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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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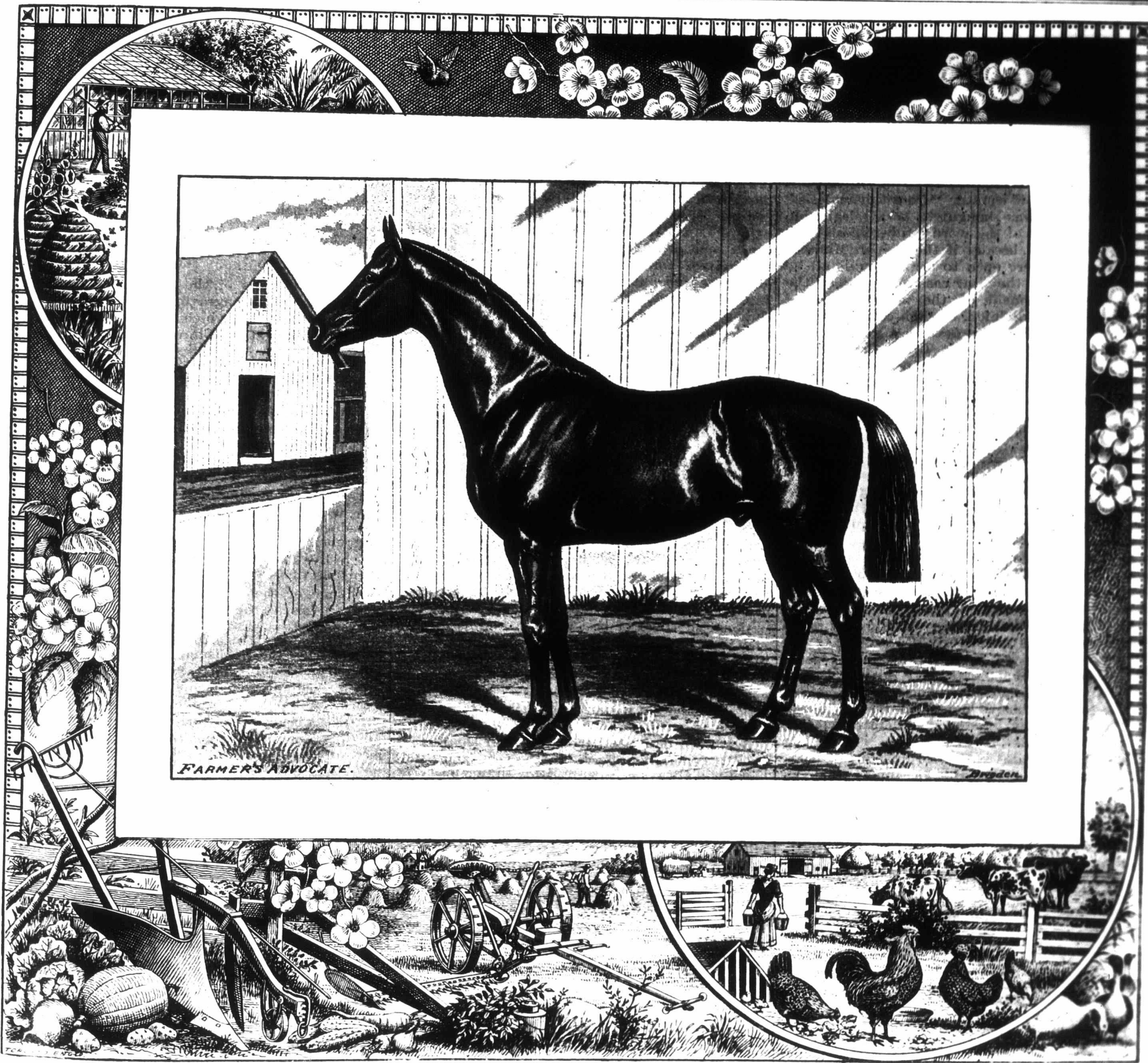
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VOL. XXIX.

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No. 357



THE IMPORTED THOROUGHBRED STALLION GRAND FALCONER.
THE PROPERTY OF MR. ADAM BECK, LONDON, ONTARIO.

EDITORIAL.

The exports from Ontario alone of Alsike clover during the past season, according to the estimate of the Steele, Briggs, Marcon Seed Co., one of the largest exporting firms, were of an aggregate value of \$350,000.

The Indian wheat crop is reported as being below the average on the whole. In the central provinces it is about up to the average, but in the important regions of the Northwest it is fully twenty per cent. below the usual quantity.

The Iowa legislature has done a most admirable thing in passing a law compelling public eating houses and hotels to conspicuously announce the fact where they serve oleomargarine to their patrons. A worthy example for other states to follow.

A Royal Commission is now enquiring into the cause of agricultural depression in Great Britain. Mr. John Speir, a tenant farmer of Newton, is on the commission for the west and south-west of Scotland. Mr. Speir was a farm delegate to Canada in 1890, and subsequently contributed to the columns of the FARMER'S ADVOCATE. A better selection could not have been made for the commission.

A good farmer will never undertake to till more land than he can thoroughly cultivate. It is the aim of too many farmers to get as many acres in crop as possible without paying sufficient attention to the manner in which it is put in. The farmer should bear in mind that well-tilled land is constantly drawing plant food from the subsoil, while a half-tilled field is growing poorer every day.

Not long ago the newspapers contained despatches from England to the effect that the British Minister of Agriculture was disposed to admit Canadian store cattle so soon as he was satisfied of the freedom of this country "from tuberculosis." At the time this was thought to be a telegraphic blunder in the use of the word "tuberculosis" for pleuro-pneumonia, because if the British Minister of Agriculture were open to conviction at all he could not gainsay the clear case made out by the Canadian Government of the non-existence of "pleuro" in the Dominion. Our able correspondent, Scotland Yet, in this issue devotes a good deal of attention to tuberculosis in Great Britain, and significantly says: "What is proposed is that farmers and all interested should agitate to have tuberculosis scheduled the same as pleuro-pneumonia is, and that compensation be paid for every animal slaughtered." Is this the beginning of a new crusade?

According to the Agricultural Journal of April 2nd, London received in the week ending with that date a good supply of American, Argentine and Russian wheat, together with 10,300 quarters of Australian wheat.

In view of this fact, we can hardly credit the good news which has been going the rounds of the papers of late, that Mr. Van Horne predicts that wheat will increase to \$2.00 per bushel in the near future. Mr. C. Wood Davis, of Kansas, made similar predictions two or three years ago.

There also arrived from Turkey, in the same time, 15,501 quarters of oats. We do not usually think of Turkey as an oat-producing country, still there are very extensive mountain regions where the rainfall is heavy, and the growth of oats might easily be increased.

The United States sent 3,826 quarters of peas, and 4,819 quarters of linseed cake came in from the River Plate district.

Mr. C. R. Valentine, the well-known butter expert in Australia, and at present special dairy commissioner of New Zealand, is very enthusiastic over the prospects of the butter industry of Australia, but is evidently laboring under a misapprehension in regard to the dairy industry of Canada, and does not realize the great efforts which are being put forth by our dairy associations to further the cause of butter-making, nor the fact that Canada not only makes all the butter which is consumed by her own people, but also has an export trade with Great Britain, which is rapidly increasing, for in the course of an article in the Australasian he has the following:

"There is a good possibility of a trade with Canada in spite of the attention which the Dominion is now paying to the development of her dairying resources. In winter Canada is subject to the same necessities of stall-feeding which enable Australia to compete with the North European export trade, and the imports of American butter, which were once large, are now rapidly falling off."

The Farmers' Institute System.

Elsewhere appears a letter from Mr. G. L. Page, of Drayton, in reply to one from Mr. Rutledge, previously published in the ADVOCATE. On their merits as an educational factor, farmers' institutes are certainly entitled to government support as well as for the reason which Mr. Page points out. It is idle, however, to shut our eyes to the fact that there exists a deplorable lack of interest regarding institute work in many places. No doubt, as Mr. Page points out, there are successful institutes, but what is needed is a better system in order to make this excellence general. Mr. Page asks for information as to how the distribution of bulletins and agricultural reports is made. On this point the Minister of Agriculture writes us as follows:—

To the Editor of the FARMER'S ADVOCATE.

Replying to your question as to gratuitous distribution of bulletins and reports, I beg to say that the department has always endeavored to supply those who request it with copies of these publications. While we are always able to supply the bulletins, we cannot make any positive statement with regard to the reports, for the reason that the supply is limited, and we endeavor to make some calculation as to how many will be required. As the number of members of the Farmers' Institute and Dairy Associations are known, the issue is made to cover their membership. We are, however, willing to supply copies if they are available.

Yours very truly,

JNO. DRYDEN.

Toronto, April 10, 1894.

The fact that Canada (more particularly Ontario) scored such phenomenal triumphs at the World's Fair, was not alone due to the fact that we have successful stock raisers, cheesemakers and fruit growers here, but was a tribute to the splendid system by which the Ontario exhibit was collected and sent to Chicago. Even though our victory were repeated every year, that would be no argument whatever that our institute system may not be improved, nor that we may not pick up serviceable ideas in New York State, Ohio, Minnesota or Wisconsin. With the good sense and pluck characteristic of Canadians, we can probably make better use of some of their methods than they have done themselves. Our business is to take a good idea anywhere and put it into practice. The Ontario Institutes should certainly be as well attended as those of Minnesota; but are they? In that state for the whole of the past winter series the attendance averaged from 400 to 500, the very lowest being 125, while as many as 900 farmers have attended a single institute meeting. We have need to wake up in Ontario. Our place is at the front end of the procession. To stand still is to fall behind, and that we must never do.

During the month of March, England imported 3,151 tons of Canadian hay, and the general opinion expressed by exporters is that the demand will increase.

According to the report of the Statistician of the United States, the attempts which have been made by the agricultural department to teach the Germans how to cook and eat corn bread have been a failure. In spite of the encouraging reports sent to the department, the fact remains that although a national shortage of bread stuffs, famine or war may increase the consumption of maize for bread, in all cases it will only be temporary. The Germans do not eat hot bread, and the other ingredients necessary to make corn bread palatable are too expensive and not within the reach of the poorer classes, for whom the bread is mainly intended. Maize bread does not harmonize with the rest of the diet generally preferred by the Germans. Rye bread will always be the bread for the majority of the Germans, and bread made from the very choicest of wheat flour is demanded by the wealthy classes.

The Texas Live Stock Journal predicts a cattle famine, and gives as some of its reasons the following:—"The hard drought of the past few years, the large 'die-offs' of past winters and the never-before-heard-of shipments of cattle, calves and yearlings to market during the same period, all go to show that the producing power of our ranches has decreased to an alarming extent, to say nothing of the practice of spaying cows which has been so extensively carried on of late years. In many parts there are not one-fourth as many cattle as there were four years ago, while in other parts there are but little over one-half the usual number. It is likely that this scarcity will be severely felt by the coming summer. At present large numbers of cattle are being marketed on account of the drought last summer and the consequent scarcity of feed." It will be a welcome change to cattle feeders if this expected shortage should have the effect of stimulating prices somewhat. The feeling this spring has been greatly depressed.

A Popular Engraving.

In the last issue of the FARMER'S ADVOCATE we announced the completion of our new engraving, "Canada's Columbian Victors," and its reception both by the Press of Canada and the United States, and the high encomiums passed upon it by those to whom it has already been sent as a premium, have exceeded our most sanguine expectations. It is indeed gratifying to find such a spontaneous, hearty and universal appreciation of our efforts. Like "Canada's Pride," issued by the ADVOCATE a few years ago, "Canada's Columbian Victors" is evidently destined to become a household word not only throughout the Dominion, but beyond its bounds. From scores of commendations we select a few as follows:—

OPINIONS OF THE PRESS.

"The publishers of the FARMER'S ADVOCATE, Wm. Weld & Co., of London, Ont., and Winnipeg, have just published a handsome and life-like engraving, entitled "Canada's Columbian Victors." The picture is a gem of artistic design, and contains the portraits of a large group of pure-bred Ayrshire cattle that won distinguished honors at the World's Fair, Chicago, last summer. Canadian live stock breeders and dairymen, especially, will appreciate the commendable enterprise which has actuated the FARMER'S ADVOCATE in thus giving the public such a permanent memento of Canada in that great prize ring. Out of \$2,035 in prizes, Canadian Ayrshires won \$1,885; United States, \$150. It is also highly creditable to Mr. F. Brigden, who is, without doubt, the leading live stock artist in Canada. In the way of live stock portraiture we have seen nothing finer than this, the shading and grouping being artistically done, and the individual characteristics faithfully brought out. We might mention that the cattle portrayed in this engraving were from the herds of Messrs. R. Reford, St. Annes, P. Q.; R. Robertson, Howick, P. Q.; Thomas Guy, Oshawa, Ont.; W. M. & J. C. Smith, Fairfield Plains, Ont.; D. Drummond, Petite Cote, P. Q.; Thos. Irving, "Logan's Farm," Montreal, P. Q.; Joseph Yuill, Carleton Place, Ont.; William Stewart, jr., Menie, Ont."—[The Weekly News, Toronto, Ont.]

"The publishers of the FARMER'S ADVOCATE have just issued an engraving of a group of pure-bred Ayrshire cattle, which won such a large number of the prizes at the Chicago fair. It is a handsome engraving, and will serve as a permanent memento of the success of Canadian cattle at the greatest exhibition the world has ever seen."—[The Advertiser, London, Ont.]

"It is a handsome engraving, and will serve as a permanent memento of the success of Canadian cattle at the greatest exhibition the world has ever seen."—[Daily News, Berlin, Ont.]

"The FARMER'S ADVOCATE has issued a capital plate of the prize-winning Ayrshires at the World's Fair, which will make an interesting addition to the adornment of every farm house in Ontario."—[Algoma Pioneer, Sault Ste. Marie.]

"In live stock portraiture we have seen nothing finer than this."—[The Arcadian, Wolfville, N. S.]

"Some of the Canadian cattle which won so many prizes at the Chicago Fair last year have been put into a lithograph, of which the artist is Mr. F. Brigden. This handsome cattle picture may be had from the publishers, The Wm. Weld Co., London and Winnipeg."—[Monetary Times.]

"Exceedingly handsome and lifelike."—[Coleman's Rural World, St. Louis, Mo.]

"It is a beautiful and artistic piece of work, and provides a means by which the stockmen of Canada may preserve a memento of the greatest achievement of Canadian stock."—[Windsor Review.]

WHAT OTHERS SAY.

"Canada's Columbian Victors came to hand, and I have to thank you for same, as well as for another copy of Canada's Pride. The Ayrshires are splendid." R. P. MCGINNIS, Iberville, P. Q.

"Please accept thanks for your premium, Canada's Columbian Victors, which I have just received. It is a very handsome premium, and more than I could reasonably expect." GEO. ALLAN, North Nation Mills, Ont.

GENTLEMEN,—The premiums you sent are now all safely to hand—thank you. The barley and oats came some weeks ago, and are in appearance all that need be desired; and the picture, 'Canada's Columbian Victors,' came to-day, and I think is one of the finest and most creditable premium pictures I have ever seen sent out by any publishing company, and with much less boasting and more real merit." Yours very truly and respectfully,
W. R. SCOTT, Allan's Mills, Ont.

Any reader of the FARMER'S ADVOCATE can obtain a copy of this beautiful engraving, by sending us the name of one new subscriber, accompanied with \$1.

Cattle Exporters Aroused.

The number and value of cattle exported from Canada to Great Britain has steadily declined from 104,133 and \$8,114,145 in 1890, to 80,572 and \$6,790,638 in 1893. This serious falling off is in part due to the scheduling of our cattle in Britain. We have all along contended that scheduling would hurt the cattle interests of Canada, and so it has proved. It also tends to promote the business of the U. S. dressed beef monopolists. Scheduling is not the only trouble with the Canadian export cattle trade, as the manifesto issued from Ottawa by the Dominion Live Stock Association recently ably and vigorously sets forth. It is charged that the very existence of the trade is jeopardized by reason of the unfair treatment to which it is subjected by those who control the ocean carrying trade from Montreal. Mr. Mulock, M. P., has a bill before Parliament which aims to remove these grievances and restore the cattle trade to a healthy basis. The shipping charges levied are described as "uncertain," "excessive," and "arbitrary." The manifesto referred to is signed by T. O. Robson, President, Thos. Crawford, Vice-President, Henry Bracken, John Dunn and A. J. Thompson. Mr. H. Gilchrist, Montreal, is secretary of the association.

Forty-Eighth Annual Meeting of the Agriculture & Arts Association.

Jas. Rowand, M. P., President, took the chair; Mr. H. Wade, Secretary.

A letter was read from C. C. James, Deputy Minister of Agriculture, announcing the following election of members for the next three years:—No. 1 Division, D. P. McKinnon, South Finch; No. 2 Division, W. C. Edwards, M. P., Rockland; No. 3 Division, Joshua Legge, Gananoque; No. 4 Division, B. Mallory, Frankford.

Communications were read from T. R. Melville, Secretary South Grenville Agricultural Society, and one from A. Shaw of Kingston, asking that the sale of stock, as contemplated by the Agriculture and Arts Association in the coming autumn, be held at their respective places, Prescott and Kingston; and one from John McCorkindale, of Guelph, asking the Association to waive any claim they may have on \$25.00 given by the Ontario Agricultural College. Referred to the Finance Committee.

Mr. Wm. Dawson was elected President for the coming year, and Jonathan Sissons, of Barrie, was elected Vice-President.

The following members were appointed a committee to strike the standing committees, viz.:—Messrs. Legge, Sissons, McEwen, Rykert, Rawlings and J. C. Snell.

The Secretary read the forty-eighth annual report of the Association, reviewing the work of the past year. They had recorded 368 horses, 791 cattle, 30 sheep, and 2538 swine; had printed the Seventh Volume of the Clydesdale Stud Book, and the Second Volume of the Swine Record; had held the Seventh Spring Stallion Show at Toronto, and the Tenth Fat Stock Show at Guelph; had granted diplomas to 160 graduates; had held four provincial ploughing matches; and had helped to make the World's Fair a success. Nearly 7000 letters and post cards had been issued from the office, as well as the Herd Books and Government Report.

A deputation waited on the Council to advocate Kingston as a proper place to hold the sale of cattle proposed by this Council. The deputation consisted of A. Shaw, Manager of the Midland Fair, Dr. Preston, M. P. P. for South Leeds, and Mr. Hart, M. P. P. for Kingston. They all spoke in favor of that city.

A deputation from Guelph also waited on the Council to ask that the next Fat Stock Show be held in their city. On motion of N. Awrey, seconded by D. P. McKinnon, it was resolved that the next Fat Stock Show be held there.

Mr. Legge, Chairman of the Special Committee for appointing the Standing Committees, reported as follows: Executive—Messrs. Legge, Awrey, Westington, Mallory and Rykert. Finance—Messrs. McEwen, McKinnon, Rawlings, Awrey, Sissons and Rykert. Stock Shows—Messrs. Snell, Legge, McEwen, Rawlings and Sissons. Shorthorn Herd Book—Messrs. Snell, Edwards, Rowand, Westington, Mallory and Wade. Representative to Central Farmers' Institute—Jas. Rowand. Report adopted.

Mr. McEwen then presented the report of the Finance Committee as follows: Your committee has examined the Treasurer's Report as audited, and recommend that it be adopted.

A letter of protest was then read from J. C. Rykert, Secretary of the Ontario Association of Trotting Horse Breeders, as to the giving of their gold medal to Graham Brothers, instead of to Dr. McCully. On motion, the decision of the Judges was sustained.

A long debate occurred in regard to the holding of two sales of cattle and sheep, one in the East and one in the West, and it was finally determined not to hold any this year.

Ontario Agricultural and Experimental Union.

REPLY TO "A SEEDSMAN'S COMPLAINT."

To the Editor of the FARMER'S ADVOCATE:

I notice an article in your valuable journal of April 15th, entitled "A Seedsman's Complaint," written by Mr. J. S. Pearce, London, Ont., to which I would like very much to reply. Mr. Pearce has surely got a wrong impression in regard to the work which is being done all over Ontario by the Agricultural Experimental Union, an association composed of officers, ex-students and students of the Agricultural College, who pay a certain fee annually. It is practically an ex-students' organization, and in no sense of the word is it secret in its operations. A very important feature of the Union work is the system of co-operative experiments which it has established over Ontario, in which any person may engage, whether a member of the Union or not. A description of how seeds for testing may be obtained, and also the results of the successful and valuable co-operative experiments, are published annually in detail as an appendix to the Agricultural College report, which is sent free to any person on application. The following sentence can be found in every report for some years back:—"Each person who wishes to join in the work may choose any one of the experiments." If seedsmen are in the dark in regard to this Union work, as Mr. Pearce says they are, who can possibly be to blame unless they are themselves? Whenever seedsmen ask for the Union samples we are always pleased to furnish them. Mr. Pearce applied for five varieties of winter wheat last autumn, and they were forwarded to him with our best wishes. Practical farmers over Ontario have not been furnished with samples for experiment, unless they have first asked for them, and in my intimate connection with the Union for the past eight years I do not remember having refused a single Ontario seedsman any samples for which he has applied. Neither do I remember ever refusing any seedsman the best information I could furnish him in regard to where the seed of such varieties of farm crops as had given the best results could be obtained.

In referring to six varieties of corn which were mentioned in a summary report of Union work, written by myself a few weeks ago, and which appeared in the leading papers of Ontario, Mr. Pearce says: "Why ignore the seedsmen and the varieties they are handling by recommending varieties that neither they nor anyone else know anything about?" In this Mr. Pearce is certainly mistaken, as these varieties are now familiar to hundreds of farmers, and more than that, they are now offered for sale by Ontario seedsmen, who have asked where they could be procured, obtained the names of the American seed firms, secured a supply of seed, and are now in a position to furnish their customers. These varieties have all been tested from three to five years in the Experimental Department at Guelph, among many other kinds purchased from Canadian and American seedsmen, and they have also been tested over Ontario along with others from one to three years. They were all specially mentioned in the College reports previous to planting time in 1893, as being varieties of very excellent qualities when total yield per acre, amount of grain produced, and earliness of maturity were all considered. How could we possibly know Mr. Pearce's desires unless he expressed them to us in some way, and had he simply applied to the College for samples of these varieties, the committee on agricultural experiments would have been pleased to have furnished them to Mr. Pearce to grow on "his own trial grounds" during 1893, and thus prevented his being so much annoyed by farmers asking for "new-fangled varieties," which he speaks of as knowing nothing about.

Is it not the desire of all corn growers in Ontario, whether seedsmen or practical farmers, to have all the leading varieties carefully tested? When three or four varieties from the great corn-growing States of the American Union prove themselves to be worthy of an important place in Ontario agriculture, why not give to them a hearty welcome here, instead of calling them "new fangled," and say, "It very is questionable if they are any better, if as good, as those now introduced and being handled by leading seedsmen," and again, "Now, I know that we have and are handling just as good and reliable varieties of corn as any that Mr. Zavitz has made prominent," as Mr. Pearce has done in his article to the public without ever testing the varieties himself. The varieties which have been advertised by Mr. Pearce in his catalogues of late years have all been purchased and tested by the Experimental Department, and the Mammoth Southern Sweet, which he claims "has no superior," in his catalogue of 1894, has been grown along with many other varieties for five years in succession. The reports of the College give the results of all these tests without any partiality whatever.

I wish to assure Mr. Pearce that, to the best of my knowledge, the members of the Union have nothing but kind feelings towards the seedsmen of Ontario, and whenever any of them express a desire to engage in the co-operative work of the Union, we are always pleased to do our utmost to supply them with material for any of the experiments. It might be interesting to your readers to know that the number of co-operative experimenters in agriculture for the present year has already surpassed that of 1893, at which time it was upwards of twelve hundred. C. A. ZAVITZ,
Director of Co-operative Experiments in Agriculture.
Agricultural College, April 23rd, 1894.

The Farmers' Institute System.

SIR.—A short time ago I read with a good deal of interest and care the very complete reports given in The Globe of the proceedings of the Central Farmers' Institute, the annual gathering of which was held in Toronto. I have also listened to an excellent account of that meeting brought back by a representative of our local institute in East Middlesex. All the published annual reports previously issued have reached me from time to time.

It cannot be said of this large—in fact, one might say cumbersome—Toronto meeting that subjects of interest to farmers were not discussed, because most of the army of delegates seemed in duty bound to "resolute," and "resolute," and "resolute," upon every imaginable question, until, as one of the members at a local meeting in this riding remarked, enough resolutions were placed on record to reach from Toronto half way across the province. But, as has been frequently noticed, a large proportion of these solemn "whereas and whereas" and "be it resolved" declarations simply become a dead letter. It was quite apparent that a lot of valuable time was consumed discussing crude and ill-considered propositions, some of which at least were wholly uncalled for. Others were practical and timely, and may result in benefit if properly followed up. Now, I do not dispute the right of the members to tackle the affairs of the country great and small *en masse*, but it is a question if they would not have done well to address themselves as did the apostle, "All things are lawful unto me, but all things are not expedient."

If we accept a paper read by the President of Agricultural College towards the close, the conclusion seems irresistible that the Central Institute dealt exhaustively with almost everything but the one subject that above all should have occupied its most earnest thought, viz., the work and progress of the local institutes. It is in these bodies that the real work and usefulness of the institute system to the farmer is accomplished. If it does not reach him in a helpful way at this point, long-winded resolutions in Toronto will be of little avail. In some populous farming localities this very season but a bare handful of farmers have attended these meetings. Surely there is something wrong when only a dozen men out of hundreds will come together to discuss their own business and how it may be improved, especially when improvement is so obviously needed. I do not say that this deplorable apathy, or whatever it may be, is universal, but it is too apparent in some quarters. The Central Institute is supposed to be the vital, heart centre of the whole system, but there must be something radically defective or else it would be infusing new life into the local bodies, causing enthusiasm to be aroused, the membership to be increased and more practical good accomplished. In reply to this point, which I raised at our local meeting in this riding, it was stated that the Central Executive was probably entrusted with enough already, and the big delegation to Ottawa, by which over \$200 was frittered away, and nothing tangible achieved beyond getting a snub, was cited. Whether or not it was proper for this delegation, paying their expenses out of the funds drawn from one Government, to go to another with a petition, the spirit of which was directly contrary to that Government's policy, I will not enlarge upon.

Dr. Mills, of the College, by whom in the past the main series of winter meeting has been very well mapped out, intimated that his duties were growing excessive and an assistant was recommended, who, I presume, would relieve the President of at least some clerical work. This, however, would simply leave things for the most part in the old "go-as-you-please" groove. With the rapidly growing usefulness of the Agricultural College, and the development of its various grand departments, that President Mills should ask for relief is only to be expected. The magnitude and importance of the institute work imperatively demands a change, though I presume, as in the past, the able College staff can be utilized to assist at one series of meetings.

I have heard the suggestion that the local institutes might be directed more efficiently from the Department of Agriculture in Toronto, but I doubt the wisdom of that idea. In some places injury has already been done through the impression (no matter if erroneous) that these organizations had some political party bearing. In another province I found danger to institute work cropping up in that very way.

As far as my observation goes, the system as in vogue in Minnesota and Wisconsin seems to be most effective. A thoroughly practical man (no mere party hack) with executive ability, well versed as to the country and the needs of farmers and the work, acts as superintendent or director of institutes, systematizing their operations, awakening local interest, in co-operation with local officers, working up home talent, starting new institutes, reviving sluggish ones, spreading knowledge of

them through the press, imparting fresh ideas to workers, getting out reports for distribution, which, by means of advertising, can be made to pay for themselves, and at the end of the main series of meetings conducting a general "round up," where all the principal addresses are again delivered and discussed, and the needs of the work carefully considered while everything is fresh in mind.

I notice that the members of the Central Institute promptly squelched the motion to reduce their numbers, but it is quite evident that, as at present constituted and conducted, it is becoming a very expensive concern, the utility of which in relation to the local institute system is anything but satisfactory.

W. THOMPSON, Derwent, Ont.
[In Globe, Toronto, under date of March 26th.]

A Reply to Mr. Rutledge.

To the Editor of the FARMER'S ADVOCATE:

In the FARMER'S ADVOCATE of Feb. 15th, I read an article from the pen of Mr. C. Rutledge re the farmers' institutes. Now, sir, I consider the reflections thrown on those worthy institutions are very unfair and unmerited. So far as the monied assistance goes, given by the Government, what class of people has a better claim to such assistance than the agriculturists, who have more money at stake in real estate than any other class in existence, and contribute more largely toward the government funds? As for the members of farmers' institutes becoming uninterested in the work of the institution, the official reports of those gentlemen who supervise the work go to prove that, on the contrary, the institute meetings are becoming more interesting every year. Mr. Rutledge also refers to the bulletins and other literature, without stint, which the Department of Agriculture has so lavishly bestowed upon the members of institutes "free of charge." Now, sir, I would like some explanation as to how this literature is procured. Are not those bulletins the results of experiments carried on at the experimental farms and stations, and supervised by officials paid by the government, said bulletins and reports prepared by the Department of Agriculture at government expense? If so, how are they supplied to us free of cost? On the other hand, I claim that the farmers are paying value for all the privileges they enjoy, and that not only should the members of institutes receive the reports of the various experiments and discoveries in agricultural science, but they should be sent to every agriculturist in the province, thereby diffusing that information for which they have paid, especially so when it is without "cost or hindrance."

Again, he contends that these good things are appreciated only to a limited extent, forming his opinion from the attendance at and interest taken in the meetings held at Drumbo, Freelon and Milton. I think a good deal of those features are dependent on the intelligence of the community where those meetings are held, and of the officers who have the management of them. The same deputation to which he refers addressed the open meetings of West Wellington, at Drayton and Arthur, at which meetings they had the pleasure of addressing large and deeply interested audiences, the members of which entered heartily into the discussion of the various subjects. At the night meetings the large town hall was packed to its fullest capacity, and a lengthy and interesting programme was rendered by the local talent, sandwiched with pithy addresses from the deputation. The success of these meetings is largely due to the zeal and enterprise of the officers who are elected to the management. When an institute has for its secretary a man of such acknowledged ability as to be placed in the highest and most honorable position attainable in connection with the institutes of the province, viz., President of the P. C. F. L., it is bound to succeed, and West Wellington should feel proud of being thus represented. If Mr. Rutledge would encourage the farmer in institute work, don't write in such disparaging tones, but try to elevate our calling and enlighten others by showing up the brighter side of agricultural advancement. As to the line of procedure followed by the people of Wisconsin in pushing the institute work, that doesn't go to prove that they are making greater advances in agriculture than the people of Ontario. On the contrary, with all their extra efforts in that direction, it was fully demonstrated at the Columbian Exposition that, compared with Ontario, the United States, in respect to their exhibits (which are a fair index to their education, facilities, resources and enterprise), sank into utter insignificance. Therefore, I fail to see how their money is better spent than ours—results fail to show it so. A good agricultural paper is a leading factor in the make-up of a farmer's helps. The FARMER'S ADVOCATE is unexcelled, and has many claims to the general patronage of the farmers, in whose interests it has always manifested great concern. Hoping this short letter may find room in its columns, I wish it continued success, always hailing it as a welcome visitor at our hearth.

Drayton, Ont.

G. L. PAGE.

The Agricultural Awakening.

There is no more significant movement to-day than the arousal and consolidation of agricultural interests and the weakening grip of old-time political partyism. Nor is this confined to Canada and the United States, where the Patrons of Industry, the Farmers' Alliance, the Grangers, and kindred organizations, have made such remarkable strides. Though not always permanent as organizations, once specific objects are attained their indirect influence is powerful and lasting. The propaganda of the National Agricultural Union of England appears to be gathering strength and a host of friends. It is an effort to unite as one force agricultural landlords, tenants and laborers. One of its most active promoters is the Earl of Winchelsea whose aggressive little paper, The Cable, gives the Union programme, which members of parliament and candidates are asked to support, as follows:

First—To relieve agricultural land from the unfair share which it now bears of the local burdens of the country by placing upon the whole national income charges which, like the poor rate, the highway rate, and the education rate, correspond to national duties and requirements.

Secondly—To restrain Railway Companies from imposing excessive rates for the carriage of agricultural produce, and especially from granting rates which give a preference to foreign produce over our own.

Thirdly—To provide State-aided Old Age Pensions for agricultural laborers.

Fourthly—To introduce such improvements into the Agricultural Holdings Act (1883) as may be necessary to give the tenant security for his improvements, taking good husbandry into account.

Fifthly—To extend the Merchandise Marks Act to food, and to strengthen the existing law which deals with adulteration.

Sixthly—Power to the Government, in the case of landlords who desire to create small holdings in suitable localities, to advance the money required in making the necessary buildings, roads, fences, etc., on the security of the holding.

STOCK.

The Part That the Shorthorn Is to Play in the Future.

[Read by J. C. Shell, Edmonton, at the late meeting of the Dominion Shorthorn Breeders' Association.]

There is a strong probability, amounting almost to an absolute certainty, that while grass grows and water runs the human race will require as an important factor in its sustenance an ever-increasing supply of beef. With the constantly increasing population of the world, and the growth of new towns and cities, especially in this western world, we may reasonably expect an increasing demand for this product of the farm, and the increasing number of persons in comfortable circumstances will no doubt exact a better quality of beef as they do a better quality of butter, and will be willing to pay a higher price for what suits their taste. The wise farmer and stock raiser and feeder will see that it is to his advantage to cater to the taste of his customers, and to meet the demands of his market.

The British market has, in the past few years, been a grand opening for disposing of the well-fed beef of this country, and has been the means of bringing large sums of money into our country. That market is still open and free to our beef, if not to our live cattle, and probably will continue to be open and free; and while we have not now, and may not again, have the advantage over other countries in that market in being permitted to take our cattle inland alive for the markets of inland cities and towns, we will still have the British markets on equal terms with other countries, and if proper care and attention is given by our breeders and feeders to producing the very best quality of beef, and having it placed upon the market in the best possible condition, there is no doubt we shall obtain the highest prices going. The whole difference between profit and loss in a critical market generally lies in the difference in quality and condition. The best will always bring a fair price and find ready buyers, even in a depressed market, while animals of inferior quality and condition are passed by and neglected even in a buoyant market, and have to go begging for buyers in a depressed market.

There is a fair prospect that large slaughtering and packing establishments will in the near future be opened in leading cities in Canada, which will dispose of large numbers of cattle, and these will arrange for shipping our beef dressed, and placing it on the English market in that shape, at much less expense for freights than can possibly be done with live animals, and with much less risk of loss, and in more uniform condition. The offal can, in these establishments, be utilized to advantage in many ways, giving employment to large numbers of men who will in turn become consumers of the

products of the farm and customers of the farmer. The outlook, therefore, is by no means discouraging, but rather hopeful, and with an enterprising and industrious people such as we have, with the skill of our breeders and feeders which has been proven in many ways, we may feel confident of being able to hold our own in competition with the world in its markets.

The breeders of this country are directly responsible for the class of cattle the country produces, and they should exercise care and discretion in keeping up the standard of the product as far as their influence extends. It is a matter for regret that the average farmer is so slow to acknowledge the superiority of pure-bred stock for feeding purposes, or rather so slow to avail himself of its use in improving the stock he has; but we have to deal with things as we find them, and the only way to secure an improved state of affairs is by a gradual system of education, line upon line, precept upon precept, and experience and observation join to confirm the opinion that the greatest factor in bringing about the class of beef cattle rendering the greatest profit to the farmers of this country for that purpose has been, and will continue to be, the Shorthorn. Other breeds may come and go, but the Shorthorn seems destined to go on forever. They furnish the standard of excellence for others to aim to attain, but for this country no other seems to fill the bill so satisfactorily, either as a beefing animal or as a general purpose cow.

The cow which can give a fair supply of milk for the dairy, worth say \$40 a year for butter or cheese, and at the same time raise a calf on her skimmed milk, which, at 2½ years old, with proper care, is fit for an export steer or heifer worth from \$65 to \$75, and is herself worth nearly that amount for beef, when from any causes she ceases to breed, is a safe sort of animal for the general farmer to have and to keep, and the farmers of this country, so far as they have sought to make any improvement in their cattle, have shown their preference for the Shorthorn for the purpose of grading up their stock. An examination of the host of cattle placed upon the market will satisfy any man who knows anything about breeds that not more than one out of every 10,000 shows evidences of any other improving blood than that of the Shorthorn. It is this blood which has made our cattle fit for the export trade, which has brought millions of money into the country. Other breeds have not been untied. In some sections of the country first-class herds have existed for 25 to 40 years, but go into those same sections of the country, go into the markets of those neighborhoods, and how many animals do you find giving evidence of the blood of those breeds? Very few indeed. If they possessed the influence to improve the common cattle of the country which the Shorthorn does, surely the farmers in so long a course of years would have by some means discovered the fact and have availed themselves of their use. But go into a neighborhood where a Shorthorn bull has been kept for a few years, and you will see evidence of his influence in the fields and by the roadside, in the improved form and condition of the grade cattle of that section.

The question of the adaptation of a breed of cattle to any country is one which the majority of the people interested generally settle for themselves as the result of experience and observation, and this test seems to have definitely settled the question in the mind of the great majority of the people of this country that the Shorthorn is here to stay; and I, for one, am cheerfully willing to accord to this noble class of cattle the highest meed of praise, and to their breeders the honor of being placed high upon the honor list of benefactors of their country.

Let this Association as such, and individual breeders as well, be true to themselves and to the best interests of the breed, by seeking to perpetuate in their cattle the great cardinal virtues of robust constitution, feeding qualities and uniformity of a good type for early maturity, the production of the largest quantity of the best quality in the smallest superficies and at the least cost, and an animal that will give the best return for the food consumed and of a quality that meets the demand of the market, and success may be safely considered assured. To this end the pruning knife should be more fully used than it has ever been, and all inferior animals weeded out. The mistake has too often been made of spoiling a tolerable steer to make an inferior bull because there seemed to be more immediate profit. Such a course is sure to prove unprofitable in the long run, as it injures the reputation of the breeder to send out an inferior animal from his herd, and a bad one will be pretty sure to perpetuate his meanness in his offspring.

Uncle Abe Renick used to say he always felt his knife turn in his pocket when he saw a mean bull, and it were well if this spirit actuated all our breeders. And not only mean bulls, but mean heifers and cows should be culled out and sent to slaughter if we would attain the best results in breeding.

Many of the crazes which, in the past, have done so much to injure the breed, have had their day, and are dead and well buried—such as that for fancy pedigrees, without an animal to match, and the craze for a fixed color, no matter how deficient in the more substantial virtues; and let us hope we shall not again be led to run after other fads which may be started, but breed for usefulness first and let pedigrees be secondary, but not a matter of indifference. When a good beast and a good pedigree are combined, the best results may be reasonably looked for, and will be generally attained.

THE FARMER'S ADVOCATE & HOME MAGAZINE

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The Pork Tariff and "Over-Production"—Discriminating.

To the Editor of the FARMER'S ADVOCATE.

Your favor of 2nd April came to hand when the writer was away and got mislaid. As to the new tariff as it now stands the farmer need have no fear, and as to over-production also there is a market for all the hogs Canada can produce; but there are times when they must accept low prices, as the markets will not justify high prices.

We don't think, as long as hogs don't go below 4c. to the farmer, he is losing any money, and hogs are an article that bring the cash any week of the year.

We have to discriminate as to the right style and weight, as we get severely punished for shipping anything that is not just right to England. We want long, lean, fleshy hogs, such as the crosses produce between the Tamworth and Improved York with other breeds. We consider they are the best breeds to cross with yet introduced into this country.

Yours truly,
JAS. L. GRANT, & Co.
Ingersoll, Ont., April 21. (Per WILSON.)

The Thoroughbred Stallion Grand Falconer.

The subject for our plate page illustration in this issue is the thoroughbred stallion Grand Falconer. This horse is the property of Mr. Adam Beck, London, Ont., and was imported from England during the past winter. Although the portrait is a fair likeness of the horse's head, neck and foreend, the artist has neither done him justice nor does the illustration give an adequate idea of his grand proportions or handsome conformation.

Grand Falconer is a whole colored bay with black points. He has a beautiful head and neck, and is exceptionally long in the rein. His shoulders are well nigh perfect, as they are beautifully sloping without a shade of coarseness. His back is strong and short, and so closely coupled as to leave only room for the saddle. His hind quarters are handsomely moulded, while his capital, deep, well-sprung ribs and round barrel give him plenty of middle. His knees and hocks are wide and strong (an essential point in breeding half-breds), while he has fully eight and a-half inches of bone below the knee. His feet and ankles are both of the form and material to stand work.

Grand Falconer is sixteen hands high, although his cobby build detracts slightly from the appearance of his height. We hail with pleasure the advent of a horse which is not only a superb individual, but his royal breeding will make him a most valuable addition to the choice of those who are seeking to improve their horses and breed them for the present demand.

Grand Falconer was bred by Mr. Burdett-Coutts, M. P., and was foaled in 1889; he was sired by Hampton, dam Lady Peregrine, by Toxophilite. Grand Falconer is a sound young horse of fashionable breeding. His half-brother, Ladas, is favorite for this year's "Derby," while such good ones as Peter, Timothy, Queen Adelaide, St. Simon and other celebrities are products of the same family. But it was the handsome conformation which the offspring of Hampton are known to possess which induced Mr. Beck to purchase him at a high figure, and place his services at the disposal of the farmers and horse breeders of Western Ontario at a nominal fee, and by so doing encourage the breeding of a better class of horses throughout this part of Canada. Mr. Beck, as all are aware, has not only been eminently successful in the "show ring" of late years with his harness and saddle horses, but he has obtained the highest average at the New York sales. He is therefore competent to judge of the requirements of the day, and is much interested in the improvement of the horses throughout the district from which he obtains his supply.

It was with a view of encouraging the farmers to breed a better and more suitable class, that led him to place this excellent stallion within their reach. The fact that there is no department of the farm which is so thoroughly demoralized as horse-breeding may be accounted for by the unfortunate manner in which breeding has been directed, as the services of the most useful brood mares have been lost through improper mating. All sorts of stallions have been patronized without any definite idea of what the offspring would be fit for, until any number of young horses may now be purchased at the price of a dairy cow, while at the same time buyers find it next to impossible to secure the class that are saleable. Several prominent buyers have recently made the statement that the actual expense incurred in buying, exclusive of price, has run up to \$40 or \$50 per horse during the late season, while others have given up in disgust on account of the labor required in picking up the proper sort. But how could it be otherwise, when stallions of every undesirable type have been brought in by syndicate tricksters and unprincipled dealers, until the country is overrun by the worst description of weeds? Farmers should recollect that the pure-bred weed is the worst weed of all, for his very breeding must of necessity make such a horse an impressive sire, and therefore his offspring will of a certainty follow the same pattern as himself.

Mr. Beck has placed Grand Falconer under the management of Mr. Frank Kelly, of Aylmer, who will stand him at St. Thomas, Fingal, Union, Sparta and Aylmer, in which district we are sure he will be appreciated, for it is in the locality where such numbers of good horses have been produced from Terror and Lapidist and their sons.

Fruit Growers' Association of Ontario.

I have read, with much interest, your editorial criticism upon the work of our Association, and as one upon whom much responsibility rests, I write to say that I, for one, appreciate friendly criticism, and am ready to profit by it.

The article demands a few explanations in order that the Association may stand properly before the public.

OUR REPORT.

True, this only contains the papers, discussions and reports of one meeting instead of three, as formerly; the reason is that the summer meetings were abolished owing to the difficulty in getting a local attendance in summer, when every one was busy, so, after much consideration, it was deemed best to double the length of the winter meeting, and thus gather an equal amount of information with less expense. The fall meeting, which was held at the time of the Toronto Fair, was never more than a meeting for the election of officers, and now, by holding the winter meeting in December, it is possible to have the election at that time instead, and save our money for better uses.

Through the Farmers' Institutes and affiliated Local Fruit Growers' Associations, our directors have also accomplished much of the work formerly done at the summer meetings, the Association paying the expenses of special trips, and selecting the best men to speak on fruit culture to go on the regular rounds of the Institutes in the month of January, and publish the information which they themselves have gained at the meetings of our Association.

I may be mistaken in my judgment, but, as a practical fruit-grower, I think there is little matter goes into our report that is not valuable. I cut it very close, and reduce it very much as it is; possibly I could do so still more and add a larger amount of practical information. Our journal is full of seasonable items each month, and perhaps much of this could be republished annually in the report for the good of those not members of our Association. I am willing to do this if it is thought desirable. The circulation of our report is no longer confined to our members, it is sent to members of Farmers' Institutes and to all persons applying for it.

The Committee on New Fruits was dropped for a year or two, but last year a committee, of which Prof. Craig was chairman, made us a good report, which may be seen in the report for 1893, just being issued; and for 1894, the New Fruit Committee consists of Messrs. A. McD. Allan, D. W. Beadle and Prof. John Craig, three fruit connoisseurs, whose report next December will no doubt have unusual value.

The Plant Distribution, which has usually cost us \$200 or \$300 per annum, has been the means of making known the value of many new varieties of fruit, as, for instance, the Wealthy, Swazie, Pomme Grise and Ontario apples, the Moore's Early, Niagara and Worden grapes, the Marlboro raspberry, etc.; and the worthlessness of others, as, for instance, the Burnett and Mills grapes, Russian apricot, Simon's plum, etc. True, no tabulated report of these has appeared as yet in our annual report, and this I acknowledge is a mistake on our part.

The Directors may not be chosen by the best method, but the nominating committee, which was once appointed by the chair—a method justly open to criticism—is now appointed, three by the open meeting and two by the chair, thus giving the public the controlling vote. This committee faithfully endeavors to nominate the best men in each district; and they do not change a director without reason, because it is more and more important to have the best men on the Board, even if they do chance to live in adjoining counties.

The frequent change of president may be unwise. Once it was thought a mistake to retain one man too long in the office, now we have reached the other extreme—a fault easily corrected when the best man appears.

I am doing my best, as secretary, to advance the general interests of Ontario fruit growers, whether members of our Association or not, both through the journal, the report, and in replying to innumerable questions by mail; and our committees have done the same, as is witnessed by our catalogues of fruits adapted to various localities, our lists for the guidance of judges, the legal enactment of brands for No. 1 and No. 2 inspected Canadian apples, etc., etc. Wishing success to the FARMER'S ADVOCATE, I remain, sir, yours truly,

E. W. WOOLVERTON, Secretary.

It is of advantage to study the length and form of the roots of the plants. This examination can be made during leisure moments and hours by removing the soil above the roots and tracing them out. Some will be surprised to find that roots of the corn plant, when only half a foot high, have already grown horizontally a foot or occasionally a foot and a half; and potato plants, long before the new tubers have set, will have met together in the spaces between the rews. The corn roots will be mostly found much nearer the surface than those of potatoes.

FIRST PRIZE ESSAY.

Profitable Horse Breeding in Manitoba and the N. W. T.

BY W. L. PUXLEY, WINNIPEG.

I would preface this essay by saying that it is intended to deal chiefly with profitable horse breeding for the farming community, which includes the bulk of the horse raisers of this province. To those who make a specialty of raising horses for speed, either at the run, trot or pace, it does not address itself.

Primarily, then, there are several considerations which must govern the selection of any particular line of breeding by the average breeder. Among others, the following are some of the foremost, viz.: the colt when grown must be salable at such a price as to pay a fair profit on the cost of raising; it must not require a great deal of technical knowledge to breed, raise and train him successfully, and there must be as few culls as possible.

Taking up, then, the first consideration, viz., the salability of the colt, we must ascertain what classes of horses are at present, and are likely to be in future, in good demand at paying prices. Among these we find the following, which may be called the staple lines in horseflesh, such as draught horses, 1,500 pounds weight and upwards—the heavier the better, large, stylish carriage horses, neat, good actioned roadsters, and clever saddle horses.

To draught horse breeding nearly all of the attention of farmers has so far been paid, for the following reasons:—Firstly, their Ontario mares were mainly of the heavier types, and such a course seemed to be "in line." Secondly, the colts were believed to be more easily raised and broken than those of the lighter breeds. Thirdly, farmers expected to be able to use on the farm such few of the colts as they could not sell; and lastly, perhaps not the least cogent reason, the service fees in this class were usually lower than in the others. The first reason seems to be a good one as long as there is a ready sale for this class of colts, and the part of the second which relates to breaking on the old plan, which in most cases was only begun at three years old, no doubt had some truth in it. On the other hand, as regards the ease of raising draught colts, my own experience goes to show that the lighter breeds are quite as hardy, and exhibit more pluck in sickness than the heavier ones; while, although the better blooded colts require rather more grain in proportion to their weight, they do not cost more per head to bring to maturity. Reason No. 3 has been exploded of late by the number of colts which are still staying on the farm—colts that never attained to the expected weight, and which, on account of the large over-supply of this kind, were almost unsalable. Too much regard for a low service fee is, no doubt, answerable for much of this, but the experience of even careful and progressive breeders in this line gives rise to a grave doubt as to whether, under our climatic disadvantages, a large enough percentage of Manitoba-bred colts will be got to tip the beam at say 1,400 pounds to make draught horse breeding a paying business, even after we have banished scrub stallions, and adopted better methods of feeding and housing our colts. In any case it can only be done, I think, by making the pick of the heaviest stallions and mares.

Turning next to carriage horses, we should aim to breed them from 15½ hands up, any good color, bays for choice, with plenty of bone and power and good action. Considering the type of mares most common in this country, I think that they will best be mated with a large Thoroughbred sire, with good flat bone, and as much "quality" as is compatible with large size, for, whereas the Cleveland Bay, Yorkshire Coach, Hackney and trotting horse all claim to be carriage sires, they are (as a class) all more or less lacking in the blood-like appearance which is known as "quality," and which the colt can not be expected to derive from his dam, she probably being common-looking enough herself. Further, the Hackneys and, I think, the trotters too, are usually rather wanting in size for this line of breeding. If, however, a farmer has one or two blood-like mares of good size he will probably do well with any of these sires, but don't forget the "if." As some confusion seems to exist even yet in the minds of many as to what constitutes a Thoroughbred, it might be just as well to state here that a Thoroughbred can only be a pedigreed English race horse, or a descendant of such ancestors. He is not a trotter in the sense of *racine* at the trot (although all road breeds are indebted to this blood for whatever good looks they may possess) and cannot, therefore, be one of those horses which, owing to the advancing popularity of the Thoroughbred sire, are now being called blood horses by their grooms, but which, they tell us, have trotted miles or quarters in phenomenal time in private trials. The Thoroughbred is descended from an Arab ancestry, and from them he has inherited his good looks, while excelling them in the three valuable qualities of size, speed and endurance. As a sire he has, undoubtedly, the greatest prepotency of any breed, owing to the purity of his breeding, and this should have a great deal of weight with the breeder when so many of his mares are of mixed, or, owing to their having been bought from a dealer, of uncertain origin. Knee action, on the other hand, is not a characteristic of the Thoroughbred, being inimical to fast galloping, and, if the sire of this breed is used the mare should be chosen with good action,

even if the sire should be possessed of it. The colts from this line of breeding which do not show enough style or are blemished will make the very best general purpose farm horse, having the pluck and endurance for which the Thoroughbred is noted, weight enough for any reasonable load, and can trot home at eight or ten miles an hour without being laid up for a week. The mares should range from 1,200 to 1,300 pounds, or even somewhat heavier if not too coarse, be low-set and well-turned; the minimum of weight is, of course, dependent on the size of the sire, who should, however, weigh 1,200 pounds or so.

Roadsters may, I think, be divided into two classes, although the two may overlap one another, viz., the pleasure horse and the business horse. In the first class the sire is preferably a Hackney. They should range about 15½ hands in height, be well turned, and show plenty of knee action. Such horses are at present in very good demand, and will always command a good price as showy horses for the lighter classes of city driving. Style is, of course, a *sine qua non*, and they should, therefore, be bred from mares with some blood and of good shape. In the second class the sire should be a well-bred trotting horse, about 16 hands high, with good bone, action and looks. The latter class are not intended so much for show as the former, but for fast road work, in which they undoubtedly excel the Hackney. The dams should be of the better class of clean-limbed mares, not too common looking. The trotting horse having so far been bred solely to a standard of speed, this is more likely to be reproduced in the foal than good looks, in which some of the best trotting families are notably deficient. Therefore, as looks sell, the trotting sire must be chosen specially with reference to his appearance. Those who are not inclined to value good looks very highly should acquaint themselves with the low prices at present asked in the United States for plain-looking horses, even when well-bred on trotting lines. In the choice of one of the two above lines of breeding each breeder must use his own judgment. A smart pace on the road being the object in the second class, a farmer possessed of a mare of suitable size and appearance, with a fair trotting gait, will probably do best with a well-bred trotting sire. But if his mare should be well-bred and not possessed of this trotting instinct, I think the Hackney will probably give the best results; for speed, in this the highest-priced class, is of no account whatever. Hackney-bred colts have a "finish" which is much rarer in trotting-bred colts from ordinary mares, and this is a taking point with the dealer; and further, those who raise fast trotting roadsters will have to contend with the competition of almost all American breeders of light horses in their own markets, which is a point worth considering. Above all avoid a pony stallion, even though the sire of his dam should be second cousin to a stable companion of Maud S; if our roadsters lack one good quality more than another, it is size.

For saddle horses the best sire by long odds is, of course, the Thoroughbred, although many useful hacks are bred from the Hackney, mated with mares such as indicated under "roadsters." But if the sire is to be a Hackney, and I think this is only advisable in the absence of a Thoroughbred stallion, the mares should have a good dash of blood. Although this class, when properly bred, raised and trained, bring, especially when combining size, substance and quality with good manners, some of the very best prices, still I consider that the training of them, in order to bring such prices, requires not only that experience which may be gained by all, but natural gifts as well not common to many. On the other hand, it may be said that the better bred broncho mares, if possessed of bone and substance, afford excellent material close at hand from which to breed this class of horses. If, therefore, these are to be raised they will, in most cases, be better sold to the dealer to train at two or three years old, or an experienced horse breaker should be secured to train them, giving the "broncho-buster" a wide berth, at any rate as far as the finishing process is concerned.

In summing up, although I believe that any of these lines of breeding, with the foregoing reservation as to draught horses, will pay a fair profit if properly conducted, still I give personal preference to the carriage horse type outlined above, for the following reasons, viz.: (1) No other line promises better prices for really good individuals. (2) Colts, blemished or otherwise depreciated in the market, can be used to the very best advantage on the farm, whereas it will be a problem what to do with blemished or undersized roadsters or saddle horses. (3) The market is never glutted with this kind; and lastly, the filies from this cross will make the very best brood mares, either to breed back to the Thoroughbred or to cross with Cleveland Bay, Yorkshire Coach, Hackney or trotting sires.

Whatever your line of breeding, begin well; see that your mare is in good order when put to the horse, as a lack of thrift at this time not only affects her chances of impregnation, but is evidence of a smaller store of nourishment for the foetus, and this must affect its development. After she is well on in foal, at slow, steady work in the hands of a careful man, avoiding all jerking, overloading and excitement, with, for the last month or so, soft food and daily exercise in the yard, the brood mare should do well enough. Many breeders affirm that boiled barley has a tendency to cause abortion in

mares, but I have no personal experience on the subject, as I have avoided it, not being anxious to prove the truth of the assertion. I like boiled wheat, even though a grain here and there should pass through whole. Occasional bran mashes also, at a time when purgatives are interdicted, are of great service in loosening the bowels—a point of importance before foaling—and in cooling down the system of a mare, which has, perhaps, been fed a good deal of grain all through gestation in order to keep her working.

TO BE CONTINUED.

Our Scottish Letter.

Four weeks have passed since last we addressed the readers of the *ADVOCATE*; since then much has happened in Scotland. Cattle and horse sales have taken place in different places, the weather experienced has been of the most favorable description, the seed time is nearly over, the season for traveling horses has come into view, and the lambing season on lowland farms is nearly over. Much that has taken place will not be of special interest in Canada, still as farming there and here is not altogether dissimilar a few items may be coned over.

No class of cattle have in recent years acquired greater popularity than what are called blue-greys, the produce of a Cumberland Shorthorn white bull and a Galloway or Aberdeen-Angus cow. Generally the former cross prevails in the border counties where Galloways abound, and the latter in the north-east where we have the A.-A. polled breed. Carlisle is a noted market for white bulls and their crosses, and at the sale held there on 16th March the white bulls made good commercial prices, running from £25 to £98 a piece, while the crosses also were in demand. The bulls reared in Cumberland and Westmoreland have a character of their own, being bred from milking families, and the blue-grey ripens fast. Staffordshire and other English counties, as well as Dumfriesshire and Galloway, are good customers for the white bulls, some of which are pedigreed, but possibly quite as many are not. It is not to be inferred from this that these bulls are not well-bred. On the contrary, they have long pedigrees, but the strains are not of the fashionable beef-producing Shorthorn lines, and many of them have never been registered up. The Galloway breeders had their innings at Castle-Douglas three days later, but it must be admitted that they did not make a first-rate appearance. Last year business was very rosy, the supply of bulls was just about equal to the demand, and good prices ruled. This year every breeder seemed to think it his duty to keep his bull calves entire. He concluded that all the farmers in Galloway were dying to own a Galloway bull, and hence the supply far exceeded the demand—animals were offered as bulls which would hardly have made respectable steers. Mr. Cunningham, Tarbreoch, is the great Galloway enthusiast; he stuck to the breed in fair weather and in foul, and now reaps his reward. His first prize yearling, The Pathfinder II., was got by Camp Follower, out of the champion cow, Madonna, and Mr. Thomas Graham, Skipmyre, bought him at the sensible figure of £57. The fourth prize winner was also from Tarbreoch, and was got by Royal Liberty. He was sold for £41. A third from the same herd, which was eighth in the class, was bought by the Messrs. Sherman, and goes to the Balig herd at £40. He is a strong youngster. For eight bull stirks Mr. Cunningham drew an average of £29 8s. 9d., but his average last year for ten was £35 10s. The Drumlaugher herd of the Duke of Buccleuch came second to Tarbreoch. It was represented by ten bulls, and amongst them were found the second and third prize winners. The former, Sir Duncan 5903, was sold for £26 10s., and the latter, McDuff 5905, for £22. The best of the remaining Drumlaugher bulls were sold for £21, £23 10s. and £24. Mr. James Henderson, Dykhead, Dumfries, got £34 and £19 for the fifth and a commended bull, respectively, and Mrs. Fraser, Glaisfers, got £25 for the sixth bull. These prices show that good bulls of the Galloway breed can be grown to good profit, but the unfortunate tail of cattle shown at the 1894 sale reduced the average somewhat seriously.

Tuberculosis and its connection with the diseases of the human family have been brought prominently before the public in a lecture delivered in Dumbarton by Principal McCall. Too little attention has been paid to this disease in the past, and now that the sanitary authorities in our large towns are refusing to allow carcasses affected with the disease to be sold in any form as food, the farmer is beginning to realize that he may lose money, and indeed with many the potential mood is unnecessary, for they have lost money by it. The butchers suffer most. Carcasses affected with the disease are so difficult to detect before death, that many a time the butcher knows nothing about the disease being in the carcass until after the price has been paid for it and the animal slaughtered. The sanitary inspectors then swoop down on him, condemn the carcass as unfit for human food, and he loses the whole. This is a bad state of matters, but worse remains, for it is generally agreed that if it is deleterious to eat tuberculous flesh, to drink tuberculous milk is much worse. What is proposed is, that farmers and all interested should agitate to have tuberculosis scheduled the same as pleuro-pneumonia is, and that compensation be paid for every animal slaughtered. Until this is

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done nothing effective can be accomplished, for the whole interest of the farmer is to conceal the existence of the disease. Principal McCall does not urge that all tuberculous meat should be destroyed; he would strongly prohibit its indiscriminate sale, but he argues that were carcasses carefully inspected by qualified veterinarians, many which now are ruthlessly destroyed might be saved and cooked under strict sanitary conditions, so that they could be utilized to the great benefit of the community. Speaking as the veterinary adviser of the Board of Health of Glasgow, the opinion of the Principal will carry great weight, and he may yet live to see his ideal realized.

Another cattle question about which there is great searching of heart is the importation of foreign store cattle. The vast majority of farmers and breeders are well-pleased with the results of the policy of the Board of Agriculture in stamping out and preventing further outbreaks of pleuropneumonia, but many breeders, especially in England, are anxious to go further and absolutely prohibit the importation of foreign stores. The Minister of Agriculture, while firm in adherence to the policy hitherto pursued, has put down his foot and refuses for one moment to accede to this idea. He will not import disease, but he will steadfastly refuse to prohibit the importation of live cattle when this cannot be done without risk of disease. There can be no possible doubt that Canadian stores have done well in this country, and many regret that any necessity should be thought to exist for refusing their free entry.

During the week now ended a good sale of Ayrshires and a fine show of cattle and horses have taken place at Castle-Douglas, and recently we have had quite a number of Hackney sales, as well as the Marquis of Londonderry's annual draft sale of Clydesdales on Thursday. A valuable shipment of choice Ayrshire cattle has been made to Mr. J. P. Dawes, Montreal. They were purchased by Mr. A. B. Stalker from Mr. John Craig, Nethercraig, Kilmaurs, and are alike well-bred and able to give good records at the pail.

At the Marquis of Londonderry's sale six yearling fillies made an average of £20 3s. 0d. a piece; four two-year-old fillies, £14 12s. 6d.; three three-year-old fillies, £9 14s. 6d.; six brood mares, £32 11s. 9d.; five stallions, £133 15s. 4d.; and six yearling colts, £31 14s. 2d. The best sale of Hackneys was held at Mr. Andrew Hunter's place near Glasgow, when the fourteen Hackneys drew an average of £103 16s. 0d. a piece, the phenomenal driving mare, Lady Lofty, realizing the equally phenomenal price of £598 10s.; another mare, Coquette, drew £173 5s., and a gelding, The Masher, £168. SCOTLAND YET.

Chatty Stock Letter from the States.

FROM OUR CHICAGO CORRESPONDENT.

Top cattle \$1.90, against \$1.75 a fortnight ago, and \$6 a year ago; hogs \$5.40, against \$5.10 a fortnight ago, and \$7.35 a year ago; sheep \$1.75, against \$5.25 and \$6.15. Live stock prices were higher a year ago, but the trade was not so healthy. The cattle market shows a remarkable degree of vitality. Receipts have lately been liberal and larger than a year ago, but the demand has improved to such an extent that a reduction in supplies for any length of time forces buyers to bid up sharply. On a recent Monday there were only 13,000 cattle, as against 17,000 expected. The lightness of hog supplies would justify a much higher range of prices in ordinary years. April hog receipts 158,000 ahead of last year, while receipts for the year to date show 728,000 larger than the meagre runs the corresponding time last year. The effort of farmers to save pigs is very marked. They are paying a decided premium on pregnant sows to keep at home. That is better than putting such stock on the market. There are points in Iowa where cattle feeders are compelled to market their cattle, as they are out of corn and farmers are too busy and independent to stop and haul it. The writer knows a feeder who had to send his cattle to market a month earlier than he thought best, simply on this account. There was plenty of corn, but farmers did not want to stop spring work. That fact certainly shows an encouraging state of business.

Sheep prices advanced to such a high point that exporters were temporarily shut out. Lately a decided reaction has set in, and exporters have gone to work again. Joseph Gould bought 7,500 sheep from one man to be delivered at Chicago at \$1.75 per 100 lbs. They average about 160 lbs. shorn, and go to Liverpool. They were bought before the recent break. The sheep exporters have made plenty of money. Prospects are that supplies of inferior grass sheep will be excessive.

After about the tenth of May, when grass comes and farmers can scatter their stock and hold and feed at less expense than now, there will be a betterment in the cattle market that will astonish the natives, and it will last at least till the end of August. This was the opinion of a well-posted cattle man. The severe drought in Texas makes it certain that there will be no grass Texas cattle marketed to any extent before July 1st, or at least six weeks later than usual.

The people in an Illinois town recently joined in a "roast pig" social at one of the prominent churches. They had pig in every conceivable style, and with a reading of Chas. Lamb's essay, and an original dissertation on pig, a good time was spent. A well-known Chicago packer, asked what he did with all the meat he handled, said: "We eat what we can, and can what we can't."

The Cow for Canadian Dairymen.

PAPER READ BY GEORGE RICE, BEFORE THE CANADIAN HOLSTEIN-FRIESIAN ASSOCIATION.

The majority of Canadians have an inherent love for large cattle. It is not altogether a matter of sentiment, either, as experience led us to believe that large cattle suit our conditions better. It is now becoming an exploded idea that has been advanced by some, that the larger the animal the greater amount of food is required for maintenance per 100 lbs. live weight.

An elaborate test to determine this question has recently been undertaken by Cornell University, and the figures show that economy of production is not attained by the smallest cows. The smallest cow, weighing 815 lbs., consumed the most dry matter (249 lbs.) for each 100 lbs. of milk; whilst the largest cow, weighing 1,520 lbs., consumed the least dry matter (74 lbs.) per 100 lbs. of milk.

A similar difference was noticeable in regard to the production of butterfat, and ten cows, weighing less than 1,000 lbs., consumed 264 lbs. dry matter per 1,000 lbs. live weight; and ten cows, weighing 1,100 lbs., consumed only 23 lbs. of dry matter per 1,000 lbs. of live weight. These facts are all in favor of the large animals. Undoubtedly the larger cows possessed better and stronger powers of digestion, and here is where the grand feature of a true dairy cow comes in, and more depends upon the powers of assimilation than upon mere size, and we want cows whose conformation and temperament give them superior powers of digestion.

The question as to economy of production between the breeds has not been settled, and never will be, because as has been well said, there is more difference between individuals of one breed than there is ever between the different breeds. The largest producers are invariably the most profitable.

Canadian dairymen want cows whose characteristics come nearest in filling their want. We require a cow for cheese first and butter second, because our export of cheese is many times that of butter. Undoubtedly our production of butter will greatly increase, but owing to our position we can only aim to expand our butter making by producing it during the winter months, as our home markets are comparatively small, and if we have to look to foreign markets we can only place our butter in first-class shape in the winter months.

If there is anything that will wake dairymen up to a desire for first-class cows it is winter butter-making. The feed being then more expensive than in summer the profit is small, and three years' experience in winter buttermaking at our factory has brought me to the conclusion that our progress in winter buttermaking is to be slow, but I still believe it is to the best interest of dairymen to expand this trade; reduce cost of production by keeping good cows and feeding most suitable feed. We will then have a safety valve to let off steam if we should get up too much in cheesemaking, and flood the market by overproduction—a danger not yet apparent, however.

In order to get good butter cows, we may have cows that give a medium quantity of milk rich in butterfat, or cows giving a larger quantity of medium rich milk; but if you want great butter cows, then you want cows that give a large quantity of rich milk—that is where the great ones are to be found.

Now, as regard milk for making cheese, what do we require? Some say "butterfat," but then they make cheese out of skim milk, in which there is only a trace of fat, so this must be taken with a qualification. True, in the Columbian test the best butter cows were best cheese cows also; but, then, they were also the largest milkers in that test, and a 2.10 horse is fast until it meets a 2.10. What is, then, the relation of butterfat to cheese?

From a great many reports of milk containing different percentages of butterfat Prof. Babcock, of Wisconsin University, found:—

Milk averaging 3.16 per cent. fat made 2.86 lbs. cheese per lb. fat.	
" " " 3.29 " " " 2.69 " " "	
" " " 4.53 " " " 2.39 " " "	

I might give similar evidence, but space forbids. This shows that a pound of butterfat in the richer milk made less cheese than in the poorer milk; but, on the other hand, milk containing more butterfat up to certain limits improves the quality of cheese, but there is nothing gained by going beyond the amount of butterfat required in the milk to make first-class cheese. The limit in this regard has not been determined, but is under 4 per cent. Evidence on this point might be taken from the fact that we have a first-class reputation for our cheese. From several reports of factories we find that milk has tested from 3.3 per cent. at one season of the year to 3.8 per cent. at another. One factory has given as their average 3.5, and from such milk first-class cheese is being made. More evidence is, Canada beat the world at the World's Fair, and the percentage of fat in the milk in the months these show cheeses were made would be about 3.7, certainly under 3.8. So that it will be seen that not very high per cent. of fat is required for the first-class article; but, under our conditions, the "relative value plan," according to per cent. of butterfat in milk, is a fairly accurate method of determining the value. It is at least nearer than the old way to being fair, and leaves no inducement for tampering with milk. Our milk on the whole is good; it will be improved in the natural course of events by having cows calve in the fall for winter buttermaking, therefore richer in summer from being longer in milk, more intelligent feeding and selection.

The consumers', dealers' and makers' end of the business is all right; but how about the producer? That is for us to consider. 'Tis said that the average cow produces only 3,000 lbs. of milk per year—that is bad for the producer; it is not, then, the quality of the milk we so much need to improve as the quantity. Our cows should give us 5,000 to 6,000 lbs. at least, and thus double our income.

The cow that Canadian dairymen want is, the cow that gives the largest amount of milk sufficiently rich to make first-class cheese.

How to get her. Some I know that are good judges of dairy qualities buy first-class cows; but this, though good for them, does not add to our country's number of good cows, but leaves the more poor ones for others. The only way to increase the number in the country is to breed them, and this must be from pure-bred stock that possesses the required characteristics, which is to give the largest possible quantity of milk, butterfat and other solids. And what about the breed that we are here to represent to-day? Do they possess these characteristics? If so, we are building upon a rock—the rock of demand.

Those entered in the Columbian test came so far behind their private test that we find to-day private tests are at a discount. So be it. The great but not only Association has flunked, but private parties have not been idle.

In the public test conducted by the Ohio State Fair and University, we find last year four entered from one herd with this result:—

Eunice Clay, 8 years old, produced 84.62 lbs. milk in 24 hours.	
Iolena, " " " 70.10 " " "	
Hilton Maid, 9 " " " 67.12 " " "	
Vassaline, 4 " " " 67.06 " " "	

These are all Holsteins, and won all the prizes for total butterfat, total solids, as well as milk. Taking the cow Iolena, that gave 70 lbs. milk, testing 3.48 butterfat, or making nearly 3 lbs. of butter per day, at a profit over feed consumed of fifty-three cents for the day, figured by Columbian test rules, this is the best dairy work of the year in any public test. In this same test the best cow of any other breed gave 48.17 lbs. milk, testing 3.75 per cent. butterfat—creditable by itself, small in comparison.

Lest the hyper-critical may say, "What have these high-testing Holsteins to do with Canada?" I will just say that the blood of almost all the highest testing Holsteins is in Canada, and if breeders and dairymen in general take advantage of these superior cattle, we shall make rapid strides, and the 3,000-lb. cow shall become a rarity instead of the rule.

Southdowns.

(Continued from Page 139.)

Why I advocate the system of tattooing is that I have found it is as certain as any other mark, and because it has one great advantage in that it cannot be removed, and once there it remains; as many of the Southdowns now here have these marks, as well as the registered trade mark of the Southdown Sheep Breeders' Association, therefore any one can see it for himself and he will at once appreciate its value.

For the information of those that may not be aware of the fact, I may inform them that no registered Southdown sheep leaves England without being first trade marked, and warn intending purchasers that if they are buying imported Southdowns they ought to make sure they are getting what they desire, to insist upon seeing the registered certificate of every individual sheep, which is granted to it, and to it alone, on leaving England. This certificate is duly signed by myself and stamped with the common seal of the Society. The purchaser will find written thereon, in addition to the pedigree, the copy of the registered trade mark, with owner's flock number in left ear and owner's private number in right ear.

Remember that all sheep imported that have neither the registered trade mark nor foreign certificate are unregistered and unrecorded; whilst every sheep whose registered trade mark and flock number correspond with the certificate produced is guaranteed pure by the English Southdown Sheep Breeders' Association.

As to the management of flock in reference to feeding, it is certainly necessary never to let the lamb lose his lamb-flesh, but to keep him going on from the first by gently but surely pushing him until ready for the market. Give every change of food possible, give as great variety as possible, and the better will be the result.

Another point in management, and upon which a great deal depends as to profit and loss, is the care and attention that is paid to keeping the sheep healthy and clean. They should all be dipped at least once a year, twice if possible, and all lambs should without fail be dipped as soon as ewes are shorn, and once again in September. These, what some call unnecessary expenses will be more than repaid by the increase in wool and general health and freedom from losses. Again, all sheep should, in places where the ground they feed on is free from stones, or where they are constantly on grass, have their feet pared at least twice a year; and if lameness ever breaks out, at once pare every foot, and then turn them into a pen with one half-inch of unslacked lime in on the bottom. By these means, I am sure that lameness will pretty soon be cured and healthy feet secured again. It is chiefly owing to the neglect of seeing that the feet are properly pared, that causes the very great amount of lameness amongst sheep. I have myself

noticed time after time, wherever foot rot is prevalent, the feet of the sheep have been entirely neglected, or only casually or not thoroughly been done.

Now, I will briefly turn back upon the question why they, the Southdowns, should be kept in preference to other breeds, and it is as follows:—
1st—Because they of all sheep will produce more meat at a less cost from a given area than any other breed of sheep. You can keep thirty of these Southdowns where only twenty of the larger breeds can be kept, on the same food and area. They are small in size but great in value—they are big sheep in little room. They are sheep that produce the greatest weight where the best points are. Many of you may not be aware of the fact, but the hind quarters of Southdowns are always at least one to two pounds heavier than the fore quarters. This is a merit peculiar to them. They are producers of fine wool of the best quality, and although the weight of the fleece is not so much as of some other breeds, taken as a whole a farmer would receive in cash more from the produce of fifty Southdowns than from any other breed, if an account of the cost of food and attendance were properly kept.

Because of their hardiness, freedom from disease and adaptability to almost any soil or climate, as well as their ability to live and thrive in extremes of heat and cold, for they are to be found all over the world. They, on their native Downs, have great extremes of climate to endure, from the heat of summer to the almost Arctic cold of winter. Their fine thick wool, and close fleece is most essential to their well-being, which being impervious to either wet or snow, they are able to put up with the greatest hardships, cold and wet, without any ill-effects either to their bodily health or to the quality of their wool. Thus, not only do you, by keeping a flock of Southdowns, keep a sheep of the most valuable mutton breed, but you keep one whose wool is of the finest and best quality, and is not affected by the weather in the manner it affects other fleeces.

Because they will thrive and live well where other sheep would almost starve; because they are small eaters and rapid fatteners, and will come as early to maturity as any other breed of sheep in the world. Because of their small size, they produce just the joints that make the highest price in the market.

Another reason why Southdowns should be kept is, that if you could get your upper ten to taste a good mutton chop or joint of mutton as we produce in England, the demand for mutton would increase by "leaps and bounds." What keeps the fashion for eating mutton at so low an ebb is no doubt the poor quality of that sold. Increase the quality, and trade will certainly follow. And lastly, because rams and ram lambs of this breed are by far the best sheep for producing crossbred mutton from sheep whose pedigrees are not recorded, or to use on various other breeds for making better mutton sheep for the butcher.

A few words on importation of sheep. If a farmer is not able to come to England himself, let him get a friend to buy for him. If a breeder does not want show sheep, but breeding ones, there are plenty of the finest Southdowns to be found on farms where none are ever shown from. These may be purchased at a far less price, whilst for breeding purposes they are just as good, if not better, than show animals.

I would earnestly press upon all sheep breeders, whatever they do in the way of importing sheep, to buy only those whose pedigrees are duly and properly recorded in the books of their respective Flock Book Associations, for it is no use bringing to America sheep whose pedigree and breeding will not bear the stamp of publicity in being recorded in the flock book of its breed. I would also venture to express a hope that shortly the question of admission of stock for breeding purposes, both in the States and Canada, will be as follows:—Free admission to all animals that are duly recorded in the pedigree record of their breed, provided that they are each accompanied by an individual pedigree certificate duly signed by the Secretary of the breed, and have in their ears, or elsewhere on their bodies, the Society's registered trade mark tattooed in the flesh, together with their breeders' registered number in the record, thus having a permanent and certain means of identification which cannot be removed or erased; and the total prohibition of importation of all non-registered animals for breeding purposes. Why I hold this opinion is, that it is for your benefit only to receive animals whose pedigree and breeding are beyond dispute, whilst it is to your present as well as future detriment to receive here stock of whose pedigree there is no public record at all, and who may or may not be pure.

Finally, in addressing myself especially to Southdown breeders, once again let me urge you all not to buy a sheep without the English registered trade mark in the ear, and without obtaining with it the individual certificate; and, above all things, remember the Southdown sheep is small in size but great in value, and that it would be a sad event in the history of the oldest and purest of breeds if size should become preferred to quality, and mere weight of mutton to character and good wool.

Gentlemen, the last words I will utter are those which a countryman of yours, C. M. Clay, of Kentucky, used in a letter to myself in reference to Southdowns as compared with other breeds: "I prefer gold to dress."

Raising Pigs from Birth till Six Months Old.

[Written for the Dominion Swine Breeders' Association, by F. J. Sleightholm, Guelph, Ont.]

Under existing conditions, we think that late winter or early spring, and late summer or early fall, are suitable times for sows to farrow.

Late Winter and Early Spring.—If the sow has had plenty of exercise and a fair amount of nutritious food, she should be in right condition for farrowing. See that suitable quarters are provided. I may be excused for digressing from my immediate subject to say what constitutes suitable quarters. First, a warm pen, free of draughts, and not more than eight feet square rather than larger, since a larger pen means greater danger of the young pigs straying from the dam and getting chilled. A shelf on that side on which the sow usually lies, this shelf to be eight or ten inches from the floor. If thought advisable, the shelf may be continued on three sides of the pen. A shelf or no shelf may mean the difference between profit and loss in the expected litter. Bedding is not desirable, but if any be given it should be cut short. When the newcomers are all safely to the teat the sow may be left alone for several hours. Do not induce her to rise until she evidences an inclination to feed or drink. Feed fluids largely at first—gruels made of bran, shorts, finely ground oats, or oatmeal with hot water are excellent. Feed light foods lightly for a week, gradually increasing to richer albuminous foods. This is necessary from a scientific as well as a practical standpoint, since the first milk of a sow is very rich in fat, while later it contains a greater proportion of albuminoids. If the sow is a copious milker feed carefully, otherwise permanent derangement of the digestive organs of the young pigs will often result. Especially is this necessary if there are few pigs in the litter. On the other hand, if the sow is a poor milker, boiled feed may be fed to advantage, giving all she can be induced to eat. In our experience we have found the following bill of fare to be quite satisfactory for a sow at this period:—

	Shorts.	Bran.	Barley.	Peas.	Wheat.
2nd week	1 (part)	1 (part)	2 (part)	1 (part)	
3rd week	1 "	"	2 "	1 "	
4th to 5th	1 "	"	2 "	1 "	1 (part)

We have not used oats much for pigs at any age, as we have found a combination of shorts and bran to be better even at customary prices. Give all the water she cares to drink three times a day. Exercise the sow daily. This is very important for both dam and litter. Some tonic should always be kept before the sow, and perhaps nothing is better than salt, ashes and charcoal, mixed and kept in a separate trough. The two former at least are always at hand. When the little pigs begin to eat it is best to give them milk, with shorts and bran, in an apartment separate from the dam. Attention to this arrangement will prevent any stagnation in the growth of the young at weaning time. We think it best to keep the youngsters in good thrift and flesh while suckling, but to avoid much fat, since we find that much fat at this period is not conducive to great weights at a marketable age of five or six months. Wean at seven or eight weeks. To leave two or three of the smallest of the litter with the sow a week longer is a commendable practice. From this time forward the pigs should continue to grow and feed rapidly till ready for market. If the greatest weights are desired, do not confine too closely nor yet allow an unlimited run. They should, however, have access to earth always, since it is the cheapest and best tonic and stomachic known in pig feeding to-day.

Feed Generously.—Withholding is poverty in this connection. Variety is better than any single feed. We have found the following a good mixture:—

Shorts.	Barley.	Bran.
2 parts.	3 parts.	1 part by measure.

Toward the finish we add a small proportion of peas, wheat, or wheat screenings. To feed largely of these latter heat-producing foods (say in July and August) is to increase the cost of the ration without a corresponding increase in the produce. Corn is especially objectionable at this season. The grain is ground and all mixed thoroughly in a large box or trough, then wet with water (milk or sweet whey is better when available) till of such a consistency that it will run readily from a pail. The feed for the whole day may be mixed in the morning, since a moderate souring is not objectionable. Add a single handful of salt a day for every ten pigs. Regularity in feeding is strictly essential. Avoid any approach to surfeiting, and allow one man only to attend to the feeding. Green fodder should be supplied daily. Clover, peas and corn in their respective seasons are as good as any. Fed as indicated above we have been enabled to reach live weights of one hundred and seventy to two hundred pounds at five months, and dressed weights of one hundred and thirty to fifty pounds, and corresponding weights, at six months. These are not weights of picked individual animals, but the averages of a number of animals sold at one time. As we are now turning off over two hundred pigs annually, we think the above, which is the result of much careful experiment and investigation is fairly reliable. The cost of raising such an animal will vary in different districts. Four and three-quarters or five pounds of the above mixture for spring and summer feeding will produce a pound of pork. The cost of a pound of pork on foot would approximate three cents. This estimate includes the cost of the keep of the sow for six months, and it is based on a continued series of ex-

periments. We have thus shown that pork can be profitably raised at a much lower price than is generally believed. We have also practised a less rigid system of summer feeding with profit. When weaned turn out, give access to clover and grass, and feed a modicum of some such additional feed as barley and peas, with an abundance of water and effective shade. In this way they will feed slower than in the former case, but there may still be reaped a nice profit. One objection to this system in our section is, that they are hardly heavy enough for the early markets and consequently the highest price is not obtained. When taken up and fed on soft feed they will, however, usually gain rapidly. Of a number fed in this manner we have put pork on the market at a cost of two cents a pound live weight, when six months old. For young sows that are to be kept over for breeding purposes, and for pigs to be kept for home use and slaughtered the following winter, we think this latter a very satisfactory system of feeding. The culls of the different litters, which as a rule do not pay well for high feeding, might perhaps be most profitably handled by some such system.

Late Summer and Early Fall Litters.—Our remarks upon the care of spring litters will also apply here. If, however, it is found desirable, the young pigs may run out with the dam. As the cold weather approaches, the feeding must be entirely different from that of the summer. In the first place, the feed should be fed dry, since wet feed loads the stomach with a cold mass that is decidedly injurious. The colder the weather, the richer and more concentrated should be the feed. We have found any of the appended rations very suitable and profitable:—

Peas.	Wheat.	Barley.
1	1	2 by measure.
2	1	1 "
1	2	1 "

Grain always ground. Where corn can be matured, it might very profitably be made a part of the ration at this season to pigs over four months old. With such rations, as much gain per day may be made as during summer, at but a slight advance in the cost. Warm, clean, well-ventilated quarters, water given separately from the feed, and a supply of salt and ashes are essentials in winter feeding. We have known a gain of a pound a day dressed weight to be made at this season, by a ration of oats and peas equal quantities, oats and fall wheat equal quantities, and even almost as great a gain from a ration of barley alone. In fact the number of varying rations that may be fed to swine at a profit are legion. There are other factors which have much to do with the amount of profit to be derived from an investment in swine, as the breed, manner of breeding, etc., but these are outside the province of this paper.

*Many would not concur with this very low estimate of the cost of production.—ED.]

ENTOMOLOGY.

Injurious Insects.

BY JAMES FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA.

THE PEA WEEVIL (*Bruchus pisi*, L.)

The Pea Weevil, or as it is more generally called, the Pea Bug, is a pest which, notwithstanding the fact that seedsmen do much to reduce its numbers, by treating their seed peas, still is the cause of much loss every year in the districts where it breeds. This is by no means a wide area in Canada. As far as my experience goes, it has not been found breeding anywhere in Canada outside of Western Ontario. This means that there are large districts where uninjured peas can be obtained for seed.

The life-history of the Pea Weevil (Fig. 1) is briefly as follows:—The mature insects emerge from the peas either late in autumn or the following spring. At the time the young pea plants appear above the ground, the beetles fly to the fields and feed upon the foliage; and, when the young pods are formed, the females lay eggs upon them. The young grub on hatching eats its way into the pod and enters one of the peas. Here it remains until fully developed, eating out during its larval life the greater part of the contents of the seed, and as a general thing, but not always, destroying it for all purposes. It is sometimes stated that weevily peas are as good for seed as sound ones. This, however, is undoubtedly, as it is easy to understand, not the case; although it is true, when the germ is not injured, the seeds will germinate, the plants are much weaker from having been robbed of a large proportion of the nourishment originally laid up by nature in each pea as necessary for the sustenance of the young plant, until it is able to take its own food from the air and soil.

REMEDIES.

There are several remedies which may be used effectively according to circumstances:—

1. **Clean Seed.**—Of great importance is the sowing of uninfested seed.
2. **Holding Over Seed.**—A certain remedy, and one which does not apparently injure the seed, is holding over seed peas until the second season. The beetles, being fully developed at the end of the first autumn, must emerge either then or the fol-



FIG. 1.

FARM.

Points in Farm Practice.

[In this department space is provided for a concise, practical and seasonable statement of any experience in farming operations that does not require as lengthy treatment as subjects dealt with in essays and contributions of similar length. In a busy season especially, many of our readers may not have the time to write long letters, but can jot down particulars of some plan which has proved successful in grain growing, fruit culture, stock raising, dairying, stock feeding, contrivances for economizing time and labor, etc. Particulars of successes in farm practice are always welcome. If anything has been tested and proved a failure, let us hear of that also. We learn from failure as well as from success.]

Brimstone vs. Canada Thistle.—Mr. Campbell, of Dwahe, New Zealand, eradicates the Canadian thistle in the following effective but rather expensive method:—"About twelve months ago I had a patch of these thistles on my farm, to which I applied a slight dressing of powdered brimstone by sowing broadcast with the hand, somewhat similar to sowing artificial manure. This wholly eradicated the weed. Brimstone is a never-failing cure for the thistle. It destroys all vegetable life, and ground treated as I have explained will not support life for two years afterward, but after that period has elapsed it can again be worked with satisfactory results."

Co-operative Spraying.—"Where orchards are not large, a few farmers might combine and purchase a spraying outfit, which would serve the community, and if it were possible to have it continuously operated by the same individual, whom practice would lend superior facility in using it, an additional advantage would be gained."—[John Craig, Horticulturist, Experimental Farm, Ottawa,

That Old Speckled Hen.—"The 'old speckled hen' that was such 'a great layer' is usually mated with an ancient barn-yard mongrel," writes Mr. W. J. Stevenson, of Oshawa, "and yet the farmer expects her chicks to be something excellent—like herself. He feels disappointed, of course. What holds good with all other classes of live stock holds good with the hen also. Moral: Use thoroughbred males only."

Ringworm in Cattle.—A writer in the Scottish Farmer gives the following prescription for ringworm in cattle, and as this nasty disease is very common in many districts, and the bluestone and tar such a simple remedy, we quote it:—"Take two ounces bluestone (powdered), and mix this with sufficient Archange tar to absorb the above quantity, and applies it to each affected part. This will clear out the pest in a short time. Care, however, must be taken to smear any spot which may appear after the first application. My method has been to mix the powder and tar with the blade of a knife and apply with same to avoid contagion, and this answered the purpose admirably."

Profit per Hen, \$2.34.—Thinking that many readers are interested in poultry, I send an account of my flock of hens. Last winter, I commenced with twenty-four hens and a Brown Leghorn cockerel. About half of my hens were Plymouth Rocks and the rest were mongrels. My account of receipts and expenditures for the year from January 20, 1893, to January 20, 1894, is as follows:—

Received for eggs at an average of 23c. per dozen	\$47 30
For 7 1/2 dozen chickens	29 35
Total receipts	\$76 65
Paid out for feed	20 35
Total gain	\$56 30

This gives a profit of \$2.34 per hen. E. A. W.

Bran for Sows.—At the Indiana Swine Breeders' meeting, a Mr. Miller complained that he had lost a number of sows at farrowing time, and he thought that he had bred them too young. In answering the question, Mr. Mustard asked him if he ever fed bran to his hogs in winter, which he answered in the negative, when Mr. Mustard said, "Well, that accounts for it. I have never had one die in my life. Feed bran mash and you will never have any trouble."

Feeding for Butterfat.—"About the 1st of February last, I tested the milk of a farrow cow that had been milked ten months; said cow was being fed morning and evening one-half bushel good corn ensilage, with four quarts shorts and bran mixed, with all the nice, early cut clover hay she would eat, and watered twice each day. After being fed on this four weeks, her milk tested, with the Babcock Test, three and two-tenths butterfat. Then, with some care, I added gradually two pounds cotton-seed meal, two pounds old process oil-meal, and four quarts cornmeal, twice per day (which makes a heavy feed), and in four weeks her milk tested four and five-tenths butterfat. There was no change in the feed of ensilage, clover hay, shorts or bran. The cow was ten years old this spring, and of common size, and a good, fair, average milker."—[J. B. Shattuck, Chautauqua Co., N. Y.]

Bud Moth. This is the time to spray the fruit trees to destroy the bud moth. This little insect lays its eggs on the leaves of the trees about June. The larva feed upon the under side of the leaf, and because of the protection afforded by the leaf, and also by the small silken covering which surrounds them, little can be done to lessen their numbers at this stage. About October they spin small cocoons upon the twigs where they pass the winter, and come out early in the spring and attack the buds. They prefer flower buds, and for this reason one insect can do a vast amount of damage. The remedy is to spray early in the spring, before the flowers

open, with Paris green, in the same proportions as for the codling moth—one pound to two hundred gallons of water.

Planting Corn.—The usual way to sow corn for ensilage purposes is by means of the common grain drill, though where a farmer has a large area to put in it would pay him to buy an implement manufactured especially for the purpose. In order to bring the rows the right distance apart, it is necessary to stop up all the spouts but two or three, according to the width of the drill. From three to three and a-half feet is the best distance to have the rows, or for the smaller varieties they might be even nearer together. Some drills can be so arranged that each spout will be the right distance from the wheel, so that when you turn at the end of the field you can follow the track of the wheel down the field and have the rows a uniform distance apart. Where the width of the drill will not allow of this being done, it will be necessary to use a marker of some kind. A good way is to attach a pole to the drill and allow it to extend past the end; a chain can then be fastened to this at the proper distance and allowed to drag, which will make a sufficient mark in the soft earth to guide the drill. If the drill is a ten-spout one, it should be set to sow about two and a-half bushels to the acre. As many of the drills do not sow true to gauge, it is well to test on a smooth lane or barn floor. When the corn will average about one grain to every five inches, or three grains to the foot, it will be set about right.

Corn Growing.

READ BEFORE THE NORTH BRANT FARMERS' INSTITUTE, BY A. W. VANSICKLE.

In a country which is becoming largely devoted to stock raising and dairying, such as Ontario, the question of growing corn as a cheap food is worthy of our consideration. The time when we can afford to let one of our fields lie idle every year for the purpose of cleaning it from foul weeds is past, and we have adopted corn growing as part of a rotation which if properly attended will not only clean the soil and leave it in a better state for the next crop, but give a profitable return for the labor expended. The ultimate success or failure of a corn crop depends largely upon the cultivation given it. Without doubt, clover sod plowed the fall before, with a liberal supply of manure, is the best preparation for the land. But having the two-fold object in view, we usually plant corn after some grain crop. The land intended for corn should, the fall before planting, receive from 12 to 15 loads of manure per acre. This should be plowed under with skimmers attached to the plows, so that all stubble and manure may be completely turned under. In the spring as soon as the other seeding is completed, or about two weeks before planting time, the cultivator and roller should be run over the field to encourage the germination of any seeds that may be near the surface, which will be much more easily destroyed before the crop is started than after. When it is about time to plant, the ground should be worked with the cultivator, harrow and roller until a very fine, deep seed bed is obtained. I like this plan rather than plowing in the spring, because any grass that may have been turned down the fall before is easier kept in control, and instead of turning up the cold, damp soil from the bottom of the furrow, we get a fine warm seed bed, and are able to plant a week or more earlier. When the ground is worked in this way it is better prepared to withstand a drouth during the summer, and the manure also is in a more available state and will give a more vigorous growth to the plant, and larger quantities can be grown in most seasons than by spring plowing. There are two ways of planting, "hills and drills." Although I think by proper management a slightly larger quantity can be raised from the drills, yet since it is to clean the land we are working, I would advise planting in rows 3 1/2 feet each way. The advantages of planting in hills are, less hand hoeing to keep down the weeds, less work in harvesting, and the land is cleaned more thoroughly of weeds, which is a very important point both in the growth of the corn and the crops following. In planting, I would use hand planters, because they save labor, and if it is dry after planting, the seed planted by the planters will germinate quicker. Three or four days after the corn is planted, a harrow should be run over the field, which will break the crust if any has formed. When the plants appear just nicely above the ground the harrow should be used again; this will stimulate the young plants and destroy any weed seeds which may have sprouted. After this, the cultivator or scuffler should be started and kept going until the corn is too large to work with a horse. The corn should be gone through once with the hoe to cut out any weeds that may have been missed in the hill, and also to thin the corn if necessary to about four stalks in each hill. Finally, I would say, if the above conditions are carried out, a proper variety of seed has been chosen, the corn cut as soon as the grain is sufficiently hard, husked and housed in reasonable time, we would have from 10 acres fully 20 loads of reasonably good fodder, and from 1,000 to 1,200 bushels of good hard corn for our labor.

lowing spring. If, therefore, the seed be kept in strong paper or cotton bags, the beetles will emerge and die the first year; and the second season all the good seed may be separated and sown. I have found from actual experiment that the holding over of seed pease practically does not impair their vitality.

3. Soaking.—If seed be found to contain weevils at the time of sowing, and it is inconvenient to hold it over, the beetles can be destroyed inside the pease by soaking the seed in water for twelve hours. The water may be made sufficiently hot to be uncomfortable to the hand, but not scalding. Pour the pease into enough water to entirely cover them.

4. Bisulphide of Carbon.—A most effective remedy is that adopted by the seedsmen to treat large quantities of infested seed peas at one time. This consists of subjecting them to the vapor of bisulphide of carbon, a liquid of an exceedingly volatile nature, which vaporizes in the ordinary temperature of the air and becomes a poisonous and very inflammable gas. For this reason, the danger of using it, it is a remedy which cannot be recommended for general use by farmers and others who have not the special apparatus necessary. Should anyone, however, require to treat large quantities of seed, I shall be pleased to send full particulars upon application.

THE APPLE APHIS (*Aphis mali*, Fab.)

This insect passes the winter in the form of small, black, shining, oval eggs on the twigs of apple trees. About the time the leaf-buds expand, the small green plant-lice emerge and cluster on the young leaves, from which they suck the sap. Later in the year, they leave the apple trees and fly to grasses and young wheat, where they live for a time and then return to the apple trees again. In this part of Canada this is not often a serious pest of apple trees, but in British Columbia it has developed into a pest of great magnitude, large trees in several districts having been destroyed by it.

REMEDY.

The best remedy is to spray the trees at the time the young lice first appear with kerosene emulsion. As there are two or three formulae for this valuable insecticide, one at least of which is of very little value, I give herewith the formula which I have found most satisfactory, and this will be the Kerosene Emulsion I mean, whenever I mention that preparation in these articles:—Kerosene (coal oil), 2 quarts; rain water, 1 quart; common hard soap, 2 oz. Boil the soap in the water till all is dissolved; then while boiling hot, turn it into the coal oil, and churn it constantly and forcibly with a sringe or force pump for five minutes, when it will be of a smooth creamy nature. If the emulsion be perfect, it will adhere to the surface of glass without oiliness. As it cools it thickens into a jelly-like mass. This gives the stock emulsion, which in a cool place may be kept for a long time, but must be diluted before using with nine times its measure, that is twenty-seven quarts of water. It will be found to mix much more easily if done at once, before it cools. The above proportions give three quarts of the stock emulsion, which with twenty-seven quarts of water added make up thirty quarts of the mixture ready for use.

Another method of diluting the coal oil is to make the emulsion with milk instead of soap and water. Take sour milk, one part; coal oil, two parts. Mix the two thoroughly, as described above for the soap emulsion. Then dilute with water, so that one part in ten will be coal oil.

The San Jose Scale in the East.

The above pest, which is the most serious insect enemy the fruit growers of California have to contend against, has made its appearance in the Eastern States, having been found in Virginia and Maryland. It is supposed that it was introduced by means of nursery stock imported from California. Though active means are being taken by the U. S. Government to destroy this insect wherever found, still there is great danger that it may spread into Canada, and fruit growers should be upon their guard for the first sign of this scourge. No orchardist should admit a single fruit tree, cutting or bud into his orchard without carefully examining it and satisfying himself absolutely that it does not carry a single specimen of the San Jose Scale. It may also be introduced into this country in the fruits imported.

This insect belongs to the same group of scale insects as the common and well-known oyster-shell bark-house of the apple. It can be easily distinguished from this species, in that the scale is perfectly round or, at most, very slightly elongated or irregular.

It is lighter in color than the bark of the tree, and will be found most numerous upon the younger limbs and twigs. It is at this season of the year about one-eighth of an inch or less in diameter, and there is in the middle of each scale a small, elevated, shiny, blackish, rounded point. Sometimes the centre of the scale appears yellowish. The wood underneath the scale is apt to be discolored and somewhat purplish. When the insect is abundant, the bark is completely hidden by a close mass of these scales, which are then hardly distinguishable to the naked eye, and give the appearance of a slight discoloration or a slight roughening of the bark. No other scale upon apple, pear, or cherry or plum possesses these characteristics. The insect ought therefore to be readily distinguished when present.

Corn Planting.

BY ROBT. M'ULLOCH, EDMONTON, ONT.

As the time of the year for corn planting is almost round again, a few hints on this subject will not be out of place. Farmers and dairymen who grow corn for the silo and for soiling purposes, as well as those who grow it for a grain crop, will each have to choose their seed corn for the crop of the coming season. It is very important that great care should be taken in choosing seed corn, as great loss and disappointment often results from planting bad seed. Corn is a grain that is more difficult to save in prime condition for seed than most other grains, and as good prices are generally given for seed corn, there is a temptation for some parties to place inferior stuff on the market. So we would caution all purchasers of corn to beware of flashy advertisements of such at high prices. Buy from reliable parties, and then after careful examination.

It would be a good plan (recommended in last ADVOCATE) to test the seed before planting, by putting some in boxes of earth in a warm place, and thus find out the proportion of seed likely to grow.

The kind of corn to plant will be considered also. Those who grow corn for a grain crop will have no difficulty in choosing a kind for their purpose, but those who grow it for the silo may need some advice in the matter.

Many silos will be built this coming season, and thus many may plant corn for the first time, and will naturally ask as to the best kind for their purpose. Even those of us who have had the silo for a number of years are still undecided as to the best kind or kinds to plant.

The answer generally given to this question is, plant the largest variety that will mature sufficiently in your locality, and perhaps this is as good an answer as we could give; yet, as our season is short, it would be difficult to select a variety that would give same results year after year. Last year, for instance, in our locality, Peel County, Ontario, the seed time was late, on account of the wet spring. A great deal of corn was not planted till on in June, which we think somewhat late for silo, especially if the large Dent varieties are grown, and they were not sufficiently matured for silo until there was danger from frost before harvesting. If corn is planted from about May 15th to 30th, we think the large Dent varieties may be grown, and will mature sufficiently to make good, sweet silage; but if not planted till on in June, I do not think it wise to plant much large corn, as we would be in danger of having either a frozen crop or a sour ensilage, which would do for beef animals or young stock, but would not do for dairymen who want to make good, sweet butter. In any case, we think some, at least, of the early maturing kinds should be planted, as they grow more grain, and the grain is ripe enough to be of some use. I have not yet become converted to the idea that some have that the grain does not count in the silo. I would much prefer to see silage well mixed with grain. A very good plan is to grow some of both kinds, and either grow it mixed or cut it into silo in alternate loads. In this way the Dent variety makes bulk, and small varieties yield more and ripen grain in proportion to amount of stalk, and when they are mixed it seems to strike a very good medium.

Last year a kind was advertised called "High Mixed." Nearly every one in our locality who had a silo thought he must have "High Mixed" corn. The result was, in some cases, an empty silo, and in many cases only a half crop. The reason of this failure was that seed of this variety was sent out which should have been fed to hogs, much of it being broken and moulded, so that it did not grow. We did not think that variety matured any earlier than the ordinary Horse-tooth yellow, which it resembled very closely, save in price. We hope those having this variety for sale this year will be more careful as to the quality sent out.

In large varieties, we have tried Horse-tooth, Leaming and High Mixed, and have seen little difference in the three. The main thing is to get first-class seed of either, and at a right price. Among the small varieties, we have tried Longfellow, and have found it to grow as much stalk as any, and an abundance of good, long ears, with a small cob and plenty of grain.

For soiling purposes, we like Red Cob as well as any. Thoroughbred White Flint grows lots of leaf, it is of a spreading nature, and think it should be good for green feed. It is a good plan to plant at different times, so that we may have nice, juicy corn coming in all through the season. Last year we planted some about 1st of July, it was the largest corn we had, and kept green as long as we wanted it, and would have until the frost came, had we not cut it before. After we had all the mature corn in the silo, we cut in this green, sappy stuff, and we found it made a good cover for silo, as our ensilage was good within a few inches of the top. We hope these few hints from our experience may be useful to those who are interested in the silo.

Freeman's Potato Contest—Suggestions.

BY THOS. J. FAIR.

After reading the account of the above contest in the ADVOCATE, I think I can give some hints and suggestions that would make a contest of that kind much more instructive to the farmers generally, and prove also whether the fertilizer manufactured by Mr. Freeman will accomplish what he claims for it, and return a profit on the investment.

A contest like the Freeman potato competition is usually made for some of the following objects:—

1st. To show what may be produced on an acre of land, as a crop competition in the United States, in 1889, when 135 bushels of oats, 738½ bushels of potatoes, 80 bushels of wheat and 255 bushels of shelled corn, each raised within the limits of an acre, were the magnificent yield in the above contest.

2nd. To show the value of special brands of fertilizers compounded for a special crop, as were the Freeman contests of 1892 and 1893.

3rd. To test the merits of some newly originated grain or vegetable as compared with the kinds grown generally by farmers and gardeners.

There is no data given in the account of this contest to show that the yield of potatoes was either increased or diminished by the use of the fertilizer, it being quite possible that the difference in yield might be due to the comparative fertility of the land, as illustrated when 974 bushels 48 pounds of potatoes were grown on an acre in Johnson County in Northern Wyoming, upon land which had never received either farmyard manure or fertilizer before, or with the prize crop of 1890, while the other forty competitors in most cases used artificial fertilizers, and whose crop ranged from 847 bushels 32 pounds, the highest, to 258 bushels 56 pounds, the lowest.

In order to make a contest like Mr. Freeman's of value to himself, the competitors, and teach a lesson to the farmers generally, I would suggest that each competitor be obliged to plant and cultivate at least one quarter acre alongside of the acre used in the contest, omitting the fertilizer, the land to be measured and the crop weighed as accurately as that contesting, and the contestants be requested to sow the whole the next season with a grain crop, seed it to grasses or clover, and note the yield of both grain and hay. This would show the effect of the fertilizer on the potato crop, and also on the grain and hay crops the two succeeding years.

Fertilizers and How I Use Them.

BY C. J. WRIGHT, DIXVILLE, P. Q.

I am a firm believer in fertilizers, and was much pleased with what Mr. Ormsby said in January 15th issue. It is a well-established fact that our farms can never stand the drain year after year of continually cropping, unless we provide fertilizers or plant food. The idea of plowing up land that is run out with hay crop! The first year applying one-half or all of your manure for potatoes, the next year cropping with barley or oats, and seeding down with no manure, will surely run out the best of land. My way is to plow up as poor land as you have, applying fertilizer the first year; then the next year I apply plenty of manure and seeding down, then the land will be in good condition for a number of years. I am using Pacific guano. I apply about 600 pounds to the acre. I raise my potatoes, turnips and corn in this way, and find that I am improving my farm all the time. I will admit that it may not pay the man that can feed 60 or 100 steers through the winter as much as the other man that cannot feed any, as the case is around here.

"Pays Remarkably Well."

Mullock Bros., of Waterdown, write Mr. W. A. Freeman, of Hamilton, as follows:—

"DEAR SIR,—We find it pay remarkably well to use your fertilizers on potatoes. The fertilizer not only produces a large crop, but the potatoes are smoother, handsomer, and of such better quality than where large quantities of good yard manure are used.

We seeded to oats last year the field in which we used your potato manure on potatoes the season of 1892. The oats were large and heavily seeded, some of them grew over four feet high; on land where no fertilizer was used they were very short, and all through the season looked as if they were sick—the difference could be seen as far as a person could see the field.

We cannot farm with profit without 'plant food,' and believe the cheapest form in which to get such food is in commercial fertilizers."

Legal Query.

S. C., Niagara Falls, U. S. :—"I own a bush farm in the County of Grey, Ontario, and I find that a person has entered upon and cut down and removed timber for sawlogs, etc. What remedy have I?"

You or your agent can lay a criminal information against the person who wrongfully took away the timber, and so have him punished, and you can also sue him in a civil action for damages and recover the value of the trees and any damages you have sustained.

GARDEN AND ORCHARD.**Potato Culture.**

The finest quality of potatoes can be grown on sandy loam, but the heaviest yield is usually found where there is considerable vegetable or alluvial deposit. Potatoes can be grown profitably on almost any soil, with the exception of heavy, wet clays.

PREPARATION OF SOIL.

The yield will be largely governed by the preparation of the soil. A thorough ploughing in the fall is undoubtedly the best preparation, for a deep soil will hold moisture, and thus be in a better condition to withstand drouth. Potatoes are also a deep-feeding crop, and for this reason require a deep, mellow soil, in which their roots can ramify in all directions.

In order to obtain the best results, plenty of barnyard manure should be applied, as few crops will give such good returns for manure as the potato. If it is applied in the fall, plow under then; if not put out until later, it can be either plowed under lightly or thoroughly mixed with the surface soil by means of a cultivator. Do not plant your land until you get it in just the right condition, for there is nothing that pays so well as thorough tillage. Where sod land is to be planted with potatoes, it is immaterial whether it be plowed in the fall or not. Many of our most successful growers are divided on this point. T. B. Terry, in his book "A B C of Potato Culture," prefers a clover sod plowed in the spring and the surface well cultivated to any other preparation of soil. It would be well to plow an old turf lightly in the fall in order to allow it to rot before spring.

The early varieties should be planted as soon as the land can be thoroughly prepared in the spring. For the later sorts, cultivate the land again, and plant after you are through with the other roots.

SEED.

If good results are to be obtained, perfect seed must be chosen. Select medium-sized, well-formed, smooth potatoes, free from scab. Practical men advise different methods of cutting, while some do not cut at all, which shows that the size of the seed has but little to do with the yield. The usual way is to cut the potato in pieces containing two or three eyes. Some late experiments are in favor of splitting directly through the centre, and, if large, split again lengthwise. Other growers claim that the seed end produces small potatoes, and for this reason should be thrown away. Experiments which have been conducted both at the Guelph and Ottawa Experimental Farms show that a much higher yield may be obtained from whole potatoes, though, in this case, there was a large percentage of small potatoes. No allowance was made in either experiment for the smaller number of eyes by the planting of the pieces nearer together, for they were all dropped at the uniform distance of twelve inches. T. B. Terry, probably one of the best authorities on potato culture, cuts his potatoes to one eye and plants 12 to 13 inches apart in the rows, but he states that in order to be successful with this method it is necessary to have very rich land, well tilled.

PLANTING.

Potatoes may be either planted in rows or drills. Though the yield will be much the same in either case, the latter method is preferable, for the planting, cultivation and harvesting can be much more easily accomplished, since horse labor will, to a large extent, take the place of hand work. Many very successful growers still plant in hills. The drills may be thirty inches apart for small varieties, and thirty-three or thirty-five for the more growthy sorts. Ten or twelve inches is a good distance to plant the sets in the rows. Cover about two or three inches deep with a plow, or, if the furrows were ridged together, a plank scraper or coverer may be used, which would cover two rows at once. A common and very successful way is to plow the land lightly, planting in every third furrow. Many who grow potatoes on a large scale find it profitable to use a regular planting machine.

CULTIVATION.

If dry weather is feared, roll the land immediately after planting. Harrow the ground just as the potatoes are coming through; it will be wise to repeat this once or twice. When the plants are all well above ground, start the horse hoe and keep it going until the plants are in bloom. Shallow, flat cultivation gives the best results as a rule. In heavy or wet soil it may be advisable to ridge up.

REMEDIES FOR DISEASES.

What is known as the Bordeaux mixture is being used with good success in combating the blight and rot. Experiments at the Experimental Farm in British Columbia last year show that this mixture was the means of practically saving the crop, while similar reports come from the United States, England and Ireland. At the first appearance of the disease, and at intervals of about two weeks or oftener if there is much rain, spray with a mixture made as follows:—Dissolve 6 lbs. of copper sulphate in about four gallons of water, slake 4 lbs. lime in about the same amount of water; mix the two and add sufficient water to make forty gallons. In order to destroy the beetles at the same time, Paris green may be added in the usual proportions, viz., 1 lb. to 200 gallons of the mixture.

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The corrosive sublimate treatment has proved very satisfactory as a remedy against scab. It is as follows:—Dip seed potatoes in a solution of two ounces of corrosive sublimate and fifteen gallons of water.

Professor Bolley recommends that the potatoes be left in the solution for an hour and a-half. Such treatment has given excellent results at North Dakota Experimental Station.

Professor Green, of Ohio, recommends that the tubers be soaked in the Bordeaux mixture for the same purpose.

Never plant potatoes in a field where the crop was formerly affected by either the rot or the scab, for there will be a sufficient number of spores left in the ground to spread the disease for several years.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Veterinary.

ABORTION—MAMMITS.

SUBSCRIBER, Shellmouth, Man.:—1. "Will a bull calf six months old carry contagious abortion from one herd to another? 2. Is there any possibility of getting rid of said disease when once established in a herd? 3. Have two cows that are extra good milkers, who during the last two summers have been troubled with something like garget. One quarter or sometimes half of udder would swell to three or four times natural size, and be quite hard with little or no milk in parts affected for one or two milkings; then the swellings would go down and the milk would be so thick andropy that it could scarcely be drawn. Were affected at different times during the summer; calved in January. Health otherwise appeared all right."

1. A bull calf or any other calf or animal of the bovine race, taken from a herd in which contagious abortion exists, will most likely prove a medium for transmission of the disease.

2. For several years past the very important subject of epizootic or contagious abortion in cows has received a good deal of attention from bacteriologists and other scientists, both medical and veterinary, in Britain, Germany, France and America. Their investigations, although not by any means barren of good results, have not, up to date, been as satisfactory as could be desired. They have, however, succeeded in demonstrating that the affection is due to specific germs, which in some way, not yet well understood, enter the system and incubate and develop therein. Five different kinds of microbes have been isolated from the foetal membranes and vaginal discharge of aborted cows, and by inoculation with a culture from these germs, the disease has been proved to be highly contagious and infectious. No specific remedy for this stock-breeder's and dairyman's scourge has yet been discovered; but the most effective measures for combating the disease are: Complete isolation of the cow immediately after abortion; burning of the foetus, after-birth, litter and every combustible thing that had been in contact with the animal and which cannot be disinfected. The cow should be kept apart from the rest of the herd until all signs of a discharge from the vagina have disappeared. If there is retention of the after-birth it should be mechanically removed, and the animal's excretions should be covered with quick lime and buried. The vagina should be injected, and the external organs and tail sponged once daily for three or four days with the following solution: Corrosive sublimate, two drachms; rain water, one gallon. The stable in which the cow or cows aborted should undergo a thorough cleansing and disinfecting. The floor should be scraped and swept, and one of the following disinfecting agents liberally applied to it, and also to the stalls, walls and mangers: Sulphate of iron or sulphate of copper, one pound to two gallons of water; or carbolic acid, half-a-pound to two gallons of water. This work of cleansing and disinfecting should be performed once a week for two or three weeks, or longer if deemed necessary. The anus, external genital organs and tail of pregnant cows that have been exposed to infection, should be sponged three or four times a week with the corrosive sublimate solution mentioned above.

3. Cows that give a large flow of milk are often subject to mammitis "garget," and all such animals should, immediately after calving, be given a full dose of purgative medicine, such as: Epsom salts, from one to one and a-quarter pounds; ground ginger, half an ounce; treacle, one pint; dissolve all in one quart of hot water, and give in one dose. Follow this up by giving daily, in water or mash, for one week: Nitrate of potassium, half-an-ounce. This treatment will very much lessen the tendency to congestion and inflammation of the milk glands and all the other organs of the system. When the disease has set in, in addition to the treatment mentioned it will be necessary to foment the udder, at least twice a day, with warm water in which hops have been boiled, and after each fomentation rub in well with the hand the following liniment: Olive oil, five ounces; fluid extract of belladonna, one ounce. If the swelling is very great and the udder very painful, it will be well to apply a suspensory bandage, and in this case poultices of warm hops are very beneficial. The teats should be kept well drawn. The disease sometimes terminates in suppuration and even in gangrene.

W. A. DUNBAR, V. S., WINNIPEG, MAN.

FOOT DISEASE.

"ALIEN," Shellmouth, Man.:—1. "One year ago we asked for some simple remedy for Foot and Mouth Disease. You gave us one, but we have come to the conclusion that it is too simple for severe cases like one we have had this winter. It was a cow that took the disease in one foot; during the summer was pretty bad, but appeared to get all right in fall, and then set in again in November and was very bad. Was in such pain that her moans could be heard all through the stables. Foot swelled to twice natural size, and for about three months did not stand on it. We bathed with strong hot solution of carbolic acid and alum, until we saw it was doing no good; then we poulticed with flaxseed and bread. When it broke, which it did in three or four places, blood, matter and great chunks, half the size of a man's thumb, of yellow, tough-looking stuff came away, that you could roll in fingers without getting soiled any. One man said it looked as though all the muscles and sinews were coming out in pieces. After it broke we tried the carbolic acid and alum again, but it just run its course, and did not seem in the least affected by it. Now, if there is anything on the face of the globe that will cure this disease, please tell us what it is? Also, we would like to know what is the cause of it? And why the cattle along the river are affected, and those back on the prairie are not? Have had it before in summer, but not in winter. Stables are warm, clean and dry, with good heven floors."

2. Have a young mare that ran on prairie until four weeks ago, then taken in to prepare for spring work. About one week ago she started to swell along the belly, and has swollen from near front legs to the udder. The swelling is hard, and when the fingers are pressed in, the impression remains. Is heavy in foal. Have been feeding all the good hay she would eat; also six quarts of oats per day in three feeds. Every second day half pail of raw potatoes instead of her two-quart dinner ration of oats. Health and appetite both apparently good. Please tell what is wrong?"

1. As soon as lameness is observed the foot should be thoroughly examined, which in most cases cannot be properly done unless the animal is thrown down and secured. The hoof, if abnormally long, should be shortened, and all superfluous horn, especially that which is unduly pressing on the quick, should be cut away. In the first stage of the disease, inflammatory action can often be subdued by wrapping the foot and affected parts in cotton batting, or tow, well saturated with the following lotion: Sulphate of zinc and sugar of lead, of each three ounces; carbolic acid, one ounce; fluid extract of belladonna, two ounces; water, half a gallon. Renew the application twice a day. A dose of purgative medicine, the same as that prescribed for Mammitis in answer to "SUBSCRIBER," should be given in the early stage. When suppuration has taken place, or fungoid growths have made their appearance, the sores should be dressed once or twice with sulphuric acid, or butter of antimony, which will stimulate healthy granulations. These caustics should, however, be used with caution. Continue the application of the lotion in the manner before mentioned. Strict attention to cleanliness of the parts and surroundings is very essential. Foreign bodies in the feet, filth and a superabundance of moisture are the principal external and exciting causes of this affection of cattle's feet. A lack of sufficient moisture, such as would be the case on standing for a long time upon a dry, hard floor, would also have a tendency to produce the ailment. The internal causes are impure blood and constitutional predisposition.

2. The swelling on your mare's belly is peculiar to the latter period of pregnancy, and medical treatment is not required. Give daily moderate exercise and easily digested food.

W. A. DUNBAR.

FEVERED FEET.

RHIND BROS., Westbourne, Man.:—"Will you kindly let us know how to treat a colt, rising two, for lameness caused, we think, by the contraction of the hoofs of both fore feet some time last winter. Nothing has been done for it except paring. The hoofs appear to be nearly right in shape, except that they do not seem to be spread enough at the heels. The colt is very lame at times."

Contraction of the hoof is not a disease, but is the result of disease. We think the sensitive parts of your colt's feet are in a fevered condition, probably caused by standing too long on a dry plank floor, by feeding too highly on grain, or the ailment may be hereditary. We would advise you to apply linseed meal poultice to the feet, changing it twice daily for four or five days, and then apply the following blister to the coronet of each foot: Powdered Cantharides, three drachms; vaseline, two ounces. This will be sufficient for both feet, and apply by first clipping the hair close to the skin, two inches from the hoof upward, and then rub the ointment well in with the fingers. Let it remain for forty-eight hours, wash off and apply vaseline or lard to the blistered surface. Keep the colt's mouth away from feet for twelve hours after the blister is applied. Feed chiefly on bran mashes containing a little flaxseed. Give also a few carrots daily, with a sufficient quantity of good hay. A run at grass will probably be of much benefit to your colt.

W. A. DUNBAR.

INFLAMED UDDER.

JOHN JOHNSTON, Little Rideau:—"I have a two-year-old thoroughbred Holstein heifer milking about two months. The first month her udder apparently was all right, but now the back part of the udder on the right side keeps swollen and appears to be hard in the fleshy part. She does not give as much milk out of that teat as the one opposite though she is milking pretty fair, her average the first month was 37 lbs. per day, but now about 30 per day. I would be much obliged if you could prescribe what to do for it?"

Saturated tincture of camphor six parts, to common turpentine two parts, makes a good liniment to the udder. The tincture is made by adding as much camphor to a quantity of alcohol as the latter will dissolve. Melted soap and cheap whiskey in equal parts is also recommended for swelled udder. Before making application it would be well to foment with hot water. If the heifer is suffering from fever give a dose of physic, a pound of Epsom salts makes a good dose.

Miscellaneous.

POTATOES AS FOOD.

J. R. TAYLOR:—"Will you please inform me through your valuable FARMER'S ADVOCATE of the digestible nutrients of potatoes? Are they a good feed for stock, and what is their feeding value as compared with white carrots, turnips and mangels?"

	Albu- minoids.	Carbo- hydrates.	Fat.	Nutritive Ratio.	Value per 100 lbs.
Potatoes,	2.1	21.8	.02	10.6	\$0.29
Carrots,	1.4	12.5	.02	9.3	0.18
Turnips,	1.1	6.1	.01	3.8	0.16
Mangels,	1.1	10.0	.01	9.3	0.14

As will be seen by the above figures, it would never pay to grow potatoes as a stock food, but if for any reason they are unsaleable they make an excellent food for stock of all kinds.

SOFT-SHELLED EGGS.

B. H. GARNER, Maxville:—"Will you please state the reason that fowls lay soft-shelled eggs, and also give remedy?"

Soft eggs are usually caused by lack of exercise and over-feeding, and as a result the fowls become too fat. It may also occur from want of lime, which should be supplied either in the form of pounded oyster shells or limestone grit, as mentioned in the last issue of the ADVOCATE.

CONCRETE BUILDING—DAIRY PROFITS.

G. W. BROWN, Petitcodiac, N. B.:—"1. Would you or some of your readers give me some information on the use of concrete for house building. 2. I see by our April number of the ADVOCATE that the farmers of the township of North Dorchester, East Middlesex, have made a much larger profit out of their cows last season than we in this province can make. Would some of these farmers be kind enough to tell us through the ADVOCATE what price they receive per 100 lbs. for their milk; also, the breed of cows they keep; what time they have them to come in; what it cost a year to feed them?"

1. Full information will be found in regard to concrete building in our issue of May 15, 1893. 2. We would be pleased to have any of the Dorchester farmers referred to answer the above queries, and will gladly publish same in the ADVOCATE.

CAPONIZING.

F. W. ROBERTSON, Portage la Prairie:—"Please give me following information through the ADVOCATE:—How is the operation of caponizing fowls performed; what instruments are required, and where are they to be obtained and at what price; also how to feed the fowls just before and after operating?"

Write Geo. P. Pilling & Son, Philadelphia, Pa., who will furnish full information.

WATER FOR HORSE—TURNIP LOUSE.

J. ROBINSON, Kintore:—"1. Is ten quarts of water sufficient for a working horse three times a time? 2. How often should a horse get oil cake and how much? 3. What is the best treatment for turnip louse? 4. What feeding value do turnip-tops contain?"

1. It is impossible to give the amount of water which is necessary for a working horse, as it will vary with the work which he does and the heat of the weather. If the weather is hot or the work exceedingly hard, thus causing profuse perspiration, the horse will need much more water than if he was standing at ease in a cool stable. Unless the horse is out of health, or very worm, he is the best judge of the amount of water which is best for him to drink. 2. One pound of oil cake per day, mixed with the regular ration of ground grain, will be found about the right feed for a horse. 3. The turnip louse was very destructive in some places last year. It is a very troublesome insect to treat, but where they are numerous the kerosene emulsion, as recommended in another column, will be found effective. 4. The feeding value of turnip-tops, as compared with meadow hay, is as follows:—Albuminoids, 5.1; carbo-hydrates, 11.0; fat, 1.0; nutritive ratio, 1.8. Value per 100 lbs., 64 cents. Turnip-tops—Albuminoids, 1.5; carbo-hydrates, 5.1; fat, 0.3; nutritive ratio, 1 to 3.9. Value per 100 lbs., 12 cents.

POULTRY.

Poultry Yard Notes.

BY MRS. IDA E. TILSON, WEST SALEM, WIS.

Benjamin Franklin says "A little neglect may breed great mischief," which often is literally true if nest fillings are not destroyed after sitters are through with them. The constant heat, of course, has made an attractive place for insects, if there were any to be attracted. I dust every mother with pyrethrum as she and her brood are taken off, after having left them on from 24 to 36 hours after hatching. No call arises for feverish haste in getting young chicks to eating and growing, because their abdomens are full of yolk, last part of the egg absorbed, and in the course of nature they will soon enough remind you of that tramp who asked for something to do. "What can you do?" was inquired. "Madam, I can eat." Tablescraps and such delicacies cannot be had in sufficient quantity to be depended on when raising broilers or a large number of chickens, and some of the following cakes must be used. I. K. Felch has ground into a fine meal, 20 pounds corn, 15 pounds oats, 10 pounds barley and 10 pounds wheat bran. One quart of sour milk or buttermilk, one quart water, a heaping teaspoon soda, a little salt and molasses, all mixed together, are thickened with above meal, like batter for corn cakes, and then well baked. A successful Wisconsin poultry woman, questioned at an institute, or on the witness stand, as I call it, gave a rule nearly like above, except she used vinegar instead of sour milk. "Fanny Field's" cake consists of two part cornmeal to one of shorts, with a little salt, pepper and soda, and either milk or water enough for a stiff dough, which is slowly baked till done. E. C. Howe mixed one pint cornmeal, one teacup bran, one tablespoon ground meat and three tablespoons ground bone. In a separate dish, he combined one raw egg, one teacup cold water and half teaspoon soda, then put into the dry mixture, and baked two hours in a deep pan. I like a sort of hasty pudding, made by stirring one-third each cornmeal, shorts and oatmeal into boiling water. After the first week, my favorite pudding, one-third each shorts, bran and cornmeal, well scalded only, can be used quite freely. Quick growth and thick flesh give profitable broilers, but egg-making is hard work, so capacity and endurance characterize successful pullets, therefore the latter need a greater variety of food, and need it while chickens, because it is a law of animal development that liberal feeding has more effect on the young than it ever can have on those older. Oatmeal, cracker crumbs, bread and milk, milk weakened with water, boiled rice or oats, baked beans, boiled potatoes and other vegetables, chopped raw onions, "Dutch cheese," lean meat boiled and chopped, eggs raw or boiled thirty minutes, custard, various tablescraps, gravel, pounded charcoal, crushed shells or bone, all enter my programme. I heard an extensive poultry raiser say he provides himself with a whole barrel of oatmeal in chicken time, and finds it pays, because safe, spending well, and laying good foundations. Being asked about shrunken wheat, I distinguished it from musty grain which is always dangerous, but clean, sweet shrunken wheat has about the nutriment of that plumper, with less water, and can be swallowed by young chicks when larger kernels would prove too big mouthfuls. As it does not sour nor spoil, may be left around freely, if you wish to be sure your chicks are always having enough to eat. Unless you believe they better die when young and innocent, give no sloppy, slippery food, nor leave a surplus around fermenting, nor throw it down where it will gather a large "unearned increment" or good percentage of dirt. I use saucers, tin plates, clean shingles, or even pieces of paper as dining furniture, and feed five times a day till the chicks run out all day, then a slatted dining-hall is handily placed and kept supplied. Whenever food accumulates in the latter, or is trodden on and mused, I move this floorless hall a few steps and let my tougher old hens work up the refuse.

Let you should think my chicks do nothing except open their beaks and stuff, let me add I believe, like Sir Andrew Clark, himself a feeble youth who survived to old age, that activity or "Labor is the life of life." With my little coop-yards, I can early and safely give young chicks a varied grass run, which provides exercise and the best form of green food. By moving them every day, a considerable plot could be evenly fertilized. Though mine are granted entire freedom at a suitable age, little chicks let go trailing around after a hen, during all weathers, through mud and high grass, remind me of "Snap the whip" as we children played it. Weak ones were always placed on the end, and with every turn of that living whip, some child there was sent rolling off out the game, till only two or three big ones at the head were left. The gradual dwindling of a neglected tramping brood is similar. See that coops are shut up at night, secure from rats and skunks, and do not place so many chicks with each hen that she will trample on them. I recently read about weighting coops with stones, lest winds tip over some. In such a case, I wonder whether the stones do not need careful placing, for fear they also upset and cause a greater havoc. My coops of inch stuff, though heavy to carry, never blew over but once, when we lost our windmill too, and really had a small cyclone doing what some folks will not, namely, its level best. I try to be faithful to my chicks, believing negligence a very expensive luxury anywhere. A

broken fence may let in enough cattle to destroy a whole crop. A weak harness or lost nut may cause a runaway. So I put in much solid, timely work by daylight, rather than burn the midnight oil studying poultry distempers or follow them up with a medicine chest. At one institute, a successful broiler raiser gave the usual fifty per cent. as relation of chicks raised to eggs set. With my hens there is little variation from seventy-three per cent. hatched, of which number I have always raised somewhere over ninety per cent., being nearly or about seventy per cent. of eggs set. As monthly averages of eggs are called for, I will give from my book a specimen year: January, twelve; February, twelve; March, nineteen; April, twenty; May, twelve; June, twelve; July, eleven; August, six; September, two; October, ten; November, twelve; December, eleven, per hen. March and April, when hens get their first liberty and grass, are bound to be ahead, and moulting, which usually does not come till after August, temporarily checks egg production. I can and have cleared \$1 per hen a year, on our low prices here, eggs seldom if ever over twenty cents a dozen, and I think I never had pullets lay under five months of age, though many at six months. A neighbor told me she cleared \$2 a hen last year, but she added many broilers to her egg product, and, furthermore, often asks my advice and reads my articles.

Geese.

BY CLAUGHBANE.

Why the term goose is applied to those persons somewhat deficient in common sense, I am at a loss to know, for a goose as a bird is quite up to the average in this respect, being generally quiet and well-behaved, unless the garden fence is a poor one, when it will cause a good deal of trouble, but that rather shows its good sense than otherwise.

Since the decline, and I think we may say fall of the feather bed, geese have not been as popular as formerly, which seems to be rather a pity, for apart from their feathers they are profitable. As compared with ducks they are kept at a smaller cost, much of their food being grass, roots, etc., during summer, and turnips and other field roots may be made go a long way towards their winter keep, they consuming but a comparatively small quantity of grain. Geese will thrive and do well where there is no natural water, provided they are supplied with a tub or trough with plenty of water for drinking, but there is not the satisfaction in keeping geese under these circumstances that there is when there is a stream or pond for them. It is then a pleasure to watch them enjoying themselves, and they are really very pretty and graceful birds when on the water. Geese to be really profitable should be (like all other stock which is profitable) good ones. There are lots of cows that do not pay for their keep, and though an ordinary goose might more than pay her way she might do better. A common goose will lay on an average from seven to ten eggs, which means the same number of goslings if they all hatch and do well, which it is unnecessary to say they do not always do. This seems but a small return for a year's work. A good goose will lay from twenty to twenty-five eggs in a season, and these eggs are just as likely to hatch as the others. It is easily seen that at this rate keeping one goose for a year may produce as large a crop of goslings as if two were kept at double the cost. It is true that one goose cannot hatch so many eggs, but they can be hatched by hens; and according to the figures I have given, the good goose lays enough eggs to pay for the time of the hens, as well as doubling the number of goslings. When I speak of a good goose I mean one of some of the pure breeds which are known to be good layers.

Did you ever eat a goose egg? If you have, you must surely think it a poor plan to keep a goose that will only lay enough eggs for herself to sit on, when she might as well lay as many more for her owner's benefit. The flavor of a goose egg is fine—hens' eggs do not compare with them, and then one is equal in size to about four hens' eggs.

A good flock of young geese sold in the fall should bring in enough to pay all expenses and leave a nice profit, their food having cost comparatively little, the birds also being hardy, and seldom any losses from disease occur. In a cold climate they should be comfortably housed in winter, but should be turned out for a time nearly every day; they should be housed at nights as soon as the nights get cold in the fall, and should on no account be allowed to lie out in the snow, or they will lose flesh. Like all other stock, if well cared for during late fall and early winter they will not mind the rest of the winter. There should not be more than three geese with a gander, and if he is a young bird two are enough. The fact that geese are so hardy and easily raised ought to make them very popular especially in Manitoba and the Northwest.

Young Turkeys Roosting in Trees.

"When young turkeys are four months old, they will do better in trees at night than in either house or shed. Here they will be quite free from colds or roup. I never knew of roup breaking out among fowl roosting out. Colds come on, generally, from an over-heated roosting house, where the birds are kept in an extra warm state during the night, and let out into the cold in the morning. The only difficulty in letting turkeys roost out is their safety. Thieves must be guarded against. The best trees are laurels, firs, or any broad tree covered with ivy." Breeder in Poultry Review.

APIARY.

Seasonable Questions.

ANSWERED BY JOHN MYERS, STRATFORD.

"How soon may I look for swarms after placing my bees on their summer stands?" Well, that depends on the strength of your colonies and the kind of weather we have after they are placed on their summer stands. If the weather is very favorable and warm your strongest stocks may cast swarms about the time fruit blooms, or the latter part of May; but don't be alarmed if they don't swarm until the middle of June, or even the first week in July.

No. 2.—"Would the Alley self-hiver be of any use to the beginner, or what course should I follow when hiving swarms?" I would not advise the beginner to use any of the self-hivers; they are far from being perfect, yet I expect to see the time when they will be perfected. At present the beginner had better let them alone. If your duties were such that you could have a constant watch over your bee yard, I would say clip one of the wings of each of your queens, then when a swarm issues take a wire cloth cage made for the purpose, and sold by any of the supply dealers, and go to the hive that the swarm is issuing from, and look on the ground in front of the hive until you find the queen, place the cage over her, and when she runs up into it put in the cork so she cannot get out. Now, lift the hive from its stand, and turn its entrance in the opposite direction to what it was when the swarm came out. Now place your new hive beside the old one with the entrance facing the same as the old one did when the swarm issued, and lay the cage containing the queen at the entrance of the new hive, and as the swarm returns they will enter the new hive. After the swarm has settled, turn the entrance of the old hive in the same direction as the new one, and leave it so for a few days, then remove it to another part of the apiary. If you are not situated so you can constantly watch your hive, place drone traps on them, then when the swarm issues the trap will catch the queen, and you can tell by the quantity of bees that will stay in the trap with the queen which hive has swarmed, then open the hive and take out a frame or two of brood, and put it in the new hive with the queen; the balance of the hive to be filled with combs or foundation, and remove the old hive to another part of the yard. All the bees that have ever flown from that hive will return to the old stand, but new hive, with their old queen.

No. 3.—"If a colony swarms more than once, shall I have every swarm?" If the above methods of swarming are followed, very few colonies will swarm more than once; of course, if you are desirous of increasing your stocks of bees, you may have second swarms if they don't come too late in the season.

No. 4.—"If a colony is weak, will it do to unite two or more in one hive, and how shall I unite them?" If the colony is weak in the spring I would not unite them, I would close them up on as few frames as they could cover and pack them snugly, and leave them to build up as they could until the surplus honey flow had fairly started; then I would unite any colonies that were not strong enough to work in the sections. I would do it in this way:—Supposing our hives held eight frames, I would go to hive No. 1 and take out all but four frames; if any of these combs had brood in I would give such to some other colony in the yard. Now, go to hive No. 2 and find the queen. Place the comb that has her by the side of the hive on the ground or on a comb holder. Now, take out a comb of brood and bees, and place them in hive No. 1 near the side of hive. Next, move one of the combs in hive No. 1 close up to the comb taken from No. 2, then take another comb from No. 2 and place it in No. 1 close to the comb you previously moved. Now move another of No. 1's combs close up to the last one you took from No. 2, and so on until the hive is full, then place on your sections and cover, and you will have a colony strong enough to work in the sections to good advantage. Then go to hive No. 2 and replace the comb with the queen on it, and you will have a small colony here, but it will be strong enough to take care of itself, and by giving it a frame of foundation now and again it will build up to be a good colony by fall.

TO BE CONTINUED.

The Apianian Exhibit at the World's Fair.

Canada appears to have surprised the world with the great and varied nature of her resources. That our apianian display was not in any way inferior is shown by the following notice, which is taken from Insect Life, a publication issued by the U. S. Department of Agriculture, and edited by the Department Entomologist, Prof. C. V. Riley:— "Canada. A magnificent display of both comb and extracted honey, nearly filling a case twenty-five feet long, five feet wide, and eight feet high, was sent from the Province of Ontario, there being forty-nine exhibitors. Many experts were undecided as to whether the palm should be given to this exhibit, or to some of the State exhibits. The Ontario honey was particularly fine, the sections being well filled out to the wood, combs even, and wood and combs clean. The show of extracted honey was good, there being many varieties.

DAIRY.

April Cheese Sells Well.

In Western Ontario the 1894 cheese trade opened well with a brisk demand for April make, prices ranging from 10 to 10½ cents per pound. The output for April was not heavy, feed being scarce, but grass is coming on now fairly well. Prospects are reported encouraging from the stand point of the factoryman and patron.

Instructions for Factorymen.

As announced in the ADVOCATE, Mr. T. B. Millar, Inspector and Instructor for the Western Ontario Dairymen's Association, is making a circuit of centrally located factories, giving makers practical instructions in the best methods of making early cheese, and in the use of the Babcock milk tester. When this work is over he will begin his work as travelling inspector and instructor. His services can be secured by applying to the Secretary of the Association, Mr. J. W. Wheaton, London, and the charge for his services will be \$7.50 per visit, which includes all necessary travelling expenses. We are pleased to announce also that the services of the Secretary, Mr. Wheaton, will again be available to render assistance to makers in testing milk, and to secretaries in making up patrons' accounts in factories where the system of paying for milk according to the percentage of butterfat has been adopted. All the outlay to a factory in this connection will be the payment of Mr. Wheaton's travelling expenses from London and return. Applications for the services of Mr. Millar or Mr. Wheaton should be made early, at least a week before his services are required.

The Brownsville Combination.

The abstract statement of the Brownsville Cheese Company, for the year 1893, is before us. This company is one of the largest and most carefully conducted cheese manufacturing concerns in the country, having under its management the factories of Brownsville, Culloden, Bayham and Tilsonburg. During the past season there was a total of 9,712,531 pound of milk received, for which the sum of \$75,137.79 was paid, or what would be equal to an average price of seventy-six and one-sixth cents per hundred pounds for the milk at the farmer's door. The drawing of the milk cost \$4,842, or an average per three hundred pounds of \$1.28 at Culloden, \$1.39 at Brownsville, \$1.61 at Bayham, and \$1.67 at Tilsonburg. The manufacturing cost \$6,729, and other expenses amounted to \$4,435. The total amount of cheese made was 897,617 pounds, which required on the average 10.80 pounds of milk to produce a pound of cheese. The average price received for the cheese throughout the season was 9.88 cents. After paying all working expenses, salaries, etc., and a six per cent. dividend of \$450 on stock, the company were able to expend on improvements \$2,586, and only overdraw their bank account to the small extent of \$216.

The Great St. Albans Creamery.

A representative of the FARMER'S ADVOCATE some time since paid a visit to the famous creamery operated at St. Albans, Franklin Co., Vermont, which is believed to be the largest institution of the kind in the world. The association was organized in November, 1890. In 1891 they operated 44 separating stations, which had last year increased to 50, when the output of butter was about 2,000,000 lbs. One separator is kept at each outlying station, and during the busiest season three are operated in the central factory, where all the churning is done. During the summer season the cream is gathered daily from the outlying stations, being brought to St. Albans in two refrigerator cars. The company has used seven different kinds of separators, but are now purchasing only the De Laval Alpha No. 1, which they claim does the most and the best work. The milk received is all paid for according to the Babcock test system, and the skim milk is returned to the patrons. This year they undertake to manufacture and sell the butter at a cost to their patrons not exceeding 3½c. per pound. The cream is delivered the day after it is separated at the creaming stations, and is allowed to stand one day at the central factory to ripen before churning. Fourteen box churns are used, each having a capacity of 500 lbs., and the butter is worked and salted on the Fargo worker, with a capacity of 250 lbs. every six minutes. After this, the butter is weighed and packed in weights varying from pound prints to 50 lb. tubs, all of which are placed in cold storage and shipped weekly. In the busiest season the St. Albans creamery has turned out as much as 19,380 lbs. in one day, but so thoroughly systematized is the work that the work in the churning room is done by three men. On one day some 4,025 lb. prints were put up and wrapped in parchment paper, four men accomplishing this feat. The highest per cent. of butterfat during the past year was 1.79, in December, and the lowest in April, 3.75, which indicates that dairying is reaching a high standard in that section of the state.

Does Color Indicate Quality?

A correspondent of the FARMER'S ADVOCATE recently boasted that one of his heifers was giving "rich looking" milk. On this point H. Snyder, Minnesota Experiment Station, writes:—

"The questions are frequently asked: 'Does a light color always indicate a poor milk, and does a yellow color always indicate a rich milk?' The color of a milk is no safe guide to its richness in fat content. The color of the strippings and the first milk will answer this question. The strippings are usually six or eight times richer in fat than the corresponding first milks, and yet both are of the same color. If you have a Babcock tester, just observe this point in testing your cows. One authority, Blyth, states that the coloring matter in milk is a nitrogenous chemical compound, and he calls it lactochrome, and says it is this compound that gives milk, butter and whey its yellow tint. The amount of this coloring matter in the milk is influenced by the food of the animal, as well as by its individuality."

The color of milk is not a certain index of its fat content, a statement borne out by the white butter usually produced on winter food and the golden-hued June product, though June grass milk is not phenomenally rich in fat—though the fat is highly colored. The only accurate way of determining the quality of milk is to test it.

Three Hundred Pound Dairy.

"My herd consisted of 16 cows, and the report will be from November 1st, 1892, until November 1st, 1893, covering the time I have run my separator. My feed was all the clover hay they wanted to eat morning and evening, and all the corn fodder they wanted at noon. For grain they received two pounds of oil meal, six pounds of middlings, four pounds bran per day each, on an average, through the winter. During the summer about two pounds of oil meal per day each. They were not allowed to be out of doors only long enough to drink, except on very pleasant days, and not too cold, they staid out about two hours. The cows were mostly Holsteins, and under this treatment gave the following:

Total lbs. milk during year.....	107,886
Total " butter " " " " " " "	4,880
Average lbs. milk per cow.....	6,743
Average lbs. butter per cow.....	305
Total amount of money received.....	\$1,136 19

The butter was shipped to Chicago and sold on commission, G. W. Campbell, Jefferson Co., Wis. Commenting on the foregoing, Hoard's Dairyman says: "This is an average of 71.01 dollars in butter per cow. Subtracting the amount of butter made from the milk leaves 6,438 pounds of skim milk, which, at prices of pork last year, was worth at least 30 cents per 100 pounds. However, we will rate it at 25 cents. This makes the skim milk worth \$16.09 per cow, or total value of the product per cow \$87.10."

Misinterpretation.

Milk Inspector Payne, of Cleveland, Ohio, referring to the low grade of some of the milk supplied in that city, says:—

"The trouble is, I am satisfied, that the farmers are feeding their cows too much, and trying to force their cattle to give an unnatural quantity of milk."

Mr. John Gould undertakes to comment on the above as follows:—

"Here is a case where the woods are full of farmers trying to feed richness into the milk of their cows and actually thinning it out."

According to the Inspector these Cleveland milkmen, like a good many others, were pushing their cows for quantity, and so long as they could dodge the inspector, quality was not taken into account. If the cow is to elaborate a liberal supply of good milk she must have good food to do it with—brewer's grains and other watery viands will not fill the bill. Of course there is a limit to what the cow can assimilate, and to simply force a few more pounds of grain per day into a cow (that has all along been kept and fed in first-class style), as some experimenters have done, might just result in the extra grain being wasted. Some people are running away with the notion that it does not matter what they feed the milk will be just as rich. A greater blunder could hardly be made. According to the inspector, these Cleveland milkmen were practically doing just the reverse of what Mr. Gould infers.

High-Priced Creamery Butter.

Flavor must be quick, full, fine and fresh. Taste must be pleasant and sweet. Color to be a light straw color. To be uniform and even.

Salt well dissolved and thoroughly incorporated. Butter to show perfectly clear brine, and little of it.

Body and grain to be sound and clear. Butter to be free from saltness and flatness.

Packing to be absolutely solid in the tub without spaces for air or brine, the top being finished straight across from stave to stave, to be covered with a cloth circle having dry salt rubbed into it with the hand; completely fill the meshes of cloth.—Elgin Dairy Report

Net Earnings, \$50.00 Per Cow.

BY ALEX. HUME, BURNBRAE.

As I wrote you, I always take a deep interest in the dairy department of your valuable paper, and, according to promise, give you the account of our herd for 1893, together with a brief summary of our method of feeding and attention, in the hope that it may provoke others to do the same. Our herd, which numbers thirty-seven in all, has done well the past year—never better, all things considered. We oversee our herd personally, bestowing the best of care and attention, strictly impressing the same on all parties connected with the farm. Each animal is closely watched and fed as much as she can assimilate and return a profit. We have no cast-iron rule for feeding only above. Our herd has been closely culled every year for the past fifteen (15) years, and to-day we have not a cull. I might say we fed grain and bran the whole year—usual mixture, 100 lbs. peameal, with 130 lbs. bran—and fed from 2½ lbs. to 8 lbs. per cow per day, according to time in milk, with the exception of a few cows dry on pasture. Cows drop their calves at all seasons of the year, and continue in milk for from ten to eleven months; a few were not dry at all, but we conclude from our experience that it is a mistake not to give them a rest of from five weeks to two months. Those we continued milking without giving a rest did not do as well as when they had a rest. I would like to hear other men's experience on this point. We have not the water in the stable as yet, consequently we let them out to drink in lots of eight or ten at a time at a pump, which we consider better than creek water, in winter when fresh pumped being warmer, and each lot put right in and fed. For six or eight days after calving in winter the water is carried to them in the stable, as we do not care to run the risk of a chill, etc., from exposure. We have not lost a cow for the past ten years, although we now force them to their full capacity, and many visitors say, "They never saw a herd with such bags." I attribute it largely to the close attention, together with a naturally strong and healthy herd. We feed at the two ends of the day: Before breakfast, straw, or, if fresh calved, hay; when that is eaten up, or in an hour, ensilage and grain ration on it. Afternoon, watered and fed ensilage and grain ration on it; then, when that is eaten, either rough feed of hay or straw, except fresh calved cows, which get good clover hay. This is in winter until early spring, when they are watered twice a day. This is another matter I would like to get other dairymen's opinion on, as I am not sure that our method of feeding and watering is best; that is the order in which the feeding is done and the time of watering. The following is a full and detailed account from Jan. 1st, 1893, to Jan. 1st, 1894, of the earnings of the herd; also the actual cost of keeping the entire herd, including cows, bulls and young things, leaving the herd with one cow less than we commenced the year with:—

Twenty-four (24) cows' milk was sent to the creamery and cheese factory, less milk fed to calves that were sold, which were fed and kept from one week to six weeks; one cow raised calves all season—no less than six fed on her for the year, a pair at a time; we sold them when six weeks old, except the last pair, which we are keeping and get skim milk. One three-year-old Ayrshire cow went to Chicago Fair three days after calving, and, of course, only arrived home 11th December; she won third place, and her prize earnings are placed to her credit in the herd. Another went wrong in her bag, was fattened early in the fall and killed; value of beef also allowed. Milk at both creamery and cheese factory is clear of all expenses except drawing, which we do ourselves. We have imported and added to the herd Eva of Barcheskie, served in Scotland, bred from one of the best stocks in Scotland, but have not included her cost against the herd, as that ought to go to capital account. No allowance is made for calves on hand, having the same number as last year, neither for increase in value of our entire herd, to which we are adding and breeding choice individuals. More grade calves were sold than pure-bred ones last year. The springers were all grade cows except one, and went to Montreal, and, as you will find, the milk was not sold in a city, but realized only the ordinary price paid at creamery and cheese factory.

RECEIPTS.	
By 30,000 lbs. milk sent to creamery.....	\$ 394 27
" " " " " " " " " " " " " " " "	15 00
" 131,000 " milk sent to cheese factory.....	1048 32
" " " whey @ 50c. per 3,000 lbs.....	22 00
" Prize money, etc.....	120 05
" Calves sold.....	163 00
" 1 bull, 2 heaves and 6 springers.....	439 80
Total, 27 cows and bull included.....	\$2182 64
Average.....	78 66
EXPENDITURE.	
To grain and bran fed.....	\$ 338 41
" 150 tons ensilage @ \$1.50 per ton.....	225 00
" 15 " hay @ \$7.00 per ton.....	105 00
" Cows bought.....	99 00
Total.....	\$ 767 41
Net earnings of herd, 27 cows and bull per cow.....	\$1115 23
	50 54



Mrs. Bunker's Nephew.

BY ELIZA STEVENSON.

It is two years ago this month since Nehemiah Bunker, that was my husband, tuk the pluralty into his sides and died, and left me alone, a widdier woman with two children in this vale of sin and sorrow.

Nehemiah died as peaceful as he had lived, and he said to me how lucky it was for me that he didn't plant any more taters in the spring, because there'd be nobody to hoe 'em; an' he sed if he should die how lucky it was for him to die afore the tater bugs got plenty.

Wal, he left me with the farm and the critters, and I have managed as well as I could with Job Stevens, the hired man; but there are times when I sigh for the presence of a kindred soul. No human critter ought to be alone, there are times when the society of a hired man don't satisfy me, I want somebody that I can lay the blame onto when things go wrong, without getting his back up and threatening to pack his trunk and go to work for old maid Jenkins, which has got her front teeth out, and not a spear of hair on her head but what's bought.

I've had some lovers since Nehemiah passed away from this mortal scene, but I ain't the woman that is ready to marry anything for the sake of being married, not by a long chalk. I want a man that don't chaw nor smoke, nor drink anything stronger than cider, and that's keesful of his clothes, and that scrapes his feet afore he comes into the house, and that's willing to do his chores and likes to go to meeting.

Last summer I got a letter from Sister-in-law Benton, that lives in Kingston, saying that her son Tommy was a little under the weather from too much study, and the doctor sed his brains was a-growing too fast for his body. It's awful un lucky to have more brains than there's room for in your head, for 'tain't a common disease, and the doctors hain't learnt to treat it right yet.

Tommy is sixteen years old, and small of his age, and he has got reddish hair and a freckled face, and as mischievous-looking a turned-up nose as ever you saw.

Mrs. Benton she wanted to know if I wouldn't board Tommy a spell, and sort of pear him up on new milk and fresh air, and she wound up in the letter by saying that the dear boy wouldn't give me the least mite of trouble, for he was good as gold and belonged to the Sunday School and could play some onto the violin.

Of course, I wrote back to her to let him come; but I didn't want him, for those ere city boys don't take to country manners, and I expected to have a time with him.

The first night he come, he ate a whole mincepie and five doughnuts and four flapjacks for supper, which showed that having too much brains don't strike to your stomach.

Next morning, he was up before anybody in the house, blowing the tin trumpet out of the kitchen winder, and he scared old Aunt Sally Walker across the street almost into fits with it—waked her right up out of a sound sleep, and she thought the last day had come.

When I called the cat to breakfast it was missing. Now, I'd had that cat for five years and I'd never knowed it to be absent or tardy to meals. I sarched high and low for him, calling "Dicky! Dicky! Dicky!" till I was as hoarse as a crow; but no Dicky appeared.

Tommy, he sot there whistling and making a tail to a kite out of my religious newspapers, that I've saved up for Sunday reading when it rains so that I can't go to meeting.

"I wouldn't strain myself any more calling of him, if I was you, Aunt Mary Jane," sez he at last, "for I guess he can't come very well. He's got other business that cat has. He's gone to sea in the well."

I flew at that boy and grabbed him by the hairs of his head, and I tuk the poker to him and made him own up that he had blowed the trumpet at Dick and scared him so that he run up the chimney, and the Tommy had cotched him and put him to soak in the well.

I rushed out and peeped down in the well, and there, on the rock that had tumbled down from the curbing, sot poor Dicky with his eyes green as grass and me-you-ing away like all possessed.

"You go down into that well and get that cat, you young scallawag," sez I, "or I swear I'll heave you down." sez I. And Tommy see that I meant it, and he off with his shoes and tuk them big brains of his down into the well in a jiffy. He grabbed the cat, and the cat grabbed him, and it was jest about an equal thing by the time they got into daylight.

Tommy's face looked like a map of Europe with the rivers drawn in red paint, and that cat was so full of lightning that it fairly hissed rite out of his fur.

Tommy had to lay by the biggest part of that day with his face smeared over with mutton tallow, but by night he got round again, and got to cutting up his pranks as bad as ever.

Grandpa Bunker lives with me, and has for several years. He has been dying for twenty odd years with the consumption and the rheumatiz, but he don't seem any nigher to it than he was in the beginning, and I kind of expect that after I'm gone he'll run the farm and keep it in the name. He's awful deaf, though, except when you're a-talking about something you don't want him to know about, and then he'll hear the faintest whisper that ever was, and I've noticed that was a good deal the way with most deaf persons.

Grandpa has an ear-trumpet that he carries round, and as soon as Tommy spied that he seemed bewitched to holler into it. He shouted so loud that he nigh about blowed the top of grandpa's head off, and the old man had to have his head done up in cotton batting and wet in sweet ile for two days, and he was mad enough with that boy to give him fits, I can tell you.

The next day after the cat catastrophe Tommy got grandpa's trumpet and filled it with mustard seed and stopp'd it up, and grandpa had a caller—a woman that was picking up items for a newspaper—and he tuk his trumpet to hear what she sed and it didn't seem to work.

"Drat the thing," sez grandpa, "it's got stopp'd up," and he in with the end of his finger and poked out the wool that Tommy had stopp'd it with and clapped it to his ear, and the mustard seed began to run in like mad.

"Thunder and Mars!" sez grandpa, bouncing out of his chair, "There's spiders in it, spiders, by jinks! an' millions of 'em! Mary Jane! Mary Jane! you sed that trumpet out, it's full of spiders!"

"Good gracious!" cried the woman, gathering up her note book and her pencils. "I was told he was a man of temperate habits, and here he is in a fit of jim-jams."

"Spiders!" yelled grandpa, digging into his ear and pulling out the mustard seed and stamping onto it as mad as could be.

"Land-sake!" sez I, "it is some of the doings of that boy, grandpa do warn yourself and set down—you'll bust your blood vessels and jar all that crockery off from the mantle-tree, and you'll get excited."

By the time the woman caller had got out into the road,

and both of our dogs was to her heels barking like mad, and I expect that Tommy put 'em up to it, for I seen him peeping out from behind the woodshed and grinning to himself.

But when grandpa got it through his head that Tommy had been fooling with that trumpet he was madder than a broke-up sailing man, and, in spite of his rheumatiz, he gave that boy a wallowing.

That Tommy kept me in a stew all the time. When he wasn't into one thing he was into another, and when he was out anywhere I expected every minute that he would come in dead or mortally wounded, and then his ma would blame me.

For quite a considerable spell, Cap'n Grimes, from Mill-wood, has been coming over here and dropped in of an evening. The cap'n lost his wife nigh onto two years ago, and he's got as perty a monument to her grave in the semetery as is there, and it must have cost a good sum. He's wore a weed onto his hat nigh about to the top of the crown; but lately he's had it tuk down a couple of inches, and he seems to have kinder pearted up, and takes an interest in the world once more. The cap'n is well-to-do, and his children is all grown up, and he keeps two horses and ten cows, and he's a man that's well-looking and he's got a good character.

Two or three nights ago, the cap'n drooped in as usual. He kept his everest on and his hat in his hand, and sed he couldn't sleep a minute—just as he allers does when he comes in. He's allers just going to go; but he generally stays till eleven o'clock, if not later.

He sot down on the sofa and begun to talk about the weather—that's one of his favorite subjects. There is a good deal to be sed about the weather, you know.

"Tain't so hot as 'twas yesterday," sez he, crossing his legs and stretching his hat onto his knee.

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THE QUIET HOUR.

"Personal Friendship with Christ."

"I would converse with Thee from day to day, With heart intent on what Thou has to say, And through my pilgrim-walk, whate'er befall, Consult with Thee, O Lord! about it all. Since Thou art willing thus to condescend To be my intimate, familiar friend, Oh! let me to the great occasion rise, And count Thy friendship life's most glorious prize!"

In the New Testament, the Christian's relation to Christ is represented as a personal acquaintance with Him, which ripens into a close and tender friendship. He invited men to come to Him, to break other ties, and attach themselves personally to Him. He claimed the full allegiance of men's hearts and lives: He must be first in their affections, and first in their obedience and service. Christian faith is not merely laying our sins on the Lamb of God and trusting to his one great sacrifice: it is the laying of ourselves on the living, loving heart of one whose friendship becomes thenceforward the sweetest joy of our lives.

The disciples first learned to know Christ in His disguise, with His Divine glory veiled. It was as if a royal prince should leave his father's palace for a time, and in disguise dwell among the plain people as one of themselves, winning their love, and binding them to him in strong personal friendship, and then, disclosing his royalty, should lead them to his palace, and keep them about him ever after as his friends and brothers, sharing his rank and honors with them. The friends Christ won in His lowly condescension He did not cast off when He went back to His glory; He lifted them up to share His heavenly blessedness. It is in the same way that Christ now saves men. He wins their love and trust by the manifestation of His love for them, and then exalts them to the possession of the privileges which belong to Himself as the Son of God. Anyone whose life is knit to Christ in love and faith is lifted up into the family of God. Some one has represented this truth in this way: A vine has been torn from the tree on which it grew and clung, and lies on the ground: it never can lift itself up again to its place. Then the tree bends down low until it touches the earth. The vine unclasps its tendrils which have twined about frail and unworthy weeds, and feebly reaching upward, fixes them upon the tree's strong, living branches. The tree, again lifting itself up, carries the vine with it to its natural and original place of beauty and fruitfulness, where it shares the tree's glory. This is a parable of soul-history. We were torn from our place, and lay perishing in our sins, clinging to earth's treacherous trusts. We could never lift ourselves up to God. Then God Himself stooped down in the incarnation, bending low to touch these souls of ours; and when our hearts let go earth's sins and its frail, false trusts, and lay hold never so feebly, by the tendrils of faith and love, upon Christ, we are lifted up, and become children and heirs of God.

But how may we form a personal acquaintance with Christ? How is it possible to have more than a biographical acquaintance with Him? If He were a mere man, nothing more than this would be possible. It were absurd to talk about knowing St. John personally, or forming an intimate friendship with St. Paul. We may learn much of the character of these men from the fragments of their story which are preserved in the scriptures, but we can never become personally acquainted with them until we meet in the other world. With Christ, however, it is different. The church did not lose Him when He ascended from Olivet. He never was more really in the world than He is now. He is a present, living Saviour; and we may form with Him an actual relation of personal friendship, which will grow closer and tenderer as the years go on, deepening with each new experience, shining more and more in our hearts, until at last, passing through the portal which men misname death, but which really is the beautiful gate of life, we shall see Him face to face, and know Him even as we are known. "Whom having not seen, ye love; in whom, though now ye see Him not, yet believing, ye rejoice with joy unspeakable and full of glory."

TO BE CONTINUED.

Is the work difficult? Jesus directs thee. Is the path dangerous? Jesus protects thee. Fear not, and falter not; let the word cheer thee! All through the coming year He will be with thee. F. R. Haverhal.

"The openings of the streets of Heaven are on earth."

Jesus near—all is well; nothing seems difficult. When He is absent, all is hard. When He does not speak in us, comfort is worthless; but if He speaks one word, great is the comfort felt. Would not the loss of Him be greater loss than if the whole world went from you? What, without Him, can it give you? He who finds Jesus finds a treasure rare, a jewel above all others. And he who loses Him is losing, ah, so much!—much more than all the world. Without Him man is but a beggar; with Him a prince. Thomas A. Kempis.

MINNIE MAY'S DEPARTMENT.

Fun and Fright.

FROM THE ORIGINAL PAINTING BY GAETANO CHIERICI.
(ETCHED BY W. W. DUNBAR.)

Love of power is well-nigh universal. But power is often abused, and so the poet sarcastically sings:

Man, proud man,
Drest in a little brief authority,
Like an angry ape,
Plays such fantastic tricks before high Heaven
As make the angels weep.

This diminutive youth, dressed in his father's hat and a borrowed mask, finds himself an object of terror. This gives him power, and he at once begins to play such fantastic tricks as cause many juvenile victims—alleged "angels of the household"—copiously to weep. Elated by his Alexandrian conquests, the young hero seeks his homestead, and with fell designs upon the tranquillity of the household, enters there. In all his terror he confronts his baby sister, who stands at a chair, peacefully imbibing liquid aliment. Now, it would have been most appropriate for the child to have apostrophized this hideous shape, in some such words as Hamlet addressed to the ghost: "Be thou a spirit of health, or goblin damn'd?" or as Satan addressed to Death at the gates of Hades, "Whence and what art thou, execrable shape?" But for various and sufficient reasons the baby did not parley with the frightful apparition, in these or any other terms. A glance of wild dismay was followed by shrieks of terror and a retreat which caused the aforesaid liquid aliment to bestrew the floor and brought the fugitive prostrate at the maternal feet. The mother quickly responds to the distressed cries of her child, but as she beholds the pigmy monster at the door, even her courageous heart quails and her cheeks blanch with fear. It is the crowning triumph of the boy's life. His victory is so great he can afford to be magnanimous; so he removes the mask. The moment when the eyes of mother and son meet is one of peculiar interest. The boy's face is radiant with the joy of victory, qualified, indeed, by a faint doubt as to ultimate results. The mother's expressive countenance is somewhat ominous; fear has apparently yielded to anger. What if the form of the daring boy were suddenly to be reversed across the maternal knee, and the ladle (or slipper) were to descend with vigor upon his humiliated person? Then, indeed, might the youthful Alexander weep,—not that there were no more worlds to conquer, but that he had ever thought of conquering even one world.

Gaetano Chierici was born at Reggio, 1838. He is a distinguished painter of *genre* subjects, and especially excels in kitchen scenes. The original of this picture is in the Corcoran Gallery, Washington. The kitchen here delineated is that in which the artist lived in his early days, and the boy and girl are his own children.

Recipes.

BAKED RHUBARB.

Peel and cut into two-inch lengths three bunches rhubarb. Dredge with flour, and put in baking dish with one large cup sugar sprinkled over. Bake in moderate oven three-quarters of an hour. Very nice served hot as a vegetable, or cold as a sauce.

LETTUCE DRESSING.

One-half pint cream or rick milk, one-half pint good vinegar (weak), one small teacup sugar, three eggs well beaten, a lump of butter size of an egg, one teaspoonful ground mustard. Pepper and salt. Mix all together cold, and cook until thick as custard.

MINCED SPINACH.

Wash spinach carefully and boil until tender. Drain, and rub through a colander or chop fine. Then put in frying pan a good lump of butter, the spinach, and salt and pepper to taste. When hot, beat in three spoonfuls of cream. Garnish with sliced, hard-boiled egg.

ASPARAGUS SOUP.

Boil one quart of asparagus, cut in inch lengths, in one quart of water until tender; rub through a colander and return to the water in which it was boiled. Heat one pint milk, stir into it one table-spoonful butter rubbed with one of flour, and cook a few moments. Season and pour into asparagus. Let it get boiling hot, pour into tureen over toasted bread cut into dice. Serve at once.

SHREDDED CODFISH.

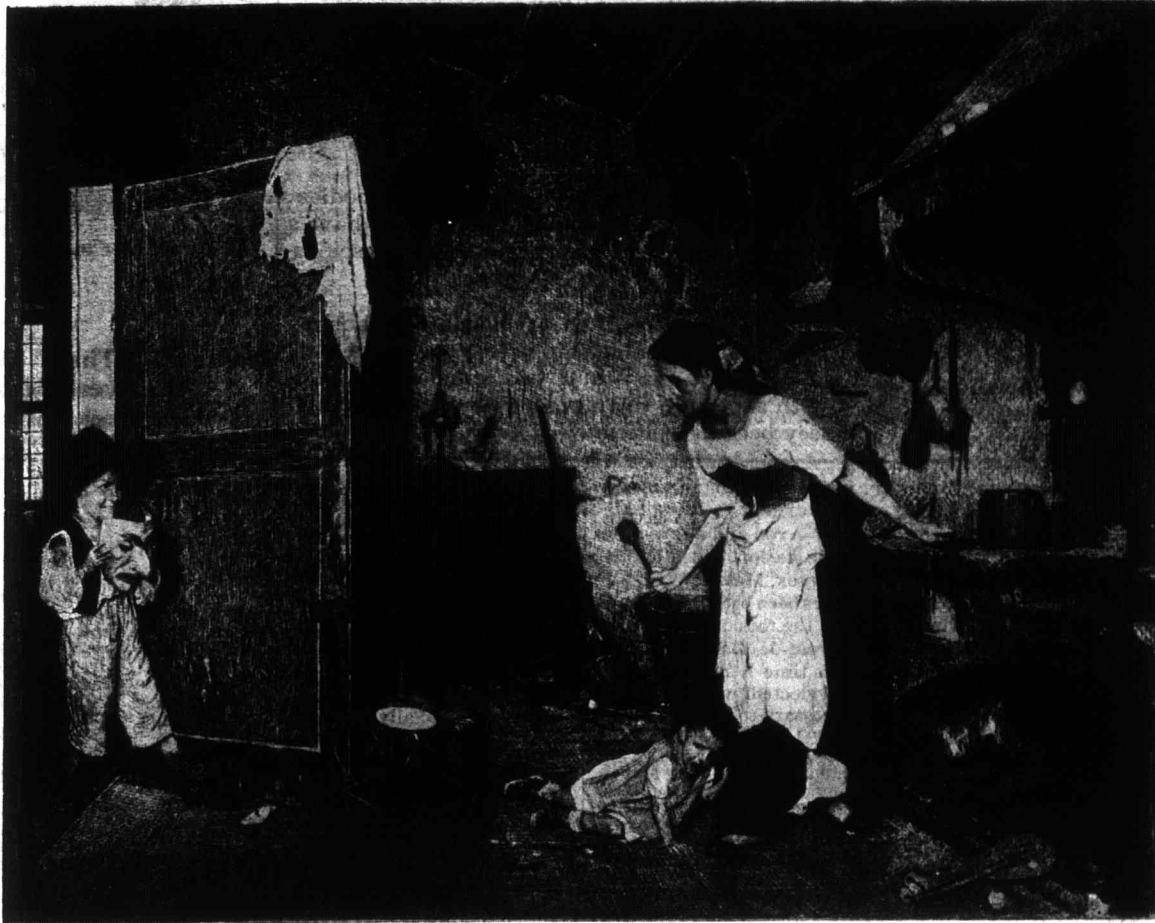
Two parts mashed potatoes, one part shredded codfish, large lump butter, a little warm milk and pepper to taste. Saturate the shredded codfish with cold water and squeeze in a linen cloth, melt the butter in the hot potato, add the fish, milk and pepper, beat very hard and light with a fork until perfectly smooth, make into balls, drop in hot lard like doughnuts, or fry in hot lard in the spider.

SPLIT PEA SOUP.

One pint of peas, washed twice in warm water. Put two table-spoonfuls of water and one table-spoonful of dripping or bacon fat in a saucepan which will hold three pints; put in the peas three hours before they are needed, and let stand on the back of the stove to swell. Add cold water as they continue to swell. Let simmer until twenty minutes before the soup is wanted. Shred some celery and one onion, very fine. When the peas are boiling, add one teaspoonful of salt, dissolve in water, throw in the vegetables and boil ten minutes. Strain through a colander, beating the thick part with a wooden spoon. Return to saucepan and simmer. Mix one table-spoonful of flour in cold water, add a little hot broth and throw in. Serve with dice of toasted bread.

The Queen's Reign.

It is a significant fact that the reign of the Queen has produced, with trifling exceptions, the whole work of Tennyson, the Brownings, Thackeray, Dickens, the Brontes, George Eliot, Kingsley, Trollope, Spencer, Mill, Darwin, Ruskin, Grote, Macaulay,



FUN AND FRIGHT.

Freeman, Froude, Lecky, Milman, Green, Maine, Matthew Arnold, Symonds, Rossetti, Swinburne, Morris, John Morley, to say nothing of younger men who are still in their prime and promise. Widely as these differ among themselves, they have characters which differentiate them from all men of the eighteenth century, and also from the men of the era of Goethe and Scott.—*Frederic Harrison.*

A Legend.

There has come to my mind a legend,
A thing I had half forgot,
And whether I read it or dreamed it,
Ah, well, it matters not.
It is said that in Heaven, at twilight,
A great bell softly swings,
And man may listen and hearken
To the wonderful music that rings;
If he puts from his heart's inner chamber
All the passion, pain and strife,
Heartache and weary longing,
That throb in the pulses of life—
If he thrust from his soul all hatred,
All thoughts of wicked things,
He can hear in the holy twilight
How the bell of the angels rings.
And I think there lies in this legend,
If we open our eyes to see,
Somewhat of an inner meaning.
My friend, to you and me,
Let us look in our hearts and question,
Can pure thoughts enter in
To a soul if it be already
The dwelling of thoughts of sin?
So then, let us ponder a little—
Let us look in our hearts and see
If the twilight bell of the angels
Could ring for us—you and me.

—*Rose Osburne.*

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES:—

"If thou art worn and hard beset
With sorrows that thou wouldst forget,
If thou wouldst learn a lesson that will keep
Thy heart from fainting, and thy soul from sleep,
Go to the woods and hills! No tears
Dim the sweet look that nature wears."

Such is Longfellow's advice, and putting it into practice one day recently, I was rambling through the woods, when espying a moss-covered log under a lovely maple I sat down to rest a while. The sun shone brilliantly and the air was warm and balmy, so dreamily closing my eyes I abandoned myself to the enjoyment of so rare a treat. Silence, disturbed only by the notes of the merry song birds, held sway, but not for very long, however, for soon I heard, or fancied I heard, voices quite close to me. Now, it is not honorable to play eavesdropper, so I opened my eyes and gazed about me, but no one could I see; the robin and blackbird chirped, the gray bird trilled its lay, and the drooping elm branches swayed gracefully under the gentle influence of the sweet zephyrs.

Coming to the conclusion that I had been mistaken I again composed myself to rest, but soon again I heard the voices, which I this time noticed were quite unlike human ones, so I kept very still, bent on discovering, if possible, whence they proceeded. Listening intently I heard a mournful voice say: "How inconstant are the people of earth! Only a few days ago they sighed and longed for my coming, and scarcely have their wishes been gratified when already they have tired of my company, and now, dear May, are praying for your advent. And yet I have labored zealously to make them happy, creeping into the depths of forest and streams I have loosened the lingering frost-fetters, and river and brooklet sparkles and baffles under my touch. I have wooed the trees, till, filled to overflowing with love of me, they are bursting out into thousands of buds. These and countless other services have I rendered, and yet, like a child's plaything, I am ruthlessly cast aside to make place for a newer friend."

Then a voice, like the tinkling of a golden bell, sweetly responded: "Why, dear sister April, you have surely been looking through your very bluest spectacles to take such a pessimistic view of things. I am happy to say I possess two great blessings—cheerfulness and contentment, and as I try to impart similar sentiments to all with whom I come in contact, I find no reason to complain. Have you not noticed how gay the children are when I appear. And how even the little lambs can scarcely contain their exuberance of spirits, but almost gambol their very lives away?"

"The buds that sprang into light at your caress

have unfolded into myriads of leaves, and every tree and shrub is robed in softest green. An emerald carpet, bespangled with lilies, cowslips, violets and many other beautiful flowers, covers our old mother earth, and all around is love and light—even the very sunbeams are warmer and more golden. And though I labor to have those things so, I know full well that my reign will be but short, and soon the queen of the year, fair June, will occupy my throne.

"And yet I grieve not—my task is assigned me and faithfully I strive to do it, and the consciousness that I have done my best, and left the earth better than I found it is recompense enough for me; and when the time comes I'll smile my very sweetest, and willingly resign my crown. Nor do I call my admirers fickle, who in my sunset leave me and turn to greet my radiant sister in her glorious morning.

"The wheel of time ceases not to revolve, and it will not seem long until it is again my turn, and then, I know, my dear friends of to-day will welcome me as lovingly as ever. There's a silver lining to every cloud, and I always try to find it.

"And now, dear April, let me advise you to try my remedy for discontent, and recommend it to those who need it; failure very rarely follows its conscientious use."

Then the first voice responded in a less dismal tone: "How glad am I, sweet May, to have met you, and what a load you have lifted from my heart! My glances have changed from blue to rose-color, and I see now many things that the darkness of my own frowns hid from my view. The fact (which I had overlooked) that my next coming will be again welcome gives me courage to complete my task cheerfully and say adieu willingly."

So interested had I become while listening to this dialogue that I remained perfectly motionless for several moments after the voices ceased, then rousing myself I again sought for some trace of their owners, but again no sign of them did I see.

Perhaps it was the trees that I heard, or perhaps (which I am inclined to think more probable) the near approach of May, together with the pleasant influence of the mild spring air, sent me off into a reverie, and my imagination having gained supremacy I merely fancied it all. So vivid, however, was the impression it left that it has ever since haunted me as a reality, and I cannot help thinking that there is considerable truth in May's supposed oration; for our own dispositions have much to do with the treatment we receive from others, the world being, as it has been said, a looking-glass, which gives us smile for smile and frown for frown.

There are unfortunately some people who cannot be induced to lay aside their blue glasses, and so drag wearily on their discontented lives, too often casting their shadows on the paths of others. The spectacles must be very dark indeed that can shut out the many new beauties that our dear friend May every day discloses to our view, but, judging from the cheery letters I receive, such glasses are not worn by any of my dear nephews or nieces. May yours ever retain their roseate hue is your old uncle's wish, boys and girls.

I had intended writing about some of those very letters of yours, and also to tell you some pretty flower legends, but I have already taken up too much space, and am therefore obliged to leave them for another time.

UNCLE TOM.

Incorrect Expressions.

Miss Hodgkins, teacher at Wellesley College, has prepared for the benefit of her young lady students the following list of "words, phrases and expressions to be avoided;":

- "Guess for "suppose" or "think."
"Fix" for "arrange" or "prepare."
"Ride" and "drive" interchangeable. (Americanism.)
"Real" as an adverb, in expressions "real good" for "really" or "very good," etc.
"Some" or "any" in an adverbial sense; e. g.: "I have studied some," for "somewhat," "I have not studied any" for "at all."
"Some" ten days for "about" ten days.
"Not as" I know for "that" I know.
"Storms" for it "rains" or "snows" moderately.
"Try" an experiment for "make" an experiment.

Singular subject with contracted plural verb, e. g.: "She don't skate well."

Plural pronoun with singular antecedent. Every "man" or "woman" should do "their" duty; or, if you look "any one" straight in the face" they will flinch.

- "Expect" rather for "suspect."
"First rate" as an adverb.
"Nice" indiscriminately.
"Had" rather for "would" rather.
"Had" better for "would" better.
"Right away" for "immediately."
"Party" for "person."
"Promise" for "assure."
"Posted" for "informed."
"Post graduate" for "graduate."
"Depot" for "station."
"Stopping" for "staying."
Try "and" go for try "to" go.
Try "and" do for try "to" do.
"Cunning" for "smart," "dainty."
"Cute" for "acute."
"Funny" for "odd" or "unusual."
"Above" for "foregoing," "more than" or "beyond."

Does it look "good" enough for "well" enough. The matter "of" for the matter "with."

- "Like" I do for "as" I do.
Not "as good" for not "so good" as.
Feel "badly" for feel "bad."
Feel "good" for feel "well."
"Between" seven for "among" seven.
Seldom "or" ever for seldom "if" ever, or "seldom or never."
Taste and smell "of" when used transitively.
More than you think "for" for "more than you think."

"These" kind for "this" kind. "Nicely" in response to an inquiry. "Healthy" for "wholesome."

- Just as "soon" for just as "lief."
"Kind of," to indicate a moderate degree.
Beautiful souls are often hidden in plain bodies; but they cannot be completely hidden, and have a power all their own, the greater for the unconsciousness of humility which gives it grace.

Do not flatter yourself that friendship authorizes you to say disagreeable things to your intimates. On the contrary, the nearer you come into a relation with a person, the more necessary do tact and courtesy become.—Wendell Holmes.

Puzzles.

PRIZE PUZZLE.

1—SQUARE WORD.

A PRIMAL please, then onward press,
This perseverance is success;
Perhaps you may some SECOND choose,
If so, why? just tell us the news;
And then comes THIRD, as you will see,
It stands just where it ought to be;
This rhyme to you quite FOURTH may seem,
If so, pray think its all a dream;
And now if you've in FINAL set
These little words, a square you'll get.

FAIR BROTHER

2—CHARADE (PHONETIC.)

My FIRST takes part in every excursion,
But never was known to take a trip, tour, or ramble;
It likes an example, abhors a copy or pattern,
And can always be found in a box, but never a chest or a coffer.

In scholars or pupils my SECOND takes delight,
That is for those that are laborious and diligent;
But for persevering or attentive ones it has no use;
From universities it keeps apart, but clings to schools or colleges.

THIRD is never found within a house or building,
Yet never edifice or structure was built without it;
It will be found in every corner or ceiling,
Surely now its identity you'll soon be revealing.

Of every coward, poltroon, or even a dastard,
My FOURTH does take their part;
Yet delights in bravery and courage of every sort,
But in an untruth or fabrications it never is behind.

WHOLE is a motto we all should take,
And never for a moment its meaning forsake;
For higher and higher we are bound to rise
If ever this watchword we rightly prize.

HENRY REEVE.

3—CHARADE.

My FIRST is something said to be sweet,
By my SECOND my FIRST is done;
My WHOLE is a tie, a LAST it may be,
Comprising an emblem of one.

CHARLES S. EDWARDS.

4—ANAGRAM.

While some may love the STARS and STRIPES,
O'er which the Yankees brag;
I think I always will COMPLETE
In loyalty to "our flag."

GEORGE W. BLYTH.

Answers to April 1st Puzzles.

- 1—Box. 2—(1) Because in Capital.
(2) Because it is well-read.
(3) Because it is upright.
(4) Because its coming is always welcome.
3—In-art-i-c-u-late. 4—W A T E R
A L O N E
T O W E L
E N E M Y
R E L Y S

Names of Those Who Have Sent Correct Answers to April 1st Puzzles.

Joshua Umbach, Thos. W. Banks, A. R. Borrowman, Mir Hogarth, Geo. W. Blyth, Josie Sheehan, H. Reeve.

STOCK GOSSIP.

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

MORELIGHT 9337.

It may not be generally known that Morelight lowered his record last season to 2.30, and has therefore entered the Charmed Circle. This fact will doubtless bring this beautiful horse more prominently before the notice of those seeking the right horse with which to mate their mares during the coming season. The more carefully we weigh the merits which Morelight possesses, the more we are convinced that he should become one of the greatest trotting sires yet brought into Canada. For not only is he individually a good one, but he is the offspring of a parentage that should insure success in the stud. His sire, Twilight 315, who is almost identical in blood with the great Dictator, has already given proof of his ability to beget speed. He is the sire of Shawan 2.16, Mat T. (three-year-old) 2.24, Dr. Tilton 2.25, Northlight 2.28, Moonlight 2.30, Eliza Jane 2.26, besides a number of youngsters which have given evidence that they will shortly be placed in the list. While this is true of his sire, Morelight's dam, Lady Carr, is admittedly one of the greatest brood mares of her day, and stands second to none in the number of her progeny that have trotted in 2.30 or better. Of these, Ambassador 2.21 has already twelve of his get in the 2.30 list. Alexandre 2.26, Strathblaine, time 2.30, Allar Clay 2.29, Mary S. 2.28, Moonlight 2.30, Maud Granger 2.34 and several others. The complete list is not to hand, but Lady Carr has produced twelve foals, of which ten are trotters. It is now pretty generally conceded by all who have studied the breeding problem that offspring follow the characteristics of their paternal granddam, or rather that the dam of the sire has the greatest influence in imparting the qualities of her son in the stud. It therefore would seem that Morelight is destined to be one of the most successful sires of speed yet introduced into Canada. In conformation and size, Morelight follows very closely the form of his sire, Twilight, which also makes him valuable as a getter of large and handsome harness horses. Further particulars regarding this horse will be found in the advertisement of his owner, Mr. Andrew Dunn, of Ingersoll, which appears elsewhere in this issue of the Advocate.

MESSERS. WM. & F. ROW'S POLAND-CHINAS AND TAMWORTHS.

Close to the village of Avon and a few miles south from Putnamville station, on the C.P.R., in the County of Middlesex, Messrs. Wm. & F. Row have for some years been breeding Poland-China swine. To form the foundation, several pigs were purchased from J. A. Shipley, Richmond, Ohio, at which time a number of superior animals were selected, while later on, feeling that it was necessary to breed different strains in order to furnish their customers with pairs not akin, the celebrated herd of A. E. Schellenberger, Camden, Ohio, was drawn upon, and several exceedingly good individuals selected therefrom. Canadian breeders will remember how successful Mr. Schellenberger was at the World's Fair, for he it was who carried off the "lion's share" of the prizes offered for Poland-Chinas, which is pretty conclusive proof of the superiority of the animals in his breeding establishment.

We were also shown several specimens from the herd of Mr. Henry Morse, Union, Mich., which have also done exceedingly well in their present quarters, and have given Messrs. Row satisfactory results. From this it will be readily seen that the herd has been started upon lines which should insure success, and, if further proof is required, all that is necessary is to turn up the prize lists of the Toronto and London shows for 1892 and 1893, where this herd achieved distinction in prize-winning during these two seasons. The Messrs. Row carried more than their share of winnings in 1892, for at Toronto of the eight first prizes offered they won four, while at London the same season five of the six first prizes offered were placed to the credit of their herd. In 1893 they were again successful, as four of the eight first prizes were won by specimens shown from this herd, and at London four out of six first premiums offered were carried with animals from their pens.

In order to supply their increasing trade, they have added to their establishment another breed by purchasing some Tamworth swine. These are chiefly bred from the importations of Messrs. J. L. Grant & Co., Ingersoll, and those who saw the excellent pure-bred Tamworth barrows which this firm exhibited at the Guelph Fat Stock Show last fall, will agree that they display good judgment in bringing out their exhibits. Mr. Neil Smith, Brampton, has been for a number of years identified with breeding Clydesdale horses, and a number of good ones have passed through his hands. Among his brood mares are some from imported animals. In 1890 he again returned to Scotland, and after visiting a number of the best known stud farms in the Clydesdale districts, he selected four yearling stallions, which he considered suitable for Canadian breeders. These are all sound young horses, in which the blood of Prince of Wales and his sons largely predominate, while Darnley and others bred in the most popular lines are also represented. Those who require anything in this line should pay Mr. Smith a visit, where they may expect to be courteously received and pleasingly entertained while inspecting the stock.

Mr. Smith is also breeding Jerseys, but we were quite as much impressed with the good qualities of some excellent improved Yorkshires which we were shown as anything about the establishment.

John A. Turner, member of the well-known firm of R. & J. A. Turner, "Clydesdale Ranch," Millarville P. O., Calgary, passed through Innipeg recently with a car of thoroughbred live stock made up as follows:—The thoroughbred colt, Col. Dennison, foaled April, 1892, sired by the great imported Dennison, winner of over £2,000 in steeplechases in the old country; dam Sally Snobs, by imp. Hymen, who ran third at the Derby. Sally Snobs is a race mare of extraordinary accomplishments, having won 13 races out of 17 starts. This colt was bred by Cloughton Bros., Epsom, England, and has already won 10 first prizes, and last fall was first and sweepstakes against all ages at Whitby, beating Glendale, the Toronto winner, and others. He is a big, rangy colt, standing 15.3 now, and has the compact build of the Hackney. He is just the stamp of a thoroughbred to cross on cold-blooded mares. There was also a Clydesdale colt, Gold, sired by Grandeur, the Toronto champion for the past two years; dam Lady St. Clair, by St. Clair Esquire, by Lord Esquire. As are all the Clydes taken out by this firm, Gold is a cracking good one. A magnificent red 14-months-old short-horn bull was in the car; he is one of those thick-fleshed, low-down, wide ones of Cruickshank breeding. He comes from the herd of that successful breeder, John I. Hobson, Mossboro, Ont., sired by a Watts bull, out of a daughter of the World's Fair champion, Young Abbotsburn; granddam, Mills', old Vice Consul. Next were two fine Galloways from the herd of D. McCrae, Guelph, one from a cow that won 2 prizes at the Highland Society Show, Scotland. Thirty Shropshire rams and 10 ewes completed the car.

The special premiums offered by the American Southdown Breeders' Association at State and Provincial Fairs of Canada, in 1893, were beneficial in increasing the interest in the Southdown breed of sheep, and in making the same liberal offer—the first four volumes of the American Southdown Record—for these fairs in 1894, yet greater benefits are expected. The conditions upon which these offerings are made permit the winning of the premium in every State in the Union and at the principal fairs in Canada. In addition to these premiums, the Association is, at the suggestion of the Secretary and by the liberality of the Southdown Sheep Breeders' Association of England, enabled to offer at ten of the leading fairs in the United States and Canada, two sets of the first three volumes of the Southdown Flock Book of England. These are also offered on the most liberal terms, so that three sets of these books may be won at each of the fairs where the offerings are made. To secure the full benefits of this offering, breeders should see that these special premiums are announced in the premium lists for the Fair of their respective States and Provinces of Canada, and then, by their exhibits, make the exhibition of Southdowns larger and better than ever before. The larger the exhibit the greater the benefits. Further particulars may be obtained from Jno. G. Springer, Secretary American Southdown Breeders' Association, Springfield, Ill.

NOTICE.

OUR BOOK TABLE.

Since our last issue we have received a number of additions to our library. The first to come to hand was No. 2 of the series of Live Stock Hand Books, edited by Mr. James Sinclair, which is entitled "Light Horses, Breeds and Management." The subject is dealt with by such writers as W. C. A. Blew, W. S. Dixon, Dr. Geo. Flemming and Vero Shaw. A full history of the development of each breed of light horses is given, together with several chapters on their management and the diseases and injuries to which they are liable. Published by Vinton & Co., London, England.

Through the courtesy of the secretary, Mr. Garrett Taylor, Trowse House, Norwich, England, we have received a copy of the "Proceedings of the Southdown Sheep Club." This volume gives a report of the proceedings of the meeting, a paper on the Southdown Sheep by Mr. J. Ellman, and also a short history and particulars of all the principal flocks of Southdowns in Great Britain. The latter is a capital feature.

"The Beautiful Garden, Its Treatment with Special Regard to the Potager," is from the pen of T. S. Mathews, while A. H. Fewkes contributes a chapter on "Floriculture." This is a handy little volume of 190 pages, and, as its title indicates, is wholly devoted to the flower garden. This is a book which will be found valuable by both the experienced gardener and the amateur, while its small compact form will render it very useful as a reference book. W. A. Burpee & Co., Philadelphia.

"All About Sweet Peas" is a complete epitome of all the literature of this fragrant annual, by the Rev. W. T. Hutchins. This book gives a complete list of the varieties, with full and complete directions for the cultivation of this favorite flower. Published by W. A. Burpee & Co., Philadelphia.

Volume XVI of the Clydesdale Stud Book (Arch. McNeilage, Secretary), is to hand. It does not contain quite as many entries as its predecessor, but the great majority of the leading Old Country Clydesdale breeders will be found to have made entries, as well as many farmers in different parts of the country. Portraits are given of the Cawdor cup-winner in 1893. We have received from Mr. Henry Wade, Secretary, Volume 9 of the Dominion Short-horn Breeders' Association Herd Book. It contains the pedigrees of 1,827 bulls and 1,890 cows, making a grand total in the nine volumes of 17,110 bulls and 23,007 cows, or in all 40,117. The pedigrees of 16 imported bulls and 16 imported cows will be found in the centre, as in the previous volume. All the animals recorded up to Dec. 31, 1892, are printed in this volume. The bulls are arranged numerically as formerly, with an alphabetical index at the end of the book. The females are printed under the names of the owners, as in Vol. VIII, and are abbreviated to the pedigree of a bull or cow, so that a catalogue can be prepared without much search. The chronological history of imported Shorthorns by the editor (Mr. Wade) is continued, and gives the importations of 1885, 1886 and 1887. A valuable addition to the book is found in the list of transfers of animals during the past year, alphabetically arranged.

VERY SPECIAL NOTICE!

TO OUR CUSTOMERS IN MANITOBA, NORTHWEST TERRITORIES AND BRITISH COLUMBIA:

GENTLEMEN,—In our Spring Catalogue for 1894, we stated that upon all \$50 Manitoba orders, \$75 orders from the Northwest Territories, and orders of \$100 from British Columbia, we would prepay the freight charges.

We very much regret the necessity of withdrawing that very liberal offer, as we have found it unprofitable to ourselves.

We therefore, from this date, May 1st, withdraw that engagement.

In order that our long-distance customers may understand our desire to help them, as far as we profitably can, in the matter of freights we have adopted the following plan, which will hold good until our Fall Catalogue is issued, by which time we expect to have our arrangements perfect:—

TO MANITOBA BUYERS: Make your order reach \$50 or upwards, then add 15% (fifteen per cent.), and we will prepay the freight.

TO NORTHWEST TERRITORY BUYERS: Use our Catalogue, make your order reach \$50 or upwards, then add 20% (twenty per cent.), and then we will prepay the freight to your nearest railway station.

TO BRITISH COLUMBIA CUSTOMERS: Use our Spring Catalogue, make your order reach at least \$50, then add 30% (thirty per cent.), and we will prepay your freight charges.

As this newspaper reaches all points in the North and West, we will positively stick to this rearrangement and decline all orders on any other terms which reach us after May 1st.

Respectfully,

STANLEY, MILLS & CO.

A GOOD

WALTHAM WATCH

FOR ONLY \$7.50.

If you will send us \$7.50 in a registered letter, we will send to your nearest post office (all charges prepaid) a genuine Waltham stem-winding, dust-proof silver watch.

They are good time-keepers, and need no recommendation from us, being manufactured by the Waltham Watch Co.; there is none better to be had. This watch (at this price) is a rare bargain, for the same watch is sold in all retail stores throughout Canada at from \$12 to \$15. By buying direct of the wholesale man you can save the retailer's profit for yourself.

Price, only \$7.50 for the best silver watch on the market. We send them by registered mail to your nearest post office, all charges being prepaid by us.

Steel watch chains, 10c. Nickel silver watch chains, 25c. Gold-plated chains, \$1.50 each.

Our terms are always CASH with the order.

STANLEY MILLS & CO

Wholesale Shippers,

HAMILTON, ONTARIO.

5-a-om

THE TROTTER STALLION MORELIGHT 9337,



record 2.30, will stand for service at Ingersoll, London, Stratford, Iona, St. Thomas, Aylmer and Brownsville. See route bill Morelight 9337, record 2.30, was sired by Twilight 313, sire of Shawan, 2.16; Mat T., three-year-old, 2.23; Dr. Tilton, 2.25; Northlight, 2.28; Morlight, 2.30; Eya, 2.33; Lady Carr, dam of Morlight, dam of Ambassador, 2.21 (sire of 31 from 2.15 to .30); Alcandre, 2.21; Mary S., 2.2; Morelight, 2.30; Strathbane, trial 2.20; to wagon over Maud Granger, 2.31; Alar Clay, trial 2.29 (sire of Alar Clay, jr., 2.29); Sally Dredy, dam of Markland, 2.21; Juno, dam of Alant, 2.29; Pomore, sire of Crete, 2.29). Service fee \$25 to insure. A. DUNN, Box 451, Ingersoll, 7-c-o.

ADVERTISE IN THE ADVOCATE



W. C. EDWARDS AND COY
IMPORTERS AND BREEDERS.

PINE GROVE STOCK FARM, Rockland, Ont.

SCOTCH SHORTHORNS.

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

ALEX. NORRIE, Manager.

BLMURST STOCK AND DAIRY FARM CLARENCE, ONT.

Shorthorns, Shropshires and Berkshires

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

HENRY SMITH, Manager.



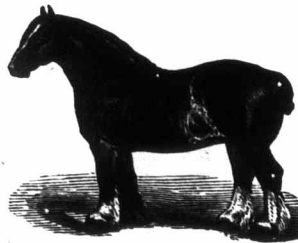
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NORTH NATION MILLS, P. Q.

Ayrshires, Jerseys and Berkshires.

Imported Emperor at the head of a grand lot of Imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires. 7-1-y

THORNCLIFFE STOCK FARM!



I have on hand the best young GYVES-BAL Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darnley, Macgregor, Energy, Lord

Montrose, The Ruler, Carruchan Stamp, Knight Errant and other celebrities.

My stock in the above lines were very successful at all the large shows last year. Call and examine our stock before purchasing elsewhere. Terms reasonable.

19-1-y-om

ROBERT DAVIES, Proprietor. P. O., Toronto.

SHROPSHIRE.

Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also Rams and Ewes of this year's importation.



SHORTHORNS!

CHOICE YOUNG

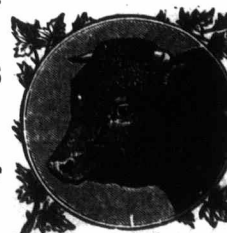
HEIFERS and BULLS

by the celebrated Cruickshank Bull

NORTHERN LIGHT

—AND—

VICE CONSUL



ISALEIGH GRANGE FARM, DANVILLE, P. Q.

SOLD AGAIN! Three of the four Guernsey bulls advertised by us are sold and delivered. We still have one more, the 3rd prize calf at the World's Fair, now fourteen months old—a dandy. Lowest price, \$200.

IMPROVED YORKSHIRES.—We claim to have the longest, deepest and most typical LARGE YORKSHIRES in AMERICA, and the reason is we have paid more money and imported more pigs from the best herds in England than any two Yorkshire breeders on the continent. Orders booked now for spring pigs. Two very handsome COLLIE BITCHES, seven months old, \$10 each. Address,

9-y-om

J. Y. ORMSBY, Manager.

JERSEY CATTLE FOR SALE

Bred for butter. G. sons and g. daughters of "Massena," the greatest cow of her age in the world,—8,000 lbs. milk and 654 lbs. butter in her 16th year; also stock from "Signal of Belvedere," whose dam made 20 lbs. 6 oz. butter in one week on second calf. Also stock from the greatest living prize bull, Canada's Sir George, whose dam made 26½ lbs. butter a week and 57 lbs. milk a day. Splendid bulls, six months old and registered, \$100 each.

MRS. E. M. JONES, Brookville, Ont., Can.
Mrs. Jones' great book, Dairying for Profit, 30c. by mail. Address, ROBT. Y. BROWN, Agent, Box 324, Brookville, Ontario, Canada. 8-y-om

GERMAN COACH HORSES

We have added to our stables the entire lot of the German Government World's Fair exhibit of German Coach Stallions and Mares, and now have the greatest show in America or Europe. These stallions will sire the grandest Coach and Carriage Teams ever seen. We have the only horse that sires the 16 to 16½ hand sellers. We also handle Trotting and Pacing stock. Send for Catalogue.

LAFAYETTE STOCK FARM,
J. CROUCH & SON, Proprietors, LaFayette, Ind., U. S. A. 6-d-om

SEED CORN

AT WHOLESALE PRICES and IN QUANTITIES TO SUIT YOUR WANTS.



SELECTED RED COB WHITE ENSILAGE—Per bush. (56 lbs.), 70c.; per 2 bush., \$1.35; per 10 bush., \$6.50.
PARAGON GIANT WHITE ENSILAGE—Per bush. (56 lbs.), 70c.; per 2 bush., \$1.35; per 10 bush., \$6.40.
MAMMOTH SOUTHERN SWEET WHITE DENT ENSILAGE—Per bush. (56 lbs.), 68c.; per 2 bush., \$1.30; per 10 bush., \$6.25.
GOLDEN BEAUTY YELLOW DENT ENSILAGE—Per bush. (56 lbs.), 70c.; per 2 bush., \$1.35; per 10 bush., \$6.40.
LEAMING YELLOW DENT ENSILAGE—Per bush. (56 lbs.), 75c.; per 2 bush., \$1.40; per 10 bush., \$6.50.
EXTRA EARLY HURON YELLOW DENT—Per bush. (56 lbs.), \$1.40; per 2 bush., \$2.70; per 10 bush., \$13.
EARLY BUTLER YELLOW DENT—Per bush. (56 lbs.), \$1.40; per 2 bush., \$2.70; per 10 bush., \$13.
WISCONSIN YELLOW DENT—Per bush. (56 lbs.), \$1; per 2 bush., \$2; per 10 bush., \$10.
RURAL THOROUGHBRED WHITE FLINT CORN—Per bush. (56 lbs.), \$1.50; per 2 bush., \$2.80; per 10 bush., \$13.
GOOD COTTEN BAGS at 20c. each.
Orders by mail promptly attended to. LINEN BAGS at 10c. each.

9-a-om

J. A. SIMMERS,
SEED MERCHANT AND GROWER, TORONTO, CAN.

OLDENBURGH COACH HORSES

I have always on hand choice stallions and mares. All horses registered. Horses from my stud have won a great many prizes in Europe, North and South America and Australia. Prices reasonable. 7-d-om

ED. LÜBBEN,
Surwürden, Granddukedom of Oldenburg, Germany.

We now have FOR SALE Four Superior Shorthorn Bulls of different ages, sired by such noted bulls as imported Baron Lenton and imported Reporter and Cavalier, also some extra good Cows and Heifers.

J. & A. SOMMERVILLE,

3-1-y-om ELDER'S MILLS, Ont.

H. I. ELLIOTT, Riverview Farm, Danville, P. Q.
Breeder of Scotch Shorthorns. Representatives of the most noted Scotch families: Duchess of Glosters, Claret, Lovely, Nonpareils, Mines, Rosebud and Mayflower. Herd headed by the imp. Cruickshank bull, King James. 15-1-y-om

IF YOU WANT a well-bred Shorthorn Bull for use on grade cows, or a heifer to start a herd with, or some Improved Yorkshire pigs from imported sow Lady Lindsay [42], write C. G. DAVIS, Woodland's Terrace Farm, Freeman P. O. 13-1-y-om

IMPORTED SHORTHORNS.

D. D. WILSON,
Ingleside Farm, SEAFORTH, Ont.

IMPORTER AND BREEDER OF
SCOTCH SHORTHORNS.

Imported stock from the herds of Wm. Duthie and W. S. Marr for sale; also Canadian-bred from imported bulls and out of imported dams. Farm one mile from G. T. R. station. 7-1-om

JOHN RACEY, Jr.,

—BREEDER OF—

Shorthorn Cattle and Berkshire Pigs.

Stock for sale. 17-1-y-om LENNOXVILLE, P. Q.



SHORTHORNS.

I have FOR SALE two Shorthorn heifers and two bull calves of fine breeding, fine colors, fine form and carriage, in fine condition, at fine out prices. Also one or two cows.

D. ALEXANDER, BRIGDEN, Lambton Co., Ont.

WESTRUTHER PARK

Herd of Bates Shorthorn heifers and other families, has outgrown the place and must be reduced in numbers. Four yearling bulls and a number of females for sale, at lowest prices and on liberal terms. Farm a mile from the station.

24-y-om

JOHN IDINGTON,
Stratford.

H. CARGILL & SON,

Cargill, Ont.

SHORTHORNS.

Two imported bulls are now at the head of our herd. Stock of both sexes and different ages from the best imported and home-bred cows now for sale. 11-1-om



LINDEN STOCK FARM.

At the head of my herd is the Kinnellar bull imp. Royal George, while my cows and heifers are principally of the Wimple and Rosedale, also of Kinnellar breeding. Young bulls are now offered.

JOHN GILLSON,

3-1-y-om London, Ont.

MEADOW-LAWN SHORTHORNS.

I will sell bull calves from my stock bull Royal Sovereign at prices to suit the times. Come and see me or write.

M. J. IRELAND, Copetown, Ont.

15-1-y-om

SHORTHORNS AND SHROPSHIRE.

For sale, seven young Shorthorn bulls, from 8 to 12 months old, got by Grand Fashion =15404=; also a choice lot of Yearling Ewes due to lamb in March. All Stock Registered.

W. G. PETTIT,

13-y-om Freeman P.O., Burlington Stn., Q.T.R.

BRILLIANT CHIEF, a No. 1 Shorthorn Bull Calf, 13 months old, for sale, at a moderate figure; all dark red; sired by our stock bull Barrington Chief 1439—dam a good milker. Write for particulars. H. RIVERS & SON, Spring Hill Farm, WALKERTON P. O., ONT. 13-1-y-om

TWO SHORTHORN BULLS FOR SALE.

Good ones; prize-winning ancestry; low prices. Come and see them. H. & W. D. SMITH, - - Hay, Ont. Exeter, G. T. R., one-half mile. 13-1-y-om

AMPLE SHADE STOCK FARM

SHORTHORNS & LEICESTERS OUR SPECIALTIES

Choice young stock of both sexes FOR SALE. ALSO: White Star Potatoes. A new and distinct variety, very prolific; fine, large tubers, very few small; are medium late; strong growers. Price per bush., \$1; per 1 1/2 bush., \$1.25. Bags free. 13-1-y-om E. GAUNT & SONS, St. Helens, Ont.

VALENTINE FICHT,

Maple Leaf Farm, Ortel, Ontario, Offers for sale at reasonable figures and on liberal terms, 30 head of well-bred Shorthorn bulls and heifers, yearlings, and two-year-olds also a three-year-old shire stallion from imported sire and dam (2nd prize, Toronto), and a grand lot of Cotswold sheep. STATION: Woodstock, on C. P. R. and G. T. R. 11-1-y-om

SUNNYSIDE HOLSTEIN-FRIESIANS

Choice animals, either sex, all ages, for sale at any time. Correspondence solicited. Address: McDUFFEE & BUTTERS, Stanstead, P.Q. 16-y-om

HOLSTEIN BULL FOR SALE

To avoid in-breeding I must sell my stock bull, Netherland Romulus. This is one of the best Holstein bulls in Canada. He won second premium at the Industrial this year in the strongest class ever shown there. Warranted right every way, perfectly quiet, and as good as when he was a two-year-old. Price very low. R. S. STEVENSON, Ancaster P. O., Ont. 13-1-y-om

LARGE IMP. YORKSHIRE PIGS -AND- HOLSTEIN: CATTLE.

We breed nothing but the best, and sell cheap and guarantee satisfaction, or ask no pay. Come and see us, or write for prices and be convinced. FLETCHER BROS., Oxford Mills P. O., Ont., Kempville Station, C. P. R. 5-1-y-om

HOLSTEIN-FRIESIANS.

If you want the choicest of the breed, then write or visit Maple Grove. Only the very best are kept and bred here. No culls sold from my herd, they go to the butcher. Choice young things from the great Colanthus Abbecker now for sale at living prices. Also some extra fine Berkshire pigs. Address: H. BOLLERT, CASSEL, ONT. 3-1-y-om

FOR HEREFORDS

WRITE TO: F. A. FLEMING, 5-y-om Weston, Ont.

JERSEY-CATTLE

Of the heaviest milking strains. One of the largest herds in Canada; bred closely to the great dairy cow at Chicago, also the famous two-year-old, Sires of both were sold from this herd. Also Welsh Blood Ponies for ladies' and children's driving. Stock for sale always on hand. GEO. SMITH & SON, Grimsby, Ontario. 3-y-om

GLEN ROUGE JERSEYS

WILLIAM ROLPH, Markham, Ont., offers Twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 19-y-om

EXMOOR - JERSEYS.

H. COOKE, - Orillia, Ont. Breeder and importer of the choicest milking strains of Jerseys. Inspection solicited. Prices right. 3-1-y-om

JERSEYS AND TROTTERS.

At the head of herd is Nell's John Bull, grandson of Ida of St. Lamberts. Females from \$75 to \$150. Our stud is principally composed of the get of Almont Wilkes 2191 and General Stanton, the sire of more horses in the 30 list than any sire in Canada. Jonathan Carpenter, 13-1-y-om WINONA, ONT.

FIRST PRIZE JERSEY HERD.

Two young bulls from first prize cows and first prize bull at Toronto. Several heifers to calve shortly, suitable for family cows. 3-1-y-om J. H. SMITH, Highfield, Ont.

BARCHESKIE HERD OF AYRSHIRES

Andrew Mitchell, the largest breeder and exporter of Ayrshire cattle in Scotland, has always on hand and for sale bulls, cows and heifers of the choicest breeding and quality. Inspection invited. Prices on application. Apply to ANDREW MITCHELL, 3-1-y-om Barcheskie, Kirkcudbright, Scotland.

PURE-BRED AYRSHIRES

NICOL & SON, Cataragui, - - Ontario. 6-4-om Some young bulls for sale.

ARYSHIRE BULL CALVES FOR SALE

Imported in dam from Scotland in 1883. Two choice ones from the most noted sweep-stake dairy breeder in Scotland. For milk, butter and cheese records they are second to none, having competed successfully at all large contests in Scotland and England which were open to the world. Make no mistake. Head your herd with this noted strain, which were purchased regardless of expense. For further particulars, write or come and see R. G. STEACY, Importer and Breeder of Ayrshires, Maple Grove Ayrshire Stock Farm, line G.T.R., LYN, Ont. 7-1-tf-o

Champion Dairy Herd of Ayrshires at various government tests. Prize winners at the World's Columbian Exposition, Chicago. Write MESSRS. ROBERTSON & NESS, Howick, Que. 19-y-om

WOODROFFE STOCK AND DAIRY FARM.

Ayrshire Cattle. A choice lot of young Bulls and Heifers of the richest milking strain now on hand. Correspondence solicited. Address, J. G. CLARK, Ottawa, Ont. 19-L-om

THE GLEN STOCK FARM

AYRSHIRES -AND- BERKSHIRES. A few good Ayrshire bull calves and heifers, Berkshire boars and sows. For particulars write Whiteside Bros., INNERKIP, ONT. 7-y-om

A. McCALLUM & SON,

Sprucehill Farm, Danville, Que. Pure-Bred Ayrshires & 6-f-om Berkshire Pigs.

J. YULL & SONS,

Meadowside Farm, Ontario Carleton Place, Ont. Our herd is composed of seventy-five head. Leonard Meadowside -1423-, first prize at World's Fair, heads the herd. Cows of the deepest milking strain, having won several medals at provincial tests. Shropshire sheep and Berkshire pigs. Young stock of both sexes for sale. Visitors welcome; met at train. Give us a call. 7-y-om

AYRSHIRE BULLS

Six young Ayrshire Bulls for sale. Five of them full brothers to prize winners at the late World's Fair. T. CUY, Sydenham Farm, Oshawa, Ont. 3-1-t

Imported and Home-bred LINCOLNS

The first Royal winner, Royal Chester, at the head of the flock. Ewes from the best English flocks, such as those of Dudding, Bailes, Wright and Clark. Rams to head flocks a specialty. R. W. STEVENS, LAMBETH, ONT. 5-y-om London Station.

PETER ARKELL, Teeswater, Breeder & Imp.

of Registered Oxford-Down Sheep. 22-y-om

ADVERTISE IN THE ADVOCATE

SHROPSHIRE - FOR - SALE

My whole flock of 60 head of Imported Rams and Ewes, a few home-bred Shearling Rams, and a choice lot of lambs of both sexes. Also a choice lot of young Yorkshire Pigs. T. H. MEDCRAFT, Sparta, Ont. 19-y-om

JOHN DRYDEN,

BROOKLIN, ONT. Makes a specialty of breeding choice SHROPSHIRE SHEEP -AND- Cruickshank Shorthorns

Low down, heavy weights, thick fleshed and easy feeders. A few choice young bulls, good colors and good quality, are ready for immediate shipment. PRICES MODERATE. 3-1-y-om

IMPORTED SHROPSHIRE EWES

And their lambs for sale by car lots; also a very choice Short-horn Bull calf, ten months old. W. S. HAWKSHAW, Glanworth P. O., Ont. 7 miles east of London. 7-tf-om

BOULDER GRANGE FLOCK

REGISTERED SHROPSHIRE. Imported and home-bred stock of the finest quality and most fashionable breeding, with prices to suit the times. Inspection invited. C. W. GURNEY, 7-1-om Paris, Ont.

Imported Cotswold Ewes

In lamb to an English royal winner that has proved himself a great stock sire. Ram lambs and ewe lambs from imported stock, which will make good show sheep, for sale at hard times prices. W.M. THOMPSON, MT. PLEASANT, Uxbridge Station, G. T. R. 9-1-y-om

HENRY ARKELL,

Arkell P. O., Ont. Importer and breeder of Oxford-down sheep, winner of nine prizes out of ten entries at World's Fair. Fifty rams and ewes for sale, both imported and Canadian-bred; 100 ram and ewe lambs for 1894, from Royal and World's Fair winning rams. Prices reasonable. Guelph, G. T. R.; Arkell, C. P. R.; Telegraph, Guelph; Telephone, Arkell. 7-1-y-om

COTSWOLDS

I HAVE FOR SALE Shearling Rams, - - Shearling Ewes, Ram and Ewe Lambs - FROM IMPORTED STOCK. ALL REGISTERED. T. HARDY SHORE, 9-1-f-om Glanworth, Ont.

To Stockmen & Breeders.

LITTLE'S PATENT: FLUID NON-POISONOUS SHEEP DIP AND CATTLE WASH.

For the destruction of Ticks, Lice, Mange and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc. Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy and healthy. The following letter from the Hon. John Dryden, Minister of Agriculture, should be read and carefully noted by all persons interested in Live Stock. "MAPLE SHADE" HERDS AND FLOCKS. BROOKLIN, ONT., Sept. 4th, 1890. DEAR SIR, - I cannot afford to be without your "Little's Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested. I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders. JOHN DRYDEN. Seventeen Gold, Silver and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world. Sold in large tins at \$1.00. Special terms to Breeders, Ranchmen and others requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to ROBERT WICHTMAN, DRUGGIST, OWEN SOUND, Ont. Sole Agent for the Dominion. 7-1-y-om

T. W. HECTOR,

Importer and Breeder of Dorset Horn Sheep. The oldest flock in Canada. P. O.: Springfield on-the-Credit. Stations: Springfield and Cooksville, C. P. R.; Port Credit, G. T. R. 5-1-y-om

JOHN A. MCGILLIVRAY,

Jerseydale Farm, Uxbridge, Ont., Midland Div. G. T. R., importer and breeder of Dorset Horned Sheep 19-1-y-om



TO FARMERS, STOCK DEALERS & WOOL GROWERS

FOR SHEEP, CATTLE AND HORSES. LEICESTERSHIRE TICK & VERMIN DESTROYER. It effectually destroys Ticks, Lice, Worms or Grub, to which sheep, horses and cattle are subject, and enables the animal to thrive. It will be found far superior to other preparations used for the similar purpose. The proprietors will guarantee perfect success when used according to directions, as will be found on each box. It prevents scurf and scab, and renders the wool bright & clear. It is put up in tin boxes, price 30 cents each. One box is sufficient for twenty ordinary sized sheep. It only requires to be tried to prove itself all that is claimed for it. Sold by Druggists and Grocers. Manufactured by G. C. BRIGGS & SONS, 31 King St. West, Hamilton, Ont. 5-1-o

THE MARKHAM HERD

Farm at Locust Hill Station, C.P.R. Registered Improved Large Yorkshire and Berkshire pigs. As we do not intend to exhibit, we will now sell a choice lot of show pigs of each breed. 17-y-om JOHN PIKE & SONS.

G. J. GILROY & SON

Glen Buel, - Ont., Have for sale some Holstein sows, one good young Bull, also a number of Improved Large Yorkshire and Berkshire Pigs. 7-y-o

IMPROVED: LARGE: YORKSHIRES

The largest herd and the most profitable type of Yorkshires from the feeder's standpoint in America. Over fifty sows bred to seven different stock boars for the spring trade. Pigs for exhibitors purposes a specialty. Stock shipped to order are guaranteed to be as described. Personal inspection solicited. J. E. BRETHOUR, Burford, Brant Co., Ont. 3-y-om

YORKSHIRE PIGS

Of the best type and breeding. Pairs not akin for sale at all seasons. J. M. HURLEY & SON, Belleville, Ont. Box 442. 17-y-om

IMPROVED WHITE YORKSHIRES.

Young boars and sows of all ages, sired by our two imported boars, and from sows of Walker Jones' and Sanders Spencer's breeding. A few young bulls of the most popular Bates families. 9-y-om WM. COWAN, V. S., Galt, Ont.

LARGE (WHITE) IMPROVED YORKSHIRES AND ENGLISH BERKSHIRES.

The undersigned offer for sale this month a few Yorkshire sows in farrow, June and July pigs, bred from imported stock, also some very fine young boars and sows, October and November pigs; also one Berkshire and one Yorkshire boar ready for service at once. Prices reasonable, and satisfaction guaranteed. Apply to WM. GOODGER & SON, Box 160, Woodstock, Ont. 11-1-y-om

DUROC - JERSEY FARM

TAPE BROS., - Ridgeway, Ont. Importers and breeders of pure-bred Duroc-Jersey Swine. Stock for sale. Prices reasonable. Correspondence solicited. 9-1-f-om

RED TAMWORTHS, YORKSHIRES AND AYRSHIRES

Now booking orders for young pigs to ship April and May. Bargains in Ayrshire cows and heifers, due in April and May. Two nice bulls, 12 months old. Stock registered and guaranteed as described. CALDWELL BROS., Briery Bank Farm, Orchard, Ont. 23-1-f-om

T. TEACORD, ON high class Some fine litters, be sale. Also pigs farrow or write for

Gold



Spring and from Young boars to breed. Jersey cow 8-y-om

LARGE

My herd or bred fr stock, and winnings shows for ing sweeps breeds at of all ages 9-y-om

BERK

Of the best bred, from grand sown ent boars. All ages for 3-1-y-om

THE H

J. G.

Eldon

Now is a good time to get pigs from a lot of us. We have fine now to present. Call on us in January and will be right in time to get your pigs. We have also Write for des

H. J. DAVIS

Ont., Breeder of class Large and Imp. Yorkshire horn Cattle

facton gu hand.

S. C.

Breeder a

Office-CLAR

ISRAEL CRE

Large - E

GREAT SW

Our herd

first prize stakes than combined, Toronto, London. T. ported and bred sows of spring trade pairs or tri specialty. I by express. & SONS, C

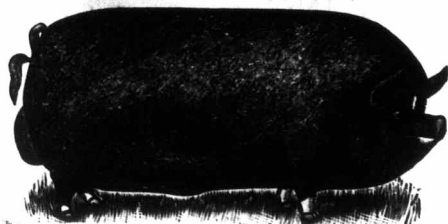
Registered

Chester Wh Dorset Horn are my spe Cleveland (i whose sire stakes at Columbian stock ready scribed. W HARDING, Middlesex

ADVERT

T. TEASDALE, CONCORD, ONT., breeder of **Berkshires.** Some fine pigs October litters, both sexes, for sale. Also fine lot young pigs farrowed in March. Come and see my stock, or write for prices and description. 6-y-om

Gold Medal Berkshires.



Spring pigs from 3 first-class imported boars and from imported sows and their daughters. Young boars and sows of October litters ready to breed. Large English Berkshires. Also Jersey cows, heifers and calves. Address—

J. O. SNELL, EDMONTON, ONT.

LARGE ENGLISH BERKSHIRES

My herd are imported or bred from imported stock, and have carried winnings at leading shows for years, including sweepstakes over all breeds at last Guelph Fat Stock Show. Pigs of all ages for sale, pairs supplied not akin. 9-y-om

GEO. GREEN, Fairview, Ont.

BERKSHIRES

Of the best strains not connected, from a number of grand sows and three different boars. Fifty-eight prizes won last season. All ages for sale, including sows in farrow. 3-1-y-om

WM. McALLISTER, Varna, Ont.

THE HOME OF THE BERKSHIRES.

J. G. SNELL & BRO., Edmonton, - Ontario.

Now is a good time to order pigs from litters farrowed this year. We never had so many fine sows to breed from as at present. Can supply a few pigs from litters farrowed in January and February. These will be right for the fall exhibitions where prizes are given for pigs of this year. We have also for sale some young boars fit for service. Write for descriptions and prices. 2-y-om

H. J. DAVIS, Woodstock, Ont., Breeder of High-class Large Berkshire and Imp. Large White Yorkshire Swine, Short-horn Cattle. — A grand lot of young pigs ready for shipment of both breeds; also boars fit for service from prize-winning stock. Stock shipped to order. Satisfaction guaranteed. Young Bulls generally on hand. 8-y-om

S. COXWORTH, CLAREMONT, ONT., Breeder and Importer of Berkshire Hogs.

Twenty young sows for sale, bred to my three stock boars, Highclere Prince, King Lee, and Champion Duke, Imp. Write for prices or come and see my stock. Station and Telegraph Office—CLAREMONT, C. P. R. 8-y-om

ISRAEL CRESSMAN, New Dundee, ONT., Importer of Large - English - Berkshires 4-y-om

GREAT SWEEPSTAKE HERD OF OHIO IMP. CHESTER WHITE SWINE.

Our herd won more first prizes and sweepstakes than all others combined, including Toronto, Montreal, London. Thirty imported and home-bred sows for the spring trade. Orders booked for spring pigs in pairs or trios not akin. Stock for exhibition a specialty. Pedigrees furnished. Reduced rates by express. Write for particulars. **H. GEORGE & SONS, Crampton, Middlesex County, Ont.** 7-y-om

Registered Improved Chester White Swine & Dorset Horned Sheep are my specialties. Cleveland (imp.) No. 320, whose sire won sweepstakes at the World Columbian Exposition, heads the herd. Young stock ready to ship, and guaranteed as described. Write for particulars, etc., to **R. H. HARDING, Mapleview Farm, Thorndale, Ont., Middlesex Co.** 19-1-y-om

E. D. GEORGE

PUTNAM, ONT. Importer and Breeder of Ohio Improved Chester White Swine

The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 9-1-y-om

ADVERTISE IN THE ADVOCATE

The Oxford Herd of Registered Poland Chinas

Our herd of Improved Poland-Chinas won 36 first, 18 second and 6 third prizes in 1893, including the Herd prize at Montreal and Toronto, for best boar and two sows, any age. Stock, both sexes and all ages. Pairs and trios not akin for sale at all times. Correspondence solicited or inspection of herd invited. 15-y-om

W. & H. JONES, Mount Elgin, Ont.

W. & F. ROW, AVON, ONT.

Breeders and importers of Poland Chinas and Tamworths. Young pigs of all ages and both sexes furnished, not akin. A few Poland-China boars fit for service on hand. Stock guaranteed as represented. 7-1-c

PINE GROVE HERD

—OF— **POLAND-CHINAS**

I have a few pairs of good fall pigs, unrelated, yet for sale. Send for Catalogue just out, for description of Spring Litters. 17-1-y-om

CAPT. A. W. YOUNG, Tupperville, Ont.

ALL PRIZE STOCK.

Golden Wyandottes (McKeen's), White Pl mouth Rocks (Knapp's), White Leghorns (Rice's).

I have some fine young birds for sale. Eggs, \$2.00 for 15. I have carefully bred for utility as well as other points. Write me, I will answer. 7-c-o

W. J. STEVENSON, Box 204, Oshawa, Ont.

HEADQUARTERS FOR

S. C. White and Brown Leghorns, S. L. Wyandottes, S. S. Hamburgs; eggs, \$1.00. B. P. Rocks from grand prize matings, \$1.50; from choice selected stock, \$1.00. B. B. Red Games and B. Minorcas, \$2.00 per 13; \$3.00 per 26. All letters answered. Address

3-1-y-o J. E. McCOMBS, Ridgeville, Ont.

MUNGER'S AMERICAN STRAIN.

25 Years Experience in Mating and Breeding. 40 Grand Breeding Pens for 1894.

For Sale at all Times. Pairs, Trios and Breeding Pens Mated for Best Results. Address **F. M. MUNGER, DeKalb, Illinois**

HIGH-CLASS, THOROUGHBRED POULTRY.

Fresh eggs, securely but lightly packed, from prize pens of White, Silver and Golden Wyandottes, White and Barred P. Rocks, \$1 per 11. Indian Game eggs, \$2 per 13. Bronze Turkey eggs, 25c, each, or \$3 per 13. Stock for sale after July 1st.

I am Canadian agent for **WEBSTER & HANNUM BONE CUTTERS and STONE CRUSHERS.** Write me before you buy. 19-y-om

JNO. J. LENTON, Park Farm, OSHAWA, ONT.

PRIZE PLYMOUTH ROCKS

- Our Eggs Hatch. -

FROM GRAND PRIZE MATINGS, \$2 PER 13 FROM CHOICE SELECTED STOCK, \$1 PER 13

Customers report from Quebec "13 chicks from 13 eggs"; Toronto, "11 chicks from 11 eggs"; Victoria, B. C., "10 chicks from 12 eggs. New circular and catalogue free. 3-y-om

C. W. ECKARDT, Ridgville, Ont.

EGGS from grand yards of Black Minorcas, Light Brahmas, Brown Leghorns and Barred Plymouth Rocks, \$1 per setting, worth \$3, as my matings are high scoring birds and prize-winners all over. Some choice Minorcas prize-winners all over. Some choice Minorcas for sale. **W. L. BIRD W. N., London West, Ont.** 3-1-d-om

"For Years,"

Says **CARRIE E. STOCKWELL**, of Chesterfield, N. H., "I was afflicted with an extremely severe pain in the lower part of the chest. The feeling was as if a ton weight was laid on a spot the size of my hand. During the attacks, the perspiration would stand in drops on my face, and it was agony for me to make sufficient effort even to whisper. They came suddenly, at any hour of the day or night, lasting from thirty minutes to half a day, leaving as suddenly; but, for several days after, I was quite prostrated and sore. Sometimes the attacks were almost daily, then less frequent. After about four years of this suffering, I was taken down with bilious typhoid fever, and when I began to recover, I had the worst attack of my old trouble I ever experienced. At the first of the fever, my mother gave me Ayer's Pills, my doctor recommending them as being better than anything he could prepare. I continued taking these Pills, and so great was the benefit derived that during nearly thirty years I have had but one attack of my former trouble, which yielded readily to the same remedy."



AYER'S PILLS
Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Every Dose Effective

We Propose to Watch You

with a Swiss, an Elgin, a Waltham or other American Watch. We guarantee prices lower than any local dealer can give. We sell them in every Province and Territory. We ship them with privilege of examination before paying for them.

May we send you our Wholesale Catalogue

FREE

It contains cuts, descriptions and prices of Watches, and of Cabinet, Mantel and other Clocks, in Oak, Walnut, and Nickel.

ADDRESS

THE SUPPLY COMPANY

NIAGARA FALLS, ONT.

MONITOR INCUBATOR.

Two Medals at World's Fair. Illustrated Catalogue for stamp. A. F. WILLIAMS, Box 11, Bristol, C. L.

CASH FOR FEATHERS

That is what we give you. Goose, Duck, Hen and Turkey. Write us what you have, or send samples.

Alaska Feather & Down Co., L'd., 10 ST. SACRAMENT STREET, Montreal. 7-1-om

POULTRYMEN! GREEN CUT BONES

warranted to double the egg production. Our BONE CUTTER reduces green bones fine enough for little chicks. Medal and Diploma at World's Fair, and, as far as we know, the only one worthy of mention. Get our circulars also of HAND STONE CRUSHER for making grit out of stone, shells, broken crockery, etc. Pure Limestone Grit, in sacks, \$1 per 100 lbs. Our CLOVER CUTTER finest made. Write for circulars. **WEBSTER & HANNUM, Cazenovia, N. Y.** 66-2-c-om

NOTICES.

Read the advertisement of Stanley, Mills & Co. in this issue.

In this issue will be found an advertisement of the Leader Churn. It is very highly spoken of. We would advise our readers to procure it.

The attention of our readers is especially directed to the advertisement of Messrs. Good, Shapley & Muir, Brantford, whose Ideal Spraying Pump will be found an effective addition to the appliances needed now on every farm and garden. They also build steel wind-mills and furnish bee supplies.

Messrs. R. Rivers & Son, Springhill Stock Farm, Walkerton, report that their Shorthorns have wintered well, and that their cows, twelve in number, have all dropped calves—six of each sex—all good, straight ones with lots of hair. They have yet one fine young bull for sale, to which reference is made in their advertisement.

AGRICULTURAL COLLEGE, MICH., Nov. 24, 93. J. W. Buchanan, Smithville, Ohio.

Dear Sir:—We are very much pleased with the Buchanan Fence. Its efficiency and low cost cannot fail to commend it to all stock farmers. We are preparing to build more next year. Your fence combines more good qualities, with fewer bad ones, than any fence with which I am acquainted. I am very truly yours, **F. B. MUMFORD.**

ANSWERS TO CORRESPONDENTS.

FARMER.—Yes, South Dakota furnishes an excellent field for diversified farming. Wheat, Corn, Barley and Flax are produced in abundant quantities and find a ready market at good prices, while the cost of production is much less than in the Eastern States. Stock raising and wool growing have become successful industries in South Dakota, where thousands of acres of the finest land in the United States can be secured at reasonable figures and upon long time for deferred payments. Further information will be cheerfully furnished free of expense by addressing **A. J. TAYLOR, Canadian Passenger Agent, 87 York St., Toronto, Ontario.**

THE LEWIS COMBINATION SPRAYER.

We have made a careful test of the Lewis Combination Spray Pump, which is offered for sale by Mr. W. H. Van Tassel, of Belleville. It is all made of brass, excepting three or four feet of strong hose, and the parts all screw together. It is handy, strong, simple, and will serve half-a-dozen different purposes. It throws a solid stream twenty-five or thirty feet high, large or small, which can be changed instantly, without stopping, to a fine or coarse spray. There is a special nozzle for spraying low bushes, such as roses, currants, etc., and can be used to apply an emulsion to cattle. As a veterinary syringe it is also very useful. Practically, there is nothing about it to get out of order, and Mr. Van Tassel will express them to any one cheaply. We can heartily recommend the Lewis Sprayer.

The Ontario Wind Engine and Pump Company, of Toronto, have purchased the stock and plant of the Ontario Pump Company, of Toronto, so well and favorably known all over Canada. They state that they will not only continue to manufacture all the best lines which were made by the old company, but that they are adding many new features, among others are steel windmills and towers. They have secured the services of Mr. S. H. Clappman, late manager of the Ontario Pump Co., who will, as in the past, have charge of the business. The new company will make it their aim, by the employment of skilled workmen, and the selection and manufacture of the best lines, to merit a continuance of the confidence and patronage so liberally accorded to their predecessors. Farmers requiring anything in the way of windmills, force or spray pumps, etc., should consult their catalogue before purchasing elsewhere. See advertisement in this paper.

HOME COMFORT RANGE.

The following are a few of the many testimonials being received daily by The Wrought Iron Range Co., and speak for themselves. Their advertisement appears in another column.

Mohawk, March 29th, 1894. Wrought Iron Range Co., Toronto, Ont. Gentlemen,—We purchased of your sales man, Mr. H. L. White, on the 26th day of February, 1894, a "Home Comfort" Range, and are pleased to say it gives entire satisfaction, as we are consuming only about one-third the fuel as our former range, and in all respects find the Home Comfort as recommended by your salesman, to a letter. Respectfully, **THOS. H. MATT, M. D.**

Scotland, Ont., March 28th, 1894. Wrought Iron Range Co., Toronto, Ont. Gentlemen,—We purchased of your salesman, Mr. H. L. White, on the 2nd day of January, 1894, a "Home Comfort" Range, and are pleased to say it gives entire satisfaction; it saves fully one-third the fuel our former range consumed. Respectfully, **WM. J. GLASSFORD, M. D.**

Mohawk, Ont., February 8th, 1894. Wrought Iron Range Co., Toronto, Ont. Gentlemen,—We purchased of your salesman, Mr. J. Burns, on the 8th day of February, 1894, a "Home Comfort" Range, and are pleased to say it gives entire satisfaction, but it perfectly heats up quickly and requires less wood by one-half than any stove or range we ever used. Respectfully, **JOSEPH MCINTYRE.**

Gork, March 31st, 1894, Guelph Township, Wellington County, Ont. Wrought Iron Range Co., Toronto, Ont. After a two weeks use of a "Home Comfort" Range in our houses we can truthfully say that it is all and everything Mr. Robinson, the salesman, claimed for it before it was put in operation. It certainly saves half in fuel, and gives much more heat than our stove. It is also a most complete baker, and is very convenient to work over. The money paid for it would not remove it from our homes if we could not obtain another like it. (Sgd) **Mrs. and Mr. DONALD MCINTOSH, Mrs. and Mr. JOHN REEVE, Mrs. and Mr. JOHN TOTTEN.**

Read the advertisement of Stanley, Mills & Co. in this issue.

STOCK GOSSIP.

Read the advertisement of Stanley, Mills & Co. in this issue.

Messrs. J. McCormick & Son, of Rockton, Ont., report that the demand for Ayrshires has been exceedingly good and at good paying prices, and that their stock at the present time is doing well.

D. F. Wilson, who was appointed delegate to the Brandon Fair Board by the Dominion Swine Breeders' Association, has succeeded in having the following additions made to the swine sections, viz.:—Boar and four of his get, not more than six months old, owned and bred by the exhibitor; also sow and four of her produce, ditto as above; also a class for fat pigs. Mr. Wilson also induced the society to divide the class for grade cattle right down to calves, one section for grade cattle for beef purposes and one for dairy purposes.

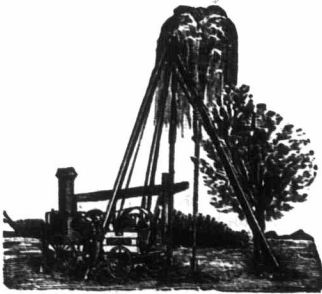
Mr. Arthur Johnston, of Greenwood, writes us as follows:—Cattle in this section of the country have never wintered healthier or better, though they are coming out of winter rather leaner than formerly, owing to scarcity of feed. There was plenty of hay, but many farmers sold out short to make money. Our own herd is in quite as good form as we have ever had them—not a fat one in the herd and not a lean one. We have to date something over twenty calves, with a few more to come. We have been obliged to destroy one cow on account of old age, but, besides this, we have not had a fatality in the herd during the past nine months from any cause. We have still left three very superior young bulls fit for service—one out of imported 34th Duchess of Gloster, and one out of Mary Anne of Lancaster 15th, both by Indian Chief, and both red. They are as good as I have ever bred—too good for present prices. The demand for young bulls has been as good, or better, than for almost anything else produced by farmers, though, in sympathy with other things, they have ruled rather lower than last year.

Read the advertisement of Stanley, Mills & Co. in this issue.

FARMERS & SETTLERS, ATTENTION!

British Columbia offers at the present time the best field for farmers and settlers in any part of Canada. Beautiful Climate, Productive Soil, Ready Markets, Good Prices, No Drought, No Frosts, Sure Crops. We have on our books over 10,000 acres of the best farming lands in the Province at very low prices, and on easy terms of payments, in blocks to suit purchasers, and situated in the best localities. Several islands within easy reach of Vancouver, well adapted for sheep and cattle. Settlers settled on Government lands. Call on or address,

MACKINNON, DeBECK & CO.,
LAND, TIMBER AND MINERAL AGENTS,
11 Hastings St. 9-y-om VANCOUVER, B. C.



WM. SHARP, Practical Well Driller,
184 Hamburg Ave., TORONTO, ONT.

LEWIS' COMBINATION SPRAY PUMP
60,000 IN USE.

THIS OUTFIT makes Three Complete Brass Machines. It is a Spraying Pump, Agricultural Syringe, and Veterinary Syringe combined. Everything screws together and can be easily taken apart and cleaned. Will throw fine or coarse spray or solid stream as desired. Impossible to clog nozzle.

A valuable illustrated book on Our Insect Pests and How to Destroy Them is given to each purchaser. Goods guaranteed as represented or money refunded. To introduce, I will deliver one of the above described Spraying Outfits and Illustrated Books to any express station in Canada for \$6.50, express paid.

W. H. VANTASSEL,
9- BELLEVILLE, ONT.



Ask your dealer for the LEADER CHURN, with Patent Gas Vent, best Churn in the market, or write direct to manufacturers for Catalogue.
DOWSWELL BROS., Hamilton,
Manufacturers of Churns, Wringers, Washers and Angles.

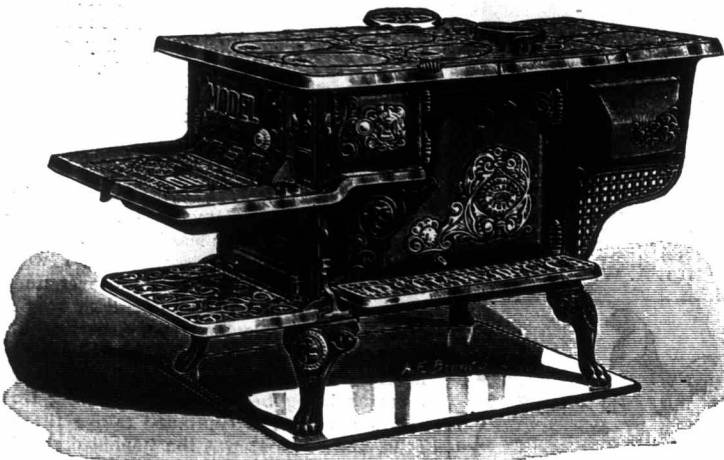
LEADER CHURN



YOU CAN'T AFFORD IT!
To LET A VALUABLE ANIMAL BECOME SICK
MAUD'S CONDITION POWDER AND LOSE FLESH.
HAS A WONDERFULLY GOOD EFFECT
IN BRINGING HORSES & CATTLE BACK TO CONDITION

We offer to mail for 10c. a regular 25c. package to anyone who wishes to try them before purchasing a supply.
DAVIS & LAWRENCE CO. (Ltd.), - MONTREAL.

OUR STOVES MUST BE GOOD



Or increasing sales for nearly 50 years could not have been accomplished.

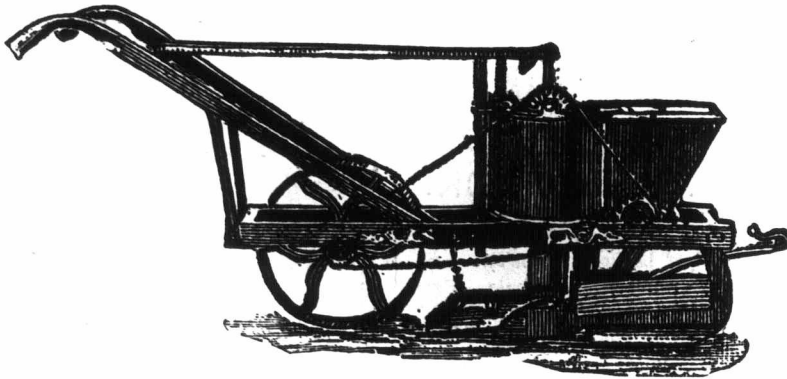
If our local dealer does not keep our stoves write our nearest House.

THE McCLARY MFG. CO.

7-y-om LONDON, TORONTO, MONTREAL, WINNIPEG, VANCOUVER.

QUEEN :: CORN :: PLANTER.

With or Without Fertilizer Distributor.

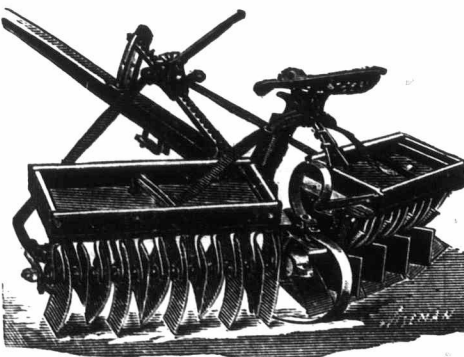


For Planting Field and Ensilage Corn, Beans, Peas, Beet, and Turnip Seeds in Hills, Drills or Checks. Weight, 150 lbs. Every Machine Guaranteed. Steel and Wood Frame Cultivators, the finest made. Steel Plows. Write for Catalogue.

W. F. VILAS, 8-c-o East Farnham, Que.

THE WORTMAN & WARD MANUFACTURING CO.'S SPADE HARROW

The Best Pulverizer! The Best Cultivator! And The Best Harrow Ever Made.



It has no equal for pulverizing hard clay lumps. It is beyond question the best machine for making a seed bed on inverted sod. For preparing fall plowing for spring seeding, especially in heavy clay soil, where the land is baked or become hard and difficult to move. For cutting up and pulverizing any kind of stubble land, either for the purpose of starting foul seeds or fitting for seeding. It is unquestionably far superior to anything in the market for cultivating any kind of land that is very difficult to subdue. Where every other tool has failed the Spade Harrow will be found to be just the machine needed. We also manufacture the "Daisy" Barrel Churn, Cistern, Well, Force and Wind Mill Pumps, Horse Hay Forks, McKay's Patent Combination Sling. Prices and terms given on application.

THE WORTMAN & WARD MFG. CO.
LONDON, 5-a-om ONTARIO.

Many Old **FARMS** require so much fertilizing that farms and gardens that produce a fine crop without this expense. The rich, loamy soil of Michigan Farms produces a fine crop of climate and freedom from cyclones, blizzards, together with good society, churches, etc., make Michigan Farms the best in the world. Write to me and I will tell you how to get the best farms on long time; low rate of interest.
O. M. BARNES, Land Commissioner, Lansing, Mich.
23-1-o

ADVERTISE IN THE ADVOCATE

Land for Everybody.

FREE GRANTS OF GOVERNMENT LAND. --:-- CHEAP RAILWAY LANDS FOR SALE ON EASY TERMS.
GOOD SOIL! PURE WATER!! AMPLE FUEL!!!

The construction of the Calgary and Edmonton Railway, and the Qu'Appelle, Long Lake and Saskatchewan Ry. has opened up for settlement two new districts of magnificent farming land, viz., that between the North and South Saskatchewan Rivers, and that between Calgary and Red Deer.

Full information concerning these districts, maps, pamphlets, etc., free. Apply to
OSLER, HAMMOND & NANTON,
LAND OFFICE, 381 Main St., WINNIPEG.
Calgary and Edmonton Railway, Qu'Appelle, Long Lake and Saskatchewan Railway Company. 17-1-y-om

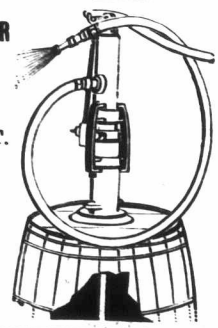
CRAWLING CATERPILLARS must go

USE THE
IDEAL SPRAYING PUMPS.

SIMPLE, RELIABLE, EFFECTIVE!
Reasonable in-Price
AGENTS WANTED.

GOOLD, SHAPLEY & MUIR COMPANY, LTD.,
BRANTFORD, - ONT.

Steel Wind Mills.
Bee Supplies.
Mention this paper.
9-b-o



FOR SALE THREE EXCELLENT FARMS.

No. 1 is "Walnut Hill," a first-class stock and grain farm in the County of Peel, near Toronto, contains 200 acres improved, excepting 15 acres of uncultured bush; soil, a very productive clay loam. Farm is well fenced in, fields of convenient size, with gates and lanes leading to the buildings, which are ample for all stock and crop requirements. There is a windmill pump and good water supply, large orchard of fine fruit, farm is thoroughly drained. There is a splendid brick residence, containing 12 rooms and every convenience. This farm joins the corporation of Streetsville, where there are the best railway and other facilities.

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THOROUGHLY WATERPROOF.

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For Transplanted Plants.
Stack Covers,
Built in sections. Diam. at bottom, 8 feet, by about 5 feet deep.

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Those machines are practically as good as new, they will skim eight hundred pounds of milk per hour EACH, and do it clean; one of them will do the milk for a creamery of 150 to 200 cows. Price low. For further particulars, address—
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The Best Made on Earth--SO SAID THE JUDGES ON VEHICLES AT THE
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VAN ALLEN'S PATENT GIANT ARMS

Throw all the load directly on the arms, and the arms are also unbreakable, because they are the best refined

MALLEABLE IRON.

Warranted as strong, more durable and lighter running than Steel Skeins. These Giant Arms completely revolutionize the building of wagons. Our 3-inch Malleable Giant Arm Wagon is

WARRANTED stronger, though less in price, than any ordinary 3¼ to 3½-inch cast-iron arm wagon, and our 2½-inch Malleable Giant Arm Wagon is warranted stronger than any ordinary 3-inch cast-iron arm wagon and less in price.

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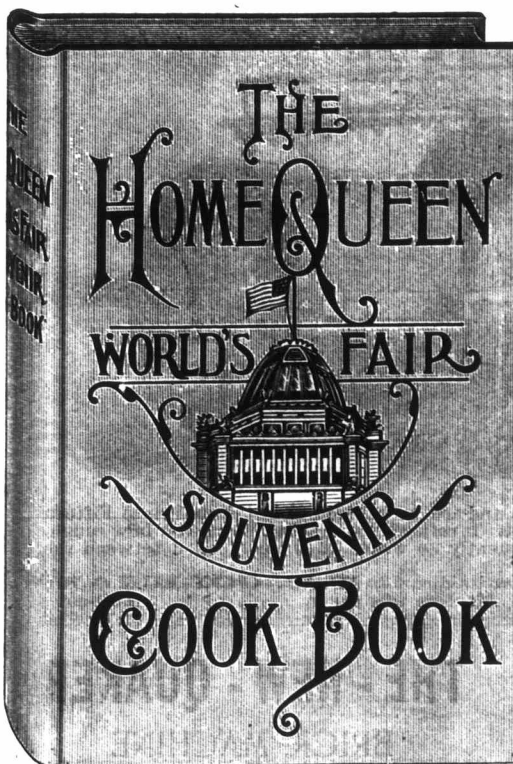
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WE WOULD DRAW our readers' attention to the very best cook book that the combined skill and ingenuity of 200 of America's foremost women could devise. It contains two thousand choice recipes, and almost every recipe is over the autograph signature of a lady manager or the wife of a governor, and representing the different States, and contains as well about 100 photogravure portraits of the lady managers and other choice contributors.

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Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Edmonton; Hon. M. H. Cochrane Compton, P. Q., or this office. JOHN SMITH, Brampton. 9-1-y-o

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With a specific chemical action, for the immediate cure of wounds and ulcerated sores on Horses, Cattle, Dogs, etc., such as Barb Wire Cuts, Collar and Saddle Galls, Cracked Heels, Frost Bites, Foot Rot, Rope Burns, Mallenders, Salenders, Broken Knees, Ring Worm, Scratches, Scalds, Cuts, Burns, and all foul and putrid sores of all descriptions. Recommended by the largest stock owners in Canada.

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Many farmers who had other kinds have taken them down and bought mine after seeing it work.

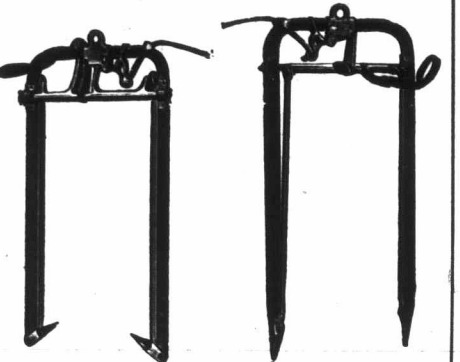
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While we do not recommend a Wood Track, we claim to have the latest improved and most reliable working Wood Track Car on the market.

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We guarantee every machine sold by us to do first-class work, and to unload one ton of hay in from three to five minutes, when properly handled and put up, and if it fails to do so, will be taken back and money refunded.



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It has been for years a part of our business to send our machine on trial to fair-minded responsible farmers living at remote distances, such machine to be put up by them and used until their harvesting be half done, when they are required to decide whether they will keep the apparatus or return it; if the latter, we will pay return freight charges.

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Established 1882.

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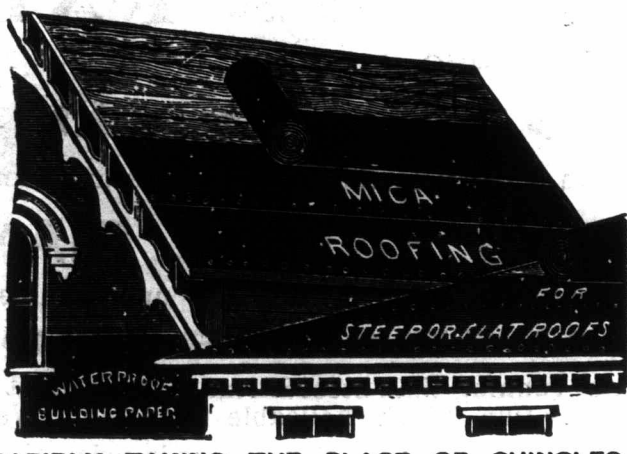
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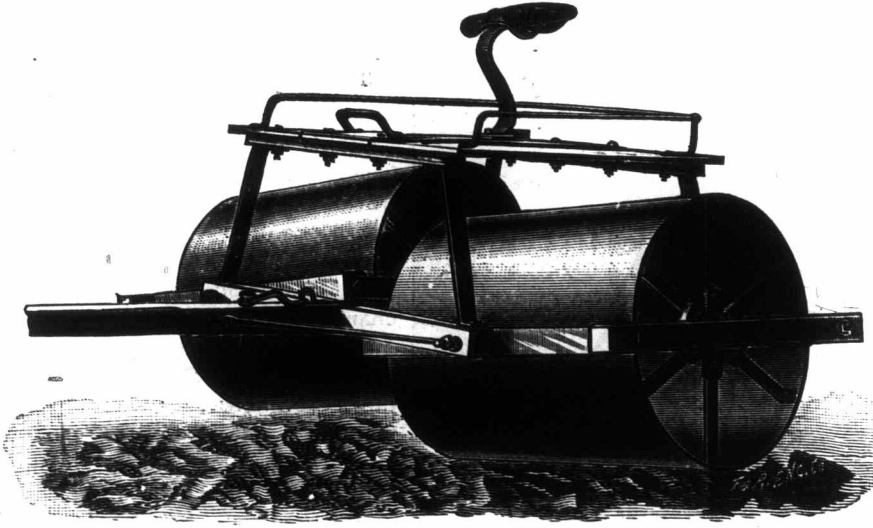
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A Steel Roller, the drums of which oscillate on pivots and adapt themselves to the unevenness of the ground.



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MAKES EITHER FIVE OR SIX BRICKS TO THE MOULD.

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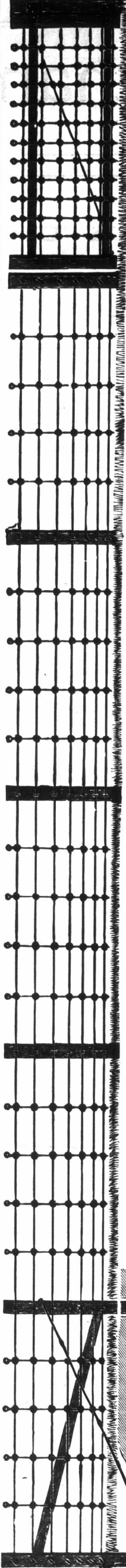
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MADE FOR Farms and Railroads.

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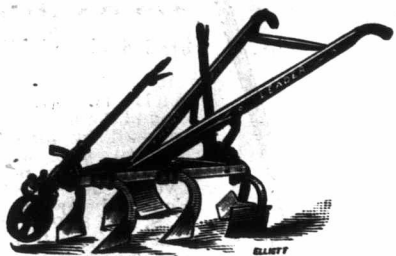
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We were
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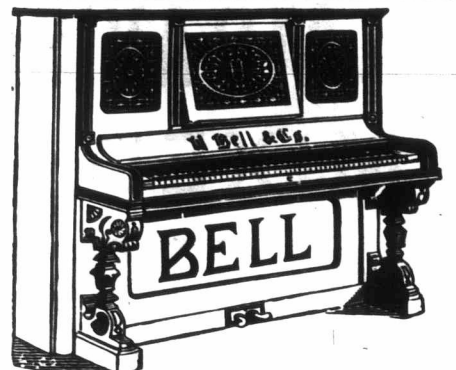
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PEAR and PLUM TREES away down.
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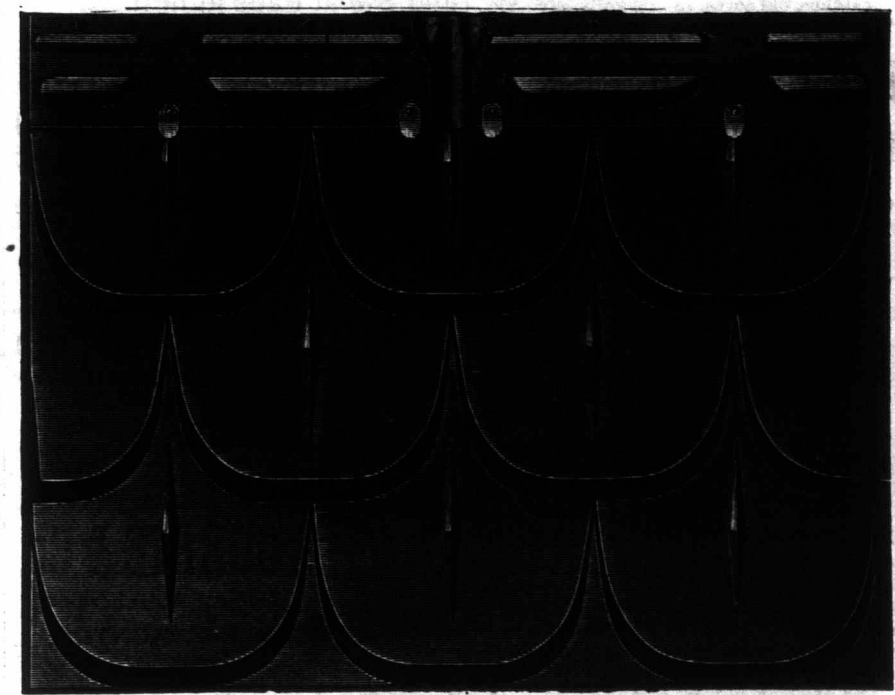
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THE NEW WAY

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For unloading hay and all kinds of loose grain.

Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Forks. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.

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Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

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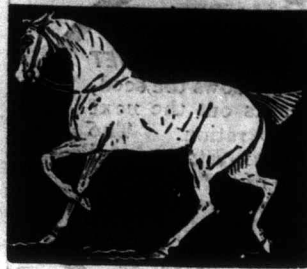
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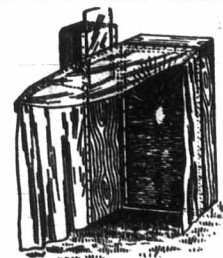
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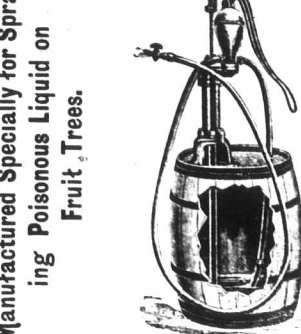
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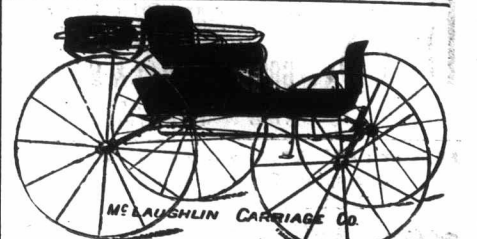
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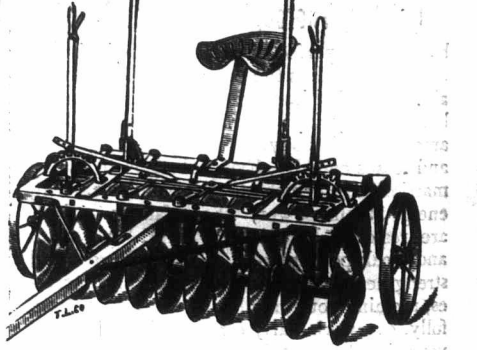


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