure water will make pure milk. Her stable next calls for our attention. It should be warm and comfortable, and always kept clean and well ventilated, or first-class milk cannot be expected. If a little lime be sprinkled on the floor of the stable occasionally it will do much towards keeping it pure and sweet.

The milk should be thoroughly aired within one hour after it is taken from the cow, to rid it of all stable odors and other gases, which hinder the manufacture of good cheese. The milking should be done by a very careful, kind-hearted person, who milks with dry hands, and as rapidly as possible without being harsh. Milking with dry hands can be done as easily and quickly as with wet hands, and is much cleaner. Rapid milking will make the cow let down her milk more freely, and so increase the quantity.

The cheese manufacturers must also take steps towards improving the quality of milk delivered to them, by assisting or at least encouraging the dairymen to produce a better quality of milk. If they would by some means test the milk supplied them, and pay according to quality, much good would undoubtedly result. They could grade it the same as the millers do the wheat, by giving a certain price for a standard quality of milk, and raise or lower the price according as the milk supplied them went over or below the standard.

The farmer, generally, is slow to adopt any new idea; but if he saw his neighbor was getting more for his milk than he was for his, he would naturally enquire into his neighbor's methods of producing it, and strive to imitate them.

The use of pure-bred sires of the best dairy families would in a few years very much improve the dairy cows; and as the cows improve their owners will generally become more interested in them, and so take better care of them, when they find there is money in it. Then, and not till then, will the milk be much improved in quality. The above simple advice, though not all bearing directly on the subject, will produce a better quality of milk, if heeded.

There are good prospects of a cheese factory being established at Cypress river next spring. Mr. Siver, who manufactures cheese at the Icelandic settlement south-west of there, has offered to remove the plant to Cypress river if a suitable building is procured. The milk from one hundred and eighty cows is already promised.

The best only pays. It is the last few cents on a pound of butter that constitutes the profit. In fact it is very doubtful if there is a profit on anything but the best. Besides the pleasure of selling an article that everybody wants. Mrs. S. L. Eadie, eight miles south of Winnipeg, has received twenty-five cents per pound all summer for her butter, and the trouble has not been where to find customers but how to supply all of them. There is room for many more of this class of buttermakers.

Butter-Making.

It would be well if butter-makers understood the nature and composition of milk in order to be a successful butter-maker. Without going into fractions, average good milk contains about the following:—Water, 87%; butter, about 4%; other solids about 9% to 10%. The art of butter-making is to separate the butter and leave the other solids in the milk. As nearly all the butter made in this country is from cream, the first point is to separate the cream from the milk in as perfect a condition as possible.

1st. The milk should be set in a perfectly clean, well-ventilated place, where nothing else is kept, and the room so constructed that the temperature can be regulated as desired, and to have a refrigerator to cool it down when required. There should be another room where the cream can be ripened and churned and the work of the dairy performed. Very few farm houses have the proper conveniences. The cellar is often used to set the milk in, and the kitchen used to ripen the cream and do the dairy work; the cellar would be all right if it has these conditions and conveniences referred to; but if the cellar is used for a general store room for the house, and also to set the milk in, it is impossible to have fine butter under such conditions. Bad surroundings and bad company are fatal to making fine butter.

2nd. In setting the milk in pans, as is the common custom, it should be warmed by adding warm water to bring it up to about 85° to 90° temperature. By doing this the butter globules rise to the surface more readily and separates more easily from the casing and other solids in the milk, and nearly all the cream will be got out of the milk in a shorter time. It is better not to stand any longer than the cream all rises, which, in ordinary circumstances in a temperature at from 40° to 50°, should be ready to skim in twenty-four hours.

3rd. When taken off keep it cold till you have enough gathered for a churning, and then stir it well and warm it to 60° or 62°, and add one pint of good pure buttermilk to every three gallons of cream, and set in a warm place where the temperature will be kept uniform, and the cream will ripen in about twelve hours and be ready for the churn. The ripening of the cream is a very important matter, both for quality and quantity; if it is not properly ripened the flavor will not be developed, and it will be of a weaker body and want of quality. If the cream be over ripe the acid will be too far advanced, and the fine sweet aroma in flavor will be killed, and the quality will be poor.

4th. Churning. Scald and clean the churn properly; put in the cream and heat, if need be, to 64° to 68° temperature, by adding warm water to bring it to the desired heat; this would be too high for summer, but not for winter; if the butter is pale in color, add a little coloring to suit the condition of the butter, and churn steady but not too fast; thirty-five to forty-five minutes should bring the butter in small granules. At this stage add a quart or two of pure, cold water to the churn; it firms the butter and helps to separate it from the milk. The churning is merely a mechanical operation to bring the butter globules together to strike each other, so that they may adhere together without being broken up. If butter is churned too warm the globules are soft, and get bruised and broken, the result will be greasy butter with no grain. The churning being finished, I will reserve the handling of the butter for next paper.

DAIRYMAN.

The Dairy Test at London.

We were not surprised at reading the spirited and flattering remarks of your correspondent, the enterprising lady of Brockville, in your November issue. She certainly deserves great credit for the admirable manner in which her animals are fitted and brought before the public at the different exhibitions in this Province, and we wish her all the success she is entitled to. It was no doubt an anxious time with her when her favorites were on this trial test at London. Hope and fear must have alternately prevailed as she reviewed the reminiscences of the past. The final result of a similar trial at Toronto and Kingston in 1882; at Toronto again in 1884; at Ottawa in 1887, and at Kingston Provincial last year, where her petted Jerseys so signally failed when competing with Ayrshires. Hence we can imagine the exuberance of joy this lady felt when she was declared the winner.

No one, I presume, will for a moment doubt the aristocratic and fashionable breeding of the animals that competed with the Ayrshires for the dairy prize at London. Therefore, I look upon this rehearsal of pedigree and Stoke-Pogis tirade as somewhat superfluous. The one great object that interests the general public is to ascertain, if possible, which breed of cattle furnished the material for the best dairy cow for the least amount of capital invested. Pedigree, I imagine, is a minor consideration, and, with your permission, Mr. Editor, I shall endeavor to show in this article that had the test in question been conducted on correct principles, and according to such laws and regulations as governed such tests at former exhibitions, when Professor Brown, Mr. Cheeseman, and others, were the judges, rules that take precedence in Britain and with our neighbors across the line, the Jerseys would have fallen in the rear, and the Ayrshires, as on most former occasions, would have been declared the victors.

Professor Robertson does not say how he estimated the percentage of profits as given in his report. Evidently he does not allow anything for the quantity of milk produced, only its quality, viz., its butter fat and solids. This ruling we object to as being an unfair and absurd way of judging, and I think the public in general will look upon it in this light also. Should not milk be estimated at so much per quart as well as butter at so much per lb.? Will 50 lbs. of Jersey milk make as much cheese as 100 lbs. of Ayrshire milk? We all know that Jersey cows give the richest milk of perhaps any other breed, and we also know that the great majority of them give only a very small quantity of it, and the problem that wants solving is, which is the most useful and profitable animal, and best adapted to supply the wants and requirements of the public as a general purpose cow: the one that yields a small quantity of milk but rich in cream, or the other that produces double the supply of milk not so rich in butter fat, but still better to fill the requirements of family and farm use, and producing nearly twice as much cheese, if manufactured into that commodity? We submit, therefore, that in a test of this nature both quantity and quality should be taken into consideration, and so many points be counted for each.

The Ohio Farmer gives the rules and regulations as practised in the United States, and adopted at their last State Fair, where different

breeds competed against each other, as follows:—
"One point shall be allowed for every pound of milk, twenty points for every pound of butter fat, four points for every pound of other solids, and one point for every ten days since calving after the first twenty days."

Here I notice two of the Ayrshires were only three-year-olds, and a certain number of points ought to be allowed for that, as they could not be considered to be at their best. One of them had been calved about eleven months, and Empress twelve months. The Jerseys were five years old, and in their prime, and all of them comparatively newly-calved and in full flow of milk. All these things should be considered.

Taking then the standard above quoted as the rule to judge by, and Professor Robertson's report as the amount of product yielded by each three cows, it will stand thus:—

AYRSHIRES.	
245 lbs. milk, at one point.....	245.00
8.54 lbs. butter fat, at 20 points.....	168.80
26.09 lbs. solids, at 4 points.....	104.36
639 days since calving.....	63.90
	582.06
JERSEYS.	
175¾ lbs. milk, at one point.....	175.75
14.12 lbs. butter fat, at 20 points.....	282.40
27.22 lbs. solids, at 4 points.....	108.88
136 days since calving.....	13.60
	580.63

Here is a small balance in the aggregate in favor of the Ayrshires, instead of a large one against them, and had the product been converted into cheese, which is the great dairy export of Canada, and which without doubt attracts the attention of the great majority of those engaged in this industry everywhere, the balance in favor of the Ayrshires would be very much larger. Allowing ten lbs. of milk to ever lb. of cheese and three points for curds, as Mr. Cheeseman did at the Toronto test in 1885, the respective breeds would stand thus:—

AYRSHIRES.	
245 lbs. milk equal to 24.50 lbs. cheese, at 3 points per lb.....	73.50
639 days since calving.....	63.90
	137.40
JERSEYS.	
175¾ lbs. milk equal to 24.50 lbs. cheese at 3 points per lb.....	62.37
136 days since calving.....	13.35
	65.72

This shows about as much difference in favor of the Ayrshires as Professor Robertson's report did in favor of the Jerseys.

There is a small account of twenty-eight cents placed against the Ayrshires for the amount of food consumed in excess of the Jerseys during the test. But this item can easily be accounted for, from the fact that the Jerseys, which had been highly fed previous to the test, were stinted in their food when it was going on. This was well-known at the time, and it was suggested to me to do the same with our cows, but I was averse to such tactics. I wanted a fair and honest test for my own satisfaction, as well as for that of the public. We fed our animals while on trial the same as they had been before. Had we withheld the feed as proposed the Dr. account would have been on the other side. Any one who has kept both Ayrshires and Jerseys, as we have done, will, I think, be fully convinced that the Jerseys will take the largest amount of food of the two, and I contend that had those cows been judged according to their merits and correct rules, as above mentioned, this prize would have been awarded to the Ayrshires. I see, sir, you have very generously offered to give a similar prize again next year, but permit me to say that unless the standard of judging is materially changed, I venture to predict there will be no entries except, perhaps, some Jerseys, for I look upon the rules at London as decidedly one-sided and unjust towards any other breed.

Yours, etc.,
THOMAS GUY,
Sydenham Farm, Dec. 11th, 1889.

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THOMAS GUY,
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Why the Holsteins Did Not Exhibit.

In an article in your last issue headed, "Handled with Gloves," Stockman makes a few remarks that call for an answer. We can scarcely hope to satisfy a man who throws stones from a glass house, protected by an assumed name. But there may be some fair-minded and unprejudiced persons who wonder why the Holsteins were not in the FARMER'S ADVOCATE test at the London Provincial. We are pleased to see the enterprise of the FARMER'S ADVOCATE, but think the test should have been made so all could compete, and would suggest that if a prize is to be offered the time should not be restricted to a few days in September, but breeders should be allowed the option of sending their cows to London, Guelph, or any other place selected, any time during the year, and Prof. Robertson should be asked to conduct the test, as at present. With us it was an impossibility to compete, because our cows are bred to calve in October, so that they will be giving the largest amount of milk and butter when these products are dearest. We may also add that the Holsteins are a new breed in this country, and, although spreading rapidly, yet there are very few matured cows that came in so as to enter the test, and these were owned by small breeders who would not go to the trouble and expense of sending a single animal, and the larger breeders did not have three cows that came in near the right time.

The reason that Stockman gives a fling at the Holsteins (although only two breeders competed) is readily seen. He evidently feels sore at "seeing the people running after the Holsteins," as we heard an old Shorthorn breeder say a few days ago, but Stockman must remember that this is an age of progress, and should shake off his Rip-Van-Winkle sleep and join the procession. His remarks simply imply that Holsteins are rapidly displacing other breeds, else, why should he single them out for an attack? and "a little chap sitting by our side" (a chip out of the old block, we suppose) would not talk of sending them back to Holland, if he were old enough to know that they are a strong factor in our country's prosperity and wealth, just as they have been in Holland. Holstein men should have nothing to fear from competition, as shown by the following results:—

The following tests, open to all breeds, were for the largest amount of butter made on the fair grounds during the respective exhibitions held this year:—

Iowa State Fair, 1st, 2nd and 3rd went to the Holsteins; Detroit International Exposition, 1st 2nd and 3rd went to the Holsteins; Nebraska State Fair, 1st and 2nd went to the Holsteins; Chicago Fat Stock and Dairy Show, 1st and 2nd went to the Holsteins; Ohio State Fair, 1st went to the Holsteins; Michigan State Fair, 1st went to the Holsteins; Tennessee State Fair, 1st went to the Holsteins; Virginia State Fair, 1st went to the Holsteins.

The "English and Scotchmen that simply overran Holland," did see "their highly lauded usefulness," for they brought over these identical cattle and laid the foundation of the Shorthorns, and to the Holsteins they owe their size and best milking strains, as the following quotation from the consular.

Report on cattle and dairy farming (page 98) shows: In referring to the cattle brought from Holland, it says, "These cattle 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."

Trusting that our explanation may be satisfactory to your many readers, and thanking you for the space,

We are, yours truly,
SMITH BROS., Churchville, Ont.

Why Holsteins Did Not Compete.

I notice an effusion from Stockman re the Provincial dairy tests. He seems to take a special delight in the fact that the Holstein breeders did not enter the late test. In fact the bare mention of the name Holstein acts upon him like the proverbial red rag. But, as he professes to be a Shorthorn breeder, it is plain that he has sense enough to know which boot pinches him most. But assertions unsupported by proof are no arguments, and will not aid any cause.

As to why Holstein breeders did not enter the tests we do not know, as we are not in the confidence of those breeders, but it is safe to say they had as good reason as other breeders (the Shorthorns, for instance). One cause may have been, and likely the true one, because these breeders did not have the requisite number of cows, fresh or in good shape, to make a creditable display of their capacity. It would be natural for an exhibitor not only to desire to secure the coveted prize, but also to show to the public as near as possible, under the great disadvantages of a public test (which disadvantages we will notice further on), as near as possible what his favorites are capable of doing, and the public would naturally expect that the exhibitors would make the best records they could. Now, as practical men, we know this could not be done if the exhibitors did not have their best cows in "shape," and "coming in" in October, or even February or March, would not be in the best of "shape," and as after July 1st they are barred, a cow to be in her best would need to calve in June. Now, this is not the time breeders are in the habit of timing their cows to calve, hence it would be necessary to have a year, or, in many cases, two years, to get into shape. But, at the same time, a breeder might have his cows just right for business the first year. Evidently the Holstein men were not so lucky, and as they are the newest in the field, have therefore the fewest to select from, many of the breeders having made no calculations to show at all, and have been paying more attention to raising calves, which sell so readily to what other breeds do, hence neglecting record making. Or they may have had valid objections as to the regulations. We don't think so many conditions and regulations were ever imposed in a test before, and although they are undoubtedly made to be equally fair to all contestants, it would indeed require a professor to determine the bearing on practical dairying. As I am not a professor, but a practical dairyman, I would rather look at the regulations from their working in practice.

If I remember right cows "A" averaged about 35 lbs. of milk daily, and cows "J" about 20 lbs. (It is not necessary to be exact to a fraction to illustrate what I want to.) Now, cows "J," by total points allowed, were as to "A" as 44.—odd is to 11.—, or, in other words, cows "A" would need to give four times the quantity of their milk to equal the quantity given by cows "J," or the Ayrshires would need to give 140 lbs. of their milk to equal 20 lbs. of that given by the Jerseys. If these deductions are right, they would have a big contract on hand to knock the little Jerseys out, and evidently there is a "hole in the wall," as there cannot be this much difference in the actual values of the two milks, although one was poor and the other rich in "butter fat," and also as the report does not show an enormous difference in the amount of food consumed. Of course, if this

is all wrong I stand open to correction. In fact, I give it to start a discussion to obtain information as to the bearing of the points allowed on the value of milk in practical dairying. Is "butter fat" everything of value in milk for either cheese or butter? Prof. Robertson says, in his able article in your December issue on "Butter Making in Winter," that the skim milk, when properly saved, is equal to nearly one-third the value of the butter. From this I would conclude I would rather have a cow that would give 40 lbs. of milk testing 3.50 per cent. "butter fat" than one giving 20 lbs. testing 7 per cent., even for butter, I would be away ahead on the skim milk.

Stockman seems to expect the Holstein breeders to equal in public test the tests made in private, and often quoted naturally by breeders of this class of stock. If this is not done, why all are a delusion. Now, as has been said in reference to these very large private tests, "They appeared to be phenomenal yields of dairy cows to those unacquainted with the capacity of a specialized cow under the high pressure system of feeding." But large as they are, be it remembered that even the largest are backed by affidavits of the "owners," attendants, merchants, bankers, rival breeders and preachers. And could more disinterested parties be found to witness a public test. In fact, a good authority says, "many of these tests are backed by enough evidence to hang a dozen men."

But why are they not equalled in "public tests?" A practical man should not need to think twice to know "Why." The Breeders' Gazette, in a late able editorial, reviews the whole question, and says:—

"Dairy cows will not yield their normal amount of milk or 'butter fat'—especially the latter—when subject to the strain of fair ground excitement. The trials all prove this; in fact it has gone on record but once that a cow has made over 3 lbs. of butter in twenty-four hours in a public test. But observe how this failure is interpreted by skeptics. Private records are contrasted with public trials by the same cow, and the marked discrepancy is hurled, as if a weapon of utter demolition, against all private tests. In this the skeptics betray either an ignorance profound or a malice reprehensible. When consideration is given the subject, the wonder is that thoughtful students of dairy cattle ever consented to enter their cows in a show ground test. That the nervous function plays a prominent part in the elaboration of milk and 'butter fat' passes all dispute. A change of milkers, all other conditions remaining the same, will, in many cases, lessen appreciably the amount of 'butter fat' elaborated and 'let down.' Railway journeys, new quarters, strange cattle, the excitement of show ground, and more especially strange water, cannot fail to operate disadvantageously to a cow when put to a test. The one item of water alone is sufficient in itself to prevent a normal yield."

This must commend itself as a very common sense view of the question, and necessarily all public trials must be a very incomplete test. Incomplete, we say, because for reasons given a cow can never show her full capacity in a public test, and because there can be no fixed rule to determine how much cows will vary between public test and private.

So far these remarks apply with equal force to all breeds, and public tests are only of value to

show comparison between rival breeds. They do not, cannot show the capacity of a cow in the "quiet of her own home," and at her best. I think if the public more fully realized this breeders would not have so much antipathy to public tests.

Now, as Stockman says he is "sick," it would be cruel to force any more physic. But as we know there are many of your readers want to learn more about Holsteins, in the next issue of the ADVOCATE I will give a few of their "performances," and will confine ourselves to public records, as your space will not allow to give testimony that supports private tests.

R. RICE, Currie, Ont.

[TO BE CONTINUED.]

The Dairy Cow Test.

That the foremost object of the FARMER'S ADVOCATE is to serve the interests of the country goes without saying. The dairy cow competition at the late Provincial Fair was a special effort in this direction.

The handsome trophy which the editor offered was not merely a boon to the winner but it proved the means of drawing out the class of facts farmers most need. The general farmer is not so much concerned about the rivalry of breeds as to secure a cow that will yield him the most profit upon her original cost, her care and her feed. This test, though but two breeds were represented, let light in upon that subject.

Furthermore, it should stimulate farmers to test every cow in their herds not only for quantity of milk, but quality. In this test one set of three cows showed a profit of over 47 per cent. on the value of food consumed, as against 13 per cent. by their competitors. In the course of a year that would amount to a "pretty penny." I read of a shrewd Yankee who largely increased his profits by testing all his cows; then retaining for butter-making the milk of cows specially rich in "fat" and sending the rest to the cheese factory. He skimmed the herd instead of the can.

Were the conditions of the ADVOCATE'S dairy competition not susceptible of improvement? I notice that Prof. Robertson, who conducted the test, intimates, in his report to the ADVOCATE, that he has modifications of the rules to suggest, if such tests are continued. In a comparative test it is desirable that the conditions be as nearly as possible alike. The point in this case is that the competing cows were fed on very different rations indeed. Let me re-adjust and analyze Prof. Robertson's tables. In weight the foods were as follows:—

	Ayrshires. lbs.	Jerseys. lbs.
Food	86½	66½
Grain	125	69½
Hay	36	137
Green corn stalks	36	137
Total	247½	289

The stalks ate by the Jerseys were cared; those fed to the Ayrshires "broadcast." In the aggregate the three Jerseys ate 41½ lbs. more than the three Ayrshires, but the latter had the more costly food:—

	Ayrshires. cents.	Jerseys. cents.
Grain	77	60
Hay	62	35
Stalks	9	25
Total	\$1.48	\$1.20

The Ayrshire grain ration was chopped oats, 44 lbs.; chopped peas, 19½ lbs., and bran 23 lbs.; in all 86½ lbs. The Jersey received equal quanti-

ties (mixed) of chopped barley, oats, peas and bran, 66½ lbs. The kinds of grain fed and the quantities were both different.

In the three days the three Ayrshires gave 245 lbs. of milk; the Jerseys, 185 lbs.; but the butter fat in the former ranged for 2.75 to 2.88 per cent. while in the latter from 4.46 to 5.04. The difference in solids other than fats was not so marked.

What was the result? The Jerseys converted the cheaper and weightier food into the more valuable though less bulky milk, showing 47 per cent. profit on their food as against 13 by their rivals.

Now, would it not have been more valuable to test what these cows would have done fed similar rations preparatory to and during the test? Did the Ayrshires receive the best possible food? With the cheaper Jersey ration would they have done better or not so well? It is worthy of note that the Jersey diet was largely corn stalks cared, but this was the least costly item in their bill-of-fare.

Objection may be raised that it is impracticable to take the feeding out of the hands of owners. Many cows will not do their best on a public show ground, but because there are obstacles in the way are public tests to be abandoned?

This test has opened an interesting field of inquiry and the ADVOCATE deserves a vote of thanks from those interested in the cow business.

WM. THOMPSON, Jr., Derwent, Ont.

Co-operative Creameries.

BY PROF. JAS. W. ROBERTSON, GUELPH.

The creamery provides for the manufacture of milk into one of the most wholesome articles of food, which everyone wants and likes, and which can be sent from the farm with the largest profit to the man selling it. From the milk yielded by the cows of this province we make, in large quantities, cheese,—a product which is a more concentrated and nourishing food than butter is. I want just here to show the weakness of our butter-making system. Of the milk yielded by the cows of this province nearly as much is converted to butter as into cheese; there is not much difference. Our cheese has won for Canada the reputation of being one of the finest cheese producing countries in the world, while our butter has earned for us the unenviable notoriety of sending to England the strongest butter received there from any part of the world. There must be something wrong, you see, in the way we do things, when we are not able to earn as good a reputation for producing butter as we have established in connection with our exports of cheese. Let me cite to you the first mistake we have made in regard to our butter making operations. There was a time when we had no reputation as a cheese-making people; when the cheese was made at home in the dairies of the farmers. Now, of all the cheese made in this province 99½ per cent. is made in cheese factories, and only one-fifth of one per cent. in home dairies. You have there, in my opinion, in that short set of figures, the real reason why our cheese-making business has attained such a high reputation, while on the other hand our butter-making operations have secured for us, in market reputation, only that which too frequently characterises the product itself—a bad odor. Of all the butter made in the province from the milk production of nearly as many cows as we used in cheese-making operations, less than three per cent. is made in creameries. Less than 3 per

cent. in one case as against 99½ per cent. in the other. If we had this position in regard to butter-making reversed, and only three per cent. of our butter were made at the farm dairies, we would get much higher figures for our total product.

Let me examine still further this making of 97 per cent. of our butter product in the farm dairies—mostly small. Is that an economical and profitable way of producing butter? To a man who gives the matter any serious consideration it at once becomes evident that it is not. The total make of butter in the farm dairies of the province is estimated at over 30,000,000 lbs. annually. I have taken some pains to discover what amount of labor is employed in making that quantity of butter, by finding out how long it takes to make ten pounds of butter in the home dairy, and I find it takes on the average just six times as much labor to make a pound of butter in a small dairy as it required to make a pound in a creamery. The amount of labor required to make 30,000,000 pounds of butter in home dairies is equal to 750,000 single days labor, whereas if made in creameries it would take less than 130,000 single days labor. You would have 620,000 days of ten hours each of labor to spare in the homes of Ontario by having this butter made in creameries. Now, in this province we should be proud, above all things, of the virtue, industry, intelligence and beauty of our women; and yet our farmers are crushing the spirit out of their wives and daughter by making them milk cows, set pans, churn butter and perform all the heavy work incidental to that process. This seems to be a small factor in our national prosperity, but it is really a very important one, that the women on our farms should have more leisure for true womanly work, and spend less of their time in producing butter which sells for twelve to fourteen cents a pound, the average price of the summer dairy butter of this province. I haven't a word to say against the butter these ladies make, but I say it is wasting labor having a large number of women doing that which one man could do. Then, again, there is more than six times as much capital invested in dairy utensils in private dairies as would furnish creameries with capacity to do the same work. Do you suppose that any manufacturer could run for any length of time in competition with another manufacturer producing the same class of goods if he actually had to pay six times as much for his labor, and to invest six times as much capital in his machinery and plant as the other did? He would be played out of business in two weeks if he kept his books well, and inside of a short period whether he kept books or not. Yet that is exactly what butter-makers have been doing, and they wonder why butter-making does not pay. It can be made to pay, but we must make our methods economical.

The shipment of store cattle to Great Britain the past season has proved a success, and we understand plans are being considered there for the extension of the trade next season.

Wisconsin still asks and compels the cheese makers to give a pound of cheese for every ten pounds of milk. Canadian cheese has nothing to fear from Wisconsin competition while that system is in vogue there.

Hoard's Dairyman seems to think it impossible for a private dairy to make better butter than a creamery. It will be when each individual patron of the creamery takes as good care of his cows and milk as the best private dairyman, and not before.

The Farm.

A Straw Binder.

In response to a prize of \$10,000 offered by the Illinois State Grange for a practical machine or attachment to bind grain with straw, about forty inventors, from nearly every state in the Union, from Canada and Scotland, sent applications. Only one working model of full size was sent, to which the Committee tendered the prize. The Committee have seen this machine bind grain, and it does its work much tighter and better than binding by hand. It has an attachment for short straw or grain, which can be set in motion by the foot of the driver. The machine seemed perfectly easy to operate, and quite as simple as the twine binder, the knotter being stronger in construction, and yet is less cumbersome. The patentee proposes having his machine ready for operation in February, 1890, and will start it down in the south, working up to the north, as the grain is ready for cutting.

Farming Affairs in Great Britain.

(From our English Agricultural Correspondent.)

London, Dec. 4, 1889.

EARLY WINTER.

Winter has set in with unusual severity, and very early, as we have already had a week of sharp frost, and snow has fallen heavily in some parts of the country. The visitation has come too soon for many farmers, who had not sown all the land intended for wheat. We have had 10 degrees of frost on the ground, even as far south as London; and, of course, all ploughing, as well as sowing, is stopped for a time. Probably most of the land not sown will be planted with barley and oats in the spring, the price of wheat not being at all tempting; whereas, good samples of barley make high prices this season—as much as 5s. to even 6s. 3d. a bushel; and oats sell better than they did last year. The first three weeks of November were fine, almost without interruption, and farmers in most districts got in all the wheat not put in before, except here and there a field intended for wheat, after the turnips upon it had been fed off; but there are always "afternoon farmers" to be found, and such men had been dilatory, and are caught by the early winter. But this is not the worst of it, for there is grave reason to fear that severe frost occurring just after a great deal of wheat has been sown, will do it harm. When wheat has once got above ground, no frost that we get in this country hurts it much, except in certain light soils where the plant is liable to be upheaved, so that the roots are exposed; but when the grain is swollen with moisture, and not sprouted, severe frost will burst it and spoil it. Again, when the grain is kept below the surface long, its young sprouts are eaten off into their very hearts by grubs, and then a thin and gappy plant is the result. I fear we shall have a bad plant, as a rule, as even some of the early-sown fields do not show regular rows.

FAT STOCK SHOWS.

Quality, rather than quantity, seems to be the rule at the fat stock shows of the season. It was so at the first, held at Norwich the other day; it is so at the Birmingham show, now open; and it will be so, as far as cattle are concerned, at the Smithfield show, to be opened in London next Monday. I give the entries for the two principal shows, as compared with those of previous years:—

BIRMINGHAM.				
	1889.	1888.	1887.	1886.
Cattle	199	251	234	182
Sheep	71	69	101	71
Pigs	88	78	99	81
Roots, corn and potatoes	268	165	248	237
Poultry and pigeons	3,795	3,492	3,529	3,772
	4,421	4,055	4,290	4,396

SMITHFIELD.				
	1889.	1888.	1887.	1886.
Cattle	265	318	300	229
Sheep	205	201	183	173
Pigs	74	85	83	85
	544	604	566	487

The fact is, that too many cattle were fattened for the Christmas market last year, and there was great disappointment at the prices realized. Therefore, feeders have not got so many ready on the present occasion; and what will be missed at the show this year will be a number of beasts sent last year and on three previous occasions, not with the remotest chance of getting a prize, but in order to be sold, as show beasts often are, and can be obtained in the ordinary way. The plan does not answer, as it was last year.

There is much disappointment here at the continued bad trade for wheat, which, if the statistical position counted for anything now-a-days, ought to be 10s. a quarter (half a crown a bushel) higher than it is. The average last week was only 30s. 1d. a quarter, or 4d. more than that of barley; while the top price of English wheat is only 37s. 1d., and that of barley is 50s. New Zealand long berry wheat is quoted up to 39s. 1d., and a rare sample of English may possibly be worth as much, though no such price is quoted. In spite of the recent rise in price, more weeks of firmness, and the present cold weather, the average is only 1s. 8d. a quarter above the lowest weekly average of the year. Yet the Russian ports are now closed, and the estimate of the American crop is 30,000,000 bushels less than was at one time confidently predicted. People talked about 500,000,000 bushels; and the Statistician of the Department of Agriculture now tells the public that 470,000,000 bushels of 60 lbs. may be expected. It is true that the Australians furnish us a surplus, but that cannot be enough to make up for the diminished expectations of receipts from America. The live stock and meat trades are in a very satisfactory condition, and the prices of butter and cheese are moving upward. Cheshire cheese sells at 34s. to 82s. per so-called cwt. of 120 lbs.; Cheddar at 66s. to 74s., and Canadian at 56s. to 58s. Trade is good in the country, generally, and the prices of meat and dairy produce seem likely to keep up well.

AGRICULTURAL POLITICS.

Mr. Gladstone, speaking at Manchester on Monday, declared himself in favor of parochial, as well as district councils, in addition to the county councils recently created. He also proposed that parish authorities should be empowered to take land compulsorily, compensating the owners, in order to let it in allotments to laborers. The title question, however, is the chief agricultural one, as far as politicians are concerned. A title bill is expected to be one of the first measures to be introduced by the government next session; and there is no doubt that it will compel landlords to pay the impost, which they never ought to have shifted on to the backs of their tenants.

THE AGRICULTURAL RETURNS.

The complete agricultural returns for the United Kingdom have now been issued by the Board of Agriculture, and I have compiled from them the following tables:—

UNITED KINGDOM.				
	1888.	1889.	Increase.	Decrease.
Grain crops	9,785,697	9,637,354	148,343	
Green crops	4,729,191	4,541,766	187,425	
Clover and grasses under Rotation	5,979,351	6,188,502	209,151	
Flax	115,795	116,192	397	
Hops	58,494	57,749	745	
Small fruit	36,941	42,506	5,565	
Bare fallow	473,116	531,010	57,894	
Total arable	21,178,585	21,115,073	63,512	
Permanent pasture	26,688,229	26,816,092	117,863	
Total cultivated area	47,876,814	47,931,065	54,251	

CORN CROPS IN DETAIL.				
Wheat	2,668,236	2,544,549	123,687	
Barley	2,304,448	2,316,044	51,596	
Oats	4,177,121	4,140,563	36,558	
Rye	81,176	85,291	4,115	
Beans	344,312	335,191	9,121	
Peas	242,414	225,726	16,688	
Total	9,795,697	9,637,354	148,343	

It will be seen that the decrease in the area of arable land, together with the increase in the total cultivated area, due to reclamation, has been absorbed in permanent pasture, while grain and green crops (potatoes, roots, cabbages, vetches, &c.) have given up ground also to clover and grasses under rotation. There is no doubt that the system of laying down land in temporary pasture is gaining ground, and an excellent system it is.

PURE STOCK.

	1888.	1889.	Increase.
Horses	1,906,702	1,945,263	38,561
Cattle	10,268,600	10,272,765	4,165
Sheep	23,988,716	23,484,774	503,942
Pigs	3,815,643	3,905,865	90,222

Here, then, is an increase all round, but not sufficient to be satisfactory. Ten years ago we had 2,753,184 more sheep than we have now, and 10,008 more agricultural horses, while the cattle were fewer by 311,209, and the pigs by 727,579. Thus in the ten years we have lost more in sheep than the small increase in cattle makes good. The small decrease in horses (and only agricultural horses are enumerated) is natural, as there are fewer acres under tillage. As to the pigs, they consume grain rather than grass. Therefore, we devote more land to live stock now than we devoted ten years ago, and feed fewer animals upon it. There were this year, 2,157,784 acres of permanent and temporary grasses and clover in the United Kingdom in excess of the acreage of 1879. In Great Britain alone, the permanent pasture has increased by 1,699,139 acres in the decade, the arable land having decreased by 941,566, while 757,573 acres have been added to the total cultivated area, and absorbed also in permanent pasture.

SALES OF PURE-BRED STOCK IN SCOTLAND.

The annual return of Scotch sales, published by the Aberdeen Free Press, shows the course of prices during the past season as compared with values in previous years:—

	No. Sold.	FOLLED.		Total.			
		Average.	£ s. d.	£ s. d.	£ s. d.		
1884	773	26	12	11	25,327	8	0
1885	885	25	14	1	22,748	3	6
1886	740	25	17	6	19,147	10	0
1887	851	17	4	6	14,315	11	6
1888	939	21	4	5	19,927	14	8
1889	1,114	21	18	0	24,460	8	6

SHORTHORNS.							
1884	762	27	17	9	21,249	17	6
1885	720	24	10	8	17,664	9	0
1886	773	22	19	9	17,898	14	0
1887	743	18	14	9	13,924	11	6
1888	619	22	11	6	13,975	9	0
1889	569	22	15	0	12,970	13	0

It will be noticed that there has been a rise since 1886, but that the high values of earlier years have not been recovered. The explanation is, that there are more pure-bred animals in the world than there were, and that fancy prices are not often given now. But ordinary market cattle sell remarkably well.

Manitoba Experimental Farm, Brandon, Man.

This farm, situated one mile from Brandon, on the north bank of the Assiniboine River, containing six hundred and forty acres, is most admirably adapted for the purposes for which it was selected. In this vast area is found all the different varieties of soil of the Province, from a deep, rich loam on the flats, six feet in depth, to a light sand and gravel on the upland, and as the experiments will be duplicated or even triplicated if necessary, each one will give results on the various soils of the Province. The farm is watered by three spring creeks and a beautiful lake half a mile in length and six or seven rods wide. It is centrally located, three of the leading trails from the north converging at this point, and Brandon is fast becoming a railway centre. The farm is chiefly prairie, although there is some small timber and a belt of ash on it. Although this is the first season for it a great amount of work has been done. Six miles of fence has been built, consisting of a top rail of two by four scantling and four strands of barbed wire with posts eight feet apart, and is painted a reddish brown, which gives it a pleasing appearance. There is one hundred acres of good, natural meadow which will be appreciated by those who are acquainted with Manitoba farming. An excellent road has been graded across the place (one mile long), and is now being gravelled with gravel from a pit on the farm. This is being done by the Government on account of closing up the trail which ran angling across the farm. Old buildings have been utilized this year, but several new ones, which are much needed, will be built next year. Excavations have been made for the basement of the new barn, 108 x 50 feet, which will be completed in time for next season's crops. The basement will be ten feet high and serve the purpose of a stable, while the upper part will be for storing crops. The contract for building a residence for the superintendent has been awarded. Houses will also be built for the horticulturist and farm foreman in the near future. Other buildings are contemplated such as pig pens, sheep and poultry houses, &c. A belt of timber, one hundred feet wide and one and one-half miles long, has been planted, consisting of various evergreen and deciduous trees. Other belts of a similar nature will be planted through the farm in the future. Improvements have been made in the way of ditching and several places will be tile-drained in the spring. The object of this farm is to carry on experiments in all kinds of grain-growing that will be likely to prove beneficial to the Province, as well as in large and small fruits, forestry, dairying, cattle, beef and dairy breeds, sheep husbandry, swine and poultry. The experiments this year are not regarded as conclusive by the superintendent, although several valuable facts have been elicited, or, properly speaking, confirmed. Ladoga wheat has proved itself ten days earlier in ripening than Red Fife, which must be pleasing to Manitoba farmers. In some quarters there seems to exist a fear that this variety will not prove equal to the Red Fife, but from all we can learn it will not be far, if indeed any, behind it, and the early ripening will, in many seasons, place it far ahead of it. A new variety, the White Delhi, promises exceedingly well, but the superintendent feels that he is not justified in speaking confidently until further tests are made.

Perhaps the most valuable experiment in wheat this year was that of sowing in the fall. Red Fife wheat sown in November produced the largest crop, viz: twenty-two bushels per acre. The soil seemed to stand the drouth better than where it had been worked up in the spring. For fuller data and results of all experiments see the annual report which will shortly be issued, and which may be had on application.

The experiments with oats this season have proved satisfactory and will be continued another year. The root crop has not been entirely satisfactory, although the potatoes have proved remunerative at current prices. Special attention will be given to this department. The superintendent claims to have proved conclusively that a dry summer can be safely tided over by the growth of fodder crops.

The cultivation of native grasses has been a decided success; grass sown last spring grew large enough to be harvested from seed this season. Several varieties have been sent to the chemist of the Central Experimental Farm, Ottawa for analysis. Cultivations of clover, timothy, etc. have also been made this season, but further results will be made. A number of raspberries, currants, strawberries, etc. have been planted, but no fruit has been reached, as the plants have not passed through a winter yet. Special efforts will be made to produce varieties of fruit suitable for this country. Importations have been made from various quarters, and native seedlings will be planted. In the grain department the experiments have been of every imaginable kind—early and late sowing—varieties against varieties; manure and no manure; stubble vs. fallow; drilling vs. broadcast seeding, etc.

Concerning the future of this farm no one can speak with certainty, but if the same zeal, economy, and general sound business principles are displayed that has characterized the management thus far, it cannot fail to prove beneficial. The selection of a superintendent was doubtless a matter of considerable difficulty to Professor Saunders, but in Mr. S. A. Bedford he has secured a man who will doubtless give general satisfaction. He has had an experience in Manitoba and the Territories, a considerable part of which was spent as a successful farmer on his own account. He seems to be the right man in the right place.

The Wheat Tester.

That grading wheat is a proper basis for prices most of our farmers will allow, but it is just as unanimously agreed that by the use of the small tester, that is, a thirty-second and sixteenth part of a bushel, as is now in general use, an injustice can, and has already been done. By its use in dishonest hands, quite a difference in the grade is quite possible. It also does not give credit for fractional weight; therefore, it is not as correct as the half-bushel or bushel weight. The fact is, in the past millers have taken matters in their own hands, and the old act, grinding for a twelfth, first in force nearly one hundred years ago, and still in force, has, in many cases, been a dead letter, and no doubt makes farmers careful how they endorse an innovation, such as the exchange table, also laid down by the Millers' Association, which pays a still higher premium for good wheat, while it is harder still on a light sample.

The proposal to have this matter settled by allowing the Minister of Agriculture and Secretary of the Millers' Association to appoint arbitrators, is, perhaps, as good a solution of the problem as any other. As it stands, none are quite satisfied. As far as the additional tariff on flour is concerned, the farmers of the Dominion should certainly hold up both hands for this

measure, as it is a decidedly further protection for their wheat, and would also give them the benefit of more and cheaper offal. The duty at present stands in favor of flour being brought in, there is a differential tariff of 21c. per barrel in favor of flour rather than wheat. It also favors American millers before our millers, grinding in bond.

This is a subject that our farmers should fully consider, and make their views on the matter heard. The more mills there are in Canada, the greater the home demand for our wheat.

The Ontario Agricultural College and Experimental Farm.

COLLEGE DEPARTMENT.

During the year just closing the attendance of students has exceeded that of 1888, the number now at the college being eighty-seven. The full courses of lectures have been given by various members of the staff, and the increasing attendance and interest not only indicate the greater success of the college during the year, but also the hope of still better work in 1890. The completion of the farm buildings and the addition of stock suggest still better work in the lectures on the care and handling of live stock. The laboratories and other departments of work are also fairly well equipped for work in connection with them. The addition of a complete system of sewage disposal is the most noticeable addition of the college buildings.

CHEMICAL DEPARTMENT.

In addition to the regular college work a great deal of analytical work has been undertaken in the chemical laboratory. Samples of the best Ontario oats have been analyzed and results published. Twenty-six samples of sugar beets, grown in the central counties of Ontario from German and Bohemian seed, have been carefully tested for their sugar, with a view to determining whether beets can be produced by Ontario farmers capable of producing good sugar. The results in some cases have been exceedingly favorable. At the time of making this report forty-two samples of corn grown by the Dairy Department are being analyzed in duplicate. The results of all this work would be too extensive to report here, but will appear in full in the College report.

FARM AND EXPERIMENTAL DEPARTMENT.

The most important point in connection with the farm during the past year has been the erection and completion of the new barns built to replace those consumed in 1888. Briefly, these barns are the old ones with improvements suggested by experience. They cost in the neighborhood of \$20,000, and are a credit to the province.

FARM AND EXPERIMENTAL DEPARTMENT.

The following is an outline of the work carried on at the College Farm this year:—An unusually large proportion of the farm was sown to grain, owing to the limited acreage of hay and pasture during 1888. Without any exception the crops produced a large amount of straw, although the grain yield is not proportionate; owing to the large acreage that lodged, the labor of harvesting was unusually heavy. The root crop was not very good, owing to the excessive wet of June, which delayed planting till in July. A field of rape was grown, and a number of lambs fattened upon it with a good deal of satisfaction all round. Several hundred dollars worth of pork was raised and marketed. The stock was gradually replenished throughout the season, so that now the barns are very well filled. All

the new purchases were made in Ontario and Quebec. In the experimental department some three to four hundred experiments were carried on with grains, corn and grasses. The most serious drawback to the complete success of these were from rust. Experiments were carried on with potatoes, turnips, and mangolds, of many varieties, and with sugar beets. Experiments were also carried on applying ashes to meadow land. An uncompromising war was carried on with all manner of weeds over the whole extent of the farm. About 1½ miles of board and wire fence were built. Paddocks were constructed for the bulls to run in. About 500 loads of stones were removed from the fence corners and deposited in the bottom of the roads that were constructed. One mile of road was nicely graded and graveled, and the sides made level that they may be sown with grass.

DAIRY DEPARTMENT.

The creamery was opened June 1st, and from the cream received from the patrons a good supply of butter was made, which sold at a good price. The experiments in this department may be referred to under four heads:—

First—A number of experiments have been carried on at the experimental dairy to determine the amount of butter obtainable from cream churned at different stages of sourness, and to determine the amount of butter fat left in the skim milk from different temperatures of setting.

Second—At the piggery, made from the root cellar of the south barn, the effects of feeding samples of buttermilk, skim milk, middlings, cornmeal, peameal and rape ensilage in various combinations to pigs of various weights, have been tested.

Third—The corn experiments covered 20 acres, and included 69 varieties. Tests were made of hills vs. rows, no manure vs. manure, top dressing vs. ploughed-under manure, fall ploughing vs. spring ploughing, superphosphate vs. sulphate of ammonia applied in various ways. Other interesting experiments in regard to corn have also been conducted.

Fourth—A dairy barn has been constructed out of the old south barn, with 16 cow stalls, 4 calf boxes, feed room, and a silo capable of holding 150 tons of silage. The methods of building a silo have here been experimented upon, to determine the cheapest and best methods of construction. The silo was filled with corn below, the millet and rape above. The rape has kept well; it comes out green looking, and pigs are doing well on it. The millet and corn also are turning out well.

In the creamery the practicability of winter dairying is being experimented upon on a small scale.

During the coming year, among other work, the following will be looked into:—Value of warm water in milk production, dehorning, ensilage vs. corn fodder, ensilage vs. grain and hay ration, value of various grains in milk production, experiments with calves, continuance of experiments in regard to best temperature for setting milk.

Their plans for 1890 are to try and make the farm proper pay. To carry on more experiments, and also more important ones than have ever been carried on there. To carry on an uncompromising war against weeds. To continue the improvements on the public roads bordering on the farm, and also the private ones in the farm. To produce a class of stock that will be creditable to the farm.

Some Things Which Hinder Greater Success in Canadian Husbandry.

BY JOHN CAMPBELL, JR., WOODVILLE, ONT.

(Continued from December Number.)

THE EXORBITANT RAILWAY RATES

charged, particularly where there are not competing lines, are a great drawback in many localities. Canadian farm productions are discriminated against by railways built largely by Canadian lands and revenues. It is said the Grand Trunk Railway's freight rates are often less from Chicago to the seaboard than from Toronto to the same terminus. Farmers are in many ways denied such terms and privileges as those given others by the railway companies. When travelling by rail why should we pay full passenger rates while in the same car commercial travellers, newspaper men or manufacturers' agents are journeying at a third or half less cost? When we ship animals by number is it right that we are compelled to pay double first-class rates while some business men can get their animals forwarded at about one-half first-class rates? Is it not sufficient to discourage us to find our progress hindered by favoritism of that kind. Municipalities which gave, to secure railway competition, bonuses so large as to seriously encumber them, frequently have had their hopes completely dissipated by the amalgamation of the competing lines. Though that destroyed the object of the bonus-givers, still they were not relieved of paying to the last cent the tens of thousands of dollars granted. Who can say it is just and right of any administration to grant charters to companies, legislate to them the power to have municipalities divided or grouped in any way they think will be most likely to secure them large bonuses, which, secured on the strength of many fair promises, they will, as soon as possible, throw those promises to the winds, and pool, amalgamate or take other steps as will enable them to levy the heaviest rates that the traffic will bear. Charters should be granted and bonuses given only on the conditions of the promised competition being faithfully carried on, the advantages given in full, and any attempt of the corporations to pool, amalgamate, or in any way withhold the benefits specially assured to the bonus-givers, render it compulsory for the tricksters to return the bonus in full. It is only in very rare instances a wise step to bonus any undertaking, as the system is being abused, and any enterprise which will not succeed without the aid of a bonus will seldom prosper though so-assisted.

To a certain extent rapacious railway companies are our real rulers, and not the gentlemen we elect to represent us in parliament, otherwise how can we account for the extraordinary state of affairs presented to us in Manitoba some fifteen months ago? A railway company unable to convey the grain of that province to market, but able to prevent other means of transport being used? Those corporations are certainly of great importance, deserve credit for their enterprise, and without them, their roads and rolling stock, the development of our country would be at a slow rate; but, like fire, while being good servants, are bad—very bad—masters. They have great influence in aiding or impeding the progress of agriculture; but, while they are greatly interested in the farm productions, are jubilant over abundant yields of grain, are pleased when stock of all kinds is plentiful and markets for it are active, it is not for any desire to "rejoice with those that do rejoice," but from selfish motives. They see in prospect rolling stock fully employed, freight rates at the highest point, as the pressure of traffic lessens or does away with competition even where opposing lines exist. So circumstanced railway companies could well afford to share the benefits of abun-

dance with the producers, and not monopolize all the profits. This strong barrier in the way of greater prosperity in rural districts cannot be removed without our government's interference, by enacting a law somewhat of the nature of the American Inter-State Commerce Bill. And we farmers can, by forsaking our worse than useless partyism, persuade our representatives to legislate so as to compel railways and monopolies to do what is just and right, or if the persuasion fails, we can, by unanimous action at the proper time, elect those who will study our interests and regulate all merciless monopolies and combine to their rightful positions as public servants.

It is difficult to comprehend how patiently and quietly the farmers of Canada have submitted to the injustice done them during the past. I sincerely hope the period of thralldom is nearly ended, that with one accord the agriculturists of this grand country will firmly refuse to be legislated into the position of "hewers of wood and drawers of water," and that nothing less will satisfy than equal rights to every class, whereby hindrances will be removed, and the way made clear and open for true, real, substantial and continual progress, not only for the tiller of the soil, but for every industrious inhabitant as well, whatever his or her occupation be, if right and proper in itself.

The International Fair and Exposition Association.

The recent meeting of the above association, held in Milwaukee, Wis., was better attended than that held in Chicago last year. The delegates were representative men, most of whom came from a distance. The representatives from Canada were:—Messrs. H. Wade, Secretary Ontario Agriculture & Arts Association; H. J. Hill, Secretary "Toronto Industrial Fair Association;" F. C. Bruce, W. E. Stack, and J. R. Smith, of the Hamilton Central Fair Association, also Dr. McKearchan and S. C. Stephenson, of Montreal. The following is a synopsis of some of the papers read and the discussion thereon:—The Hon. John B. Dinsmore, Sutton, Neb., read a paper on "The Fair Work in the West," which was well received. He favored a liberal treatment of exhibitors in the way of prizes and premiums, and believed that it would stimulate exhibitors to return each year and to urge others to come also. Judges should be selected with great care, as the value of a prize often was enhanced by the standing of the judge. He believed one judge was preferable to three. He wanted all gaming devices excluded from grounds and would hail the day when carriages could be kept out also. He also thought that amphitheaters should be erected about show rings that people might be induced to remain, where they otherwise would succumb to the fatigue of standing in a crowd. The discussion of Mr. Dinsmore's paper turned on the subject of one versus three judges, and a lively diversity of opinion developed. One member said that where one judge was employed, he must be considered an expert, and it was hard to get good men to "go round experting." Mr. Dinsmore said it was hard to handle three judges and the expense was greater. Another member said that the objection to one judge was that in certain departments such a man was one who bred himself to a certain ideal type and was liable to give all the ribbons to exhibits of that particular family. He believed in a feeder and a breeder to judge, with a butcher to decide when they disagreed.

Henry Wade, Secretary of the Agricultural and Arts Association, Toronto, read a well written and lengthy paper entitled "A Chat on

Exhibition Subjects," which also called for considerable discussion. Mr. Wade championed the sort of exhibition that was thoroughly educational and which drew people by that fact only. He was fearful, he said, of the tendency of late to make exhibitions part of what was known popularly as "show-business." He believed an exhibition ought to draw without the employment of acrobats. He spoke of the Paris exposition as not only stimulating inventions, but of averting wars and saving France from demagogues. As was the Paris exposition to the world, so each small show should be to its community. In regard to the site for the fair of 1890, he said that Canada was disinterested. The success of the fair did not depend on where it was located, for the world was waiting to attend it, no matter where it was opened.

When Mr. Wade had concluded, Mr. H. J. Hill, the genial Secretary of the Association, was asked to give his views on the show part of exhibitions. He believed that people demanded amusements beyond the fair itself and had always been on the lookout for new attractions. Mr. Campbell said that while he agreed with Mr. Wade in the theory, he believed in being on the right side of the balance sheet. He did not believe any rule could be laid down for such matters, but it had to be left largely to the judgment of the manager of an exhibition. Mr. Becker said he thought it was largely the way a show started. If it began with offering special attractions, the people came to expect them.

The matter of advertising was discussed at length. Messrs. T. L. Newton and J. G. J. Campbell, of Milwaukee, were for newspaper advertising first, last and all the time. They believed in using the newspapers from the start and using them thoroughly.

In his report concerning the transportation of exhibits, Dr. D. McEarchan advocated a single rate going and coming. President Furnas said in this connection that west of the Missouri river, exhibits for fairs were carried free of charge by the railroads. Mr. Wade, of Canada, in his report on gates and tickets, endorsed the ticket plan of Mr. E. J. Becker and Secretary Hill, of Toronto. The turnstile, as used by fairs and expositions, was roundly denounced as a delusion, a snare and a mockery as far as economy was concerned.

Mrs. A. M. Noe, President of the Woman's State Fair Association, of Indiana, read a very interesting paper on "Women's Work in Connection with Fairs and Expositions." Mrs. Noe quoted instances in which the work of women had been largely instrumental in making fairs successful in all parts of the country.

After full discussion the following resolution was unanimously passed:—

Whereas, In consideration of the natural advantages of location and its ability to handle and accommodate a large concourse of people and the able and enthusiastic work done by the citizens of Chicago in agitating the holding of a World's Fair in 1892, and for the financial support such a movement has received at the hands of all its people, capitalists and citizens alike; it is

Resolved, That this convention give the city of Chicago its undivided support and endorsement for the World's Fair to be held in 1892.

At the close of the meeting the delegates were given a sumptuous banquet by the Directors of the Milwaukee Exposition. We regret that there were no delegates present from any of our prairie provinces—good fairs are a necessity there.

Garden and Orchard.

Vegetable Pathology.

BY JAMES ELLIS HUMPHREY.

Prof. of Vegetable Physiology, Massachusetts State Agricultural Experiment Station.

(Continued from December issue.)

A question which very naturally suggests itself is: Why do fungi attack and cause diseases of other plants, instead of living independently? This question involves matters of the greatest interest and of fundamental importance and significance. It is well known that all green plants owe their characteristic color to the presence of a definite pigment known as leaf green or *chlorophyll*, which is so generally present among the higher plants, that to most minds the very word plant carries with it the idea of greenness. Now the possession of chlorophyll is the pre-eminent feature which gives to plants their all-important place in the economy of nature. No living thing can continue to live on inorganic substances, but all require as food some of those materials of comparatively complex chemical composition, known as organic substances. The materials furnished by the earth, the air and water are all of simple composition and unorganized, but in leaf-green we have the connecting link, the means of bridging the interval between the inorganic and the organic. We need not here discuss the process in detail. It is sufficient for our present purpose to say that in Nature's laboratory of the leaf, some of the simple constituents of air and water are combined, by the action of leaf-green in the sunlight, into the complex organic compounds which serve the plant as food. The chemistry of this remarkable process is not well understood, but the commonest permanent form in which these food materials appear is that of starch.

Now, as was noticed above, the threads of the fungi are white, uncolored; that is, they contain no leaf-green. Consequently, the fungi cannot elaborate their own food material, but must obtain it ready elaborated, from some other source. Evidently the available sources of organic food supply fall under two heads, *living organism*, and *dead organic matter*, commonly decaying. And, on this basis, we may divide the fungi into two classes, those which derive their nourishment from other *living* things, and those which live on the remains of *dead* organisms. The latter, known as *corpse-plants* or *saprophytes*, includes the moulds, toad-stools and many other fungi. But the first named group is that which at present interests us, since it contains the various groups mentioned at the beginning of this sketch, which live on or in the bodies of other living plants at their expense, and cause extreme weakening or even the death of the affected plants. Such fungi are known as *parasites*, and the plants they attack are called their *hosts*. This distinction between saprophytic and parasitic fungi is a very useful one, but no sharp line can be drawn between the two groups, since some fungi seem to be able to live either as parasites or as saprophytes, while it is probable that very many *pleomorphic* fungi are parasites in some of their forms, and saprophytes in other stages of their life-cycle.

Finally, we may notice the interesting fact that any given parasitic fungus is usually restricted in its capacity for harm to a single host-plant or to a few closely related ones; though,

on the other hand, closely related fungi may attack plants of widely different relationships. Thus, the mildew of the lettuce and that of the onion are very closely related fungi, yet neither mildew can attack the host-plant of the other, since the structural resemblances are few and the relationship remote between the lettuce and the onion.

From the above facts we may derive a few important principles for our guidance in attempts to avoid or check the ravages of fungi among plants cultivated for use or beauty. Since the mycelium of a parasitic fungus grows usually within the tissues of its host-plant, it is too late to try remedies after a plant is once infected. It is true that a few fungi are superficial in growth, and a treatment may perhaps be found which shall destroy such parasites without harm to the host. But in most cases our aim must be to fortify exposed plants against infection by the timely application of productive solutions or mixtures, which shall prevent the germination of the spores which fall upon the plant so treated. Some progress has been made in this direction and some results have been reached which justify hopes of ultimate general success in largely avoiding the present enormous annual losses resulting from fungous diseases.

The treatment which now gives promise of most general applicability and efficiency is the spraying of the plants with a solution of sulphate of copper (blue stone) or with one of the preparations in which it is the important ingredient, known as *Eau celeste*, *Bordeaux mixture*, etc. It seems very possible, too, that plants may be fortified against the attacks of parasitic fungi, or their susceptibility to such attacks be largely diminished, by special fertilization, for the purpose of introducing into the plant substances which, while not interfering with its growth, shall make it a less congenial soil for the growth of fungi. The line of investigation here suggested has not yet been followed out, although it offers an opportunity for chemico-physiological work which may yield important results. It is obvious, also, that a vigorously healthy plant will resist the fatal influence of parasites far better than a poorly-nourished one.

Much may be done, after a plant is too far gone to be saved, to prevent further spread of the disease by removing and destroying the diseased parts. It is not sufficient, however, to throw the portions removed into the rubbish heap; the spores must be actually destroyed and this can be effectually done only by burning. A considerable number of fungi produce, in the plants on which they live, *resting-spores* which ordinarily remain on or near the ground in dead leaves or stubble, survive the winter, and, germinating in the spring, infect the new growth. In these cases the danger of a severe attack in the following year can be greatly lessened by clearing up and burning all such sources of infection.

Numerous instances can be cited of more or less common weeds or wild plants so closely related to certain cultivated plants that they are liable to the attacks of the same fungi, and so serve to perpetuate those fungi and to infect the related cultivated plants when growing near. Evidently, then, such plants should be carefully and thoroughly exterminated wherever they may prove a source of danger.

We may pass, now, to the application of the foregoing facts and principles in the consideration of a few particular fungous diseases.

[TO BE CONTINUED.]

Fruit Rooms and Storage of Fruit.

Read before the late meeting of the Ontario Fruit Growers' Association by T. T. Lyon, President of the Michigan Horticultural Society.

There are two, in some respects, distinct purposes, for which fruit retarding arrangements are more or less employed.

That to which we will first give attention is for the temporary holding of the earlier and more perishable fruits. These, owing to their very perishable character, can only be retarded for a comparatively short period; and experience has taught us the fact that even with the arrest of decay, the flavor deteriorated more or less rapidly; so that little or nothing is to be gained by more than a very temporary holding of such.

The process, whether with early or long-keeping fruits, consists in keeping them in an equable moderately dry condition, a few degrees above the freezing point. This low temperature may be produced by different methods, although it is usually secured by the use of ice, in a room with double walls, ceiling and floor, packed between with dry sawdust or other cheap non-conducting substance, or by the use of what are known as *dead air chambers*.

Since the warmer air is always found in the upper part of the room, the *ice box* is placed there; and since the gaseous results of decay are heavier than atmospheric air; the opening, if any, provided for their removal should be placed very near the floor of the room.

The *ice box* will necessarily be the coldest object in the room, for which reason, any excess of moisture in the air of the room will be condensed upon it, and this will the more readily occur if its surface is of metal. It must therefore be supplied with the means of collecting such condensed moisture, together with the drip from the ice, and carrying the same outside the building; the discharge pipe should be provided with a *trap* to prevent the admission of the warmer air from without.

The fruits to be held, should be in as perfect a condition as possible; rather under than over-ripe; may be in moderate-sized packages, or placed directly upon shelves. Bruised or decayed fruits should be vigorously excluded.

Such arrangement will be found useful also for the preservation of perishable culinary and other articles.

The arrangements for the preservation of the longer-keeping fruits differ from the foregoing, mainly in dispensing with the use of ice, and, instead, securing the needful low temperature by employing a system of ventilation, by means of which the outer air may be admitted, when its temperature is low enough for the purpose, excluding it at other times.

As, under other circumstances, the fruit should be gathered with the utmost care when not over-ripe; all bruised or decayed specimens excluded; and the packages placed at once in the retarding house, the temperature of the same having been already reduced as low as practicable, by opening the ventilators during cold nights and closing them before a rise of the outer temperature. The effect of this will be to avoid the continuance of the ripening process, consequent upon the comparatively warm weather which so frequently occurs after the fruits are gathered; bringing the fruit thus treated down to the final advent of winter, slightly if at all changed from its condition when gathered—an important point gained, especially in the more southerly portions of the apple-growing regions of our country.

[TO BE CONTINUED.]

Forestry—Small Plantations.

BY R. W. PHIPPS, COMMISSIONER OF FORESTRY FOR ONTARIO.

In answer to some questions, lately put, as to where to obtain black walnuts, and what trees to plant in a small plantation, of say two acres:

—The best place to get the nuts here would probably be near Brantford, where they used to be plenty on the Indian Reserves. Perhaps some of your readers who have them on hand, or know where they are to be had, would send a line to your paper to that effect. In planting the nuts, the way is, as far as possible, to imitate nature by leaving them out of doors, slightly covered with soil, or spread in an outhouse with a covering of leaves or litter, till spring, when they can be planted where needed. As for distance apart, four feet each way is the best, and the best plantations I have seen have been so obtained. It is, however, quite possible to transplant young trees, which, of course, cost much more, but save a great deal of time. Mr. Gott, of the Arkona, Ont., nurseries, says, in a letter in one of my reports:—"We can get the young walnuts in about four years, from the seed, to be from six to eight feet in height, and strong, stocky trees that transplant with certainty and ease." The same gentleman says of black walnuts:—"We have them in this neighborhood, grown from the seed about twenty years ago, that have now a spread of fully forty feet, and the same height, and with fifteen to eighteen inches through at the base of the trunk, which have been bearing nuts for a considerable time. They grow with surprising rapidity, and planted thickly, say six or eight feet apart, will tower to a great height in a comparatively few years."

The best plantation I have seen is in Northern Illinois, belonging to Mr. Culbertson. He thus describes his method:—"In the spring of 1855, I broke some raw prairie land in Douglas county, Illinois. The fall of the same year I planted ten bushels of black walnuts as they fell from the tree, with the hull on, in the manner following:—I took a common shovel plough and marked off the ground in checks ten feet apart, and planted one walnut in each check, making the planting ten feet apart each way. They all sprouted and grew. I planted the field in corn for several years. It will be noticed that when this is done, the trees need not be so close. After two years the side limbs should be cut off yearly for several years. When ten years old, every alternate tree should be cut out; after that, keep culling out the smaller trees from year to year, as they show signs of falling behind in growth, compared with the other trees. Keep this up till you cut out three-fourths of all you have planted, when you will have a stand of trees of uniform size and vigor. You will find, after about eight years' growth, that no planted crop will grow among the walnuts. I have a grove of fifteen acres planted, and managed as above set forth. The sizes are now from 10 to 18 inches through at axe-cut. They are straight and without limbs for from 25 to 45 feet from the root; some of them eighty feet to the top. I am still cutting out the weakly ones, in the month of June, and peeling off the bark and piling and drying them, using them for cribs, bridges, and so on. My grove of walnuts are now considered very valuable, and, in a few years, are likely to be worth more than the balance of my farm of 2,300 acres."

It is four years since I examined this grove,

having travelled a hundred miles out of my way to see it. Here we must notice that he was using the walnut for rough, common work. The reason was, that it was not old enough to be valuable, which cannot be expected in less than seventy years. Before that, too much of the tree is soft and whitish—not at all the fine cabinet wood it will ultimately be. On the other hand, if we plant cherry, which is an excellent wood, we may expect good, large, mature timber in half the time. Then there is the hickory, which comes in early for another reason; that is, that a tree of six or eight inches through will sell well for carriage work. The ash is also a valuable tree to plant, as is likewise the elm. I mean that these trees are valuable when planted closely in plantations, and cared for, when they will make clear timber, not when they grow alone in fields, when they run to branches and are full of knots. Besides, in a plantation, one tree draws another up, and they all grow rapidly. The Scotch larch is an excellent and quick-growing tree.

I would plant walnut trees by themselves, and also hickories and larches; the others grow well enough together. It is a good plan to plant three cheap, easy-growing trees, like maples, say, to every tree like ash or elm, which some day will be very valuable for their timber. Then we can, as they get too close, cut out the maples for fuel, and leave the others at about their proper ultimate distance. As to where these are to be had, ash, elm, maples and other good trees, can be procured as saplings from many forests; but for walnut, hickory or larch, we must go to a nursery. Of course, if we mean to grow from seed, the hickory is treated as the walnut.

We must always remember, that in the care of walnuts—and such, it is of little use to put them on poor soil; neither would I try the first much north of their old habitat. They will grow there, but other trees will grow better.

Now, with regard to plantations, four feet apart will let a cultivator through to keep down weeds for a couple of years, and then the shade of the trees should begin to keep all clean. It would be an excellent thing if every farmer would plant a few acres with trees. They will grow very much faster and better when planted and cared for than in the original forest. It would be better, too, in taking saplings from the forest, to take them quite small, plant them for a year in a garden bed, and then where they are to grow. The transplanting gives them a much better set of roots, more fibrous and bunched. Many transplant twice for this reason.

An Illinois horticulturist is disgusted with the *Lucretia dewberry*, having found the fruit, though large, "flat and hardly fit to eat."

Popular Gardening quotes an orchardist as saying that if you must set a tree where an old one died, "remove a waggon-load of earth and replace it with fresh, new soil."

A reformed farmer tells the *Farm, Stock and Home*, that he raised small fruits this year for the first time—all his family could eat—and, Providence permitting, he will never be without them again.

Mr. P. M. Augur, State Pomologist of Connecticut, saw enough during a recent outing in Delaware, to convince him that the peach industry of that once famous region is on the wane.

An old pioneer says the Assiniboine river was as low in 1874 as now. That was the year of the grasshoppers. The next year the crops were excellent. In the spring of 1876 heavy rains fell. From that the rivers began to rise, and in 1882 was the flood. Make a note of it, he says, and see if history does not repeat itself.

Commercial.

ADVOCATE OFFICE, Dec. 28th., 1889.

WHEAT.

The weather has continued exceptionally warm for the time of the year, attended with local rains during the month. The growth which the wheat plant has made in various localities lead to fear of injury to it later from hard freezing.

The speculative wheat market at Chicago has been moderately active a considerable portion of the time the past week, but without particular gain in interest from outside orders.

It is generally accepted that this season's wheat supply in the United States is equal to furnishing 35,000,000 to 40,000,000 bushels more surplus for export than was exported last year, by reducing reserves equally as low at the end of the crop year.

Advices from California say the severe rains there exceed anything on record, and the situation as to the growing crop is considered somewhat critical.

ENGLISH CONFIDENCE IN WHEAT.

J. E. Beerbohm says:—There seems to be a growing feeling of confidence that the supplies during the winter months will not be easily forthcoming in sufficient quantities at anything below the present level of values.

RYE AND WHEAT.

The Montreal Trade Bulletin says:—The large deficiency in the rye crop has caused a material advance in values in every country in Europe: and as rye is used very largely as food in most of the continental countries, its enhanced value will in all probability create an increased demand for wheat between now and next harvest, which, it is thought, will result in higher prices for the latter cereal.

LIVE STOCK.

The British cattle markets during the past week have been irregular with business characterized by an unsettled tone, still to-day our special cables quote some improvement in values.

The live stock trade during the past week varied considerably. In the early part of the week the demand was good and a large amount of business was done at good prices, but later on the demand fell off, and on Thursday the market was dull and quiet.

DRESSED HOGS.

Parties just returned from the west state that the hog crop of Ontario is even larger than that of last year, although the average weight of hogs is admitted to be not as heavy.

DAIRY PRODUCE.

Butter.—The market has continued in its dull course, the only signs of any approach to a shipping movement being the sales of about two cars of creamery for British Columbia at prices ranging from 22c. to 24c.

Roll Butter.—A fair enquiry has been experienced for choice rolls, with sales at 16c. in bbls. and cases, but anything poor is difficult to sell.

Cheese.—The exports last week were 19,361 boxes, of which 10,659 boxes went via Portland to Liverpool, and the rest via Boston by the Central Vermont Railway.

Everyone is waiting for the "turn of the year," and the tone of some English advices received to-day give a hopeful outlook on the whole.

POTATOES.

THE POTATO SUPPLY.

Latest private advices from Liverpool state that the potato crop has turned out exceptionally good in England and Scotland, and that sales have been made by English farmers at from 21 1/2s. to 22 per ton.

the crop of potatoes in the Eastern States is considerably below an average yield, this deficiency, it is now thought, will be fully compensated by the large yield in the Western and Northwestern States.

APPLES.

LOSSES ON APPLES.

Advices from Liverpool regarding Canadian apples are of a discouraging character, owing to the bad shape in which the fruit arrived. The Sarnia's cargo, which was landed in very bad condition, was sold at a low range of prices, the returns showing a net average to shippers of \$1.61 per bbl., including the Maine fruit.

WOOL.

THE WOOL TRADE.

The Trade Bulletin says:—"There has seldom been a greater scarcity of foreign wool in the Montreal market than at present, and prices have gradually advanced in sympathy with increased values at the primary markets, until to-day they are quoted at 33 to 40 per cent. above lowest prices, sales of greasy Cape having been made in this city within the past few days at 18 1/2c to 20c as to quantity and quality."

Corn cobs charred and pounded are greatly liked by fowls.

It is not necessary to keep chickens fat, especially while growing, but it is very important to keep them in a good thrifty condition; a better growth will be secured, while they will be in a better condition to market any time that it may be desired.

The breeder will suspect that he needs fresh blood for his stock when the annual number of eggs begin to diminish, when the moulting and feathering processes come on late and go on badly, and the flocks begin to show signs of debility in their movements.

The best roosts for a poultry house are strips four inches wide and one inch thick. The fowls can roost on these with comfort to the feet. They should have a clear space of one foot between them, and should all be on one level, and not more than one foot from the floor.

Doctoring chickens is a poor business at best. It is true that valuable, mature fowls are worth saving, if they fall ill, when we know what their trouble is, and have a remedy for the malady they may be suffering with.

Family Circle.

Some of the Foreign Capitals.

Great London is the capital of all our English cities. Renowned for many a stirring tale in ancient lays and ditties. Fair Edinburgh, Scotland's pride, thy treasured names we greet Of Holyrood and Calton Hill and lofty Arthur's Seat. And Dublin on the Liffey's shore—the greatest Irish town, Where many a jaunting outside car is driving up and down. And Paris is the city prized by all the land of France, Where people love to sit outdoors, and laugh and sing and dance. And Berlin is the capital of all the federation. Which makes the German empire strong, a brave and mighty nation. In Austria Vienna stands, above the rushing wave, Her mansions and her palaces the Danube's waters lave. And grand Madrid's a stately town, the Spaniards love it well, The proud Castilians walk its streets with many a dark eyed belle. And Lisbon on the Tagus's shore, of Portugal the boast, Its outlook on the crested wave, its seat the Atlantic coast. At Amsterdam the gallant Dutch have bade the waters flee, Their dykes and dams have checked the waves of foaming Zuyder Zee. Gay Brussels in the Belgian's land may art and pleasure woo, While hearts of English travelers glow at thought of Waterloo.

THE DARK HORSE; OR, A MONTH IN AN AMERICAN COUNTRY HOUSE. BY GEORGE A. HIBBARD.

(Continued.)

Several prandial stages had been accomplished before Wrexford entered the dining-room. He had arrived not five minutes after dinner was announced; had been taken immediately to his room; had dressed hastily and then he had descended to join the party at the table. His host shook hands with him most cordially, presented him to Mrs. Kerneval, and made him known to the other guests. Wrexford sank into a place made for him on Mrs. Kerneval's left, between herself and Miss Ashwin. Kerneval had asked him when he arrived in the country. Mrs. Kerneval had expressed her pleasure at knowing at last her husband's old friend; Miss Ashwin had remarked that it became dark very early; and then conversation resumed its former course, now flowing in general and equable tide, now stirred or broken in episodic eddies. "Do you ride, Wrexford?" asked Kerneval suddenly. As it happened, the question broke into one of those little, placid, silent places the swirl of rapid talk so often leaves, and all could hear the answer. "As a rule," replied Wrexford slowly, "it's wiser for a man to say he doesn't." "Then you'd never get on," said Bobby Chatto; "to be a Roman here you must be a rider, or—you're—'not the man for Galway.'" "I was about to add," said Wrexford, smiling good naturedly at Bobby, and turning to Kerneval, "that if you'll risk a horse's bones, I'll risk mine." "But," continued Kerneval, "have you ever ridden to hounds,—across country, you know?" "If he hasn't," whispered Bobby Chatto to Mrs. Trevor, "and tries it, he'll have a new sensation. The first time I ever took a fence, I felt as if I did the first time I stole a kiss,—I was so frightened I didn't know whether I liked it or not." "Not for a long time," said Wrexford, answering Kerneval's question. "It couldn't have been so very long," said Everest precisely and a little suspiciously. "The hounds haven't been going here so very many years." Wrexford looked up quickly, and the eyes of the two men met. "It wasn't in this country," said Wrexford, "it was in England." "Indeed," responded Everest. "I've done it a little over there myself," said Etheridge. "Where were you?" "With Sir Redvers Hope, in Leicestershire. I broke my collar-bone there, and he was good enough to keep me for several weeks." "I hope no such accident will happen to you here," continued Etheridge civilly. "But you'll find some stiffish things." "I think," said Wrexford, again turning to Kerneval, "I'd like to try it if you'll trust me with a horse." "Of course," said Kerneval.

Wrexford turned to Mrs. Kerneval. "Is not Hardy Granthorne somewhere?" he asked. "He wrote me he was to be here." "Yes," answered Mrs. Kerneval, "he has been here a week or more,—with his horses. You know him?" "He's a cousin of mine, in a way," replied Wrexford. Mrs. Kerneval looked at her guest with something very like astonishment. To be known to Hardy Granthorne was more than creditable; to be his cousin was distinction. "Why, Mr. Wrexford," exclaimed Mrs. Trevor from across the table, "then you are a relative of mine. I'm his cousin, too. Haven't you ever heard of me?" "Often," answered Wrexford. "But I should have hesitated before advancing my claim to kinship. We Southerners all feel a little like poor relations,—since the war." "How very stupid of me," continued Mrs. Trevor in petulant half-anger towards herself, and with even more heartiness than usual in her generous manner. "Of course. You are Dick Wrexford's son. How very stupid of me not to have thought of it before. Your father was always very kind to me,—I remember that he gave me the first pearls I ever had—and you were not going to say anything to me,—you,—Dick Wrexford's son! How strangely things turn out." "Yes," said Wrexford. "I feel as if I had been stolen by gypsies and just found again, at last." "Where's the meet-to-morrow?" asked Everest suddenly feeling that the evident interest in what had been said by Mrs. Trevor and Wrexford was rather too strong. "At the Seven Gullies," answered Kerneval. "That sounds formidable," said Wrexford. "It is," responded Kerneval. "That's where Granthorne's best hunter broke his neck. The horse turned a somersault, you know, and—" "Nonsense," interrupted Everest almost roughly. "I have heard that sort of thing before, but no one ever saw a horse really go over on his back." "I think," said Wrexford quietly, "that I have seen it happen." "Really," said Everest, "and may I ask where?" "It was hardly in a hunt," said Wrexford, dismissing Everest from out of his field of vision, "but it was certainly in a chase. It was in Bulgaria, and just before the opening of the Turco-Russian war. The Turks were in the very height of the season for the exciting little sport that they had found so pleasant, and which they were carrying on in what they had come to regard as their own preserves. One day three or four of them were engaged in the pastime peculiar to that part of the world at that particular time, and the game took to flight. It was a 'hot scent,' and they came on at full speed, shouting a sort of infernal 'vewhalloo.' A ditch and a thick hedge were in the way. The pursued, on an old English hunter that had in some way got out there, went over like a bird. But the first Turk it sounds like 'first murderer' in a play; he was a cut-throat and a thief, but he was a plucky fellow to try it on a 'green horse'—the first Turk came to grief. His horse stumped, and over he went square on his back with his rider under him. There probably was joy, beside mine, somewhere else, over the death of that unrepented sinner. Since then I have been convinced that a horse can really turn a somersault." "But," objected Everest, "you said you saw it." "So I did," said Wrexford, in puzzled wonder as to what might be meant. "You were there." "Certainly." "But I do not understand—" "Oh," laughed Wrexford. "I was the game in default of better. They, in very complimentary fashion, took me for a Christian and I hope a gentleman and—I ran away." "But didn't they follow you after that?" asked Miss Marling, who had been listening most intently. "No," replied Wrexford, turning and speaking directly to her. "The performance of their friend didn't seem to encourage *les autres*. They didn't care to try the jump, which was fortunate for me, as my horse couldn't have held out much longer." "Had you gone so far?" asked Etheridge with real interest. "A mile or so." "But you're not exactly a heavy weight." "I weigh more than you think,—Kerneval's horse will find out that," and he turned to speak to Mrs. Kerneval. "Come," said Mrs. Trevor, "what's the mystery? Tell us all about it. Why couldn't your horse have held out?" "For one reason," answered Wrexford, "that I wasn't alone." "Not alone," said Mrs. Trevor. "I had a miserable little Bulgarian—a boy of ten or so—with me. He didn't weigh much,—he hadn't eaten much of anything for nearly a week; but he handicapped both the horse and myself." "And you saved his life," almost exclaimed Miss Marling. "I hardly did that; he died the next day." "Still," observed Etheridge, always ready in his placid good humor, to say a good word for anybody, "it must have been preferable to die in a bed,—if there was such a luxury out there. Mr. Wrexford,—and not be pitchedforked on bayonets, as such people had a way of doing with such small game just then." "Don't," cried Mrs. Trevor; "you make me feel as if I did the first time I ever saw the hounds kill." Later in the evening, as Kerneval left the men in the smoking-room, he met Mrs. Kerneval crossing the hall.

"Well," said Kerneval, "what do you think of him?" "Think!" said Mrs. Kerneval. "I think—I don't like him?" "He's good looking?" said he. "Yes." "Well-mannered?" "Certainly." "Capable?" "Unquestionably." "Interesting?" "Without doubt." "Well born?" "Of course." "Then why don't you like him?" "I think I'll telegraph Kitty's mother." "You think he's dangerous?" "He's a mixture of Archibald Forbes and Laurence Oliphant. He has courage and dash, and a style and tone of his own. There'll be trouble." "Nonsense," said Kerneval, with complacent self-reliance. "You'll see them in three days as indifferent to each other as two people with their heads buried in the same stocks, and who have been destined for each other from their cradles." Mrs. Kerneval shook her head doubtfully. "You know that when you're very clever you're always very stupid," she said. "Did you see how Kitty listened to his story? How much reclamation was there in it?" "I am sure we had to drag it out of him as if it was 'mired,'" said Kerneval. "He's the most modest fellow in the world. I believe he blushed—I do, indeed." "Blushed!" said Mrs. Kerneval contemptuously. "A newspaper man blush!" "You are unjust and ungenerous," said Kerneval. "That's what a man always says when you don't agree with him," retorted his wife. "I haven't any confidence in any of you, and if he goes on recounting any more of his little adventures, I will certainly telegraph Kitty's mother. Do you suppose I am going to have Kitty marry an unsettled creature, more in love with his career than he could be with her? I don't believe in careers. Marry a man who'll never do anything very great or very small, would be my advice to a girl." Later still, Kerneval went to Wrexford's room, and found him smoking the profound cigar of the day's final summing up. "You don't look worn,—travel-stained," said Kerneval. "That isn't the modern pilgrim's style," responded Wrexford. "Besides, we are all pilgrims really. Staying at home nowadays is like sitting in a car at a standstill while another train is passing. You seem to be moving yourself." "I always look out of the other window." "You always had a taste for the other window." "Yes, looking at the landscape or the street,—not at the hurrying, busy freightcars, with their lading, human or otherwise." "Don't you ever get tired of it?" "Frankly, no. I was born without ambition, and being born without ambition is equivalent to being born with all ambition can give." "Yes—if you have what it can give," said Wrexford, moving uneasily. "But you—are you never tired, though you are doing just what at Harvard you hoped to do?" "No," replied Wrexford slowly; "not tired I think; impatient now and then; feverish, perhaps. It's vague work travelling towards no end. I wonder if I could do as you do if I had the chance. I'll never have it, though." They always had talked freely to each other, as in the days when they lay upon the grass in front of a standstill while another train was passing, and dreamed, more plans made, more fully talked, than upon any other greensward in the land, no matter how narrow its space or how wide its acreage. "Your place is charming," continued Wrexford; "and as I drove from the station, dark as it was, I couldn't help seeing how fine the country is. If there's any sedative to, quiet human restlessness, it's such a place as this." "Take care," said Kerneval, "or you'll catch a 'cropper' that'll quiet you. It's a relaxed, languid, unstrung condition that invites illness big or little. What do you think of Miss Ashwin?" "I can't furnish enthusiasm to order,—and somehow, in her case, it seems to be demanded,—it's as ludicrous as court-mourning. Miss Marling's a prett' girl?" "Not bad-looking," said Kerneval, instantly rushing to meet such danger, "but she's the last girl in the world you'd like. She's the quietest little town mouse you ever saw,—not at all the woman of the world you used to admire. A simple little thing, although she's such an heiress." Wrexford said nothing. "No," continued Kerneval, "little Kitty Marling, with her quiet ways, her straightforward eyes, and her 'repousse' nose, won't please you at all." As Kerneval made his way down the darkened corridor there ran through his complacency a slight thread of distrust,—but he reassured himself in a moment. What he had said had been so skillfully said. How could quiet Kitty Marling, after such explicit warning as he had given her, feel interest in this lawless free-lance, however brilliant he might be? And Wrexford,—a man of continents and capitals, and, after his fashion, of courts and brilliant coteries,—how could he give a second thought to gentle Kitty Marling? But—but—was Kerneval turning traitor to his cause—the cause of Mrs. Kerneval and "Kitty's mother"? He liked Kitty and Wrexford so much. And it would be so really advantageous for both of them. As he

reached his dressing-room and rang the bell, that he might give his man final orders for the morning, he felt quite a little touch of regret that he had been so skillful in his diplomacy.

When Kerneval left his room, Wrexford lit another cigar and drew the curtain from a window. In what strange whirl his whole busy life swam before him as he sat and looked out! And how delightful was all this crown and charm of civilization,—this rounded crystal in which one could see reflected so much that is best of such life! How easily could a man stay his foot at such place! And then, with some inexplicable alertness, his fancy brought before him the vision of Kitty Marling. He had noticed with what interest she had listened to what he had said of his affair with the Tarks. And there was such a charm about her,—it was as if a tinge of purple giving tone to sunshine falling upon pure white,—and her soft eyes, languid a little at times, as might be a violet in the morning kept awake all night by the chatter of a wild rose. And there was something else that he now understood after Kerneval had told him that she was a great heiress. Was there not even a strange significance given to her by her unavoidable consciousness of her great wealth?—an aureate coloring that slightly tinged with golden richness all that she was,—a mere thing, however, a shadow almost, nothing like the bees-wings of gold-leaf that float in *eau de vie de Dantzic*. And Wrexford, laughing at his disconnected thoughts, turned from the window.

Rain had fallen in the night, but in the early morning a brisk wind, now subdued to a whispering breeze, had cleared the sky of all clouds save for a few plainly defined and purely white that lay in diminishing perspective along the horizon. A strong, and heady smell arose from the wet and matted leaves and grasses. The most of the fields were bare, with only the stubble rising from the brown earth, but in some the winter wheat had sprung up bright in glowing verdigris. The afternoon was either just bracingly cool or pleasantly warm, as your blood ran or your spirits were. The country was at its best, and the "meet" was the largest of the season. Bobby Chatto counted thirty-two who were to "follow," without including the "whips,"—a "field," too, that looked like "going." All the Kerneval party were horsed as originally intended; but Wrexford, who had not come into the stables, Parsifal had been given him as a mount. He was a large, solemn animal of the highest respectability. His regular work was dragging the express cart to and from the village. But he was not wholly untried. Sure enough at an ordinary jump, he had been known to do some surprisingly good things in a sedate, meditative, and wholly self-satisfied manner. Indeed, there ran a rumor among the grooms that a little good blood trickled in his veins.

"I hope," said Mrs. Kerneval, as she drove Mrs. Trevor to the "meet," "that Mr. Wrexford won't do anything absurd."

"Oh, he'll be all right," observed Mrs. Trevor cheerfully. "I can tell a man that can ride a horse as well as I can tell a horse that a man can ride. Parsifal isn't exactly what one would choose, but he's not so very bad, and I'll answer for his rider."

Men were arriving singly and in parties. Some were driven, but the most came on their hunters at a walk or an easy trot. Grooms led about the horses that had been sent on ahead, or those belonging to the riders who had not yet mounted. Many carriages stood around, the gowns and sunshades giving the color lacking in an American hunt where the "pink" does not appear. By the side of the road, the hounds were gathered, restless, turbulent, requiring all the efforts of the huntsmen to keep them from straying.

"Oh," cried Miss Lyddington excitedly, for it was her first hunt, as she watched the swaying tails, "look at the cunning things. Each dog must have half a dozen tails at least."

It was some time since Wrexford had been on a horse,—a long time since he had been in a hunting-field. Parsifal was not one to excite the spirit of a rider, but he was far better than nothing, and Wrexford felt much of the exhilaration of every true horse-lover when he feels himself carried by four stout equine legs instead of his own pitiful two. His thoughts flew back to his Kentucky childhood when he had been lifted almost out of his cradle on to the back of a pony, his own from that moment; to his boyhood when, hardly more than twelve, he had run his clever little sorrel against the grav of Colonel Judson's nephew, with thousands on the event; to his youth, when he had ridden in the famous steeplechase, and landed his horse a winner amid cheering crowds. He remembered the day when his father's horses were sold,—when everything was given up,—when he turned from the stables for the last time. And then he thought of his long rough ride with Gourko across the Balkans; of his long gallop—a day and night over the Egyptian sands, that he might telegraph an account of Hicks's defeat to his paper; of how, in all the glory of "pink," he had ridden with Sir Redvers Hope through the most famous hunting ground in the world. The cool, aromatic breeze blew in his face; the fresh fairness and glad brightness of the time inspired him. He had been depressed of late. His life, that led him everywhere, seemed to lead him nowhere. But now such shadows were lost in the absorption,—in the loss of all self-consciousness. Who could be querulous, doubtful in vexing inspection, or gloomy back-look, or dejected forecast, with the glowing, grandly-rolling country about him; with the eager crowd at one with himself in the single interest of the hour; with clear,

glad voice and quick laughter on the air; with faces that were as gems making the daylight brighter? The most obstinate pessimist that ever misinterpreted the book of life could not here misread its lines. His doleful questioning, his whence, his why, his whither,—would seem but idle caviling. Whence? From some good source, and with adequate cause, when the untried world has spun on so long, and offers this very scene to prove its worth. Why? The happiness of such an hour is reason enough for existence. Whither? Good in its origin, good in acts, why shall not the end be as is the world's birth and life? What more can one wish to know than that he is free in mind and body to ride away across the glorious country in full possession of the best that Mother Nature has to give,—youth, and strength, and hope?

Looking up, Wrexford saw Miss Marling looking down at him from the break.

"How I wish I were going with you," she said.

"Why do you not?" he asked.

"I promised before I came that I would not."

"There's no chance for me to win the brush to-day."

And then there Wrexford knew that Parsifal had work cut out for him; that all that a man could do would be done, and that his worthy horse willing, the chief trophy of the day's chase should be handed up over the wheel of that break before nightfall. It takes quite a number of words to record that kind of a vow but it was made in the infinitesimal of an electric flash. It would only have given Wrexford, if possible, firmer determination, had he known that Everest had come to a like resolve ten minutes before.

Crack, went a huntsman's whip, and at the sharp sound even Parsifal stirred uneasily. With a short "toot-toot" of the horn, the Master of the Hunt trots quickly down the road,—the pack at his horse's heels. Now there is a quick yelp, and the first hound has jumped, caught the top of the fence under his fore-paws, and is over; all the rest tumbling in a sort of canine torrent after him. Well together,—

"a blanket might cover them,"—they start across the first field. There is a rush,—three or four horses clear the fence at once. Chatto comes first of the Kerneval party. His mount is a fidgety little mare, and jumps with a light spring that more than takes as he is a trifle out of landing. But he recovers in an instant, and rides steadily on. Everest follows. He is a well-known rider, a distinguished member of the Myopia, and, with his powerful animal, jumps almost from the road. It is a splendid performance, clean, clear, and complete, looking, perhaps, more difficult than it really is, and Kitty Marling claps her hands approvingly. Kerneval, Etheridge, and Dakayne follow in the crowd unnoticed. Wrexford, who has been in the crowd the start, is left alone. He attempts to bring up Parsifal, but that worthy beast, apparently thinking that the jump has not been approached with sufficient deliberation, "refuses." It is one of those little things that, after all, are so great.

Wrexford has never felt so humiliated in his life. He turns the sedate animal, with vigorous determination, and, starting him from the opposite side of the road, horse and rider are over in really a splendid leap. It is as fine a performance as Everest's, and again Kitty Marling claps her hands.

And now they are really off. The pace at first is not great, and, as Parsifal settles down to his work, Wrexford looks back. Carls and carriages and drags have started, and are tearing along the highway. It is a "gallery hunt," and all are anxious to reach a cross-road which the hounds will doubtless cross. Parsifal, so to speak, transacts a slow, lumbering, business pace, and Wrexford, almost with starting anger, feels that he has little chance of being in the "first flight,"—no hope at all of being in at the "kill"; that there is no possibility that he can keep his promise to himself that he will give the brush to Miss Marling. If, he thinks, as he pounds on, he only had under him one of his father's bluegrass steeplechasers, the one on which he made his famous water-jump so easily, so long ago; or the thoroughbred that, a shorter time past, had borne him so lightly over the hedges in the Leicestershire fields! But slowly his animosity toward his mount commences to wane. A "Virginia creeper" lies ahead. Parsifal begins to find out with what manner of rider he has to deal, gets over his first "sulk," and clears it nicely. Whatever has quickened him, he addresses himself soberly, determinedly, to the matter in hand, and now takes his jumps in a style, large and ponderous perhaps, but with a strength and certainty that more than win Wrexford's confidence. Parsifal begins even to show such possibilities of speed that Wrexford feels some slight return of hope. The glories of the run may not be for him, but he feels that his horse will not disgrace him,—that he will not be in the "ruck,"—will not be wholly "out."

The "field" keeps well together; the bounds run freely. The pace is not great, neither is it slow,—an easy swinging canter that brings a man up squarely and well to his jumps. The country is fairly cut up. The fences claim constant attention,—they keep the horses sharply up to their work, but do not vex them. One or two "raspers" have been encountered, but as yet there have been no falls. A quarter of an hour had passed without a "check." On they go, over every-changing ground and amid swiftly-shifting surroundings; now in half-bared land and past scattering trees; now through the underbrush of swales; of the river banks, almost echoing the hoof-beats, of the river rushing on and away below. The wind is dead ahead, and meeting it straight, at such speed, it seems to blow with greater velocity,—to charge the riders in arrayed battalion and with leveled lances. Over all falls the glorious autumn day, deepening

into the distance where the blue haze hangs over and along the far-away hills.

Ascending a slight incline, the hounds, at an increased speed, cross a level pasture, so closely grazed by the cattle—that now stand at gaze, or start with shaking heads out of the way of the pack—as to be as closely shaven as a lawn, and approach a road. The carriages have reached the place, and are gathered near the spot where the hounds will cross. Above them all rises the Kerneval break, and Wrexford, as he come on, can see Miss Marling standing, and holding the rail of the driver's seat. He calls to Parsifal, pats his broad shoulder, and feels the quick strain and play of muscle and tendon. Parsifal must not fail him here; and there passes between the horse and the rider that something that, in such junctures, assures that there shall be no failure. Again Everest, on his better horse, leads, and again takes the jump in great form. On the other and farther side of the road is an ordinary board fence with a closed gate. Those who are leading make for the panel next the gate on the right, for the "take-off" seems better there. Everest goes over gloriously. Etheridge follows, but, either because his horse is winded or has grown careless, he fails to clear and does not break 'the topmost board, and falls with his rider. Parsifal is following closely,—too closely, perhaps, but his blood is up at last, and he will not be checked. The fallen, struggling horse and the entangled man are directly in his line. On the left is the gate, a foot higher than the fence, and on the right a panel, lower, to be sure, than the one directly in front, but near which are loosely-piled stones making a jump impossible. There is but one way. With a quick turn Wrexford calls upon old Parsifal, and the call is honored. They are safely over the gate,—safely over, but with nothing to spare, as a splinter flying from the top makes evident. It is more than a good jump,—it is the best and boldest thing of the day. All who follow shout approval; and Wrexford, turning in his saddle as Parsifal lands in the field, sees Miss Marling unclasp her hands, and hears her laugh a little excitedly as she applauds wildly. Etheridge rises from the ground, and, mounting his horse almost before he has scrambled to his feet, again takes up the chase.

And now the character of the run changes. Now it is over no predetermined course. The pace quickens, and the carriages in the road not far off are left a long way behind. A ditch lies on either side of the fences. Huge boulders, like the uplifted shoulders of giants at toil in the earth, rise all around. Thick bushes in places almost cover the ground, and no one knows what they may conceal. There is a "check" for an instant upon a broken stretch, but the hounds quickly pick up the scent and are again away. The handful who are "well up"—the pace has told, and "tailing" has begun—are at last at maddening speed. A lagging crowd, taking line of flight above their course, seems to stream like a black wind-straightened flag behind. Wrexford and Everest are leading. That animosity that had sprung up between them the night before had taken form, and they have ridden and now ride in direct rivalry. Kerneval, who is close behind, marvels at Parsifal, and concludes that after all he would not sell him. It is the fastest thing, so far, of the season,—Kerneval says it in the smoking-room that night, and all agree with him,—fast, short, and brilliant. Now only the best horses—Parsifal has won his place and the best riders are "in." Parsifal stumbles, and for an instant slackens his pace. Wrexford falls back beside Kerneval, and for a few minutes they ride over the grassy ridges of the meadow side by side. And now there springs up in Wrexford the old racing feeling. He will not be left behind. He feels as he had felt long ago, when he had caught, between the flat ears of his horse, the glint of the shoes on the hoofs flying before him. As if he had received some sudden infusion of his rider's hot spirit, Parsifal makes one great effort. He lengthens his stride—he "collars" Everest's horse,—has passed him. The bounds are clambering over a fence along a narrow strip of woodland, and through the scattered trees Wrexford notices, in the field just beyond, a spot of yellow gliding swiftly over the brown earth. Glancing along the fence, he sees, farther along, a gate with an opening beyond that seems to promise better landing. But to reach this he must swerve from his course, and to swerve is to lose time. The bounds will kill in a minute, and to lose time is to lose all. Which shall it be? Such, and the like, are the quick questions that come to the cross-country rider, questions to be answered on the instant, with horse and pulse at full gallop. Wrexford holds straight on. In an instant he is at and over the fence. The wind has not dried the earth, and the ground is slippery. Parsifal almost comes down, but with convulsive action he staggers to his feet and picks up the running. The fence that bounds the thicket on its farther side is low and insignificant. Wrexford is again in the open, and the course across the level nothing to be considered. But Parsifal is old; he has done wonders; he can do no more. He is "pumped;" he "throws up his tail." His speed lessens, and he strikes a walk. Wrexford sees Everest pass him; sees him in the next field spring from his horse amid the tumbling, tearing, yelping mass of the hounds, and lay about him with his crop,—the winner of the brush.

(To be continued.)

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.

Minnie May's Dep't.

MY DEAR NIECES,—Another year with its trials and worries, joys and sorrows, incidental to humanity has passed away, and let us hope we are nobler, wiser, and better for the experience, for if we have not benefited in some one way by it we have lived in vain. To me the past year has been most encouraging, for my girls have responded, in many ways, to my efforts to amuse and benefit them. In the limited space at my disposal my nieces and I have had many a pleasant chat, and the prizes offered have been competed for with much spirit. I trust the various hints on domestic and household matters have helped the weary mothers and depressed housekeepers over many a rough place. While my nieces have found something to amuse and interest them in the miscellaneous reading matter, receipts, fashion notes, and stories, it is satisfactory to feel and know that my nieces are in sympathy.

But before we settle down to every day life again, let us this bright New Year's morning turn over a new leaf—a clean white sheet—make some good resolutions, and keep them. Begin the year with a determination to do something better this year, if it only be getting control over a hasty temper or a slovenly habit; or an inclination to idleness; or maybe you have been endowed with a special talent for drawing, or painting, or music, or even plain sewing; or, perhaps, your tastes are domestic, and you love housework, or cooking. Any of these would be a great glory to any woman to know perfectly. So resolve to perfect your talent, whatever it may be, and you will be astonished how soon the point of perfection is attained. If we have only gained a victory over self, what a grand one it is. There is a word much used now-a-days, "cleverness." Well, my dear girls, when I tell you there is no such word you will feel quite jubilant. Perseverance is just the same word; for "cleverness" is perseverance, and all can exercise that if they will. Do not be discouraged by a few failures; try again, and again; nor do not sit down and weep; tears never won a battle yet, nor wont; just keep on trying, and success will crown your efforts.

Wishing my dear nieces a very bright and happy New Year. MINNIE MAY.

Our Prize Essay.

Minnie May offers a prize of \$2.00 for the best article on "A Country Party, and How to Make it Pleasant." Essays to be in by the 20th of January.

Minnie May offers a prize of a gold thimble for the best essay on "The Cultivation of Individual Taste," communications to be in by the 20th January; also, the prize of a ladies' beautiful pocket knife for the best article on "Economy of Time," essays on this subject to be in by the 20th of February.

Household Hints.

Massage for the wee baby is recommended as putting the darling to sleep sooner, and it will sleep longer. Just before putting on the little "nightie," gently rub the little arms, then the back, chest, legs, and feet; bye-bye the little one will "coo" and stretch its weary limbs, feeling very refreshed.

PRIZE ESSAY.

School Lunches for Children.

BY MRS. M'ADAMS, TORONTO, ONT.

Much indeed might be written upon a subject of so much scope, but I am only able to give you a few practical hints concerning lunches. Children (if well) ought to have good appetites, but that is no reason why any and every kind of food should be given to them, nor why it should not be wrapped daintily in a nice white napkin or white paper and placed in a clean basket. Old linen tablecloths cut up into napkins and hemmed are splendid for lunches. But what shall we give the children for lunch is a subject too frequently neglected by busy mothers and elder sisters who, in their hurry to do up the morning's work, hardly give the children's lunch a thought until the last moment when it is just school time, then they pack up whatever comes first, without once considering whether it is wholesome and nutritious. Now, what is wholesome food? is the next question.

Good bread and butter, of course, and preserve us from bread and butter that is not good. Sandwiches made (without mustard) of good boiled or roasted meats, such as ham, tongue, corned beef, lamb or mutton, roast beef, chicken, etc. The wings and legs of cold fowl are very acceptable as they can be nicely managed with the fingers. I would never give fried meats of any kind, but for a change hard boiled eggs cut into slices and placed between the pieces of bread and butter, or honey or jam, is very good. So far we have bread and butter and sandwiches of some kind. Biscuits are not a good luncheon eaten alone, and, indeed, I allow my children very little cake and never any pie; believing that most of the headaches and much of the complaint of indigestion arises from the pie and unwholesome food eaten. I would not deny gingerbread or any kind of plain cake or cookies or corn bread. Always give ripe fruit in season, or a few figs, dates or raisins in season. In the way of sweets it is well to be cautious. As Canadians we go in too much for them, a little is very good but too much is sadly injurious to both mind and body. I would caution you about giving pickles or sauces of any kind as being very injurious. To make a luncheon complete I would recommend that the children carry a small bottle or self-sealing pint jar of fresh milk every day; milk is so highly recommended by all the best physicians now-a-days, and besides the water in many of our school sections is not good. Now, however simple the fare may be, it can always be made to look neat and tempting. Many ideas will suggest themselves if one only takes the time and trouble to carry them out, and really it is worth it; food tastes so much better if nicely served, you know; besides we owe it to our children. You must remember we are bringing up the future great men of this Dominion of ours; for, you know, nearly all our great men usually begin life at the common schools.

The term spinster, in law, is the common title by which a woman without rank or distinction is designated; or the general term for a girl or a maiden woman.

The bride's veil originated in the Anglo-Saxon custom of performing the ceremony under a square piece of cloth held at each corner by a tall man over the bride and bridegroom to conceal the bride's blushes. If the bride was a widow this veil was dispensed with.

Fashion Notes.

Evening cloaks are made of satin plush fur or silk, short or long, as the purse or taste of the wearer decides.

The ugly Empire veils have entirely disappeared; and if any is worn it just tips the nose and is tucked under the bonnet at each side.

There is nothing remarkable in the styles of mantle worn. Short seems to be slightly in favor; but many who possess handsome long ones wear them.

Our climate has a fashion of its own in boots; and that is, the feet should be comfortably booted and protected from cold and wet by rubbers or overboots.

The Newmarket or close long cloak is received with an increased measure of popularity, and will be worn with a shoulder cape of the goods or fur throughout the winter.

Skirts are worn a neat walking length, apparently plain; but in reality they are most artistically draped, and the trimmings on the bodices are heavier and richer than ever.

Bracelets of silver, from four to six inches wide, are worn, but they look too suggestive of fetters; when these are worn the glove wrists must be shortened. Wide bands of black velvet are pretty and inexpensive on the wrists.

Furs of all sorts and kinds are worn, from the soft, dyed rabbit skin to seal, beaver, otter, and even mink is sometimes seen. The fancy furs are more worn by girls and children. A grey boa, cuffs and muff, gives a very fresh tint to a young face.

Bodices remain very fanciful in trimming still. The buckle waist is a favorite with rather young ladies. The shoulders are trimmed with lappels of broad ribbon, and the ends are crossed both in front and at the back, and drawn through elaborate buckles of gold or silver.

Crotchetted rings enter largely into the decorations of the holiday season, they make a rich and beautiful decoration for scarfs, etc. Ribbons of all shades are twisted, tied and folded into all sorts of fantastic ways for the adornment of fancy articles, and often form entire articles that are both useful and handsome.

Bangs are still worn, but no longer heavy. The lighter and fluffier they are, the more fashionable. One soft curl worn in the middle of the forehead, so long the fashion in Paris, is wonderfully becoming to oval faces. The soft French twist is still a favorite style for doing the back hair, and is suited to the shape of most heads.

Velvet seems to be the favorite trimming for dresses. Any girl handy with the needle and thimble can make her own bonnet. Two different materials are often worn, and the shapes are so simple, that, when neatly covered, a few loops of ribbon or velvet trim them. Some really pretty little bonnets have been made from a bit of the material of which the dress was made. Do not make your bonnet bulky; make all the trimming on top. Take long stitches in sewing a bonnet; small ones pucker and give a drawn look. Broad strings should be worn longer than narrow ones. Yellow looks well on a brown or black bonnet, and white looks very stylish. Some women venture upon veils down to their chin, but, as a rule, they are unbecoming and uncomfortable, catching the moisture of the mouth and nose in frosty weather, and chapped lips are the results.

Faba Baga.

or parlor bean bags, is an amusing game for the holidays. Any boy handy with tools can make the boards, and the picture will explain how to make and put them together; and the little girls can make the bags, one for each opening. The largest is called "Jumbo," and each bag should be different material and of bright colored chintz, or sateen, filled with clean beans. It is good exercise, and will furnish amusement for evenings at home. The player should stand about ten feet from the board, and throw the bags in succession; if the large bag passes through the smallest hole it counts fifteen; if through the medium it counts ten; and if through the largest it counts five; if the bags pass through their own holes they count five. Any number can play it, each having a throw of the three bags.

Winter Evening Occupation.

BY ADA WOOD, BIRTLE, MANITOBA.

The wise people of the world endeavor to make the most they can out of life. "Will it pay?" is the question that comes instinctively to them at every undertaking they contemplate. Not that they waste time in debating the subject, or they should not be called wise, but by continually exercising those divine gifts to the human race—thought, reason, judgment—they can manage to make this life a very enjoyable one. To them it is so full of resources, a thousand years of it might be spent, and they would still realize that there was much to learn and enjoy well; but what has all this to do with winter evenings' occupation? Simply this: We have not got a thousand years to live, nor half, nor one-tenth that time. Three-score and ten years is the allotted age; few of us reach even that. Then, when we realize how the time is flying by, and, as Canadians, a good share of it is taken up in the long winter evenings, it behooves us to make the most of them. To those living in towns or cities, there is no need to offer any suggestions except perhaps in the way of warning. Pleasure, that delusive goddess, is as large—smiling, alluring, sweet. Give her a friendly greeting, and she will be of great benefit; but if you value your best interests, don't go farther; don't fall down and worship her, for she will prove vain and deceitful, as too many have found out to their cost. But there are other voices than her's calling—higher, nobler, better ones. Follow these and you are safe.

It is in the quiet village and lonesome country, when summer with its pleasures, and autumn with its duties, have passed—where the dancing river is stilled and the trees are brown and leafless, when over all the earth the soft snow has fallen, doing its work silently but surely, that the question comes up: "How shall we spend our long winter evenings?" Now, let us do a little rough calculating, and find out how much time these winter evenings are going to embrace. Six o'clock is the usual supper hour; and, by the way, don't let us hurry over that sociable meal. Let us make it as cheerful and pleasant as possible, and contrive to keep up merry conversation as long as it can be done after the business part of the meal is over. It is not a waste of time, but very beneficial to the health, as all doctors are agreed upon. Then, say at eight o'clock, one is really settled

down to spend the evening, and at ten o'clock it is time to get ready for bed; so that leaves two hours every evening to be put in somehow. Every evening? Well, we must except Sunday; for then, all good people go to church, or, if they cannot manage that, their own conscience will dictate as to the best way of spending it at home. Perhaps we might except Saturday night as well, for that is very often a busy one in busy households. Then, let us say, that on an average two evenings are taken up in attending meetings or social gatherings. That leaves just three nights at home, a-week, in which to solve the problem, "How shall we occupy them?" At two hours a night, we have six hours a week, and for twenty weeks, we will say, we have one hundred and twenty hours—a small calculation. Wonders might be accomplished in that time. And that is only one winter, remember. What fine opportunities for those young people who have been deprived of school too early, to devote to

opened and silently poured over till bed-time comes. Such persons or families ought to forego reading, occasionally, and make the evenings merry with frolic and song. A family taffy-pull would be a pleasing change. If there is an organ or piano in the house, there should certainly be music, if it is nothing more than practising simple, familiar airs. There are now so many parlor games, whose low price is within the reach of all, that no family should be without some of them, such as chess, checkers, cards, and many others more amusing and more instructive. The old-fashioned game of parlor croquet ought to be revived for family use, since it is one that both children and old people can play and enjoy. A note of warning here again:—Do not let the games grow too fascinating. We know of families where, night after night, whist is played as regularly as supper is eaten; and we hear of men who can never get enough chess or checkers. Such is not commendable. We heard of one young lady who spent a great share of her winter evenings in learning to knit. "Is it not a waste of time," asked a friend, "when you can do so much finer and nicer work?" "No," was the sage reply; "for when I am old and my sight fails I shall not be able to do fine work or read; then I can knit for my grandchildren all day long instead of spending my time in idleness. I almost wish the time were now, for it is such fascinating employment." May she live to realize her expectations.

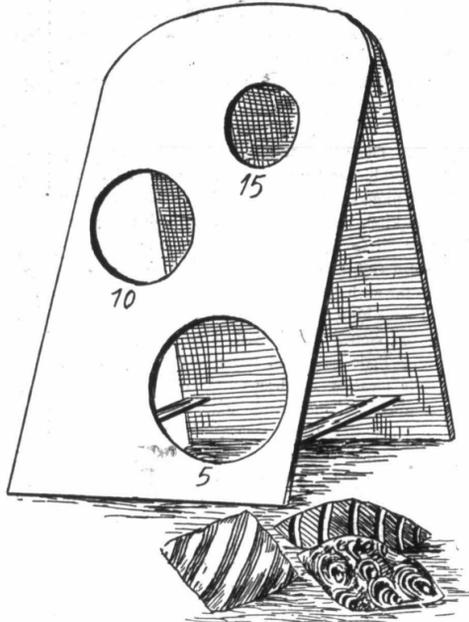
Out-door sports are both enjoyable and beneficial on fine moonlight nights, and should be more indulged in than they are, especially by our young ladies, who love too well a cozy nook by the fire-side, where they can sit and work or read while contentedly listening to the hilarious shouts of their brothers and younger sisters, who are out tobogganing on the moonlit hillside. Put aside your work or book, my dear young lady; wrap up and go out and enjoy yourself with them, like a loyal Canadian; for Canada is justly celebrated for her winter sports, and, as Canadians, we must uphold them. Besides, the moon does not always shine; and you will not always be as young as you are now. Consider the matter, and be guided in it by your common sense.

One more suggestion, and I shall have finished. Not that the subject is exhausted, but it is wise to stop before the patience of the reader is: Did you ever try a family concert for an evening's pastime? Then get one up some night, and you will be surprised at the amount of fun and talent that will be produced. Music, readings, recitations, tableaux, charades, can all be got up with very little trouble. The larger the family the more successful the affair ought to be. Now, let us put our wits to work and see how much solid benefit and fun we can get out of the evenings we still have before us this winter.

Table linen should always be hemmed by hand. Not only does it look more dainty, but there is never a streak of dirt under the edge after being laundered as with machine sewing.

When painting a baseboard to a room it is a good plan to paint two or three inches of the floor too. Then if the carpet does not quite cover the floor, the gap is not so noticeable.

Whole cloves are now used to exterminate the merciless and industrious moth. It is said they are more effectual as a destroying agent than either tobacco, camphor or cedar shavings.



FABA BAGA.

study. Grammar, geography, writing, spelling, history and literature, are all studies that can be learned at such times. Would that we were all more deeply impressed with the value of knowledge.

Reading aloud is a beneficial pastime; and to kill two birds with one stone (for while one is listening one can be otherwise employed), get instructive as well as interesting books. Dickens' "Child's History of England" is an excellent one for this purpose. This is a very good way to foster a healthy appetite for good reading. There are many who have not the inclination or patience to wade through a good work themselves, but are most captivated by them when hearing them read out. On the other hand there are some people too fond of reading. I don't mean those who are fascinated by trashy novels, but those to whom a good book is one of the greatest pleasures in life, and who spend all their spare time in gratifying this desire. Night after night when the lamps are lit, books, papers, magazines, are brought out,

Uncle Tom's Department.

MY DEAR NIECES AND NEPHEWS:—

"Hopes fulfilled, high wishes strengthened. May the New Year bring to thee: That I know, beyond all doubting: Happy will the New Year be."

Christmas! Merry Christmas! is past, and the dear old year of '89 is forever gone. The eighties have run their course. With the slow tolling of the village bell, the last minute of the last hour of the last year passed away down the stream of time. All the golden opportunities, all the moments, gone, gone, GONE FOREVER.

And the New Year opens, and we have welcomed it in.

Ten years ago, a young girl "in maiden meditation fancy free," wrote in her diary:—"First day passed of 1880. Another decade gone. Where shall I be ten years hence?" A quiet grave, on which the daisies grow and the geraniums bloom, and over which the wintry winds sigh and rustle the mountain ash which grows near by, answers the question which she—the merriest and brightest—asked ten years ago, as far as the mortal is concerned; but away beyond, who shall answer the question? who shall show to us the mystery of the glory? Who shall draw aside the curtain and disclose the beauty of the joys within? Let us thoughtfully ask the question:—"Where shall we be ten years hence, when 1900 shall be ushered in?" Where? Ah! Where? Uncle Tom's little nieces and nephews whom he now writes to will be men and women, taking their places in the great world. The older ones will themselves be aunts and uncles, and, like Tennyson's "Cousin Amy," giving advice and telling others—

"They are dangerous guides—the feelings—She herself was not exempt; Truly, she herself had suffered." &c. &c.

Who will have fallen, who will have risen ere that time? Scattered the wide world over, "by mount and stream and sea." In all occupations, in all climates, in all stages of advancement, where will the present readers of Uncle Tom's letters be then? Perhaps not so soon filling the Professor's chair, but many, I doubt not, in college halls. Do you know, boys, that about nine-tenths of the thought-workers of the day have been country boys—boys of the farm. You do not know what a heritage that dear old farm has given you in a sound body, which tends so much to develop the sound mind? Uncle Tom looks forward with hope, then, for the future of the Canadian girls and boys, and in his New Year's wishes he would say, keep your ideal high, make this the best year, this decade—which decides so much of your life destiny—the best and the highest. "Improve the present, it is thine;" then "go forth to meet the future with a manly heart and without fear." Many of you know the story of how Nelson inspired his men with renewed courage just before a battle, by shouting:—"England expects that every man will do his duty." At this time, I would change the words and write to all my nieces and nephews; "Canada, yes, Heaven, expects that every one of you will do his or her duty!" Uncle Tom would set his ideal high, and then in the earnest pursuance of it, will we not be bound

together by an invisible cord which binds us—from Nova Scotia, away down by the sea, to British Columbia, away across the Rockies. Yes, farther still and farther, till the chain encircles the whole world round, and the ends—if ends there be—are in His hands, who "in life, in death," will abide with us and crown our labors if we sincerely pray, "O God, abide with me."

As we watched the day fade away, and the last long shadows grow more dim as last year closed, I wondered what thoughts were stirring in your minds. Thoughts at such times are what gives the impetus to improvement. Time is so short! O make a bold resolve this year to waste no golden moments. Value them as the

Prize Winners for 1890.

MY DEAR NEPHEWS AND NIECES,—The time has come around again when we must decide who are the lucky prize-winners for 1889. I'm sure all who have read the puzzles will have an idea who stand very high in Puzzledom, viz., Harry Woodworth and Ed. A. Fairbrother. I consider their puzzles have been very good, and I have enjoyed them as much as any of my large family, and enjoyed many a good laugh over them. Indeed our puzzles are of a very high standard now; the quality far exceeds those of any previous year. I am not pleased with so small a number in competition for best puzzles; and I think, perhaps, it is because some of the original puzzles are so cleverly done that many become discouraged, and because they think they cannot do so well as others, leave it all for them. Now, this is hardly fair; so now I intend to add a new special prize of "A Golden Days," Puzzler's Directory, to the one sending the most best original puzzles during the next six months, who has never won one of the first four prizes for contributions in these columns. This directory is a cloth-bound book, containing the names and addresses of nearly 4,000 of the leading puzzlers in the United States and Canada, and nearly 800 *noms de plume*. The following is the list of the successful ones for 1889 for best puzzles:—1st, Ed. A. Fairbrother, Copenhagen, Ont.; 2nd, Harry A. Woodworth, Sackville, N. B.; 3rd, Arthur T. Reeve, Highland Creek, Ont.; 4th, Henry Reeve, Highland Creek; 5th, Amos Howkins, Lorneville, Ont.; and the special prize offered in September is awarded to Miss Ada Armand, Pakenham, Ont. For the most and best answers to puzzles:—1st, A. Russell Boss, Athol, Cumberland Co., N. S.; 2nd, Morley T. Boss; 3rd, Amos Howkins; 4th, Anna K. Fox, Delaware, Ont.; 5th, Henry Reeve; 6th, Ed. A. Fairbrother.

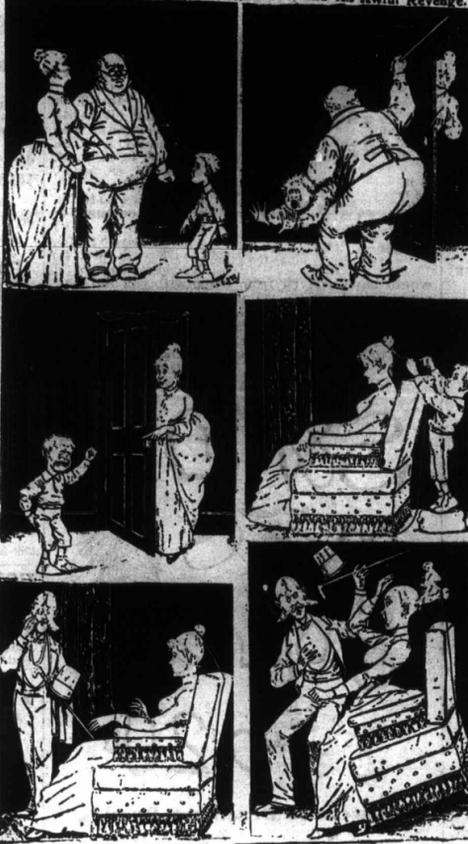
For 1890 I will again offer \$15.00 in prizes. For the best original puzzles—1st prize, \$3; 2nd, \$2.50; 3rd, \$2; 4th, \$1; 5th, 50 cts.; and for the most correct answers to puzzles, six prizes, of \$2, \$1.50, \$1, 75 cts., 50 cts., 25 cts. The puzzles must be original, answers to accompany each puzzle; also, address in full with each communication; write on one side of the paper only. All letters must be in our office by the 20th of the month. We intend to have the ADVOCATE out earlier each month, and thus allow you plenty of time before the 20th.

Now, let me hear from all the boys and girls who read this letter, and let me have a larger family for 1890 than I have ever had any previous year. UNCLE TOM.

When trying to thread a sewing machine at twilight or in any imperfect light as sometimes one is obliged to do, if one will place a bit of white cloth or paper back of the needle eye it can be found and filled very much easier.

The pole was used by the barber-surgeon for the patient to grasp in blood-letting, a bandaging being used for tying his arm. When the pole was not in use the tape was tied to it and twisted around it, and both were hung up as a sign. At length, instead of hanging out the actual pole used in the operation, a pole was painted with stripes round it, in imitation of the real pole and its bandages. Hence the barber's pole,

The Tall-Tale Sister, a Severe Chastisement and An Awful Revenge.



Copied by permission of Saturday Night—a new, spicy, lively illustrated paper published by E. Shephard, Toronto.

miser does his gold, and as the clock, with measured tick and slow, tells the moments, resolve that none of them shall be wasted, that at the close of 1890 you can review the past without a blush, and find yourselves a large niche higher up than at its beginning.

The beautiful, imaginative pictures of the past come like some sweet memory before me: the artist's palette has fallen from his nerveless grasp; the light has grown dim and the fire is out. The unfinished picture requires the absent master's touch, for the round faces are lengthening, and the sweet girl graduate has come forth in her "robe of white" on her bridal eve; and he who was a boy is now a man, and leads her to the altar. We will not to night renew the light or fan the embers to a flame; with softened tread and muffled oar, we'll leave the sacred spot—

"I feel what we can ne'er express. Yet cannot all conceal."

Your loving UNCLE TOM.

Puzzles.

1-NUMERICAL ENIGMA. My 10, 23, 4, 22, 5, is a cutting instrument.

ED. A. FAIRBROTHER.

2-JANUARY, 1890.

Grid for puzzle 2 with numbers 1-31 in a 4x8 layout.

Across-1. The progenitor of the human race. 2. A problem difficult to be resolved.

3-CRYPTOGRAM.

1. Avive ghwtw Z cvefbaf Xszexgve yl V-Kgveazo zcoozezaxof.

A. T. REEVE.

4-CHARADE.

Dear Cousin Harry, you're very kind To ask us all to come.

ADA ARMAND.

5-ANAGRAM.

He lived in a tub! He lived in a tub! And about him the world made a great hub bub.

6-CHARADE.

Our friend H. A. W's up to some trick; FIRST, he invited us all down to (sea);

Let's see, there was to be pudding and pie, Turkeys, ducks, chickens, and geese;

He even inferred that his sister's delight, I think that he has lots of cheek;

7-CHARADE.

On my first you may find Many a juicy seed,

FAIRBROTHER.

On my first you may find Many a juicy seed, On which man and beast

HENRY REEVE.

8-CHARADE.

I once more call on all the girls, FIRST the LAST of days of yore,

9-CURTAILMENT.

Happy New Year, hail to thee, As thy smiling face we see;

It matters not our rank or station, We need a little recreation;

Though your efforts with success Have not been crowned, says Little Bess;

The WHOLE of these few words you'll find, Is to promote the puzzling mind;

FAIRBROTHER.

10-PUZZLE TO HARRY WOODWORTH.

Diagram for puzzle 10 with numbers in a grid.

Dear Cousin Harry

A.-(From 1 to 6) my (33 to 30) (8 to 13) for your kind (55 to 64),

would have derived from being with you and your company. I, (88 to 96), you will still continue to work for (14 to 19, 6 to 20),

HENRY REEVE.

11-ILLUSTRATED REBUS.



Answers to December Puzzles.

- 1- F O G 2-Loves-solve. 3- D U C K S 4-Within. 4- P A R K A K E 5-Good intentions. 5- O C T A G O N 9-Facitious. 6- I M A G I N E 10-Capacity. 7- G R O A N 11-Willow. 8- E N D 12-Wintery.

3-APPLE C FARM S IOU ER ROLL ISOW GRUNT ENDS A D I E U NI NE FA I R R E DP AT ON C E A D A friend of agriculture.

- 6-(1) Love cannot enter the heart without bring- ing with it a train of other virtues. (2) Thou shalt always have joy in the evening

8-Merry Christmas, Glad New Year.

Key: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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

A. Russell Boss, Morley T. Boss, Ed. A. Fair- brother, Anna K. Fox, Willie N. Redner, A. How- kins, Henry Reeve, Arthur T. Reeve, Elinor Moore, Geo. Harrison, J. H. Morgan, Sarah Moorhouse, Jennie Case.

NEW ADVERTISEMENTS.

SPECIAL NOTICE.

THE FARMER'S ADVOCATE refuses hundreds of dollars offered for advertisements suspected of being of a swindling character.

AUCTION SALE

OF HIGH CLASS PEDIGREE IMPORTED Clydesdale Stallions and Mares

AT MITCHELL, ONT.,

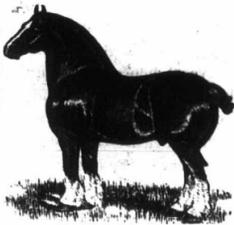
ON Wednesday, Feb 12, '90

The splendid stock embracing ten stal- lions and three mares, all imported.

For catalogue ad- dress THOS. COLQUHOUN,

PROPRIETOR, MITCHELL, ONT.

289-b



JERSEY COW

Handsome, solid fawn; pure- bred; unregistered; from rich butter stock; two years old; fresh Dec. 17th. Will make a model family cow. Also Heifer Calves and Yearling Heifers for sale.

J. C. SNELL,

EDMONTON, ONT.

289-a

BERKSHIRE PIGS.

Young Sows in farrow to Imported Prize Boars. September and October pigs bred straight from im- ported stock. Pairs not akin. We have special rate by express, and we ship to order and guarantee satisfaction.

JOHN SNELL'S SONS, Edmonton, Ont.

289-a

FOR SALE----SELECTED FARMS,

From \$16,000 to \$1,500, in the Counties of Huron, Middlesex, Elgin, Norfolk, Kent, Lambton, Oxford and Essex. These counties are the garden of Canada. Address

EDWARD HARRIS

Real Estate Broker, 23 Toronto St., Toronto.

289-a

RUPTURE

Consult your own interest. You can get at the lowest price, the very best the land produces. Your Physi- cian knows my goods. The only system to positively suit your case. Truss especially made for you and sent by Mail same day. Fully equipped factory at my command. It took me over twenty years to perfect this work. Send 6c. stamps for Ill. Book. Valuable Information, etc. etc.

CHAS. CLUTHE, Surgical Machinist

134 KING STREET WEST, TORONTO, ONT.

SEED GRAIN.

The subscribers have for sale a choice lot of the following varieties of grain, true to name and free from all impurities, viz.: Colorado Spring Wheat, American Banner and White Poland Oats, Prussian Blue and Crown Peas.

Also a few Shorthorn Heifers and Cows with calf and Berkshire Pigs.

Correspondence promptly answered, and samples of grain sent on application.

R. RIVERS & SON,

Springhill Farm, Walkerville, Ont.

289a

BONE MILLS

For Grinding Bones Oyster Shells and Grain for Poultry.

Every Farmer and Poultryman should have one. Circulars on application. WM. BENNIE, Toronto.

HOME STUDY—Thorough and practical instruction given by MAIL in Book-keeping, Business Forms, Arithmetic, Penmanship, Shorthand, etc. Low rates. Distance no objection. Circulars free. **BRYANT & STRATTON'S COLLEGE, 419 Main-St., Buffalo, N. Y.** 287-y

ONTARIO CREAMERIES' CONVENTION

The Fourth Annual Convention of the Ontario Creameries' Association will be held at **SEAFORTH, ONT.,** **TUESDAY & WEDNESDAY, JAN. 14 & 15, '90**

The Association is making an extra effort to make this the best and most practical convention ever held in Canada, for those interested in the cow and her products, especially the mode of manufacturing the choicest creamery butter.

Full information re the Convention can be obtained from

R. J. GRAHAM, Secretary,
288-a BELLEVILLE, ONT.

SEEDS Johnson & Stokes'

GARDEN AND FARM MANUAL FOR 1890.

Is the best published. Brimful of good things, crowded with illustrations from Nature, and the choicest list of rare and valuable novelties ever offered. On receipt of 10 cents in cash or stamps we will mail it, together with a large packet of our new cabbage **ALL YEAR ROUND.** By far the Best Cabbage ever introduced for early, intermediate and late, catalogue price of which alone is 20 cents. Market Gardeners write for Special Prices. Mention this paper.

JOHNSON & STOKES,
217 & 219 MARKET STREET, PHILADELPHIA, P.

IMPROVED EXCELSIOR EXCELSIOR INCUBATOR

Simple, Perfect and Self-regulating.



Hundreds in successful operation. Guaranteed to hatch as large percentage of fertile eggs as any other hatcher. Send 6c. for new Illustrated Catalogue. Circulars Free.

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50 CENTS Watch for \$4.98



This watch has fine expansion balance, quick train (18,000 beats per hour), accurately regulated and adjusted. Full upper plate, dust proof, full jeweled, Waltham style movement, warranted an accurate time-keeper. The case is a genuine 4 oz. Duobee Silver-ine, warranted by the manufacturer a life time. In order to get good Agents immediately to introduce our watches and jewelry we make Grand Offer: good for 60 days. Cut this advertisement out and send to us with 50 cts. in postage stamps, as a guarantee of good faith, and we will send you the watch by express C.O.D. subject to examination. You can examine and test the watch and if found perfectly satisfactory and exactly as represented you can pay the express agent the balance, \$4.48, and take the watch—otherwise you do not pay one cent. If you wish the watch sent by mail, cash in full must accompany order. **SPECIAL**—Dealer immediately, sending \$4.98 in full with order, and if yours is the first order from that town we will give you the exclusive agency of your county and send you Free in addition to the watch a valuable sample outfit of jewelry consisting of rings, chains, pins, charms, etc., etc. **CANADIAN WATCH & JEWELRY CO., 69 & 71 Adelaide St. E., Toronto, Ont.**

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C. O'DEA, Secretary.

Ontario Business College
BELLEVILLE, - - ONTARIO.

A REMARKABLE PHOTOGRAPH was taken in January, 1889, containing representatives from ten different Provinces, States and Colonies then represented among the students. A photograph copy (reduced in size) sent free to any address. Solely on its merits and the success of its graduates, the College (now in its 21st year) enjoys a reputation throughout and beyond this Continent, and an attendance so notable and extensive. The College Circular and interesting and valuable Copyrighted matter sent free to any address.

W. B. Robinson,
286-d **J. W. Johnson, F. C. A.,** Principals.



Buy the **St. Thomas Road Cart.** It is neat, durable, and easy riding; made of the best of material, and warranted for one year. Write for prices, terms, etc. **BROWNELL & FERLE, St. Thomas, Ontario.** 286-f

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—BY THE—
Canada Company

WILD LANDS. IMPROVED FARMS.

TITLE GUARANTEED.

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

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

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

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

In Eastern Ontario.—In the Counties of Lanark, Carleton, Prescott, and Russell, besides many lots scattered through the older sections of the province. These lots are, generally speaking, within a short distance of a railway, and are easily accessible by good travelled roads from a market town. Many of the farms have from fifteen to twenty-five acres of clearing fenced ready for cultivation.

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

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

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

COMMISSIONERS OF THE CANADA COMPANY,
TORONTO, - - ONTARIO. 287-f
Offices, 204 King-St. East.

Business College Bulletin.

VOL. I. ST. CATHARINES, ONT. No. 1.

The St. Catharines' Business College will, for the coming year at least, give in this space a brief record of its progress, work and successes, together with a short account of its facilities and other matters of interest to the readers of this most excellent journal.

The College is entering on its fifth year with the largest attendance it has ever had, and with a wonderfully improved course of business training, that has been used and found to be perfect during the last year.

It unquestionably has the most thorough system of any business college in the Dominion.

Its students are more successful in obtaining positions than those of any other business college.

Three students from other business colleges have, during the past year, taken a second course here, and gone direct from this college to good positions.

The Shorthand Department is unequalled. Students become fast writers, and have such a thorough training in office work that they secure the best positions by their own merit.

No young man or young woman who wishes to secure the best there is among the leading commercial colleges should fail to send to the St. Catharines' College for full information. The rates are reasonable, and board only \$2.50 per week in private families in the city.

W. H. ANGER, B. A.,
President.

WEBSTER'S Unabridged Dictionary.

A DICTIONARY, 118,000 Words, 3000 Engravings, a **GAZETTEER OF THE WORLD,** of 25,000 Titles, and a **BIOGRAPHICAL DICTIONARY,** of nearly 10,000 Noted Persons, **ALL IN ONE BOOK.**

Contains 3000 more Words and nearly 2000 more Illustrations than any other American Dictionary.

Should be in every school in the Dominion.—*Canada Educational Monthly, Toronto.*
Best Dictionary of the language.—*London Times.*
G. & C. MERRIAM & CO., Publishers,
Springfield, Mass., U. S. A.

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

- Pumping Water
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- Farm Buildings
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- Villa Residences
- Public Institutions
- Gardens
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- Town & Village Water-works
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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

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RIGHTS TO MANUFACTURE
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FOR SALE.
DURHAM BULL CALF,
 Nine months old, with registered pedigree.
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TWO IMPORTED HORSES,
 (one Clydesdale, one Percheron), both young and sound. Apply to **FRANCIS RUSSELL,**
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MAPLE LODGE STOCK FARM.
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 Come and see them before purchasing.
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CRUICKSHANK -- BULL
 Imported Excelsior (51233) — 2893— Apply to
W. J. BIGGINS,
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For Sale, at a Great Bargain
 Our entire Herd of
AYRSHIRE CATTLE.
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BERKSHIRE HOGS
 of extra quality.
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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.
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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.
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PURE-BRED SHORTHORNS.

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 ADDRESS—
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FOR SALE. Five young Shorthorn Bulls, and a lot of Berkshire Pigs. These are all first-class animals. Send for catalogue and prices. **EDWARD JEFFS,**
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WILL BE SOLD.
 Two young Matchless Bulls, sired by imported Excelsior (51233); also two heifers—all good animals, colors and pedigrees. Particulars sent on application to—
W. J. BIGGINS,
 ELMHURST FARM,
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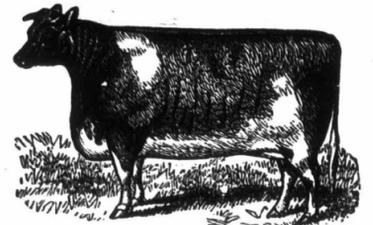
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Holstein-Friesian Cattle.
 Netherland Romulus, a grandson of Netherland Prince and Albino the Second, heads the herd. Young stock for sale.
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SEVEN CHOICE
YOUNG BULLS
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One registered Holstein-Friesian Cow, coming four years old; due to calve the first of February next; good milker. Price, \$120.
 One registered Shorthorn cow, five years old; due to calve 28th of February next; served by Holstein-Friesian bull Napoli; fine milker, fifty pounds a day. Price, \$120.
 One pure-bred Jersey Heifer, two and a-half years old; due to calve 20th of January; strong solid color. Price, \$100.
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Plain View Stock Farm
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 Have for sale two imported Shire stallions, foaled 1881, also two imported Clydesdales, foaled 1887:—
 William the Conqueror
 337 American Stud Book,
 Vol. I, 37 Canadian Stud Book, Vol. I, Lincolnshire Lawver 2821 English Stud Book; Tom Norrie, sire Young Lord Keir 320, Vol. VI; Buffalo Bill, sire MacCamon 3818, Vol. VII.
 For further particulars apply to
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 New Catalogues for 1890, will be ready by January 20, 1890. Send for one.

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



FRENCH COACH HORSES.
 Large, Stylish, Standard-Bred American
Carriage Horses.

Choice quality. Terms reasonable. Correspondence solicited. Mention this paper.
A. O. FOX, WOODSIDE FARM,
 OREGON, WISCONSIN, U.S.A. 288-f

300 PERCHERONS,
100 FRENCH COACHERS

Comprising my importations for 1889, are now on exhibition at
ELLWOOD'S RANCH,
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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 is situated on C. & N. W. Ry. 58 miles west of Chicago. 288-y

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Young ani-
My year-
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H. GEORGE & SONS,
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Importers and Breeders of

OHIO IMPROVED CHESTER WHITE SWINE,
also Suffolk and Berkshire Swine. Sixty fine fall pigs, now fit to ship, from prize-winning stock. All breeding stock recorded. Correspondence solicited. Single rate by express. 286-y

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My herd consists of 12 choice registered sows, bred to Middlesex 3717 (Free Trade 4359) (Crown Prince 4569), Uncle Sam 4361, National C. W. Record. Expect some good ones for fall trade. 282-y

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

Improved Yorkshire Pigs.

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

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

DAVID BIRRELL, Greenwood, Ont.

Breeder and Importer of First-class

Clydesdales, Cotswolds

-AND-

Scotch Shorthorns.

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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, including an imported bull. Trains twice daily. Station one mile. 282-y

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-OF-
SHORTHORN CATTLE.

Animals of both sexes for sale.

R. & S. NICHOLSON,
283-y SYLVAN, ONT.

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A. J. C. C. JERSEY CATTLE.

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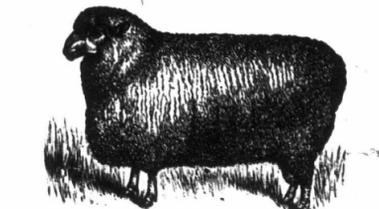
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For many years my flock has been the largest and best in Ontario County. A number of sheep and cattle always on hand for sale. Come and see me, or write for particulars.

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THOS. GUY,
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-AND-
COTSWOLDS.

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COTSWOLDS
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We have on hand and for sale a superior lot of imported and home bred Clydesdale Stallions and mares. Several of them were prize winners at the leading shows in Scotland and Canada. Also a few choice Shetlands. Prices to suit the times.

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LAWN STOCK FARM HERD OF SHORTHORN CATTLE, SOUTHDOWN SHEEP AND BERKSHIRE HOGS.

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Having a very large stock, and not sufficient accommodation for them during the winter, wish to dispose of

NINETY VERY FINE MERINO EWES

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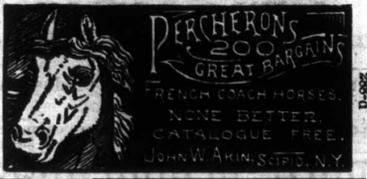
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 Pontypool Station and telegraph office, C.P.R.

BREEDERS OF DRAUGHT STOCK
 Notice is hereby given that the receiving of entries for registration in Volume B of the Dominion Draught Horse Stud Book will close on March 1st, 1890, after which the standard of registration will be raised to three crosses for stallions and mares. Dams with two crosses will then require to be also registered to admit progeny, but mares entered alone must have three crosses. No entries on the present standard will be received after that date, and parties interested will do well to govern themselves accordingly.
 Blank entry forms and all information will be promptly furnished on application to the undersigned. By order of the Council.
JAMES MITCHELL, Secretary,
 289-b GODERICH, ONTARIO.

FARMERS' INSTITUTES.

List of Meetings to be held in Jan'y, 1890.

I. NORTH-WESTERN DIVISION.		
Drayton (West Wellington).....	3rd and 4th	
Tara (North Bruce).....	7th	
Cheesley (Centre Bruce).....	8th	9th
Formosa (South Bruce).....	11th	
Feeswater (South Bruce).....	10th	
Wroxeter (East Huron).....	18th	14th
Mount Forest and Kenilworth (East Wellington).....	15th	16th
Goderich (West Huron).....	17th	18th
Hensall (South Huron).....	20th	
Elora (Centre Wellington).....	22nd	
II. WESTERN DIVISION.		
Lucan (North Middlesex).....	7th	
Parkhill (North Middlesex).....	8th	
Dorchester Station (East Middlesex).....	9th	
Ivinston (East Lambton).....	10th	11th
Glencoe (West Middlesex).....	13th	14th
Botany (East Kent).....	15th	
Zone.....	16th	
Windsor (North Essex).....	17th	18th
Amberburg (South Essex).....	20th	
Tilbury Centre (West Kent).....	31st	
Chatham (West Kent).....	22nd	
III. SOUTH-WESTERN DIVISION.		
Freelton (North Wentworth).....	2nd	
Drumbo (North Oxford).....	3rd	
Innerkip.....	4th	
Mount Elgin (South Oxford).....	7th	8th
Shedden (West Elgin).....	9th	
Waterford (North Norfolk).....	10th	11th
Aylmer (East Elgin).....	13th	14th
Simcoe (South Norfolk).....	16th	
Selkirk (Haldimand).....	17th	18th
Marshville (Monck).....	20th	21st
IV. SOUTH-CENTRAL DIVISION.		
St. George (North Brant).....	4th	5th
Brantford (South Brant).....	7th	
Welland (Welland).....	8th	
Thorold.....	9th	
St. Davids (Lincoln).....	10th	11th
Hamilton (South Wentworth).....	13th	
Oakville (Halton).....	14th	15th
Georgetown (Halton).....	16th	
Brampton (Peel).....	17th	18th
Weston (West York).....	20th	
Preston (South Waterloo).....	22nd	
V. NORTH CENTRAL DIVISION.		
Shelburne (Dufferin).....	3rd	
Dundalk (South Grey).....	4th	
Flesherton (East Grey).....	7th	
Meaford (North Grey).....	8th	9th
Cremore (West Simcoe).....	10th	11th
Tottenham (South Simcoe).....	13th	
Rimvale (Centre Simcoe).....	15th	16th
Aurora (North York).....	17th	18th
Markham (East York).....	20th	
VI. EAST CENTRAL DIVISION.		
Uxbridge (North Ontario).....	3rd	
Breechin (North Ontario).....	4th	
Lindsay (South Victoria).....	7th	
Bobcaygeon (North Victoria).....	8th	9th
Peterboro' (West Peterboro').....	10th	11th
Norwood (East Peterboro').....	13th	14th
Warkworth (East Northumberland).....	15th	16th
Baltimore (West Northumberland).....	17th	18th
Bowmanville (West Durham).....	20th	
Blackstock (West Durham).....	21st	
Osha's (South Ontario).....	22nd	
VII. EASTERN DIVISION.		
Pictou (Prince Edward).....	3rd	
Centreville (Addington).....	7th	
Inverary (Frontenac).....	8th	9th
Lansdowne (Leeds).....	10th	11th
Algonquin (Grenville).....	13th	14th
Iroquois (Dundas).....	15th	
Lancaster (Glengarry).....	16th	18th
South Finch (Stormont).....	17th	
Mark (South Lanark).....	20th	
Carleton (South Lanark).....	21st	

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 287-c Thomas W. Bowman, Peterboro', Ont.

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- S. STERLING BROS.**, Wholesale Boots and Shoes. Granite Block, York-st., opp. G. T. R. Station
- R. LEWIS**, 434 Richmond St., Wall Paper, Paints and Window Glass. Stained Glass to order.
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- WILSON BROS.**, Grocers and Wine Merchants, 398 Richmond street, London, Ont. 288-y
- NEW YORK STORE**, London, for the last 25 years has been known as the reliable house for Teas.
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- THOS. GREEN & CO.**, Cor. Clarence & Bathurst Sts., London, Ont., Builders and Contractors, Planing Mill, Sash & Door Factory.
- CHAS. CHAPMAN**, London, Ont., Book Binding in all its branches; dealer in Artists' Materials.
- FRANK COOPER**, ARTISTIC PHOTOGRAPHER, over 169, 171 & 173 Dundas St., London, Ont.
- E. BURKE**, 521 Richmond St., London, Ont., dealer in Photographic Goods, Amateur Outfits, &c.
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1 pair Shakers, Pepper and Salt..... 2
1 Cream Jug..... 7
1 dozen Individual Butter Plates..... 5
1/2 dozen engraved Table Spoons or Dinner Forks..... 8
1/2 dozen engraved Dessert Spoons or Forks..... 7
1/2 dozen Teaspoons..... 4
1/2 dozen Table Knives, best quality, English make..... 5
A very handsome Carving Knife, Fork and Steel, buckhorn handles, silver-mounted, finest English goods..... 8

In fancy articles we offer some very choice goods, suitable for wedding or Xmas presents. I will mention a few particularly good ones:-

- 1 Ladies' Companion, containing 7 pieces, Rodgers' best English make, beautiful, fancy plush case..... 16
1 Case of Scissors, containing three pairs, different sizes; best steel, with gold-plated handles; all set in a plush bottle-shaped case..... 12
1 Ladies' Pocket Knife, best make, pearl handle, two blades..... 4
1 Gents' Pocket Knife, three blades, stag handle, best maker..... 3
1 Call Bell, extra nice, for the table..... 4

In addition to these premiums, which are all of the very best quality, we have made arrangements with a publishing house, and are now prepared to offer some wonderful inducements to those who would like to have some of the standard works. It is a good thing to have such books at hand to pick up and browse over when the inclination comes, and thus become acquainted with a higher grade of literature.

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One containing about six acres and the other forty-eight acres. These lands are in a high state of cultivation, part of them having been used for the purposes of a Market Garden, and a large portion planted with an extensive variety of Small Fruits-comprising Strawberries, Raspberries, Black Caps, Grapes, Black and Red Currants, Blackberries, Pear and Plum Trees, &c., &c.

There is a large and finely situated Greenhouse on the premises. An extensive NURSERY STOCK is also offered for sale, together with a list of about 4,000 customers. The land will be sold with or without the nursery stock, as the purchaser may desire.

For full particulars apply to S. H. NEWMAN, or WM. P. TELFORD, Owen Sound, Ontario.

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BEST ON EARTH. Lasting in Their Results, Quick in Their Action. TRADE MARK. Sure Growth, Grape Food, Pure Bone Meal, Pure Animal Fertilizer and Farmers' Pride. Also Granulated Bone for Poultry Food.

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STOCK GOSSIP.

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

Tisdale's Brantford Iron Stable Fittings. We lose no job we can figure upon. Catalogue sent free. The R. G. Tisdale Co., Brantford, Canada. Adv.

A mistake was made in the Provincial prize list which gives Ormsby & Chapman 1st prize in two year Shire stallion. We understand H. George & Sons, Crampton, were the winners. Any mistake of this description we are only too glad to rectify. The list was taken from the official copy.

Mr. Jno. E. Smith, of the Beresford Stock Farm, Brandon, Man., has recently sold to Jas. Davidson, Reeve of Cypress, Man., Lord Charles Beresford—11076—a worthy son of Old Bampton Hero. Lord Charles has won some valuable prizes; also, to Jacob E. Baker, Melgund, Man., Beresford Imperial—10770—a son of Sunrise; also, Major Beresford—11712—a prize winner to S. S. Simpson, of Brandon, Man.

Through an error in the copy of the Industrial prize list, we omitted giving Dundas & Grandy's two-year-old filly, Maid of Barbraing, credit for sweepstakes as the best mare of any age. In looking up our notes on this filly we remember how highly we thought of her, and if space would have allowed given this particularly grand ring of two year fillies, in which she led off with the "red," a more extended notice in our review of that show.

Frank R. Shore & Bros., White Oak, have sold within the last month twelve Shropshire ewes through W. H. Beattie, to go to A. O. Fox, Oregon, Wis.; two ewes to W. H. Beattie, Wilton Grove, Ont.; also, the red bull calf Brawth Baronet, sire Vermilion (50687), dam the imported Sittyton cow Whin Blossom, to head the herd of R. Callacutt & Son, Tyrone. Their importation of Shropshire sh-shearing ewes have arrived in fine order, and their flock now numbers nearly eighty, all of which are registered and a large proportion imported.

Mr. Jas S. Smith, Maple Lodge Stock Farm, Maple Lodge, Ont., writes: We have recently made the following sales of Leicester sheep and Berkshire hogs:—To J. Wells, Ohio, U. S.: one ram; D. Harvey, West McGillivray, Ont., one ram lamb; Neil McDonald, Blyth, one ram lamb; Jas. Windsor, McGillivray, one ram lamb; John Hord, Parkhill, one ram lamb; Wm. Ellwood, Maple Lodge, one ram lamb; J. Smith, Conroy, one ram lamb; J. W. Murphy, Cass City, Mich., U. S., four ewe lambs; John Forbes, Brussels, Ont., one shearing ram; Jesse Snowden, Moray, one boar pig; C. H. Wilson, Greenway, one young boar; Peter Hord, Parkhill, one young sow. After the exhibitions we purchased from D. Harvey the three-shear Leicester ram which took 1st prize at London and Toronto, 1889; also, 1st at London, 1888, and 1st at Toronto, 1887, and we believe all our ewes are with lamb to him; notwithstanding that he weighs close on 400 lbs. He is active on his feet as a shearer.

The Sittyton Shorthorns, as all are aware, were sold entire to Messrs. Nelson for export to South America at the beginning of last summer. The fact has been deplored by the friends of Cruickshank Shorthorns through Canada and the United States, where they have become very popular, not only from their good beef and show qualities, but also for the successful way in which they sick with other Shorthorns. The bulk of the herd is still in their old quarters, only one shipment of twenty-four, including one bull, have yet left for their new home. We understand that the Violet tribe has been re-sold to some English breeders, along with a red bull calf, for which they paid 200 guineas. The price paid for the Violets is not stated. Another roan bull calf has been sold for 300 guineas. They refuse to sell any more cattle there, and the same parties have purchased this year's crop of bull calves of Mr. S. Campbell, Kenilms and they, with the Sittyton bull calves, have been sent to Yorkshire to be wintered. Mr. Cruickshank has settled to lease Sittyton from year to year at 25s. per acre, which is considered a fair price as things go in Scotland, and as there are many farms without tenants in many parts of the United Kingdom.

W. S. Hawkshaw, Glanworth, Ont., has recently landed one of the finest lots of Shropshire breeding ewes which have been imported. Fourteen ewes are out of the noted flock of Mr. J. E. Farmer, of Ludlow, and are by Felton Oak (3483) Prince Perfect (3153). Most of them are in lamb to that grand shearing ram bred by Mr. Andrew Mansell, which was winner at the Royal Show at Windsor, at the Bath and West of England, and West Midland. He has always taken first honors wherever shown. Eighteen ewes are out of the Old Onitbury flock of Francis Bach, which has been established nearly a century, and are by such sires as Double B. 12 and Chief Choice, winner of 1st prize at the Shropshire and West Midland Show. Eight ewes are in lamb to that grand sheep Ashby Star, winner of 1st prize at the Shropshire and West Midland Show in 1889. Eight ewes, six ewe lambs, and three rams are from the flock of Richard Bach, which is descended from the Old Onitbury flock; six of these ewes and three of the lambs are 1st prize winners, and most of them are by that wonderful stock-getter Woodstaple the Second—420 and Rebel—chief 1876, and are in lamb to Ashby Star and Rector Prince; the last named is by the noted Rector, which was let for \$1,000 after taking first honors at the R. A. S. E. at Sarawbury. The remainder of the ewes are out of the flocks of Mr. C. Bright, of Broom, and Mr. W. M. Dawes, and are very fine breeding ewes. The few Cotswolds, which are keeping them company, look like making good ones.

NO SOIL BLIZZARDS, CYCLONES, THE **FINEST, RICHEST** long line of expensive freights but **BEST PAYING MARKETS** right at the door for farmers in Michigan. How to get a **FARM CHEAP**, long time, easy payments, and full information, address **O. M. BARNES, LANSING, MICH.**

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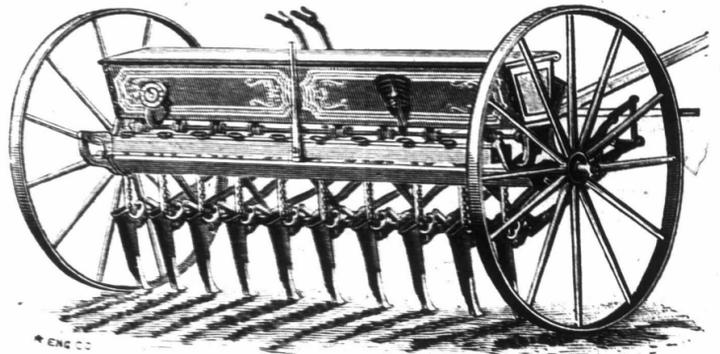
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150 PERCHERONS.
100 JERSEYS.
To be Disposed of this Season.
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Over 25,000 Hoosier Drills and Seeders with our Positive Force Feed in use in Canada.



GUARANTEED THE BEST IN THE WORLD, and the only drill that can be instantly regulated to run the desired depth in hard and soft ground while moving.
THE HOOSIER IS THE ONLY DRILL that sows all kinds of grain and seeds evenly, and at the depth desired in all kinds of soil.
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Imported Clydesdale & Hackney Stallions for Sale

Highest Prize Winners in the Leading Shows of the World
AND GETS OF FAMOUS SIRES

Such as Lord Erskine, Darnley, Old Times, McCammon, Garnet Cross
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Prices Reasonable. Catalogues Furnished on Application.



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BOWMANVILLE, ONT.
Bowmanville is on the line of the G. T. R., 40 miles east of Toronto
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—IMPORTERS OF—
**CLYDESDALE, ENGLISH SHIRE,
and CLEVELAND BAY HORSES.**
NEW IMPORTATION JUST RECEIVED.

The animals now on hand are of large size, good colors;
low, wide and blocky; with good heavy bone, good feet,
and the best of action. We have winners at many of the
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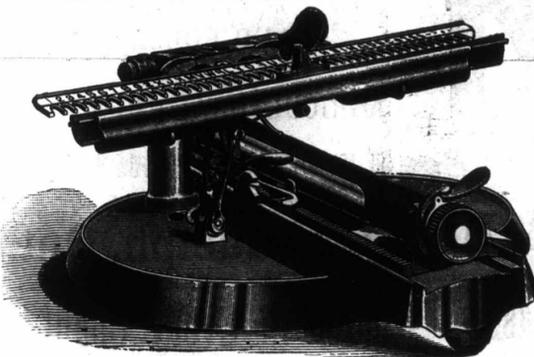


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CLYDESDALE AND HACKNEY
STALLIONS AND MARES**

Constantly on hand, and For Sale at Reasonable Terms.

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

GRAHAM BROTHERS,
Twenty-five miles east of Toronto, on the C. P. R. 278-y **CLAREMONT, ONT.**

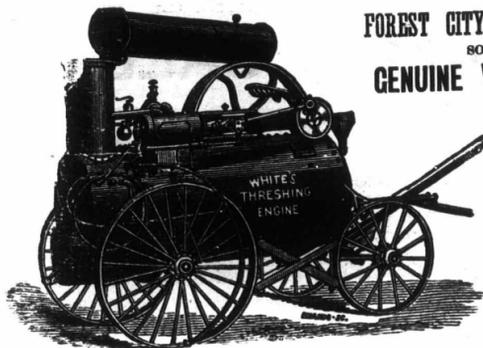


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\$15 will buy the ODELL TYPE WRITER. Warranted to do as good work as any \$100 machine.

\$1,000 offered any operator who can do better work with a Type Writer than that produced by the ODELL. Reliable Agents and Salesmen Wanted. Special inducements to Dealers. For Pamphlet, giving endorsements, etc., address the

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"THE FITTEST SURVIVES." FOREST CITY MACHINE WORKS, LONDON, ONT SOLE MANUFACTURERS OF THE GENUINE WHITE THRESHING ENGINE,

Special 20-horse power Portable Saw Mill Engine, (same pattern and style), Light and Heavy Traction Engine, and is licensed by all Insurance Co's, and has proved itself to be the most durable. The Engine for the Northwest is made to burn either coal, wood or straw. A thorough warranty given with all Machines and Engines. Call and examine our Machinery, or correspond with us before purchasing elsewhere.

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A. W. WHITE, Asst. Manager.
F. J. WHITE, Asst. -Sec. 287-1f

STOCK GOSSIP.

The Detroit International Fair and Exposition Association have already announced, that their second annual fair will be held in Detroit, Mich., commencing August 26th, and continuing until September 5th, 1890. The management are already at work with the hope of making their next exhibition even greater and more meritorious than the last.

C. & C. Christner report the following sales:—One Shorthorn bull calf to C. Both, of New Hamburg, Ont.; one shearing Shropshire ram to Davenport Bros., of Jacksonville, Ill.; one two-shear ram and ewe to C. P. Steiner, of Columbus Grove, Ohio; one ram lamb to N. C. Bechtel, of Haysville, Ont.; one ram lamb to Alex. Hastings, of Chesterfield, Ont.; one ram lamb to Jacob Richter, of New Hamburg, Ont.

John Snell's Sons, Edmonton, Ont., report a steady demand for Berkshire pigs, their sales in the last month calling for shipments to Nova Scotia, Manitoba, British Columbia, Texas, Oregon, Kentucky, Tennessee, Pennsylvania, Missouri, Michigan, and Wisconsin. Their sales of Cotswold sheep have also been numerous, and over nearly as wide a field as those of the Berkshires.

E. D. George, Putnam, Ont., writes:—The demand for pedigree Chester whites is still increasing; have shipped forty-eight lots to order the past six months, extending from Nova Scotia to British Columbia, and are giving splendid satisfaction to my patrons. Have a grand lot of fall pigs, bred principally by winners at London and Toronto; am breeding fourteen imported and home-bred sows to four imported boars for spring trade. Hope to fill all orders in the future.

R. Callacott & Sons, Tyrone, Ont., have made heavy sales of over ninety Shropshires during the sale season included in the last three months. This firm have imported quite freely of late years from such studs as those of Minton, Montford; A. E. Mansell, Broughton; G. G. Blantern, Peter Everall, all near Shrewsbury. They still have a useful flock of breeding ewes, which, together with a ram bred by Minton, which they purpose holding over for another season.

John Dryden, M. P. P., Brooklyn, writes us that: Sheep—For information of those still enquiring for sheep I wish to state that all are now sold, except a few lambs retained for next season's trade. I have sold about 170 the past season, among them several show lots, which have won prizes in New York, Pennsylvania, Michigan, Minnesota, Dakota, and Eastern and Western Ontario. Nearly every mail brings further enquiries, which cannot be filled at Maple Shade. Cattle—The mild weather seems favorable to the growth of young stock. Some of the young bulls have been already sold, the others are growing finely, and will, I think, please the most fastidious. Five are red and two roan, which, as usual, are not the worst.

Arthur Johnston, of Greenwood, reports enquiries brisk for the season of the year, much more so than last season at the same time. He says sheep and cattle have gone into winter quarters in unusually good condition. Feed is plentiful, and farmers' cattle are selling at very high prices—the highest ever witnessed in this section—especially grades showing considerable breeding. My own herd is of first-class shape, and now numbers sixty-seven head. My new catalogue for 1890 will be ready for delivery about the 20th January, 1890, when I will be pleased to send one to any farmer or breeder who may have a desire to see them, without any regard to business.

R. Rivers & Son report a good demand for South-down sheep and Berkshire pigs, and have made a number of sales at fair prices since the fall exhibitions, having been awarded the major part of the prizes at Walkerton and Paisley shows, and two diplomas on Southdowns. Owing to their last season's crop of calves from Victory being chiefly heifers, only had two bulls to dispose of, viz., Marmion Champion, which went to Robert Thompson, of Chesley, and Earl of Springhill to Joseph Morgan, of Purple Grove; the two year heifer, Autumn Blossom, to Wm. Carr, of Calsarus. They say our seed grain business is increasing, owing to the fact that we endeavor to send out nothing but a first class article. See advertisement in another column.

Rock Balley, Union, Ont., says:—"The demand for Merinos has been good. A number of fresh men are taking hold of them, such as H. Chisholm, of Paris, who bought four nice ewes, one pair of yearlings, that took first at Provincial, and a pair of two-year-olds, which were prize winners; these, with a pair I sold him last spring, make a nice start. They are all finely bred. Mr. Geo. Deo, of New Sarum, also bought a very fine pair of ewes, bred by Gayer Bros., Michigan, registered in Michigan register. Robert Shaw, breeder of South-downs, is dabbling in Merinos a little. I sold him a fine yearling ram, sired by Climax, dam bred by Gayer Bros. sire Zack Chandler. I don't know but he is going to try and convert his Southdowns into Merinos, or use the ram on that nice pair of yearlings that got the red at Toronto. I also sold a number of rams to go to Salt Lake City, Utah, while at Detroit Exposition. I bought of L. E. Shattuck, Stanbury, Mo., the ram lamb that was first at both Buffalo and Detroit. He is a fine large fellow. On the 6th of Nov. I went to Michigan and attended Adam Dicht's sale of thoroughbred Merino sheep, and secured fourteen ewes, the tops of the flock. There were lots of breeders there from all parts of Michigan. The bidding was lively, as this was one of the most noted flocks in the State, all registered in the Vt. register. My Jerseys are all doing well. My cow, St. L. Beauty, has just dropped a beautiful heifer calf, sired by King Hugo, of St. Ann's. Her milk is very rich.

STOCK GOSSIP.

A very large grade steer was weighed on the Winnipeg market scales a few days ago, and kicked the beam at 2,300 lbs. He was seen as Christmas beef at the stall of butcher Kobold, who fed him.

Mr. Empey, of Brandon Man., brought two fine Holstein heifers and a young bull with him from London, Ont., last spring. One of the heifers since met with an accident that caused her death; the other one and the bull are doing nicely, and will no doubt prove a good investment. Improved stock is one of the wants of Manitoba farmers.

H. J. Davis, Woodstock, Ont., reports the following sales:—The horned heifer Violet's Eclipse, sired by imported Eclipse and dam Violet Arundel, to Mr. G. Green, East Zorra; also, Berkshire sow to same gentleman; one boar to E. J. Tobin, Malmison, P. Q.; one boar to A. R. Kidd, Peterboro'; boar and sow to James Cherry, Jr., Nobleton, Ont.; one sow to R. J. Peacock, Aliston; two sows to Thos. Mackay, Richmond, Ont.; one boar to John Atkinson, Guelph. Have some good young bulls and heifers; also, some choice Berkshires of both sexes for sale.

H. George & Sons, of Crampton P. O., Ont., have made the following sales of pure-bred swine within the last three months:—To Geo. Beaudet, Valley Field, P. Q., Chester white boar and sow; to R. M. Brown, Cowansville, P. Q., Chester white boar; to Donald Jack, Newton P. O., Chester white boar and sow; to Edward Trott, Christiana P. O., Chester white boar; to Geo. Patterson, Watford P. O., Chester white sow; to Duncan Campbell, Norwood P. O., Chester white boar; to John Pringle, Guelph P. O., Chester white boar; to Geo. White, Emsdale P. O., Muskoka, Chester white sow; to Wm. Stoddart, Bradford P. O., Chester white boar; to Geo. Gill, Rosedale P. O., Chester white boar; to P. G. Walker, Westwood P. O., Chester white boar; to Fred. A. Stragg, Brockville P. O., Chester white boar and sow; to Adam Hill, Durham P. O., Chester white boar; to R. Moorhouse, Newbury P. O., Chester white boar and sow; to Benj. Johnston, Rodney P. O., Chester white boar; to W. H. May, Trenton P. O., two Chester white boars; to B. Story, Picton P. O., Chester white boar; to John Mahoney, Newmarke, P. O., Chester white boar; to H. M. Richmond, Creemore P. O., Chester white sow; to W. Trick, Thedford P. O., Berkshire boar; to Geo. C. Trunna, Berkshire boar; to R. Rivers, Walkerton P. O., Berkshire boar; to N. White, Wallace town P. O., Berkshire sow; to R. C. Nixon, Esquesing P. O., Berkshire sow; to R. Dorsey, Burnhamthorp P. O., Suffolk sow; to John Kulp, Bayham P. O., Suffolk boar; to John Collins, Union P. O., Suffolk boar; to Geo. White, Emsdale P. O., Suffolk sow; to Joshua McMahon, Cookstown P. O., Suffolk boar; to Thos. Agar, Belfast P. O., Suffolk boar; to John Haw, Bracebridge P. O., Suffolk boar; to Thos. Douglas, Galt P. O., Suffolk boar; to Edward Boyd, Kars P. O., Suffolk boar. We have still a few good fall pigs on hand. We have bred fourteen fine sows for spring trade to seven boars, four of which are imported. We find the sale of improved Chesters on the increase, and have decided to add a few more breeding sows to our herd.

NOTICES.

We would call the attention of our readers to the advertisement of selected farms for sale in Ontario by Mr. Edward Harris, of Toronto.

We call our readers' attention to Mr. O. M. Barnes' advertisement of farm lands in Michigan. Mr. Barnes is a reliable and experienced agent.

We call our readers attention to the adv't of P. M. Barnes, of Lansing, Mich., which appears in another column. Parties desiring information should write Mr. Barnes for full particulars of lands for sale.

One of the most highly esteemed papers that reach our table is The Week, published at Toronto, Ont., by C. Blackit Robinson, at No. 5 Jordan street. Its contributions are of the best informed and deepest thinkers. Its editorials independent and fearless, and is a credit to Canadian journalism.

The Seed Annual for 1890, issued by D. M. Ferry & Co., of Detroit Michigan, has reached our table. Its cover this year is especially artistic and attractive, and its contents, as usual, interesting and instructive. D. M. Ferry and Co. are very conservative, both in offering new sorts and in their claims for them when offered; but they take pains to inform themselves as to the true character of all new varieties.

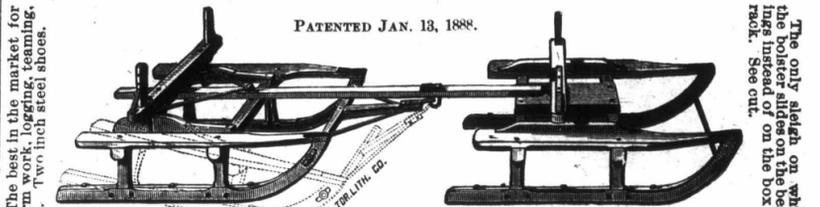
SCIENTIFIC GRINDING
GRINDS EAR CORN MILL
 with or without Shucks on
 and all small Grains, in fact everything which can possibly be utilized for feed.
SAFETY BOTTOM and other Practical Devices to prevent breakage should iron accidentally get into Mill.
GRINDING PLATES reversible, self-sharpening, double the capacity of all others. Sold on trial. All Mills fully guaranteed. Simplest, lightest running, strongest, fastest grinding. Send for circulars.
THE FOOS MANUF'G. CO. SPRINGFIELD, O.



NUMEROUS SIZES ADAPTED FOR STEAM OR HORSE POWER

286-f

BAIN WAGON CO'S KNEE-BOB



REASONS WHY OUR SLEIGH IS THE BEST IN THE MARKET:

Because, with our patent attachment to hind bob, it is the easiest running sleigh made. Because it will go in and out of Pitch-holes without any strain on itself, even when heavily loaded. Because it will go in and out of pitch-holes without the hind bolster sliding back and forth on the box or rack, as it does with the old coupling. Because with our improved coupling it can be backed up the same as a wagon. Because with our swivel in coupling it can be used on the roughest roads without any twist to the reach. Because with our swivel in coupling it will allow either bob to turn up on its side when loading or unloading logs without any danger of breaking the reach. Because with our improved coupling it can be turned around in its own length. Because it is always in line and will track under all circumstances. Because it cuts off less than any other sleigh made. Because it is well made of the very best wood and iron. Because it has a good length of runner, and faced with a two inch steel shoe. Because all sleigh makers who have seen our coupling say that it is just what was wanted to make the bob-sleigh perfect, and wonder why such a simple and necessary improvement was not thought of before.

288-1f

BAIN WAGON CO., Woodstock, Ont.

FODDER -- CUTTERS

Either Horse or Hand-power, with all the latest improvements for changing or reversing feed, Carrier Attachment, etc.

ROOT PULPERS and SLICERS

Separate or combined, with interchangeable or Reversible Knives.

LAND ROLLERS

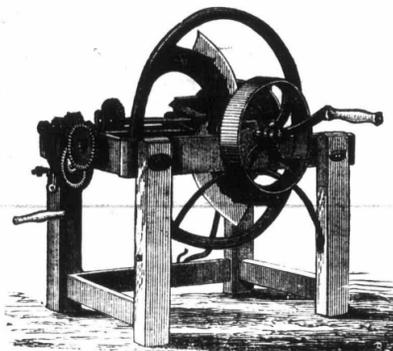
Two Wooden Rollers, with iron ends, rolling eight feet of land.

AGRICULTURAL FURNACES

Capacity, 45 gallons.

THE "CHAMPION" FOUR-HORSE POWER, ETC., ETC.,

MANUFACTURED BY 288-b



THE GOWDY MFG. CO., Guelph, Ont.

Permanent Canvassers Wanted in Every County

To whom paying wages will be given. Write for particulars.

MANITOBA LANDS FOR SALE

BY D. A. ROSS & CO.

ESTABLISHED 1877.

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

285-y

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