

**PAGES
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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

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No. 442.

EDITORIAL.

Observations from the Standpoint of the Stockman and Farmer on the Conduct of the Dominion Experimental Farms.

The recent discovery of tuberculosis among the cattle stock of the Central Experimental Farm at Ottawa, and the resignation of Mr. John Craig, the Horticulturist—second editions of such unfortunate circumstances there—revive public interest in that institution and bring to the front a subject which the FARMER'S ADVOCATE does not feel justified to pass over in silence. One would naturally suppose, in the light of the lengthy experience gained with the tuberculosis trouble five or six years ago, when a large number of the cattle were found affected and slaughtered and others experimented with, that care would have been taken by the authorities to prevent its reappearance and spread (providing they really considered it a serious matter) by applying the advice contained in Bulletin No. 20, issued in Feb., 1894, after three years' experience, and in the annual reports of 1894 and 1896, which cover the experience at the branch farms, where it was carried from the Central Farm. It was announced in Bulletin No. 20 that this work had confirmed the reliability of tuberculin as a means of diagnosis. Farmers were thus being enlightened as to the insidious nature of the disease, the means of prevention, detection, and general precautions. Surely the Government herd, right under the shadow of the capital, would have been closely watched, frequently examined, the new purchases of stock thoroughly tested, and the progress of the disease, if found to exist, noted and made the subject of study for the benefit of those who foot the bills! Fancy the feeling of surprise, to put it mildly, with which hard-working farmers and careful stockmen have read the announcement that on a recent test, out of 55 animals 26 were found diseased and two suspicious! Simultaneous with this discreditable news appeared another stirring bulletin from the Dominion Veterinarian, Dr. McEachran, warning farmers to watch their herds, not to depend on sight or sound, but apply the official tuberculin test, by which the ravages of the dread bacilli can be detected. What wonder the layman exclaims, "Physician, heal thyself," and is amazed that the medicine so strongly recommended to him was not sooner applied at headquarters, so that this second shocking example would have been avoided.

As far back as 1895 the FARMER'S ADVOCATE complained of the lack of attention to live stock husbandry at the Central Farm, noting the fact, for example, that throughout the entire system only two sheep (Dorsets), at Agassiz, B. C., were to be found. At some of the branch farms we have seen very inferior animals sent out from headquarters. So little attention, comparatively, has been given to this fundamental branch of Canadian agriculture that the Central Farm has lagged in the procession to such an extent as to become almost a back number instead of doing pioneer work. This is not strange when, with all its officials, the farm is yet practically destitute of an acknowledged agriculturist having practical knowledge of advanced methods of live stock husbandry in its various lines. The institution is thus lamentably weak at a vital point. Is it credible that a capable stockman, with a practiced eye and hand and the experience that the institution had already undergone, would have allowed affairs to drift into the deplorable state reported the other day, when, as Hon. Mr. Fisher, the new Minister of Agriculture, tells us, the existence of the disease was discovered through the herdsman accidentally killing a bull by giving it saltpetre instead of Glauber's salts! Sixteen of the reacting animals were condemned

to slaughter and ten reserved for experiment, most of them under the direction of Dr. McEachran at Montreal, where Dr. Adami, of McGill University, will conduct bacteriological investigations with the milk of these cows, which will also be fed to pigs, calves, etc., to determine its effects. A number of the animals the Minister has reserved for curative treatment, so that the truths shown in connection with this disease may be properly exemplified to the general advantage without inaugurating a newspaper "scare" or a crusade by the professional cow-killer.

Under Hon. Mr. Fisher as Minister we look for better things at these institutions. It is satisfactory to note that the recent purchases of pure-bred stock (Guernseys) for the Central and Nappan Farms are reported perfectly sound. The remedy for past occurrences is not, we submit, a high-flying, fat-salaried live stock commissioner, industriously boomed in certain quarters. The fact that elaborately-prepared petitions were scattered broadcast through the country, the recipients being urged to sign and send them in to the Minister of Agriculture, need not be taken as an indication that there was any "long-felt" need for the creation of such an office. It was a small compliment to the Minister, himself a live stock-man, to meet him at the outset of his work with such a proposal. He has shown commendable enterprise and zeal for trade extension of farm products and cold storage transportation. This, with the raising of the cattle quarantine and minor reforms, is a fair share of work for the comparatively short period of his administration. The pure-bred live stock trade of Canada is now in a decidedly healthy condition, and safe in the hands of the intelligent officers and members of the various breeders' associations, who are not pining for a live stock commissioner to sacrifice himself on their behalf at the Canadian Capital City.

The management of the Experimental Farms deserves, and will doubtless receive, Hon. Mr. Fisher's careful consideration, particularly in the direction indicated above. We are free to confess our admiration for the many eminent attainments of Dr. Saunders, the Director, an able man of the highest integrity, with fine executive ability, devoting infinite care to his work; an enthusiast and a success in his many specialties, such as horticulture, insect life, cross-fertilization, chemistry, etc., and deserving of praise for his success in making the wilderness of drifting sand selected for the Central Farm to blossom as a rose; but, withal, we feel sure he would be the last man who would claim to know it all or desire to do it all, but would gladly be relieved of the responsibility of actively directing the department of farm management and live stock.

Most of the branch farms have done good work in the provinces in which they are located. The Manitoba Station at Brandon, under the able superintendence of Mr. Bedford, who has developed very marked capabilities, making the farm distinctly useful to the Province in the testing of fruits, trees, grains, grasses, and various methods of cultivation, etc., and has, through the agricultural press and in scores of other ways, kept himself in touch with the farmer. Mr. Mackay, the superintendent at Indian Head, a man of many practical qualifications and rare good judgment, is doing grand work in many lines, especially in arboriculture and the testing of grains and seeds most applicable to Territorial conditions, stock-keeping, the production of fodder crops, etc. Mr. Sharpe, at Agassiz, is doing splendid work in fruit-growing and orchard culture, but has little encouragement or hope for success in experiments with grain or stock on a location the selection of which was about as unfortunate as that of the Central Farm, having reference to its suitability for general

farming. The Station at Nappan, N. S., has been unfortunate in its management and has made an indifferent record, but from the late appointment of Mr. Robertson to the superintendency, a practical stockman and dairyman, and a successful farmer, we may reasonably hope for an improvement in the not distant future.

The farmers of the Western Provinces are anxious that the Minister of Agriculture should ere long personally inspect those important portions of the Dominion and look into the working of the Experiment Stations, but are making due allowance for the multiplicity of his duties, and hoping to see him in the West during the coming year.

In the meantime the Central Farm is easily under his eye, and the public feel that there is room for improvement in the management of the stock and the farm proper, and that a thorough investigation will probably indicate the need of giving greater scope to specialists in the work of their departments, as well as bringing those receiving less attention in the past more into harmony with the methods of advanced agriculture which the times demand at such institutions.

A Furore in the Western Hog Camp.

The United States Department of Agriculture, under Secretary Wilson, has stirred up a hornet's nest among the Western States hog breeders and feeders. Envious eyes have been cast at Canada's high-class trade, and in order to get a share of the fancy British demand, literature has been scattered westward, favoring the bacon hog and discounting Western wholesale methods and corn feeding.

The *Swine Breeders' Journal* is mad and merry by turns over the suggestion of "15-cent bacon from Tamworths without corn!"—a joke good enough for Puck, but the "S. J." can see no other good use for it. The *Breeders' Gazette*, a strong Wilson organ, favors a middle course, holding their present low-grade trade in Britain and capturing a slice of the 15-cent business as well. But the *Swine Breeders' Journal* will have none of it, and concludes with this bit of sarcasm:

"Corn being so cheap to raise, will not be such a great loss when farmers are producing a Tamworth streak of lean and fat bacon from a combination of autumn zephyrs, hoar frosts and beech-nuts. The farmers of this country should feel gratified at the attention they are receiving from their Agricultural Department. The insinuations that the past efforts of farmer, breeder and bacon-raiser have been failures should not annoy them any. But they should carefully observe all the instructions from the Department. Introduce the razor-back: Try the Tamworth: Try a cross of yellow dog: Discard corn and introduce, outside of Kansas, the wind pump, if it is necessary, to down Denmark in bacon-raising." Whew!

After ridiculing the idea of the great American Republic catering to the taste of a "few rich people in England," considering it more profitable to cater to the poor of that country because they consume far greater quantities, the eagle reaches its highest flight in the following sentence: "It has been the observation of the *Journal* that the farther away the American people get from English methods in farming, from English breeds and strains of hogs, the greater their success."

Elsewhere we give vigorous, readable and "meaty" chapters on this highly important subject to the Canadian farmer, from the pens of the president of the Wm. Davies Packing Company, and Mr. Fearman, of Hamilton, who touch nearly every phase of the question from the standpoint of the packer, dealer and exporter.

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THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

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Bear in mind, the balance of this year, our superb 1897 Christmas Number (about which you will hear more in next issue), and all of 1898 for \$1. No such quantity of high-class, practical and really helpful matter can be got for so small an outlay in any other way.

Do people appreciate the FARMER'S ADVOCATE on the ground of actual merit? From scores of similar references recently received we select a few:

"Have taken it twenty years. An excellent farming paper, full of valuable information."—David Robertson, Middlesex Co., Ont.

"Holds its own against all others."—C. A. Cass, L'Orignal, P. Q.

"Every farmer should take and read the FARMER'S ADVOCATE thoroughly."—Alfred Judd, Simcoe Co., Ont.

"Glad to see you still lead."—G. C. Caston, Experiment Fruit Station, Simcoe Co., Ont.

"Times will indeed be hard in the future if I cannot spare a dollar for the FARMER'S ADVOCATE."—Arch. D. Kerr, Huron Co., Ont.

The Farmers' Thanksgiving.

The recurrence of our national Thanksgiving Day will be full of interest to the agriculturist this year. If any class of the people have more cause than another to be thankful for the blessings of the year, it is the farmers. Last year times were hard, as they had been for several years previously. Prices were low and crops short; but even then the thoughtful farmer could find much cause for gratitude in the review of the year, inasmuch as things were not nearly so bad as they might have been. But this year he has experienced the upward turn in the times which we predicted a year ago, and with good crops and improved prices for most articles of farm produce and for all classes of stock a feeling of courage, confidence, and hope is inspired which wakens pleasing sensations in the mind, and a cheerful spirit prevails where a year ago the discouragement which comes from hope deferred was depressing the heart of many a struggling farmer.

The blessing of national peace, at home and in our relations with our neighbors, continues to be ours to enjoy, and this is always cause for thankfulness, more than we are prone to realize and which we fail to appreciate at its true value to the individual, to homes, and to society. The health of the people generally has been good, epidemic diseases have been happily averted, no destructive storms of any considerable magnitude have been experienced, and only in two or three limited districts have forest and prairie fires brought disaster and sorrow to the homes of sufferers, and to these we tender our sincerest sympathy. The harvest in nearly if not all the provinces has been fully an average one, if not more, while in nearly the whole of Western Ontario fall wheat was an abundant crop, and in Manitoba and the Northwest, wheat, besides being above the average in yield, was secured in first-class condition and ranks uniformly high in quality. The improved prices prevailing for wheat at this time last year, and which we ventured to predict would probably be maintained, being founded on the bedrock of demand growing out of a short supply, have been realized and are at present fully up to those paid at the corresponding date of last year, while the prospect is that the good prices now prevailing will continue for the coming year.

The live stock trade has been good, the demand both for breeding and feeding cattle having been active at improved prices, while the export trade has been the largest in its history and the returns to the farmer and feeder very satisfactory. The demand, principally from the United States, for breeding sheep has been extraordinary; and while prices have not ruled high, a very large number have changed hands, and at prices considerably in advance of those of last year. The market for hogs has been steady at good paying prices all through the year, and farmers have benefited by this more than for many years previously. The season has been unusually favorable for dairying, both on account of the pastures remaining fresh through the summer months and the steady demand for cheese at good paying prices. The butter market has ruled low, but is improving, and the prospect is good for the future since the arrangements for shipment in cold storage to distant markets are nearly completed and will probably bring good results during the coming year. The fruit crop has probably on the whole been an average one, and the specialists in this line have had a good year. The apple crop, the farmer's stand-by, has been deficient in many districts, while in others it has been very fair, and the prices obtained have made it very profitable. Small fruits were abundant, and the people find themselves on the whole well supplied. The barns of the farmers are full of good fodder for winter feeding, and the animals will enjoy what, in many sections, they have not in the last two years, a good bedding of straw, which is abundant. With peace and plenty prevailing, to complain would be a shame, and gratitude to a beneficent Providence should be the dominant sentiment.

Really good live stock may cost a trifle more at the outset, but when the satisfaction of seeing it is felt, and the handsome returns for food consumed are realized, the wonder is why so many waste their time with scrub sorts.

Late chickens are always a doubtful investment. The meat they will put on in cold weather is worth less than the value of the eggs that ought to be laid in the same time by an equal number of early pullets. Only the man who cannot make hens lay in winter should bother with fall chickens. Winter growth is slow, costly growth, and will not pay at all unless a good price is obtained for the product.

NEEDS OF THE CANADIAN BACON TRADE

Important Letter from the William Davies Packing Company.

SUPPLIES OF LIVE HOGS—FUTURE PROSPECTS—OLD-FASHIONED STUFF NOT WANTED—POINTS ON BREEDING AND FEEDING FROM THE PACKER'S STANDPOINT.

To the Editor FARMER'S ADVOCATE:

SIR,—You ask first, "Do you find supplies of live hogs sufficiently numerous and regular throughout the year?" We reply, they are not sufficiently numerous if the supply was regular and constant; but it is "now a feast and then a famine." The deliveries in October, November, December, and April and May are about double any other five months in the year. This is the time when, as a rule, bacon is cheapest in England, and the very large supplies depress prices to a ruinous point to the exporter of bacon, and to a disappointing price for hogs to the producer. We know some farmers who arrange to have their hogs ready for sale in July and August when prices are high; and mark you, they are high then, not so much because of scarcity as because that is the time when the English people eat bacon and hams. Canadian farmers are now standing in their own light by all having them for sale at once. Canadian bacon is making a name for itself, and we think will before very long take the place alongside Danish, which will mean more to Canadian farmers than they have any idea of; but that position can only be attained and kept by our having a regular supply. During September, the agents for Canadian bacon in England could not supply their customers' wants. This led to a good deal of heartburning and dissatisfaction. We paid in August and September 5½c. and 6c. for prime singers, and are now paying 4½c. At this latter price we shall be more than pleased if we can get out without serious loss. Doubtless some farmers will say the spring pigs are ready in October, and the fall pigs are ready in April and May; but these things can very largely be controlled. Of course it will require attention and care, but the extra price obtained will pay for that.

2nd. You ask, "Would you say that the prospective demand will warrant increasing stocks beyond what they have been during the past year?" Our reply is, that while we would not advise anyone to rush heedlessly into hog raising and feeding, we believe that a steady increase will prove satisfactory to the producer, and will be necessary to bacon-curers doing a successful export business.

3rd. Replying to your question, "What points of difference, if any, are there between Canadian and British or foreign trade that have a bearing on the work of the breeders and feeders?" The excellent mild cured bacon that is now manufactured is alike pleasing to English people and Canadians, and for town and city trade has entirely driven out the old-fashioned stuff that was as salt as Lot's wife and warranted to keep for seven years. It was fit to go to the Klondyke. Nowadays the cities and towns demand and even farmers buy this mild cured meat, but there is a demand for a considerable quantity in Canada of coarser meat for mess pork and long, clear bacon. This is used in the back country and by contractors for feeding the hands who are building railways and such work. For this purpose heavy hogs are required (also for mess pork for lumbermen); but as this sells at a low price, of course the hogs bring only a proportionate figure. The Canadian hog is particularly adapted for a fine class of English trade in London and the Provinces. Therefore, it would seem to be to the interest of producers that they should raise the kind of hogs suitable for the export business. We are pleased to say Canadian farmers have, on the whole, responded very handsomely to the earnest suggestions of the export packers, and have bred the right style of pigs, but more attention is required to feeding. The majority err in keeping them shut up and feeding too much grain or meal; they should, till four months old, have plenty of exercise and rough, coarse food. This develops them; the former plan stunts them. We want them long and fleshy.

As remarked above, Canadian farmers are doing well, but in their haste to market their hogs are forcing them too rapidly, shutting them up and feeding strong food from the start. The consequence is while there is only a moderate showing of fat all down the back, there is too much fat all through the side. This is a very serious fault, and will lower the character of our bacon in England, and we are in great danger of losing the ground already won. This really must have the earnest attention of farmers. Let the pigs have the run of a large yard or small field with a shelter. It is impossible to overrate the importance of this. We have been paying 1c. to 2c. per lb live weight for Canadian hogs in excess of American, and the difference can only be maintained by vigilance and close attention to the points we have named. Many farmers suppose because we ask for lean hogs we want them thin, and that scallwags fill the bill—a grievous mistake. Fed as we have described, and finished off with meal from mixed grain to weigh 160 to 180 lbs. alive, they will fill the bill to perfection. But here we must warn farmers not to feed them too fat; if they do, they will not bring within half cent of No. 1, and perhaps even a greater difference. The buyers of Canadian Wiltshire bacon

in England are willing to pay a good price for the right article, and discriminate very severely against the wrong. For months past, with the exception of the last few weeks, there has been a discrimination against fat sides of this character, running from 8s. to 12s. per 112 lbs. This means that, given two hogs out of one pen, one running stout and thick with fat on the back, and the other somewhat lean and fleshy, the product from the fat hog has sold at from 2c. to 2½c. per lb. less on the English market than the product of the best.

4th. Q.—Having in view the probable tendencies of the most profitable market demand of the next few seasons, what points in breeding, such as character of side, back, belly, ham and shoulders, are deserving of special attention?

Regarding the most profitable market demands of the next few seasons, it is likely to be for long, lean sides, and they can only be made from long, lean hogs, and the animal when standing, or hanging after killing, should hardly show where the shoulder ends and the ham begins. Thick shoulders are an abomination, and thick, unwieldy hams would be objectionable, but we have very little trouble from the latter. We are of opinion a good deal of nonsense has been said and written about the desirability of thick hams. Of course, with the greatest care in breeding, there will occasionally turn up an animal of abnormal shape; but as a rule, if a pig is well-bred his hams will be all right. We have often seen a hog with a heavy, thick shoulder and a miserably thin belly and flank, and such an animal is objectionable and unprofitable in the highest degree. At the last Markham fair we offered a money prize for the best pen of bacon hogs, and our foreman was the sole judge. They afterwards came to our bacon factory, and they were a pleasure to look at. A line stretched along the back and sides would have touched along the whole length. Thick bellies are very desirable. We are a little diffident in advising how this can be attained; but that it can be is certain, because we get thousands of that description.

5th. "Would you emphasize any points useful in regard to feeding, age when sufficiently matured, pure-bred or cross-bred, etc.?"

In replying to this question, we will take up the last point first, whether we prefer pure-bred or cross-bred. We prefer Tamworths, pure-bred, but don't want pure-bred Yorkshires on any terms. The hogs of which we spoke so admiringly were cross-bred Yorkshires, and that is the prevailing style in Ontario now, and we want nothing better than pure-bred Tamworths or cross-bred Yorkshires. Regarding feeding, there can be no doubt that a mixture of meal with dairy slops makes the sweetest and richest pork. Peas alone have a tendency to make the meat, both fat and lean, rather hard. Lastly, as to the age at which they are sufficiently mature for our purpose, that will depend very much on the way they are cared for, but with proper attention they should be in good shape at six to eight months old. In the former part of this letter we have laid stress on the young pigs getting plenty of exercise, at the same time plenty of coarse food, so that they will grow into long, rangy stores.

Far too many pigs are sent to market weighing only 130 to 140 lbs., and many of them thin. They are a nuisance to a pork packer and often entail a serious loss, and drovers should not buy them. In one word, pigs weighing 120 to 140 lbs. are very undesirable. They will be discriminated against more severely in the future. The future of the bacon trade is in the hands of farmers as much as in the hands of packers; hence we have a right to ask for co-operation.

Hoping the above will be of service,

Yours truly, THE WM. DAVIES CO., Limited.
Toronto, Nov. 4th.

P. S.—Since writing the foregoing the expected decline in England has come. It is worse than a decline—it is a crash; and this simply because, as we have said in our letter, farmers will persist in giving us hogs so irregularly.

An investigation by Prof. Duggar, of the Cornell Experiment Station, showed that certain mold on butter was due to the use of improperly seasoned or young, porous wood in making tubs, or tubs stored in a damp place before using. Trouble may also arise from inferior parchment paper used in lining the tubs.

The Views of a Hamilton Packer.

To the EDITOR FARMER'S ADVOCATE:

SIR,—1st. This is the first year in which we have found the number of hogs sufficiently numerous for our wants, and even this year they have not been regularly so. The only way that we could suggest to remedy this, is for the farmers and breeders of hogs to have them ready to market at different seasons of the year, instead of their having them come in at one time; for instance, during the last few weeks there has been a large supply of hogs, while at some times during the summer it has been difficult to get them. The supply is, however, a great deal better than it has been in our experience.

2nd. We should say that the demand for Canadian meats would warrant an increasing supply of hogs.

3rd. There is now very little difference between the style of hog wanted for the English trade and that wanted for the bulk of the Canadian trade. The only difference is that the lumber and mining trade of Canada demands a larger and fatter hog than is wanted for the English trade, but this is now not nearly so large as it has been in former years.

4th. The English trade and the bulk of the Canadian trade demands a hog weighing from 150 to 200 lbs., lengthy, lean, and with small head and shoulders.

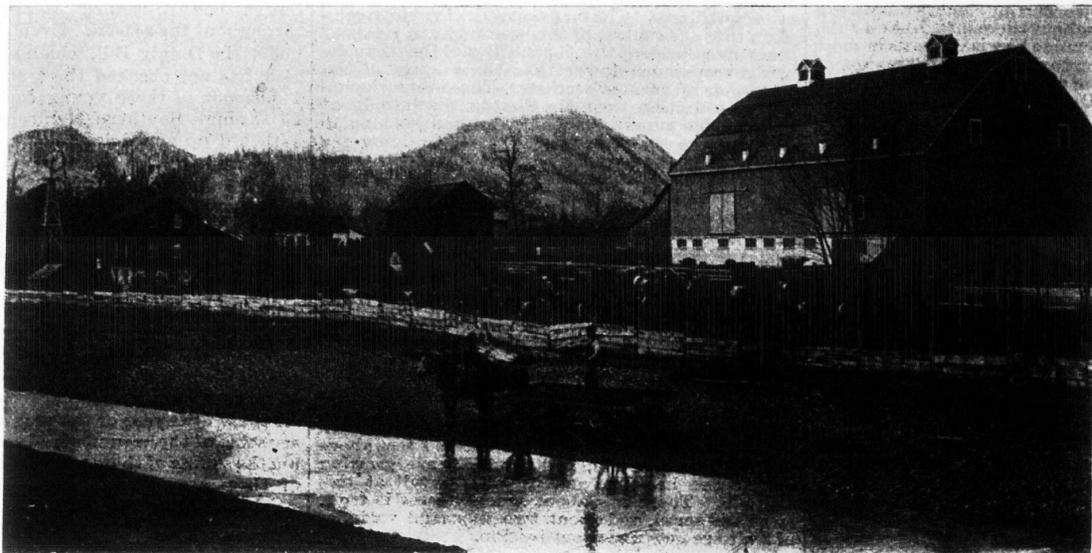
5th. We would make no suggestions regarding the breed of hog, except that it should be one possessing the qualities which we have already mentioned. We find of the present breeds that the Tamworth and Yorkshire have these points, but there are other breeds which are furnishing the kind of hog wanted, and we find the bulk of our supplies come from the cross-breeds.

Yours truly, F. W. FEARMAN.
Hamilton, Ont.

Woods, set with ideal islands, the summer resort for weary Winnipeggers, passes through the kaleidoscope on our left, and turning to the right we see the massive granite flouring mills of the Lake of the Woods Milling Company, grinding day and night fine flour for the trade east and west. A breathing spell of two hours at Winnipeg, and the iron horse pulls us out over the Prairie Province, where, the harvest home and the threshing done, the farmers are plowing long furrows in preparation for the spring seeding and the coming crops, cogitating, no doubt, on the satisfactory price realized for the last, and the bright prospect for the future. The Manitoba farmer heaves a sigh of relief, feels that he has been helped over a hard place by the upward turn of the markets, and is now "on easy street." The long line of elevators at the stations, filled to the roofs, give the key to the situation, and the Western farmer smiles at the thought that he is getting as much for his wheat as his Ontario competitor, whose crop costs him so much more to produce. The long haul does not seem to count, though, as a matter of fact, it does, but it is *quality* that wins for the Westerner.

Rolling over the prairies of the Northwest Territories day after day reminds one of sailing across the sea, where the outlook is limited only by the horizon. One can form no conception of the vastness of the country till he has gone over it, and a run through by rail gives but a very imperfect conception, for one sees only the length of it, while the width thereof seems bounded by the extent of his vision. The rolling prairie country would be beautiful but for its bareness of trees, which gives it a

lonely aspect that becomes monotonous, and one would wonder what it was good for if it were not for the full trains of fat bullocks bound for the British markets which we passed side-tracked at the stations along the road, which remind us of the existence of the ranches of Southern Alberta, where high-class beef is made from the buffalo grass, which costs nothing to produce, but which comes to him who patiently waits; while a band of sheep here and there on the north side of



"EDEN BANK" FARM BUILDINGS OF A. C. WELLS & SON, CHILLIWACK, BRITISH COLUMBIA.

A Trip to the Pacific Coast.

[EDITORIAL CORRESPONDENCE.]

A trip to the Coast in October is an enviable treat, and one which marks an era in the lifetime of one who may not have the privilege of repeating it. Leaving Toronto at midday, the remaining hours of daylight give us glimpses of the fertile fields of the fine old counties of York and Simcoe, fair samples of the best of the farm lands of the banner Province, and the evening shades find us skirting the lovely lakes of the Muskoka district. Retiring to our berths at North Bay, we are rocked to sleep to the tune of Westward Ho! Waking, the outlook reveals the sunbeams shimmering on the shores of Lake Superior, studded with islands, evergreen, while our road runs over rocky ridges on a rugged shore. The land side here has no charms for an agriculturist, but the man intent on mining associates Sudbury with copper and nickel, and Michipicoten with gold, and dreams of the mighty possibilities bound up in these rocky fastnesses. Bedtime finds us under the shadows of the mammoth wheat elevators at Fort William, filled to overflowing with golden grain from the farms of Manitoba. We waken in the Wabigoon district, and sipping our coffee in the dining car, view from the window the pioneer farm at Dryden, and marvel at the sight of nearly a hundred houses where two years ago we saw but two log cabins and an unfinished barn. Here are indisputable indications of immigration, a country rapidly filling up and a home market growing as the result of the rush to the mines in the Rainy River district hard by. Rat Portage, beautifully situated on the Lake of the

the track indicates that the wool-grower has claimed the ground where the wolves used to hold carnival, and heaps of whitened bones at the stations tell of the departure of the buffalo to the happy hunting-grounds, where his old-time enemy, the Indian, is fast following him, and is seldom seen where he used to assert himself. The great bands of horses that constitute another feature of the marvellous ranching country did not come within range of our vision.

IN THE ROCKIES.

Sunrise on the fourth day finds us at the foothills of the Rockies, humming—
"Morn amid the mountains,
Lovely solitude,
Gushing streams and fountains
Murmur God is good."

We shall make no attempt at the impossible task of describing the matchless mountain scenery passing in panoramic view for thirty-six hours, presenting a continuous variation of towering monuments of mighty convulsions in nature in the long ago, some of them snow-capped the year round and having their heads in the clouds and their bodies clad with evergreen, interspersed at this season with variegated autumn-tinted leaves of the annuals which go and come to give variety. These, with the succession of glittering glaciers, gushing fountains, foaming cascades and thundering canyons which come into view as the train winds its serpentine way between the mountains, must be seen to be appreciated, and they are never tiresome and never disappointing. There is no monotony here, for the scene is ever changing and always beautiful.

THE AGRICULTURE OF BRITISH COLUMBIA.

Much has been said and written, and justly, of the wonderful mineral resources of British Colum-

bia, in which the people have full faith, but little has been said of its agricultural capabilities, and the tourist passing through on the railway line, which follows the course of least resistance, wonders where the farming land is, and is disposed to forgive the statesman who described the Province as "a sea of mountains"; but the enthusiastic settler who is in love with his country is not so willing to forgive or forget it, but reminds you that the presence of large mountains implies the existence of large valleys, and that distance here is deceiving, which is true, for what seems to be a mile across a valley is really five or more. It is not easy, however, for the most charitably disposed visitor to imagine that the extent of the valleys is in anything like equal proportions to the mountains. That there are large and rich valleys of farming land is, however, evident from the display of stock, grain, vegetables and fruit at the exhibitions and on the markets. Vancouver Island gives evidence of excellent agricultural land, where fruit and cattle thrive. There are grist mills at Vernon, Enderby, and elsewhere. Over 150,000 bushels of wheat have been raised round about Vernon, on the bottoms and uplands resembling rolling prairies. One farmer in Chilliwack assured us he had 3,000 bushels of wheat in his granary, and it was dry and hard. Wheat growing, however, is limited, the principal industries being dairying, fruit growing, and poultry raising, for all which products there is an excellent home market, and large quantities are shipped to Manitoba.

The Fraser River Valley, extending for ninety miles from its mouth, has an average width of twelve miles, and the greater part of this area is composed of rich agricultural land, capable of cultivation well up to the foothills, while fruit in many places can be successfully grown on the plateaus or benches of the mountains, while in the interior are extensive prairie lands, suitable for ranching purposes, on which thousands of cattle are successfully fattened, producing the finest quality of beef in the world, the climate admitting of their grazing throughout the winter. As a rule, though, it has been found to be wise here, as in most ranching districts, to provide a certain amount of prairie hay to meet the contingency of a severe and protracted storm. One of the best farming districts is

THE CHILLIWACK VALLEY.

with an area of about nine by fourteen miles, one of the richest agricultural districts in the Province, the soil being alluvial deposit of great depth and fertility. Here heavy crops of cereals are grown, wheat often averaging forty bushels and oats one hundred bushels per acre, while clover yields three to four tons per acre, and is frequently cut twice in the season and sometimes three times, and permanent meadows are a complete success. We were shown a meadow which had been over twenty years standing without ever being broken up, which yielded three and a half tons per acre this year and has more clover than any other kind of grass in it now, the clover gaining from year to year instead of running out. Immense crops of roots are grown here, and fruit in abundance, apples, pears, plums, prunes, and cherries all yielding largely. Of the latter we saw trees of the English varieties thirty feet in height and over two feet in diameter, some of which have yielded over five hundred pounds of cherries in one season. The display of fruit at the exhibition was equal in most classes to the best that can be made in Eastern Canada.

DAIRYING

is one of the leading industries in the farming districts, to which the climate and all conditions are peculiarly favorable, the winter being mild and the growth of grass luxuriant. In addition to the many private dairies, there are five fully equipped creameries at different points in the Province, which are well patronized by the farmers, some of whom have cream separators on their farms, while at many points are skimming stations, from which the cream is brought to the creameries, which are operated for the most part by joint stock companies, and are giving good satisfaction to patrons, creamery butter at the time of our visit bringing 27½ cents per pound. One of these, the

EDEN BANK CREAMERY,

on the farm of Messrs. A. C. Wells & Son, Chilliwack, it was our privilege to visit. This creamery was built and equipped by the Messrs. Wells as a private enterprise, and as such operated with success for some time, its sphere having since been enlarged by merging it into a joint stock company. It is supplied with a No. 1 separator having a capacity of 300 gallons per hour, and the churn a capacity of 400 lbs. butter. This creamery is complete, having steam power, and is conducted by Mr. Smith, who received his final training at the dairy school of the Agricultural College, Guelph, Ont. The younger Mr. Wells had also the benefit of two terms at that institution, and the knowledge acquired has stood him in good stead in the operations of the home farm. The Eden Bank farm and steading are excelled by few in the Dominion in culture and appointments, the dimensions of the barn being 120 by 68 feet, with basement stabling the full size, high, light and dry, capable of stabling 100 head of cattle comfortably, the whole building being well finished and brightly painted; the basement walls being double boarded with clear matched lumber, and standing on a solid stone foundation. Mr. A. C. Wells is an enterprising and influential man in the community, being reeve of the municipality, taking a leading part in many

public enterprises for the public good, widely read, and up to date in his methods of farming. In this neighborhood are found the first and second prize herds of Jerseys at the Provincial Exhibition, the former owned by Mr. A. C. Street, the latter by Mr. J. S. Smith, at the head of whose herd stands the champion bull of the breed at the same fair.

Other valleys of greater or less extent are equally fruitful as farming lands, among which is the Delta, which is highly spoken of, and from which came much of the best stock, fruit, and dairy produce at the fair. The Okanagan Valley is a veritable earthly paradise. Near Kelowna, Lord Aberdeen has a large fruit farm, and also a cattle ranch of 13,000 acres at Vernon, where Mr. Ellis has 50,000 acres in ranches, with 20,000 cattle. A settler at Trout Creek, on Okanagan Lake, sent 2,000 baskets of peaches to Boundary Creek mines this summer, which netted him one dollar a basket. The day we passed down the steamer Aberdeen took in six carloads of fruit and vegetables at Kelowna for Boundary Creek; going back next day we had seven tons for Manitoba. Extensive stock ranches are also in evidence at Kamloops, in the Cariboo district, and at other points in the interior.

THE EXPERIMENTAL FARM AT AGASSIZ

is conveniently situated close to the station, seventy miles east of Vancouver, on the main line of the C. P. R., in the Fraser River Valley, surrounded on three sides by mountains which one would judge would serve as a protection to vegetation, but which we are told do not answer that purpose so fully as one would expect, the north winds sweeping down at times with damaging effect upon fruit trees and arbor plants. Indeed, convenience of location is about the only redeeming feature in the selection of the site of this station, as the soil is infertile, being evidently composed principally of a deposit of river gravel and sand, not well suited to the growth of grain or grass, and only capable of growing fruit trees successfully by constantly repeated doses of manure, clover and other fertilizers. The farmers of the Province complain that the reports of this station as to yields of grain misrepresent the capabilities of the country, being very much lower than the average of the best lands in various sections. These remarks imply no reflection upon Mr. Sharpe, the intelligent and capable superintendent, who had nothing to do with the selection, and is probably doing the best work possible under adverse conditions. He is an enthusiast, and has done splendid service in the line of horticulture, which, being one of the leading industries of the Province, is of peculiar interest to its people. The apple, pear, plum and cherry orchards are completely successful, bearing heavily of high-class fruit. Apricots, prunes, figs, peaches and grapes are also successfully grown, while good work is being done in the line of arbor culture and the testing of hedge plants. An interesting experiment is also being conducted in the line of mountain-side orchards with very satisfactory results, considerable plantations (about fifteen acres) of apple, pear, peach, plum and cherry trees having been made upon four benches of the mountain at different elevations, the highest being one thousand feet above the level of the farm, and the trees are growing strong and healthy, and promising well at this altitude. There are about seventy acres in fruit, large and small, and about two thousand varieties of fruit are now under cultivation.

MINERAL AND TIMBER RESOURCES.

The vast mineral wealth of British Columbia is almost fabulous, yet it is undoubted, the most astute authorities on mining having full faith in the existence of immense stores of gold, silver, copper, and coal, which only await development, and which will be made largely available on the completion of the Crow's Nest Railway, which is being rapidly constructed, and which, when completed as contemplated, will shorten the road to the Coast by nearly three hundred miles.

Immense stores of timber of high-class quality are available, or will be as new railroads are opened up. Great forests of giant trees of cedar and fir, 4 to 10 feet in diameter, and running up to a height of 150 to 200 feet, clear of knots nearly to the top, cover the mountain sides over vast areas; and mammoth saw mills at many points are sizing timber to 3 feet square and 100 feet long, and cutting planks and deal boards for shipment to the ends of the earth. The British Admiralty test gives British Columbia fir more than twice the strength of Eastern pine and one-third more than Eastern green oak, and it gains immensely with age as compared with oak. An excellent authority has ventured the assertion that there is timber enough in British Columbia to put farm buildings on every quarter-section in the Northwest Territory and still have millions of acres to spare, enough to supply the Territories with all the lumber they will require for 1,000 years, and an equally safe authority estimates that there is coal enough in the mountains to supply the world for as many years.

THE SALMON INDUSTRY.

This season 840,000 cases of salmon—18 lbs. to the case—have been packed on the Fraser. Averaging these at \$3.50 per case, this year's pack is worth nearly \$3,000,000, and this represents only the sockeye harvest for 1897. With the northern pack added to this, the grand total this year will be over a million cases, and the value three and a half millions for a crop that swims up to the very doors of the canneries. There are forty-five canneries on

the Fraser alone. Prices are depressed, yet new canneries are being erected.

Automatic can factories at Westminster are operating on a large scale. The tin plate inserted at one end of the machinery comes out at the other end a finished can. Chinamen clean the fish and fill the cans, which are soldered automatically, being carried on a moving platform through a stream of melted solder. The sturgeon season follows, and is of large output. We hesitate to make the statement, lest our reputation for veracity suffer from suspicion, that we were invited to witness the cutting up of a sturgeon weighing eight hundred pounds, and we were assured there was one on exhibition last year weighing one thousand two hundred pounds. With this necessarily partial inventory of the industries of British Columbia in view, who can doubt the richness of the resources of the Pacific Province? Its own people have unbounded faith in its possibilities. They are full of hope for the future, and are happily sharing in the improved aspect of business and trade, which promises better things. With a transcontinental road the finest in the world to the East, and palatial ocean steamers plying from their ports to Australia, China, Japan, India, and the Occident, it is hardly strange that they begin to feel that they are at the front, and that even now they point with the thumb over the shoulder when they speak of the provinces "back East." This we can say for them without reservation: They are a brave, cheerful, broad-minded and hospitable people, enterprising, self-reliant, and deserving of the success which seems assured to them and which we sincerely hope will be theirs to realize and enjoy. J. C. S.

The Export of Store Cattle an Ultimate Loss.

(FROM OUR MANITOBA AND WESTERN EDITION.)

The heavy export of young store cattle from Manitoba (as well as from Ontario) to the corn States has continued without any abatement throughout the season. Even the increase of duty under the Dingley Bill, which went into force July 24th, has not checked the trade as was expected. Thousands of these young cattle have gone out; all through Southern Manitoba great herds were gathered up and driven across the boundary, destined for Iowa, Nebraska, and Southern Minnesota. Buyers have scoured the country from east to west and north to south and picked up everything in sight. Large numbers of all sorts have been accumulated in the C. P. R. stock yards at Winnipeg, where they are sorted over. Those fit for export or Eastern Canadian markets go forward over the C. P. R. to Montreal, and the young, thin, unfinished cattle have mostly been shipped to St. Paul for distribution among the feeders of the adjoining States. A few carloads have been sent to our own West and Northwest to be carried over and finished off grass next year or the year after. The following are some of the arguments advanced by those favoring the selling of these young cattle: 1. Very many of them are not of choicest breeding, and when finished will not be good enough to make export cattle. 2. Comparatively few of the sellers of these cattle have facilities for feeding or possess the skill and experience necessary to convert feed, no matter how abundant, into export beef. 3. Up to this year the prices paid for stall-fed steers have not been high enough to encourage an extension of this branch of stock raising. 4. The prices paid this season for one-year-old and two-year-old stockers have been tempting—\$20 to \$25 for two-year-olds off grass is a price which the farmer is not used to, nor likely to refuse. 5. Money was not a plentiful commodity, and the Americans' cash was timely and very acceptable. And, 6, since the results of this year's crop became known, and the scarcity of feed wheat, oats, and barley fully realized, many have sold the store cattle they purposed feeding.

Doubtless the sale of these thousands of stockers has been an immediate gain to the sellers; still, it cannot but prove an ultimate loss to the Province in the long run.

Soil in Manitoba, however so fertile, will, like soil in every other part of the known world, become exhausted by continual wheat cropping, unless the elements taken out of it by the wheat plant are restored in some form or other. The only practical way this can be done is by the application of manure. The only practical way to get the manure is to have it produced as a by-product while converting rough fodder, chaff, and hay, along with coarse grains, screenings, bran, and shorts, into beef or dairy products. The Ontario farmer appreciates the truth of the above, for we notice that as high as \$40 a head has been paid by them this fall for store cattle. Add to that \$10 the cost of feed, stabling, and care, and surely it cannot be expected that the steer can do much more than clear himself; but he leaves behind him on the farm the manure, which the Ontario farmer finds absolutely essential

to successful farming. *Summer-fallowing* does not restore anything to the soil, but the cultivation given makes available a fresh supply of latent plant food and generally leaves the soil in better mechanical condition, and if properly done conserves moisture. *Seeding down to grass* does much to improve the mechanical condition of soils, prevents drifting, and adds humus or vegetable matter, which increases the capacity of the soil to retain moisture. *Plowing under green crops* amounts to little or no gain in supplying fertility, unless it is a leguminous plant, as clover or peas, that is turned under, as these plants take nitrogen from the air and sub-soil, storing it in their tissues.

While any of these methods of cultivation are well enough in their way, keeping the land clean and in better condition for cropping, they cannot take the place of manure. Manure the soil must have, or our farms will become impoverished, and it will cost us or those who follow far more to restore the land and make it productive than it will cost now to maintain and improve its virgin fertility. The sooner every farmer gets down to mixed farming on a systematic and permanent basis the better. Mixed farming means, in our vocabulary, wheat the staple product, the growing of fodder and hoed crops, seeding down for hay and pasture, live stock breeding and feeding, by which the raw material of the farm is converted into a concentrated finished product, beef, mutton, pork, dairy products, etc., while the manure is left on the farm to keep up the fertility and make possible the continued production of Manitoba hard wheat.

Agricultural Schools.

At the annual meeting of the Scottish Chamber of Agriculture recently held in Edinburgh a resolution was unanimously passed, affirming "that the subject of agricultural education is one of the first importance to agriculture," and strongly recommending the establishment of schools of agriculture "where theory and practice could be taught and experiments conducted." In regard to the experimental work the mover of the resolution said:

"I think it is an essential part of agricultural education. There is no farmer of fifty years' standing who has not been an experimenter. His daily practice is ruled by the results of prolonged observation. He pursues certain methods and he avoids others because he has observed and noted certain results. He cannot, perhaps, give you a reason, but he is satisfied in his own mind. The defect of such experiment is that it is long and laborious, that the results are not placed on record, and the young farmer has, in many cases, to begin and gain experience in the same way. An important part of all experiments is to define cause and effect, and experiments in agriculture are so much affected by side influences that they need to be carried out with the utmost care and be repeated before reliable results are attained. You cannot get the best conditions in ordinary farm practice. You require trained experimenters, with ample time and means, to attend to every detail, and even then must be again and again repeated before you can rely on your results."

The resolution in question was moved by Mr. Jas. Biggar, of Dalbeattie, and seconded by Rev. Dr. Gillespie, of Mouswald, both prominent agriculturists, and in speaking to the resolution, both referred in the most eulogistic manner to the Ontario Agricultural College, the seconder referring to it as the *beau ideal* of an agricultural college.

It must be gratifying indeed to Ontario to have her agricultural college so highly thought of by such eminent agriculturists, and held up as a model for Scotland to copy. It will have been noticed by the greatly increased attendance this year that the College is steadily advancing in popularity and usefulness at home. When the Manitoba Government is ready to establish an agricultural school, it will not be necessary to go farther afield for a model than the Guelph College.

Exhibition Dates.

To the Editor FARMER'S ADVOCATE:

SIR,—I was pleased to see a discussion started about the dates for holding the big shows. I cannot speak from either the standpoint of an exhibitor or a manager, but from that of a common farmer and interested sightseer. In 1892 the Toronto management changed the date of holding the show, putting it a week earlier, so that it takes place now in what is with us in Peterboro district the busiest time of the year; i. e., the season for sowing fall wheat. I believe that double the number of farmers would go to Toronto exhibition from this section if it were put back to the old date, or even a week later, and my proposal is that the Eastern exhibitions which are held in a section where they do not raise fall wheat, and where the cold season comes earlier, be held first, at a pretty early date, and let Toronto and London come in after. This is the opposite of Mr. McMahon's proposal, and he should of course know what would suit directors and exhibitors, but I believe I am voicing the wishes of a considerable number of the ordinary farmers, of this district at least.

Peterboro Co., Ont.

R. S. SUTTON.

STOCK.

Canada to the Top at Chicago.

As in important cattle and other live stock classes at the World's Columbian Exposition, and on a later day in the battle of the mutton breeds of sheep at Madison Square Gardens, New York, so a week ago at Chicago, the American met his Waterloo when he went down before the prowess of Canadian horsemen. The names of Graham, Davies, Beith, Hendrie, and Beck—"Royal Standard," "Young McQueen," "Mikado," "Banquo," and "Othmar"—and their triumphs on the tanbark of the Coliseum became historic in the showyard annals of that great city. Canadian sheep, too, were there to win. Canada has the soil, the climate, the breeding stock, and the men to produce what will win and sell anywhere in the wide, wide world. All that we need to-day is to raise more of this high-class stock to sell. The salient features of the Chicago show are faithfully portrayed elsewhere in this issue by an editorial staff representative who was on the scene from start to finish.

The Chicago Horse and Fat Stock Show.

(BY AN EDITORIAL REPRESENTATIVE.)

For two years Chicago held no autumn show, but the intermission seemed to act as a storage battery, especially with the horse department, as perhaps never in the history of America has such a show been held, excepting, of course, the World's Fair of 1893. The Coliseum building, which may be said to have arisen out of the ruins of the structure destroyed two years ago, proved a perfect building, especially for the horses; but a large proportion of the fat cattle, and all the sheep and swine, were shunted in a rather dark shed a few feet from the main building. The Coliseum building is in all some 600 feet long by 300 feet wide. The arena in which the horses were exhibited is 250x110 feet. This was tanbarked and kept in perfect order by a number of liveried attendants. Around the arena is a wide promenade and tier after tier of seats, including the boxes, which were usually well filled during the afternoon and evening sessions. The horses were comfortably stalled in single and box stalls of modern pattern and fittings. The horse show was under the management of Mr. John A. Logan, every branch of which went off like clockwork, the well-arranged programme being carried out from end to end with very little clash or delay. The building was beautifully decorated with plants, flags, etc., and rendered a pleasant and fitting situation by a continuous band concert for the thousands of prettily-attired horse-loving ladies who paid their daily visits to see the horses, the other visitors, and be seen and admired.

The horse exhibit, as we have already said, was a great success. In no class was there a surfeit of entries, but of the twenty odd breeds and types there were grand representatives. This is especially true of the breeding classes, but, as at all modern horse shows, the harness and saddle classes exceeded the others by far in numbers—a fair index of the popular taste in that direction, and for which horse breeders may well continue to cater. The show was similar to Madison Square Garden's annual event at New York in so far as city competition was concerned, but New York never put up such

A GRAND DISPLAY OF HORSES.

for which the West is noted. Of Clydesdales there were fifty-nine entries from the best studs in America, including studs that even the Scotchmen occasionally draw upon to replenish their studs. We refer to Col. Halloway's and Robt. Davies'.

The exhibitors of Clydesdales were the following: Robt. Davies, Toronto, Ont.; Graham Bros., Claremont, Ont.; Col. Robt. Halloway, Alexis, Ill.; N. P. Clark, St. Cloud, Minn.; McLay Bros., Janesville, Wis.; R. B. Ogilvie, Madison, Wis.; Wm. Moffatt & Bro., Paw Paw, Ill.; Herman von Bridenfeld, Granville, Ill.; Brookside Farm Co., Fort Wayne, Ind.; and Robt. Morton, Johnstown, Wis. The first class in the catalogue for Clydesdales was for four animals the get of one stallion. When the families lined up they were a sight to please a Scotchman. No less than five lots came forward, including animals which proved later to be the best in the show. The contest for first place was strong between R. B. Ogilvie's Queen's Own and Col. Halloway's Cedric. The former had a source of strength in Graham Bros.' Young McQueen, the three-year-old that has carried all before him ever since he came to Canada, some nine months ago. Along with him was a rather rangy chestnut, five years old, Simon Yet 6895; also Dolly's Duchess 8673, that later won second in mares three years old or over, and Queen of Quality 8676, that won third as a two-year-old. They are a beautiful four. Cedric's get consisted of Handsome Prince 5581, owned by McLay Bros., a noble horse, that won second in stallions three years and over. He is eight years old, nicely topped, and has a grand set of limbs and feet and beautiful action. Prince Delightful, a five-year-old, shown by Col. Halloway, needs no apology made for him, although he did not win in the mature section, nor did his brother, Prince Radiant, three years old, although he too is a toppy good one. Minute II., owned by Col. Halloway, helped the group considerably, as she proved one of the stars of the breed, winning as she did first prize for mare three years and over. She is just three years old, grandly developed, and full of quality. It was no light task to decide this award, as the judges, Robt. Beith, Bowmanville, Ont.; Leonard Johnston, Northfield, Minn., and Joseph Watson, Beatrice, Neb., learned before they concluded. The matter seemed to hang for considerable time, but when the real merits of the Canadian colt, Young McQueen, began to be realized, the decision was made in favor of McQueen, which award was decidedly popular, especially after

YOUNG M'QUEEN CAPTURED ALL THERE WAS TO WIN; viz., for best Clydesdale stallion, three years old and over; best Clydesdale's stallion, any age; and for best draft stallion, any age or breed, a victory Canada should feel proud of when it is remembered that the best draft horses of all breeds were in competition, even those that won the best premiums at the World's Columbian. The third family award settled on the get of Barney 5002, owned by McLay Bros. This lot had good individuals, but seemed hardly as uniform as the fours above them. One of the best of the lot was Robt. Davies' Bar Bell, that has won so many premiums at Ontario exhibitions. A very uniform but rather short-ribbed and fretful four by Erskine's Heir 4852, owned by Brookside Farm, stood fourth. They were nicely topped and moved beautifully on smooth, hard limbs, but they could not stand the excitement of a Chicago audience without taking part in the dance act.

The stallion class for horses three years and over was a superb string of twelve. The first and second winners have already been referred to. The third prize fell to Lynoch Chief 5442, an 8-year-old bay son of Lord Lyndock. He was exhibited by Herman von Biedenfeld, Granville, Ill. He is a lowish-set, wide horse, nicely put up, and shown in fine vigor. He is beautiful at the ground, and had he held his back up a little he was hard to fault. Col. Halloway's newly imported Sirdar 4714 was at the show, but his years are against him beating such good horses as we have mentioned. He is a son of Darnley 222, which alone makes him famous. He is one of the big sort—dark bay with black points, with a strength of underpinning that many of our best horses lack to some extent. He received the highly commended ribbon. Two-year-old stallions, five in number, divided the honors between the exhibits of Messrs. Clark and Halloway, the former winning first and third on the gets of Rosewood and Lothian Top, while the latter was by Cedric. Yearlings had a good entry of nine. Clark's son of Stanley Prince was the victor, with Robt. Davies' Lyon MacGregor right at his heels, winning second award. This colt has gone on well since his appearance at Toronto Industrial just after his importation. His stable mate, Tom MacGregor, was placed fourth, leaving the third award to McLay Bros.' Sir David, by Barney.

The mare sections were quite well filled with animals equal in merit to the stallions. In the section aged three years and over, the first three winners were just three years old. Minute II. and Dolly's Duchess, the first and second winners, have already been mentioned as members of the families. Princess Maud, by Prince of Quality, until recently owned by Robt. Davies, was placed third, and does her sire credit. Robert Davies' Nelly was placed fourth. Half a dozen two-year-olds, and the same number of yearlings, also foals, were each strong classes in point of merit. The winners were as follows: Halloway, Clark, and Ogilvie; Halloway, Clark, and Halloway; and in foals, Col. Halloway won all three awards. Robt. Davies' noble pair of mares, Bar Bell and Nelly, captured the first premium for pair of horses to wholesale merchant's wagon.

Percherons.—We expected to see a strong competition in Percherons, and we were not disappointed. This breed of horses are quite in favor, especially in American cities where a gait above the walk is desirable. As a class, however, they did not show the quality throughout that was evident in the foregoing breed, despite the fact that World's Fair winners were numerous among the entries. Just one family was entered for the class of four—the get of one stallion. The sire was Bigelin, owned by H. A. Briggs, Elkhorn, Wis. This lack, if it may so be called, was made up in the section for stallions three years old and over, as here thirteen entries were made and nearly all forward. Handsome grays, with flowing manes and beautiful action, made an imposing display. The principal exhibitors of this breed were Robt. Burgess & Son, Wenona, Ill.; H. A. Briggs, Elkhorn, Wis.; Fietcher & Coleman, Wayne, Ill.; Wm. Hadden, Janesville, Wis.; Storm Bros., Marley, Ill.; Fred. Soper, Ripon, Wis.; and others. The younger stallion classes and filly class as were not as well filled as those of Clydes, but they did the breed a credit in the entries placed.

Sires made a rather poor attempt at a big show, but perhaps the secretary of the association was napping while the other fellows were stirring the breeders to action. The principal exhibitors were Robt. Burgess & Son, Wenona, Ill.; Jerry Warner, Mahomet, Ill.; H. A. Briggs, Elkhorn, Wis. There were in all some twenty entries, few of which were sensational, although some of the exhibits were worthy animals of this

FAVORITE ENGLISH DRAFT BREED.

A worthy feat was performed when Burgess & Son's yearling, Wenona Hawkstone, captured the yearling championship from all the draft breeds.

Hackneys.—It was hardly expected that the Hackney show at Chicago would reach the magnitude and splendor seen at Madison Square Gardens, as most of the big breeders live in the East; but despite this fact the display was a creditable one in point of quality; so much so, indeed, that both the male and female championship awards for all coach breeds were captured by this class. It is with much pleasure we announce that

CANADA WAS DECIDEDLY TO THE FORE in this, as they had been in Clydesdales, as Graham Bros.' (Claremont, Ont.) Royal Standard did as he pleased in every contest he entered, which were not few. In stallions three years and over he won easy, while his stable mate, Courier, formerly owned by Logie Farm, Mount Elgin, Ont., followed next in order. Erling a very breezy son of Cadet, shown by E. W. Twaddell, Devon, Pa., took third award. He is a chestnut three-year-old, and was much admired by the spectators. The first award for stallions 15 hands and under 15.2 also came to Ontario in the well-known Banquo, by Jubilee Chief, owned by Robt. Beith, Bowmanville. His only opponent was a bay horse, seven years old, known as Lord Palmer, the get of Kaiser. He was exhibited by Geo. McKerrow, Sussex, Wis. A. J. Cassatt's 18-year-old Little Wonder showed a one as stallion under 15 hands. He is a perfect model of a pony cob. In two-year-olds Langton Performer II., exhibited by F. C.

Stevens, Attica, N. Y., put up a show sufficient to meet strong competition, but just another entry came against him—Norfolk Laddie, a strong black colt, shown by H. J. Huyett, Milan, Ill., and sired by Lord Palmer. The former won. The junior champion of the show was found in the yearling Chesterbrook, by Cadet, and shown by A. J. Cassatt. He is a beautiful, flash colt, well-mannered and of good size. His stable mate, Mars, by Cadet, won second, and Stephens' Langton Model third.

The mare classes were good throughout. The three-year-old Lady Sutton, by Chocolate Jr., carried off the female Hackney champion cup, as did she also for coach mares any breed, under fifteen hands three inches. She is a model of perfection, bay in color, and is a proper air-line goer. Her stable mate, Lady Valentine, two years old, did a like feat in winning from all coach breeds the two-year-old championship female victory. She was also the junior champion Hackney mare of the show. Considerable interest centered around the ring when the gets of Cadet and Langton Performer lined up for inspection. These, as were all the Hackneys, were judged by Dr. Andrew Smith, Toronto; James Cochran, Compton, Que.; and R. P. Sterricker, Springfield, Ill. The families of four each were difficult to decide upon, but on account of a bit more substance and about equal action and quality, Cadet's offspring won the trophy. The senior championship was fought out between Graham Bros., Royal Standard, A. J. Cassatt's Cadet, and Robt. Beith's Banquo. It was not a hard matter to see that Royal Standard had the cup, as he apparently lacked nothing in make-up, and the way he went was a marvel to everyone. Old Cadet is a great sire and possesses immense scale, but his thirteen years have robbed him of some of his freshness. He was placed second. The victory of the show was not reached until the class was called for coach horse championship for stallions any breed, three years old and over 15½ and under 16 hands.

THE BATTLE—A KEEN ONE—

lay between Graham Bros.' Royal Standard and W. H. Dunham's famous French trotter Indre, the latter one of the sweetest horses we ever saw. He is symmetry itself, and such a goer! He was shown by four men in succession up and down the tanbark, three regaining their breath while the fourth gave him a round. The excitement was intense, it may be readily understood, as the two favorites showed what was in them, but the Canadian was too much for his rival, and won amid great applause. The Hackney seemed to realize what was expected of him, as he went as true as a machine, with great force. Royal Standard had not yet finished, as he later won the champion cup for best coach stallion any age, breed or size, beating all the Coach horses: Cleveland Bay, French Coach, German Coach, Thoroughbred, and Standard-bred, beating such noted horses as Perfection and Indre, invincible in England, France, and America.

French Coach and French Trotters we see very little of in Canada. This is not readily understood, as they represent two of the most beautiful types of carriage horses we believe exist. They are fine, handsome, of good size, the former about 16 hands, and have withal beautiful action. M. W. Dunham, Wayne, Ill., was the largest exhibitor, while E. M. Barton, Hinsdale, Ill., also exhibited some beautiful animals. These various classes were well filled, and we failed to see among them an indifferent animal. The female championship for coach mares, any breed, age or size, fell to E. M. Barton's five-year-old French Coach Palestine, a bay, 16.1 hands high, and as clean as a Thoroughbred. The same mare won over all breeds, 3 years old and over, 15½ hands and over. Mr. Dunham's stables were the admiration of all who saw them, both for what they contained and the tastefulness of their decorations.

Cleveland Bays and German Coaches were not numerously shown. Mr. A. L. Dorsey, Perry, Ill., was the chief exhibitor of the former, and his stock are a credit to him. J. Crouch & Son, Othmans Bros., Watseka, Ill., and Wm. E. Moore, Springfield, Ill., had out some grand Germans.

Thoroughbreds were also few, but good. Ontario was not slow in this competition, as Robt. Davies'

GRAND OLD MIKADO,

by King Earnest, not only won second in the mature stallion class for runners—following a flash, smaller bay horse, Judge Morrow, shown by S. S. Howland, New York City—but Mikado won for a suitable sire of hunter stock. He was closely followed on either occasion by Wm. Hendries' (Hamilton, Ont.) Othmar, by Ondago, a strong bay horse of eight years that has won a number of Canadian trophies.

Trotters and Pacers.—A volume could be written on the favorites that were exhibited in the classes for pacers and trotters, but our space is too contracted to do more than mention some of the most noted. The looked-for two-minute pacer, Star Pointer 1.59½, was present and greatly admired, as was also Joe Patchen 2.01½, who was paraded daily with four of his get—Elloree 2.09½, holder of the two-year-old trotting record; Caid 2.11, holder of the four-year-old trotting record; Bermuda Boy 2.20½, Hazel Ridge 2.26½, and others were being continually admired. We may say that they are all beautifully formed animals, and apparently receive all the attention possible to give them. The beautifully formed lone pacer, Marion Mills, was also on exhibition. She is known as the "guideless wonder," and goes without a driver in 2.07½.

Saddle and Hunter classes were well filled with the choice of Canadian and American horses. Mr. Adam Beck, of London, Ont., and Mr. Wm. Hendrie, Hamilton, Ont., especially the former, became particularly well known. The "Canadian Stables," as they were called, were enquired after from every side. We cannot possibly go into the classes, but when we say that Mr. Beck won some \$2,400 in awards, it is evident that some other exhibitors must have come out short. It seemed for the first two days that the judges were determined to hold all the money possible for American horses, and it was not till the spectators outside the ring demanded justice did the London horses receive their due recognition, and towards the end of the week they brought something out of almost every contest entered. Among other firsts he won on Argyle for green hunters up

to carrying 165 pounds to hounds; on Mehon for green hunters up to carrying 190 pounds to hounds; for saddle pony, on Margin, and for high jump of six feet one inch, Argyle cleared all at six feet four inches amid great applause. Mr. Hendrie won in a few classes. Mrs. S. S. Howland, N. Y., and Mr. Thos. Clyde, Bryn Mawr, Pa., were strong competitors.

Harness Horses.—The great class of the show in point of numbers was made up of the various harness sections. There were no Canadian entries, but that did not prevent a magnificent display, which was, however, deemed somewhat behind what has been seen at Madison Square Gardens. One of the most attractive lines of stalls was that of M. H. Tichenor & Co., of Chicago, who had upwards of fifty entries. Mr. and Mrs. Geo. S. Gagnon, Chicago, also scored a number of worthy victories.

THE FAT STOCK DEPARTMENT.

The fat stock show, like the horse department, was supposed to be under the dual management of the Illinois State Board of Agriculture and the Chicago Bit and Spur Club, an unfortunate double-headed arrangement, as the fat stock end of the show was shamefully neglected, and the extravagant management of the other end involved a considerable loss. So little was done in the interest of the fat stock show department that thousands who visited the horse show and paid a full fee to see all, went away without knowing that a fat stock exhibition was in progress. It was just at the end of the week that a sign was displayed: "This Way to the Annex." The fat stock show, too, was very poorly advertised, as we learned that a number of farmers living in the West who preferred to see the fat stock rather than the horses waited till the following week, with the impression that the exhibition of their choice was to be held during the following week.

CATTLE—HOW SOME OF THE WINNERS WERE FED.

Considering the location of the show in the great meat center of the West, the exhibits were disappointing, more in numbers, however, than in quality. There were 153 head of cattle, comprising Aberdeen-Angus, Herefords, Shorthorns, Devons, and grades. Outside of the carload lots of fifteen steers each, three years old and under, there was comparatively little competition. In this there were six grand pens of cattle just ready for the block; none of them overdone, but all smooth, even and prime. The two prizes of \$300 and \$200 were given by Messrs. Clay, Robinson & Co., Chicago. The three best breeds were represented in the six entries. Angus blood predominated, as three lots were of that breed, while two lots were Shorthorn and one of grade Herefords. They were two-year-olds, with a few thirds, except one bunch of nineteen-months Argus owned by G. H. Gardner, Blaindinsville, Ill., all eligible for registration and as alike as peas in a pod. They might well be termed typical baby beef, as they were ripe for the block at 1,200 pounds. This lot, we learned, were commenced to be fed whole oats from a self-feeder before they were weaned in Nov., '96. The oat feeding continued till March, when upon the last 200 bushels of oats in the feeder was placed 1,000 bushels of shell'd corn. In a few hours a little corn worked down with the oats, and in this way they gradually got more and more corn till pure corn was taken at pleasure, on which grain they have been fed in conjunction with pasture ever since. They received no special care. Mr. Chas. Esher & Son, Botna, Iowa, also informed us how his car lot was fed. They consisted of two- and three-year-old Angus; also a handsome lot. Until July they ate from a feeder in the pasture mixed corn and oats; then soaked corn was fed, which caused them to gain rapidly. Of this they each ate about half a bushel daily. They were finished on new cracked corn and oats and oil cake. This firm won first on car lot of eight yearling steers. The car lot of fifteen, first award went to J. K. Kerrick, Bloomington, Ill., on an Argus group, and second to Harry Shirding, Petersburg, Ill., for high-grade Shorthorns, two years old, which averaged 1,600 pounds each. The first lot sold on the market at six cents per pound and the latter at \$5.60, while the yearlings brought \$5.40 per cwt. The Hereford pen shown by Stanton Breeding Farm Co. averaged 1,600 pounds, and had been fed on crushed corn and oats and bran, about a half bushel each per day. J. R. Peak & Son, Winchester, Ill., were also extensive exhibitors of grade Shorthorns, and won second on a bunch of eight yearling steers, as well as first on yearling steer and steer calf, champion premiums for grade animal and for herd of calf, yearling and two-year-old.

Herefords claimed the grand sweepstakes award over all other breeds and ages on the 1,800-pound Jack that won first last year at New York as a yearling. He was shown by W. S. Van Natta & Son, Fowler, Ind., the winner of all the Hereford premiums. Against Jack for the grand sweepstakes was pitted B. R. Pearce & Son's Angus, Black Jim, sixty-nine days older and a few pounds lighter. This latter firm cleared the boards in Angus competition. Two good herds of Shorthorns competed, those of Peak & Son, and Abraham Renwick, Sycamore, Ky. The former had the class champion, and also the herd victory. John Hudson & Son Moweaqua, Ill., who bagged most of the World's Columbian Devon awards, were a one here in this ruddy breed characterized by lightness of offal.

CONTESTS IN THE SHEEP RING.

Had not Canadians gone over with their exhibits the show would have been unworthy of a Chicago attempt of this nature, as there were in all 120 head of entries all told, comprising Shropshires, Oxfords, Southdowns, Dorsets, Cotswolds, Leicesters, Merinos, and grades. The awards were placed by R. H. Todd, Ohio, whose rulings in a few cases were open to criticism; for instance, in the grand sweepstakes it seemed hardly possible to go past one of Geo. McKerrrow's exhibits, as he carried his mutton in the right place and was smooth and even throughout, quite surpassing his rival shown by Geo. Allen, Allerton. Of the Wisconsin University exhibit we have nothing but praise to offer. They are about five-cross Shrops., said to be descended from native ewes. They appeared typical Shrops. in form, color, and covering. The five averaged 220 pounds. Among them was found the best wether, sired by a Shrop. ram and out of a grade ewe.

The Canadian exhibitors were John Rutherford, Roseville; W. H. Beattie, Wilton Grove; Richard Gibson, Delaware; and R. H. Harding, Thorndale. Mr. Rutherford had his sheep in, if possible, better fit than usual, and won among others the following awards: First for pen of Cotswolds; pen of Leicesters; best Cotswold and best Leicester; best yearling sired by Shrop. ram; best Cotswold wether two years old; also first and second for yearling Cotswolds and lambs; and two firsts and three seconds in Leicesters, besides good prizes in Southdowns and Oxfords. His strongest opponent in long-wools was W. H. Newton, Pontiac, Mich. Mr. Beattie captured some good winnings in strong competition, including firsts for best three registered Shropshires, Southdown lamb, and seconds on yearling Southdown, yearling Oxford, Shropshire lamb, grade Shropshire lamb, and pure Shropshire lamb. Mr. Gibson had forward five prime wethers, on which he won first on Shropshire lamb, and on a lamb the get of a pure-bred Shropshire; and second on the yearling get of a Shropshire ram, and on yearling pure-bred Shropshire. R. H. Harding had the only Horned Dorsets forward, namely, one two-year-old, two yearlings, and one lamb. They were in good fit and well represented the breed. The strongest American exhibitors were Geo. Allen, Allerton, Ill., with Shrops.; R. J. Stone, Stonington, Ill., with Oxfords; W. H. Newton, Pontiac, Mich., with several breeds; Geo. McKerrrow, with Southdowns; and Wisconsin University, with grade Shrops. The awards were in all fairly well divided up.

SWINE—RESULT OF THE IOWA FEEDING EXPERIMENT.

There was very little competition in swine in the thirty-seven entries of different breeds. Prof. C. F. Curtiss, of Iowa Agricultural College, and L. H. Mattinge, Plainsville, placed the awards. The premium for best five hogs, any age or breed, fell to Berkshires shown by Harry Cass, Buffalo Hart, Ill. They were well brought out. Mr. Cass had no opposition in Berkshires as a breed. Victorias are little known in Canada. They much resemble the Chester White, but the ears point upwards instead of down. A few heavy specimens were shown by Geo. H. Davis, Dyer, Ind. Mrs. Ann Newton, Mich., showed the only Yorkshires, and Harry Taylor, Wayne, Ind., the only Duroc Jerseys.

Considerable interest was manifested in the experimental lots of various breeds fed at the Iowa Experimental Station at the direction of Prof. Curtiss. This test will be repeated with a similar lot next season, in order to verify the results, as has been done with the various breeds of sheep. Below will be found the breeds, number of each, weight, price received, and the gain and cost of the pork. The wide ration referred to in the table was chiefly corn; the others had a more nearly balanced feed given them in dry form in fenced lots. The sale, live weight, etc., resulted as follows:

	No.	Lbs.	Price.
Berkshire	10	1900	\$3 80
Tamworth	10	2000	3 30
Duroc-Jersey	9	1820	3 70
Yorkshire	9	1940	3 70
Poland-China	8	1550	3 70
Chester White	9	1600	3 70
Duroc-Jersey, wide ration	5	1210	3 70
Duroc-Jersey, narrow ration	5	1070	3 70

They were bought by Swift & Company, who will make elaborate tests. One or two carcasses of each breed will also be returned to the station for analytical examination of fat, quality of lean, etc. Their feeding record between June 1 and November 1 was as follows:

	Average age (Days)	Average weight (Lbs.)	Av. gain per head daily (Lbs.)	Av. cost of feed per lb. of gain (Cents)
Poland-Chinas	213	200	1.14	1.8
Duroc-Jerseys	209	207	1.09	1.9
Tamworths	212	208	1.00	2.1
Duroc-Jerseys (wide ration)	213	249	1.22	1.9
Yorkshires	221	225	1.16	1.9
Chester Whites	202	184	1.26	2.1
Berkshires	196	192	1.03	2.0
Duroc-Jerseys (narrow ration)	213	222	1.38	1.6

Death of Mr. Thos. Hume, of Burnbrae, Ont.

The death of Mr. Thos. Hume, of Burnbrae, Ont., on Sept. 20th, father of Mr. Alex. Hume, the well-known Ayrshire breeder, removed from the activities of this life a man of sterling integrity, active in promoting the general welfare, and a farmer and breeder of good repute. He was born at Montreal, Que., in 1832, being the son of Mr. Wm. Hume, of Newcastle-on-Tyne. His boyhood was spent in the Eastern Townships of Quebec, and later years near Kingston, Ont. He graduated at the Toronto Normal School, and was for a number of years a most successful teacher, which profession he gave up in 1865 to devote himself to farming. He brought the first reaper into Seymour years ago, and this fall introduced the first corn harvester. He was, with the late Jas. Whitton and Wm. Cleugh, the promoter of the first cheese factory in the township; was also a municipal councillor, township treasurer, and a staunch Presbyterian, ever liberal in his aid to church enterprises and Queen's University. He early saw the need for improved dairy cattle, and twenty-four years ago he and Mr. Whitton purchased the first Ayrshire bull between them. In '79 he secured the first female Ayrshire, and later added others, thus laying the foundation of the herd of Alex. Hume & Co., now known so favorably throughout the country, ranking well up among the prize winners at the Toronto Industrial this season. No pains nor expense were ever spared in securing breeding animals. In later years the deceased took equal pride with his worthy son in the successes of the herd. Mr. Hume was several times President of the Seymour Agricultural Society, and always encouraged beginners, often materially, in his own unostentatious way.

Sheep -- Advantages and Wintering.

"The sheep has a golden hoof," so saith the Spanish proverb. "One thousand sheep will in one night manure an acre of land sufficient for any crop," says a German authority. "The manure of a sheep and lamb is worth ten cents a week," says a Canadian authority. It will thus be seen that sheep are great manure makers. But sheep are not generally kept for the manure they may excrete. There are two other attributes to the sheep of much vaster importance — wool and mutton, or, perhaps, rather wool and lamb. Many writers have waxed enthusiastic on sheep as the "great scavengers of the farm," but my experience with sheep go to show that they require more care and attention than this. To keep a flock of sheep for the purpose of scavenging the farm—keeping down weeds, eating underbrush and suckers—does not pay. Sheep, to be profitable, require attention and an abundance of good feed. In the growing season, if one has a sufficiency of pasture fields, with water and shade in them, there need not be much anxiety about extra feed. It is from the time of the coupling season—in November—till the lambing time that the flockmaster must give his attention to the sheep. The coupling season will, of course, depend on the time one wants the lambs to come. I do not want the lambs to come before the middle of April, hence about November 1st we begin feeding the ewes about a pint of oats each per day till the fifteenth, when the ram is let with them at night only. At this time we gradually reduce the amount of oats till the end of the month. When the ewes are all with lamb they are on their regular winter feed.

Wintering the Flock.—I have wintered sheep on nothing but oat straw and took them through in good condition; that is, the breeding ewes. The lambs, of course, would require some extra feed. That strong breeding ewes could be wintered on oat straw may seem paradoxical to many of the readers of the FARMER'S ADVOCATE I am prepared to believe. But I believe our oat straw is much more nutritive than the average sample of this feed. Grown in proximity to the salt breezes of the Gulf of St. Lawrence and in a climate particularly suited to the growth of oats—Prince Edward Island oats are the finest in the world—no doubt our oat straw is about equal in nutrition to average meadow hay. The front of our farm is washed by the waters of the Gulf of St. Lawrence on the north side of the island, and the breezes blowing from over the Gulf on our farms make the herbage, as well as the straw of the oat crop, salty and pleasant to the palate of the sheep. Ewes require roots fed regularly in winter. Roots are inseparable with the growth of sheep. A flock of sheep can be wintered, and wintered well, till lambing time on bright, early-cut oat straw and roots, with an occasional feed of hay; the lambs, however, require an addition of bran and oats—about a half pint each per day.

The late Prof. E. W. Stewart says:—Thrifty sheep may be wintered on one and a half pounds of grain per head, beginning at one pound and increasing to two pounds last month; preferably a mixture of corn, barley and oats, costing one cent per pound. They will eat per head 75 lbs. straw per month and 45 lbs. grain—value: straw, 15 cents; grain, 45 cents, making the cost per head per month 60 cents. The manure should pay for labor and profits, and is worth one-third cost of feed. English feeders are always satisfied if they can get the manure over cost of food.

Henry Stewart:—When oat straw was plenty and hay was dear I have used at times 10 lbs. of roots, sprinkled with one pound of bran, per head, and all the straw that would be eaten, leaving the waste for litter and manure. The same authority says: I have fed sheep successfully on clover hay alone; 3 lbs. per day until lambing time, when I always fed grain, wishing to grow the lamb as quickly as possible. Again: I have fed sheep at a cost of 75 cents for the whole winter, when the hay and grain has been charged at actual cost price, which I think is the only right and satisfactory way, unless the feeder is only satisfied with two profits, one on the feed and another on the sheep. "For winter feed I would recommend oat straw and clover hay, with some grain ground coarsely. The straw will cost but little and the one and a quarter hay may be sufficient each day." "I have done the cheapest feeding on oat straw and mangels or turnips, the latter costing not more than 1 cent for the 10 lbs., fed daily to each sheep with one-half pound bran, costing less than one-half cent, and counting the straw at nothing, this will cost but 45 cents per month."

J. A. MACDONALD.

No Money in Frozen Mutton.

Frozen mutton in England has come down to an almost ruinous price to shippers. Messrs. Weddel, in their latest circular, quote the very best Canterbury mutton at 33d. per lb., few carcasses touching over 34d., while fine mutton from the north of New Zealand sells at 3d., and heavy or inferior carcasses at 24d. to 25d., Australian at 25d. to 26d., and River Plate at 27d. The cheapness of New Zealand lamb, worth only 24d. to 34d., is one reason assigned for the extreme dullness of the frozen mutton trade. At 3d. per lb. or less, we imagine, the breeders get little, if any, more than boiling-down price for their sheep or lambs.

The Dominion Breeders' Associations and the Central Experimental Farm Staff.

In connection with the subject of live-stock husbandry at the Central Experimental Farm, Ottawa, dealt with on a previous page of this issue, it should be stated that the position we have taken has the endorsement of the Dominion Cattle Breeders' Association, which, at the regular annual meeting in Guelph, on December 7th last, passed the following resolution:

"That this association respectfully memorialize the Minister of Agriculture in the Dominion Government to appoint to the position of agriculturist at the Central Experimental Farm, not only a practical farmer, but also a man thoroughly in touch with and acquainted with the needs of the live-stock raisers of the country, and that a copy of this resolution be forwarded to the Minister of Agriculture for the Dominion."

The Dominion Sheep Breeders' Association adopted a similar resolution.

Crossing Buffalo with Domestic Cattle.

To the Editor FARMER'S ADVOCATE:

SIR,—I was pleased to see the letter of Mr. R. M. Traill on this subject in your last issue. It recalled a matter in which I took a great interest some years ago, and I thought others might be interested as well, so that I give you my experience in this line, trusting that it will give a little information that has not yet appeared. I will lead off with a little history. The largest herd of domesticated buffalo in Canada, owned by the late S. L. Bedson, of Stony Mountain, Man., originated in this way: About 1875 the late Hon. James McKay, of Silver Heights, Man., brought a bull and two females down from Prince Albert. They were placed in a park and bred until Mr. McKay's death, the winter of 1879, when, with the rest of his stock, the buffalo were sold by auction, Mr. Bedson buying them at a nominal figure. At that time the herd numbered thirteen, all pure-bred buffaloes. It was only known to a few intimate friends of Mr. Bedson that Sir Donald A. Smith, now Lord Strathcona, was the silent partner in the transaction, or to put it plainer, Mr. Smith had furnished the money to purchase the buffalo on condition that Mr. B. feed and care for them, the profits, if any, to be equally divided; but after two or three years the herd increased to such an extent that it was almost impossible to keep them within bounds. Sir Donald relinquished all claim to them on account of numerous claims for damages presented by settlers in the district. When Mr. Bedson made the sale of half the herd to "Buffalo" Jones, an American, it numbered about eighty. I was then living on the adjoining farm, a neighbor of Mr. Bedson, until about the time of the sale to the American. My occupation was stock-raising. My herd consisted principally of pure-bred Shorthorns, which suffered from the depredations of the buffalo bulls, but all loss was covered by check from Sir Donald's agent. Mr. Bedson and I experimented for five years, crossing with all kinds of cattle, and the only calves we got alive in this cross-breeding experiment was from the native cattle of the country; the only exception was from a Canadian cow imported from this Province (Ontario), one which showed no breeding. The Shorthorn cows always dropped their calves before maturity or died in calving, the fetus of the buffalo seeming too coarse for the finer bred cattle. One conclusion we came to, and which I have never seen touched upon in this connection, is that a domestic cow that has given birth to a buffalo calf will never breed again. We tried several cows continually for from three to five years without success. They ran constantly with the buffalo and were tried time and again with Shorthorn bulls and even scrubs, but all to no purpose, proving conclusively that having once bred to a buffalo their fecundity is destroyed. This fact in itself will shatter the highfaluting schemes often advocated on crossing the buffalo with the domestic breeds for their hides. We could never get a domestic bull to cover a buffalo cow, so that I never saw a cross in that way. Mr. Bedson persisted for years to get such a cross, shutting a pair up for months at a time. He also let bulls run with the herd, which usually ended in their getting killed by the buffalo bulls.

A peculiar feature of the male bison is that in the calving season the bulls all leave the herd and go off together for a couple of months. The only cross-bred bull calf raised by Mr. Bedson was changed to an ox when three years old, having proved no use for breeding purposes. He was afterwards broken to drive in a sled, but never became very tractable. I think the reason Mr. Goodnight's cows only bred every other year is that they do not roam at will as in their natural state. The same difficulty was experienced at Stony Mountain when the buffaloes were confined. I noticed in to-day's Globe that Mr. T. G. Blackstock had presented the Government with three magnificent specimens of the breed, which had been placed in the National Park at Banff, to be preserved, and which will ensure the perpetuation of this noble animal; but I do not agree with the statement therein that they were brought from Texas at great expense because no pure specimens could be obtained in Canada. If Lord Strathcona's herd is part of Mr. Bedson's, which there is no doubt, they must be pure, for in that herd were some of the finest buffalo that ever crossed the prairies of the "Great Lone Land."

Wellington Co., Ont. WM. W. MACALISTER.

FARM.**Inside Watering Approved After Three Years' Trial.**

To the Editor FARMER'S ADVOCATE:

SIR,—I notice your recent article upon the watering of cattle during the winter, which I consider very timely. In order to reap the greatest returns in the feeding of beefing animals and milk cows, it is absolutely necessary that at all times they be allowed free access to pure water.

After an experience of three years in having water continually before our animals in winter, we consider that no individual inexperienced in this method can form any real estimate of its great benefit. With the exception of our milk cows, and a few other animals which are tied in the stall, we keep our cattle in large loose boxes, where water is supplied from a trough in the corner of each pen. For our cows we have a long water trough in the front of the manger above the feed box, and forming a part of the face partition between feed passage and stalls. The bottom of this trough is just two and one-half feet above the floor of the feed box. The water is forced into these troughs by means of a windmill, and we have a large tank in the barn above in one of the straw mows, from which water is supplied in case of a dead calm for a day or two. As a precaution against frost, our tank in the barn is packed around with the refuse from a flax mill, and our pipes leading to the tank and water troughs are boxed around and similarly packed. All other pipes are sufficiently underground to prevent freezing. In our experience we have had no trouble from allowing the animals to drink at their pleasure, and I consider the practice well worthy the attention and approval of the stock-feeding farmers.

Huron Co., Ont.

THOS. McMILLAN.

Advantages of Inside Watering on the Annandale Farm.

To the Editor FARMER'S ADVOCATE:

SIR,—We find indoor watering to have many great advantages over outdoor watering. In the first place the cows have all the time before them fresh spring water of an even temperature both summer and winter, varying only a few degrees—standing from forty to fifty degrees in winter, and fifty to sixty degrees in summer—which we consider far better for the cows than drinking a larger quantity of ice cold water at one time out of doors on a winter day. Under our system the water is continually running through the pipes, and is always fresh. Some of our boxes have a hinged cover that the cow lifts up when drinking, which falls back tight on the box when not drinking. This keeps the feed from getting in. We find it quite an improvement, and intend to cover all the boxes this winter. In watering a large herd of cows outside we found it necessary to have quite a number of long watering troughs in order that they may all drink in a reasonably short time, and then they are inclined to hook and drive one another about, and some of the weaker and the more timid ones will not get a chance to drink at all unless left out a long time, which is bad for them on cold, stormy days. We have no trouble in keeping our water boxes clean, as we have such an easy way of drawing the water all off from all the boxes in two minutes' time, and having the waterworks pressure and a rubber hose attached to pipe with valve, we can flush and clean them all quickly. We do not use the water from our waterworks for supplying cattle inside, but have flowing spring water brought from hillside in iron pipes sufficient for all purposes, except fire protection, which we get from the waterworks system, also brought into the barn in pipes. There are many advantages in watering cows in their stables, particularly in the winter season. It must make considerable difference in the quantity of milk during a winter, but I have not tested exactly how much. At the same time we have a most abundant supply of natural running spring water in all our yards and all around our premises, which never freezes over in the troughs in the coldest winter weather.

Norfolk Co., Ont.

E. D. TILLSON.

Hydraulic Ram Successfully in Use Since 1888.

To the Editor FARMER'S ADVOCATE:

SIR,—There is probably no question of greater importance to successful winter feeding than a proper system of watering stock. After seven years' experience, I consider a proper indoor system the most practical, economical, satisfactory way of watering stock in winter. Since the ingenuity of man has so perfected conveying water either by gravitation, wind, hydraulic or other powers, there is little excuse for any farmer not having some proper plan, and I am positive in a very short time, from a labor-saving standpoint only, all the money invested will be repaid, besides the many other advantages gained.

I have successfully used a hydraulic ram since 1888, conveying water about sixty rods with very satisfactory results. In the first place I had it under the shed adjoining the barn, where the cattle were given a chance to drink twice a day. It was quite an improvement to the old system of using a pump or driving to a stream, but the new system is as far ahead as the former was of the latter.

My system is this: The water is forced by hydraulic ram at the spring stream into a large tank in the barn. Troughs are placed in front of the cattle and connections made to the tank with piping and arranged with taps so that the troughs are filled while we are doing the feeding. The troughs are arranged with covers so no dirt or litter can get into them (and if anything gets in they are cleaned). The advantages are these: The water is always of a normal temperature, nothing to chill the systems of the cattle by an over-draught. They can drink at will, or at least three times a day, in quantities according to their own inclinations, undisturbed and unmolested, not being hooked or crowded away by a stronger animal. I have often noticed with outdoor watering that cattle on a cold day would take only a few swallows and shake their heads—yes, crimp up their whole bodies—then to be roughly dashed aside by a stronger animal. The result would be no more water that day, an over-dose the next, and the following day probably a derangement of the system or a case of indigestion. I have noticed with indoor watering some animals will drink a dozen times a day in small quantities, while others will drink three times a day in larger quantities. I am also convinced that under any system of feeding, even with roots fed abundantly, cattle will drink some water, and no more than is good for them. With ensilage they also drink very freely, and where neither ensilage nor roots are fed they drink very large quantities, and I believe the only practical way to successful dairying or stall feeding is indoor watering. Should you want to exercise your cattle give it as they need it. For young stock indoor watering is indispensable. Waterloo Co., Ont. A. C. HALLMAN.

Chemistry of Canadian Soils.

To the Editor FARMER'S ADVOCATE:

SIR,—In a note upon the papers of special interest to Canadian farmers which were read at the British Science Association meeting I overlooked an important one carefully prepared by Mr. F. Shutt, M. A., Chemist to the Dominion Experimental Farms, on "The Composition of Canadian Virgin Soils." These are soils that have not either been cropped or manured. After pointing out that chemical analysis alone cannot diagnose the productiveness of soils, owing to the varying effects of drainage, rainfall, sunshine and temperature, he shows that a knowledge of the maximum amounts of the several plant foods which may be present in the soil will guide the farmer to supply deficiencies and to do it in an intelligent and economic manner. Pot or plot experiments with the various fertilizers are at present the only means of reliably testing the soil's needs, but he expressed the belief that ere long an agreement upon laboratory methods for the determination of available plant food will be reached along the lines of Dr. Dyer's citric acid method. He presented tables of over sixty analyses and followed Dr. Hilgard in the statement of his deductions. According to Hilgard's standards of fertility, good agricultural soils will show between twenty-five and fifty parts in ten thousand of potash. On soils falling below fifteen it will pay to use potassic fertilizers. Less than one per cent of lime in clay soils indicates a deficiency in this mineral. Phosphoric acid should appear in the proportion of fifteen to twenty-five parts in ten thousand, but its adequacy is largely dependent upon the quantity of lime present. As a rule, it pays to dress peaty soils with lime. He showed in conclusion that in all the provinces of Canada large tracts of untilled land exist that would rank with the fertile soils of other countries, and that many Canadian soils are possessed of most abundant stores of plant food such as to allow of their favorable comparison with the richest soils of which we have any knowledge. J. DEARNESS.

An Excellent Farm Paper—Where to Place the Tank.

To the Editor FARMER'S ADVOCATE:

SIR,—In answer to "Subscriber's" query in your October 1st issue as to the best location for the water tank, I may say that we have a large bank barn with eleven-foot stone wall, which gives plenty of room for roots. Just inside of barn doors we bored six holes through the sleepers, and hung our supply tank in the roothouse on six iron rods. It takes up very little room. By boring a hole in the barn floor we can connect pipe with engine for threshing. The frost never gives any trouble.

It is twenty years since first I took the ADVOCATE. It is an excellent farmer's paper, full of valuable information regarding everything belonging to the farm. DAVID ROBERTSON.
Middlesex Co., Ont.

A Good Point Along With Subscription.

To the Editor FARMER'S ADVOCATE:

SIR,—Find enclosed two dollars to pay for the ADVOCATE for the years 1897-1898. I water cattle in the stable, and think it has everything in its favor. The cattle get water when they want it and do not get chilled. It does not interfere with turning out when you desire to do so. The tank is placed in the straw mow, beside the granary, over the alley in front of the cows, where the warm air from the stable helps to keep it from freezing. Pump water with windmill from outside of barn. Did not know what comfort doing chores meant till I got water inside. Success to the ADVOCATE. W. A. BEEBE.
Durham, Co., Ont.

DAIRY.

The Dairy Thief.

BY DICK JOHNSTON.

Bill Buckboard has a brindle cow
That does not pay her board.
He keeps the beast because she's now
The best he can afford.

Once, as the sun rose in the east,
He drove his cattle home;
Sat down beside the brindle beast
And lashed her milk to foam.

But Brindle shook her nimble foot,
Displacing Bill's support;
He from the dirt surveyed the brute
And thundered this retort:

"You long-legged, lanky, lean old fool
(Mind, now, I'm warning you),
Next time you dare to kick my stool,
You'll kick the bucket too."

Bill works each year to pay the debts
Of that old dairy thief.
He'd better save his empty threats
And turn her into beef.

Hints for Flaking Butter at Home -- Churning -- Salting -- Packing.

(From an address delivered at Lacombe Exhibition, Oct. 6, by C. Marker, Dairy Supt. of Alberta.)

I have been requested to act as judge of the dairy products and to give a short address on the exhibits with a view of making some suggestions, based on the character of the exhibits, which might help and encourage some of the patrons.

Before entering on my subject I wish to consider with you for a few moments the value of our agricultural exhibitions, more particularly the educational feature of them.

Besides offering prizes for such articles and products as are of a superior quality, they excite a friendly spirit of competition and rivalry among the exhibitors. Competition is not only commercial warfare, but also the great vehicle of education. Nothing has done more towards the development and progress made in the most prominent agricultural sections and countries of to-day than competition and a higher standard of general education which follows in its wake. These two great factors in modern civilization are as cause and effect. We might consider the great market of the world—Great Britain—one huge progressive exhibition, patronized by all lands, competing for first prize, viz., a regular market and highest prices paid for products of fine quality. The competition on the British market was never so keen as at present; all competing countries are doing their utmost to have the privilege of catering to that great consumer.

It is true all exhibitors do not get first prize, but they are given the opportunity of learning what is really required in an article to entitle it to recognition, and this feature should not be lost sight of. Remember there is always room at the proverbial "top of the ladder," and—that we must climb in order to reach it.

Previous to the exhibition the following list of questions was handed to each exhibitor, who returned his answers along with his entry:

1. How long have the cows been milking?
2. Do the cows get good drinking water?
3. Do they have access to salt regularly?
4. Was the cream raised in deep pails or shallow pans?
5. How soon was the milk set after milking?
6. How many hours was the milk set?
7. If set in deep pails, what was the temperature of the water in which it was set?
8. Was the cream skimmed off the milk or was the skimmed milk drawn off at the bottom of the can?
9. How long was the cream kept from the time of skimming until time of churning?
10. What temperature was the cream kept at while ripening?
11. What was the temperature of the cream when put into the churn?
12. How many minutes did the churning take?
13. How soon after did you work the butter?
14. Was the butter made from mixed herd's milk?

The objects in sending out these lists were to ascertain the particulars in connection with the manufacture of each entry of butter on exhibition; to compare with them the results of the scoring, and in that way to point out where the mistakes, if any, had been made in each particular case; and also to impress on the minds of the exhibitors that a number of conditions have to be complied with in order to make a good quality of butter as economically as possible, or, in other words, with as little loss of butter-fat in the skim milk and buttermilk as possible.

The replies accompanying the butter which was awarded first prize show that the cows had always access to good drinking water and to salt. The milk was set in deep pails immediately after it was milked, and left for twenty-four hours in water at 45° F. The cream was ripened for twenty-four hours and churned at 60° F., the churning taking about thirty minutes. The butter scored 97 points out of a possible 100.

The score card used by the judges is a very valuable feature of the agricultural exhibition, as it shows the awards in points, made by the judges, also the defects found in each entry.

Experience teaches that improvements are sure to follow when the exhibitor, having such defects pointed out, decides to concentrate his efforts to-

wards avoiding them in future. Below is a sample of an ordinary score card:

SCORE CARD.

	SCORE.	REMARKS.
Flavor (45).....
Grain (25).....
Color (10).....
Salting (10).....
Appearance (10).....
Total (100).....

Judge.

With regard to the exhibits, we shall now consider the defects pointed out on the score cards and discuss means whereby they may be avoided.

I find a couple of samples with "old" flavor; there may be various reasons for that, but the answers to the questions show in both cases that the cream was kept from five days to one week. In addition to this we find also that the cows from whose milk the butter was made have been milking nearly ten months. When cream is kept too long, the fermentation goes into the wrong channels, producing flavors termed old, bitter, tallowy, etc. In order to make a strictly fine quality of butter, we must not keep the cream too long before churning; it is essential to churn often and not hold the cream more than a couple of days, particularly in the fall of the year, when most of the cows have been milking a long time.

I found in one case a sample with "heated" flavor, which, I think, is caused by ripening the cream at too high a temperature.

"Herbal" or "weedy" flavor is no doubt caused by the cows eating some strong-flavored herbs or weeds. Herbal flavor is sometimes called "sectional flavor," being peculiar to certain sections of the country.

The grain or texture of the butter exhibited is, with a few exceptions, good, but here we have a couple of samples with a weak texture, containing too much moisture; these samples were evidently churned at temperatures higher than desirable. When we churn at too high temperatures we have a great loss of butter-fat in the buttermilk, and the butter comes soft, holding excessive moisture which cannot be worked out afterwards without injury to the texture. While it is not practicable to lay down any rules as to churning temperatures, which sometimes vary as much as 10° Fahr., we find that a successful churning should take about half an hour.

Another sample here is somewhat "salvey." Overworking of the butter is liable to remove too much of the moisture, which is required to make butter palatable, it being, to a great extent, the moisture which distinguishes butter from lard in the matter of texture. We have then to strike the happy medium or we shall find the texture of the butter weak, moist, or salvey.

While the color is largely a matter of choice, the scoring was based on the color of June grass butter.

The salting of butter is also a matter of taste, and should be regulated to please our customers and also to suit the general quality of the butter, as salt sometimes covers a multitude of mistakes made in the manufacture. Butter intended for export should be salted at the rate of half an ounce per pound, while the local markets require about twice that amount.

Last, but not least, we shall consider the appearance or finish of the several entries. If the appearance be not attractive, as a rule we do not feel encouraged to look for any other qualities; this is especially true regarding dairy products. "A thing worth doing is worth doing well." The buttermaker who produces a fine quality of butter is also careful to give it a neat and attractive appearance.

Packages.—I think it would be well to point out in a few words how the market likes the butter put up; this should, after all, be our guide. For the local market it may be put up in tubs, square boxes, prints or rolls. The tubs or boxes should be lined with the best quality of parchment paper, wetted in cold water or brine. This is waterproof, and prevents the moisture of the butter from soaking through the wood and giving the packages a wet, mussy appearance. The butter should be packed as closely as possible with a wooden packer. The best way to finish the upper surface is to pack in more butter than the package actually holds, then draw a fine cord, stretched across over the edge of the package, through the butter. The surplus thus cut off is removed and the surface is perfectly smooth. Cover the surface with parchment paper and nail the cover on tight.

Prints are made in small boxes, known as butter printers, holding one-half, one, and two pounds of butter. The movable wooden block of the printer should have some initial or trade-mark carved on it, so that each print of butter could be stamped tastefully. Prints and rolls should always be wrapped up in parchment paper. Ornamental butter is only made for exhibition, and should not be sent there unless a special class and prize be awarded it.

Has no Equal.

C. A. CASS, L'Original, P. Q. —"I think yours, as an agricultural paper, still continues to hold its own against all others."

Feeding Young Calves.

Although the natural way for the young calf to feed is to draw the milk from its dam, the system of raising calves in this way is not practiced among dairymen, while many of those who raise the beef breeds find it to their interest as well to discontinue the practice, especially those who are endeavoring to develop the milking qualities of their herds. When the calf is raised on the dam there is a tendency among many cows to hold back the milk after the calf has taken all its requires. Then the calf is usually weaned at five or six months of age, and though there are cows that will milk for two or three months afterwards, there are others that will cease milking immediately. This, having lowered the profit derived from the cows considerably, has led to the adoption of the system of hand feeding. By this method the amount of milk may be increased or decreased at will as the calf grows older, and skim milk may be used, with the addition of other foods as a substitute for the fat. It is considered by practical men that calves can be raised with as good results on cheaper food than butterfat after they are three or four weeks old.

Calves dropped at this time of year will require to be kept in the stables. There is no better place than a roomy box stall where a number of them may be allowed to run loose. Care must be taken to have those in the same box as even in size as possible.

The accompanying illustration represents the arrangement of calf pens in the stock barn of Hon. Thos. Ballantyne & Son, Stratford, Ont. The pens are 12 x 13 feet and the feeding stalls are 4 ft. 8 in. in

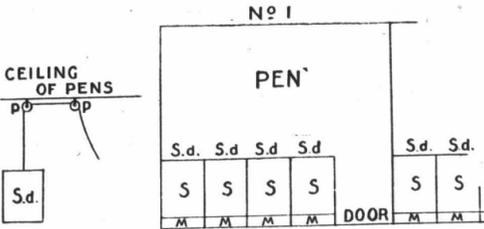


FIG. I. PLAN OF CALF BOX WITH SINGLE STALLS.

length by 20 inches wide, with mangers made of 2-inch plank, 1 foot in width and about the same depth. The partitions between the manger a crosspiece, 1 1/2 x 2 inches, is spiked to keep the calf from reaching far enough forward to get his feet in the manger. Mr. W. W. Ballantyne says that he would prefer having the partitions a foot higher, as the larger calves sometimes succeeded in sucking one another's ears by reaching over. The crosspiece might be placed lower in order to keep small calves from getting their fore feet into the manger. The drawing to the left (Fig. II.) is of the slide door, showing how the rope is attached. It passes from the door up to the ceiling, where it runs through a pulley (P), along the ceiling through another pulley (P), and hangs down in the alley in front of the calves. The feeder may by pulling the rope raise the slide door (S D). The milk is placed in each manger in pails, and when the calves run into the stalls the doors are dropped. They are kept in the stall for a short time after taking the milk so as to prevent them sucking one another. M represents manger, S stall, S D slide door. In Fig. II, the rope should pass towards the alley in front of calves after passing through the first pulley instead of running to the right, as shown in figure. The partitions and doors are built of inch lumber, and 2 x 4 scantlings are used for the ends and for the doors to slide up in a groove in the scantling. A member of our staff recently observed in a modern stable the arrangement of a board hinged to the partition between the passage and the manger. It had a hole opposite each stall the size to hold a pail. When the calves are to be fed the board is turned over the mangers to hold the pails, and after the pails are emptied and removed the board is turned back into the passage.

The calf may be taught to drink at once without allowing to suck the dam at all, though it is necessary that it gets the mother's milk the first few days. When two weeks old add a little skim milk to the sweet milk, and gradually increase until the sweet milk is withheld entirely. As soon as the calf will chew a little begin to feed a small quantity of ground oats and oil meal out of the hand. In a short time the meal may be dropped in the pail immediately after it has taken the milk. It is more likely to be eaten while the calf is licking the pail, and in a few days it will begin to look for an additional supply. This method is preferable to boiling and mixing the meal with the milk, as the calf derives more benefit from it. It will not be so liable to scour, overfeeding is easier avoided, and the labor of feeding very much reduced. Where a cream separator is used the milk will be at a proper temperature soon after it comes from the separator. If the cream is raised by deep setting or shallow pans the milk will require heating to raise the temperature before feeding. By setting the milk cans in a small tank of hot water the milk will rise to the required temperature in a few minutes. It should never be allowed to get above 98° Fah. After the feeder becomes accustomed to this method he can ascertain, by dipping the finger into the milk, when it has reached the right temperature. It is well to keep the milk stirred while heating.

Whether the calf is to be raised for beef or dairy purposes, it is not wise to allow it to become too fat. Foods that will induce rapid growth should constitute the daily ration. For the bulky part clover hay is perhaps the best food for young calves. Ground oats, oil cake and bran will keep the calf in a thrifty condition. As it grows older corn ensilage and pulped roots may be fed advantageously. Calves like variety, though sudden changes are likely to produce scouring. Where this trouble occurs a handful of scorched wheat-flour mixed with the milk will give satisfactory results.

Science Prevailed Over Brute Force.

"MANITOBA" writes:—"I fully intended to write to thank the author of an article entitled 'That Kicking Cow' which appeared a few issues back. I had been fighting with a newly-calved heifer for a month—a quiet little beast naturally—but her bag got very sore and teats cracked, therefore making her for the time being a tiger to milk, but science prevailed over brute force. After trying the plan recommended for a week, I have now a nice, quiet little heifer; and, by the way, she is a Jersey and calved at eighteen months, but she is hale and hearty and gives five quarts per diem. Three months calved, and yet the majority of people tell me I will spoil her growth, etc. I say I am not raising beef cattle, and that I will certainly be a calf ahead. Will you kindly give me your ideas on the subject?"

[Eighteen months is certainly young for heifers to calve, but Jerseys are frequently brought in at about that age with apparently no ill effects. However, it is generally conceded that at two years old is soon enough for heifers to drop their first calves.—Ed.]

POULTRY.

Good Suggestions for Winter Egg Production.

To the Editor FARMER'S ADVOCATE.

SIR,—In considering the production of eggs in winter, there are four very important factors if success is to be obtained: a person thoroughly in sympathy with the business, a suitable house, a well-bred flock, and a ration suitable for egg production.

1. To be a successful poultryman one must be constantly studying the characteristics and needs of the fowls under his management just as much as the successful stock raiser must study each individual in his flock or herd, and in order to reach the greatest possible gain from a flock, we must breed as to individual merit as to the production of the largest number of eggs during the winter months. One dozen eggs in winter is worth three or four in summer. I would be very glad if some reader would suggest some plan so that we could tell accurately the number of eggs each hen laid, so that we could get some idea of our flock as to individual merit, as does the dairyman, who will say such a cow gave so many pounds of milk testing such a percentage of fat. Now, what we want to be able to say, is that such a hen laid such a number of eggs, each weighing so many ounces. Then, and only then, will one be in a position to reach the top.

2. We must have a house warm enough so that during the coldest weather the fowls' combs will not freeze. The house should face the south or south-east. It should have plenty of light, about one-third of the front glass is plenty. Allow each fowl six square feet of room. The perches should be so placed as to be on a level, and so that the droppings can be easily cleaned. A dust bath is very essential.

3. Yearling hens and early pullets make the best winter layers. Hens not yet moulted will likely be of little service to produce eggs this winter. Weak and small late-hatched pullets are only a nuisance, as they will not lay, and are more prone to disease. Fowls bred for a number of years with the object of eggs in winter are more easily made lay than the ordinary scrub. Fancy fowls that are not encouraged in winter laying should not be used in the flock any more than should a male from a dairy herd that milks only seven months of the year. This is one of the causes why some farmers have been disappointed in pure-bred fowls. They were not bred to produce eggs, only in spring when they would be wanted for hatching. The idea that hens that lay in winter never produce strong, healthy chicks is folly.

4. Just now is the time to feed for eggs. A little meat, or better, ground green bone, helps wonderfully. The moulting season is shortened, and the general tone and appearance of the fowls is improved. A warm mash, consisting of bran, shorts, and ground oats and barley, makes a good evening feed. Give a variety of grains in the evening. Wheat is, perhaps, the best mainstay. Buckwheat is a good grain, but all kinds are relished as a change. Give all they will eat up clean. Any fowls showing symptoms of disease should be isolated or slaughtered. The latter treatment is preferable. If taken in the earlier stages the flesh is good to eat, and all danger of contagious disease is avoided. Clean out all droppings once or twice a week; coal oil the roosts once every two weeks; use the oil freely, getting it into all cracks. Give plenty of good water, and have a liberal supply of grit within easy reach.

W. R. GRAHAM.
Hastings Co., Ont.

Getting Eggs in Winter.

There are several factors in the production of eggs in winter. Let us see what they are.

FACTOR 1.

A fairly comfortable house. Temperature at 35 or 40, if possible, particularly for the Mediterranean breeds. For acclimatized breeds, such as Plymouth Rocks, Wyandottes, Javas, Brahmas, Langshans, Cochins, a few degrees less will not hurt, provided the birds are kept in activity.

FACTOR 2.

The layers may be kept in activity by having the grain fed to them thrown in the litter, which should always be on the floor to the depth of one to two feet. This litter may be composed of cut straw, chaff, oat hulls, dry leaves, etc.; whatever suitable material is in most abundance on the farm and cheapest.

FACTOR 3.

A wooden floor has been found to be dry as compared with an earth one. What litter is put on it is more likely to remain dry. It is not as cold in the winter season. Therefore, when circumstances permit, have a wooden floor, and let it be four or six inches above ground.

FACTOR 4.

For morning ration feed three times per week meal of some kind. Out green bone preferred, if it can be procured. The cut bone is valuable because it furnishes lime for shell as well as egg-making constituents. Other three mornings of the week feed a mash composed of table and kitchen scraps, boiled vegetables, steamed lawn clippings or clover hay, and ground grains of some sort. Mix with boiling water until in a crumbly condition. On Sunday morning feed whole grain, so as to make as little work as possible. Feed the meal in proportion of two ounces to each hen. Out bone in ratio of one ounce to each layer. Mash in quantity of one quart to every twenty hens. Never gorge the hens at this morning meal. Overfeeding of this early ration (as well as others) is the rock on which many are wrecked. The layers should be fed only enough to barely satisfy. Then scatter a couple of handfuls of grain in the litter on the floor, so as to start the hens busily searching for it. You now see the object in not overfeeding. Hens fed to repletion will not exercise. If possible, keep the layers in exercise all day.

Noon ration—Nothing. Unmarketable vegetables such as turnips, carrots, mangels, etc., should always be placed where the fowls can get easily at them. If cabbage be occasionally given, suspend it from the ceiling until about three feet from the floor.

Afternoon ration—Should be of sound grain and fed early enough to permit the fowls searching for it in the litter. The layers should go to roost with crops full, and should, if possible, be so fed that the filling of their crops will be a gradual process, the hens being kept in constant exercise in so doing.

FACTOR 5.

Have the minor essentials, grit, lime, dust bath, and drinking water, in regular supply. Different forms of grit are cheap and will be found wholesome. It is the means whereby the fowls grind up their food in their gizzards. Lime in some shape is necessary to furnish material for egg shell. The dust bath is the means by which the hens keep themselves free from lice.

FACTOR 6.

In the artificial housing and treatment of the laying stock the natural conditions should be imitated as much as possible. Use intelligence and energy. Remember that the laying hen while at large during the summer picks up for herself all that is required to make egg and shell, grit wherewith to grind up her food, green stuff in the shape of grass and clover; rolls in the dust to keep her body free from vermin, withal keeping herself in constant activity. Remember that experience is necessary in every department of business before success can be attained. Do not be discouraged at first failures.

Hens properly fed will neither eat eggs nor pick feathers.

And having got your product at a season when it is worth most, sell it to the best possible advantage. Produce as cheaply as possible. Sell at the highest price.

A. G. GILBERT,
Exp'l Farm, Ottawa. Manager Poultry Dept.

Build a Henhouse.

Winter is coming on. Have you a good, warm, comfortable house for your poultry? If not, build one. Eggs in the winter always pay big, and you can't have them without a comfortable house. It needn't cost much. The chickens care nothing about the architecture. All they want is comfort. You can put up the building yourself. Make it plain. A house 12x15 feet, and 6 feet high to eaves, will accommodate twenty-five laying hens. Line it up air-tight. Batten the outside. Put in a hall, with nests easy of access from it. Put in a board floor, as it is the warmest. Have everything tight and snug around the bottom, so that there are no drafts of air. Get a little oil stove for \$2 or \$3, to use in very cold weather, and don't let the temperature go below 40 degrees. You can build such a house with hemlock lumber, roofing paper, and sheathing paper, for \$25 outlay, besides your own labor. With eggs at 20 cents a dozen, 25 hens ought to bring \$30 during the winter. That is a good profit. Without the house you would get nothing, and would be minus the feed.

A. L.

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.

Hernia of the Uterus.

Mr. S. HIND, JR., Kent Co., Ont.:—"I have a mare eight years old; she foaled in June last; about a week before she ruptured the abdominal cords, allowing the belly to sag down. Can anything be done for her, and should she be allowed to breed again?"

[The conditions briefly described by our correspondent are not commonly met with, and are due to a relative narrowness of the pelvis or haunch bones—"animals with a sharp croup"—such as the Norman or Percheron class crossed with a pure-bred animal. In the non-pregnant animal the uterus is small and closely fixed by its ligaments to the sub-lumbar region. When, however, pregnancy is advanced, the great size of the organ, together with the weight of its inmate, brings it in contact with the parietes of the peritoneal cavity, and if there happens to be a weak spot or a rupture, however slight, the heavy uterus gradually forces its way through, and we have seen cases where it actually forces its way into the abdominal sac also. This is termed hernia of the uterus. This may be due to mal-nutrition, "poor feeding," predisposing, relaxation or softening of the abdominal muscles, which leads to their being unable to support the gradually increasing strain or the too lively manifestation of the young and energetic inmate. The muscles of the abdomen become stretched and attenuated, their fibres rupture, and in this way a rent is formed, a tumor appears externally towards the lower part of the abdomen, most usually on the left side. In many instances these appearances are due to violent exertion, or a blow or kick. It need hardly be pointed out that it is very injudicious to attempt to breed from an animal suffering from these conditions.]

Treatment.—The only treatment likely to be of any service is to feed the animal on close food, such as clear oats and peas, only a very small quantity of hay. Apply a wide bandage, secured by straps over the loins, which must be worn constantly until the abdomen has regained its former size. Without inspection there is nothing else we can suggest.

DR. WM. MOLE, M.R.C.V.S., Toronto, Ont.]

An Ailing Bull.

HARRY SIRETT, Muskoka District, Ont.:—"My bull was taken sick last August; his mouth, lips and eyes were badly swollen, and discharged considerably from the nose of a yellowish color. I gave Epsom salts and one-ounce doses of sulphite of soda, iron and gentian daily for a week. He apparently recovered, all but his eyes, which had a muddy film over the sight. I washed them with a solution of sulphate of zinc, and they seemed to be improving. Last week they seemed to be taken suddenly worse, and at the present time he is nearly blind; he seems healthy and feeds well. Can you advise me with regard to his eyes, and if he loses his sight will it hurt him as a stock bull or be any detriment to his usefulness?"

[From the above description your bull has been suffering from a disease known as glossitis inflammation of the tongue, leading on to inflammation of the lining membrane of the nostrils. It is caused by the mechanical irritation set up by eating coarse food, such as barley straw, cornstalks, etc. The treatment has been very good and attended with the ordinary amount of success. The film over the eyes is due to the inflammation of the lining membrane of the nostrils, which has induced ophthalmia. It is difficult to say whether this is likely to be of a permanent nature, and we are inclined to think it will. Should blindness supervene, it would not be advisable to again use him for breeding purposes. In many cases that have come under our notice the disease has become confirmed and difficult of cure. The extreme emaciation which must necessarily ensue renders the animal worthless.]

DR. WM. MOLE, M. R. C. V. S.]

Obscure Lameness.

A SUBSCRIBER, York Co., Ont.:—"We have a valuable mare who sprained her hip a year ago. After resting all the winter we thought her much improved and put to light work in the spring. In a short time she became so lame she could not get along. We then had her fired and blistered by our veterinary surgeon. She has done nothing since and is a little lame yet when trotting, and also after standing over night is quite stiff on coming out. Kindly let us know what is best to do?"

[There is nothing more provoking than a lame horse, and in some cases it is difficult to locate the exact cause. We would advise that you have another veterinary surgeon examine her and get a written opinion from him, and if it confirms your regular attendant again follow his advice. This would be more satisfactory to you.]

DR. WM. MOLE, Toronto.]

Worms in Horse.

GEO. CLARK, Frontenac Co., Ont.:—"I have a horse when standing still will turn around and bite his sides. I was feeding a little salt and ashes, and he passed quite a few worms. I think that is the trouble. Please give a remedy in your next issue?"

[The surest symptom of worms is the visible evidence of their presence which is mentioned above. Other symptoms are the passing of glairy mucus, depraved and fastidious appetite, coat dry and rough, and a general unthrifty condition. Good treatment is to fast the animal for 12 hours, and give aloes, 6 to 8 drams, followed in two days by 1 oz. oil of turpentine in mild oil or linseed gruel. It would be well to repeat this treatment in a week or ten days and follow with a tonic of sulphate of iron, one-half dram twice daily for six days in soft food or solution. This should be accompanied with good feeding with laxative food, including boiled oats, carrots, and good hay. A lump of rock salt in the manger answers a good purpose.]

Heaves.

B. J., Headingly, Man.:—"We have a mare nine years of age, about 1,400 lbs. weight. When driven in warm weather or warmed up at any time, even walking, pants and has great difficulty in breathing. Her three-year-old colt seems to be affected in the same way, and it has never done anything to bring on this trouble. Do you think this is heaves, and will it be hereditary? Can anything be done for them?"

[Heaves in this country, owing presumably to the clearness of the atmosphere, fodder and water, is not very common. The respiratory organs of your mare and colt are, however, from some cause, lacking in power. It is possible that the trouble is of a hereditary nature, and if so, little can be accomplished in way of a permanent cure. It would not be advisable to breed either from the mare or colt. If possible have both animals examined by a competent veterinary surgeon.]

W. A. DUNBAR, V. S., Winnipeg.]

Eczema.

W. WATERHOUSE, Little Red Deer:—"I have a three-year-old heifer which had bare patches mostly on the shoulders and neck last fall, and this summer the hair has almost completely gone off her whole body. The heifer is healthy but uneasy. I should be obliged if you would tell me cause and how to treat it?"

[Your heifer is suffering from a form of eczema. Cleanse the skin thoroughly with the following wash: Warm water, two gallons; soft soap, six ounces; liq. ammonia, strong, two ounces. Rub dry and then apply the following with light friction: Creolin, two ounces; fluid ext. of belladonna, one ounce; water, two quarts.]

W. A. DUNBAR, V. S.]

Swelling on Leg.

E. C. THOMPSON, Vernon, B. C.:—"An ailment of a cow consists of a large swelling on the ham, just between the femur and the tibia bones and about on a line with the stifle joint. It got very large, but with scarcely any lameness, so Mr. H. applied to the local doctor (in the absence of a V. S.) who opened it and took out fully half a pail of putrefaction. They now syringe it and keep it running as much as possible. The cow had a swelling there before I sold her (by the by, she had calved about two weeks), but I put it down to a slip she had when backing out of the stable one day, the stall being raised up. It swelled considerably within a couple of days, but rapidly decreased again, and when Mr. H. took her was not much more than noticeable, but again it took a bad turn, and he now despairs of saving her. The abscess appears to be four inches deep and with a very foul smell. She is a valuable pure-bred Jersey, and as he has only just brought her of me I should be much obliged if you could give us any advice that will help."

[The swelling and subsequent abscess might indicate that the cow is affected with tuberculosis. If, however, there are no other symptoms of that disease in connection with the animal (which your local doctor should be able to recognize) I would advise you to have the cavity in the leg syringed twice daily with the following lotion: Hydrar perchlor, two drams; muriatic acid, four drams; alcohol, four ounces; water, one pint.]

W. A. DUNBAR, V. S.]

Miscellaneous.

Hedge Fence Plants.

THOS. GARVIN, Quebec:—"What is the best hedge plant for the Niagara Peninsula? Great hopes were entertained of the honey locust for a time, but it is not sufficiently thorny, and the cattle eat it. Would the Osage orange be hardy there? In what section of Ontario could plants be bought? An answer in an early issue will oblige."

[The Osage orange is hardy here, and is certainly the best hedge plant we have for turning stock. A great quantity of it is grown here, and turns stock all right. Do not know who would have it for sale, unless Morris, Stone & Wellington. I, however, do not believe it pays to grow a hedge for fence. Our best farmers say they can build a wire or board fence every seven years cheaper than to keep up a hedge fence.]

W. W. HILBORN,

Southwestern Experiment Station,

Essex Co., Ont.

The Osage orange is hardy in the Niagara Peninsula. Plants could probably be bought of any large nursery firm. I do not know that the Osage orange has any better features to recommend it than the honey locust. I would prefer a hedge of Norway spruce to either. It would be some time before any hedge would be effective against cattle without protective wires. The honey locust is, I believe, somewhat more expensive than Norway spruce, and

when old much more difficult to prune and keep in order. For a road fence where cattle are not likely to injure it, nothing can be more compact or look more attractive than the Norway spruce hedge, and it is quite hardy in the Niagara Peninsula.

MARTIN BURRELL,

Niagara Fruit Experiment Station.]

Cause of Light Oat Crop.

R. S. A., Hargrave, Man.:—"The oats I sowed last spring were apparently good in every respect; still they came up very patchy. There was in some instances a space of from two to three feet between the plants. Can you account for this?"

[If the germinating power of the seed was good, your oats were no doubt injured by the severe frosts which occurred late in May and in the early part of June. The oat plant is very tender in its early stages, and some of our fields were badly injured from this cause last spring. Our early sown oats seldom give as large a return as the later sown ones, and there is less danger from frosts.]

S. A. BEDFORD, Supt. Exp'l Farm, Brandon.]

GARDEN AND ORCHARD.

Manitoba-grown Apples at Morden Fair.

The Morden fall fair enjoys the unique position of being (possibly with one exception) the only show held in Manitoba at which native-grown standard apples were exhibited. Mr. Stevenson, whose fruit orchards and beautiful home at Nelson, only eight miles to the north-west of Morden, made a most interesting and attractive display of standard apples, crabs, and other fruits. Of course Mr. Stevenson's place is particularly favorably situated for fruit growing, and, furthermore, the proprietor, who has been experimenting for many years, knows how to grow fruit. In response to a request Mr. Stevenson kindly furnishes a brief descriptive review, published below, of the several varieties of fruit which he exhibited. The Morden fair cannot be said to have come up to the standard of former years. There was a noticeable absence of stock upon the grounds, although a few fine animals were shown. The display in the hall was good, especially the roots and vegetables. The Morden Woolen Mills made a really grand display of their goods. The attendance was certainly ahead of past years, there being a very large concourse of people present. Mr. Stevenson reports:

STANDARD APPLES.

Wealthy.—A fall variety too well known to need any description here. Trees seven years old from graft, ten feet high, are healthy. This variety, although doing well here, I would not advise any one to plant unless in very favorable localities, its chief weakness being its liability to sunscald. Mine are grown on north side of a row of Scotch Pines, the limbs intermingling.

Lieby.—A Russian variety, admitted to be the hardest of all large apples; came into bearing this year for the first time. Specimens were of good size and fair quality; trees six years old; fall variety.

Little Hal.—Another Russian fall apple, came into bearing this year for first time. Fruit highly colored; flesh white, tender, juicy, subacid; trees five years old.

Blushed Caville.—A Russian variety. This is a fine summer apple, handsomely blushed, large and fine in quality; trees five years old.

Anism.—Russian variety. Tree very hardy, a strong, upright grower. Came into bearing this year for the first time; fruit medium in size; tree seven years old, fourteen feet high.

Whitney.—A small hybrid apple of excellent dessert quality.

CRAB APPLES.

The varieties mentioned below are too well known to require any lengthened description at this time. One variety I will this year require to revise my decision upon. Last year it came into bearing for the first time. The fruit was about the size of marbles. This year the crop was extra heavy, and the apples the largest of any of the crab family grown here. It is known as *Gen. Grant*. Other varieties shown were *Virginia*, *Transcendant*, *Montreal Beauty*, *Hyslop*, and *Sweet Russet*.

Before going further it might be well to note here that all varieties of standard apples and also some crabs are protected every winter in the following manner: On the approach of cold weather four boards are put around the trunks of the trees, long enough to reach from the ground up to the limbs; the space between the boards and trunk of tree is filled with earth. This is the plan adopted by some of the most successful orchardists in Minnesota, and of various plans tried I have found it to be the best. One thing is certain, little success will attend the efforts of those trying to grow the larger fruits if this essential to success is neglected.

Of the plums shown I place at the head of the list the *Cheney* as being the best all-round of the varieties yet fruited here. The rest in order of merit: *Birby*, *Rockford*, *Wyant*, *Chippewa*, *DeSota*, *Newton Egg*, and *Lendloff's Long Red*.

In the novelties shown the *Elderberry* had a good deal of interest for some, it having been generally understood that our climate was unsuitable for their growth. One bushel of berries were picked from a bush planted four years ago. *Large-berried Elder* is the name of the variety.

Amur Barberry.—This is a much larger grower than our common species. This year they bore an immense load of dark purple fruit, which is decidedly ornamental and also useful for making jellies.

The Resignation of the Dominion Horticulturist.

Mr. John Craig, Horticulturist at the Central Experimental Farm, Ottawa, recently resigned his position, owing, according to some newspaper rumors, to a difference in judgment with the Director as to whether his department should be devoted mainly to fruit culture or arboriculture.

Mr. Craig is a native of Quebec, where in his earlier years he was associated with that well-known fruit-grower, the late Chas. Gibb, at Abbotsford.

After taking a thorough general education, Mr. Craig took a three years' course at the Iowa Agricultural College, with Prof. Budd, in horticulture and economic botany, being subsequently elected Assistant Director, in special charge of the Department of Horticulture.

It is my honest conviction that Mr. Craig was working on the right lines to meet the wants of the fruit-growers; in fact, I know of no other branch of the Horticultural Department requiring such close attention as those taken up by Mr. Craig.

MARKETS.

Toronto Markets.

Export Cattle.—There was scarcely any export trade being done, and very little of the best cattle were on sale. Prices are nominal at from 34c. to 35c. per pound.

Butchers' Cattle.—There was a moderate trade in butchers' cattle. The mild weather somewhat checks trade. The demand from all outside points is very good, and butchers buy for immediate requirements all the butchers' cattle sold, and from enquiries we find that a large amount of dead meat is shipped to outside districts; there is said to be that drovers can quote market price and so purchase for immediate consumption.

Stocks and Feeders.—Trade was dull in this class of cattle, the demand from Buffalo being a little quieter. Prices rule from \$2.70 to \$3.30.

Sheep.—A very light run and firm at 41c. to 42c. per pound. Messrs. Dunn shipped four carloads of choice wethers to the Old Country by C. P. R. The demand from Buffalo has fallen off. Prices for the better class \$4.10; export sheep 3c. per pound.

Lambs.—Scarce, and the prices are unchanged, 4c. to 4 1/2c. per pound.

Calves.—Are scarce and wanted. We can well remember at this time last year that they were a drug on the market and exported to Buffalo by the carload; \$4 to \$5 per head for choice, \$4 for the medium. Choice veals are in demand and wanted.

Milk Cows.—All on market sold readily at steady prices from \$25 to \$45 per head. Choice dairy cows wanted.

Hogs.—The price continues to fall, and when the present glut is over look out for higher prices. The large number of stores coming forward seems to say that the farmers have no faith in the hog business, but we continue to say hold on to your stores and take any price for the finished article.

Wheat.—About three years ago the official weekly price of English wheat fell to the lowest level on record, 17s. 6d. per imperial quarter of 480 pounds, or 52 1/2c. per bushel of 60 pounds.

Butter.—Owing to a falling off in export, creamery butter is offering and prices are easier. Dairy tub, poor to medium, 11c. to 12c.; choice, 15c. to 16c. per pound; creamery pounds, 19c. to 20c. per pound.

Cheese.—Most of the cheese factories are closed down for the season, and stocks have been accumulating, but not to any great extent. Dealers sell at 9c. to 10c. for early and late makes.

Hay.—Twenty-five loads of hay sold at from \$8 to \$10. Baled hay, car lots at \$9 per ton. Straw.—Scarce, and sells readily at \$8.

Potatoes.—Contrary to expectation, plenty of potatoes are coming forward to supply all demands; the feeling is rather more easy. Farmers' loads are quoted at 55c. to 60c. per bag.

Hides.—Good demand, but market is practically without change. Prices for butchers' hides are 9c. for No. 1, 8c. for No. 2. Sheepskins—Dealers are paying 90c. for best fresh stock.

Wool.—There is still a good demand from some mills for supers and low-grade foreign wools. Supers, 21c. to 22c.; extra, 23c.

Toronto, November 11th.

Montreal Markets.

There has been no export demand during the week, as the cattle that have been shipped are all through from Ontario and the Territories, the bulk of the shipments being from the latter place.

For the local butcher trade good beefs on Monday's market sold high, making 4 1/2c. for choice, nicely-finished steers; others from 3 1/2c. to 4c. per pound.

Sheep and Lambs.—Supplies were light on Monday, but on the heavy side on the several preceding markets. The light supplies created very little demand for export account, what were sold being at 3c. per pound, butcher stock ranging 4c. to 4 1/2c. per pound below.

Calves.—Only about 20 were in yesterday, and these sold from \$2 to \$3 for common grades, and up to \$12 for choice.

Hides and Skins.—As far as outward appearances and market quotations are concerned, there is no change to note in this market, but underneath is quite a current of unrest.

Cattle Shipments.—Shipments of live cattle from the port of Montreal this season promises to equal if not surpass the total reached in 1891, when 123,136 were shipped, but which, unlike the present year, consisted of fully forty per cent. stocker cattle, whereas this season's were made up entirely of beef cattle.

British Markets.—Cables were of a little more encouraging nature yesterday, as they chronicled fully one cent advance over those of a week ago, choice Canadian steers selling at 10 1/2c. in London and Liverpool, and United States, 11c. to 11 1/2c. per pound, sinking the official. Choice Canadian sheep realized 11c. per pound, and lambs 12c., sinking the official. Ranch cattle, 9c. per pound.

Chatty Stock Letter from Chicago. (BY OUR SPECIAL CORRESPONDENT.) Following are the current and comparative prices for the various grades of live stock:—

Table with columns: CATTLE, Range of Prices, Present, Top prices, 1896, 1895. Rows include 1500 lbs. up, 1200 @ 1500, 1200 @ 1350, 1050 @ 1200, 900 @ 1050, Stockers and feeders, Fat cows and heifers, Canning cows, Bulls, Calves, Texas steers, Texas C. & H., Western, Western cows, Hogs, Mixed, Heavy, Light, Pigs, SHEEP, Natives, Western, Lambs.

In addition to the above it should be noted that some fat stock show animals sold at higher prices. Mr. R. J. Stone's Shrops, 138 lbs., and his 166-lb. Oxforde sold at \$5.25.

There is considerable inquiry for fancy holiday cattle. Buyers feel that there will be no end of "next best" cattle, but fancy kind are hard to find. A breeder of Hereford cattle, one of the largest in the country, says he can see a very marked gain in business over a year ago, both as to volume and prices obtainable.

John Goaling is here on a visit from St. Joseph, Mo. He has been buying a good many grade bulls for Southern Texas and Colorado. John is an old-time fine stockman. There is a general agreement among the stockmen that the tide of improvement has set in much more strongly than the public realizes.

There were 14,868 Southern cattle received in quarantine division in October, against 13,008 in September and 20,812 in October, 1896. October cattle receipts of all kinds were about 4,000 more than a year ago, and the ten months' receipts were 51,722 less than a year ago. Last month Sioux City received 40,745 cattle, the largest on record for one month. It is thought Texas will feed even fewer cattle on cotton-seed meal and hulls than last year, owing to scarcity and high price of cattle.

The Western range cattle season is drawing to a close. The season's receipts to date are about 221,700, being 37,000 less than last year and 160,000 less than two years ago. The heaviest week's receipts of Western range cattle this year was for the week ended Sept. 11th. The big week last year was Sept. 18th.

Peter Duff, who has lately been here on a visit from Scotland, says the supply of cattle has been large in that country this year and feeders have made no money in the business; in fact, some have suffered severe losses. Crops have been good. The supply of sheep is about normal.

"We in the Old Country must make up our minds for a greater competition of high-class of both beef and mutton from the United States, Canada, and the Argentine Republic than we have ever had before."

The 6,672,802 hogs received at Chicago the first ten months of 1897 averaged 240 lbs., or 5 lbs. lighter than the average for the same period of 1896, when 6,280,121 were received. The

October hog receipts were 48,708 less than a year ago, and receipts for the year so far show an increase of about 392,681 head. The average weight of hogs for October was 241 lbs., being 8 lbs. less than in September, but 2 pounds more than a year ago, and the heaviest for October since 1883, when it was 267 lbs.

An authority estimates that hog receipts at the four great Western markets for 1897 will be the largest ever known in one year. For ten months of this year Kansas City, Chicago, Omaha and St. Louis will totalize about 11,950,000. The greatest receipts in a whole year were in 1891, when 15,578,228 head were marketed. Deducting ten months' receipts for 1897 from the total in 1891 we have 1,625,000 head required in the final two months of this year to make the 1897 total equal that of 1891.

Receipts for the approaching two months would be light if they did not exceed 1,625,000, for in the past seven years the average November receipts were 1,264,000 and the average for December was 1,281,000. Should the November and December arrivals this year equal those of 1896 the total receipts for 1897 would be around 14,350,000, or 1,250,000 greater than in 1896 and 772,000 greater than in 1891.

Hogs received at Kansas City last month averaged only 210 lbs., the lightest since August, 1894, and the lightest October since 1894. A average for September, 218 lbs., and October, 1896, 226 lbs. The average weight of hogs sold at Sioux City last week was 294 lbs., the heaviest average since the week ended Dec. 26, 1896, when the average was 295 lbs. Average last month, 281 lbs., against 274 lbs. the previous month and 289 lbs. a year ago.

At the various breeders' meetings much interest was shown in the coming trans-Mississippi exposition at Omaha, and an appropriation of \$150 was set aside to be divided into special prizes for Hampshire sheep exhibited on that occasion.

Reliable figures as to the sheep business in Montana are to the following effect for 1896: Number of sheep, 3,968,627; average of fleeces, 7 1/2 lbs.; wool, washed and unwashed, 21,530,013 lbs.

The Chicago Horse Show was quite a success.

Canadian Live Stock Exports.

The following are the live stock exports for the weeks ending Nov. 3rd & 10th, as prepared by R. Bickerdike, of the Live Stock Exchange, Montreal:

Table with columns: Date, Location, Cattle, Sheep. Rows include Oct. 30 - Parkmore, London, 73 cattle, 410 sheep; Nov. 3 - Devona, London, 350 cattle, 1,300 sheep; Nov. 3 - Grecian, London, 273 cattle, 401 sheep; Nov. 3 - Iowa, London, 401 cattle, 355 sheep; Nov. 3 - Lake Winnipeg-Liverpool, Liverpool, 198 cattle, 375 sheep; Nov. 3 - Buenos Ayres, Liverpool, 275 cattle, 327 sheep; Oct. 28 - Etolia, Bristol, 241 cattle, 154 sheep; Oct. 28 - Cynthiana, Manchester, 241 cattle, 154 sheep; Nov. 5 - Montevideo, London, 177 cattle, 150 sheep; Nov. 5 - Hurons, London, 350 cattle, 258 sheep; Nov. 5 - Scotsman, Liverpool, 620 cattle, 134 sheep; Nov. 5 - Numidian, London, 305 cattle, 253 sheep; Nov. 5 - Lake Huron, London, 134 cattle, 440 sheep; Nov. 5 - Tower Hill, London, 440 cattle, 365 sheep; Nov. 5 - 7 cycles, Bristol, 365 cattle, 302 sheep; Nov. 5 - Kastalia, Glasgow, 302 cattle, 241 sheep; Nov. 5 - Concordia, London, 241 cattle, 889 sheep.

Buffalo Markets.

Canada Lambs.—Since our last report there has been but very little change in the situation in the sheep and lamb trade; prices have ruled steady to strong, with offerings only moderate; good to choice ewe and wether grades selling at \$5.00 to \$5.70 when weighing under 90 lb. Heavier lambs have been in light request, and some weighing over 100 lbs. in the market have sold as low as \$5.35 to \$5.40, and in the absence of an export demand these heavyweight lambs have ruled drabby. Culls and throw-out lambs in good request, principally from local butchers, at \$5.00 to \$5.25. Good fat ewes are selling at \$4.25 to \$4.50, with prime wethers at \$4.75.

Exports of Cattle sell readily at these prices, \$6.50 to \$7.00, and with prospects generally favorable at these prices, the week ending Nov. 10th, the Canadian stockers and feeders this week about 60 cars, and with about 50 loads of Michigan there was an active demand and prices for good stockers and feeders ruled stronger, whilst the common and rough lots sold barely steady with last week. Prime, well-bred, good quality feeders sold at \$4.10 to \$4.25, with good to medium grades taking at \$3.75 to \$4.00. The common coarse Montreal and Eastern Ontario cattle sold slow and in light request, at \$3.25 to \$3.65. There still continues to be a good demand for prime, good color, well-bred yearlings and stockers, and they averaged 10 to 15 cents higher than last quotation, selling at \$3.85 to \$4.00, with some extra fancy lots bringing \$4.15 to \$4.25. Stock holders sold at \$3.00 to \$3.25, with several Eastern buyers taking some choice breeding heifers at \$3.40 to \$3.50. Stock bulls sold steady, at \$2.85 to \$3.15 for best grades, with common at \$2.50 to \$2.75. Best export and shipping steers sold at \$5.00 to \$5.15.

East Buffalo, Nov. 9.

Stock for Manitoba and the Northwest. Under direction of Mr. F. W. Hodson, acting for the Dominion Live Stock Associations, the loading of another car of live stock for the West was completed on Nov. 11th. The car contained animals to the following persons: M. Gardhouse, Highfield, to D. Sinclair, Portage la Prairie, Man, one yearling Leicester ram; Wm. Linton, Aurora, to F. W. Brown, Portage la Prairie, Man, four ewe lambs, four yearling ewes, and one yearling ram (Cotswolds); J. & W. Watt, Salem, to J. R. Sanders, Minnedosa, Man, one yearling Shorthorn bull; Thos. Teasdale, Concord, to F. W. Brown, one Berkshire boar; Wm. Linton, to Wm. Linton, Jr., Elkhorn, Man, one Hackney mare; Jas. Russell, Richmond Hill, to G. Allison, Elkhorn, Man, three Shorthorn heifers; J. M. Gardhouse, to G. Allison, one yearling ram and one ram lamb (Leicesters); Wm. Grainger & Son, Lonsdale, to T. T. Skinner, Indian Head, Assa, one yearling Shorthorn bull; Jas. Russell, Marsh, Richmond Hill, to Wm. Stothers, bull, cow, heifer (Shorthorns); John Gardhouse, to Wm. Stothers, Shorthorn heifer; Mossom Boyd, Bobcaygeon, to Mossom Boyd Co., Prince Albert, Alta, Hereford bull, bred by D. Smith. Compton, Que. to W. Butler & Son, Dereham Centre, to Kipp & Knight, Chilliwack, B. C., Guernsey bull.

These animals were sent out in charge of Chas. King, and are a first-rate lot. The bull bred by J. W. Watt is a particularly good one. The bull sent out by Wm. Grainger & Son, of Lonsdale, is a promising youngster. Both of these animals, if handled well, will likely give an account of themselves in the showing of Western Canada. They are among the best specimens that have left Ontario for the West during the season. The Cotswold sheep sent by Mr. Linton are full in high condition, but they are exceedingly well-bred and full of quality. Mr. Gardhouse's Leicesters are in nice condition, and are first-rate specimens of the breed. The three Shorthorn heifers shipped by Jas. Russell are nice, straight, useful heifers, in fair condition, but of good quality, and faultless as far as color, skin, and hide go. The Berkshire boar sent out by Thos. Teasdale, of Concord, is one of his famous family of Berkshires, and if given fair treatment will be a prize-winner of the future. There are now enough animals on hand to partially fill another car, and one will be sent as soon as sufficient animals are available. Those having stock on hand which they wish shipped to the Northwest should correspond with F. W. Hodson, Secretary of the Associations, Parliament Buildings, Toronto.

brought himself down to marry Elizabeth Grootenheimer!" It was not long after this happy event that another great joy came to Mrs. Aleshine. Her son returned from Japan. He had heard of the loss of the steamer in which his mother and Mrs. Leeks had set sail, and was in great trouble of mind until he received a letter from his mother which brought him speedily home.

He was a fine young man, handsome and well educated, and we were all delighted with him; and in a very short time he and Lucille Dussante, being the only young bachelor and maiden of the company, became so intimate and super-friendly that it was easy to see that to Mrs. Aleshine might come the unexpected rapture of eventually being the mother of Lucille.

We staid much later at Meadowville than we had expected. But, after a time, the Dusanter considered it prudent to go to Florida for the rest of the winter; Mr. Enderton had long since read all the books on his closet shelf and departed for New York; and Ruth and I determined that we, too, must move eastward.

In the spring the Dusanter family came North again and Lucille and her lover were married; and then all of us, except Mr. Enderton, who had obtained a most congenial position as assistant librarian in a public institution seldom visited, gathered at Meadowville to spend a week or two together before Ruth and I repaired to the New England town which was to be our home; and the Dusanter family, the young husband included, set out on a tour, partly of business and partly of pleasure, through Canada and the far Northwest.

This visit to Meadowville was in the onion-season; and one morning Ruth and I sat upon a fence and watched the three sailor men busily at work. The soil looked so fine and smooth that one might almost have supposed that it had been holy-stoned; and the three nautical farmers, in their tight-waisted, loose-buttoned trousers, their tarpaulin hats, and their wide-collared shirts, were seated on the ground at different points, engrossed in the absorbing task of setting out young onions as onions had never been set out before. In a portion of the field which had been first planted the onions had sprouted, and we could see evidences of astonishing designs. Here were anchors in onions; hearts in onions; brigs, barks, and schooners in onions; and more things pertaining to ships, the heart's affections, and the raging main outlined in onions than Ruth and I could give names to.

"It seems to me," said I, "that there must have been some sort of enchantment in that little island in the Pacific, for in one way or another it has made us all very happy."
"That is true," answered Ruth; "and, do you know, I believe the cause of a great part of that happiness was the board-money in the ginger-jar!"
[THE END.]

THE QUIET HOUR.

Thy Will, Not Mine.

"Our lives we out on a curious plan,
Shaping them, as it were, for man;
But God, with better art than we,
Shapes them for eternity."

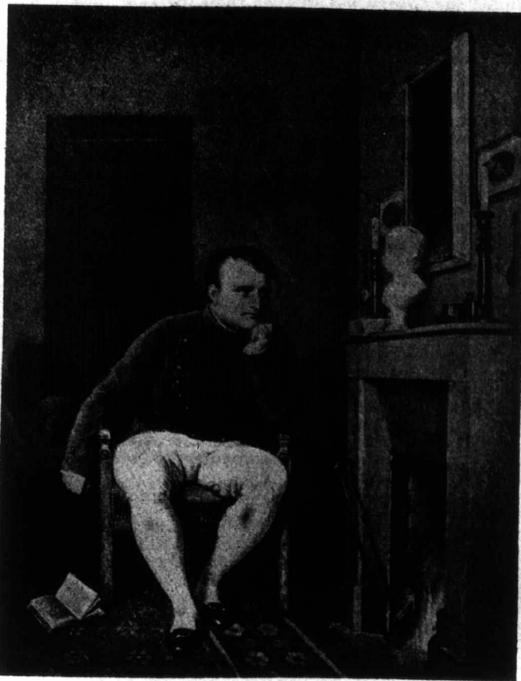
Many people only half read their Bibles. They skim the surface and fail to get the full deep meaning of the words. They get but half-truths, and half-truths oftentimes are misleading. Even inspired sentences, standing alone, do not always give the full and final word on the doctrine or the duty which they present; frequently it is necessary to bring other inspired sentences, and set them side by side with the first, in order to get the truth in its full rounded completeness. When the Tempter quoted certain scriptures to our Lord, he answered, "It is written." The plausible word in its isolation was but a fragment, and other words must be brought to stand beside it to give it its true meaning. Many mistaken conceptions of the doctrine of prayer come from this superficial reading of the Scriptures. One person finds the words "Ask, and it shall be given you;" and, searching no further, he concludes that he has a key for the unlocking of all God's storehouses; he can get anything he wants. But he soon discovers that the answers do not come as he expected, and he becomes discouraged, and perhaps loses faith in prayer. The simple fact is that this word of Christ, standing alone, does not contain the full truth about prayer. "It is written again." He must read more deeply, and, gathering all our Lord's sayings on this subject, combine them in one complete statement. There are conditions to this general promise. The word "ask" must be carefully defined by other scriptures; and, when this is done, the statement stands true, infallible and faithful. One of the oft-forgotten conditions of all true and acceptable prayer is the final reference of every desire and importunity to the Divine Will. After all our faith, sincerity and importunity, our requests must still be left to God, with confidence that He will do what is best. For how do we know that the thing we ask would really be a blessing to us if it came? Surely God knows better than we can know, and the only sure and safe thing to do is to express our desire with earnestness and faith, and then leave the matter in His hands. It is thus that we are taught in all the Scriptures to make our prayers to God. But do we quite understand this? Is it not something more profound than many of us think? It is not mere silent acquiescence after the request has been refused. Such acquiescence may be stoical and obstinate, or it may be despairing and hopeless, and neither temper is the true one. To ask according to God's will is to have the confidence, when we make our prayer, that God will grant it unless in His wisdom He knows that refusal, or some different answer than the one we seek, will be better for us, in which case we pledge ourselves to take the refusal or the other answer as the right thing for us. If we understood this, it would remove many of the perplexities which lie about the doctrine of prayer and its answer. We pray earnestly, and do not receive what we ask. In our disappointment we say, "Has not God promised that if we ask we shall receive?" Yes; but look a moment at the history of prayer. Jesus himself prayed that the

cup of His agony—the betrayal, the trial, the ignominy, the crucifixion, and all that nameless and mysterious woe that lay back of these obvious pains and sorrows—might pass, and yet it did not pass. St. Paul prayed that the thorn in his flesh might be removed, yet it was not removed. All along the centuries, mothers have been agonizing in prayer over their dying children, crying to God that they might live; and even while they were praying the shadow deepened over them, and the little hearts fluttered into the stillness of death. All through the Christian years crushed souls, under heavy crosses of sorrow or shame, have been crying, "How long, O Lord, how long?" and the only visible answer has been a little more added to the burden, another thorn in the crown. Are not our prayers answered, then? Certainly they are. Not a word that goes faith-winged up to God fails to receive attention and answer. But oftentimes the answer that comes is not relief from suffering, but the spirit of acquiescence in God's will. The prayer many, many times only draws the trembling supplicant closer to God. The cup did not pass from the Master, but His will was brought into such perfect accord with His Father's that His cries for relief died away in a refrain of sweet, peaceful yielding.
[TO BE CONTINUED.]

THE CHILDREN'S CORNER.

The Tool Chest.

They gave him a chest full of wonderful tools when he got to be six years old, and he made up his mind to go forth in the world and become a carpenter bold.
"I've gimlets and saws and hammers and nails, I've jack-planes and awls," said he;



"NAPOLEON AT ST. HELENA."

"I've rulers and screws—how can I refuse a carpenter-man for to be!
The first thing to learn is to hammer a nail." And he got out his hammer and tacks, and he hammered and hammered and hammered away till he'd used up a half dozen packs. He nailed up the doors and he nailed down the floors, and he nailed them again and again, and he made no mistake till he hammered a tack through the nursery window-pane. Then he took up a saw, and he tried its teeth. "I must now learn to saw," he said; and he sawed at the lock of the bureau-drawers, and he sawed off the legs of his bed. And he sawed on the lock of the nursery door till the teeth of the tool grew rough, and then he sat down and remarked to himself, "Well, I guess I have sawn enough. I will now try the awl and the gimlet, too, and learn what different kinds of holes they make—for they're not alike"—and he bored on the outside blinds. He bored six holes in the shutter slats, and then made a change again. And tried his luck on the bureau top with the beautiful two-inch plane. And then, poor boy, some one came in, and, oh, what a fuss was raised! They spanked that boy for trying to learn, when he thought he'd surely be praised; and his father raged, and his mother was cross, and even his sister cried. Because he'd taken her desk apart to see what there was inside. And the baby, too, was as wrathful as they, because for a little while he'd used the ruler to find how wide was the dear little fellow's smile. And that's why Jack—the poor little chap—has changed every future plan, and is going to be a policeman bold instead of a carpenter-man.
—Harper's "Round Table."

There is a false economy which costs more than it returns; such as saving old medicine bottles, partially used prescriptions, the tacks taken from the carpet, or working days to save or make that which can be bought for a few cents.

Wrong Side Out.

Tom was cross; nothing pleased him. He was late for breakfast, and then grumbled because everything was cold. He did nothing but fret and complain. At last his mother said:

"Tom, I want you to go right up to your room and put on all your clothes wrong side out."
Tom stared. He thought his mother must be joking.

"I mean it, Tom," she repeated, so he knew that there was no help for him. He had to turn his stockings wrong side out, and put on his trousers and coat and collar wrong side out.

Then he came down, and stood—a forlorn and funny-looking boy, all linings and seams—wondering what his mother meant. He was not quite easy in his conscience.

Then his mother, turning him around, said, "This is what you do nearly every day—make the worst of everything. You have been turning everything wrong side out. Do you really like your things this way so much, Tom?"

"No, mother," answered Tom, with a very red face. "Can't I turn them right?"

"Yes, you may, if you will turn your temper to match. We don't want to see the worst side of your temper and manners, any more than your clothes."

After that Tom was careful to put on his very pleasantest smile before coming down to breakfast. Try it.

Making Friends.

Bobby's Aunt Ju lived in a pretty cottage and kept bees. She loved them, and knew all their ways.

"You must make friends with my bees, Bobby," said the old lady when the little boy came on a week's visit.

"All right," said Bobby; his big brother Sam always said "all right" to everything, and Bobby thought he would show off too.

An hour after there were loud screams from the garden. Aunt Ju put down the newspaper and ran out.

"Oh, oh, oh! I'm stung! A bee has stung my finger."

"What were you doing, dear?"
"I was making friends, and was taking a handful of the bees out. One stung me, and I did beat it, Aunt Ju, but it went on stinging me more."

"Now, Bobby," said the old lady, when she had made the finger as comfortable as she could, "next time you want to make friends with anything, try to be kind instead of rough. If you hit a bee, it is sure to hit back, and you know now which gets the worst of the fight."

There is nothing which the average husband better appreciates than a tidy, well-ordered home, with a place for everything, and everything in its place. On the other hand, there is no more potent source of domestic unhappiness than disorder in the living apartments.

Memory Gems.

FROM PAPER CONTRIBUTED BY MISS BLANCHE MACMURRAY, STIRLING, ONT.

"The leaves of memory seem to make
A mournful rustling in the dark."
—*The Fire of Driftwood*: Longfellow.

"Silently one by one in the infinite meadows of
Heaven, blossomed the lovely stars, the
Forget-me-nots of the angels."
—*Evangeline*: Longfellow.

"I hold it truth with him who sings,
To one clear harp in divers tones;
That men may rise on stepping-stones
Of their dead selves to higher things."
—*In Memoriam*: Tennyson.

"In contemplation of created things
By steps we may ascend to God."
—*Paradise Lost*: Milton.

"When noble aims have suffered long control,
They sink at last or feebly man the soul."
—*Goldsmith*.

FROM PAPER CONTRIBUTED BY MRS. EDITH PHILP, BEAUMONT, ONT.

If you cannot find happiness by direct search, try another plan. Make others happy and see if that does not make you truly blessed.

Does any man wound thee? Not only forgive, but work into thy thought intelligence of the kind of pain, that thou mayest never inflit it on another.
—*Margaret Fuller*.

So live that when the sun
Of your existence sinks in night
Memories sweet of mercies done
May shrine your name in memories light,
And the best seeds you scattered: bloom
A hundredfold in days to come.
—*Sir John Bowring*.

Cowards die many times before their death,
The valiant never taste death but once.
—*Shakespeare*.

Learn to say "No," and it will be of more use to you than to be able to read Latin.
—*Spurgeon*.

The most common cause of failure is attempting too much and doing too little.
—*Wigglesworth*.

One science only will one genius fit,
So wide is art, so narrow human wit.
—*Pope*.

Thoughts were not meant for strife nor tongues for swords,
He that sees clear is gentlest of his words.
—*Archibald Lampman*.

There is something harder to bear than the reverses of fortune: it is the ingratitude of man.
—*Napoleon I.*

The tissues of the life to be
We weave in colors all our own,
And in the fields of destiny
We reap as we have sown.
—*Whittier*.

FROM PAPER CONTRIBUTED BY MISS MAUD E. SMITH, PARIS, ONT.

This above all,—to thine own self be true,
And it must follow, as the night the day,
Thou canst not be false to any man. —*Shakespeare.*

Live for something. Do good, and leave behind you a monument of virtue that the storms of time can never destroy. Write your name by kindness, love and mercy on the hearts of the thousands you come in contact with year by year, and you will never be forgotten. No, your name, your deeds, will be as legible on the hearts you leave behind you as the stars on the brow of evening. Good deeds will shine bright on the earth as the stars of heaven. —*Dr. Chalmers.*

Love all, trust a few, do wrong to none;
Be able for thine enemy rather in power than use,
And keep thy friend under thy own life's key. —*Shakespeare.*

Talents angel-bright, if wanting worth, are shining instruments
In false ambition's hand, to finish faults
Illustrious, and give infamy renown.
Great ill is an achievement of great powers,
Plain sense but rarely leads us far astray.
Means have no merit if our end amiss.
Hearts are proprietors of all applause.
Right ends and means make wisdom: worldly-wise
Is but half-witted at its highest praise. —*Young.*

Since we too can love, we know that we are of God in some more vital way than rocks or trees or than our own bodies. But love has no contempt. She sees all things in God, and she feels the throbbing of her own heart, the life of God in her life beating back to her through what are esteemed the meanest of his works.

"A weed, to him who loves it, is a flower."
And love continually hears a sound as of human expostulation and entreaty coming up to her from tangled and neglected wastes, which to other ears are bound in savage silence. The earthly palpitates with a dim consciousness of its heavenly affinities and possibilities, which will some time be realized. —*Lucy Larcom.*

There has come to my mind a legend,
A thing I had half forgot,
And whether I read it or dreamed it—
Ah well, I remember not.
It is said that in Elysium at twilight
A great bell softly swings
And man may listen and harken
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 throbs in the pulses of life;
If he thrusts 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 Osborne.*

A Friend in Need.

Gin ye find a heart that's weary,
And that needs a brither's hand,
Dinna turn thou from it, dearie;
Thou maun help they fellow-man.
Thou, too, hast a hidden heartache,
Sacred from all mortal ken,
And because in thine own grief's sake,
Thou maun feel for ither men.

Gin there's one 'gainst whom unkindly
Scorn has vent her bitter blows,
Dinna thou join in and blindly
Lend thy doubts to swell his woes.
Thou mayst feel the lash o' slander,
Know the stings o' falsehood, too,
Dinna stop to wait and wonder
If the thing be false or true.

Give thy hand while hands are needed,
Give thou trust while trust is scant.
The sma' gifts are doubly heeded
When they come in time o' want.
Pity's blind and faith is blinder,
Hand in hand the brithers go;
Hope is kind, but love is kinder,
Dearie, thou will find it so.

In this worl' o' seesaw, dearie,
Grief goes up and joy comes down,
Blows that catch the sunshine cheerie
May to-morrow wear a frown.
Bleak December, dull and dreary,
Follows on the heels o' May;
Give thy trust unstinted, dearie,
Thou mayst need a friend some day.

Wedded Love.

And if the husband or the wife
In home's strong life discovers
Such slight defaults as failed to meet
The blinded eyes of lovers:

Why need we care to ask? Who dreams
Without their thorns of roses?
Or wonders that the truest steel
The readiest spark discloses!

For still in mutual suzerance lies
The secret of true living;
Love scarce is love that never knows
The sweetness of forgiving. —*John G. Whittier.*

Sometimes, Somewhere.

Unanswered yet! The prayer your lips have pleaded
In agony of heart, these many years!
Does faith begin to fail; is hope departing,
And think you all in vain those falling tears?
Say not the Father hath not heard your prayer;
You shall have your desire, sometime, somewhere.

Unanswered yet? Faith cannot be unanswered,
Her feet were firmly planted on the Rock;
Amid the wildest storms she stands undaunted,
Nor quails before the loudest thunder shock.
She knows Omnipotence has heard her prayer,
And cries, "It shall be done," sometime, somewhere. —*Robert Browning.*

To cleanse glass bottles that have held oil, place ashes in each bottle and immerse in cold water, then heat the water gradually until it boils; after boiling an hour, let them remain till cold. Then wash the bottles in soap-suds and rinse in clear water.

Teach History from a Tree.

LONDON MUSEUM HAS A SECTION OF TRUNK 533 YEARS OLD.

At the Natural History Museum in South Kensington there is a section of polished Douglas pine large enough, say, to make a round table to seat a dozen persons. Instead of making it an object lesson in botany, the museum authorities have ingeniously chosen it as a medium for the teaching of history. The tree was cut down in 1885, and as the age of the tree can be inferred from the number of rings which its cross-section discloses, this one must have been 533 years old. In other words, it was born in 1352, and it lived through the most interesting part of English history—from Edward III. to Victoria.

It is therefore a simple matter to mark different rings with their dates and the names of the events that were happening while they were being born. This is what has been done—from the center of the tree in two directions, right away to the bark. The markings, which are neatly executed in white paint, reveal some interesting facts. Thus, when this pine was four years old, the battle of Poitiers was fought, in 1356; when it was twenty-five Edward III. died. It was 119 when Caxton introduced printing, and when Columbus discovered America it was 140. When Shakespeare was born 212 rings had already made their appearance; when Raleigh settled Virginia, 240. Fifty years later Sir Isaac Newton was born. When the great fire of London was raging this venerable specimen could boast 314 rings, and eighty more when the battle of Culloden was fought.

It had reached the remarkable age of 424 when American independence was declared, and the yet more remarkable age of 485 when Queen Victoria ascended the throne. And even then it had a long time yet to live. Evidently there is something to be said for the theory that the more we vegetate the greater are our chances of longevity.—*London Mail.*

A Knowing Horse.

Some few months since a heavy cart horse, employed in one of the royal drydocks, slipped and fell accidentally into a deep trench that had been dug across the roadway.

Here he lay for hours—helpless. A skilled veterinary surgeon was called, who declared the beast to be physically uninjured and quite able to extricate himself.

All the arts of persuasion were tried without avail—he would not budge an inch! The time for closing the yard was nigh—still he lay immovable.

As a last resource, the services of a steam traveling crane were requisitioned to lift him out. Just as the necessary slings were being adjusted around him, the yard bell rang to cease work.

At the well-remembered sound the animal struggled to his feet, leaped lightly out of the trench, and with a low neigh of satisfaction trotted contentedly along the accustomed road to his stables.—*Edinburgh Scotsman.*

She Had Lost It.

An old woman whose husband was ill in bed sent for the doctor, who came and saw the old lady. "I will send him some medicine," he said on leaving, "which must be taken in a recumbent posture." After he had gone the old woman sat down, greatly puzzled.

"The recumbent posture—a recumbent posture!" she kept repeating. "I haven't got one." At last she thought, "I will go and see if old Mrs. Smith has got one to lend me."

Accordingly she went and said to her neighbor: "Have you a recumbent posture to lend me to put some medicine in?" Mrs. Smith, who was equally as ignorant as her friend, replied:

"I had one, but to tell you the truth I have lost it."—*Pearson's Weekly.*

Women's Work in Shetland.

In Shetland there are some generally accepted divisions of labor, though they are not strictly observed. For instance, it is usually understood that the women attend to the cows and the men to the ponies. The sheep are impartially cared for by the whole family, but the lambs taken home for the winter are fed by the boys of the household. The men cut the peats, but the women remove the turf from the surface beforehand. In former times when the people all wore homespun, the men sewed the woven garments, and the woman made those that were knitted. Such rules are now greatly relaxed, the usual limit being one's capabilities. Formerly they were carefully observed, and in such divisions of labor as are universally recognized the lines were drawn very sharply indeed. A girl chancing to make some observation about the tide being at ebb was tartly told by her mother, "Yon's men's talk. It's no dacent to hear a lassie spaekin' about da tides."—*Dundee Courier.*

Why Habit is Fixed.

"Habit is hard to remove. If you take away the first letter, 'a bit' is left. If you take off another letter you still have a 'bit left.' While if you take off another the whole of 'it' remains. If you remove another it is not 't' totally used up. All of which goes to show that if you wish to get rid of a bad habit you must throw it off altogether."—*The Weekly Bouquet.*

Puzzles.

1-LOGOGRIPH.

Whole I am often seen in the sky; behold me and I am easily heard; behold and transpose and I am a musical composition; put my head and tail together and I mean "to act"; behold me again and I am an exclamation. "Kit."

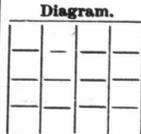
2-NUMERICAL.

5, 2, 3 is a reptile.
5, 6, 7 is a piece of cloth.
8, 9 is a pronoun.
2, 3, 4, 5 is a mineral.
Whole is a vegetable. "Kit."

3-TRANSPPOSITION.

Predifnshi evsle tis syee therra anth ese het oomn clesedopt; elwih camile senide hatt ti si veer at teh ufl. EDITH BROWN.

4-MAGIC SQUARE.



Fill in the square with figures from 1 to 16 inclusive, no two appearing twice, to be placed in such a position that when added will make 34 every way that four figures appear in line, except diagonally. EDITH BROWN.

5-HIDDEN SQUARE WORD.

I am not one when I work;
Who says so two wrong;
And any one can four me
As I run and three along. A. P. HAMPTON.

6-SQUARE WORD.

1, A sandy shore; 2, something more; 3, a collection of maps; 4, a small vessel; 5, to hurry. BLANCHE MACMURRAY.

7-ANAGRAM.

SIN IS NO CREDIT.

Beware of "total" great or small,
For nature claims her pay for all.
The brimming cup and painted card
Teem with danger. He's gone to sin
Who perils the safety of his soul
Dallying daily with deadly "whole." W. G. MOFFATT.

8-TRANSPPOSITION.

Yyirchpso si a tors fo hmgoae tthah elov ypsa ot uveirt. MURIEL E. DAY.

9-NUMERICAL.

A 1 to 7's life is one of care
As he doth try his charge to Christians make;
While many a 3 to 6 he'll patient bear,
Because he does an interest in them take.

1 to 5 on! reward is near,
Thy 1, 2, 3, 7's may win a few
Stars for thy crown. Thou hast no cause to fear,
For God shall call thee "faithful one and true." W. G. MOFFATT.

10-TRANSPPOSITION.

Ows oevl dan estta tis itegaurlf repu
Swo ecaep nad aper sti stevhar ghtbri
Oew smeabnus no het okrc nda romo
Adn indf a stevhar meho fo gthli. ETHEL MCCREA.

Answers to Oct. 15th Puzzles.

- 1—Now all who journey to Alaska
Might better stop at Arthabaska;
So Charlie take a friend's advice,
E'er go to Klondyke think twice.
- 2—William Weld, 3—Start—tart—art, 5—Box, 6—Baby-lon, 7—Mexico, 8—Orbit, 9—Westminster.
- 4—1. Canada
2. Urr
3. Rabbi
4. Ice-cream
5. Outdo
6. Sunless
7. Illuminati
8. Tut
9. Yesterday

Initials—Curiosity
Finals—Animosity

SOLVERS TO OCT. 1ST PUZZLES.

Maggie Scott, Annie P. Hampton, Mabel Ross, Edith Brown, W. G. Moffatt, Muriel E. Day, Chris McKenzie, "Kit."

SOLVERS TO OCT. 15TH PUZZLES.

Annie Hampton, Edith Brown, Maggie Scott, "Kit," Blanche MacMurray, Mabel Ross.

COUSINLY CHAT.

"Kit."—Your puzzles are quite in order. Come often.
"Annie Laurie."—You are doing well, busy little woman. Did Mary go? "Kit" had many more things in that grave, but I did not use all.
Chris.—I was delighted to see your familiar writing. Do not leave us again. The prize-winners will have to work if you start in earnest. Eh, Chris?
W. G. M.—Your questions are not wholly fair. I can only say in answer, "Nothing venture, nothing win." "Never say fail" is a good motto. Please send answers to original puzzles on a separate paper, or at least leave room to detach. Sign name to each puzzle.
B. MacM.—Anything meant for publication should be written with pen and ink.
Cousins All.—Please do not ask my personal opinion on your work. If all would comply with the simple rules from time to time published it would much lessen my labor, as in order to use a very good puzzle I am obliged to copy it to make it presentable. This only applies to a few. Although the names of solvers have not appeared in proper order, I have kept account of all work, and Uncle Tom will be able to award the prizes at the proper time. The usual quarterly prizes will be given. ADA A.

A Silent Lamp Post.

It was midnight, and the wanderer slowly and unsteadily approached the lamp-post.
"Shay, you," he said.
The lamp-post said nothing.
"C—can you tell me, shir," said the wanderer, "whash time day i—is it?"
The lamp-post remained silent.
"W—will yoush tell me, shir," said the wanderer again, "whash time o' day i—is it?"
The lamp-post made no answer.
"Stuck up," said the wanderer, reproachfully. "St—stuck up, ain't yer? But I'd like yer t' know, shir, that I'm just as fine gentlemen's you are, even if I d—don't wear a glass hat, shir."

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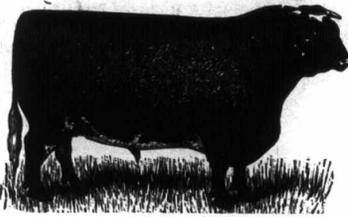
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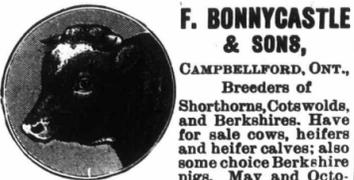
RIVER BOW STOCK FARM.

B. SNARY & SONS, Croton, Ont., Breeders of Shorthorn Cattle, Poland-China, Duroc Jersey, and Chester White Swine, and Leicester Sheep. We now offer for sale five good young bulls, and also heifers of choice quality and breeding, sired by Chief Captain, a son of Indian Chief. Young pigs of both sexes & all ages at exceedingly low prices.

1855 TO 1897

Willow Bank Stock Farm

One of the oldest-established herds of SHORTHORNS in the province, has for sale a number of young bulls and heifers got by Isabella's Heir = 19350 =. Also young cows of grand milking families. JAMES DOUGLAS, Caledonia, Ont.



F. BONNYCASTLE & SONS,

CAMPBELLFORD, ONT., Breeders of Shorthorns, Cotswolds, and Berkshires. Have for sale cows, heifers and heifer calves; also some choice Berkshire pigs. May and Octo-

ber litters at very low prices.

ADVERTISE IN THE ADVOCATE

GOSSIP.

The dairy milking trial at the Brantford, Ont., Show, reported in our last issue, was conducted by Prof. H. H. Dean, of the Guelph Dairy School.

A GREAT SALE OF JERSEYS.

Messrs. Humpidge & Laidlaw, London, Ont., announce in our advertising columns the sale of their entire herd of high-class Jersey cattle by auction, on Thursday, Dec. 9th. The herd comprises 40 head, all of which are registered in the A. J. C. C. herd register, or are eligible. Representatives of this herd have been very successful in the last few years in winning high-class honors at the Western Fair, where they have had to compete with the best winners at the other leading shows of the Dominion. In 1896 in very strong competition 11 prizes were won at the Western Fair, seven of which were first prizes, including sweepstakes for best bull any age, sweepstakes for best female any age, and first prize for the best herd.

The stock bull at the head of the herd is Prince Frank 33972, by Daleman, a grandson of Stoke Pogis 5th, sire of Charity of St. Lambert, with her record of 24 lbs. 14 oz. butter in seven days, and full brother of Stoke Pogis 3rd, sire of Mary Anne of St. Lambert, 35 lbs. 12 oz., and of 26 others with records averaging 20 lbs. in a week. Prince Frank is a bull of fine character, having strong constitution and superior dairy conformation, combined with rich breeding. He was second only to the great 200 Per Cent in his class at the Western Fair for 1897, and has proved an excellent sire, a large majority of his calves being heifers. A son of Prince Frank was the first prize bull calf at the Western, beating the winners at the Toronto Exhibition. He is coming near a year old, is out of Zola of Glen Rouge, a pure-bred St. Lambert cow, and is a model Jersey bull, with fine form and the richest yellow skin. The yearling bull, Pride of Alton, won second prize at London, and was first favorite with many good judges. He has faultless dairy form, handsome head and horns, rich yellow skin, and large and well-set rudimentary, and is good enough to head any herd in the land. Another excellent yearling bull is the son of the sweepstakes bull and cow of 1896 at the Western, and he does credit to his parents, having fine form, deep ribs and flanks, smooth shoulders, and good handling qualities. The females in the herd, numbering over 30, about 20 of which are in milk or due to calve soon, are richly bred in the blood lines of the St. Lambert and St. Heller families, and comprise a number of excellent cows coming into their prime, none of them being over six years, and many of them having had only their first and second calves. Among these are the first and second prize cows at the Western Fair in 1896, and the sweepstakes cow of that year, also the first prize three-year-old cow, and all the members of the first prize herd. The yearling heifers—sired by Prince Frank, and in calf to Pride of Alton—are an exceedingly good lot, rich in color and breeding, and very promising for dairy work; while the heifer calves are uniformly nice in style and character; and a few good bull calves complete the list. The whole herd has been very healthy, the cows regular breeders, there being no old or doubtful ones among them, and they have been very satisfactory to their owners, increasing rapidly and doing good honest work. It rarely that so good a herd is offered. The time is favorable for stocking up, winter feed being plentiful, and the prospect for the dairy business encouraging. Read the advertisement and send for a catalogue.

GET A THOROUGH DAIRY TRAINING.

It affords us pleasure to direct the attention of our readers, especially those in Western Ontario, to the announcement in this issue of the Western Dairy School at Stratford, of which Mr. F. J. Sleightholm is the superintendent. During the past season this establishment has been run as a regular creamery most successfully, and large quantities of milk will be made up for the regular trade during the school term, the first of which opens on November 24th, and the second on January 5th. This is certainly most advantageous to students, as they will meet conditions just such as are found in a regular creamery or factory. We are glad to find that a complete new apparatus has been furnished the butter department. The lectures cover every phase of butter and cheese making, milk testing, etc., while home dairying receives special attention. Cheesemakers should no longer defer taking a thorough course in buttermaking, such as this institution affords. With the development of winter dairying it is absolutely imperative. In the school there is a well-stocked library and reading-room, together with every comfort for students. Tuition is free. Good board can be secured in the town at from \$2.50 to \$3 per week. At the end of an eight-weeks course, which we would recommend the reader to take rather than a shorter period, diplomas are issued after a thorough examination in practical work and upon the course of lectures. Drop a line to Mr. Sleightholm for any other information desired.

AYRSHIRES CHANGE HANDS AT AUCTION.

On Nov. 9th Mr. Michael Ballantyne, St. Mary's, Ont., had sold by auction the following Ayrshires to the following purchasers: Hattie Lee 2564, bought by R. H. Harding, Thorndale. Spotty 2365, W. Gillard, Stratford. Bell of Rosmond 2837, R. S. Brooks, Brantford. Topsy 3047, Sidney Elliott, Blanchard. Nellie, Richard Raycraft. Ada 1361, Jas. Bolten, Motherwell. Mary Lee, R. H. Harding. Lady Maud 2321, R. Brock, Brucefield. Gurdy Lee 1868, Robt. McIntosh, Motherwell. Victoria 3046, R. Brock, Brucefield. Douglas 2076 (3 years' bull), Robt. Campbell, Crosshill. Minnie May 2838, Robt. McIntosh, Motherwell. Beauty, Robt. Stevens, Anderson. Yearling heifer, Robt. Robertson, Blanchard. Annie Laurie 3044, R. H. Harding. Yearling heifer, Arthur Harding, Blanchard. Yearling heifer, J. Tiernan. The cows were in good thrifty condition after a profitable season in the dairy.

IMPORTANT PUBLIC SALE OF

HIGH-CLASS Jersey Cattle

— BY AUCTION, ON —

Thursday, Dec. 9th, at London, Ont.

THE entire herd of Jerseys, property of Messrs. Humpidge & Laidlaw, London, Ontario. Forty head registered in A. J. C. C. herd register, including the sweepstakes bull, PRINCE FRANK, two other prize-winning bulls, and a grand lot of young cows and heifers, richly bred and strong in individual capacity for dairy work. For Catalogue giving pedigrees and particulars, address

John Smith, M. P. P.,

AUCTIONEER, BRAMPTON, ONT.

Humpidge & Laidlaw,

LONDON, ONT.

Spring Grove Stock Farm



Shorthorn Cattle and Lincoln Sheep. The noted sire, Golden Robe = 20396 = and Nominee = 19628 =, at the head of the herd. Representatives of this herd won two silver medals and the herd prize at Industrial Fair, Toronto, 1897. Prize-winning Lincoln Sheep are also bred at Spring Grove. Stock of all ages and both sexes for sale. Apply T. E. ROBSON, Iderton, Ont.

FOR SALE! Good Young Cows

two years old, yearlings and heifer calves out of imported and home-bred cows, and the imported bulls, Royal Member and Rantin Robin. Come and see them, or write, if you want something special. H. CARGILL & SON, Station on the farm, Cargill Sta., P. O., Ont.

W. G. Pettit & Son, FREEMAN, BREEDERS OF SHORTHORNS, SHROPSHIRE, and BERKSHIRES

Have an extra good lot of young bulls from 6 to 8 months old, got by Indian Statesman. A Duchess of Gloster bull by Indian Chief. Also a few choice yearling ewes and ram lambs, and Berkshires of all ages. Farms one-half mile and one and one-half from Burlington Station, G. T. R.

THOS. ALLIN & BROS.

LAKE VIEW FARM, OSHAWA, ONT. Breeders of SHORTHORN Cattle and SHROPSHIRE Sheep. 2 choice young bulls now for sale, also a few choice bred cows and heifers. Hard-times prices. Correspondence solicited. 4-2-y-om

Shorthorns & Leicesters

Nominee, sweepstakes bull at Toronto, 1897, bred by us. We also won first prize on pen Leicesters bred and owned by exhibitor. We continue to breed the best.

YOUNG STOCK FOR SALE. E. GAUNT & SONS, ST. HELENA'S, Lucknow Station, G. T. R., 3 miles. om

...FITZGERALD BROS...

Mount St. Louis, Ont., Breeders of pure Shorthorn cattle, the descendants of Crookshank and other noted breeds, and Cotswold sheep. We are now offering a bunch of strong and strongly-bred young females, at reasonable prices. om

MAPLE LODGE STOCK FARM

Maple Lodge P. O., Ont. We have a very nice lot of Leicester ram lambs and ewes for sale just now.

E. JEFF & SONS, BONDHEAD, ONT.

BREEDERS OF Shorthorn Cattle, Southdown Sheep, and Berkshire Pigs. At present we are offering some choice young Southdowns and Berkshires. om

Hawthorn Herd of Deep-Milking Shorthorns

For Sale! FOUR young bulls and several heifers of the choicest breeding and good quality. Prices right. om WM. GRAINGER & SON, Londesboro, Ont.

GOSSIP.

In writing to advertisers, mention the "Farmer's Advocate."

F. Bonnycastle & Sons, Campbellford, Ont., having sold out about all the sheep they care to part with this season, send us change of advertisement regarding their other stock, which our readers will carefully note. They report the following list of sales: To J. Farrow, Strirling, one ram lamb; to John Cox, Jepter Station, Quebec, one ram lamb; to J. Diamond, Warkworth, Ont., one boar pig; to F. Kerr, Norham, Ont., one sow pig; to R. Miller, Brougham, Ont., three bull calves, two shearing rams, and nine ram lambs. There has been a great run for bull calves and Cotswold rams. We could have sold a great many more if we had them. We have some extra good two-year-old heifers and three-year-old cows for sale, due to calve in December and January.

ARRANGEMENTS FOR THE COMING ONTARIO PROVINCIAL FAT STOCK AND DAIRY SHOW AT BRANTFORD.

A meeting of the local officers of the Provincial Winter Show, and representatives of the City Council and other interested bodies, met in the Kerby House, Brantford, Tuesday, November 2nd. Those present were G. W. Clemons, H. A. Foulds, D. G. Hamner, J. E. Brothour, C. W. Yapp, S. Suddaby, George Hately, Mr. Strathdes (representing the G. T. R.), F. W. Hodson, and others. After carefully inspecting various buildings available the Grand Trunk Car Shop was chosen as the building in which to hold the next show, December 7th to 9th. This building is of brick, one story high, and is very well lighted; sides, ends and roof. Large boilers are in an adjoining building, and steam pipes surround the inside of the building, so arranged that if the weather is cold at the time of the show steam can easily and quickly be turned on to heat the entire space. This structure is 345 feet long by 136 feet wide, giving a floor space of over 45,000 square feet, all of which is floored with pine plank. The cattle, sheep, swine and poultry will all be stabled and shown in this building. The offices and board rooms, and a large assembly room, where the annual meetings of the Dominion Cattle, Sheep and Swine Breeders' Associations will convene, are under the same roof. There will be an exhibitors' room, comfortably fitted and supplied with a telephone and lunch room. Visitors and exhibitors need not leave the building from the time they enter in the morning until after the meetings are closed at night. The building is situated within three minutes' walk of the G. T. R. station and within two minutes' walk of the city street cars, of easy access to the public. Live stock sent for exhibition will be carried by the G. T. R. and C. P. R. at single fare; that is, animals sent for exhibition will be charged full rates going to the exhibition, and will be returned free. The building is so arranged that large doors can be opened and the cars shunted inside of the building and the stock unloaded directly from the cars into the pens which they are to occupy. Arrangements have been made with the G. T. R. officials to place these cars in the freight yards close by the building, and hold them there until the close of the exhibition, when the cars will be again run into the building and the animals loaded from their pens into the car. All crates, boards, etc., required by the exhibitors to pen their animals in the car may be left in the cars, and will be taken care of by the railroad authorities and returned with the car when the animals are to be loaded again. All persons who wish to attend the exhibition as spectators will be carried by either of these roads at single fare; that is, a person wishing to attend is required to buy a single fare ticket and procure a standard convention certificate from the agent at the starting point. This will be signed by the secretary of the exhibition, and will entitle the passenger to return free.

A local Board meeting was held, at which the following names were added to the Executive Committee: Messrs. J. M. Shuttleworth, Geo. Hately, H. A. Foulds, S. Suddaby, D. G. Hamner, J. E. Brothour, and C. W. Yapp, with power to add to their number. Mr. Foulds was elected local chairman, and Mr. Yapp secretary. Messrs. C. W. Yapp and D. Henley were appointed a committee to take charge of the bacon classes in the swine department, and one or other of these gentlemen will take charge of the ring during the time the judging is being done.

A letter was received from Prof. G. E. Day, of the O. A. C. Guelph, in which he stated that it would be very inconvenient for him to conduct the testing in the dairy department. Mr. J. W. Palmer, B. S. A., Toronto, was elected to Prof. Day's place, and the judges in the bacon classes were appointed to award the prizes in class 24. The entries close Nov. 25th.

Magnificent Premiums

EVERY ONE EXTRA GOOD VALUE.

Bagster's NEW COMPREHENSIVE Teacher's Bible

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, WITH SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

Binding—

Strong, durable, flexible American Seal (best material) improved circuit cover, round corners, red-under-gold edge.

Paper, Type, Etc.—

Of superior quality, clear and distinct, easy to read.

Maps (with index)—

Revised and brought down to January, 1896.

Helps—

Covering nearly 2,000 subjects—contain all features so popular in the past, and an endless amount of fresh matter, including concordance on new and improved plan, dictionary of proper names and places, with pronunciation and meaning. Size 8½ x 5½ inches (closed).

How to obtain this Handsome and Valuable Bible

(Which ordinarily would retail at from \$4 to \$5): We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of THREE NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1 each.

OUR BAGSTER BIBLE APPRECIATED.

The Bible we are offering was submitted to the careful scrutiny of several leading Divines, who commend it in the very highest terms in every respect, particularly as to the Helps, Typography and Binding. We have sent out large numbers of them already to persons securing new subscribers (3) for the ADVOCATE, and in every case they are more than delighted. Several have earned more than one Bible in that way. Here is a sample testimony received recently from one of the best known horticulturists in Ontario.

GENTLEMEN,—I am pleased to acknowledge the receipt to-day of the very valuable premium, being a fully-prepared, up-to-date "Comprehensive Bagster's Teacher's Bible," that in your great generosity you were pleased to offer and transmit to me for the very small service of procuring three new names for the FARMER'S ADVOCATE AND HOME MAGAZINE for the year 1898. I wish herewith most sincerely to express my grateful thanks for this very precious gift, and I shall be much pleased to use it in remembrance of your thoughtful kindness. When I hold this very pretty, useful book in my hand and consider its very great comprehensiveness and its helpful modern advantages contained in its 1,100 bright, beautiful octavo pages in clear, readable minion type, I am astonished that you can in safety to yourselves make such an offer to your canvassers for so small a service, and I am sure there should be thousands of our young people all over this fine prosperous country who will readily do this service and hold out their grateful hands for a present so valuable and so useful to all. Gentlemen, allow me again to thank you for your valuable gift, and I shall still consider myself further indebted to you to do whatever lies within the range of my power and ability for your success. Very truly yours, B. Gorr.

Middlesex Co., Ont., Oct. 9th, 1897.

HOW TO GET A

First-class Collie

TO any subscriber sending us the names of 10 new yearly paid-up subscribers we offer a young Collie, six weeks old or over, eligible for registration, and bred by Mr. R. McEwen, Byron, Ont., whose stock has been so successful in the leading shows in Canada and the United States.

TWELVE
MONTHS **FREE**

Any subscriber may have his own subscription credited 12 months for sending two new subscribers at \$1.00 each.

“Canada's Glory,”

“Canada's Pride,”

“Canada's Columbian Victors”

May still be obtained by sending us the name of one new yearly subscriber for each. Price, cents each.

TWO GOOD WATCHES



Ladies' Gold-filled Hunting-case, guaranteed for five years, with genuine American seven-jeweled movement, stem wind and stem set, for 18 new subscribers.

Same Watch—gent's size, open face—for 16 new subscribers.

Same Watch—gent's size, with hunting-case—for 19 new subscribers.



Gentleman's 3 oz. silverine, open face, with seven-jeweled American movement. Case will wear white throughout, and last a lifetime. For 9 new subscribers.

**Commence
Canvassing
To-day**

Premiums!

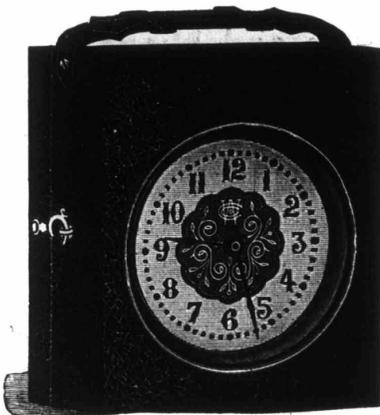
Premiums!

To any of our subscribers furnishing the required number of new subscribers we will send per mail, charges pre-paid, any of the valuable premiums shown on this page.

Subscriptions must all be NEW, and cash accompany orders.

BALANCE OF 1897 AND ALL OF 1898 FOR

\$1.00



Fine Gold-finished Clock, handsomely decorated dial; fitted in Maroon Seal Leather Case. 4 New Subscribers.



Rich Roman Gold Plate Clock, handsomely polished Case. 4 New Subscribers.



Lady's Bracelet, best Rolled Plate, 4 New Subscribers. Same pattern in Sterling Silver, 3 New Subscribers.

FOR CANVASSING OUTFIT ADDRESS:

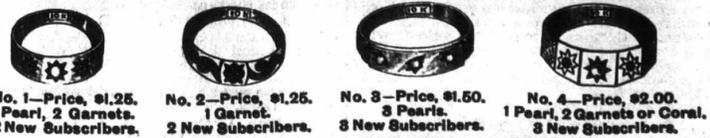
**The Wm. Weld Co., Limited,
LONDON, ONT.**

Handsome Rings

WARRANTED TEN KARAT GOLD.

To find the size of ring required, take a narrow strip of paper that will draw tightly around the finger, forward same to us, and we will assure you a perfect fit.

CHILDREN'S OR MISSES' REAL STONE SETTING.



No. 1—Price, \$1.25. 1 Pearl, 2 Garnets. 2 New Subscribers.

No. 2—Price, \$1.25. 1 Garnet. 2 New Subscribers.

No. 3—Price, \$1.50. 3 Pearls. 3 New Subscribers.

No. 4—Price, \$2.00. 1 Pearl, 2 Garnets or Coral. 3 New Subscribers.

LADIES' REAL STONE SETTING.



No. 5—Price, \$3.50. 2 Pearls, 3 Garnets. 5 New Subscribers.

No. 6—Price, \$3.50. 2 Garnets, 5 Pearls. 5 New Subscribers.

No. 7—Price, \$3.50. 1 Garnet, 2 Pearls. 5 New Subscribers.

No. 8—Price, \$2.00. 3 New Subscribers.



Sterling Silver Baby Pin, 1 New Subscriber.



Gent's Gold Filled Cuff Links, warranted for 20 years, for 3 new names. In Sterling Silver for 1 New Subscriber.



Gent's Gold Filled Cuff Buttons, as above, or Masonic, Odd-fellow or I. O. F. emblem, 2 New Subscribers.

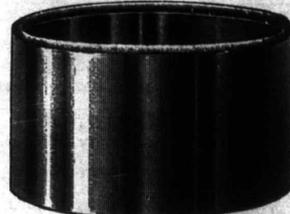


Solid Gold Locket, either Guinea Gold color or bright, 10 New Subscribers. Can have same locket gold filled for 3 New Subscribers.

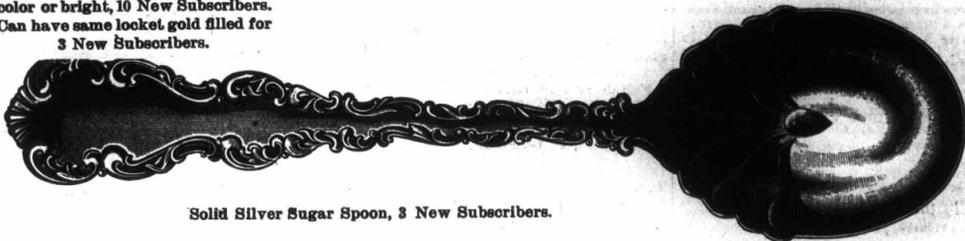
Sterling Silver Canoe Scarf Pin, can also be used as lady's stick pin, 1 New Subscriber.



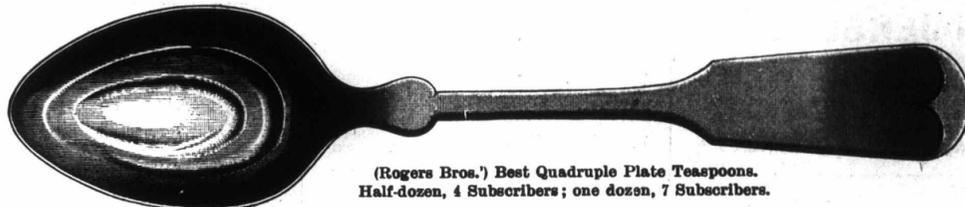
Sterling Silver Thimble, handsomely engraved (give size required) 2 New Subscribers.



Solid Silver Napkin Ring, 4 New Subscribers



Solid Silver Sugar Spoon, 3 New Subscribers.



(Rogers Bros.) Best Quadruple Plate Teaspoons. Half-dozen, 4 Subscribers; one dozen, 7 Subscribers.



Gent's Rolled Plate Chain, guaranteed to wear 5 years, 3 New Subscribers.

Consumption Cured.

An old physician, retired from practice, having placed in his hands by an East India missionary the formula of a simple vegetable remedy for the bronchitis, Catarrh, Asthma, and all throat and lung affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper. W. A. NOYES, 320 Powers' Block, Rochester, N. Y.

BOWEN CABLE STAY FENCE CO. For a machine to build the cheapest, roughest and best fence made of wire. No royalties, no farm rights machine easily and quickly operated by any farmer. Send for large circulars. NORWALK, OHIO, U.S.

Samuel Dunlop, EADY P. O., Ont., Breeder of Pure-bred Shorthorn cattle and Poland-China hogs. Am now offering half a dozen young heifers for sale from deep-milking dams.

FOR SALE.—Two registered BERKSHIRE BOARS; also one SHORTHORN BULL CALF, nine months old, and some choice HEIFERS. F. A. Gardner, BRITANNIA, PEEL COUNTY, ONT.

H. K. Fairbairn, Theford, Ont., Offers for sale his yearling bull, winner of second prize at the recent Western Fair; sure and quiet. Also three yearling heifers fit to breed this fall.

WILLOW GROVE HERD OF JERSEYS. Sweepstakes herd of 1893, 1894, 1895 and 1896. J. H. Smith & Son, Highfield, Ont., are offering 12 females, to calve shortly; one first prize bull, dam Elena of Oakdale (19 lbs. 4 oz. of butter in seven days); grand dam Menies 3, A. J. C. C., test 20 lbs. 1 oz. in seven days. Dam of bull won 1st prize in dairy test, Guelph, 1896, and he is half-brother to King of Highfield.

LEE FARM REGISTERED JERSEYS. Bulls fit for service, \$50 each. Heifers in calf, 50. Young cows in calf, 75. Heifer calves, 30. Solid colors. None better bred in Canada for dairy purposes. Come and personally select, or write for description and pedigrees. E. PHELPS BALL, Lee Farm, Rock Island, P. Q.

DON JERSEY HERD. Now offers FOUR young bulls, sired by Costa Rica's son. He has 75 per cent. of the blood of Merry Maiden, one of the champion sweepstakes cow of all three tests combined at the World's Fair, Chicago. Address: DAVID DUNCAN, DON P. O., ONT.

JOHN PULFER, BRAMPTON, ONT. Breeder of choice Jerseys reg. and high-grade of fine quality. Also TAMWORTH SWINE. Young stock always for sale at prices that should sell them.

GLEN ROUGE JERSEYS. WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lambert), out of tested cows. Grand individuals. Prices right.

TENDERS FOR SUPPLIES, 1898.

The undersigned will receive tenders for supplies up to noon on MONDAY, NOVEMBER 15, 1897, for the supply of butchers' meat, butter (dairy and creamery, giving price of each), flour, oatmeal, potatoes, cordwood, etc., for the following institutions during the year 1898, viz.:

At the Asylum for the Insane in Toronto, London, Kingston, Hamilton, Mimico, Brockville, and Orillia; the Central Prison and Mercer Reformatory, Toronto; the Reformatory for Boys, Penetanguishene; the Institutions for the Deaf and Dumb (Belleville), and the Blind at Brantford.

Two sufficient sureties will be required for the due fulfillment of each contract. Specifications and forms of tender can only be had by making application to the Bursars of the respective institutions.

N. B.—Tenders are not required for the supply of meat to the Asylum in Toronto, London, Kingston, Hamilton, and Mimico, nor to the Central Prison and Mercer Reformatory, Toronto.

The lowest or any tender not necessarily accepted. Newspapers inserting this advertisement without authority from the Department will not be paid for it. (Signed.)

R. CHRISTIE, T. P. CHAMBERLAIN, JAMES NOXON, Inspectors of Prisons and Public Charities, Parliament Buildings, Toronto. November 15th, 1897.

GOSSIP.

In writing to advertisers, mention the "Farmer's Advocate."

See advertisement of poultry, Jas. Boland, Duncrief, Ont.

Mr. Sharpe Butterfield, the well-known poultry judge, of London, Ont., is away on a five weeks' tour in England.

James H. Shaw, Simcoe, Ont., makes a strikingly liberal offer in Yorkshires. It will be well to look up his advertisement and participate in the snap.

Mr. J. C. Lyons, Lucknow, Ont., in writing us instructions regarding his advertisement, says: "I had a successful year at the fall fair, winning 95 first and 40 second prizes at six shows in the hottest of competition." Those who want good fowls will know where to find them.

Mr. John A. Craig, B. S. A., Professor of Animal Husbandry at the University of Wisconsin Agricultural Experimental Station, has resigned his position on the staff, and proposes going into sheep husbandry. His successor, also a graduate of the Ontario Agricultural College, Mr. W. L. Carlyle, B. S. A., who has devoted considerable of the last few years to Farmers' Institute work in the State of Minnesota, has already entered upon his new duties. Mr. Craig graduated at Guelph in 1888, and Mr. Carlyle in 1892.

J. E. Brethour, "Oak Lodge," Burford, Ont., writes:—"I have sold over three hundred Yorkshire hogs within eight months, and could have sold nearly as many more if I had had them. All the young boars fit for service are sold. I have about forty young sows that I am breeding to my prize boars, and I will offer these for sale when safe in pig. I have now about one hundred as choice young pigs from two to three months old as I ever offered. My hogs were very successful at the fall exhibitions, winning the lion's share wherever shown, I am also preparing some good ones for the Fat Stock Show in Brantford.

James McCormack & Sons, Rockton P. O., Ontario:—"Enclosed find change of advertisement. Our Ayreshires are doing well, and as the pasture has been good they will go into winter quarters in prime condition. The young bulls we are offering are of the choicest breeding and quality. Our Barred Plymouth Rocks are bred from the best that could be got in the States—Bradley & Thompson stock—and the birds we are now offering are bred from choice matings. In Toulouse geese we have as good as can be got. On young birds at Toronto we won first and second; at London they won two firsts; and at the Ontario Poultry Show last winter on young geese we won two seconds and one third.

NOTICE.

MAKING ELGIN WATCHES—INTERESTING FACTS ABOUT THE WORLD'S GREATEST WATCHMAKING INDUSTRY.

Thirty-three years ago, there was begun in Elgin, Ill., the manufacture of high-grade watches. A success from the start, Elgin watches have grown in popular favor until today the name Elgin is everywhere considered synonymous with accuracy and general excellence in time-keeping machinery.

It is said that up to the present time it has produced nearly eight million watches, more than any factory in the world has produced in the same period.

The work is done, when the factory is at its full capacity, by a force of 3,000 skilled artisans of both sexes, who are able to turn out a total of 2,500 watches a day, including all grades of movements. There are about 50 different watch movements made, all having a degree of excellence which is a distinguishing mark of the Elgin, but the tendency of later years is toward the higher grades of movements, the Full Ruby Jeweled, which are in every respect superior to any watches made, either foreign or American.

Aside from the supervision of the departments by the highest grade of skilled mechanics, the location of the factory and the factory system contribute in large measure to the excellence of Elgin watches. Located on twelve acres of ground on the shores of Fox River, 40 miles from Chicago, the various wings are far apart, allowing splendid light, plenty of pure air, and ample room. There is no overcrowding, nor has the factory any "stores" or other methods of interfering with the personal freedom of its employees. The broad spirit of free American manhood and womanhood prevails, and it is believed this fact contributes in no small degree to the excellence in all its details of the peerless Elgin Watch.

JOHN TREMAIN, FOREST, ONT., BREEDER OF HIGH-CLASS

Holstein Cattle. The stock of which being purchased from the noted herds of B. B. Lord (Sinclairville, N. Y.) and H. Bollert (Cassel). Young stock of gilt-edge breeding for sale.

D. J. GIBSON, Bowmanville, Ont., Breeder of

HOLSTEINS AND TAMWORTHS

Now offering a yearling bull fit for service and a number of young Tamworths of both sexes.

SPRING BROOK STOCK FARM.

Choice Tamworth pigs ready to wean, sired by the prize-winning imported boar, Nimrod. Write at once for prices.

A. C. HALLMAN, New Dundee, Waterloo Co., Ont.

HOME COMFORT VICTORIES.

AWARD—Chattahoochee Valley Exposition, Columbus, Ga., 1888. HIGHEST AWARDS—St. Louis Agricultural and Mechanical Association, 1889. GOLD MEDALS and 6 DIPLOMAS—World's Columbian Exposition, Chicago, 1893. HIGHEST AWARDS—Western Fair Association, London, Canada, 1893. SIX GOLD MEDALS and Diplomas—Cal. Midwinter Fair '94. SILVER MEDAL—Industrial Exposition, Toronto, Canada, 1895. 345,584 Home Comfort Ranges Sold to Jan. 1st, '97. Made of open hearth, cold rolled steel-plate and malleable iron—will last a life-time with ordinary care.

WROUGHT IRON RANGE CO., Founded 1864. Paid-up Capital \$1,000,000. Factories, Salesrooms and Offices: TORONTO, CANADA, and ST. LOUIS, MO. Western Salesrooms and offices: DENVER, COLO. We manufacture and carry a complete stock of Hotel Ranges and Kitchen goods; also the unequalled HOME COMFORT STEEL FURNACES. Write for catalogue and prices.

MICA ROOFING.

USE... Mica Roofing ON ALL YOUR BUILDINGS. IT IS CHEAPER THAN SHINGLES. WATERPROOF AND FIREPROOF. USE... Mica Paint TO REPAIR LEAKY ROOFS. SHINGLE, IRON OR TIN ROOFS PAINTED WITH IT WILL LAST TWICE AS LONG. RAPIDLY TAKING THE PLACE OF SHINGLES. Is put up in rolls of one square each, 40 feet long by 32 inches wide, and costs only \$2.25, including nails, thus affording a light, durable, and inexpensive roofing, suitable for buildings of every description—especially flat roofs—and can be laid by any person of ordinary intelligence.

Hamilton Mica Roofing Company, Office—101 Rebecca Street, HAMILTON, ONT.

TOLTON'S No. 1 Double Root Cutter

The Latest and Best, and the Only Double Root Cutter Manufactured. POINTS OF MERIT. (1) To change from pulping to slicing is but the work of a moment. (2) There are two separate wheels, one for pulping and the other for slicing. (3) The united force of both wheels is always used in doing the work in either capacity. (4) The hopper is between the wheels, and having large lower pockets prevents choking. Soliciting your orders for the same, we are, yours truly, TOLTON BROS., GUELPH, ONT. Pat. Sept. 6, 1894. (When writing, please mention "Farmer's Advocate.")

The Dominion Organ and Piano Co'y

— ARE PIONEER MANUFACTURERS OF — Pianos and Organs.

Established twenty-five years. 60,000 instruments in use. See local agents, or write for catalogue to head office.

Dominion Organ and Piano Co., Bowmanville, Ont.

Maple Hill Holstein-Friesians

SPECIAL OFFERING. Three bull calves, sired by Sir Pieterje Josephine Mechthilde, whose five nearest female ancestors average over 28 pounds butter per week, and out of the great cows, Cornelia Tensen, Lady Akkrum 2nd, and Inka Rose Pieterje DeKok. If you want a bull to head your herd why not get the best? 11-y-om G. W. CLEMONS, St. George, Ont.

Brookbank Holsteins.

Champion milk and butter herd. Can sell a limited number of bulls and heifers one month old and up; some nice ones from our show herd. First come first served. Quality unsurpassed. Prices right. Write or come and see.

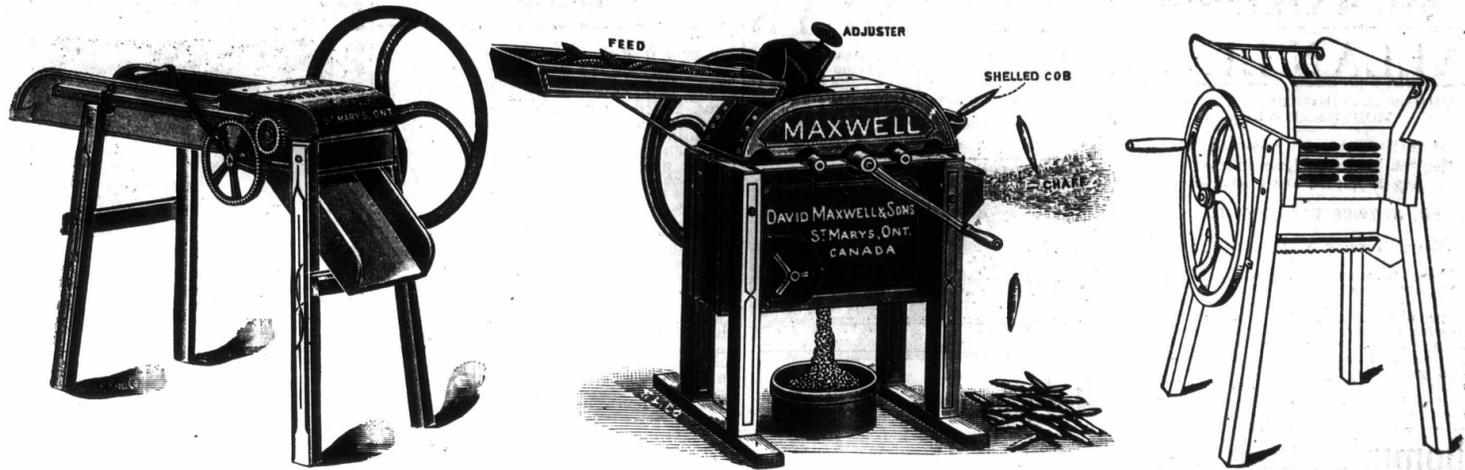
A. & G. RICE, Oxford Co., Ont. com CURRIE'S CROSSING.

"Gem Holstein Herd."

STOCK FOR SALE! We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited. HELLIS BROTHERS, BEDFORD PARK P. O., ONT. Shipping Station, Toronto. 7-y-om

FOR SALE Pair Black Wyandottes.

Cock score 914 points; Hen, 934; (by Jarvis). Price \$3. Choice lot of W. Leghorns. Write JAS. BOLAND, DUNCRIEF, ONT.



David Maxwell & Sons

St. Mary's, Ontario, Canada,

Manufacturers of

High-Grade Farm Implements:
 Binders, Reapers, Mowers, Hay Rakes, Hay Loaders, Hay Tedders, Disk Harrows, Scufflers, Turnip Sowers, Turnip Slicers and Pulpers, Cider Mills, Hand Straw and Corn Cutters, Lawn Mowers, Churns, Wheelbarrows, and Corn Shellers, Iron Jacks, Riding Plows, etc. Agents wanted in all unoccupied territory.

SEND FOR CATALOGUE.

GOSSIP.

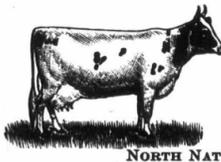
An advertiser of pure-bred stock in the FARMER'S ADVOCATE informs us that his letters of enquiry for stock in the month of October were fifty-five in number, three-fourths of which referred to the ADVOCATE as the medium of communication. The enquiries came from a large constituency, extending from P. E. I. in the east to B. C. in the west, and have resulted in a number of satisfactory sales.

Geo. Harding & Son, Waukesha, Wisconsin, have taken from Ontario since July last 1,300 stock rams for breeding purposes, 1,100 of which were Cotswolds, which is the breed in which they are specially interested. The majority of these rams have been sold for use on large sheep ranches in the Western Territories, the choice registered ones being sold to head pure-bred and high-grade flocks in the States.

Hon. Sydney Fisher, Knowlton, Quebec, writes: "In regard to the addition to my herd of Guerneys, I would say that I have purchased three cows and a bull from the United States. They satisfy me very completely, the cows being good working specimens of a dairy cow. The best of them I think, Gipsy the Fifth, is one of a very well-known family in New Jersey and New York States. Her son, Rockmount the Second, is the best bull I saw in a rather extended visit to the Guerneys herds of those parts, while she has half-sisters of equal merit with her, all splendid specimens of Guerneys. Ornament, one of the others of my importation, is also a large animal, with the best characteristics of a dairy cow. She is about to calve shortly, and I will look forward with a great deal of confidence to her work. The third one comes from Massachusetts, from the herd of an ordinary farmer there who has been doing ordinary buttermaking very profitably on a large scale with a herd of thoroughbred Guerneys, essentially a business herd. She has all the characteristics of a good cow, though, unfortunately, both her horns have been broken and hang loose, which hurts her appearance. She is about to calve in the early winter, but is now giving a good mess of milk. The young bull is a very fine specimen, coming from the same herd as the last named cow, out of the best animal in the herd. This latter is one of the cows that were bought for the Experimental Farm. The young bull is well grown, thrifty, and with fine butter points. These animals were all tested for tuberculosis, and passed the test, so I feel safe in that respect."

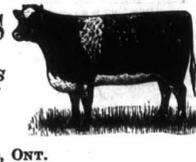
MR. ARTHUR JOHNSTON'S SHORTHORNS.

We direct the special attention of our readers to the change in the advertisement of Mr. Arthur Johnston, of Greenwood, Ont., in this issue. Through the slack times of recent years Mr. Johnston has kept his hand steady to the plow, so to speak, with abiding faith in the Shorthorn, and so has the satisfaction of having to-day a herd strong in breeding and typical characteristics, standing in the front rank, taking a share of the improved trade that breeders and farmers are now enjoying. In a note to the FARMER'S ADVOCATE regarding his young stock, Mr. Johnston writes: "Our young bulls, of which we have fifteen, are now in the very finest form, though not by any means fat. They are big, evenly fleshed, massive fellows, with soft, mellow skins, and wonderful coats of glossy hair. We have never bred a better lot, and we have never had a lot in nicer form at this season of the year. We have what we think the very best young bull the old bull (Indian Chief) ever left—a rich roan Duchess of Gloster calf of right size, right color, right flesh, right style, and above all, right character—a show bull, and a good one in any land. We also have an almost equally good white Duchess of Gloster one. This particular white one has a double cross of the old bull. Come and see if it is a failure! Besides these we have a dozen other most excellent young bulls—reds and roans. Our heifer calves, though scarcely in such excellent bloom, are a capital lot of seventeen—reds, roans, and one white one—and not the worst one either, all good, and all of the choicest Scotch blood, and, what is important to our customers, they are all for sale. Our yearling heifers are an equally attractive lot, and equally bred, massive, smooth, and evenly fleshed. Come and see them or send for catalogues. We have also some splendid young Berkshires."



W. C. EDWARDS
AND COMPANY,
IMPORTERS AND BREEDERS

Laurentian Stock and Dairy Farm,
NORTH NATION MILLS, P. Q.



Pine Grove Stock Farm,
ROCKLAND, ONT.

Ayrshires, Jerseys, Shropshires, Berkshires.

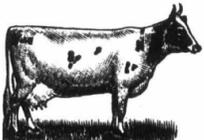
Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Lisgar Pogie of St. Anne's heads the Jerseys. The young stock are all from time-tried dams.

The imported Cruickshank bulls Knight of St. John and Scottish Sportsman are at the head of this herd of imported and Home-bred Cows and Heifers of the most approved Scotch families.

ED. McLEAN, Manager.

7-1-y JOS. W. BARNETT, Manager.

Isaleigh Grange Stock Farm.



J. N. GREENSHIELDS, Prop.,

Special Sale!

Consisting of five choice young Ayrshire Bulls fit for service, two Guerneys Bull Calves, and the best lot of young Imp. Large Yorkshire Pigs ever offered.

PRICES LOW IF TAKEN AT ONCE.



T. D. McCALLUM, Mgr.,

DANVILLE, QUEBEC. 8-y-on

The Razor Steel, Secret Temper, Cross-Cut Saw



WE take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A Saw to cut fast "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These Saws are elliptic ground thin back, requiring less set than any Saws now made, perfect tapes, from tooth to tooth.

Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good ask your merchant to let you take them both home, and try them and keep the one you like best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a Saw for one dollar less, and lose 25 cts. per day in labor. Your saw must hold a keen edge to do a large day's work.

Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.

MANUFACTURED ONLY BY

SHURLY & DIETRICH,

GALT, ONTARIO.

Bookkeeping, Shorthand, Penmanship!

BUSINESS FORMS AND CUSTOMS, ETC., TAUGHT BY EXPERIENCED SPECIALISTS.

Central Business College.

Stratford, Ont.,

UNQUESTIONABLY the leading commercial school in Ontario. Graduates of other business colleges in attendance this term. STRONGLY RECOMMENDED BY FORMER STUDENTS. Up-to-date courses; moderate rates; board cheap; enjoys a splendid patronage; assists students to positions. Write for catalogue. WINTER TERM OPENS ON MONDAY, JANUARY 3rd, 1898.

W. J. ELLIOTT, Principal.

ADVERTISE IN THE FARMER'S ADVOCATE.

Shropshire Breeders Meet.

The American Shropshire Breeders' Association met in Chicago, Nov. 4th. Pres. Hon. John Dryden, Brooklyn, Ont., occupied the chair in his usual acceptable manner. Secretary, Mortimer Levering, La Fayette, Ind., was present, and recorded the minutes, read the communications, etc.

The President, Hon. Mr. Dryden, in his address referred to the excellent standing of the Shropshire Association, which is ahead of any other like organization, due in a large measure to the general excellence and many good qualities of this breed of sheep. The Shropshire suits all markets, is a hardy, quick grower, stands at the head in producing the greatest quantity of the best quality of mutton at the lowest cost, and shears a capital fleece of useful wool. He advised that breeders keep this breed at the head by continued selection and weeding out. Something more than a pedigree is necessary in a good Shropshire. There were about 100 members present, including Messrs. R. Gibson, Delaware, Ont., and W. J. Beattie, Wilton Grove, Ont.

The treasurer's report showed that last year's cash balance on hand was \$3,217.34 while this year's cash balance is \$3,715.53. The Association has 1,678 members.

Among the communications read was an invitation from Mr. J. B. Dinmore, of Nebraska, to the Association to offer prizes and exhibit sheep at the trans-Mississippi Exposition, of the three outgoing directors, T. A. Bixby, South Haven, Mich., and John L. Thompson, Gas City, Ind., were re-elected, along with Dr. G. Howard Davison, Millbrook, N. Y. On the Committee on Pedigrees, Mr. G. N. Greenshields, Montreal, was elected in the place of John Campbell, Woodville, Ont., and Prof. H. W. Mumford, of Michigan Agricultural College, in the place of Dr. Davison. Vice-President for Ontario is W. H. Beattie, Wilton Grove, and for Quebec, W. C. Edwards, M. P.

Officers were elected as follows: Pres., Hon. John Dryden, Brooklyn, Ont.; Vice-Pres., Prof. W. C. Latta, La Fayette, Ind.; Sec.-Treas., Mortimer Levering, La Fayette, Ind. Executive Committee elected for three years: Of the three outgoing directors, T. A. Bixby, South Haven, Mich., and John L. Thompson, Gas City, Ind., were re-elected, along with Dr. G. Howard Davison, Millbrook, N. Y. On the Committee on Pedigrees, Mr. G. N. Greenshields, Montreal, was elected in the place of John Campbell, Woodville, Ont., and Prof. H. W. Mumford, of Michigan Agricultural College, in the place of Dr. Davison. Vice-President for Ontario is W. H. Beattie, Wilton Grove, and for Quebec, W. C. Edwards, M. P.

Aberdeen-Angus Breeders Meet.

The American Aberdeen-Angus Breeders' Association held their last annual meeting in Chicago, Nov. 4th. It was well attended by a large number of representative breeders of Angus cattle. It was conducted harmoniously and expeditiously. Pres. E. S. Burwell, of Iowa, occupied the chair, and Sec.-Treas. Thos. McFarlane, Harvey, Ill., kept a record of the minutes. The total number of animals recorded is 26,846. The secretary reported that \$1,075 had this year been paid out in special premiums for fair awards. The treasurer's report showed a present cash balance of \$6,029.90. The Association passed a resolution to erect a monument in memory of the late William Watson, who recently died at Winchester, Ill.

Officers elected: Pres., M. L. Evans, Emerson, Iowa; Vice-Pres., O. E. Bradfute, Calderville, Ohio; Sec.-Treas., Thos. McFarlane, Harvey, Ill. Directors for three years: W. A. Henry, Denison, Iowa; O. E. Bradfute and L. H. Kerrick, Ill.

GOSSIP.

Clydesdale foals are reported scarce in Scotland this season; losses have been heavy.

C. E. Stubb's, of Denver, Col., is off to Europe for the U. S. Government to get a report on the sort of horses wanted there for cavalry, carriage and other purposes. The trouble in Canada is to produce enough horses of the fancy hunter, carriage and draft type. There is no secret about the sort that are wanted.

Mr. Alf. Hunter, Addington County, Ont., writes congratulating the publishers on the excellence of the FARMER'S ADVOCATE, and commending it as an advertising medium. Referring to some stock he purchased without seeing it from E. Gaunt & Son, St. Helen's, Ont., he adds: "It proved more than satisfactory in every respect, and I can heartily recommend the firm to intending purchasers. Although I have never seen Mr. Gaunt," he adds, "I know he must be a gentleman."

SS. SAILINGS.
ALLAN LINES

THREE DISTINCT SERVICES FROM MONTREAL WEEKLY.
Royal Mail Service of Passenger Steamers, Montreal to Liverpool, every Saturday, calling at Quebec and Londonderry.
DIRECT SERVICE MONTREAL TO GLASGOW
Direct Service Montreal to London.

These steamers are of most recent construction; are of the highest class, and their record for the safe carriage of cattle is unexcelled. Special attention paid to the best methods of stowing and carrying cheese, apples and other farm produce. Steamers fitted with refrigerators for perishable freight. For schedule of sailings, rates of passage or other information, apply to— J. D. HUNTER, Western Freight Agent, Corner King and Yonge Streets, Toronto, or H. & A. ALLAN, Montreal.

Dominion Line Royal Mail Steamships.

Steamer. From Montreal. From Quebec. Ottoman, Nov. 17, daylight, Nov. 17, 2 p.m. Rates of Passage—Cabin, \$52.50 to \$70; second cabin, \$34 to \$36.25, to Liverpool or London. Steerage, \$22.50 to \$23.50, to Londonderry, Liverpool, London, Glasgow, Queenston or Belfast. Outfits furnished free to steerage passengers. First and second cabins are midship, and steamers are lighted throughout with electric lights. S.S. Canada will sail from Boston Dec. 9th. DAVID TORRANCE & CO., General Agents, 17 St. Sacrament St. MONTREAL.

PRIZE-WINNING Ayrshires and Poultry FOR SALE

Choice young bulls fit for service, sired by Jock Morton, and from heavy milking dams, and a few young cows and heifers. Also Barred Plymouth Rocks and Toulouse Geese from choice matings.
JAS. McCORMACK & SONS, 20-2-y-o Rockton, Ontario.

BROOK HILL AYRSHIRES....

are still to the front. Two fine bull calves for sale. Orders taken for young stock. Speciality in bull calves. Correspondence solicited.
W. F. STEPHEN, Trout River, Que.

GLENGARY STOCK FARM.

My herd comprises the best strains procurable. Am now offering young bulls and heifers descended from the importation of the late Thos. Brown. PRICES RIGHT.
JNO. A. McDONALD, JR., Williamstown, Ont. 4-2-y-o

Ingleside Herefords.

UP-TO-DATE HERD OF CANADA!

Bull Calves OF THE RIGHT SORT For Sale.

Address— H. D. SMITH, 17-y-om Compton, Que.

Guernsey Cattle

CHESTER WHITE AND DUROC-JERSEY PIGS.
At present we are offering

4 Richly-bred Bull Calves two of which are from imported cows, and pigs of all ages.
WM. BUTLER & SON, DERHAM CENTRE, ONT.

Guernsey Bulls for Sale.

We are now prepared to dispose of half a dozen young bulls of gilt-edge breeding. McNISH BROS., LYN, ONT. 0 7-y-om

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.
Address: SYDNEY FISHER, Alva Farm, Knowlton, P.Q. 17-y-o



THE ORIGINAL Non-Poisonous Fluid Dip.

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large stockmen.
FOR SHEEP: Kills ticks, maggots; cures scab, heals old sores, wounds, etc.; and greatly increases and improves growth of wool.
CATTLE, HORSES, PIGS, ETC.: Cleanses the skin from all insects, and makes the coat beautifully soft and glossy. PREVENTS the attack of warble fly.
HEALS saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.
NO DANGER; SAFE, CHEAP, and EFFECTIVE.
BEWARE OF IMITATIONS.

Sold in large tins at 75c. Sufficient in each to make wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.
Sold by all druggists. Send for pamphlet.
Robt. Wightman, DRUGGIST, OWEN SOUND, ONT. Sole agent for the Dominion. -om

FOR CHOICE Shropshire Rams

Of finest breeding and quality, at moderate prices, call at Maple Shade, or address: JOHN DRYDEN, BROOKLIN, ONT. A. H. CHRISTIAN, Foreman.

SHROPSHIRE SHEEP.... AND JERSEY CATTLE.

At present offering a choice bunch of thrifty, well-covered young Shrops. Also two young Jersey bulls, ready for service.
D. H. KETCHESON, MENIE, ONT.

LEICESTER SHEEP ONLY

Yearling and ram lambs for sale at moderate prices. We have only a few, but they are all first-class animals, with good pedigrees.
Address—C. & E. WOOD, Freeman P.O., Burlington Station, Ont. -o

Cotswold Sheep AND BRONZE TURKEYS

Rams and ewes of all ages, all registered, and from prize-winning stock. Turkeys from 42-lb. tom and Mungers hens.
T. HARDY SHORE, Glanworth, Ont.

ASHTON FRONTVIEW STOCK FARM.

A. J. WATSON, CASTLEBERG, ONT., Importer and breeder of Cotswold Sheep, Shorthorn Cattle, and Berkshire Swine. Station and Telegraph Office, Bolton, C. P. R., of Paigrove, G. T. R.

SMITH EVANS, Gourack, Ont.

Breeder and importer of registered Oxford-Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited. 6-1-y-o

Oxford Down Sheep.

A fine lot of Young Stock for sale. A few nice Yearling Rams and Ewes. Prices reasonable. Inspection invited.
Herbert Wright, 6-2-y-om Box 47, GUELPH, ONTARIO.

"FARNHAM FARM" OXFORD DOWNS.

I HAVE for sale a choice lot of yearling and ram lambs, yearling ewes, and ewe lambs for 1897. Prices reasonable.
H. ARKELL, Arkell P.O., Ont. 7-y-om

GOSSIP.

Wesley W. Fisher, Benmiller, Ont., writes— "The following is a list of my late sales of hogs: Poland-Chinas—One boar and one sow in pig, to Fred. Moss, Auburn; one pair to Thos. McMichael, Seaford; one pair to Ed. Good, Benmiller; one brood sow to Wm. Good, Benmiller; one brood sow to Robert Wilson, Goderich; one sow to Alva McIntosh, Winchester Springs; one boar to J. H. Brandon, Wingham; one sow to Joseph Govier, Hullett; one sow to Chas. Joffer, Arnprior; one boar to John Park, Banks; one sow and litter to Geo. Clark, Nile. Tamworths—Two brood sows, two boars and two sows to E. O. Wood, Flint, Mich.; boar and sow to Mr. Hamilton, Porter's Hill; one sow to J. E. Smith, Wainstead; one boar to Jas. Gledhill, Petrolia; one sow to A. Wilson, Holmesville; one boar to Mr. Robertson, Lucknow; one boar to Mr. Doyle, Holly-road. Duroc-Jerseys—One boar to Tape Bros., Ridgetown; one boar to Mr. Tamlin, Blyth; one sow and litter to Chas. Okes, Benmiller; one sow to James White, Benmiller; one sow to Mr. Tamlin, Blyth. Note change of advertisement. My stock is sold down very closely at present, but have a few real good boars left to part with."

MR. ROBT. ROBERTSON'S DISPERSION SAL. OF AYRSHIRE CATTLE.

On Thursday, October 23th, the well-known herd of Ayrshire cattle owned by Mr. Robert Robertson, "Maple Cliff Farm," Compton, P. Q., were sold at auction by Mr. R. L. Craig, in the presence of a good purchasing crowd. The reason for this dispersion was, as our readers are aware, the recent appointment of Mr. Robertson to the superintendence of the experimental farm at Nappan, Nova Scotia. Excellent prices were realized, showing a continued strong confidence in the capacity of the Ayrshire for the general result was a tribute to the high reputation of the herd and its breeder. The total amount of the sale was over \$5,000, and so well satisfied were purchasers with what they had secured that it would have required many hundreds of dollars more next day to have obtained the same stock. It was certainly a gratifying finale to Mr. Robertson's achievements as a breeder. The three-year-old herd bull, Matchless 7550, by Glencairn 3rd 6955 (imp.), out of Nellie Osborne 5358 (imp.), brought the top figure of the day, \$255, being secured by Mr. T. D. McCallum, manager of the celebrated Isaleigh Grange Farm, where the Ayrshire is a conspicuous feature. A son, Matchless Again 8757, was secured for the Ottawa Experimental Farm. Among the cows, Silver Maid of Howick -7043-, by Silver King 5809 (imp.), out of Blossom of Burnside 5887, topped the list at \$200, going to Mr. W. C. Edwards, M. P., for his fine stock farm at North Nation Mills. Following is the complete list of sales:

Bulls.
Matchless -7560-, T D McCallum, Isaleigh Grange, Danville, P.Q. \$255.
Matchless Again -8757-, Central Experimental Farm, Ottawa, \$85.
Victor of Maple Cliff -8753-, D Cumming, Lancaster, \$34.
Bull calf out of Silver Maid, fourteen days old, J D Morrison, Waterville, P.Q. \$65.
Bull calf, Emergency, 7 n days old, S A Baldwin, Norton Falls, \$20.
Bull calf out of Lady Topsy, ten days old, D Drummond, Petite Cote, \$20.

Cows.
Little Wonder -6239-, J Blue, Capelton, P.Q. \$77.
Wilhelmina of Burnside -6260-, R Reid & Co, Hintonburg, Ont, \$115.
Daisy of Burnside -6011-, J Ryan, Compton, P.Q. \$120.
Lady Maggie -6013-, R Reid & Co, Hintonburg, Ont, \$150.
Eva of Burnside -6242-, W C Edwards & Co, North Nation Mills, P.Q. \$160.
Bud of Burnside -6259-, J G Clark, Ottawa, Ont, \$75.
Nancy -3384-, J G Clark, Ottawa, \$67.
Village Bell -6396-, M S Campbell, Augusta, Maine, \$63.
Queen of Burnside -6258-, R Reid & Co, Hintonburg, Ont, \$90.
Silver Maid of Howick -7043-, W C Edwards, North Nation Mills, P.Q. \$200.
Jessie Brown -8747-, D Cumming, Lancaster, Ont, \$91.
Blossom of Burnside -5887-, M S Campbell, Augusta, Maine, \$63.
Lady Nancy -6245-, D Drummond, Petite Cote, \$130.
Lady Topsy -8756-, M S Campbell, Augusta, Maine, \$71.
Emergency of Burnside -8755-, R Reid & Co, Hintonburg, \$151.
Primrose of Havelock -3354-, R Reid & Co, Hintonburg, \$76.
Viola of B -7612-, W C Edwards, North Nation Mills, \$100.
Bell of Bromo -7888-, S A Baldwin, Norton Mills, \$90.
Spot of B -7394-, T D McCallum, Isaleigh Grange, Danville, \$38.
Lucinda of Maple Cliff -8748-, T D McCallum, Danville, \$42.
Lady Wonder -7893-, D Cumming, Lancaster, \$30.
Beauty of Compton -7898-, J Mills, Compton, \$30.
Daisy of Compton -7897-, T D McCallum, Danville, \$35.
Gipsy Maid of C -8249-, T D McCallum, Danville, \$45.
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