THE FARMER'S ADVOCATE AND HOME MAGAZINE

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THE FARMER'S ADVOCATE
—AND—
HOME MAGAZINE.

WILLIAM WELD, Editor and Proprietor.

The Only Illustrated Agricultural Journal Published in the Dominion.

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THE FARMER'S ADVOCATE
AND HOME MAGAZINE,
London, Ont., Canada.

1881.

The present number closes the 16th volume of this journal. It also completes our agreement with many thousands of our subscribers, many of whom have continued with us steadily from the 1st volume to the present time. We return you our thanks for your long continued patronage.

We have endeavored to do our duty to you as far as existing circumstances and abilities would permit. The past seventeen volumes must stand as a guide to aid you in deciding whether you deem it worthy of your continued support. You who have been with us in the clearing of the forest, in the tilling of the ground, in the introduction of the best seeds and stock, through the dairy and orchard, shall we still enjoy your company? It is for you to decide. Also those who have been with us at the agricultural exhibitions and agricultural meetings, must have formed opinions of their own. You have travelled with us in England, France, the Eastern, Western and Southern States; you have also been with us to the Maritime Provinces, to Manitoba, etc., etc.; if not personally, your minds have been with us. In the Home Department the ladies and children have their pleasant and useful talks.

Father Time has removed some of our old staid friends during the past year. It is but a few years at most ere we all must part, but while here let us each aim to do our duty. Remorse and regret will not then trouble us, though we may not always accomplish all we attempt to do. No great improvement is done hastily; it takes a series of years to accomplish much. If we have been working together for a good cause, let us continue to do so. Right and truth will stand the longest test. Some few have been induced to abandon the FARMER'S ADVOCATE every year, but every year our subscription list has been increased, and never before have we received so many renewals from old subscribers who had left and now return to our fold, as during the past few months. Our energies and our means will, as in the past, be devoted to giving you an agricultural paper, filled with such matter as we deem most interesting and valuable to you in pursuing the different branches of agricultural economy. We now have better arrangements than ever before for giving you a better illustrated journal, filled with the writings of better writers than could ever before be procured. We trust that each friend who can do so will send one new subscriber. Remember, "Where there's a will there's a way." You also are cordially invited to contribute to our journal.

The year just closing has been most propitious for the agriculturist. The crops generally have been very good and the prices received have also been highly remunerative. Not only have the farmers reaped a golden return, but mechanics and artizans have been overcrowded with work. Many of our advertising patrons have been under the necessity of increasing their factories and work hops, and still have been unable to fill the immense demand. Wages for all kinds of labor have very largely increased, and a general prosperity prevails. To such an extent is this the case that improvements are being rapidly pushed forward to a greater extent than we have ever seen them. We truly live in a land flowing with milk and honey, and blessed with peace and plenty.

Trusting that each one of you are sharing in the general prosperity, and that you may feel grateful and thankful for these blessings that you are now enjoying, perhaps at this season of the year you might look around you and see if there is no deserving, worthy but pitiable creature that you can cheer or help. Perhaps you have not yet experienced the truism, namely, that "it is more blessed to give than to receive."

Try and do some good act of kindness. Even some of your own family may really deserve a little attention. You are a steward; the more justly you act in your position the greater the pleasure and blessing will fall to your lot. Be just and fear not.

Wishing you all the compliments of the season, and expecting confidently a renewal of your patronage, I am yours respectfully,

THE EDITOR.

Our Envelopes.

Each subscriber receives with this issue a plainly directed envelope. This is for you to enclose your subscription or the subscription of a new subscriber. This we find the safest way—for you to send the money yourself by post. Do not leave it to any one to do for you; mail it yourself. You can register it if you desire. The certificate of registration acts as your receipt from us, and you require no other. Be sure to write your name and your P O. in the letter with the money. By sending direct to us in this envelope you save much future trouble, as we find others are too apt to delay or neglect, and perhaps forget. Several errors have occurred from improper addressing of letters and the lack of signatures. We hold hundreds of remittances now that we cannot trace to give the right credit to the sender. Remit promptly and have your name entered among the first and best supporters of agricultural progression. If you are paid in advance use the envelopes for a new subscriber, or to send in some agricultural hints.

"Your patience and plucky perseverance has given to Canada a *first-class* agricultural paper."—SAMUEL WILMOT, Ex-President Board of Agriculture and Arts, Ontario.

"The FARMER'S ADVOCATE is the *best* value for the money of any agricultural journal I have ever seen."—J. R. ALEXANDER, Brantford, Ont.

"The FARMER'S ADVOCATE is up to the *top mark* of agricultural family papers. None better is published anywhere."—FREE PRESS, London, Ont.

"In all respects the *best* Canadian agricultural work I ever met."—J. H. SWALES, Logan, Illinois.

"I like your paper much better year after year, for I think it improves with age, just as good cheese."—J. S. CROSBY, Charlottetown, P.E.I.

"The FARMER'S ADVOCATE is the *only real agricultural* publication in Canada."—HON. S. C. WOOD, Commissioner of Agriculture.

"All national wealth depends upon an enlightened agriculture."—WEBSTER.

English Letter No. 32.

[FROM OUR OWN CORRESPONDENT.]

Liverpool, Nov. 1.

The past month has been singularly deficient in matters likely to be of interest to your readers. I refer, of course, to those special subjects usually discussed in this letter. In general matters the month has been very lively, and especially in regard to the great and apparently interminable Irish question. In one respect, however, this question may affect materially the Canadian farmer, and is therefore a fit subject for discussion in your columns. It is not to be imagined that radical land reforms are to be allowed in Ireland, whilst the old, cumbrous, restrictive and vexatious laws of England and Scotland remain untouched. A comprehensive reform of the land laws of England and Scotland is a feature of the near future; and, under an improved system of dealing with our lands, a much heavier production is certain to follow. This, however, will probably not do more than keep pace with the increase of population, and still leave a very large and profitable market for those who send a good article, and quality is a *sine qua non*, whatever the article may be.

A history, adequately written, of the improvements which have taken place during the last quarter of a century in the production and still more in the distribution of food, would form a vastly interesting volume. The other day I dined at a friend's house off a leg of Australian mutton, and I can honestly say that I never ate anything superior for tenderness and flavor, and it was bought at little more than half the price that is asked for English-fed meat. It is doubtful, however, whether the prices obtained leave any profit, and, as the inferior parts of the carcass are practically unsaleable, the margin for profit is woefully small. Whilst the handsome bounties subscribed in the Antipodean colonies for the promotion of the trade remain unexhausted, we shall continue to have cheap Australian mutton; but when they have run out—rumor sayeth not. The mere question of preserving the meat seems to be fully solved, for I have been told of fresh salmon being taken out to New Zealand, brought back again, and still found to be in a perfectly fresh and sound condition.

The steamer Texas, which left this port last week, carried for Canada one of the most usefu lots of cattle probably ever shipped from this country. The lot comprised eighty-six Hereford bulls, twenty Polled Aberdeens and four Jerseys, besides some Oxford and Shropshire Down sheep and some Clydesdale stallions. Mr. W. Horseman, a well-known stock authority, referring to these shipments, says that the wholesale importation of cheap rubbish into the Dominion might increase, in the first instance, the number of white faces out there, but, in the long run, will not improve the breed in the estimation of practical men. Much of the stock recently sent over has been wretched stuff, such as Mr. Horseman described. The eighty-six bulls referred to, however, are first-rate animals, specially selected. After passing through the ninety days' quarantine at Quebec, fifty of them are to be drafted off for the Hon. M. H. Cochrane's farm near Bow River, and the remainder, I am informed, are to be disposed of in the Province of Quebec, with the view of improving the breeds of cattle in that district. It is to be hoped that the farmers of Quebec Province will take advantage of this opportunity, and will not let these valuable animals be snapped up by ranchmen from the States. The Hon. Mr. Pope had nine exceptionally good cows and heifers on the Texas, and I was informed, by one who saw them and is competent to judge, that they excel in quality any previously shipped.

This morning (November 1st) was ushered in with a violent snow storm, and we have every appearance of a long and severe winter. Yet even we are favored, compared with the north of Scotland; for in Aberdeenshire well on in October many corn crops were still standing, with eighteen inches of snow in the fields, and comparatively little had been housed.

The great North-west is rapidly growing in public interest here, and we can now rarely take up a newspaper or magazine without seeing articles upon it, or references to it. English people are very slow to move; but when once their interest is roused it is generally thorough, and there can be no doubt that this awakening interest is largely due to the influence of the reports of the farmers' delegates, which have been very widely circulated during the past two years. Four German and one Swiss delegates, with whom the necessary arrangements were made by Mr. Dyke, the Dominion agent here, on his recent visit to the Continent, have just returned from a tour through the Dominion, and have expressed themselves highly pleased with Manitoba, and also with the older settled parts of your province. Their reports, I understand, will be published shortly, and this circulation of reliable information respecting the Dominion, in Germany, will no doubt have a marked effect in directing the stream of emigration next spring towards the Dominion.

The agents for Texas, Arkansas, and other parts of the Union, are again working vigorously and paying enormous commissions; but no doubt their efforts will be largeiy counteracted by an extensive propaganda on behalf of the Canadian Pacific Railway, which, as yet, can hardly be said to have moved in the matter.

A large number of samples of grain and other produce from the Canadian fall shows have been sent to this country and will be exhibited on various occasions during the winter. The Root Growers' Association, of Toronto, have also promised consignments of their roots, and experience has shown that these will be of great service in making plain to the comprehension of the British agriculturist the capabilities of your vast and magnificent country.

The Pocklington Grape.

About two years ago we were met in Brantford by two tree pedlars. They were nicely equipped with beautiful plate books of fine fruit, handsome trees, flowers, etc. They tried hard to sell a Pocklington grape. They lauded it so much that we looked on it as one of the usual swindles, like the Alpine Strawberry, El Dorado Wheat, &c. To tell you the truth we are rather shy about purchasing from travellers. We prefer to deal with some known establishment. And we wanted no grape vine of any kind. The price asked was only $3 a vine. That put on the cap-sheaf. A swindle sure, we thought. Some time after this we met one of the members of the Canadian Fruit Growers' Association, also a member of the Board of Agriculture and Arts. This gentleman, we thoughts, ought to be posted, and in answer to our enquiries he pronounced it a humbug and said it was a hard, poor grape, fit for bullets. Shortly after this one of our agents sent us a large advertisement of this grape. We rejected the advertisement because we thought we should be injuring our paper as much as if we gave long advertisements in our reading columns of some injurious patent medicine men, that we knew were tending to the injury of the public. About two months ago our opinion was very materially altered, as Messrs. Stone & Wellington, of the Fonthill nurseries, sent us a bunch of these grapes by express. To our astonishment they were undoubtedly the largest and finest looking white grape we had ever seen, that had been raised in the open air in this country. On testing them we did not find that acidity we had heard of and expected, neither did we think they would answer very well for bullets, although we do not consider the quality equal to our little favorite, the Delaware. We took them to Mr. H. Mountjoy, the largest importer of foreign grapes in this city. He looked at them, tasted them, and pronounced them a good saleble grape, by far the best he had ever seen grown here, and said he could sell such readily for 15c a pound—that is about double the price of any other out-of-door grape raised in this part of the continent. We also showed them to Col. Leys, an amateur gardener, who immediately wanted to get some of the vines, but we did not tell him who had them. He will now see. We also showed them to Mr. Wm. Saunders. He said they were undoubtedly a new grape, and quite an acquisition.

Editors, you see, are not infallible in their opinions, but when from any cause they do not give correct information they are, or ought to be, ready to correct errors. We have always been ready to make corrections when any have ever been pointed out to us.

Should Agricultural Exhibitions be Abolished?

Many officials or officious persons have endeavored to abolish Township Exhibitions, and those living near the desired locality for holding County Exhibitions may have aided that project. Some have advocated dividing the public grant between four cities. Perhaps these cities would like to get it, but the President and Vice-President of the Industrial Exhibition of Toronto rather exceed such injurious steps.

The President at a recent meeting in Toronto had the honesty to speak plain and said *he did not wish* to act against public opinion. He quite approved of a large exhibition being held every fourth year,

NO OTHER EXHIBITION

to be held in any other place. This should be provided for by Government legislation. He thought Toronto was the most central and best point for any such exhibition. Alderman Baxter said he would not exactly accuse the Provincial Board of breaking faith, but they had done something very like it. He did not care for public opinion.—[From Toronto paper of the 15th Nov'r.

Among other instructive attractions at the Industrial Exhibition this year was a negro putting his head through a hole and dodging a ball that the enlightened marksman might throw at him at so much per throw and a premium per hit. The Association should have added a medal or a diploma as a premium.

Farmers, your voice should have weight. Should the backwoods farmers be taxed to support the whims of those who would take your agricultural exhibitions from you and turn them into circuses. All those who voted to take the power from the farmers and centre the Provincial Exhibition permanently and solely in Toronto, should have their names published. Every person should give a clear and lucid reason for every act of his in a public position. Excuses and evasions or pretended ignorance should no longer direct our agricultural exhibitions.

M. J. Hover, the well known agricultural implement agent, says from his observation that parsimonious persons live poor for the purpose of dying rich. Question—Does it pay? If so, in what way?

Agricultura Elections.

The annual elections of officers of the agricultural societies will soon be here again. We should look about us and see if everything has been going right with the society in which we are most interested. There are always some improvements that could be suggested. Perhaps they might be carried out; if not at the present time, it is well to look ahead. Introduce the ideas and have them discus ed. Every friend to agriculture will encourage discussions. It is well to go to the foundation of past events and see what has succeeded and what has failed. It does much good to all to hold discussions on such subjects, and the annual meetings should be patronized to encourage them. Long, tedious and dry addresses should be cut short; a limited time should be given to each. As consid lable party feeling often exists, care should be taken to give each party an equal chance. Not that politics ought to interfere, but it is to be regretted that ni some localities the very best men have often bee rejected for party causes. When such has happened it has invariably acted injuriously on the societies and sometimes ruined them.

In selecting men or listening to those who seek for office, or are aiding others to obtain an office, a very good way to judge of their fitness is to ascertain how many agricultural papers they take. Those who take the most are apt to be most correct in their conclusions; those who take none are more apt to be in error in their views, because if they do not expend a little of their money in obtaining information about their own business, they are not apt to be beral or successful as directors of your xhibitions.

In some places they have farmers' clubs, and devote an afternoon once a month. Surely you can devote a full afternoon once a year. In some places a dinner or supper is arranged, and a long, pleasant and enlightening evening is often spent and much good is done in this way. A trifle expeuded in this manner is often well and profitably expended.

A question you should decide on is whether Townshi Exhibitions should sustained or abolishe A very reat influence has been at work with the inte of abolishing them and throwing all the funds into a County or united County Exhibition. You should enquire of the candidates for office in what way they will vote in this matter. I some localities it might act advantageously, but in the majority it is our opinion it would be injurious to abolish them. We look on them as on the Section school-house; they are the farmers' school. When the cities and towns get the control the exhibitions are too often conducted more for the interest and profit of a few manipulators in the cities and towns than for the farmers. You can easily see that is the case by the two-week exhibitions. Tavern and other influences brought that about, because farmers must expend more money in two weeks than in one. Real, live farmers would not consent to attempt the two-weeks exhibition of live stock as the Provincial Board did this year. The power is now almost entirely taken out of your hands to elect members to the Board of Agriculture, but you may use a little influence by enquiring who your officers will support. It would be well to have the names out early of parties who would be the best to represent your interest. Do not think of electing men because they have already been appointed to some office. Select good, practical, intelligent farmers who hold no other office. There are plenty of good, suitable young men. There is one thing you may be pretty safe in saying, that is, that they cannot do worse than the old members have done.

Stock Sale.

Perhaps the most important auction sale of really choice breeding stock that has taken place this year in Canada, was the joint sale of Messrs. Beattie, Holderness and Miller. This sale took place in Markham, Ont., on the 3rd day of October. The stock sold consisted of a very choice lot of imported Clydesdale mares and stallions. On the whole we never have seen so many really choice Clydes before offered for sale; a very superior blood stallion was also offered. Pure imported Jerseys, imported Shropshires, a lot of good imported Oxford and some good Cotswold sheep comprised the stock.

The sale was but poorly attended by purchasers. Perhaps the inconvenience of railroad communication may have debarred some, as these branch lines do not run often and are rather more expensive than main lines. For instance, to attend a sale at such a place it must take the greater portion of three days for passengers to go and return from Guelph, Brant or other stock centres in the west. The sale was conducted in a very honorable manner. There were no puffers or by bidders, as we have too often seen. Everything set up was either sold or honorably withdrawn. The prices ruled low considering the choice quality of the stock, as really choice stock of this kind is dear in England or in Jersey. In saying the stock sold low, this was the opinion of all the really good judges of stock we spoke to. Most farmers would look with astonishment to see a sucking Clyde colt sell at $350, that being the price, and it was considered well worth the money. But what would astonish you more would be to see a little, tiny Jersey heifer, such as no common farmer would think of giving $10 for, judging from the size or symmetry of the animal, knocked down at $200 and $300. One young cow brought $400; at a common farmer's sale she would not have brought $15. Yet at these prices they were considered cheap, and we believe they were cheap, considering what they cost and the prices they sell for in the States. When in Toronto the day after the sale, and conversing about it, we said such an animal brought $1.50 per lb. live weight. A gentleman that had seen the beast, said he would give $2.50 per lb. for her. Surely some people must be making money to sell horned cattle at $2.50 per lb. live weight; but such is the demand that fashion has set on animals, that the wealthy ladies and gentlemen in the States who can afford to keep a villa residence, now prefer the Jerseys for two reasons. One is because their fawn color and fine canary-like legs more resemble the deer than any other of the bovine race; secondly, their butter is of the finest color and quality, and as to the cream, some claim that they can take the cream off a pan of milk, throw it over their arm, carry it into the parlor, and lay it in a dish, and leave no grease mark on the dress; and further that you will not find dead mice in the milk pan, as in other kinds of milk, the cream being so thick that a mouse will not drop through it. We have not kept Jerseys, and therefore will not vouch for all we hear, but that they have the name, command the prices and are dearer now than ever before, we firmly believe. And further, as long as such is the opinion and such the prosperity of the Americans, the best will be in increasing demand, and the demand for good Jerseys is now so much in excess of the supply, that although high prices are now being paid, the prospects are that they are more likely to increase for the next ten or twenty years than decrease.

Ayrshires.

Many years ago Mr. W. Crawford, of Malvern, purchased a one-year old Ayrshire heifer from the late Col. R. L. Denison, for which he paid $50. He only keeps a small herd, but he says from three Ayrshire cows he made and sold this summer 40 lbs. of butter per week for several weeks in succession, and this besides supplying his house with milk and butter. He has sold a great many head, some bringing him from $75 to $100 per head. Question—Does it pay to give $50 for a good Ayrshire heifer?

From the United States.

[BY OUR OWN CORRESPONDENT.]

Washington, D. C., Nov. 17, 1881,

The report of the Commissioner of Agriculture for the past year, which is yet in the hands of the Government printer and will not be out of press for several months yet, devotes a large space to the culture of sorghum and the manufacture of sugar. Not less than seventy pages are taken up by the Chemist alone in his tables of the analysis of the juices of sorghum cane and corn stalks, in which is given the percentage of glucose, sucrose, etc. etc., and the condition of each at different stages, the period of maturity and the length of time each will remain in condition to work into sugar after maturing. From this great volume of tables, and these extended experiments, the following conclusions are drawn, which are sufficient for all practical purposes to farmers who are not scientists. Those varieties which mature quickest, and also have a long working period, are the ones especially adapted for cultivation in more northern latitudes. Judged by this rule, says the Chemist, the following are best suited to a northern climate where the season is short: Early Amber, Early Golden, Golden Syrup, White Liberian, Black-top Sorghum and African Sorghum.

Among the essential points worthy of consideration are the following:

1. Select a cane that matures quickly, and has as long a working period as possible.

2. Do not work the cane too early; the seed should be well matured and quite hard, and the juice should have a specific gravity of 1.066 or higher.

3. After cutting the canes, work them up without great delay. It is best to draw directly from the field to the mill as may be needed.

His concluding suggestions concerning the utilization of waste products in sugar-making are as follows: "The *baggasse* (crushed stalks after expressing the juice) is a valuable fodder, being sweeter than ordinary grasses, and sufficiently nutritious. A good article of paper pulp has been made from this *baggasse* by the usual methods employed by paper makers. The leaves, which are removed in stripping the stalk, make excellent green fodder, and the seeds furnish good food for farm animals."

The Chemist has made an analysis of a "Farm Stock Powder," advertised as being beneficial in Pleuro-pneumonia and other diseases. While he does not express any opinion as to its merits, he gives the result of his analysis in the following recipe for the benefit of those who prefer to purchase the ingredients for a few cents, rather than give a dollar for the advertised article:

Common salt	6 parts.
Sulphur	4 parts.
Spent cloves	4 parts.
Ammonium carbonate	1 part.
Wood charcoal	1 part.

The Commissioner, in his report upon grasses, says: "It is apparent that the time of bloom or thereabout is the fittest for cutting grasses in order to obtain the most nourishment and the largest relatively profitable crop, and for the following reasons: The amount of water in the grass has diminished, and the shrinkage will therefore be less. The weight of the crop cut will be largest in proportion to the nutritive value of the constituents. The amount of nitrogen not present as albuminoids will be at its lowest point; fibre will not be so excessive as to prevent digestion, and the nutritive ratio will be more advantageous. If cut earlier the shrinkage is larger, although the fibre is less and albumen a little larger. The hay may be more palatable, but the total nutrients to

the acre will not be so large. If cut later there will be evident increase of fibre, destroying the digestibility of the nutriments, and a falling off of the albumen. This is not made up by the larger crop cut."

The Botanist and Chemist have made a report upon their analysis of 25 varieties of grasses. It is interesting, but whole is too long for a letter. Among them they mention Meadow Foxtail, not a native of this country, but which grows throughout the Northern States. It flowers in May, nearly four weeks earlier than timothy, and is one of the earliest grasses to start in the spring. Pastures of this will afford a free bite to stock a week or ten days earlier than others. For this reason it is a good grass for early spring pasturage. It will not do well in dry soils, but is not injured by frequent mowing. For dry sandy soils they describe a variety of Red-top much grown in England. It is said to withstand severe droughts.

A series of experiments made by P. E. Salmon, D. V. M., and communicated to the Dept. of Agriculture, shows that chicken cholera, which has destroyed so many fowls in different sections of this country, is not communicated by innoculation or germs in the air. He states that it can only be contracted through the throat by means of food or drink swallowed infected with the disease. When flocks remote from those affected are attacked with the disease, it is communicated by other animals that have eaten or drank with the infected flocks, or by insects or flies coming gorged from the sick birds, and are eaten by the healthy.

The drought of the past summer has so increased the price of all farm products, that many farmers are selling off a large portion of their stock in preference to feeding them on high-priced grain and fodder.

LOTUS.

Oxford Downs versus Cotswolds.

BY PETER ARKELL, TEESWATER, ONT.

In your number for October, Mr. J. C. Snell has quite a long article on Cotswolds, and, being a breeder of Cotswolds myself, can fully endorse what he says of them in regard to hardihood and making of large weights for mutton purposes, but must take exception to what he says in respect to the Oxford-downs.

First, with respect to their not being a sufficiently fixed breed to produce a uniform offspring; this statement can scarcely be borne out in face of the following facts, viz :

That they have been an acknowledged distinct breed and allowed to compete as such in the Royal Society's show yards, of England, for the last twenty-four years, and that Mr. Hitchman, of Great Milton, in Oxfordshire, Eng., commenced to breed them nearly thirty years previous to that date, a space of time greater than that occupied by Bakewell to establish from a multitude of crosses and fix beyond doubt the celebrated Dishley or Leicester breed.

In the second place, I do not believe in Mr. Snell's prophecy that at the end of two or three years people using them will be disappointed ; this of course will depend considerably on the skill and experience of those handling them, as it would do in any breed ; but I would venture to say that if handled only in an ordinary way, the result will be satisfactory ; in conformation would quote what Mr. Randal, of the *Practical Shepherd*, says of them : These sheep were first introduced into the United States by Richard S. Fay, Esq., of Lynn, Massachuetts, and the Hon. William C. Nives, of Virginia, who selected and improved their sheep together. Mr. Fay had a considerable extent of rough pasturage, better adapted to sheep than other animals, and he first stocked it with fine wooled sheep and subsequently with crosses between them and Southdowns. Neither experiment resulted satisfactorily. A resident of several years in England induced him to turn his attention to the English breeds, and he came to the conclusio that they would better answer his purpose. Living two years among the Shropshires, he was highly pleased with them, but on going to see Mr. Gillits and Mr. Druce's Oxfordshire-downs, he gave them the preference aud sent home a ram and ten ewes of this family. Mr. Fay, in answer to my inquiries, informs me that these sheep fully meet his expectations, that they are of good constitutions and "take to his briars and rough pastures as if 'to the manner born.'" He has no difficulty in raising all their lambs dropped in March, and the ewes many of them then fit for the butcher. The mutton killed from his rocky, rough pastures, in November, is of very high quality. His ewes in 1862 averaged 8½ lbs. to the fleece, unwashed. The average weight of the shorn ewes being 135 lbs. and rams 220 lbs. The yield of lambs was 160 per cent. on the number of breeding ewes. In 1863 the yield of wool fell to a small fraction under 8 lbs. and the increase of lambs rose to 175 per cent. His wethers yield on the average fully 10 lbs. of wool. He further remarks that their wool has a good lustre, is neither hairy nor harsh, and it has a very desirable quality for certain fabrics and will always command a ready sale. Of their disposition, he says they are gentle and disinclined to rove, but are willing to work hard for their feed and are very promiscuous feeders ; they make excellent returns for their feed and mature very early.

Your Opinion Wanted.

Very great and very important changes are about to take place in agricultural affairs in Ontario. We have been called on to express our opinion on a very critical question, but we felt it our duty to withhold our own personal views for a short time and appeal to our patrons before committing this journal to the support of any particular course of action, as we believe any great changes should be freely and openly discussed before too hasty decisions are arrived at.

We went to Toronto on the 23rd of November to ascertain as much as we could about your affairs, as two very important meetings took place at that time. On the 23rd a meeting of the Shorthorn breeders of Canada had been called to assemble and discuss final arrangements in regard to the establishing of a new Herd Book, as the existing Canadian Herd Book is found to be in disrepute in England and in America, on account of entries having been made in it of animals of shorter pedigrees than the best American Herd Books have allowed. The breeders found that in effecting sales the name of our Canadian Herd Book is looked on by the breeders of the fancy or choicest bred animals as of no account, and they call it a Grade Herd Book; and, to maintain a proper position for Canadian stock, they consider the only possible way to do so is to establish a new Herd Book, leaving out all cross-bred animals and inserting only those that can be traced directly to imported English stock. The Agricultural and Arts Society have, by invitation and propositions, tried to compromise the matter and alter the Herd Book to some extent to try to meet them, but the breeders refuse to take any part in the matter of arranging about the old book, as any steps they might take must lead to dissatisfaction to some, and they wish to have nothing to do with the four-cross animals or their descendants that have been entered in that book.

We fail to see any reason why an individual cannot keep record of his own stock, or if they choose, to combine and keep a record for those who prefer to record with them. The objectors to this say it will form a monopoly, and is done for the purpose of enhancing the value of certain stock, which we presume is the point desired. But to do this effectively and to raise the standard of stock and of the Herd Book, they contend that no alloy must be found either in their book or animals entered into it. The Government is not called on to pay anything toward their Herd Book, and they consider that the breeders can manage their own affairs better than the Government officials can. "Stockman's" report of the meeting will be found in another part of this journal.

The Board of Agriculture is in a bad plight. When at London a resolution was passed to register no more descendants of the four-cross animals they had already entered ; and now at the last meeting they propose publishing a hand book omitting many animals for which they have received payment from the farmers. While the debate on this subject was going on, your humble servant, although merely sitting in the room as a reporter, was called on to express our views, but not deeming it judicious we respectfully declined until fully prepared to do so, which we said we would be if the Board would furnish us with the particulars in regard to the first establishment of the Herd Book in Canada, and also at whose suggestion and for whose benefit was the original Herd Book altered to admit of the four crossed animals being inserted. We asked Mr. White or Mr. Shipley to explain, but they have not yet explained. We believe that public officers who are in receipt of public money should explain or acknowledge their inability to do so. These gentlemen, being old members of the Board, having been in close and intimate connection with all who have had anything to do with the Herd Book, having had their expenses paid to travel throughout the United States and Canada for many years, expressly for the Shorthorn interest, should return information for all the money that has been expended, for there is a great difference in a private individual and a public or paid servant. We yet await their reply, and we *require your opinion.* Do you consider that the Association or the Government should publish the Herd Book as usual? Do you think they should omit any names of animals for which they have received payment? if so, should they refund the money to those that have paid it ?

The Board have decided to publish their Herd Book and to leave out many animals for which they have received payment. This subject is now open for discussion. It is our opinion that erroneous steps have been taken.

Another very important question was brought up, namely, the location of the Provincial Exhibition for 1882. The usual custom has been for any locality desiring to have it to send a deputation and furnish approved gnarantees from the localities desiring to secure it; and the decision has generally been arrived at by a vote of delegates sent at great expense from all parts of Ontario to the annual exhibition. This year Kingston was the only place that complied with the Act, although a premature assemblage of the members of the Board of Agriculture had been called to Toronto to previously decide this question, and through some extremely doubtful or injudicious arrangement that is stated to have been made by one of the members of the Board that Toronto had been promised it two years in succession—such was the darkness kept over affairs that the delegates who attended the Provincial this year to decide where it was to be held next, were not made publicly aware of this underhand promise. But somehow or other the Board almost to a man voted for the

exhibition to be held in Toronto, and their influence and power succeeded in procuring a majority of the votes for Toronto, notwithstanding that the Torontonians had protested against having it, and Kingston asking for it. Despite this strange procedure, the Board tries to arrange with Toronto, but Toronto, desiring to secure the whole grant and the whole control, the Board found they were checkmated, as many of the members could not consent to have the whole agricultural interest of Ontario made subservient to a body of showmen who had secured rights and privileges from the city to carry on the Industrial Exhibition as a private money-making institution, more for the purpose of amusement and making money from the farmers than for the good of agriculture. Several of the members saw through the scheme, and loudly protested against the steps taken by both the *Globe* and the *Mail* to withhold the true facts from the country for the purpose of aiding the manipulators of the Industrial Exhibition. It appears that the citizens of Toronto are divided on this question, but those who can pay for most printers' ink are those who generally gain the day, and the masses are often sacrificed to the speculators who make the money at the expense of the majority.

On finding this dilemma, one of the members of the Board of Agriculture laid a plan to catch London, and actually got a vote passed in the City Council to offer London as a place for holding the Exhibition in 1882. This proposition was laid before the Board. A deputation from Guelph waited on the Board asking for the Exhibition, and particularly asking how much it would cost them to add sufficient buildings to those they now have, and offering their locality. The Hon. J. Skead, of Ottawa, also waited on the Board, offering to furnish accommodations in that city.

Amidst the discussions on this question, your humble servant was called on to express his views. This we willingly did, showing that their only step was to decide at once in favor of Kingston, considering it the only place entitled to it, and the only step they could take to prevent a disruption of the whole body—particularly so as the Hon. Mr. Wood, among his other suggestions, had requested them to give an estimate for the money required by them. We gave many reasons why we considered that Kingston was the only place that should be taken into consideration this year. We also stated in regard to the offer from London, that it was not an offer from either the citizens or the farmers. We would vouch for the farmers repudiating such a request, as they did not wish to act selfishly, but would be willing to accept the Provincial in its regular turn; they did not want to take it when other places were justly entitled to it. We also informed the Board that this request had been introduced into the City Council by the two men who had worked the hardest to destroy the exhibition grounds and the exhibition, and to injure the Association and the agricultural interest, more than any others in London.

The motion was that Kingston be selected as the location for holding the Provincial Exhibition in 1882. The opponents of this introduced a motion to the effect that the selection of the situation be laid over until the next meeting in Jan'y. The vote on this resulted as follows:

To Postpone Discussion.	For Kingston.
1—S. White,	1—Parker,
2—L. Shipley,	2—Drury,
3—Moore,	2—Carnegie,
4—Hunter,	4—Aylsworth,
5—Graham,	5—McKinon,
6—Rykert,	6—Buckland,
7—Morgan,	7—Bell,
8—Dempsey,	8—Legge.
9—Saunders,	
10—Klotz.	

We believe every vote should be taken and the name be known in every important question. The public can then enquire for reasons and can judge of acts. This old system of stating that the Board commend, or the Board does such and such, brings nothing home to the door of the right person. This vote, we think, settles the fate of the old Board. Nothing but a radical reformation can satisfy the public cry. More will be said of this meeting in a future number.

Veterinary.

Salting Stock in Winter.

BY JAMES LAW.

That common salt occupies a most important position in the animal economy may be directly inferred from its universal presence in the blood and solid tissues. In the blood plasma, according to Schmidt, it forms 5.546 parts out of every 8.505 of ash. In saliva it forms 2.5 parts out of 8 of the salts, in gastric juice 2 5 parts in 6, and in surat 20 parts in 50. Again, the eagerness with which all herbivorous animals seek this condiment partakes of the nature of a true instinct, and may be held to demonstrate a want in the economy. Salt springs are usually known as salt-licks or deer-licks, from the herds of wild animals that resort to them, and wherever on our western plains salt springs can be found as yet undeveloped, the earth around them, to the extent often of many hundreds of acres, is depressed several feet below the level of the adjacent prairie, by reason of the quantity removed by the tongues of animals resorting to the spot. Deer and buffalo are known to have travelled hundreds of miles for the privilege of an indulgence in this condiment, and hunters could always rely upon finding large game in the vicinity of the springs.

Regarding the advantages of salt as an aliment, even Aristotle had recognized them and recommended salting as a means of hastening the fattening of sheep. Pallas noticed the same thing in the camels of the Kalmuc Tartars on the banks of the Volga. Boussingault made the question the subject of experiment, selectiug six cows as nearly as possible alike, and feeding all alike, with the exception that three had each from 1 to 2 ounces common salt daily. In about six months the skin and hair of the three which had been deprived of salt became rough, dry and staring, presenting a marked contrast to the smooth, oily coats of the others, which, though not much heavier than the others, yet were so much better in appearance that they brought a higher price. Throughout the whole course of the experiment the salted cattle had shown more life and appetite than their fellows, the signs, in short, of a more robust health.

The uses of the salt in the animal economy are not well understood. It has been held that the chlorum in its composition serves to furnish hydrochloric acid to the gastric juice, and thereby to secure a more prompt and perfect digestion of the nitrogeneous constituents of the food. The large amount of salt in the blood implies still other uses. Its presence doubtless maintains the blood in that condition of density which is most favorable to the absorption into the blood of the products of digestion. The integrity and proper function of the blood globules depend largely on the density of the machine in which they float, and here too the amount of the contained salts and even their nature serve to secure healthy function. It is generally held that the presence of a certain amount of salt is essential to the nutritive changes (metabolism) in the tissues, alike in the process of repair and the removal of the waste materials. It is none the less manifest, however, that to secure the best results the amount must neither be deficient nor excessive. A proper balance is essential to the best results, and too much salt will not only cause a shrinkage of the blood globules, with an arrest of their function, but will similarly derange the process of nutrition in the tissues. It follows, as Liebig pointed out, that an excess of salt, instead of favoring growth and fattening, will really retard them, and that hence restriction to a moderate amount is best for animals that show an inordinate fondness for the condiment. It must be allowed that any excess is easily thrown off by the kidneys, or if in larger quantity, by the bowels, yet during its presence in the blood it interferes with those processes which are essential to health. An unlimited consumption of salt is therefore to be avoided, and a limited daily allowance is to be preferred.

The artificial feeding of salt is altogether superfluous in certain places where it is normally present in considerable amount in the food or water. Springs that contain a small percentage of salt are usually preferred by herbivora, and where these exist salt as a condiment is superfluous. At places on the sea coast, too, where the vegetation contains much salt from the spray carried inland, this agent need not be fed. It is especially in the interior of a continent, where the rock is sandy and the water soft, that salt is advantageous. Again, where stock are fed largely on brewers or distillers' grains, or on cooked food from which the salts have been dissolved out, it becomes absolutely essential that salt should be added to secure the best results from the food.

In addition to its uses as a condiment, salt is one of the best laxatives. In cattle and sheep especially in which a dry winter feeding is liable to induce a partial impaction of food between the leaves of the third stomach, the stimulus given by the salt to the free secretion and the muscular movement of the stomachs, together with the engendered disposition to drink more freely, serve to dislodge such obstructions and to restore perfect digestion. Even if a full purgative action is wanted, few agents will serve better than 1 or 2 lbs. of salt, according to the size of the cow. But it should never be forgotten that water must be allowed without stint after the administration of such a dose, as a concentrated solution of salt is highly irritating to the stomach and bowels. An abundant consumption of water serves at once to remove the irritant qualities of the salt and to hasten the action of the bowels.

Finally, salt is destructive to almost all intestinal worms. In Brazil, where cattle are very subject to parasites, the stock owners have discovered this virtue, and therefore dose their animals twice a year with 1 lb. each of common salt, after the action of which they always manifestly improve in condition. It is to the young worms especially that salt proves destructive, hence a daily allowance of one or two ounces for the larger quadrupeds, or two drachms for the sheep, will go far toward warding off fatal attacks by destroying the young parasites as they are taken in, in the food or water. Thus for the liver worms in sheep (Rot) salt marshes or the free use of salt proves almost a specific, and the stomach, and to a less extent, the intestinal worms of all domestic animals, may be kept in check by a daily, liberal yet moderate allowance.

The Pea Weevil.

A correspondent writes: "I have observed of late numerous complaints of the difficulty of guarding pea and bean seed from the weevil. Your subscriber has found an effectual remedy, and gives it for the benefit of those seeking such. After harvesting, dry thoroughly in the sun, and afterwards place in jars, cans or barrels that have been thoroughly heated before the fire, placing in each vessel a bottle of turpentine, not corking the bottle but simply tieing a piece of cloth over its mouth. Cover the vessels as airtight as possible, and afterwards expose to the sun occasionally. The fumes of the turpentine engendered by the heat kill the egg of weevil deposited in the seed when it is green. This is an effectual remedy, and should be known to all seed growers North or South.—Ex.

Scatter manure under fruit trees, as also a quart of salt under each tree as far out as the limbs extend.

Stock.

Chicago Fat Stock Show.

(From our Correspondent.)

Of the four fat stock exhibitions that have been held under the supervision of the Illinois State Board of Agriculture, at Chicago, none have been more successful, or nearer what such things should be, i e., full of practical lessons for the breeders, the feeder, the butcher and consumer, than the one just closed.

The fact that this annual fat stock display, which may now be regarded as a permanent institution, is under the management of a single State society, might give one the impression that the affair is one of merely local interest. This is far from being the case. Such an institution is well calculated to be one of national importance, for there can certainly be few questions that are of greater interest to the masses than that of of how to obtain the best results at the minimum cost of production in the matter of supplying food animals to the consumer. Canadian breeders have been represented in the prize rings, and in addition to adding much interest to the occasions, by the excellence of the animals shown, they have found ready sale at remunerative rates for such stock as they cared to dispose of.

At the show just closed there was an excellent cattle exhibit, a fair showing of sheep and swine, and a splendid display of poultry. Several breeds of horses were also well represented.

The two great rival beef breeds, Shorthorn and Herefords, formed the centre of attraction in the cattle department, and in every prize ring both were well represented. A few choice Devons appeared, and captured some of the premiums, but other breeds were but scantily represented. Of the polled breeds, which many had hoped to see, there was only one entry; that of a Polled Angus bull by Mr. Hood, of Guelph, Canada, which before the closing day was sold to a western breeder. The competition between the two first named breeds was never sharper than during the past year or two, and as a result, champions of each have been exerting themselves to make their respective favorites excel, and it is safe to say, a finer lot of Shorthorns and white faces have never been collected in this country. The herd prizes, as also those offered for yearlings, two-year olds, and the grand sweepstakes, were taken by the Durhams, but in the three-year old ring and in the slaughter test, the Herefords came off victorious, and upon the whole they rather got the better of their adversaries. The most able judges often disagree in deciding upon the quality of a live bullock, and many consider a smooth, mellow hide a sure indication of a fine beef, while there are others who consider that not altogether an essential condition in a ripe steer. In fact careful experiment has disclosed the fact that an animal which might be considered by many a poor "handler," may have under his coat a finer quality of more thoroughly marbled meat than one which might be the choice of one who lays particular stress upon the handling quality of a beast; unquestionablp the practical butcher is the best judge, and the way to get at the "true inwardness" of the matter is for him to render his final judgment upon the quartered carcass.

A noticeable feature was the presence of a half dozen or so 2,500 @ 3,000 lb steers which have been heavily fed for three or four years, and which were considerably past the profitable age, and are simply kept because they are of huge proportions and are successful in attracting considerable attention. Just what there is, for a young stockman for instance, to learn from beholding aged bovine monstrosities, which are very largely made up of tallow and grease, is not easy to understand; unless indeed he should learn a lesson that would forever keep him from pursuing a like course. If such animals were entered in the slaughter tests the young man would have no difficulty in seeing for himself the folly of adding fat to old and over ripe fat by feeding too long, but such animals are not disposed of in that manner. They are usually dished up on some day of celebration, and fed to people who enjoy very poor beef, and discuss at great length its excellence just because it came from the carcass of a huge bullock. Early development should certainly be the aim of the breeder and feeder. Anybody can make an enormously large animal by feeding until four or five years old, but people who succeed in making premium two and three year olds are not plentiful yet and are the ones who are paid best for their labor.

The entries of cattle were: 107 Shorthorns and grades, 32 Herefords, 9 Devons and one each of Polled Angus and Ayrshire. Total 151.

Entries of sheep included 20 of Southdowns, 29 of Cotswold, 15 of Shropshire, 9 of Oxfordshire and 8 of Merino. Total 80.

Of swine there were 35 entries, embracing 5 of Berkshire, one red Berkshire, 8 Essex, 2 Suffolks, 7 Poland Chinas, 5 Chester whites and 7 Victorias. The latter is a new cross breed which resembles very closely the Berkshire in form, but is of a pure white color.

The Canada West Farm Stock Association, of Brantford, exhibited the finest Shorthorn cow shown, which sold to a butcher at 12c per lb., gross weight. Geo. H. Hood, of Guelph, exhibited a Polled Angus bull, and M. N. Hood, of the same place, 4 Cotswold, 4 Southdowns, 9 Oxfords and 4 Merinos.

At this time there is a very strong demand in this country for the hornless breeds of cattle, and that fact tends to keep them from being shown in the fat stock display, as breeders are selling stock of that kind at rates too remunerative to admit of even grades being fattened for beef. Americans are noted for taking hold of things in a "whole hog or none" fashion, and just now there is something of a Polled cattle mania taking its turn. It will probably result inmany over sanguine stockmen becoming disgusted with them, as many have bought grade bulls, andpoor specimens at that.

The chances are that if some Canadian farmer should fatten up a nice lot of Polled Angus or Galloways, for the November show of 1882, some valuable premiums could be taken.

The following grades of beef are established at the Union Stock Yards in Chicago. Extra beeves, steers weighing 1,500 pounds and upwards; choice beeves, fine, fat and well-formed steers weighing 1,350 to 1,450 pounds; good beeves, well-fattened steers, weighing 1,200 to 1,300 pounds; medium grades, steers in fine flesh, weighing 1,100 to 1,200 pounds; butchers' stock, poor to common steers and common to choicecows for city slaughter weighing 800 to 1,050 pounds; stock cattle, common cattle, weighing 600 to 1000 pounds; inferior, light and thin cows, heifers, stags, bulls and scallawag steers.

At the opening of the fat stock show the representative of the Union Stock Yard's Company remarked in substance, that the most skilful and successful of stock growers within a radius of a thousand miles had brought together the choicest of their flocks, not only for exhibition but to prove that with proper selection in breeding, and care in development, more weight and a better quality of meat could be produced in one quarter of the time than was required under the old haphazard styl. Few even of Chicago's citizens realized the vast importance the live-stock interest bore to the wealth, commerce and prosperity of the city. It was a source of just and commendable pride that the foresight and enterprise of some of Chicago's citizens led a few years ago to a plan for furnishing such facilities as to draw to this centre the bulk of the live-stock trade of the country. It was only a quarter of a century ago that John B. Sherman and Geo D. Williams established a stock yard on West Madison street. It was a very small one then. The hogs were dumped out on the prairie, picked up a living the best way they could, while waiting for a market, and were driven to Chicago river to water. Twenty-five years only have elapsed and Chicago had become the greatest live-stock market of the world. Sixty-five thousand hogs, 10,000 cattle and 3,000 sheep per day had been handled at the Stock Yards, and 100,000 men, women and children in Chicago were fed and clothed out of the products and industry arising from the live-stock and packing interests of the city. The census returns showed that in 1880 the sales of live-stock here amounted to $143,000,000; all the gold and silver produced in the United States in a year would not pay for the live-stock bought and sold in Chicago in six months.

Col. John T. Gillett, of Elkhart, Logan Co., Ill., stood at the head of the list in point of number of cattle exhibited, as well as in their quality, weight and general thrift. He had on exhibition thirty-two head of grade Shorthorn steers, including eight snow-white bullocks. Col. Gillett took the grand sweepstakes premium for steers three years old and under four, with his magnificent grade Shorthorn steer "McMullen." This steer was 1,237 days old, and weighed 2,095 pounds, showing an average daily gain since birth of 1.61 pounds. Of this premium animal the judge stated: "He was a good handler, and gave every indication of having enjoyed sufficient exercise and other favorable and natural conditions to develop a due proportion of lean meat. This steer had not matured as rapidly as some others in the ring, and was more evenly covered with thick, mellow, firm meat of the most desirable quality for the consumer, was the smoothest animal in the ring, and had the best loin and rib, smallest brisket in proportion to weight, straight and even top, bottom and side lines, and was well filled in twist. This steer had a small head, short, neat neck, was well filled in shoulder and carcass; and a very large proportion of choice cuts. With the exception of being rather leggy and slightly deficient in second thigh, there was but little room for improvement in all that goes to make up a profitable butchers' bullock. This same steer received the honor of the grand sweepstakes for any age or breed of cattle on foot; thirty-one appeared in the ring.

As a representative herd of grade Shorthorns, it is interesting to note that of the thirty-two steers of all ages entered by Col Gillett, one weighed 2 435 pounds, four upwards of 2,100 pounds, six others about 2,000, five about 1,900 and only one less than 1,500 pounds. As illustrating the question of early maturity and rapid growth, one of these steers 1,176 days old and weighing 2,130 pounds, had gained 1.81 pounds daily since its birth; another showed a daily gain since birth of 2.07 pounds, while not a steer among the whole lot had gained less than 1.19 pounds per day since birth, the average of the cattle exhibited by Col. Gillett showing a daily gain of about 1.65 pounds per day. Among the Herefords this quality of rapid growth was marked. One Iowa breeder exhibited an animal, but 267 days old, weighing 725 pounds, or an average daily gain of 2.71 pounds; the same party entered a steer, 622 days old, weighing 1,280 pounds, or 2.05 pounds daily gain. An Indiana stock breeder entered several Herefords as follows: One 365 days old, weighing 880 pounds, an average daily gain since birth of 2.41 pounds; another 209 days old, weighing 500 pounds; one 249 days old, weighing 610 pounds; one 199 days old, weighing 500 pounds. Among the Devons the relative daily gain was much less, while the same was the case with the thoroughbred Shorthorns.

British American Shorthorn Breeders' Association.

A large and very enthusiastic meeting of Shorthorn breeders took place at the Walker House, Toronto, Ont., Nov. 23rd; all the prominent breeders were present or represented. The President (Mr. John Dryden, M. P. P.) addressed the meeting at some length. He said a false impression had gone abroad concerning the aims of this association, and for that reason gave the reasons the breeders had for forming this association and conducting their own record. All of these arguments were given in our June number.

In conclusion, the President said this would probably be the most important meeting that had been held yet. He hoped they would enter carefully on the subjects that would come before them, so they should escape errors. They had learned, with regret, that the old Herd Book had not only a poor standing with their American neighbors, but a number of their own breeders had no confidence in it. It had been a matter of discussion whether they could better the position by joining with the committee of the Agricultural and Arts Association, and it was argued that joint action would not be beneficial, and a separate action was decided upon. This had led to the formation of the British American Shorthorn Association. The question was whether the publishing of a Herd Book should be under the control of a committee of the Agricultural and Arts Association, or whether it should be continued by the Breeders' Association. Those of us, Mr. Dryden said, who had an interest in the Herd Book *would* see that if it was controlled by the Breeders' Association it would be better, and would not be so expensive as it would be under the system that had been in operation up to this time. It could no longer be carried on as it had been hitherto, for the breeders would see to it that every man would have justice. Mr. Dryden understood that the Agricultural and Arts Association had some propositions to submit to the meeting to day. But he desired to say that he did not wish to relinquish the object they had started to effect, and he hoped they would pursue it with honesty of purpose and a desire to do justice to all breeders of Shorthorns.

Mr. S. White, M. P. P., said he was sorry he had not been at the former meeting, and was glad

to be present now. His opinion was that Shorthorn breeders should take this matter in their own hands. They had been subject to a good deal of caprice on the part of the publishers of the Herd Book. Both here and in the United States these Herd Books were held as private property and outside of the control of the breeders. He thought publishers might be met half way and their rights purchased, It was a purely commercial matter. If the publishers would not meet them half way, the Shorthorn breeders would do properly by getting up a book of their own. Mr. White related what he had herd at a meeting of Shorthorn breeders in Chicago, and he said it was shown there also that the breeders were at the mercy of the publishers of the Herd Book. He said also that there was a general feeling among many of the members in Chicago to have a Herd Book that would cover the Shorthorns both in the United States and Canada. It was thought that such a book could be furnished cheap, and it would also be a good record and almost universal as it would include the cattle in all North America. He thought it would be a good thing to join the Americans. A Herd Book was desirable as an advertisement for the sale of their cattle, and by a combination with the Americans they would secure a wide field. He agreed entirely with the President that the association should take the matter entirely into their own hands.

The President said that Mr. A. R. Gordon, Cooksville, Ont., had arrived, and would state what were the propositions made by the Agricultural and Arts Association with regard to the Herd Book.

Mr. Gordon said it was true he was the bearer of certain propositions from the Agricultural and Arts Association, but he was in no sense their agent. The Agricultural and Arts Association had asked the Breeders' Association to confer with them and see whether they could not both exist. For if they had not any control of the Herd Book they did not know what else they were in existence for. Mr. Gordon said that it might be a subject for much thought whether they would join the Agricultural and Arts Association, or whether they would themselves get up a book of their own, and of which they will have full control. Mr. Gordon read the propositions, of which the following, the sixth and last, were the principal :—

"That in case the Breeders' Association do not publish a Herd Book, two members of the Revising Committee shall be appointed by each association, whose expenses shall be paid the same as the other members of the Board, three of whom shall make a quorum. The Committee to be empowered to procure evidence to their satisfaction in reference to all doubtful pedigrees, and empowered to make rules in reference to all matters connected with the reception of pedigrees and the publishing of the Herd Book."

Mr. Gordon proceeded to say that a discussion had taken place on these propositions, and it was agreed that the Herd Book should be published at the cheapest possible rate. They should consider whether it was better for them to wait a time and go on with the Agricultural and Arts Association, with the expectation that by-and-bye they would get all the benefit of the books now issued; or to go on as they had begun and get up a book of their own. The Agricultural and Arts Association did not look any longer for any profit from the Herd Book; but as a body they had nothing left to do but manage this Herd Book, and if the service was taken out of their hands, they had no reason for continuing as an association any longer. Mr. Gordon thought these propositions were deserving of much consideration, and he moved that the several propositions be taken up one by one and discussed.

Mr. Arthur Johnston, Greenwood, Ont., thought the work done by the Agricultural and Arts Association in its earlier days was as well done as could be expected, but he thought their usefulness was gone. The work done, however, had been well paid for, and he did not see that the breeders should pay a very high price for what they had already paid for. There is no reason why the breeders should pay more for their Herd Books than their value in order that the Agricultural and Arts Association might be kept alive. It was a mere question of economy, and if the Breeders' Association could make as better a book at less cost than the one they were getting now, he would advise that the breeders should have no connection with the Agricultural and Arts Association.

Mr. R. Gibson, Ilderton, Ont., moved, seconded by Mr. Jas. Cowan, that, as breeders, the association feels that the Herd Book should be under their own control, and that the propositions of the Agricultural and Arts Association cannot be entertained.

This resolution was unanimously passed and loudly applauded.

After this resolution was passed the business of the meeting consisted in the appointing of a recording secretary and the appointing of several important committees. After much careful discussion, R. L. Denison, of Toronto, was unanimously appointed Recording Secretary at a salary of $800 per annum. Messrs. Dryden, Hunter, Johnston, Gibson and Snell were elected Editing Committee under the control of the association.

Finance and other committees were also appointed.

Discussions took place as to the best method of reaching all the breeders in Canada. It was decided to issue circulars and send letters to all breeders inviting them to join.

Mr. Johnston moved, seconded by Mr. Hunter, that "Whereas the breeders and members associated have pledged themselves by their votes to-day to carry out the objects of the association, every member of the association pledges himself to send in at once, or as soon as convenient, all pedigrees which they intend to record, and they urge upon other members of the association and breeders in general to co-operate heartily in this work." The resolution was carried.

The meeting then adjourned, subject to the call of the President.

Overfeeding Stock for Exhibition at the Fairs.

BY A. B. ALLEN.

This has not yet been followed to the expensive and destructive extent in America that it is in England, but if not speedily checked in its incipient state, our breeders may soon grow up to the same folly.

Excessive high feeding for show at fairs, or what is termed "training," was little practiced in England previous to the year 1850. After this it so rapidly increased as to destroy the breeding power of many very valuable animals, which might have contributed not only to the wealth of their owners, but also to that of the country, by assisting in a more rapid increase of improved stock.

The Shorthorns Mr. Bates exhibited at the annual Royal Agricultural Society's Show, at Oxford, in July, 1839, were the Oxford Premium Cow, two Duchess heifers, and his famous bull the Duke of Northumberland. These were travelled on foot about 20 miles distant from his farm at Kirklevington to Middlesboro, on the river Tees, and shipped thence to London. Disembarking there, these fine animals were travelled on foot to Oxford, about 60 miles, as no railroad then connected the two cities. On each of these animals Mr. Bates obtained a first prize; but what would be his chance for prizes now if he exhibited them as then, merely in good travelling and breeding condition? The stock at present usually shown upon such occasions are so loaded with fat that they could not travel a single mile, particularly on a hot day, without danger of dying from the exertion.

When prizes came to be awarded by the judges at agricultural societies for mere fat and flesh, without regard to fine quality, superior anatomy, and choice pedigree, Mr. Bates gave up exhibiting his cattle for prizes, although he continued to show them for the inspection of the public. Lord Althorp (afterwards Earl Spencer), as well as some other excellent breeders, would not feed their stock for exhibition except for the annual Christmas Fat Cattle Show in London, where they occasionally took prizes for such as were intended for the butcher. Mr. Booth, Lady Pigot, and other celebrated breeders, after ruining many a valuable animal for breeding purposes, wisely came to the conclusion to abandon exhibiting them at the cattle shows, for they found this did not pay; and, moreover, it was too sad and disheartening to witness the loss of so many splendid animals.

Distemper in a colt takes about three weeks to run its course; all the medicine required is a light dose of Epsom salts, say four to six ounces, and good nursing. Give warm bran mashes, linseed or oatmeal gruel; keep the animal warm, and rub the legs with cloths dipped in hot water? a tablespoonful of mustard in the water would be beneficial if the legs seem to de weak and numb.

Absorbents.

In the stabling of stock various materials are used to absorb the urine, and thus to prevent it from escaping to waste, as well as retaining it in a form more convenient to the farmer than would be its collection in tanks. The material used and the manner of using it differ considerably in different localities, and it is to be determined by each farmer for himself. Where straw is used as bedding, this of itself collects the watery manure and conserves it in its pores, while the putrescent material thus collected acts in turn as a ferment in the presence of the oxygen of the air. In many portions of our country the best use for straw is as a bedding material, but in other portions it can be utilized or can be sold at a price above its nominal value for the purposes of the city stables or the manufacturer. In cases, again, horse dung itself may act as an absorbent, especially where the urine can be collected in gutters and discharged of itself on the pile. In some parts of the Eastern States, where horses and cattle are kept on the same farm, the horse dung is placed behind the cows', in a trench, in order to absorb the urine and mix with the dung of the barn. At other times, and in other localities, dry peat makes an efficient absorbent, and is much used. It is, however, apt to make a fine dust, which is carried by the currents of air, and thus annoys the dairy farmer by lodging in his milk. Perhaps the best general absorbent is the dry loam or earth or sand, which is now so largely used in Massachusetts, not only to absorb moisture from cattle, but even as a bedding. Where the land farmed is heavy and sticky clay, sand is by all means to be recommended, as its addition to the soil, through the manure, tends to ameliorate, by lessening, the adhesive property. Generally speaking, however, that kind of earth is used which is most convenient.

The amount of absorbent used, or even necessary, to preserve the excreta of animals in a solid form cannot be definitely stated. The English practice, which seems to have modified our opinions so generally, recommends about 20 lbs. of straw per day to litter an ox; but one of their essayists uses 24 lbs. per head daily in open yards. It is to be remembered, however, that in England straw *must* be consumed on the farm or converted into dung. Boussingault remarks that litter (straw) doubles in weight through the absorption of urine, and also that no matter what quantity of litter is used, some of the urine will run through. While not deposited to agree with the statement, yet we consider straw by no means the best absorbent within our control, although circumstances may make it the most desiroble to use. A good dry sand will absorb twenty or twenty-five per cent. of water, before it becomes saturated, while a good yellow loam or common soil, well dried, will absorm far more. Some peaty soils will even absorb double this quantity. In those portions of our country where economy is most needful, refuse dry litters of all kinds are used, but the dirt is the stand-by. This is sprinkled or sanded on the floor of the lintels, in order to prevent the drug from sticking to the wood, while a considerable quantity is placed in the trenches behind the stock, to be removed daily and replaced by fresh material.

For horses, sawdust is often used as a bedding, and, if carefully used in the proper quantity, serves a good purpose, and does no injury to the manure. Hard-wood sawdust is, however, preferable, and the shavings of a planing-mill will do about as well, or perhaps better. Care must be used, however, as to the quantity, for if in large excess, it seems to work injury to the soil to which it is applied, especially if of a clayey nature.

But few farmers can afford to use more absorbent material than is needed for the purpose and but few can afford to use none at all fo stable animals, for the urin is in all cases a most valuable portion of the excreta. It is for each one to use the absorbent which is most convenient and sufficiently effectual to retain all the fluid excreta in its pores. Where there is a choice among many, that one should be taken which would tend the most to add value to the soil—[National Live Stock Journal.

Breeding ewes will thrive better upon bran than upon corn. Bran supplies the needed nutriment better than corn. Oats are next in value to bran. Mixed food, however, is the best. One bushel each of corn, rye, buckwheat, oats, and bran mixed combine all the needed and most nutritious food elements. One pint daily will be a fair allowance. One bushel for 100 sheep is a common ration.

How the Cattle Were Fed Which Took the Farmer's Advocate Prize for 1881.

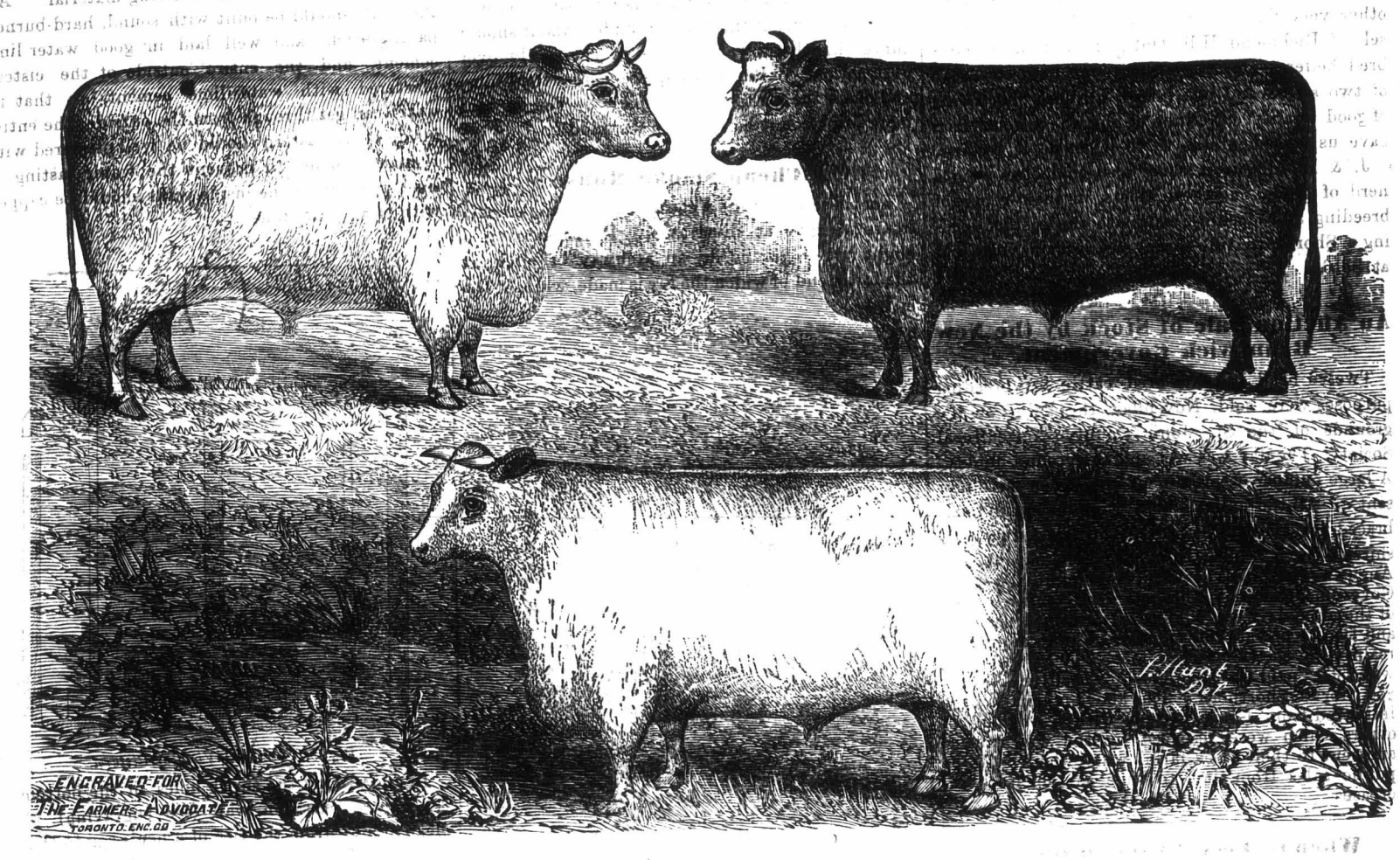
The herd which won our prize of $100, consisted of the following steers:—1st Canadian Champion, light roan, 28 months old, weighed 2,000 lbs., was a Shorthorn grade of two crosses, both of which were by Cruickshank's bulls of Booth blood; 2nd King, of the West, pure white, age 31 months, weight 1,900 lbs., was a thoroughbred Shorthorn of the Booth family; 3rd, Young Pilot, red roan, 41 months old, weight 1,920 lbs., Shorthorn grade of three crosses, all of which were by Cruickshank's bulls of the Booth family.

These cattle were owned by Messrs. H. & J. Groff, Almira, Ont. Their system of feeding is as follows:—When a calf is dropped the cow is allowed to stay in the stable with it for the first four or five days. After this age, for the first month, the calf is allowed to suck three times a day, but after the expiration of one month, only twice a day. They allow all their calves to suck until they are four months old, and sometimes let a choice calf suck six months. When cows are on pasture while suckling, they generally give each cow half a gallon of bran each morning and night; this is continued until about the middle or end of July, or as long as the pastures are good and the weather cool; but, when the pasture becomes poor, the weather hot and the flies troublesome, they kept them in a darkened stable during the day, but allowed them to run out in the fields at night. When kept in the stable during the day, they are fed cut straw or clean wheat chaff, to which is added bran, a few boiled peas, a little flax-seed and Thorley cattle food. For twenty head of grown cattle, when on grass at night, they give 10 bushels of chaff, 30 gallons of bran, 1 bushel of well-boiled peas, 1 pint of flax-seed boiled with the peas. In preparing the above food for use, the chaff or cut straw and bran is put in a large feed box, then the boiled peas and flax-seed with the liquid in which they were boiled is added, hot from the furnace; as soon as one meal is fed the feed is prepared for the next; the box is covered over as soon as the feed is well mixed and all the steam kept in. In feeding calves a quantity of this feed is given suitable to their age.

The above food is given three times a day, and as soon as it is eaten, at morning and noon, as much cut green corn is fed as each animal will eat up clean—no green food is given at night, for when the cattle have eaten their evening meal of steamed food they are turned into the pasture. Whenever it is noticed that an animal does not eat well, the quantity of food given is diminished. Never give more than the beast will eat at the time, and always keep food boxes clean; this is very essential to success in feeding. Occasionally sprinkle a little salt in the boxes or troughs after feeding, and always sprinkle salt on the boiled feed.

For winter treatment, the warm mixed feed is continued, but a little more is given, and in place of pasture and cut green corn, hay and cured corn stalks cut up with pea straw in equal proportions are fed; this pea straw and corn stalk is prepared and fed as mixed warm feed. They also feed a few turnips to each beast, but do not believe in giving too many cold roots in winter, considering the warm mixed feed much better, especially the boiled peas. They give their aged cattle about three pecks of turnips per day; to their fattening cattle they give about one gallon of pea meal per day mixed with the warm mixed feed and divided into three meals. They fatten off their cattle between two and three years old, and they hold that all cattle should be sold to the butcher by the time they are three, in order to give the farmer the best results.

The above is their method of feeding cattle over two years. As before stated, they allow their calves to suck from four to six months, generally letting the dam suckle her own calf; but in cases where it is desirable to dry the dam for any reason, another cow is procured and the calf allowed to suck her, and the dam milked for a short time until she is dried. They have found it preferable to keep the calves in the stable during the first summer. This they think advisable because the calves learn to eat much sooner and better, they grow faster and do not worry the cows or themselves nearly as much, and are protected from the heat and flies, which they think is important. As soon as the calves can be induced to eat (which is at about six weeks old), they are fed a little bran and oats at first, as much as they will eat at a time, and as soon as they begin to eat well, bran and boiled peas, with a little Thorley food, are fed three times each day, never feeding more than they will eat clean at a time, but always as much as they will eat. Before the grass or green feed comes in, a little hay is given, clover hay being preferred, and, if it is a season of the year when roots are fed, they give to each calf a few cut fine twice a day. But as soon as green food can be obtained, it takes he place of hay and roots, and is fed three times a day. Clover, coming in first, is fed in the early summer, then American corn, which is always cut up in a straw cutter and fed as turnips in a trough. The calves are always allowed to run loose in box stalls, being careful to keep those of an age and size together so that all get their share, for if large and small were allowed to run together, the large ones would thrive at the expense of the smaller. Plenty of fresh water must be supplied in abundance, three times a day during the summer and twice a day during the winter. This treatment is continued until the beginning of the second summer, or until after they are twelve or sixteen months old, after which time they get the same treatment as the aged and breeding cattle. The breeding cattle are let out of the stable each day during the winter, just long



enough to drink and returned to the stable; but the fat cattle have their water carried to them. This is done for the purpose of keeping them quiet and warm, and it is found to pay. They think in all cases it pays better to keep an animal growing from the time of birth to maturity, and at no time to stint it of feed or water.

While these gentlemen lay great stress on proper and plentiful feeding, they also consider good ventilation, warm and cleanly kept stables and gentle treatment of vital importance. They never allow a dog in the stable or yard, nor persons employed to be noisy or rough when amongst or near the cattle. Nor do they allow their animals to become dirty. All are curried and brushed at least twice each week during the winter, but they prefer it done once a day if possible.

The cost of feeding the above steers, which won our prize, is only given for the three months previous to the show, which was $30 per head, *i. e.*, $10 per month.

Besides the Messrs. Groff's, there were three other very fine herds shown. Mr. James Russel, of Richmond Hill, Ont., showed three pure-bred heifers. John S. Armstrong's herd consisted of two steers and one heifer, all pure Shorthorns of good quality. Neither of the above gentlemen gave us statements as to th ir mode of feeding.

J. & R. McQueen, who also competed with a herd of grade Shorthorn steers, in their report of breeding and feeding, estimate the cost of feeding a Shorthorn till three and a-half years old at $116.

An Auction Sale of Stock by the New Brunswick Government.

Twelve head of pure-bred cattle for breeding purposes were sold, November the 19th, on the grounds of the St. John County Agricultural Society. The day was wet and the ground muddy. A large number of prominent gentlemen were present. All the animals sold were males, and embraced two Herefords, three Durhams, two Ayrshires, three Polled Norfolk, and two Polled Angus. The prices realized were not high, yet the Government lost nothing by the venture. Ten of the animals were sold to agricultural societies and two to private individuals. The total amount realized by the sale was $2,455. The highest price was $360, paid for an Ayrshire, and the lowest $50, for a Shorthorn. The above animals were imported from Great Britain with a number of others which were reserved by the Government and sent to their stock farm, where there will be public sales from time to time as the stock increases.

When to Feed Grain to Horses.

Horses are provided with an unusually large development of the salivary glands, and an enormous quantity of saliva is secreted during the eating of a feed of grain or hay. This copious supply of saliva is amply sufficient to moisten and dilute the food, so that it can be digested perfectly without the help of water. Water is absorbed by the coats of the stomach and enters the blood with such rapidity that a thirsty horse will drink more water than the stomach will contain at one time, and the water begins to pass off through the kidneys in such a case, after the lapse of a very few minutes. So that, knowing these facts, one may naturally infer that a horse may be watered a few minutes before feeding with more advantage than soon afterward, because in the former case the water has been absorbed before the food is swallowed, and digestion cannot be interfered with by the presence of too much water in the stomach, as might happen in the latter case. The best practice is that usually followed, namely, to give the horse a very little water on starting out to work after feeding in the morning; to water on coming in at noon, and in the evening, before unharnessing and feeding. This gives time for the absorption of the water before the food enters the stomach.—Ex.

Hints and Helps.

A Very Simple Log Sled.

Many times a farmer wishes to haul a few logs from the forest to an open and convenient place for loading them on an ordinary sleigh for transportation to the mill; or perhaps they may be intended for hewing timber. The illustration (No. 1) represents a very simple and yet effective sled or drag to haul the log with. It is simply a crotch or

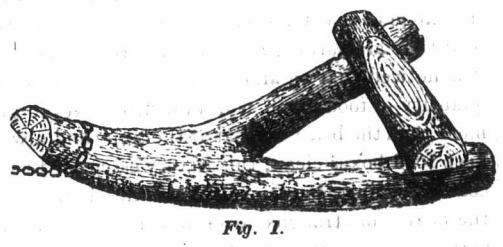


Fig. 1.

fork of a small tree, say, about a foot in diameter, to the end of which the team is hitched. It will run more easily if this end is rounded, and it should curve slightly upwards so as to get easily over obstructions. Pin a crosspiece across the limbs, and chain the log to this crosspiece. The log lays more firmly on it hollowed in the middle.

A Cheap Smoke House.

For those who want a cheap, easily-made smoke-house we give an illustration. It is made on a slight rise of ground, by an archway of brick, at the lower end of which the fire is made, while at the

Fig. 2—A Cheap Smoke House.

upper end is a barrel or box containing the meat to be cured. The lower end is closed after the fire is well started, to prevent a too rapid burning of the material used for making the smoke, and also to direct the smoke to the place of escape.

How to Build a Cistern.

We have been asked for a plan showing how to build a cistern, and we now give you one of the best we have heard of. If you only require the water for stock purposes, the filtering arrangement might be dispensed with. A good large cistern or two would be a great saving of labor in the dry spell in summer when you have to drive miles for water.

To build a cistern that will last a hundred years or more, be convenient, useful, and supply a large family with good and wholesome water for cooking and drinking purposes, and soft water for cleaning and washing, select a location near the dwelling (generally in the grass plot), and, for a cistern 12 feet in diameter in the clear and 10 feet deep from the bottom to the spring of the arch, dig a circular hole about 15 feet in diameter and 16 to 17 feet deep. See that there is a good foundation (which is all important), and that the bottom is made smooth and level; then cover the bottom with one-and-a-quarter-inch boards, two thicknesses laid crossways on each other; on this lay two thicknesses of sound, hard-burned paving brick in good water-lime cement; then, leaving 12 feet space in the clear, commence the outside circular wall, eight inches thick, and raise it perpendicularly 10 feet high, at which point commence turning the arch, with a proper turn, leaving a hole in the top about three feet high; it should just come to the top of the ground. Also build a partition wall eight inches thick across the centre of the cistern and up to a little above the spring of the arch, leaving eight or ten bricks out of the bottom course so as to allow the water to pass from one side to the other of the cistern; also build two low partitions, one on each side of the centre partition, each about two feet in the clear from the centre partition and two feet high, to hold the filtering material. All the walls should be built with sound, hard-burned paving-brick, and well laid in good water-lime cement, and the entire outside of the cistern plastered with water-lime cement, so that no water can get through from the outside; the entire inside of the cistern should be well plastered with Roman cement, to prevent the water tasting of lime; the tops of the inside walls should be capped with clean, flat stone.

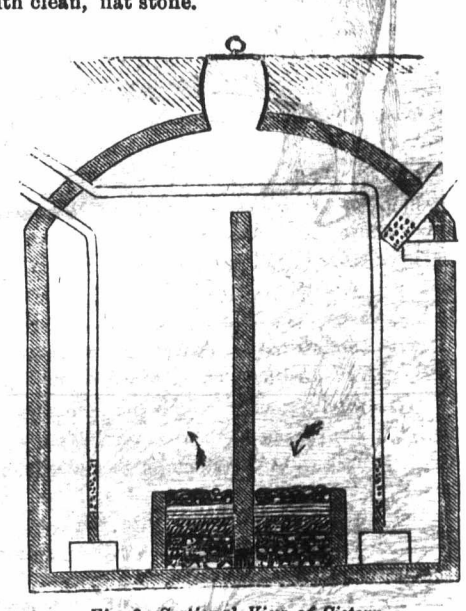


Fig. 3—Sectional View of Cistern.

In and around the small holes in the bottom of the centre partition wall (see engraving) place clean stones, from the size of a hen's egg to that of a goose's egg, so as not to clog the holes but allow the water to pass through freely; next have some well-burned charcoal, clean and free from knotty and smoky pieces; break it up fine, from the size of fine shot to that of a pigeon's egg; then pack the filtering places tight and full with the coal to within about six inches of the top, and lay a coarse canvas or coarse flannel on top of the coal, well tucked in tight around the edges; on the canvas lay clean slate crossways of and near each other; then fill with clean, roundish stones, so as to keep all down in their places and not allow the water to trickle down between the wall and the charcoal, but force it to go down through the coal, when it will be thoroughly purified.

The Governor of the State of Illinois has issued a proclamation, stating that he has good reason to believe that pleuro-pneumonia exists in the States of New York, Pennsylvania, New Jersey, Deleware and Maryland, and therefore prohibits the importation of all domestic animals of the bovine species into the State of Illinois from the affected districts of the above named States. Heavy fines will be imposed on all who break this law. They will also be held responsible for all other damages which may result from their importation.

The Dairy.

Winter Dairying.

BY L. R. ARNOLD.

The practice of having cows come in in the fall instead of the spring has been developed in the interest of fresh butter, and whenever there is a demand for such butter there is an inducement for those who have cows to furnish it. The public taste grows more fastidious year by year about the quality of butter, and the finer grades are steadily advancing in price, while stale goods are more shunned and are a drag in the market. The tendency of this change is to diminish the practice of making butter in summer and holding it for winter use, and increasing the winter make, thus giving customers fresh butter the year round.

Cheese, as well as butter, is made in the winter, but it is invariably made in connection with butter, the skim milk being converted into cheese. There is not the same inducement for making whole milk cheese in winter that there is in making first-class butter. It is the reverse of butter in respect to being consumed while fresh. It is the better for age, and on the score of health is objectionable when new. Midsummer cheese, made in the Cheddar plan, with the whey drawn sweet and the curd kept fine and warm and well aired and well matured before pressing, is better for winter use than any winter-made cheese can be, and is more palatable and wholesome and also more nutritious, as new cheese is less digestible.

The main object in winter dairying is the manufacture of butter to be used, while it is less difficult to accomplish than if the object was fine cheese, which must be warm while making and curing. It is not difficult to make butter in winter, even where they are long, if proper preparation is made for it; but it would be a vexatious and losing operation to undertake it with the ordinary preparations for summer use, and with the ordinary stock of winter food for cows. Without rooms in which the temperature can be controlled, loss and trouble would follow in working the milk, and the attempt to make fancy butter out of the straw, corn-stalks and late-cut hay, which often find their way into the barns of dairymen, would certainly be a failure. Butter from such food will be scanty, white and low flavored, no matter how fresh in milk the cows may be. If full-flavored, fancy butter is desired, late-cut fodder of any and every kind must be avoided and green or early-cut supplied, unless grain is made the principal diet. As good butter and as much of it can be made in winter as in summer if good butter producing food is provided. There is nothing equal to corn for making high-grade butter, and this can be fed better in winter than in summer on account of its heat-producing tendency. But it costs more to winter cows on grain and early-cut fodder than it does on the ordinary kinds of feed; but, since silos have come into use, the expense of winter food has been so much reduced that it is a question whether cows in milk cannot be kept on ensilage and a little grain cheaper than dry cows generally are on their customary fare. Experience has demonstrated that cows will do well and that their milk will be abundant, and make excellent butter, when their food is from half to two-thirds ensilage. But it is too sour to form the exclusive ration. Cows kept wholly upon ensilage fail by degrees in the character of their milk. Its butter-making capacity grows less and less till it becomes so inferior that no butter at all can be made from it. A too liberal use of ensilage must therefore be avoided, but, when used within proper limits, I know of no food which can be furnished at less cost. The ordinary buildings prepared for the protecti o cattle in winter would not do for winter dairying. They are too open and cold. Cows which are giving milk cannot stand the cold as well as when they are dry, and, besides this, pinching with the cold interferes most seriously with the secretion of milk. Nothing will reduce the flow of milk sooner than undue exposure to cold. No one therefore need ever think of adopting winter dairying without first providing the means of keeping his cows comfortably warm in any weather.

In regard to handling the milk, it can be done as well in winter as in summer. It is, in fact, easier to protect it against too much cold in winter than against too much heat in summer, and the labor and expense of refrigerating will be greatly reduced. There are some advantages in having cows come in in the fall, by way of a better division of labor on the farm. The cows being dry in mid-summer, the important work of the season is but little interfered with on account of the dairy, and the less hurrying time in the winter season will be more fully occupied, thus distributing the labor of the farm more evenly through the year. Dairymen in the Western States have adopted winter dairying more extensively than in other localities, and there are some special reasons which have led them to do so. Their summer seasons are long and dry. The space between moist weather in the spring and moist weather in the fall is much longer than in the Eastern States or in Canada. Their pastures become parched and dry and water often scarce, and flies become troublesome, and the cows in consequence shrink in their milk so much and for so long a time as to occasion serious losses, besides having the reduction so established that they do not recover from it in the fall, when feed becomes plenty again. All this is obviated in winter dairying, and it often becomes a very important consideration. These circumstances do not everywhere prevail to the same extent, but they are not without some bearing in most dairy districts. Then the higher price of choice fresh butter in the winter, and the greater s fety and convenience with which it can be marketed, are items which should not be overlooked in determining which is the better season for producing butter. When all the bearings are taken into consideration, it becomes a question whether even where the winters are long, it would not be to the advantage of dairymen favorably situated for the change and to the welfare of the dairy interest as a whole, to relieve the surplus of butter in the market in summer by having the cows in their dairies come in in the fall.

"Familiar Talks on Dairy Topics."

BY W. D. HOARD, PRESIDENT NORTHWESTERN DAIRYMEN'S ASSOCIATION, FORT ATKINSON.

I have a few heads sketched here, which have been the result of a general thinking upon several topics. I might say that the central thoughts will be some mistakes which I conceive are made by farmers. I don't think there is any particular necessity of attempting to instruct manufacturers. The great class to whom we look for help in dairy matters are the farmers, the milk producers. Just in proportion as they raise the manufacturer will raise. Cheese making has ceased to be a farm product. It is to be classed among the manufactures of the country. It requires commercial judgment, skill and intelligence, and that cheese manufacturer that is not successful, is so, as a rule, because he lacks commercial judgment. Therefore, I say, it has ceased to be a farm production. To be sure it is made from a farm product, the same as our clothes are made from the wool that the farm produces; but the cheese as well as the cloth, is manufactured in a factory. I want to get at the man that produces the milk. I want to see that man's profits enlarged. I want to see his labors lightened. I want to see his intelligence increased. I want to see his family happier and his home more cheerful, and the man, and all that belongs to him, a better produce of this day and civilization. I have sketched in my mind a few things wherein I think he might make some improvement. First.—I conceive that the dairy farmer makes a great mistake in his estimate of the cow. I find scattered almost universally, this conception of a dairy cow: "I want a cow that, when I have got through milking her, will make good beef." Now, suppose we take the reverse, and say "I want a cow that when I can't make beef of her I can milk her." These two distinct qualities are not found in the same animal with equal power of development, and I can see that the farmer who forms his opinion of a cow on that basis has made a very serious mistake. It is not good, sound business judgment for a man to throw away ten years of butter production in order to sell thirty dollars worth of beef. Suppose a cow gives 700 pounds of butter and lasts five years, 5 x 700=3500 pounds, at thirty cents per pound, will amount to one thousand and fifty dollars. Now, do you think the farmer that will reject that cow, because when he has got through with the little creature, she won't turn off thirty dollars worth of beef, is a wise man? He would be like a man who took an old fashioned cent and held it to his eye so closely as to swear there was no moon. It is done every day. When a farmer has got through milking a good cow he should say, "Good bye, old bossie, you have been a faithful servant, you shall now be placed in the earth. All I can expect to save is your hide." And that is all he has any right to expect. I believe the farmer makes another great mistake, that is of importance. and one that has a wide bearing upon his welfare. I refer to the preparation and management of food. And let me say to you that while we have arrived at considerable excellence in making butter and cheese—while our reputation is good, yet the judgment and economy of our farm management is very much behind that of Great Britain. Our farmers have not learned to be economical feeders. They have not learned to house their stock well. They have not yet learned the best elements in the management and breeding of their cattle. Winter food enters very largely into the economy of dairying in Canada and whether your cows are profitable or unprofitable will depend very largely upon how well you figure the question of winter food. Ensilage is a result of the efforts which are being made in the eastern states to solve the question of cheap yet nutritious winter food. I scarcely find a dairy farmer who has cut his hay for his cows with any reference to the profit of its feeding. I have not been able to buy this year a single pound of what I call good hay. If they have got any they won't sell it. I don't believe that you can go into one county and find ten farmers to-day who cut their timothy before it blossoms I think you will find that the best dairy intelligence has been teaching you to cut your hay greener and oftener. What is the most profitable food for a cow? Grass. How should hay be to make it the most profitable? As near as possible like grass. Farmers often say, in excuse for cutting hay too late, "It goes farther." I say, God bless your innocent hearts; browse will go further still; that is a fact. Cut down bass wood trees, and let the cows browse on the tops, and it will go further than even your poor hay; but how far will your cows go? You can't cheat the cow and escape cheating yourself. The object of plant life, the whole end and aim of its being, is to produce seed. Until that plant has fulfilled its mission, it struggles with that strange persistency that looks to nature for its accomplishment. Now when the seed is formed, the growth of the stalk is arrested, and the whole energy and succulent juices of that plant have been drained out to develop the seed. The result is, that as soon as the seed is formed, the plant has lost its value as hay, or in other words, it ceases to be like grass. The next thought I come to is another mistake my farmer friends make. He thinks that farming is not a commercial business. They often tell me they can't afford to keep help, and the refrain ascends continually: "I can't afford to hire." What can you afford to do? Can you afford to do the whole of this vast amount of labor yourself?

Some farmers are very much like some carpenters. You can think of certain carpenters that you would not trust with the fine finishing of a house. They are just the kind of carpenters that never make joints Between one piece and another there will be a gap wide enough for a whole house to slip through. The lack of making joints stamps him as an unsuccessful business man. Not fitting the joints in their business properly, stamps so many men as unsuccessful, and often between the

gaps will slip out a whole year's profit. Now do the milk producers make well-fitting joints always? I am afraid not. There are plenty of men here cursed with too much land, and if they would only be obedient to the reasons of things, there would be a sale of a great many of their broad acres before next spring. I tell you that poor cow has to exert herself tremendously to pay a profit on that land. When you have loaded her with the interest, cost of fencing and the general cost attending agriculture on so much land, you have asked more of her than you have any right to ask. Farmers are also cursed with the foolish idea that they can't afford to hire help. Nothing is so cheap as rude muscular labor; nothing so scarce in farming as management, brains and the final persistant judgment that makes the business a success. I can find plenty of workers to work, but few to take my place as manager. Therefore muscular labor is the cheapest, and farmers make a great mistake when they decide they cannot afford to hire. I once knew a farmer who could do no physical work, but who hired a great deal and was very successful. Once in conversation, he said "it was worth all that I am worth to-day, to me, that I could not work. Had I been able to work hard with my hands, I would have put myself into the field along side of my hired men, and being content to measure my business from the hired man's standpoint. Farmers work too hard, and consequently exhaust themselves, so that their intelligent mental action is materially interfered with." You may say "this is all theory." "This is very nice." "This is taffy." But I tell you, gentlemen, a thing is not correct in practice that is not correct in theory. That fact I have worked out in my own business. Farming is just like any other business; it is based upon and governed by the representative unit, the dollar. The best economy, the best judgment, the sharp commercial intelligent action that makes a man successful in selling a pound of tea is exactly the same quality that makes a farmer successful in selling a pound of cheese or pork. I claim that you can make a very good merchant out of a very cheap farmer, but you can't make a very good farmer out of a cheap merchant. It requires the best quality of brain to be a successful farmer. Let me recount one more mistake. Above I spoke of this land question. I wish you would more clearly look into and practice political economy. Now I see half of you are shutting up your eyes and saying, "that is not for us; that is for scholars such as these high falutin fellows that stand on platforms and do big talking." Well, now, that is not so. Let me take two principales that are laid down in all sound works on political economy. Capital is divided into two classes, primary capital and working capital. What is meant by your primary capital is that which is locked up in your land and fences. Your working capital is the live, active moving forces of your property, like cows, sheep, swine, horses and machinery. When you see a dairy farm of two hundred acres with good buildings, fences, all represeniing a primary capital of say $10,000 with a dairy of only twenty cows and a working capital of only about $1,500 all told, you need not wonder if you hear the owner say, "Farming don't pay." And you need not wonder much if you see him continue his mistaken policy by buying more land. That man has the cart before the horse. The law of relationship in capital must be obeyed in farming just as well as in making cotton goods. The way to make money is to make a little earn much, not the reverse. Seventy-five out of every hundred farmers are carrying too few cows for the amount of land they possess. I say to you, enlarge your working capital. Quit laying out your money in more land, and make the money you have more profitable. Instead of twenty cows, put on next year twenty-five cows, and every year increase by five more, until you are carrying all you possibly can. When I tell the farmers this they are apt to say, "It can't be done." The transition in dairy interests has been rapid, and it has not brought with it sufficient intelligence. The result is that we are a lot of wheat farmers, just commencing to keep cows. We are not yet well posted in our business, and I want to press this thought upon our factory men, that every factory is a dairy centre, and from that dairy centre should emanate an intelligent, progressive spirit of inquiry, pertaining to all questions of dairy management. Every factory man should be a teacher, and every farmer should make a study of his business and embrace every opportunity of gaining information concerning it, attend all meetings of an agricultural nature and endeavor to make them profitable to yourself. Now, who are the men that are always present at such meetings? Those that least need them, representative men who make $40 in this business where the average farmer makes twenty. But you will see these men always in attendance upon the conventions of all associations, while the men who need such influences must remain indifferently at home.

Our Cheese Curing Rooms.

Prof. X. A. Willard says there is hardly a good cheese curing room in the whole country. That is one thing dairymen should pay attention to. All cheese that is properly cured (that is after it is cured) should contain about 33 per cent. of water. If the cheese house is arranged so that the water passes off rapidly, when it is cured there will be less than 33 per cent. of water, and consequently the cheese is hard and does not mellow down; the water passes off two easily. After the cheese is properly cured the water does not pass off. It is safer than it is at first. Englishmen who make fine Cheddar cheese, which sells for the most money, are very careful in regard to their curing rooms. They are kept at a temperature of 70°, and we know that England has a moister climate than Canada. It is not so dry, and consequently the water does not pass off so rapidly in the first stages of curing, and they get a very nice cheese.

Over Feeding With Hay.

Now that cows are about going into winter quarters, a hint about feeding hay may not be out of place. We often hear dairymen talk as if the height of skill in taking care of cows in the winter, was to get all the hay down that it is possible to cram into them. "I give my cows all the good hay I can get them to eat," is the boastful remark often heard from a spirited and aspring dairyman, though in doing so he is wasting good provender without promoting the best welfare of his animals. It is a good thing to feed cows well, and to be sure that they have food enough to sustain them fully, but it is neither wise nor economical to crowd them with a great bulk of hay of any quality. It is not wise to crowd any animal with a great bulk of coarse food. A horse will do more work and do it easier, on moderate feeds of hay, than he will to crowd him with all that can be got down him. It is burdensome for him to move or exert his muscles with an over distended stomach, and the too large ration will not be digested so well as a smaller one. These objections are more emphatically true with cows. It is the nature of ruminants to hurry down large meals when opportunity occurs, and to lie by a long time to grind it over, a cud at a time, till it is well pulverised. If palatable food is offered to them, they will take one meal after another, in such quick succession, as to give very little opportunity for remastication, and the successive meals of half-ground food will be crowded out of the rumen, one after another, imperfectly digested for the want of being properly pulverized. In this course of feeding the double loss from discomfort and imperfect digestion is forciably felt. Cows should have no more hay than they have time to remasticate, and if this is not enough for their necessities, they should have some easy-digesting concentrated food along with it. The quantity of hay given should never exceed what they will eat up clean, and twice a day is often enough to give time for properly ruminating.

Bitter Milk.

Bitter milk is a matter of frequent occurance every fall and winter, or soon after the cows are off from grazing. It is caused, first, by bitter herbs in the hay - such as May weed, rag weed, John's wort, etc.—and also by the use of too much overripe food, such as straw, corn stover, or late-cut hay. It never occurs when cows are fed on good food, and are thriving, or even holding their own, and are kept comfortably warm. It can be avoided, first, by correcting the error in feeding and exposure; and, secondly, by scalding the milk when it is first drawn, by setting it in pans over a kettle of boiling water till the skin which forms on top is well wrinkled, and then setting it away to cool for the cream to rise. This treatment will drive out the cause of the bitter flavor, and improve the butter and make it easy to churn.

Sixteen of the Six-Nation Indians are numbered among the members of the Fruit-Growers' Association of the Province of Ontario.

Poultry.

Description of Farm Poultry.

(Continued.)

BY R. A. BROWN, CHERRY GROVE, ONT.

Black Spanish—Comb single and evenly serrated, erect, and well set on the head, bright red. Face white, smooth and of waxy appearance, the clearer the better. Wattles bright red, thin, long and pendant, inside pure white. Plumage throughout glossy black. Tail large, the cock's well sickled and carriage of cock very erect. Shanks dark leaden blue, clean and smooth. Hen: Comb falling over to one side, carriage not so upright as the cock. Remarkable good layers of large white eggs; lay about 150 per annum of 7 per lb. Require good range, are non-sitters; mature in six months.

Leghorns—Black, brown, white and Dominique, black—Cock: Comb rich red, single, evenly serrated, large, smooth and erect; ear lobes creamy white; wattles rich red, long, thin and pendant; tail upright, well sickled. Hen: Comb single, falling over to one side, rich red; ear lobes creamy white; tail erect and fan-shaped; color of plumage rich deep black. Good layers, the largest bodied and lay the largest eggs of the Leghorn family, 7 per lb.; lay about 160 per annum. Do better with large range, but may be enclosed if a good yard is added to apartments. Are non-sitters, and are very timid when approached; require high fences for enclosure.

Brown Leghorns—Comb of cock single, erect and evenly serrated, bright red and medium size; ear lobe creamy white; wattles red, thin, long and pendant; neck and saddle hackle rich golden bay striped with black; breast black; wings brown, pencilled with lighter brown; tail upright, dull black evenly pencilled with light brown; shanks yellow. Hen: Comb bright red, evenly serrated and falling over to one side; ear lobe creamy white; neck yellowish brown, each feather striped with black; back dark brown, each feather pencilled with lighter brown; breast salmon color; wings dull brown; tail erect, dull black; shanks yellow. Remarkable good layer; eggs 9 per lb.; flesh good when young. Stand enclosure very well, but are better running in open yard; are very timid when not much handled; are non-setters and are great favorites with all breeders.

White Leghorn—Cock: Comb single, erect, medium size, evenly serrated, bright red; wattles red, long and pendant; ear lobes creamy white and rather pendant; tail erect and well sickled; plumage white, as free as possible from yellowish tinge. Hen: Comb medium size, falling over to one side, bright red; wattles bright red; ear lobe creamy white; tail erect and fan-shaped; plumage white; shanks and beak yellow. Are non-setters, good layers, eggs 8 per lb., flesh good when young. Require a good range and warm apartments in winter; are general favorites wherever owned.

Dominique Leghorns—Cock: Comb single, evenly serrated, medium size, bright red; wattles red and round; ear lobes creamy white; tail full, large and upright, well curved, sickle feathers; plumage slate blue, each feather distinctly pencilled across with dark bars; beak and shanks yellow. Hen: Comb falling to one side, bright red; ear lobes creamy white; wattles bright red and well rounded; tail erect and fan-shaped; plumage same as cock; shanks and beak yellow. Good layers, eggs 9 per lb. Require warm apartments in winter and a good range in summer; are naturally timid; make good table fowl when young.

The American Dominique is in appearance similar to the Dominique Leghorn, except comb, which may be either double or rose; and ear lobes red, and somewhat larger bodied. Are the best of mothers, being of gentle disposition and attentive while rearing their brood. Flesh excellent and tender; moderately good layers; eggs 8 per lb.

Plymouth Rocks—Single comb, other appearance same as American Dominique, but smaller tail and longer legs. Qualities also about the same as Dominique.

Houdans—Cock: Head crested with black and white feathers; are full bearded or "muffed." Comb bright red, the outside opening like the leaves of a book, the centre having the appearance of an ill-shaped strawberry; ear lobe white; wattles red, thin and long; tail full and well suspended, carried tolerably erect, and well supplied with handsome sickle feathers; shanks pinkish white, mottled with lead color; toes five in number. Plumage broken with black and white as

evenly as possible. Hen: Smaller comb than cock's, branching and coral-like; other appearance same as cock's. Are a superior table fowl, flesh being tender, juicy and sweet; are good layers, eggs 8 per lb. Stand enclosure very well, but do better when an outside run is attached to compartments; are not much inclined to sit, but will if allowed to steal their nests away about autumn. Are exceedingly useful to farmers, being very hardy and good foragers when allowed to run out.

(To be Continued.)

Preparing for Winter.

Now is the time to clean out all impurities from the fowl-house. Remove all the interior that is possible to the outside, and sweep and dust out all the inside neat and clean, so that not even a loose feather is left inside. The old fowls are now getting through their moult, and if the house has not been swept out every week there will be a direful nuisance of droppings mixed with feathers (the very fountain of disease). Old feathers left in the roosting apartments are more dangerous or damaging to the thrift of poultry than most any other thing. There is a real putrid, tainted odor in the apartments where many feathers have been dropped from fowls while moulting, and are the harbor for hosts of vermin that destroy the birds' constitution and breed numerous diseases which are easier warded off than remedied.

After the whole house has been thoroughly swept, dash in hot lime washing into every crack and crevice. Better burn the old roost poles and replace with new ones; the hens will eat much less, lay better and sooner to pay for extra roostings, for which use three-inch strips; they balance the birds better than if narrower, and keep the toes up against the warm body feathers during cold winter nights, which prevent them from freezing. Mix a mortar of sand and equal parts lime and ashes, and plaster every crack where the wind is likely to blow through; make the building as close and warm as possible. Now close the door tight and burn about half a pound of sulphur, and leave the house as full of the smoke as possible for two hours. Then open the ventilator, get in the flock and catch every fowl, whether old or young, put some coal oil on the shanks of every one, dust a little sulphur under the wings and down the back; also mix a large feed of bran or oat chop with hot water (just enough water to make it damp). Sprinkle a little red pepper, salt and sulphur amongst this feed, and give it to the fowls, so as to fill their crops with it before going to roost. Place a dust box with dry wood ashes for the hens to wallow in when they desire to do so, and you will be better satisfied with that day's work than many you have done before.

To protect birds with large combs and long wattles from being frozen, take bits of soft flannel, cut them in shape to suit the comb, head and wattles, leaving an aperture for eyes and beak; sew tightly on the head, or the birds will tear it off if possible to do so. Red flannel looks best; when well put on it makes a good warm hood and will defy all attempts of "Jack Frost" to injure those beautiful appendages, for which all Leghorns and Spanish are noted. We have tried the above and found it a sure preventative for frost bites. Care must be taken not to take them off too soon in spring before all heavy frosts are gone, or the combs will be lost.

One Variety.

As a rule, one variety of fowls is enough for almost any person to manage successfully and profitably, and this is especially true with beginners, who have to gain their experience in all the varied details of poultry management. If a breeder has been successful with one variety, has not merely made good sales but has produced birds of such a high order of merit that the stock makes a good advertisement, and a permanent one, for the breeder, it can be taken for granted that it will pay to take up one or more breeds, provided the same care is bestowed upon each variety as was formerly accorded to the single breed, and provided there are ample conveniences, room and quarters for them. It seldom pays to attempt raising pure bred poultry, of several varieties, unless there is ample room, both in yards and houses, for they must have this to insure their healthfulness and consequent profit.

Milk for Fowls.

Since milk is the only article of food known to contain within itself all the elements necessary to the perfection of growth and vigor in an animal, it is not strange that it should be found to be one of the very best egg producing materials that can be supplied to poultry. Given two flocks of fowls, and treatment, location, and original stock being equal in all respects save one, it will be found that those having skimmed milk as a portion of their daily food or drink will give more eggs weekly, and for a longer term of weeks, than those whose treatment is exactly the same, with this single exception. A correspondent writes thus: "A neighbor of ours, whose hens, to our exasperation kept laying on when eggs were 45 cents per doz., while ours persistently laid off during the same season, on being questioned, revealed the fact that his hens had a pailful of skimmed, perhaps clabbered, milk each day, and no other drink. On comparing notes we each found that our management of our fowls was almost exactly alike, with this single difference—a difference that put many a dollar to the credit side of his ledger, while our own was left blank during the same period—and this thing had been going on for years, with the result always in favor of a milk diet." In cases where milk is very plentiful, and only a portion is needed for fowls, it would be well, say once a week or oftener, to give the milk in form of curd, by heating it until the whey separates from the more solid portions. This is very nutritious, and its constituents so nearly resemble the white of the egg, that egg formation must naturally follow its use. Let no one hesitate to take from his waste milk whatever his hens will use, assured that they will yield five times over the returns that swine or any other stock would give for the same amount.—*American Poultry Yard.*

The Black Laced Parma Fowl.

It is at times pleasant to turn our thoughts away from the poultry yards of our own country to get a glimpse at those in other lands where we can see, like as in our own, the same spirit of enterprise—the same ardent love and the same zealous care manifested and bestowed on their native fowls.

Every region has its own fauna and flora. And although the domestic birds are more in companionship with man than the domestic animals, yet they very often exhibit some peculiar type, trait or feature, characteristic of the locality or people to which or to whom they belong.

In Normandy and Picardy nine in every ten fowls show a fantastic or grotesque type or comb. They have either the antler-like spiked, palmeated, branching or depressed combs; while in Sardinia and Tuscany the fowls usually carry the large upright single comb, typical of the Spanish or Mediterranean fowls.

The subject of this article is one of the most popular breeds in the duchy of Parma. Both Parma and Modena carry on a very extensive trade in poultry. Taking the area of the districts into account, they rival Normandy and Picardy in the number annually raised, fattened and slaughtered; although the artificial methods of hatching, rearing and cramming are not to be compared to those of the French.

The Black Laced Parma fowl belongs to the non-sitting class, though the trait is not very strong, as they can be frequently seen doing maternal duties with as much dilligence and solicitude for their broods as is shown by the game or any other good setter or mother. They are a good sized fowl, approaching more the shape, size and weight of the American Dominique than those of the Leghorn type. They are unrivalled as egg producers; authentic accounts have credited them with an annual average of 200 eggs each. Their eggs are white and large, and in shape and size look like those of the White Leghorn, and their flesh is equal to the best Italian fowls for the table. But as they are fed largely on artificial animal food—maggots and ground chestnuts, olive oil, lupine, maize and buckwheat, may have something to do with their marvellous productiveness, and in giving their flesh a high flavor, for in the process of fattening a great deal of aromatic seeds and pot herbs are cooked for them.

The Black Laced are as beautiful as they are useful. They are without doubt a very comely and prepossessing fowl—one the amateur would naturally like to possess if they were bred by our American fanciers. The comb of this breed is single, but not quite as large as the Leghorn, and extends well over the back of the head, and has four or at most five points. The ear-lobes are creamy white, thin and flat; wattles long and pendulous, and the head short and deep. The neck is long and well arched, having abundant hackle, almost approaching a "shawl;" back medium length; body deep and broad, and wings large and well folded. The tail is well developed and well spread at the base; sickles good length, large and well curved; legs of medium length and slaty blue in color. The plumage throughout, but breast, which is mottled, is a silvery white distinctly and evenly laced with narrow edgings of black. The hen has alike lacing on each feather on head, neck, breast, body and tail, and the comb, as on the Leghorn varieties, droops to one side.—[Poultry Monthly.

Eggs as Food.

Eggs are an article of cheap and nutritious food which we do not find on farmers' tables in the quantity which economy demands. They are very convenient to take to market, and this is the disposition which too many farmers make of them. They probably do not fully comprehend how valuable eggs are as food; that, like milk, an egg is a complete food itself, containing everything necessary for the development of a perfect animal, as is manifest from the fact that a chick is formed from it. It seems a mystery how muscles, bone, feathers and everything that a chick requires for its perfect development, are made from the yolk and white of an egg; but such is the fact, and it shows how complete a food an egg is. It is also easily digested if not damaged in cooking. A raw or soft-boiled egg is always as easily assimilated as is milk and can be eaten with impunity by children and invalids. The average egg weighs a thousand grains, and is worth more as food than so much beefsteak. Indeed there is no more concentrated and nourishing food than eggs. The albumen, oil, and saline matter are, as in milk, in the right proportion for sustaining animal life. When eggs bring no more than 20 cents per dozen, it is much better economy to find a market for them in the family than at the store. Two or three boiled eggs, with the addition of a slice or two of toast, will make a breakfast sufficient for a man, and good enough for a king.

An ordinary hen's egg weighs from one and a half to two ounces; a duck's egg from two to three ounces; the egg of the sea-gull and the turkey, from three to four ounces; and the egg of a goose from four to six ounces. The solid matter and the oil in the duck's egg exceed those in a hen's egg by about one fourth. According to Dr. Ed. Smith, in his treatise on "Foods," an egg weighing an ounce and three quarters, consists of 120 grains of carbon, and 18¾ grains of nitrogen, or 15.25 per cent. of carbon, and 2 per cent. of nitrogen.

A writer in *The Scientific Farmer* estimates that the value of one pound of eggs, as food for sustaining the active forces of the body, is to the value of one pound of lean beef as 1,584 to 990. As a flesh producer, one pound of eggs is about equal to one pound of beef.

A hen may be calculated to consume one bushel of corn yearly, and to lay ten dozen or fifteen pounds of eggs. This is equivalent to saying that three and one-tenth pounds of corn will produce when fed to a hen, five sixths of a pound of eggs. But five-sixths of a pound of pork requires about five pounds of corn for its production. Judging from these facts, eggs must be economical in their production, and in their eating, and especially fit for the laboring man in replacing meat.—[English Live Stock Journal.

The breeder of pure-bred poultry who is unwilling to invest a few dollars in advertising, when he may get ten dollars in return for the outlay, possesses neither the tact nor the pluck to carry on the business successfully.

When your young stock is between five and six months old, separate the cockerels from the pullets and rear each sex by themselves. When you wish to mate them is time enough to allow them to have intercourse with each other.

Fowls subject to roup, or where the disease is neglected for some time, are more liable to the visitation of cholera than fowls never affected, because the gall bladder and liver are enlarged and full of pus.

Garden and Orchard.

Hedges and Barbed Wire Fencing.

BY HORTUS.

On a trip lately to Owen Sound, on the T. G. & B. R., I noticed that, in connection with the refitting of this road and widening of the guage, the company were putting barbed wire in place of other styles of fencing, on each side of the road. Besides myself in the car, there were a group of intelligent men, principally farmers, and the fencing occupied their attention, and was a theme of discussion for some time. Several of them insisted it was a poor way of fencing, their main objection being, that cattle and horses running would not notice the wires, and, consequently, would hurt themselves severely; though none knew of any cattle being injured as yet, still it looked to them very possible. On the other side it was maintained that cattle would soon become educated to it and consequently avoid it; no doubt older stock might become hurt some time, but young colts and calves accustomed to run against it would readily learn to see it and avoid it. The only thing necessary to make barbed or any other kind of wire fencing successful and safe, is to plant some rapid growing plant or two along the line of fence. The foliage and intertwining branches would prevent any heavy concussion, and offer a springing resistance to any animal's attacks. On the railroads where these new fences are being put up, and we notice that many different companies are using it, as it lessens the cost of building, and not so apt to be burnt down during summer fires, and thus conduct fire to buildings and grain, as was the case in many instances during the drought of last summer where board fences were used. On the railroads, we repeat, there is always a spontaneous or indigenous growth coming up all the time that will soon hide the fences and protect cattle. This growth is generally composed of second-growth oaks and maples, with shrubs of elder, sumach and witch-hazel. But for the farm we recommend either berberry, buckthorn or honey locust; or instead of these three, a continuous row of Lombardy poplar cuttings made one foot long and planted two feet apart, would rapidly make a fence valuable for many points—1st, as a windbreak; 2nd, as a fence; 3rd, making a solid fence in connection with wire; 4th, as shelter for cattle and causing snow to lodge more evenly, instead of forming large drifts and blockades. We commend this idea to railroad companies that peruse the FARMER'S ADVOCATE. Cuttings of Lombardy poplar are made of strong one-year or two-year wood, one foot long. They may be planted in fall, if time will allow; if not, make and store away in cellar ready for spring planting. To parties intending to migrate to Manitoba or farther west, let a part of your equipment be 1,000 cuttings of Lombardy poplar; also some cuttings of the despised silver poplar. This is the tree for the Prairie Provinces without a doubt, but we have a lot to say about the silver-leaf poplar, and will make it a subject for another time; for the present we have special reference to hedges and Lombardy poplar.

One thing any grower of hedges can always remember—that the treatment necessary for a deciduous hedge or plant that drops its leaves in fall, will do for another variety. A simple and expeditious way of growing hedges is to sow the seed. Berberry, buckthorn and honey locust grow easily and rapidly from seed. It may be procured from nurserymen or seedsmen. Some nurserymen make a specialty of growing hedge plants, and offer them at very low rates. To grow them from seed prepare a strip of land where the hedge is to grow, either by digging or plowing and levelling into shape; in the centre of this draw a drill 2 inches deep, sowing the seed therein thinly; cover evenly and mulch with a top-dressing of long manure or other litter.

The best way to keep grapes is to wrap paper around each bunch of grapes and pack away in a box, and keep in a cool place where thermometer will not gobelow 30°.

Coal ashes have a wonderful effect upon pear trees, especially those growing in light soil. Our ashes of last winter were used around trees in liberal quantities, and those thus treated have outgrown anything in the orchard. Some that were even sickly, and apparently ready to give up their hold on life, have been restored to perfect health by this remedy.

The Gooseberry.

BY B. GOTT.

The increasing importance and value of the small fruits is now very generally and most readily admitted. Some of these are far more necessary and important to our general welfare than are others on account of their better adaptation to our wants and increased facilities of their production, but whether more or less important, all are useful, or as we feel it, indispensable. Among fruit growers small fruits are generally understood to be small summer fruits or berries, as strawberries, blackberries, raspberries, gooseberries, currants, grapes, &c., in direct contrast to the larger or staple fruits of the country, as apples, pears, plums, quinces, &c.; cherries and peaches are almost always classed in the small fruit list. Of the class of small fruits first enumerated we prefer at present to say a few words about

THE GOOSEBERRY,

not because it is the most useful or the most extensively cultivated in this country, or because it is the most valuable, or even because it is the highest and best flavored of the list of small fruits, or because it is the latest introduction or novelty, as they sometimes say—for none of these reasons, but simply because we are moved in that direction just at present. At the same time we may be allowed to say it is not by any means least or even last in many of the good qualities mentioned, that distinguish many of the small fruits of its class. Again we may be allowed to state that this fruit is far more important and essentially valuable in the daily uses and family economy of some countries than of others. For instance, it is more extensively grown and brought to the highest perfection, and to our certain knowledge more generally used by the people of Great Britain than by those of America. It is well known that the gooseberry shows of England exceed anything of the kind in the world and are matters of universal admiration. The reason of this is because the climate of their country is more favorable to the highest development of this fruit and are well adapted to

ITS CULTURE.

The soil best adapted to its requirements is a strong clay loam, thoroughly drained and perfectly warmed and ventilated. For successful and easy culture, the bushes (as we much prefer gooseberry bushes to gooseberry trees) should be planted in perfectly straight rows, six feet apart each way. This will require 1,200 plants to an acre and will give plenty of room for purposes of culture, weeding, ventilation and gathering of the fruit. During the whole growing season the ground must be frequently and thoroughly stirred, by means of horse cultivators or scufflers, as they are sometimes called, and afterwards hoed close around the bushes, and all weeds must be dilligently kept out. For stock to plant enquire of the most reliable nurserymen for well grown young bushes of not less than two years nor more than four years old, and see that they are healthy and abundantly supplied with good growing fibrous roots, and plant as easily as possible in well prepared ground, as directed in the last number of the ADVOCATE. The stock should not cost you less than $3 or more than $5 per hundred, as it is readily obtained at these figures. The second year after planting, the young bushes should begin to show you some samples of their fine and delicious fruit. In regard to which are the best varieties, there is much difference of opinion among the growers. Locality and climate make all the difference possible. In this climate, and the somewhat peculiar condition with respect to the inconstant supply of heat and moisture, it is clearly demonstrated beyond a doubt that the American gooseberry seedlings raised among us are decidedly the best. This is not saying that they are the largest, or the finest flavor, or the finest hues and color, but that they are the surest and some of them are fine in size and excellent in quality. In England, which is apparently the home of the gooseberry, the fine, large, handsome varieties they successfully grow are almost endless, but to attempt to reproduce these under our conditions of climate, would only result in disappointment and total failure. What is the reason of this, you ask? Climate is the sole cause. At the same time there are many fine and acceptable fruits successfully produced under the conditions of our climate that cannot be even attempted in England, our fine grapes, peaches and tomatoes for example.

ITS USES.

These are numerous and well defined, as every good caterer to our tables well understands. In a green state, that is, when the fruit is well grown but not matured or ripened, it is very largely used as pickles and preserves. The reason of its being thus used in a green state is because the skins are more tender and easily subdued. For this purpose the fruit is gathered and carefully cleaned of stems and calix. They are then placed in the jars and boiling hot syrup is poured over them, two or three times in succession. The syrup is prepared for pickles by taking the quantity of vinegar required and adding the various spices to properly flavor, and some improve it by adding a little sugar and thoroughly boil the whole and in this condition pouring it over the fruit; when cold again pour off and repeat; this forms a pickle of fine quality and very relishable to most. The process for the manufacture of a preserve is somewhat similar, only that for the base of the syrup sugar is substituted for vinegar. If the fruit is allowed to completely ripen on the bushes, its flavors are brought out and its uses are very various. In gooseberry countries where they are largely grown, every small boy and girl is fully acquainted with many of them. They are then used in sauces, in tarts and in puddings, and are considered exceedingly relishable and healthy in whatever they are preferred. Prosperous is that country and happy are those people who successfully produce them in abundance for the daily needs of the lower classes, for the gooseberry is more essentially *the poor man's fruit*. But you must now for a moment glance at

ITS ENEMIES,

for they are numerous, as in the case of most other good things mercifully given us. The enemies of the gooseberry (by which we mean those antagonistic forces which attack it) differ both in the locality, the climate and the soil where the fruit is cultivated. In England, where this fruit is most successfully and abundantly raised, its enemies are less numerous and less deadly than is the case with us. The reason is undoubtedly the difference in the climate. The enemies of the gooseberries that we are forced to cope with, are conspicuously of two kinds, viz., *vegetable* and *insect*; both are very destructive. The vegetable is a parasite and is observed in the shape of a fungus or mildew. The nature or direct cause of this dead fungus is not at present well understood, but its effects are immediately to destroy the crop; this it does by thickly enveloping the fruit and appropriating the juices to its own growth and development. You may have seen it on the gooseberries in your own garden and perhaps wondered what it was. The other enemies are insects, and the most prominent of these, is *the currant worm*; in our experience it generally attacks gooseberries in preference to currants, and as long as gooseberry leaves can be got in good condition, it will scarcely look further for relishable food. It is a kind of *saw-fly* and lays its eggs very early in the spring on the underside of the leaves, and the young worms feed voraciously on the soft and tender parts. So numerous do those worms (or perhaps they should be called caterpillars) appear, that in a very short time the plant is completely stripped and the fruit in consequence perishes. Another very injurious insect attacks the fruit instead of its leaves; it is the *gooseberry fruit worm*; it attacks the red and white currants as well. This insect is also a worm and feeds on the internal contents of the fruit; it is laid on the fruit as an egg and soon hatches and at once makes its way into the very heart of the berry; as soon as the berry is quite scooped out it attaches another to itself by means of silken cords and treats that exactly the same, and before it arrives at maturity or is done eating it will go through some ten or twelve berries. When these insects are numerous, as they sometimes are, a bush loaded with fruit only lasts them a short time.

THE REMEDIES

are not very clear and are expensive in their application. For the milddew there is no known remedy. For the currant worm, powdered white helebore is extensively and effectually used. For the gooseberry fruit worm no remedy can touch him except hand picking, which is both very expensive and tedious.

Have shallow bins arranged for your fruit. Carefully sort your apples; in one bin place those that have been carefully picked, and that you desire to keep until spring, and in the other bins put the windfalls.

NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post-Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason that course seems desirable. 3. Do not expect anonymous communications to be noticed. 4. Mark letters "Printers Manuscript," leave open, and postage will be only 1c. per ½ ounce. We do not hold ourselves responsible for the views of correspondents.

SIR,—I beg to herewith hand you a copy of a letter which I addressed to the editor of the *Globe* on the 31st October last, and a copy of which I forwarded to the editor of the *Mail* on the 30th inst., with a request for its publication in the last-named paper, but which, up to the time of writing, has been refused an insertion in either of these nominally provincial, but in reality Toronto journals, in the hope that you will make room for it in your widely-circulated journal, in order that the farmers of Ontario may have a practical illustration of the fair play which either their interests or their representatives may expect at the hands of either the *Globe* or *Mail*, when they run counter to the all-grasping city of Toronto.

While it is not for me to express an opinion as to the matter contained in my letter, I think I may be permitted to say that, written as it is over my own name, and by one who, however unworthy of the position, is an elected representative of the farmers of a not unimportant section of this province on its Board of Agriculture, it should not have been refused admission to their columns without good and sufficient reasons—reasons which might, and, I venture to think, will have to be made public before the candid reader of my letter will come to any other conclusion than that the course of these two journals in this particular instance affords strong presumptive evidence that, notwithstanding all their political squabbling, they have entered into a solemn league and covenant to, so far as in them lies, make the whole of Ontario mere hewers of wood and drawers of water to the all-important city which is their common home.

Were I not afraid of trespassing too much on your valuable space, I should like to point out how, ever since 1858, the citizens of Toronto have been striving to monopolize the Provincial Exhibition not out of love for its proper objects, but as a means of drawing away from other cities and towns their trade and centralizing everything within itself. And I cannot help adding that I entirely agree with you as to the impropriety of tacking on to our agricultural exhibitions the various "attractions" which have recently become so fashionable. Such things would be much better left in the hands of a Barnum.

Yours truly,
Peterboro', Nov. 14, 1881. JOHN CARNEGIE.

To the Editor of the Globe.

SIR,—Knowing by observation that it is contrary to your sense of fair play to permit those differing from either your opinions or statement of facts, a fair hearing in your columns, I cannot say that I am surprised at the treatment which you have thought proper to accord to the brief communication which I ventured to address to you on the 19th inst., with regard to some of the statements contained in an article on "The Provincial and Toronto" in your previous Monday's issue. Happily the *Globe* is not the only medium through which the public can be reached, as, if it were, it would not only be useless for me to pen this, but impossible for any one questioning the correctness of either your facts or opinions to make themselves heard. As it is, however, I feel rather encouraged than discouraged by the treatment which my letter received at your hands in the article on "Toronto and the Provincial," published in your issue of the 27th inst. Had the facts I submitted and the question I asked been as easily disposed of as you would have your readers believe, we have evidence in the promptness with which room can be found in the *Globe* for anything written in the interests of "Canada's Great Fair," that my letter would not have been held under consideration for a week, and then presented in the garbled form in which it appeared in your last-named article.

In addition to giving you the amount paid in prizes and for expenses in 1878, I called your attention to the fact that while the gross receipts on exhibition account that year amounted to $22,570.21, the Association paid for:

Prizes	$15,521 00
Folder	1,004 00
Gate keepers	825 00
Judges	1,315 00
City of Toronto	4,000 00
Making a total of	$22,665 00

or nearly $100 more for these five items than the gross receipts, and, I think not unfairly, asked you to point out how, with these facts before you, you could make out that the Provincial Association still owed the City of Toronto some four or five thousand dollars on account of the exhibition of 1878. Well, sir for reasons best known to yourself, you did not deem it expedient to place before your readers all my figures, but instead picked out the two items which suited your purpose best, and, after so culling them, let us examine your reply to my question.

You said (I won't garble your answer): "The explanation is this:—In 1879, 1880 and 1881 the Toronto Exhibition was conducted by the local association. The financial results of the two first-named years were that the sum of $25 672 99 was cleared *over and above the expenses* of the exhibition and the prize lists. In 1881 there was a cash surplus of receipts over expenditure, amounting to $1,576.30, making a total sum *earned* in the three years and applicable to the extinguishment of debt $27,249.29—an *average* of more than $9,000 a year. *The presumption is that if the exhibition of 1878 had been conducted by the Association it would have yielded an equally large surplus.* Doubtless the surplus of 1881 would have been much larger had it not been for the prevalence during the entire period of the exhibition of bush fires, which made farmers afraid to leave their homes."

There, sir, is your explanation of how the Provincial owes, in your opinion, your city some four or five thousand dollars, and I venture to think that before I get through I shall be able to show your readers if you permit them to see this letter, that however much the farmers were afraid to leave their homes last September, you are not "afraid" to presume upon their supposed ignorance of the facts to which I propose to call your and their attention. You say that "the financial results of the first named years were that the sum of $25,672.99 was cleared. Pray, where did you find that out? I have before me the reports of the Industrial Exhibition for 1879 and 1880, and I can't find such a result there. I will, however, tell you what I do find: I find in 1879's statement of Assets and Liabilities, the "amount to credit of capital account, being balanced over liabilities" set down at your sum for the two years, to a cent, namely, $5,672 99, and this being the case, I think I may assume that it is to this sum that you refer. If so, then you are guilty, either through ignorance, or because it would have made your previous estimate too small by about $1,6 0 per annum (and *you must always be right* under any circumstances) of understating the *earnings* of your Industrial, because the same item in the report of 1880, on the same balance sheet, is set down at $30,284 20, which, with this year's surplus of $1,575.30, brings the total up to $31,860.50, or equal to an *average* for the three years of $10,620. So that, according to this method of figuring, the Provincial owes Toronto, not four or five thousand, but $6,620 on account of 1878. But, is this an honest way of stating the case? Does it really tell the whole truth? Not by any means. Turning to the reports of the Industrial we find among its *receipts* such items as the following.—

City Council	$5,000 00
County Council of York	2,000 00
Net amount of subscription received	13,259 65
Electoral Dis. Agricultural Society	400 00
Total in 1879	$20,659 65
and in 1880 we find "subscriptions"	1,575 00
and in 1881 we find "subscriptions"	633 00
Total outside receipts during 3 years	$22,887.65

Now, sir, dare you or any one else openly and above board claim one single cent of this $22,887.65 as earned by the Association in the sense in which you use the word in the extract quoted from your article. Why, sir, the Provincial Association might just as well and as honestly claim that they earned the Government grant which they receive. Well, then, this being the case, the nett savings of these three years as set forth above must be reduced by this amount, leaving the honest earnings of the Industrial for these three years $8 972 85, or an average of *less* than $3,000 per annum, and the "presumption" being "that if the exhibition of 1878 had been conducted by the (Toronto) Association it would have yielded" the same amount, it is clear that the Council of the Association granted to the city of Toronto in 1878 $1,000 *more* than was their due.

Then, sir, you find it necessary to excuse the smallness of the surplus of 1881 by reminding your readers that "the prevalence during the period of the exhibition of bush fires," reduced the attendance, and consequently the receipts. It also reminds me that in 1879 (to quote the words of the Industrial's report) "the Association was fortunate in having the presence, at the opening of the exhibition, and on several other occasions, of His Excellency the Governor-General and Her Royal Highness the Princess Louise, and there is no doubt that a knowledge of the fact that the exhibition was to be under the immediate patronage of their excellencies was an incentive to many from very long distances to visit it. The exhibitors also experienced much pleasure from being afforded an opportunity to explain to their excellencies the nature and quality of the various goods, &c., manufactured by them," while we are also told that the "trials of speed, the display of horsemanship by ladies, the games of school children and the glass hen, were features which attracted considerable attention." And yet, with all these special attractions, the honest earnings of 1879 only netted some $5,000.

Then, in 1880, notwithstanding "the finest display ever made in the city of Toronto" by the Oddfellows, Caledonian games, dog show, bycicle races, and in fact everything calculated to draw a crowd except the greased pole and pig, and, notwithstanding the collection of $5,042 for entrance fees and space charges, for which the Provincial makes little or no corresponding charges, the exhibition of 1880 only netted out of honest earnings between three and four thousand dollars. While those of 1881 have dropped down to less than $1,000.

A good deal has been said about the costliness of the management of the Provincial, and I am free to confess not without cause; yet fair play is fair play, and fair play constrains me to point out that while the Provincial in 1878 footed up $7,110, exclusive of the grant to the city, the expenses of the Industrial in 1879 were $9,190.40; in 1880, $9,182.80; and 1881, $7,942 13. I mention this fact not to justify unnecessary expenditure on the part of the Provincial, but to show that it scarcely lies in the mouth of Mr. Withrow and his colleagues to talk, as they have been doing, about the expensiveness of the Provincial Association.

If I have not gone over, by any means, all the ground which one might touch upon in connection with this subject, yet I fancy I have said enough to render it necessary for you to "try again" before you make good your assertion, and that I had better stop, or I will give you some ground for refusing to insert this on the score of its length. I must, however, add that while I am prepared to defend the Association from unjust or unfair attacks, I, as a new member of the Council, not only do not feel any responsibility for its past shortcomings, but that I cordially agree with you when you said on the 3rd inst. that "the truth is that the entire agricultural expenditure of the province and its whole policy with regard to the encouragement of agriculture need overhauling." But and this, I am sorry to see, you do not seem to desire the first thing to a proper overhauling is to elicit the facts.

Yours, JOHN CARNEGIE.

Peterboro', October 31, 1881.

NORTHERN EXHIBITION, WALKERTON.

SIR,—This exhibition was held on the 4th, 5th, 6th and 7th of October, thereby clashing with both Guelph and Hamilton shows; but notwithstanding this drawback, it was highly successful in the way of exhibits, spectators and also financially, and the directors can congratulate themselves upon the fact that they are reducing their debt and will soon be able to issue a prize list that will be more satisfactory to themselves and the public. It is also gratifying to the Board and promoters of the exhibition to find that the farmers and general community of the north-west portion of Ontario are at their backs and begin to appreciate the exhibition as a place of business where they can buy and sell stock, grain, implements, etc., etc. But for the success of our shows in general it is the opinion of your correspondent that it is not only desirable that the public should be on hand at show time, but they should take a lively interest in our annual meetings. Let them attend in good time and come with memo's of what they have seen wrong and where it can be mended; turn the drones out of the Board and put workers in their places, and let the new Board feel that they—the members—have an interest in the exhibition and wish to see it succeed, and that if from ten to twenty-five dollars a-piece from all the members present would pay off the debt of the Society, they are prepared to do it. Such meetings as this would encourage the directors, and they would work with re-doubled zeal, and the result would be that our exhibitions would be more worthy of attendance. AN OLD STAGER, Walkerton, Ont.

SIR,—I never lose an opportunity to put in a good word for the FARMER'S ADVOCATE. I only wish I had taken it seven years ago when I commenced farming; it would have saved me several thousand dollars that went buying experience. There is far more practical information for small capitalists, at about one-sixth the cost, than is contained in "The Field." I have been experimenting this summer in different ways. I moved on to a new place last October (480 acres), and having no land broken, I determined to see what could be done. After breaking about two acres early, I put on the cross plow and a heavy yoke of oxen, and subsoiled about nine inches. My beets, carrots, parsnips and onions were immense, and out of a patch of potatoes, 60 by 30 ft., we fed all our house (seven) from 15th July, and took up 12 bush. in Sept., with only two pails smaller than hens' eggs. Our summer vegetables were A 1.

I trust that when you next come to Manitoba you will make time to pay us a visit, and see the stock-raising country east of Red River. I forgot to tell you of my hay. I commenced cutting on June 24th, one month earlier than usual, amidst a storm of remarks from those who know everything (?) Prophecies: "It would heat, scour the horses and cattle," etc. Result: Beautiful green hay, and never a blade of waste. Cut Monday, cocked Tuesday, drawn Thursday. It is dry and green and sweet. I used no salt or lime. I don't believe hay ever heats here unless wet, and it was above my waist and some to my shoulders. Our dry winds are what tell. You may depend on my doing all I can for you whenever opportunity occurs. J. F., Cook's Creek P. O., Manitoba

SIR,—I notice in this month's number of your valuable paper an enquiry from Muskoka relative to Manitoba, as to the nature of the soil and method of farming there. The majority of the Muskoka settlers are well acquainted with me; I have traveled through the greater part of the district, and I am well acquainted with its resources. I have also spent this season since April in Manitoba and the North-west, and had a good chance to compare it with Ontario generally. But it would be difficult to find a country which would suit everybody. Some three years ago I met a man in the Nipissing country who had been to Manitoba and returned, and had taken up land in Nipissing in preference. In July last I was in the Parry Sound district, and was told by a man who had just returned from Manitoba and bought his place back (which he had sold before going), that he paid $175 to get it back. On the 22nd of

October last I met Mr. Sirett, of Rosseau, at Brandon, N. W. T. He had sold as good a place as can usually be found in Muskoka, was looking for land in the North-west, and would not return to Muskoka on any account to farm again; and I have met hundreds of the same opinion. The soil varies in different localities; in some places there is a greater depth of black muck than in others, but it ranges from two inches to four feet, sometimes with clay and sometimes with sand or gravel subsoil. The usual mode of cultivation is first to break the prairie in the spring, which can be done till about the middle of July. If a crop is required the first season, it can be sown on first breaking, or as some do, sow on the prairie and plow it in light, which gives about half a crop. I was told by one man just before I left that he had raised this year on first breaking 40 bushels to the acre of wheat, but this is unusual. For potatoes the sod is turned and the potatoes planted in the furrows and the next furrow turned on top of the potatoes, where it is left till they are dug; this gives a fair crop. In July and August the farmer cuts his prairie hay and begins his back-setting and cross-plowing; to back-set he turns the furrow back, cutting an inch or two deeper, and this leaves the ground ready to sow on in the spring; an ox team will break on an average one acre a day.

J. W. V., Orillia, Ont.

CAN STRAY DOGS BE KILLED?

SIR,—Can you or any of your numerous subscribers tell the process of manufacturing plug tobacco from the raw dried leaf? A friend has a quantity of very fine leaf, and would be much obliged for any information regarding the manufacture of the same, as there are no factories here.

If a dog is found prowling around my premises at night, am I liable for damages if I shoot the dog on the spot?

SUBSCRIBER, Winona, Ont.

[It is lawful to kill a dog when it is caught in the act of killing sheep, but not otherwise. Will some of our subscribers reply to the first question?]

SIR,—I suppose a few notes about the crops would not be altogether uninteresting. At least I always like to read the accounts of farm crops in other places, and I suppose human nature is somewhat alike in general. There was more corn planted in this and adjoining townships last spring than ever before, but either from the hard winter injuring the germ or from the cold spring, corn did not come up well and it had to be replanted in many cases, and in general made a poor start, but grew so well later on that a large crop was anticipated, when the terrible drouth of August and September withered the crop prematurely and leaves about two-thirds of a crop, or 70 to 80 bush. of ears per acre. Oats and hay—a very heavy crop. Barley very good, fully up to average, but a large portion of the crop colored. Fall wheat here about three quarters of a crop; on heavier land further south, in Haldimand County, a great deal of it was plowed up and sowed with spring grain, and the crop very poor on the whole. Spring wheat, very little sown; crop good where grown Roots promised a fine crop until, like the corn, they were struck with the drouth, but have grown fast the last two or three weeks, so that about three-quarters of a crop would perhaps be about the average. We had no rain until about the 4th of Oct., so that wheat, whether sown before that time or not, has very little top, though it has grown very fast since the rain commenced, as it has been warm and rainy most of the time. Apples a very short crop, and selling quickly at $2 per bl.

SUBSCRIBER, Wentworth Co., Ont.

SIR,—Can you give me a good and safe remedy for white worms in a horse? Is it safe to use raw linseed oil and turpentine, and in what proportions? We can only get solids out here by mail, and as we are 100 miles from town we can only get articles at the stores which are in regular demand. I wish to know how to enter a thoroughbred calf in the herd book. Is it necessary to register the date and name of sire when the cow goes to him, or can you enter the calf when it is born without taking any preliminary step; where should I send the particulars to have it recorded? We have a disease going the rounds amongst the horses which they call Pink-eye here, and no one seems to know what it is or exactly how to treat it. The first symptoms are dullness, a slight discharge of watery mucous from the nostrils, great heat in the chest, heavy breathing (not wheezing—more in the throat), swelled legs (no grease). They refuse their feed for days, and in aggravated cases break out along the neck and in the flanks. With these horses it is generally fatal. My horses had it, and I gave them warm boiled feed, chilled water, a good dose of spirits of nitre and gentle exercise, and they pulled through in a few days. Can you tell me what it is from the above description?

A. C. H., Glenfell, Manitoba.

[Raw linseed oil and turpentine is a safe remedy for worms; dose, 1 pt. of linseed oil and from 1 to 2 oz. of turpentine. Mix well and give a dose every ten days until the animal is relieved. When you wish to register Shorthorns, give the age of the animal, when dropped, color, etc.; also the register numbers of dam and sire. R. L. Denison, Toronto, Ont., is Secretary of the Record British American Shorthorn Breeders' Association. Henry Wade, Toronto, Ont., is Secretary of the Agricultural and Arts Association record. See the November number of the ADVOCATE, page 281, for particulars concerning Pink-eye.]

WHEN TO CUT UNDERBRUSH.

SIR,—Permit me to enquire through the medium of your excellent journal when is the proper time to cut brush so as not to be troubled with a re-growth. Most persons will have observed that in some instances, when alder or any underbrush has been cut, there is a vigorous growth of sprouts which retard the rotting of the old stumps and occasion the farmer considerable trouble. At other times not a single twig appears, the stumps rot rapidly, and no difficulty is experienced. Please inform us through the ADVOCATE if this arises from the time in which the cutting was done. If so, which is the best time, summer or winter, spring or fall? Has the moon any influence in the matter, and is the same season suitable for all kinds of wood?

A. S, Colchester Co., N. S.

[We have found the late fall months or the early part of the winter the best time to cut most hard wood underbrush. We could not say which is the proper time to cut alder or scrub oak. Will some of our readers who have had experience answer? The moon has no influence in the matter.]

SIR,—Permit me through the columns of your valuable paper to express the objections I and other farmers have as to the manner in which our exhibitions are held. First of all, we contend that in many cases the man and not the animal or article get the prize; and second, we say that there are men appointed to act as judges who are in no way capable of performing their duty. And until these and other objections—which at present I will not mention, but will refer to in some future issue—are removed, we must expect our exhibitions to fall to the ground, as they have been doing for years past. I like the ADVOCATE for its independent course, but I think you give too much information from American writers, and do not give Canadians a fair show.

MALCOLM MCINTYRE.
Springbank, Ont.

[Mr. McIntyre is quite right in regard to awarding prizes and giving positions to persons who do not deserve them. That is the cause of the general and just condemnation that is now visiting the old Provincial Board. They have done wrong for years and knowingly and wilfully continued in that course. Any exhibition conducted in such a manner is sure sooner or later to come to grief. The most successful exhibitions are those where honor and honesty have the greatest sway. In regard to your complaint about American writings appearing in this journal, have not the articles of L. B. Arnold been of more value to our country than the writings of any Canadian authority on the dairy interest? Who in Canada has given such correct accounts about the diseases of stock as James Law and Manly Miles? Have any of our Canadian writers given such accounts of trees, plants and agricultural information as our Washington correspondent? The fault lies with Canadians, not with us. They have opportunities, but do not improve them. We have many valuable writers in Canada, and they have contributed frequently to the ADVOCATE; but we wish to furnish the best and most useful information from any source from which it can be obtained.]

WINDOW BOXES.

For those who have many plants without the convenience of a bay-window or conservatory, there is nothing so convenient as window boxes. One can pack in these double the number of plants that in pots would fill the same space. But this is not the only advantage derived from their use; it is not half the labor to care for plants thus disposed of. You can water them with very little trouble. It is is more cleanly; plants tastefully arranged in boxes are far more attractive.

Last winter I had a box made of zinc; size, one yard long, fourteen inches wide, and seven inches in depth. A frame of wood two inches wide and stained in imitation of walnut was put outside at the top to give strength to the box. It was two inches thick, and when put on was even with the edge of the zinc. I filled the box with choice Geraniums or Coleuses; a few vines drooped over the sides.

M. D. J.

[This is a move in the right direction Plants thrive much better in boxes than in pots, for the reason, mainly, that they are not so apt to suffer from want of watering. In the living-room, which is usually kept too warm, the evaporation from pots is very rapid, and watering is so frequently neglected that the growth of the plant is checked; in that condition the plant again gets too much water, which is quite as fatal in its results as too little. As a rule, plants will flower better in pots than in boxes, as they should be root-bound in order to flower freely. On the other hand, they thrive so much better when not "bound" too tightly that a healthy, vigorous plant is the result, which is preferable to a flowering plant]—Floral Cabinet.

HOW TO PROTECT ROSES.

I see enquiries in your paper asking how to protect tender roses. I will tell you how I have done for twenty years, and have never lost the most tender rose. Take a bundle of rye straw and set it up all around the tree; then take some wisps of straw or strong twine and tie them up two or three times; then put some manure around the roots. I find that taking them up sets them back, as they don't flower well the first year, and laying them down you are apt to break the new shoots.

James Comely stated at a horticultural meeting at Boston that all the best rose growers in England (whose grounds he had visited) agreed that they got as good a plant from a graft in one year as they could on its own roots in two, and he thought that grafted plants or hybrid perpetuals would produce twice as large roses as those on their own roots. It wants only one shoot the first year.

F. R., Rochester, N. Y.

DESTRUCTION OF THE WHEAT PLANT BY GRUBS.

I was on the Sydenham River, near Dresden, and saw several fields of wheat badly eaten out by some grub or insect; some of the land had been sown the third time. Any information respecting it in the ADVOCATE would be very serviceable.

J. C. S., Thamesville, Ont.

[Had you sent in one of the grubs that are doing such injury, we could give the information required with the greater certainty. The grubs are probably the large, white, fleshy larvæ of the May or June bug—a large, brown beetle, commonly found flying into lighted rooms at night in the spring and early summer. The grubs injure grass, corn, garden plants and strawberries by eating the roots. The past season has been unusually disastrous in respect to the destruction of grass in meadows and pastures by these larvæ. In the New England and Middle States the herbage of grass and clover could be raked off, leaving the soil brown and bare. Wheat has in parts of New England suffered from their voracious propensities. There is no known method of destroying these grubs when the land is under crop, grain, grass, &c.; otherwise, plowing late in the fall would be of service, thereby some would be crushed and killed by the plowing and some by being frozen. A heavy application of lime is also destructive to them. The parent beetles may be caught when abroad at night in the spring and early summer, in barrels half full of water covered with a film of kerosene oil and having lighted lanterns hung within them.]

SIR,—Which is the proper way to procure registration of Berkshire swine? Is there a Berkshire record for Canada, and what will be the cost of registration? Address,

S. W., Highland Creek, Ont.

[If you wish to register in Canada, send the pedigrees of all animals you wish recorded to Mr. Henry Wade, Sec'y of the Agr'l and Arts Ass'n, Toronto, Ont.; but if you wish to record the U. S. A., apply to J C. Snell, Edmonton, Ont. Either of these gentlemen will give you full particulars.]

SIR,—Can you tell me how to cure a spavin?
W. W., Braemar, Ont.

[In ordinary cases they can be cured by a course of blistering, but in bad cases it is necessary to have them fired and blistered afterwards by some competent person. A very good blister to use on a spavin is :—Cantharides, two drams; Binodide of mercury, one dram; lard, two ounces. This you will apply once every two weeks, rubbing in well. The above mixture would be enough for three or four applications. It would be well to apply a little lard to the part blistered every four days.]

SIR,—What will cure Scab (Pox) on cows' teats?
A. B., Innerkip, Ont.

[Give a purgative drench once a week, made of—Epsom salts, one pound; ginger, one ounce; warm water, one quart. After which, give two drams of salt-petre, three times a week in bran mash, and foment the teats and udder well with warm water before milking. In cases where the teats are very bad, it would be well to remove the milk by means of a teat-syphon. Also, dress the teats and places that are sore two or three times a day, with equal parts of glycerine and tincture of arnica.]

SIR,—I have a valuable mare which has a bad cough; I think she has the heaves; the cough commenced this fall; is there any way of curing her?
NEW SUBSCRIBER, Glengarry, Ont.

[More can be done in the way of feeding and watering the beast, by the party that has charge of it, than by doctoring it for heaves. It is necessary to have it fed on clean, fine hay, and if mixed with a quantity of good oat straw would be better, being careful never to allow it to have a large quantity to eat at once, especially before going on a journey, or pulling a heavy load; never allow it to have more than a pailful of water at one time; you will find a benefit from damping its food with lime-water, also, mixing some with the water that it drinks. Give a purgative ball occasionally, and a powder of the following at night in feed:—Nitrate potash, one half dram; Digitalis, half a dram; Tartarized Antimony, half a dram.

SIR,—We consider the ADVOCATE the best agricultural paper that is printed.
Yours, etc., J. H., Shakespeare, Ont.

SIR,—Can you inform me where I can procure a threshing machine to work with two horses? The fact is, I am rather afraid of these steam powers, and as for a ten-horse travelling power, well, my farm and property do not appear to belong to me when they are on it. I want to feel independent.
JEBE, Huntsville.

[Mr. James Sharman, of Stratford, would be the best person to apply to in Ontario. He makes the simplest and best small thresher we know of in Ontario. Mr. Sharman had one of his small threshing machines at work on the Exhibition Grounds during the Provincial Exhibition, held in this city this year. We saw it when in operation, and feel justified in recommending it, as all that we spoke to about it were of the same opinion as we were, that these small machines will come more generally into use, particularly in localities where they are once fairly introduced. Send to Mr. S.—his address is Stratford—and he will give you reliable information, and make just what you require.]

Seed Grain.

There is always a demand for good seed grain. Farmers who have clean farms and good samples of wheat they know to be profitable varieties will find it profitable to expend a little more time and thoroughly clean it for seed. Many of our seedsmen supply themselves with grain grown by careful farmers, and are always willing to pay a higher price for a good, well-cleaned sample. We are acquainted with several farmers who sell but little grain on the market or to the grain buyers. Nearly all the grain they grow they sell for seed either to seedsmen or direct to farmers, and always receive a higher price than their less careful neighbors. A very necessary implement on a farm is a good fanning mill, yet it is seldom found. Much of the grain sold on our markets is very badly cleaned. The grain buyer does not lose by this, but the farmer. It is astonishing the difference that can be made in the same sample of grain by careful or careless cleaning. Even if not sold for seed all grain should be well cleaned.

The Berberry.

Some months ago we published articles on hedge cultivation, in which the Berberry was recommended. Since that time we have received several letters from correspondents, some of whom speak highly of the Berberry, and some condemn it. A correspondent from England says that it causes wheat growing near to it to rust, and puts forth several arguments in proof thereof. Under these circumstances, we have made searching enquiries and find the opinions of scientific as well as practical men to differ widely concerning this plant. Several leading authorities whom we have consulted state that they have no reason to believe that it causes wheat or any other plant to rust. On the contrary, they recommend its cultivation. Lewis F. Allen, in his new American Farm Book, after speaking of its origin and highly recommending its fruit for use, says:—"The Berberry makes a fine ornamental hedge, sufficiently strong and compact to turn ordinary animals. It also forms a graceful clump of shrubbery when planted in single roots. There are few of the more-valued exotic shrubs that excel it. We decidedly commend the Berberry for cultivation."

On the other hand, A. S. Fuller, in his Small Fruit Culturist, says:—"Although the Berberry is seldom injured to any considerable extent by disease or insects, the leaves are sometimes injured by a species of fungus which usually makes its appearance on the ends of the leaves, then becomes scattered over the surface and extends to the fruit. To the eye it appears like a fine reddish dust, but when highly magnified they are found to consist of cup-like cells. These cups are at first covered with a thin, light-colored film, which, when the fungus becomes mature, bursts, and the cups then discharge their spores or reproducing dust, which is spread over adjoining objects. This fungus, or mildew, has been supposed to cause the blight in wheat, and it is an old belief that Berberry would cause the grain near it to blast. This belief has generally been treated as a superstition by scientific men, but recent researches show that it may have a foundation in fact. Many of the minute fungi have in different generations different forms. There is a strong probability that the rust of the Berberry and the smut of wheat are both forms of the same fungus."

We also consulted an English gardener of many years experience, who states that if a Berberry plant by any means grew in a white thorn hedge the thorn plants which grew near it would be attacked by a fungus and would die. Ashes or slackened lime scattered over the leaves when the dew is on them is given as a remedy for rust on Berberry.

Cutting and Seasoning Timber.

Although it is almost the universal custom to go into the woods to cut timber, whenever it can be done to the best advantage, without for a moment considering its keeping qualities, every observing person knows that the durability of timber depends very much on the season of the year that it is cut. Careful experiments prove that timber cut in the spring of the year will not keep as well as that cut in August. Pine timber cut in February and March is much more liable to become worm eaten than that cut in autumn. Gray birch cut in March never seasons as well as if cut in August; when used for firewood, if cut the last of August or early in September, it makes wood that is equal to maple, but if cut in March it is so full of water that it is very difficult to season it before it begins to decay, unless it is sawed into short pieces and split, and even then it never appears to give as much heat as if cut in the autumn; when cut in September, without much care, it will dry enough by the first of January to burn freely. It is believed by some that timber cut in the autumn is better, because it is not as full of sap as if cut in the spring; this is probably one reason, but there is another reason which is not usually alluded to, which is, if cut in autumn it is not affected by the heat the same as if cut in the spring, for if cut, even in hot weather in August, before the wood gets very much dried, the cool winds of October come and it is dried more by cool than hot air.

Timber cut in March is partially dried before the hot weather comes, and is in just the right state, when the sultry days of summer come, to encourage decay, if surrounded by heat and moisture; for this reason, if no more sap was in the wood in the spring than in the autumn, it would be best to cut timber in the autumn; but when we consider that all kinds of wood are filled with a much larger quantity of sap in the spring than in the autumn, it must be evident to every one that, for durability, it is much better to cut timber in the autumn. It is very true that it is not always convenient to cut so early as September, and the weather is frequently so hot as to make it very uncomfortable to work in the woods, therefore but little timber is cut so early. If we cannot get ready to go into the woods until after Thanksgiving it is much better to cut in December and January than later in the season. Timber to be used where it is important to have it durable, should never be cut later than January, especially pine, maple and birch.

Farmers who cut but a small quantity each year can easily manage to cut in the autumn, or early in the winter; but those who follow no other business but lumbering will pay but little attention to the keeping qualities of timber, well knowing that purchasers will not enquire what month it was cut in, and will pay just as much for timber cut in March as in September; if the quality of the lumber is good and it is well sawed it is all that is required; no one looks forward to the time when the building is to be repaired and a portion of it new timbered, because it was not all cut at the same season of the year; in fact, even when a building comes to repairs, but a few connect the fact that a portion of the timbers have decayed because cut at the wrong season of the year, yet this is often the case, though not always; sometimes one end of a stick of timber decays by reason of moisture, while the other end, by being kept dry is perfectly sound; but there are frequently cases where two sticks of timber with the same surroundings, will show a great difference in their durability, which is undoubtedly caused by the fact that they were cut at different seasons of the year.

The methods to be adopted to season timber must depend in a measure on the particular qualities it is desired to secure; if, as is often the case with pine timber, it is desirable to season it so that it will be soft and easy to work, and the strength of it is of no consequence, it should be kept over winter in the log and sawed in the spring, then piled up in a manner to secure as much air as possible, so there shall be no delay in drying the sap out; but if it is desirable to have the wood hard as possible it should be sawed in the autumn and dried very gradually. Walnut timber for handles and other purposes that require great strength should be split in large pieces and housed where the atmosphere is cool; many believe it is better to be two years in drying walnut and white oak, that is to be used for purposes that require great strength. Wood that it is desired to make tough and elastic should be dried very slowly, and at the same time care should be taken to dry it fast enough so it will not begin to decay. The soft maple is a wood that if properly managed can be made very tough and kept perfectly white; to cut it and keep it in short logs over summer destroys its whiteness and elasticity; to saw the logs in the spring and stack the lumber out in the rain and air, also destroys its strength, and frequently its whiteness. The most certain way to keep this timber and preserve its whiteness and strength is to cut the tree in autumn, trim the limbs off and leave the trunk the entire length for a year, when it may be sawed and dried under cover; by this treatment it can be seasoned perfectly white and very tough. The strength of some kinds of wood can be increased by girding the trees and letting them stand and season on the stump. An oak, maple or apple tree, that has naturally died on the stump, is very hard to cut; but a birch or a poplar that dies in this way usually decays and is not of any value even for firewood.

The durability and strength of timber depends somewhat on its age as well as the manner of seasoning. There is a period when a tree arrives at its greatest perfection, after which it begins to decay, although it may not show any outward sign of it. The pine and the white ash and many other kinds of trees, until near their full growth, have the strongest wood near the ground, but after having passed full perfection a change takes place, and decay commences at the heart of the tree near the ground; the decay once commenced gradually extends towards the outer surface of the tree; in time it is hollow, and year by year the living rim grows less, until at last it is so thin that it cannot support the tree, and it falls to the ground, with a trunk that has the strongest wood at the top.

Farmers who cut their own fence posts should cut them before they have passed their full vigor, and at that season of the year when they have the least sap in them, being careful to season well before setting; green posts should never be set if it is possible to avoid it.—*Ploughman.*

Send us Your Opinion.

We went to Toronto to be present at the meeting of the Board of Agriculture and Arts, also the meeting of the Breeders of Shorthorns. When in the Queen's Hotel we were accidentally thrown into the company of the Hon. S. L. Tilley. We informed him that we failed to see any advantage to Canadians by imposing a duty on corn, and said that the Western States could produce corn much cheaper than we could, and that we required it too as raw material to make our beef, mutton, wool, butter and cheese, and to aid us in enriching our land. Mr. Tilley informed us that the duty was put on at the direct request of numerous farmers in Ontario, and for their benefit only, and that it would give his constituents in the eastern part of the Dominion great pleasure if it were removed. But he had informed them that as a duty was put on coal for their benefit, they should be willing to allow the duty on corn for the benefit of Ontario farmers. We informed Mr. Tilley that we believed we could convince him that it was not advantageous to us. Now we wish every one of our readers to aid us in convincing Mr. Tilley that we are right, that is, if you believe we are. But if you consider we are wrong, we wish you to let us know. The answering of this question is not in any way intended to act as a party or political one, as you know we have tried to avoid broaching on that ground in this journal; but we deem this of interest and importance to every farmer. Send us a postal card, and when you write we wish you to add either of the following lines:

TAKE THE DUTY OFF CORN,

or

KEEP THE DUTY ON CORN.

We will keep a correct account and forward the result to Mr. Tilley. You will oblige by replying.

"Mr. Richard Gibson, stock-breeder, of Ilderton, Ont., speaking about his recent large importations of stock from England, spoke strongly against the vexatious quarantine laws which at present exist. It appears that after the steamship arrives at Halifax the stock is put aboard the cars and taken to Quebec, where they are kept in the quarantine yards for three months. During all this time they are at the expense of the owner, and in case they are found to have the foot and mouth disease, are slaughtered at once. Mr. Gibson says that in the opinion of leading veterinary surgeons three weeks instead of months is quite sufficient to disenfect cattle, and he thinks the Government should enquire further into the matter and see if a change could not be effected."

We extract the above from a political paper.

Although Mr. Gibson may be a large stock importer and breeder, member of the late Ontario Commission of Agriculture, and is now Vice-President of the B. A. Shorthorn Ass'n, we feel it our duty to condemn the reduction of the time for cattle to lay in quarantine, which we believe has been very properly fixed at three months. The best authority that we know of recommends the necessity of retaining them for three months, as that most dangerous disease Pleuro-pneumonia may remain in an animal, before showing the symptoms, nearly that length of time. It is that disease we have to guard against, and we are liable to import it either from the States or England. We have used our influence to try and prevent the introduction of the diseases to which stock are liable, and also to check the spread of diseases when any have been imported, and trust that no steps may be taken to shorten the time now fixed (three months) until we hear that the diseases are entirely eradicated from the countries from which we import. In fact we would rather commend the prohibition of importing live stock of any kind than to open the channel so that Canadian stock in general might become infected. We believe we are now free from any contagious disease, and let us try and keep so by every legitimate means. We are much surprised at such an opinion coming from Mr. Gibson.

Agricultural.

Suggestions for Drouthy Seasons.

The incalculable loss to farmers caused by the great drouth of last summer and fall has directed their enquiry to the opportune query: How shall we guard against the effect of such seasons on their recurrence? In Ontario the drouth has not been so long or so permanent as in the United States; but even here the question is an important one. When the pasture is scorched and the plains that have been wont to be covered with luxuriant grasses were bare as the great desert, what would be in such circumstances the best forage plant is naturally the query.

A writer in the New York *Tribune* is in favor of lucerne. He says: "It was very evident in passing over the drouthy districts that a good forage plant that could flourish in a dry season would be a great boon. These two years' experience may encourage a more general and thorough trial of lucerne. This plant seems to possess more valuable qualities for a forage plant than any other with which we are acquainted, more desirable even than clover, for the following reasons: It is perennial, it furnishes pasturage later in the season, it grows more rapidly, and stands drouth much better. Flint, in his 'Grasses and Forage Plants,' says of it: 'In a mellow or sandy soil lucerne has been known to send its long tap-roots down to a depth of thirteen feet; I am convinced that many of the failures in growing lucerne come from an improper selection and preparation of the soil."

As drowning men catch at straws, so the above writer turns in the emergency to weeds. It is rather shocking to the ideas of good farming to have what has been considered as troublesome weeds recommended for cultivation, but, says he, the way in which pig-weed, purslane and plantain stood up green and succulent in the dusty earth and under the scorching sun of the past summer, when grass and clover were as brown and crisp as at mid-winter, suggests that prejudice be laid aside and these heretofore despised weeds be fairly judged as to their qualifications for forage plants. All of them are relished by stock. The plantain (Planta lancolata), the only perennial of the three, has been cultivated to some extent for sheep pasturage, to which it seems better adapted than for other stock, on account of its low habit of growth. The Amaranthus retroflexus, or pig-weed, is an annual and seems to be endowed with a most vigorous constitution. When the main stalk is bitten off the little stump will send out a surprising number of thrifty branches in a short time. This plant, too, has been cultivated for forage, and it is certainly capable of yielding a large quantity. "That miserable pursley," purslane (Portulaca oleracea) is so well known that it needs but little mention. It is an annual, and was formerly used as a pot-herb. Every owner of a pig and garden patch is acquainted with the fattening qualities of its fleshy, nutritious leaves. It would not be well to experiment largely with these plants till well tested, but till lucerne becomes a success is there anything better offered for a drouthy season?"

Aside from clover, lucerne and what are more commonly called the grasses, let there be rye and wheat sown the preceding autumn, oats and barley early in the spring, followed by corn as soon as the ground is warm enough. Add to these sorghum, and Hungarian grass as required. If the grain crops mentioned are not wanted for soiling, they can be suffered as the season advances to ripen and then threshed; the same with corn to shell; thus there would be neither waste nor loss although the variety is so great.

The melitot, sweet clover, has its advocates as a forage plant. There can be no doubt of its great vitality, being able to stand any extreme of temperature. It grows luxuriantly on a sandy soil so barren as to support no other vegetation. Once sown it propagates itself annually by self-sown seed, if the seed be allowed to ripen. Though we have known the plant for many years, we know nothing of its value as a forage plant, so we give the testimony of Prof. C. S. Thorne, of the Ohio State University:—

"Sweet clover will grow quite luxuriantly in hard, poor clay, where even white clover will scarcely live at all, and grows much more rapidly than red clover in any soil, while in the soils that are, as is said, 'clover-sick,' it thrives as well as anywhere. It is a good forage plant for bees and for cattle, and is well adapted for soiling, as it makes a growth of four to six feet during the season, and is said to bear two or three cuttings. A German analysis gives its hay a feeding value of $15 per ton as against $16.28 for very good red clover hay. While red clover, upon which our farming in many sections, and especially in clay lands, depends so essentially for crops of grain, is becoming more and more uncertain, it would seem to be worth while to try this 'fast weed' as a resource for recuperative green manuring, in heavy soils especially.

"To sum up, it is worth more to the farmer for soiling than red clover, because of its thrifty growth; it is a more reliable pasture for cattle, sheep, etc., than red clover, because it will thrive on soils where red clover sickens; it will yield equally as much fodder as red clover, because it will stand two or three cuttings; and it lacks but seven per cent. of the nutritious properties of red clover. We can add, we believe it is worth the cost of cultivation to the bee-keeper for honey alone, even though he is not the possessor of a four-footed animal, because its flow of nectar is not affected by atmospheric changes, as is the case with many plants, notably white clover and linden."

It may be well to give it a trial, sowing a small plot of it for soiling. An experiment with melitot may lead to good results. The mere consideration of the subject must be beneficial. Farmers will be brought more than heretofore to see the value of forage crops for soiling. There is every year a dry spell when some addition to the pasturage is a matter of necessity.

Notes for December.

The work of the farmer during this month may be summarized under these headings, preservation and utilization of the products of the past season; care of his stock; preparing for another year.

The grain crops are all in the barn and granary, or turned into hard cash, and the farmer has had another lesson on the important fact that the thorough cleaning and preparing of wheat or other grain for the market, is well paid for by the increased price. The inferior grain should be fed in the stock yard; in this way only does it pay. The root crops also stored for the winter, in the cellar, or root-house, or in the pit. We must bear in mind that frost is not the only state we have to guard against. Too high a temperature as well as too low must be avoided; in order to preserve roots in good condition we must keep them from growing. The cooler we can keep them without exposing them to the risk of freezing, the less liable they are to sprout; if the temperature is too high roots are liable to injury from sprouting; if it be too low their is the certainty of their being frozen; if too dry they are liable to be wilted, while too much moisture rots any roots.

The due care of live stock implies perfect cleanliness, good ventilation with sufficient warmth, good wholesome food, and (for horses especially) moderate exercise. This care farmers cannot afford to neglect.

Prepare your plans for your spring work; each year's experience should make you a better farmer. Be guided by this experience in your programme of work for the ensuing year. Experience is by no means the least important educator of the farmer.

Vegetation is now dormant in our climate; there is therefore little outdoor work this month. There is however in gardening as well as farming much of preparation for the coming spring, as well as care of the garden products for the winter supply. If there are any days of open dry weather, vacant ground not yet turned up to the frost, should be dug, and when necessary, for deepening the soil and renewing it, trenches from twelve to twenty inches deep. Trenching, it is true, is expensive, but there is no labor more remunerative. Manure can be brought by sleigh or wheeled carriage with greater ease than at any other season; it should be put in large heaps on the plots to which it is to be applied. A mixture of plaster will prevent its being fire-fanged and a covering with plaster and earth will save it from being frozen. None of our various root crops will bear the frost so well as parsnips and horseradish, and if any of these have been left in the ground they would keep there in better condition by being mulched with litter or earth; they will there keep uninjured till spring. The vegetables in the cellar or root-house should be carefully hand picked occasionally and decaying ones, if there be any such, removed.

Fruit Growing at Owen Sound.

The midsummer meeting of the Fruit Growers' Association of Ontario was this year held at Owen Sound. There was a very general attendance of the members from that vicinity, and a goodly number from a distance. The display of fruit was much better than was expected, the crop in that section having been nearly destroyed by the untimely frost which visited the place early in the summer.

President Dempsey called the meeting to order, and after a few words of hearty salutation to the members present, called attention to the first subject, namely: To what insects and what diseases are the plum trees liable in this vicinity?

The replies to this question indicated that the depredations from insects were not serious. The tent caterpillar and other leaf-eating insects were to be found occasionally, but they had not been sufficiently numerous to cause any alarm or make it difficult to keep them in check. The Black-knot was mentioned by nearly every speaker as the most troublesome disease with which they had to contend. It seems to have been more than usually prevalent this year, and to have spread with great rapidity, affecting many of the trees so very seriously that there seems to be no hope of saving them. Mr. John Chisholm stated that it had been more serious in his garden than ever before, and that the only adequate amputation in many instances would be the entire removal and burning of the tree. He thought that the disease thus far had been chiefly confined to the blue-plums.

Mr. D. R. Dobie spoke of it as being frightful this season, and believed it probable that the dry season favored the black-knot. It had attacked his yellow plums, such as the Coe's Golden Drop and Washington, but was worse on the Jefferson and McLaughlin.

Mr. R. J. Doyle thought that trees growing in a wet sub-soil were more subject to black-knot than those in well-drained ground, and believed that by thorough underdraining and watchful amputation the disease could be kept in subjection.

Several speakers stated that the black-knot was very abundant in some sections upon the wild plum and wild cherry trees, but especially so on the Manitoulin Islands.

The Secretary stated that some twenty years ago he had noticed the black knot was very abundant on the wild plum and cherry about Orillia, and from there to Coldwater. It was not now so prevalent in the Niagara District as formerly.

Several members brought plums to the meeting having the gum exuding from the fruit, and otherwise defective specimens, some of them showing the marks of insect depredations, in order that they might be examined by those who were familiar with the work of the curculio, but very careful examination failed to discover any evidence of the curculio. Plum growers at Owen Sound may congratulate themselves that the curculio has not yet found his way to their plum trees. President Dempsey remarked, in this connection, that in Prince Edward County they had found the rotting of fruit on trees before ripening a much worse evil than the curculio. The curculio could be kept in subjection by jarring the trees and catching the insects, but that no method had yet been discovered of preventing the rotting of fruit.

The subject of the borer in apple trees was next considered, but the discussion revealed the fact that it had not been troublesome at Owen Sound, but one person having ever seen any in his apple trees.

The discussion on the grapes best adapted to this section of country revealed the fact that quite a number of varieties can be grown and ripened. Mr. Brownlie had grown the Eumelan, Delaware, Massasoit, and Concord. He remarked that the Eumelan succeeds well, and that he had not found it subject to mildew; that the Concord in some few seasons had hardly ripened, and that it was not wise to plant varieties which ripened later than the Concord. Other members had also grown the Champion, Creveling, Clinton, Brighton, Burnet, Hartford Prolific, Northern Muscadine, Rogers Nos. 3, 4, 9, 14, and Salem. It was remarked that at Owen Sound the Burnet did not ripen any earlier than the Concord.

Small fruits generally were grown with good success. Members found no difficulty in growing Raspberries, such as Fanconia, Brinkle's Orange, Knevet's Giant, Pride of Hudson, Cuthbert, Turner, &c. English gooseberries were generally subject to mildew, but Downing and Houghton did well. Strawberries were also grown without difficulty. Mr. T. C. Robinson said that the Wilson was the most reliable sort; no other had yet proved to be as profitable for market. He thinks that the Crescent will outcrop the Wilson. President Dempsey manures his strawberries with ashes and bone dust, applying ten barrels of unleached hard-wood ashes to the acre, and obtains for the Wilson a yield of six thousand quarts to the acre.

The resident members spared no pains to make the visit one of great pleasure to those who came from a distance, kindly taking them to several places of interest in the immediate vicinity.

At Mr. Doyle's we found most extensive plum orchards, some in full bearing and some more recently planted, the number of plum trees running into the thousands; indeed, the largest plum orchard we have ever had the pleasure of seeing. The trees were all vigorous and healthy in their appearance, and many of them well filled with fruit.

Although they had no curculio to trouble them at Owen Sound, they are not wholly exempt from the ills to which the horticulturist is heir, for the frost had so interfered with fruit culture there this season that but few of the plum trees were yielding a crop. Mr. Doyle also showed the members a barrel, having the staves so arranged as to admit of ventilation of the fruit packed in it. This barrel is specially adapted to the shipping of early ripening apples and pears, which require to be forwarded in hot weather.

New Fruits.

Windsor Cherry—It is above medium size, nearly black, flesh very firm, of an agreeable flavor, having that mingling of saccharine and acid which is so refreshing. The stone of the fruit is very small. It is said to be enormously productive; very hardy, being the only Biggareau or heart cherry that had not its fruit buds winter-killed last winter on some grounds; even Dukes were killed.

Dougall's Seedling Gooseberry No. 1—Was raised from seed of an English gooseberry fertilized with the Houghton. The berries average larger than those of the Haughton, are oblong or oval in shape; color, a deep rich green with light veins; flavor is excellent.

Seedling No. 2—Is another variety from the same parentage as the foregoing. The berries of this are of about the same size as the Houghton, nearly round in form, and yellowish green in color, and of a rich, pleasant flavor.

Seedling No. 10—Was raised from seed of a Houghton fertilized with an English gooseberry. It is oblong or oval in shape, nearly as large as the Downing, and of the same light-green color; flavor very good.

Hybrid Seedling No. 2—Is descended from the wild prickly-fruited crossed with an English gooseberry. It is the second remove from the wild. The berries are oval in form, thinly sprinkled with fine hairs, showing its descent from the prickly; about the same size as the Houghton; the ground color is a very light straw color, almost white, sprinkled with minute red dots. The flavor is very pleasant.

Hybrid Seedling No. 7—Is also descended from the wild prickly-fruited crossed with an English variety, and is also the second remove from the wild. These berries are oval in shape, about the size of Smith's Improved; well covered with short prickly hairs; the color dark purplish red; flavor very good.

Mr. Dougall says of the Hybrid Seedlings No 2 and 7:—"I think these will be the parents of a variety that will probably displace all others. They are strong, upright growers. I measured a shoot that grew from the bottom of one of these varieties; it is now four feet nine inches high (branched), covered with bright brown prickles. It will no doubt reach six feet by the end of the season, though they are not getting fair play, being grown under fruit trees. None of these seedling gooseberries have ever mildewed, though planted in different localities. I have several others, both of the hybrids and crosses between the English and Houghton, but, being transplanted last fall, they have but little fruit on them, and that not fully grown. I have a No. 9 hybrid of the same strain as No.'s 2 and 7; the fruit is much larger than either, smooth, and a pale red. The catbird, robin, and Baltimore oriole are very bad on gooseberries here, more especially the oriole. I had to remove my bushes to a place near my house, and cannot save them there.

Supply and Demand.

In making choice of the crops to be grown, care should be taken to select those which will supply an existing demand. It will not do to grow the same crop year after year, without regard to the condition of the market. The wants of consumers change, and the producer should adapt his crops to their varying moods. If the demand is for varieties of grain or fruit of only medium quality, he must not insist upon growing the finer sorts. For home use the best should be produced, but for market the varieties which pay the best should be selected. There are much finer pears than the Bartlett, and nicer grapes than the Concord, but as long as the demand of consumers are so strongly in favor of these varieties, the fruit-growers who do business for profit and not for pleasure alone, cannot afford to attempt the forcing of better kinds upon the market. The consumers know what kind of fruit they want, and if they pay for it, they certainly have a right to say which varieties they prefer. It belongs to the seller to supply the demand which already exists, and it is no part of his duty to dictate to the buyer which varieties he shall choose.

The same principle should apply with equal force to the farmer. When there is no moral element envolved, he should supply just what the state of the market demands. One variety of corn may be better than another, but if buyers insist upon having the poorer sort the growers should furnish it cheerfully. The same rule applies to all farm products. It is the farmer's business to supply, not to govern the market.

The principle which we have endeavored to state seems so simple, so plain, and to be so directly in the line of that sound and solid common sense for which farmers as a class are noted, that it may seem to some of our readers a waste of time and effort to call attention to such a self evident truth. But the compliments which have been made concerning the recent action of the Minneapolis (Minn.) Millers' Association, is deciding to pay ten cents less per bushel for soft wheat than for hard wheat at an equal grade, is an indication that a great many farmers, even in that wide awake and progressive State, have not given this subject proper attention. The Canadian Northwest will also be affected to a greater or less extent by this association. This discrimination against soft wheat was not the result of a sudden and arbitrary change in the general policy of the Association. Had it been so the farmers would have deserved, and received a great deal of sympathy. But they had been informed that hard wheat was preferred, that it was worth more to convert into flour by the process now in use, and that the demand in future would be for hard wheat instead of the soft varieties which had been so popular in the past. More than this, the millers claimed that with equal care in the choice of seed, the hard wheat would yield as well as the soft. In order that they might test the matter without incurring great expense, the millers obtained a large quantity of hard (Fife) wheat, which they furnished to farmers at cost. Those who used this seed have secured a large yield of grain, for which they received a satisfactory price; while farmers who paid no attention to the notice that there was a change in the demand of the market, but allowed their preference for soft wheat to control in the selection of seed, are heavy losers. The latter are learning that in order to make the most money in the production of grain it is necessary to grow those varieties which buyers wish to purchase. It is a hard lesson, but, by causing farmers to pay more attention to the intellectual part of their business, inducing them to read and think more about their work, it will lead to good results.

Reports of Plowing Matches.—We have received from various parts of the province a number of reports from plowing associations. We are glad to learn the Farmer's Advocate for the year 1882 was a valued prize at these contests. We would like the Secretary, or any plowman or other intelligent agriculturist, to send us reports of these matches, especially when there is any thing worthy of special mention, or when any new feature is introduced. Suggestions calculated to make these meetings more beneficial are always received with favor by us, and we will gladly publish them.

Mr. Chas. T. Doyle, of Walkerton, Ont., has sent us a long account of his great exertions in disseminating choice seed wheat in Grey, Huron and Bruce. We wish friend Doyle the best success in his enterprise.

Farmers' Associations

BY S. L. PETERS, OTNABOG, N. B.

The rapid strides which improved agriculture is now making in this "Canada of Ours," is in my opinion largely due to the numerous agricultural associations established in our country. As iron sharpeneth iron, so do men's minds, when brought in contact with each other, quicken and expand. Experiences are given, ideas exchanged, practices carefully criticised. Men are drawn out of the old ruts by the actual experience and convincing arguments of their brother farmers. In short, these farmers' associations, if properly conducted, are vast schools of agriculture, where each by turn may impart to the many something new, something valuable to all.

We in New Brunswick watch with interest for the reports of proceedings of your Agricultural and Arts Association, Dairymen's Association, Fruit Growers' Association, Stock Breeders' Association, and your Agricultural Commission of Ontario, as they are published in a condensed form in the ADVOCATE. How much impetus has been given to the development of your improved agriculture by these institutions is something of which the farmers of Ontario are the better judges; but sure it is that much valuable service has been rendered by them, and the farmers, as well as the country, been largely benefited. In addition to these organizations, the agricultural societies of your townships, and the numerous fairs which have been successfully held under their jurisdiction, have afforded a wide field for information and comparison. In this Province we have for quite a number of years enjoyed the advantage of local agricultural societies in the several counties, and very much has been accomplished through their instrumentality. Greater interest is being awakened in the different breeds of stock and improved systems of husbandry. Farming is beginning to be looked upon as an occupation and science that every man is not qualified to follow or grapple with successfully without much preparation and experience.

Not possessing any of the Provincial associations of which Ontario can boast, yet believing strongly in the good they accomplish, quite a large number of the farmers in the various sections of the Province sought for and obtained the formation of a Provincial Farmers' Association for New Brunswick, the sixth annual meeting of which will be held at Hopewell, County of Albert, on the first Wednesday in February, 1882. The meetings of this body of farmers have always been largely attended and very interesting. I think it can be safely said that it has a strong hold in the country. Various subjects bearing directly on our agricultural pursuits are discussed at its annual meetings and much good has already been accomplished.

The question might fairly be discussed as to whether it would not be to the advantage of the agriculture of the Dominion to have a yearly gathering of the leading farmers of the several Provinces at some central point, where discussions might be held on agricultural topics as viewed from a Dominion standpoint. Such a course is now being adopted in the United States by Commissioner Loring, who, I notice, has issued a call to the officers of all agricultural organizations, as well as leading farmers, in the United States, to assemble at Washington in the month of January next. The convention will be composed of Professors of Agriculture from the various Agricultural Colleges, stock breeders, dairymen, market gardeners, fruit growers, members of the different State Boards of Agriculture, &c.

England has for years been drawing large supplies of food from North America, and will continue to do so. The question as to what proportion of the necessary supply will the Dominion of Canada be in a position to furnish is an important one, and fraught with the deepest interest to every Canadian. The "British Isles" will for many years, no doubt, offer to us the most profitable market in which to dispose of our surplus agricultural produce. To know just what those markets demand, in order to secure the highest price, is a matter of much importance to every farmer and stock-raiser; and possibly in no way can such knowledge be imparted so readily and satisfactorily as through the agency of a convention of the leading farmers of the Dominion.

The suggestion is made with a view of eliciting the opinions of others through the columns of the ADVOCATE.

[It is our opinion that a Farmers' Alliance would be of great benefit to the agriculturists of this Dominion, particularly so if the association could be conducted in an independent, open and free manner, and provision made against centralizing the power or influence too much in one locality, and too long on any individual. This suggestion comes from New Brunswick, and as Mr. Johnstone, the late Principal of the Ontario School of Agriculture, suggested the same course, perhaps some persons in our other sister Provinces will add their opinions in regard to it. We would feel obliged to Mr. Johnstone, the late Principal, if he could furnish us with the rules, regulations or by-laws; or perhaps Mr. Peters could forward us the rules that govern their Alliance. We shall be pleased to furnish further information in regard to the above question.—ED.

Sheep at the Chicago Fat Stock Show.

Though very good, the display of sheep at this show scarcely equalled its predecessor of 1880. While in some of the rings were to be seen animals the peer of the best, both in flesh and breeding, there was evidently a falling back in the standard of other rings—notably the car-load lots. These latter, while in fair mutton condition, seemed out of place in an exhibition of which the word *fat* is the designative title. In the absence of competition, the prizes were divided between the only two car lots in the show—the first going to a fair lot of graded Southdowns, the second to a lot of low grade Shropshires—leaving the third prize to revert to the treasury through absence of competition.

As heretofore, for the convenience of exhibitors, the sheep were first shown in competition with their own breeds—Long Wools, Middle Wools, Fine Wools—before being grouped in general competition for the sweep-stakes prizes.

In the Long Wool rings the effect of the Cotswold boom was apparent—with the exception of two or three Leicester grades, no other variety contesting the honors. The demand for rams, which has for several years past been so highly satisfactory, has had its effect on the show of wethers in the Long Wool rings. Those shown were good, but their number was limited. The restriction of exhibits to animals other than those used for breeding purposes, as was to have been expected, limited competition in the ewe rings to barren animals and those too young for breeding.

As usual, the pens of the "Downs" proved a centre of attraction. In these the Shropshires contested the laurels—often successfully—with the hitherto peerless Southdowns, dividing the honors in a majority of the rings, and triumphing in the grand sweepstakes for "best ewe or wether in the show." This high honor has now been successively won by the Cotswolds in 1879, the Southdowns in 1880, and the Shropshires in 1881. Notwithstanding the twinge of chagrin which momentarily affected the champions of the less fortunate animals, there was apparent a very general admission that the victors were fairly entitled to their high honors.

The Sheep Department has no more interesting feature than the two pens of fine wool wethers, shown by the Merino Breeders' Associations of Western New York. Heretofore there has been no show of fine wool sheep worthy of consideration. A few imperfectly matured animals have been shipped in to carry off prizes by default—serving to encourage the too-prevalent error that the Merino is not to be considered as an element in the mutton product of the country. Ten fine wool wethers were shown, averaging in weight over 136 pounds, after remaining on the cars five days. Beside them was displayed their fleeces, sheared in 1881, average weight 18½ pounds of unwashed wool. A prominent Chicago butcher offered the outside price for the lot—only to find that he had been forestalled by an enterprising competitor from Detroit. Let the Merino be saluted as it comes into liue as a muttou producer which competitors for future honors may not safely ignore.

The failure of exhibitors was conspicuous in the slaughtering tests. But one ring—that for two year-olds—was filled; and one of the competitors in this withdrew before the hour for leading the block arrived—and for the first time since the tests have been opened to them, the sheep men have omitted the opportunity for vindicating their claims by the crucical test offered by the knife and block. The reasons for such omission will not be discussed in this connection. Whatever they are, it is to be hoped that in future shows this highly interesting feature—pregnant with information to the feeder, the consumer and the butcher—will not be so conspicuous a failure.—[Breeder's Gazette.

Care of Machines.

After the season for using them is over it will not pay to leave the harvesting machines in the fields or by the side of the highway. They can do no good in either of these places, but they will be seriously damaged if left exposed to the destructive influences of the weather.

The manufacturers say that when left constantly out of doors the machines last only about half as long as they would if they were protected from the weather when not in use.

Although not as expensive, and therefore not involving as heavy loss when neglected, plows, harrows, horse-rakes, and all other farm implements, are seriously damaged by exposure to the elements.

Not only do the implements which are left out of doors wear faster and break oftener, thus involving the necessity of frequent repairs, with the expense and loss of time inseparable therefrom, but they are also much harder to use than those which are properly housed. A reaper which has stood in the field all winter will draw much harder than one which was put under cover at the end of the harvest. Continued exposure of any machine involves the necessity of increased power, with increased liability of breakage, in its use.

It is a noticeable fact that in sections of the country where the farmers are rich and prosperous, it is seldom we find machines lying about the fields or stock running the roads or weathering the cold autumn rains and sleet; but, in sections where the farmers are poor, though the land may be fertile, we invariably find farm implements left in the field, in the summer their cattle running the roads, and in the late fall, when they should be in the stable, we find them shivering in the fence corner or seeking shelter in barns or other buildings the doors of which have been blown off. In such times their only food is frozen grass, or other unnutritious substances. Care and economy must be exercised in all matters relative to agriculture, or on the most fertile land nothing but a bear existence can be had, and that only by the hardest drudgery. The same men on the same land by careful management and a study of their business could be comfortable and respected, neither of which careless farmers are.

What the Farmer Should Study.

The farmer should study the laws of concentration. He should learn how to concentrate his crops into the best paying articles. Does he consider that butter, cheese, beef, pork and mutton represent only a certain amount of grass, hay and grain that his farm produces? That, instead of selling the raw commodities, he can, by putting them into these articles, get much better returns for his products? His study should be how to transform the raw products of his farm into something that is concentrated and that will bring him the most money. What he raises has to go to some market. By condensing it, little freight will have to be paid, and thus much will be saved. A farm should be a factory for changing the raw products into articles of general consumption that have a commercial value the world over—that are of the best quality, that keep well and sell well, and bring prices that will pay well for the skill, labor and capital employed in producing them.

The January number, besides other illustrations, will contain a fine original cut of Shropshire Down sheep, the prize winners at Provincial Exhibition. We hope, shortly, to give the commencement of a series of letters on stock, dairy and agriculture in the north of Scotland.

The attention of our readers is called to an able letter from Mr. John Carnegie, of Peterboro, Ont., member of the Board of Agriculture and Arts, on the Provincial Exhibition "jumble."

Any subscriber who desires a sample copy of the FARMER'S ADVOCATE for any intending subscriber, can send the name and P. O. address for same.

Bound volumes of the FARMER'S ADVOCATE for 1881, will be mailed, postage prepaid, to any address in Canada or the United States for $1.50. Orders can now be sent in.

A few volumes of 1880 still on hand, and can be obtained at the same price.

The Family Circle.

"Home, Sweet Home."

A Kiss Under the Mistletoe.

"You are really going to hang up that sprig of mistletoe, Winifred?" said the stately Gertrude Ponsonby to her gay young sister, as she was arranging the decorations for a Christmas party, on a bright, cold December day.

"I certainly am, Queen Gertrude. Have you any objection?" asked Winifred, demurely, looking up in the face of her elder aister, whom she dearly loved, devoutly admired, and unscrupulously teased.

"I do—well—I do think it rather—what shall I say?—childish, unless it is somewhat too fast for our style of guests," replied the first speaker.

Winifred burst into a merry laugh.

"Poor darling! Refined! Perfect pity!" she said, throwing her arms around her sister's neck and kissing her, like a spoiled child as she was. "Don't be alarmed; Louis St. Aubyn shall be duly informed that the magic circle is reserved for 'fast damsels and for children,' and that Miss Ponsonby has no 'connection with either party.' There, only see how beautiful it looks! And, by the way, I asked old Stamford to find a white camellia for your hair, my queen, and he promised to rummage the conservatory for the said blossom. Will that plead my pardon?" she added, coaxingly.

"You are a provoking little creature; and Heaven help the man who ventures on such a tiresome, wilful darling," returned the elder sister, returning the girl's kisses with a protecting fondness.

"Ah he would certainly be insane to attempt it, in the first instance!" returned the girl, dancing off in glee.

And Gertrude, grandly beautiful as she was, almost gave the palm of attraction, with a generous though doubting sigh, to the petite and piquante fairy.

They were the daughters of a widowed mother, but in easy circumstances, that enabled them to live in simple elegance, and mingle with the pleasant circle in their neighborhood; while the residence of a bachelor brother of their father's within a short distance of their villa, gave always the sanction of a host to their entertainments when they required his presence.

Within the last twelve-month a very pretty place in the immediate neighborhood had been purchased by a gentleman named St. Aubyn, a widower with an only son.

The father was a great invalid; but Louis had become so completely domesticated at "The Larches," (Mrs. Ponsonby's residence), and his father was so charmed with the high-bred mother and pretty daughters resident there, that the families had formed a closer intimacy than is some times the growth of years.

Still if there was any tenderer feeling than friendship on Louis St. Aubyn's part for his fair young neighbors, no one appeared to decide for which of the girls it was entertained; and it would have been difficult for the choicest observer to say whether the stately blonde Gertrude or the piquante brunette Winifred engrossed the largest portion of the young man's attention or thoughts. At any rate, neither of the parents appeared to object to the probable consequences of such an intimacy. Perhaps, as usual, they were blind to the feelings springing up before their eyes.

The evening arrived.

Gertrude was nearly ready; but though the beautiful hair was arranged in its most becoming style, she stood in a sort of dissatisfied pause before the cheval-glass.

"This horrid crimson flower will never do!" she murmured fretfully. "My pale blue silk can never stand such a vulgar contrast!"

And she glanced despairingly around at the fairy dress—all trimmed with delicate white lace, that accorded so well with her pale skin and soft bloom.

It was very trying, doubtless, for the only resource from the crimson camellia was an artificial flower, which had already done duty at two balls and dinners.

But there was no alternative, and, with a deep sigh, she seized the French spray of lilies of the valley, which was her *pis aller*, and was in the very act of raising it to her hair, when Winifred burst joyously in.

"See, Gerty! here's a lovely white camellia—with such leaves! I never saw anything to equal them! There, be quick! See, I am dressed already!"

And very charming the little creature looked in her amber and black costume, that contrasted so well with her brilliant eyes and hair.

Gertrude gazed with delighted surprise.

"How good of old Stamford! I suppose he found me one at last," she said. "And what a beauty it is—like wax-work!"

She placed it among her fair braids as she spoke, while Winifred archly pinned a slip of paper on the toilette table.

Gertrude's eyes rapidly caught the words, "To Miss Ponsonby—from L. St. A."

"There, queen Gertrude, I hope you are happy now!" said Winifred, gaily. "But make haste down stairs! I only hope the mistletoe will not spoil all!" she added demurely, as she danced out of the room.

Gertrude soon followed. The slip of paper had disappeared when the maid entered to clean the room immediately afterwards.

Perhaps it was thrown away!

* * * * * *

Louis St. Aubyn did not appear till an unusually late hour, and Gertrude's card was filled up far more closely than she wished in his absence; and it was while she was waltzing with one gentleman, and just before a rapid succeeding quadrille, for which she was claimed by another, that he came into the ball room, and requested her first disengaged dance.

Poor Gertrude fancied he looked cold and formal; perhaps her own manner was somewhat piqued and annoyed; for he went off, and at the end of the quadrille he was not visible, till she caught sight of him at the side of a delicate, lovely-looking girl, to whom he was talking with great interest.

She did not even know her, and could only suppose some of their guests had brought an unexpected visitor in their party.

But a strange gloom came over her, and she stole away as the guests were resting and taking some refreshments. and hid herself in a small back apartment, which opened into a dining-room, where the celebrated mistletoe bough was hanging from the centre chandelier, between the rows of tables now awaiting for their guests.

She heard voices approaching, and as she drew back to listen, she could just perceive the figures of Louis St. Aubyn and the beautiful girl in whom he had before seemed so much interested.

"It is the dining-room; surely we must not come here," said a remarkably weak voice.

"Oh, yes; I may take such a liberty here. I am privileged, I believe, and it is so long since I have seen you, and we have such heart-touching matters to discuss—have we not Ada, *ma belle?*"

And Louis gave an arch smile, and bending down, whispered something that brought the color to the girl's fair cheeks.

Gertrude dared scarcely breathe; her very heart was choked and swelling with grief, and shame, and indignant pride.

Louis spoke once more, and her ears were strained to listen to the words.

"Yes, Ada, we can, I trust, both be happy now; but this is scarcely the time to enter on all I have to say. We must return; and I want to find Gertrude for the next dance. Hist!—by jove!—what a sprig of mistletoe! Just the very thing for the occasion!" And, drawing the fair Ada under the branch, he pressed a kiss on her lips.

She laughed—blushed—and with a half arch, half reproving tap on his arm with her fan, they went off together in the direction of the ballroom.

Poor Gertrude! she sat cold and sick, as if stricken by sudden illness.

She never had guessed, never confessed the extent of her love for Louis St. Aubyn till now.

And to hear such words, when actually wearing on her brow his volunteered gift, when she could recall such numberless looks and words, and even gestures, that could scarcely be interpreted as aught but the indication of honorable love.

It was a terrible blow, and one that fell most hardy on a singularly proud and deep nature.

She had committed herself. She had given even Winifred the insight into her mind. What could she do? Where could she hide herself till she had crushed down the agony, and taught herself to wear a mask that could not but deceive her nearest and dearest?

She felt that her very face must be wan and haggard, her voice constrained. She must wait till the first shock was over, and then brave all, and suffer torture like a Spartan or a sage Indian.

So with dry, tearless eyes and a cold hand, which mocked the burning brow it supported, she rested on a small couch in the recess, and listened mechanically to the music and dancing, and only wondered when the advent of the party to supper might risk her discovery, and cause a search for the missing daughter of the house.

She closed her aching eyes in utter weariness. Life seemed so dark to her now.

How could she ever trust anyone more, even if this deep pain was conquered?

The music and the tread of feet sounded as if the crowd had actually gone frantic. How could anyone be so happy, so gay, and she so miserable?

Gertrude never knew how the minutes passed by till they certainly lengthened into an hour.

A kind of a dull apathy stole over her, and a voice said softly and doubtingly, "Gertrude——dear Gertrude, what is this?" she started as if in a deep slumber.

"Mr. St. Aubyn! This is extraordinary!", she said, gaspingly. "What could bring you here—in my private retreat?"

"I came to find you, Gertrude; your mother is anxious about you. She fears you are ill, to have left the dances so long."

"I am quite well. I will go to—to mamma," she murmured. "I am not wanted. Please to leave me, Mr. St. Aubyn."

"Not wanted? Not by me!—and you have not danced with me yet, Gertrude!" he said, reproachfully.

"You must excuse me. No doubt you would only be missed elsewhere—where you ought to be," she said, irritated at his seeming treachery.

He stood for a moment in wondering silence. Then, to her excessive annoyance, he gave a slight but irresistible laugh.

"Can it be?—am I so happy?—are you, indeed, resenting a perhaps. natural mistake?" he said, a bright flash of triumph illumining his features.

Gertrude's eyes were downcast, and a dawn of suspicion that she might have been too hasty came on her mind.

"Perhaps you may have been here when I brought my cousin here for air, and for a few moments' talk after her long absence," he said, with an arch smile, "and to exchange mutual confidences, dear Gertrude?"

"I—I really do not know—it is no affair of mine," she said, reddening, and trying to rise and pass him; but he stood right before her.

"No, Gertrude, not till you have heard the explanation which is due to you, after all I have said in manner, if not in words," he said firmly. "The simple truth is, that my cousin Adelaide Fance, who has been as a sister to me since boyhood, has just unexpectedly returned with her mother to our house, and I knew that I might venture to bring them to your party, even at the last moment. She has been betrothed most happily in your absence, and I was exchanging congratulations with her on her real and my wished-for happiness, when we strolled in here, and, I believe, enacted a foolish piece of sentiment into the bargain," he added, with a glance at the mistletoe.

"Gertrude," he resumed, drawing her more daringly towards him, "can you not guess what was the happiness I hope for, that I wished Adelaide to sympathize in? Will you not tell me whether you can love me, and whether this dear hand is to be given for life, as well as for the dance to Louis St. Aubyn, your true lover?"

She certainly did not speak; but then the said hand told a great deal instead of the lips.

And when they went into supper, Adelaide Fance's dark grey eyes looked significantly at her cousin and his companion when they passed near the mistletoe bough.

But Louis did not take advantage of its privilege. Perhaps he scarcely acknowledged its necessity in his present happy case.

Three months after, Gertrude and Adelaide were married on the same day to the lovers of their choice; and some twelve months after, when Winifred followed their example, Mrs. Fance and Mrs. Ponsonby agreed to share the home of the latter. But, so long as she lived, Gertrude preserved that memorable branch of the mistletoe.

S. D.

Minnie May's Department.

My Dear Nieces,—With this number we complete our labors for the year and make our last visit for 1881. We hope, however, to continue the acquaintance of all with whom we have had such pleasant intercourse for months and years now passed away, and when we consider what a beautiful volume the numbers for the year will make, and how much information it will contain at so trifling a cost, we settle down into the conviction that we have really done something toward making our friends both rich and intelligent. Doubtless our readers have discovered all this long ago, and we are, therefore, wasting both time and paper, so will think a little about what can be done to make the winter home pleasant and especially to secure a Merry Christmas and a Happy New Year. This we wish all our friends most heartily; but we have never accomplished much good by only wishing. A good deal of happiness depends upon the dispositions we cultivate, but none are independent of their surroundings. Christmas Day in country houses, far removed from business centres, is too frequently a dreary season, remarkable only for a big dinner and the absence of the usual routine of work. Where there are no children in the household there is some excuse, possibly, for the failure to observe this holiday in a joyful manner. Otherwise, it is unjust to the young folks, who are thereby defrauded of a rightful heritage. Every child is a subject for sympathy to whom Christmas tide comes and goes without marking the 25th of December as a red letter day. A distinguishing feature of Christmas has always been that of the decoration of the churches and the home, and we have often been both interested and pleased to observe the zeal and taste with which the ladies do this work, with very little assistance indeed from those who are stronger and more useless on such occasions. Nowadays, in all enlightened countries, Christmas is the day when people possessing love for their families and fellows manifest it by some gift. It is especially a happy day for the children. It matters little whether it is Kris Krinkle, St. Nicholas, Santa Clause, or papa and mamma who give them presents—the important fact is that somebody loves them, and manifests that love in a gift. No man who loves his child should allow Christmas to pass without giving it something that will make its heart rejoice, and render the day one to be remembered with pleasure. Minnie May.

Madam,—I am a small girl, but cannot think of doing without your paper, and seeing the premiums you offer, I have been canvassing and have got two new subscribers. I wish to try for one of the prizes, and if you wish to send me one, please send "Lorne and Louise."

Russell, Ont. Sarah J. N. A.

Recipes.

MINCE-MEAT FOR PIES.

Shred and chop very fine two pounds of beef suet: by dredging the suet occasionally with flour it chops more easily and does not clog; boil slowly but thoroughly, two pounds of lean round beef and chop fine, (mix all the ingredients as they are prepared;) stone and cut fine two pounds of raisins; wash and pick two pounds of currants; cut fine half a pound of citron; chop two pounds of apples, weighing them after they have been peeled and cored; a taplespoonful of salt, a teaspoonful of cinnamon, a grated nutmeg, a saltspoonful allspice, half as much cloves, half an ounce of essence of almonds, half a pint of brandy, and a quart of cider. This may be kept in a cool place all winter. If too dry add more cider.

IRON RUST STAINS.

Iron rust stains may be removed thus: moisten the stain with soft water and spread crystals of oxalic acid on it, wet these and dissolve them lay in the sun till the stain disappears; then rinse thoroughly in clear water. Or use lemon juice and salt. It is well to have a bottle of oxalic acid in the house, but it should be labelled *poison*.

OLD ENGLISH PLUM PUDDING.

One pound of raisins, stoned and cut small; one pound of currants, well washed, picked and dried; quarter of a pound of citron, cut fine; half a pound of suet, shredded and chopped very fine, almost like flour; half a pound of brown sugar, six eggs, a saltspoonful of ground mace, the same of allspice, half as much cloves, two teaspoonfuls of cinnamon, the same of ginger, one teaspoonful of salt, a nutmeg grated, one gill of brandy, a pint of milk, half a pound of bread crumbs, and half a pound of flour; beat the yolks of the eggs, one at a time, well into the sugar; add all the spices and the salt, then the brandy and milk; sift the flour and mix it well in; then the bread crumbs and all the fruit, last of all the whites of the eggs, beaten to a stiff froth; the pudding should be about the consistency of a plum-cake; butter and then flour two tin forms and put your pudding in them, (a two quart covered tin milk-can answers admirably;) have a pot with boiling water, the water to come about a third from the top of the form; put the form in the pot and let it boil uninterruptedly for four hours; have a kettle of boiling water, to add to your pot, as the water evaporates very rapidly. This pudding can be kept all winter in a cold dry place, and be warmed by boiling over for an hour.

SAUCE.

Four ounces of sugar and two of buter well creamed together; then beat an egg thoroughly into it, and two ounces of brandy.

TO TAKE OUT SCORCH.

If a shirt bosom or any other article has been scorched in ironing, lay it where bright sunshine will fall directly on it. It will take it entirely out.—[Buckeye Cookery.

Answers to Correspondents.

Dandruff.—R. R. K, says: "Soft water and persistent effort will free and keep the head free from dandruff. Wash the scalp and rub it thoroughly with the fingers twice a week, taking care not to wet the hair much beyond the roots. Then brush the hair well with a bristle brush. When the dandruff is once removed, the application once a week regularly will keep it away. It is of no use to wash it one week and neglect it the next.

A Subscriber.—What is the best way to make good chocolate? Ans.—Procure the pure French chocolate, if it is not desired very rich use half milk and half water, put a pint of this on the fire to boil, scrape one square of the chocolate fine, and when the milk boils take it from the fire and put in the chocolate, stir or mill it well with a chocolate miller, and in five minutes serve with the froth. Add sugar if desired when it is served. Chocolate must be served as soon as it is made, as it is an emulsion containing much oil, which soon separates and floats on the top of the liquid, and can never be brought to its first state again.

A Reader.—Is vinegar spoiled when frozen; I had some foozen last year and it seems not so good now as it was? Ans.—Freezing vinegar separates the water from the acid, and if the ice which forms on to a tub of vinegar on a cold night is removed, the vinegar is increased in strength in proportion. If the vinegar is repeatedly frozen and thawed the acid is decomposed and the vinegar weakened.

Little Sandy.—Being a backwoodsman and not knowing the rules of etiquette, and wishing to secure the consent of the parents to wed the lady I so much admire, I would ask for the proper way to address them. 2. Is it etiquette for ladies to bang their hair? 3. Is it in good taste for a lady to have her hair singled? 4. Is it etiquette to secure the consent of the parents first or the lady with a view to matrimony? 5. What do you think of my writing? Ans.—Do you mean that you wish to address them by letter? If so, we will give you a formula, although we think you might write a much more natural letter yourself. However, as Humphrey Clinker and Blue Johnnie are asking for the same thing, we shall give a form which may be modified to suit circumstances:

Dear Mr. Brown.—You must be aware of my attachment to your daughter, Angelina, and I now beg your permission to propose to her. I am in a position to keep a wife comfortably, and I think you know enough of my character and disposition to feel assured that I will do my best to make your daughter happy, should she consent to become my wife. Hoping that you will look favorably upon my suit,

I remain,
Yours sincerely,
Humphrey Clinker.

When both the lady's parents are living the letter should be addressed to the father; if the father be dead, the letter should be addressed to the mother, but never to both. 2. It is still fashionable to cut the front hair short. 3. Shingled hair is not now fashionable. 4. According to strict etiquette the parents should be consulted first, but nowadays it is quite usual to, as you put it, "secure the lady first." 5. It is poor.

Jennie F.—To kill the moths, you had better take your carpets up on a bright, sunny day, and give them a good beating; then sprinkle the edges well with cayenne pepper, camphor or snuff, when you lay them down.

A. G. O.—If you place your cider near the stove and put a little whiskey, and some sugar, and a sheet of note paper in it, it will soon become good vinegar.

Isabel.

BY MRS. SARAH M. WYMAN.

The prayers all said, the good-nights told—
On snowy pillow, coils of gold;
Two dimpled hands, quite tanned and brown,
Peep out beyond the white night-gown.

'Tis Christmas Eve, and Isabel
Lisps in the darkness, "Now I'll tell
You, Santa Klaus, just eb'ery fing
I want—A black and crimson wing

"For Maggie's hat, a drum for Ned,
For 'ittle Grace a trundle bed;
A gold-head tane for my papa,
Betause he's lame; and dear mamma,

"One 'ittle baby right from heaven,
And me tsome kittens, four, tix, tseven,
And that is all for them and me,
But lots for Lu and Will, you tsee,

"Poor Lu and Will! Oh, please to bring
Them toal, and shoes, and eb'ery fing;
For they've no h'ose nor milk nor bread,
Their mofer tsick, their father dead—

"Make her well, Santa K'aus! But no,
'Tis only God does that, and tso
I'll pray to Him and ask Him, too
To tsend the fings I want to you."

Two dimpled feet upon the floor,
Two knees as white as robes they wore,
Soft eyes like eyes the violets hold,
And this the prayer the dear lips told:

"Oh, God, I pray that you will make
Lu's mofer well, for Jesus' tsake;
And *my* mamma—tso 'fraid there'll be
Tsome awful fing befallin' me—

"She worries tso—If you would tell
Her you'd tate tare of Itsabel,
Then p'r'aps I'd let the baby stay
In heaven, till next Kristmas Day.

"The other fings I need not tell,
You k ow your 'ittle Itsabel;
Give Santa only what is best,
But *do* send Lu's, if not the rest."

Ah, precious darling, mother hears,
Rebuked, her penitential tears
Attest full stores for Will and Lou,
And God provide, sweet child, for you.

Life.

Was it not said by some great sage
That life is an unwritten page?
We write our fate, and when old age
Or death comes on,
We drop the pen.

For good or ill, from day to day,
Each deed we do, each word we say,
Makes its impress on the clay
Which molds the minds
Of other men

And all our acts and words ars seeds
Sown o'er the past, whence future deeds
Spring up to form our wheat or weeds.
And as we've sown
So reap we then.

—*Argosy.*

We've Always Been Provided For.

"Good wife, what are you singing for?
You know we've lost the hay,
And what we'll do with the horses and kye is more than I can say;
While like as not, with storm and rain, we'll lose both corn and wheat."
She looked up with a pleasant face, and answered low and sweet,
"There is a Heart, there is a Hand, we feel but cannot see—
We've always been provided for, and we shall always be."

He turned round with a sudden gloom.
She said: "Love, be at rest;
You cut the grass, worked soon and late, you did your very best.
That was your work; you'd naught else to do with wind and rain,
And do not doubt but you will reap rich fields of golden grain;
For there's a Heart and there's a Hand, we feel but cannot see—
We've always been provided for, and we shall always be."

"That's like a woman's reasoning—we must because we must."
She softly said: "I reason not, I only work and trust;
The harvest may redeem the day—keep heart, what'er betide,
When one door shuts, I've always seen another open wide;
There is a Heart, there is a Hand, we feel but cannot see—
We've always been provided for, and we shall always be.

He kissed the calm and trustful face, gone was his restless pain;
She heard him, with a cheerful step, go whistling down the lane;
And went about her household tasks, full of glad content,
Singing, to time her busy hands, as to and fro she went:
"There is a Heart, there is a Hand, we feel but cannot see—
We've always been provided for, and we shall always be."

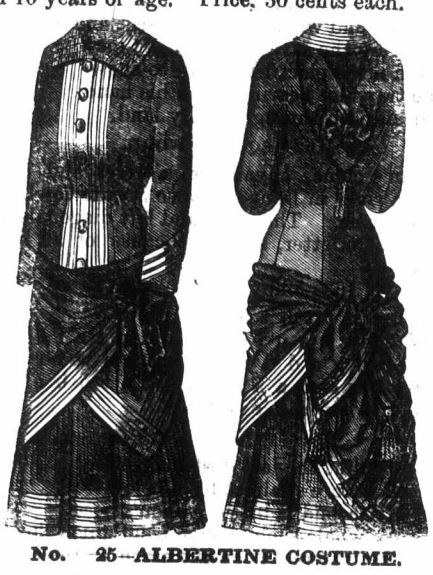
Days come and go—'twas Christmas tide, and the great fire it burned clear,
The farmer said: "Dear wife, it's been a good and happy year;
The fruit was gain, the surplus corn, has bought the hay, you know."
She lifted then a smiling face, and said: "I told you so!
For there's a Heart, and there's a Hand, we feel but cannot see—
We've always been provided for, and we shall always be."

WILDNESS is a thing which girls cannot afford. Delicacy is a thing which cannot be ost or found. No article can restore the grape its bloom. Familiarity without confidence, without regard, is destructive to all that makes women exalting and ennobling. It is the first duty of a woman to be a lady. Good breeding is good sense. Bad manners in a woman is immorality. Awkwardness may be ineradicable. Bashfulness is constitutional. Ignorance of etiquette is the result of circumstances. All can be condoned and not banish men or women from the amenities of their kind. But self-possessed, unshrinking and aggressive coarseness of demeanor may be reckoned as a State's Prison offence, and certainly merits that mild form of restraint called imprisonment for life. It is a shame for women to be lectured on their manners. It is a shame that they need it. Do not be restrained. Do not have impulses that need restraint. Do not wish to dance with the prince unsought; feel differently. Be sure you confer honor. Carry yourself so lofty that men will look up to you for reward, not at you in rebuke. The natural sentiment of man toward woman is reverence. He loses a large means of grace when he is obliged to account a being to be trained in propriety. A man's ideal is not wounded when a woman fails in worldly wisdom; but if in grace, in tact, in sentiment, in delicacy, in kindness, she should be found wanting, he receives an inward hurt.

Fashion Notes.

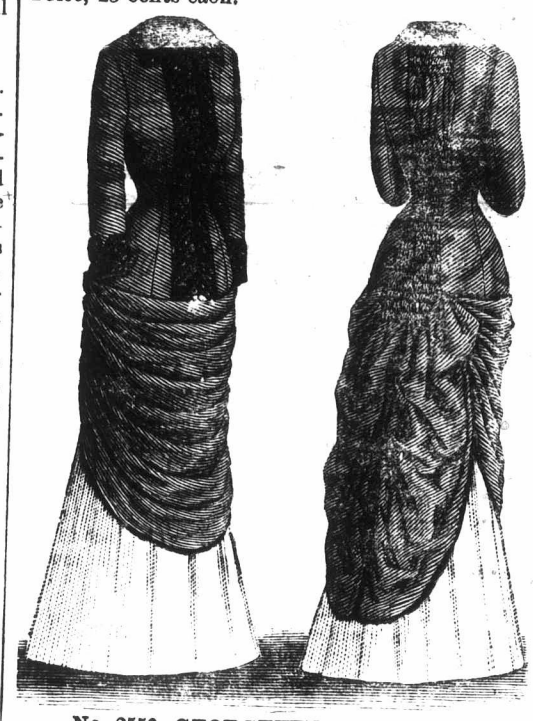
No. 3225—LIONEL SUIT.

A stylish suit, arranged with a double-breasted, short, sacque coat, a single-breasted vest, and knee-pants cut plain at the top. The size for eight years requires three yards and a half of goods twenty-seven inches wide. Patterns in sizes for 8 and 10 years of age. Price, 30 cents each.



No. 25—ALBERTINE COSTUME.

A ht-fitting cuirass basque, to the bottom of which s added a deep box-plaiting, forming the skirt, is the foundation upon whi h handkerchief draperies are disposed in this stylish design. A small capuchin hood and a turn down collar complete the dress. The size for ten years requires seven yards and three-quarters of goods twenty-four inches wide. Half a yard of silk will ine the hood. Patterns in sizes for from 8 o 12 years. Price, 25 cents each.



No. 2550—GEORGETTE POLONAIS.

Adapted to all classes of dress goods. For a medium size nine yards and a quarter of goods twenty-four inches wide will be required; one yard and a quarter of contrasting material will trim as illustrated. Price, 30 cents each. A. J. Pell, agent for Mme, Demorest, 345 Notre Dame St., Montreal, can furnish patterns, etc.

Oatmeal as Food.

Says an Irish paper:—Oatmeal is a food of real strength and nutrition, having claims to be better known and more widely used than it is at present. Of much service as a brain food, it contains phosphorus enough to keep a man doing an ordinary amount of brain work in good health and vigour. All medical authorities unite in the opinion that eaten with milk, it is a perfect food, and having all the requisites for the development of the system, it is a pre-eminently useful food for growing children and the young generally. Oatmeal requires much cooking to effectually burst its starch cells, but when it is well cooked it will thicken liquid much more than equal its weight in wheaten flour. The oats of this country are superior to those grown on the Continent and in the southern part of England, but certainly inferior to the Scotch, where considerable pains are taken to cultivate them, and it is needless to point out that the Scotch are an example of a strong and thoroughly robust nation, which result is justly se down as being derived from the plentiful use o oatmeal. Dr. Guthrie has asserted that his countrymen have the largest heads of any nation i the world—not even the English having such larg heads—which he attributes to the universal s o oatmeal, as universal it is, being found alike on the tables of the rich and the tables of the poor in the morning the porridge and in the evening the traditional cake. The two principal ways of cooking porridge and cake (bannock), which I will describe, and also some other modes of cooking to afford an agreeable variety of dishes. First, then, we will commence with a receipt for porridge:—To three pints of boiling water add a level teaspoonful of salt and a pint of coarse meal, stirring until the meal is diffused through the water—about eight or ten minutes. Cover it closely then, and place it where it will simmer for an hour; avoid stirring during the whole of that time. Serve hot and with as little messing as possible, accompanied with milk, maple syrup or sugar, and cream. To make oatmeal cakes, place in a bowl a quart of meal, add to it as much cold water as will form it into a soft dough, cover it with a cloth fifteen minutes to allow it to swell, then dust the pasteboard with meal, turn out the dough and give it a vigorous kneading. Cover it with the cloth a few minutes, and proceed at once to roll it out to an eighth of an inch in thickness; cut it into five pieces cook them on a griddle, then finishing them by toasting them in front of the fire.—[Cultivator.

To Clean Poultry.

BY MRS. HENRY WARD BEECHER.

Many complain of a very peculiar and offensive taste in some parts of poultry, particularly in turkeys, geese and ducks. They cannot understand why this should be so, when other parts are perfectly sweet and palatable. It is always the lower part of the body of the fowl—the back, side bones, &c.; and unless the bird is on the verge of decay, from having been kept too long, and quite unfit for use, it is usually the inside of these pieces, objectionable. We find no difficulty in discovering both the cause and the remedy, at least to our that come in contact with the entrails, that are own entire satisfaction.

Many cooks object to washing poultry at all after cleaning them, but claim that wiping them with a dry cloth is quite sufficient. We cannot think this idea is neat or advisable, and are sure we could detect this unpleasant flavor in any bird that has not been carefully washed. We should earnestly advise giving them a thorough washing in good cold water, but by no means allow them to remain in the water a moment longer than is necessary to perfectly cleansing of all the parts, Drain in immediately, hanging them up by the neck a few minutes; wipe again, and put a clean piece of charcoal inside, and hang in a cool, dry place.

A stiff whist broom or straw brush is better to remove the dust and dirt from a horse's legs than a currycomb. Many horses with thin skin are exceedingly nurvous, which often degenerates into viciousness.

Uncle Tom's Department.

MY DEAR NEPHEWS,—

This year Xmas comes on Sunday, and, strange to say, Easter was on the same day of the week; one represents, *1881 years ago*, the birth of our Saviour; the 2nd His rising again after having been sacrificed by the Jews. On both occasions we feel as happy as the day is long, but particularly on Xmas, for it comes at the time of the year when the weather is beautiful, and such merry sounds come with it, not only the ringing of church bells, but also the jingle of sleigh bells, as well as the merry voices of you, my children, on your first waking up and finding what good things Santa Claus has put in your stockings while asleep. Many years ago, when I was a little fellow like yourself, I made up my mind to stay awake in bed and see for myself what Santa Claus looked like, and how he could have big enough pockets to carry all the presents for all the children for five miles around, for, at that time, I did not know that the world was any larger; but, in the midst of thinking and trying to keep awake, I fell asleep and woke up again by the sun shining through the blind, or my mother calling out breakfast, I cannot remember just which; at any rate it was Xmas, and the way I ate the roast goose and plump-pudding makes me almost sick to think of it now, for the day after Xmas I had to take castor oil and a lot of other nasty stuff; if you will only take example by the way too much eating affected me, and don't eat any candies before breakfast, you will enjoy by far a much happier Xmas, this year. In the middle of the ocean every sailor celebrates Xmas day; they generally have service on deck and shake hands. Even those who at other times during the year will hardly speak, on this day they wish each other the greatest joy; the day before everything is washed as clean as a new copper, the sails seems much whiter, and the foam and spray dashing up against the ship's side would say, if they could only speak, "On this day was born, in the City of David, a Saviour, who is Christ the Lord."

The poor sick children in the hospitals look forward for weeks, and sit up in bed making wreaths for the coming Xmas, which, to some of them, may be their last, but does that make them the less happy, to go to God who set this day apart for Himself, for this one day in the year is an example of every day we shall spend with Him. You must all go for a walk in the afternoon, and please your mammas by coming home in good time for tea, with bright, shining, rosy cheeks, and, best of all, a splendid appetite well earned by a pleasant day's enjoyment; then, after one more play with your presents, your poor tired eyelids won't keep open, and your nice round mouths, for some reason or other, will get into the way of opening, because you are tired out; so with a kiss all around—off to bed. Good night!

In looking over my list of those who have sent the most correct answers to the puzzles since last May, when I promised the ADVOCATE free for 1882, I find that none have answered all; but Wm. Howell, of Carlow P. O., Ont., and Minnie G. Gibson, of Kars P. O., Ont., have answered nearly all the puzzles, therefore I will give them each the prize. And credit is due to Chas. M. French and Chas. S. Husband for good answers. But no one has written letters worthy of a prize. For 1882 we will offer our prizes for Minnie May's and Uncle Tom's departments next month.

UNCLE TOM.

Paper pulp made from sawdust is to be sent to England from Welland, Ont. It will be tried at an English factory, and the paper sold as an experiment. If successful, several capitalists will start a factory at that place.

PUZZLES.

159—CHARADE.

My first was growing in the field;
It promised for a famous yield;
My second was all around it.
Search the map of England through,
My whole to you 'twill bring to view,
You then may boast you've found it.

160—DECAPITATIONS.

1—Whole, I am a fop; behead me and I am a spring; behead me again, and I am a measure.

2—Whole, I am dexterity; behead me, and I am to slay; behead me again, and I am unwell.

3—Whole, I am a small thing; behead me, and I am a weapon.

161—ENIGMA.

I'm on the land, and I'm on the sea,
Wherever you turn you'll sure see me;
I'm in your rooms, and I'm in your stores,
And I used to guard Old England's shores;
I'm hard, I'm soft, I'm both heavy and light,
And I'm scarcely ever out of your sight;
I'm thickly spread in the far-off west,
And deep in the earth I lie at rest;
In the shape of a substance you've often seen,
When old Father Winter hides the green
Of summer, with thick coat of snow,
And fun goes on 'neath the mistletoe;
I have a sweet scent, and yet none at all;
I'm brown and white, and I'm large and small;
I'm used by the savage to slay his foe;
And I'm often placed the way to show
To the traveller bearing me in his hand,
To aid his path through a hilly land.

162—SQUARE WORD.

A man's name, advantage, a river and lake in Brazil, a river in Denmark, also a waterfowl, signs used in music. The right and left diagonals, read to the centre letter, show the cause of all human misery.

163—DROP-LETTER PUZZLE.

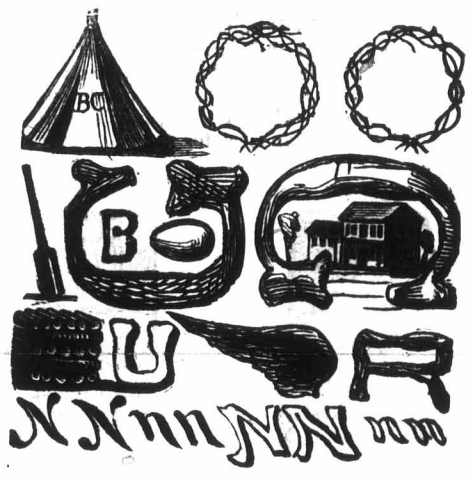
T b o n t t b t a i t l q l t o
W e h r t s n b e i t e m n t s f e
T e s i g a d d r w o o t a e w f r w e
O t t k a m a a n t a s a o t o b e
A d b o p s n e d t e

164.

My first the last destructive foe
Of nature's fairest form below;
My second is brave Albion's boast,
My whole such change from union flows,
The bitterest boon the earth bestows.

—JOHN FLEMING.

165—ILLUSTRATED REBUS.



Answers to November Puzzles.

152—War and love are strange compeers,
War sheds blood and love sheds tears,
War has swords, and love has darts;
War breaks heads, and love breaks hearts.

153—W, one, uncle, elk, e.

154—Carrie.

155—I saw Easau kissing Kate. The fact is all three saw I saw Easau. He saw me. She saw I saw Easau.

156—Chair, hair, air.

157—Envy is a self-execution.

158—Wrist, rover, ivory, serfs, tryst.

This world belongs to the energetic.

He who is perfectly vanquished by riches can never be just.

Names of Those who have Sent Correct Answers to Nov. Puzzles.

W. J. Workman, Wm. E. Serson, Selina J. Snyder, Amy A. Lancaster, Minnie G. Gibson, W. Howell, Enos Marr, Addie Richards, John Dearing, John E. Fleming, Katie Ellis, A. G. Gurney, Jessie Munro, P. T. Ketchum, Tom Wilkinr, Robt. Wilson, Ada Graham, Bert L. Switzer, Harry Johnston, Gussie Gordon, Helen McMann, Flora H. Hunter, B. S. Moore, Janie Gouinlock, Dora Evans, George Smith, F. Lancaster.

Mistletoe at Christmas Tide.

The hanging of the Mistletoe is the cause of much frolic and laughter in the house. It is a rule that whoever is passing under the mistletoe-bough must submit to being kissed then and there by whosoever chooses to take that liberty. As a bough usually hangs from the centre of the ceiling, spreading over a large space, it follows that there must be much dodging or much kissing. I am inclined to think that there are both.

The origin of this use of the mistletoe is not known; but we know that more than eighteen hundred years ago, when the glad stars sang together over a manger at Bethlehem, and wise men brought gifts of gold, frankincense and myrrh to a young child in the peasant mother's arms, England was a chill, mist-covered island, inhabited only by savages who wore garments of skins, and lived in huts of mud and stone. Among these savage Britons there were pagan priests called Druids. These priests were a mysterious folk, who lived in dense woods far away from other men, and who, in the gloomy solitudes of the forest, performed strange, secret ceremonies. The "sacred groves," as they are claled, were of oak; for the oak was a divine tree, according to Druidical religion. Within these sacred groves, the priests, it is recorded in history, offered their sacrifices, and in some manner not now known, they employed the mistletoe. But all mistletoe was not sacred to the Druids. They would have none but that which clung to the trunk and was nourished by the sap of the divine oak. To them the apple-tree mistletoe which modern England uses so freely in her holiday festivities, would be a worthless and common thing.

When, in later centuries, England was taught the Christian religion by priests who went thither from Rome, the people, though professing a belief in Christ, retained many of their heathen rites and customs changed from their original meaning and purpose. At any rate, from the Druids has come the modern usage of the mistletoe-bough, strangely preserved in festivities which commemorate the birth of Him whose pure worship destroys all heathen superstitions.

"I Beg Your Pardon."

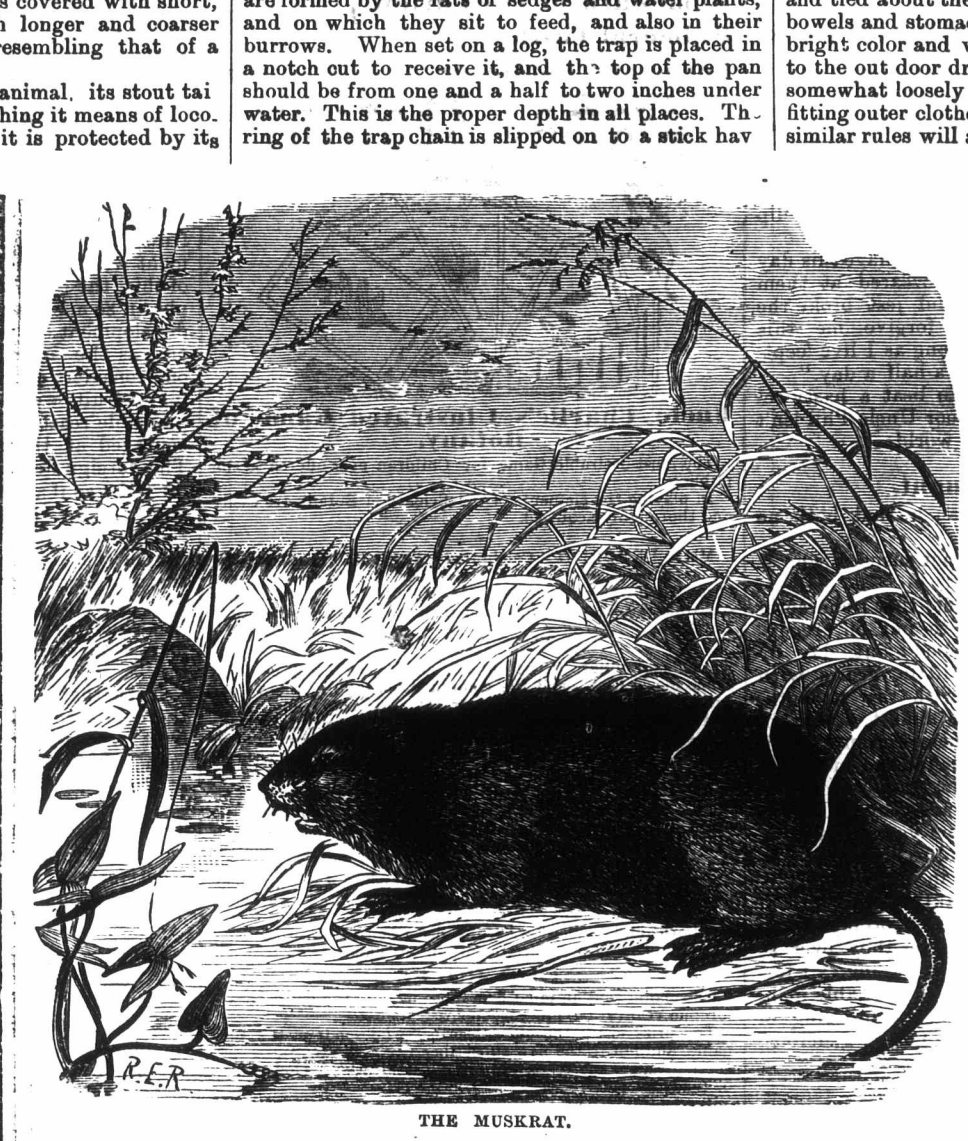
A civil word is the cheapest thing in the word, and yet is a thing which the young and happy rarely give to their inferiors. See the effect of civility on a rough little street boy. The other evening a young lady abruptly turned the corner, and very rudely ran against a boy, who was small and ragged and freckled. Stopping as soon as she could, she turned to him and said: "I beg your pardon; indeed, I am sorry." The small, ragged and freckled boy looked up in blank amazement for an instant; then, taking off about three-fourths of a cap, he bowed very low, smiled until his face became lost in a smile, and then answered: "You kin hev my parding, and welcome, miss; and yer may run agin me and knock me clean down, an' I won't say a word." After the young lady passed on, he turned to a comrade and said, half apologetically: "I never had any one ask my parding, and it kind o' took me off my feet."

A Western judge was approached by a verdant couple who wanted to be married. The would-be groom asked the price of tying the knot, and was told it was $1. "Can't you take beeswax?" inquired the rustic. "Yes," said the squire. The beeswax was brought in, and upon being weighed was found to be worth just 60 cents. "Waal," said the anxious groom, "tie the knot, and I'll fetch more wax next week." "No, sir; I don't trust; that is against the rules of the office." Slowly the disappointed youth turned to go out, saying: "Come, Sal, let's go." "I say, mister," answered Sal, with a woman's wit, "can't you marry us as far as the wax will go?" "Yes, I can, and I will," responded the squire laughing, and he did.

The Muskrat.

The muskrat abounds in the regions of North America between the 30th and 60th degrees of latitude, except in some portions of the South-eastern States. The body of a full-grown animal is about fifteen inches long: tail ten inches. The body is thick and round, with a short head and indistinct neck; incisors large; eyes small, lateral; ears short and hidden by the fur; thighs hidden in the body; legs very short, so that when the animal walks the body touches the ground; legs and feet covered with short, shiny hair; hind feet with toes flattened and partly palmated; soles and toes margined with rigid hairs; claws strong; tail large, flattened laterally, larger in the middle, tapering to a point at extremity; it is covered with small brown scales, interspersed with short black hairs. The peculiar secretion which gives this animal its name is found in glands at the root of the tail. This musky fluid is more abundant in spring than in thefall. The whole body is covered with short, downy fur, intermixed with longer and coarser hairs; its skin somewhat resembling that of a beaver.

The muskrat is an aquatic animal, its stout tai and muscular hind legs furnishing it means of locomotion in water, from which it is protected by its thick, downy fur. Its movements on land are slow and awkward, and with its tail trailing on the ground and feet wide apart, it makes a singular track; if in snow or mud, the mark of its low-set body is seen.



THE MUSKRAT.

Along swift streams and by clear water muskrats live in burrows; but in marshes and ponds and along sluggish streams they build houses formed of sticks, rushes, leaves of the arrowhead and pond lily, and other aquatic plants, which they stick well together with mud. In the centre is a comfortable chamber, entered only through a hole from below the surface of the water. This is the winter home, more than one family building and occupying the same house. Near by, in the bank, is a burrow with numerous and extensive galleries, to which they retire when driven from their houses by hunters, or flooded out by high waters. These burrows always have their entrance under water, and sometimes are rods in length, though at no great depth below the surface of the bank. The house when completed is three or four feet above the water, and looks like a small hay cock. If destroyed by hunters, the repairs are begun the next night and proceed so rapidly that the dwelling is usually restored by morning. The houses are usually washed away by the high water in the spring, and are rebuilt every season.

The muskrat is chiefly nocturnal, though in the day it is not uncommon to catch a glimpse of it as it moves rapidly through the water, or dives suddenly to the mouth of its hole. It feeds in summer upon the leaves of various water plants, the arrowhead being an especial favorite; and sometimes, wandering on the land in quest of food, it eats grasses, and if found convenient, it relishes Indian corn, melons and other vegetables. It consumes great quantities of muscles in some of our rivers. Collecting them from the bottom, it carries them in its teeth to a log or stone, where, sitting upon its haunches and grasping them in its fore paws, it skillfully opens the shell with its incisors. The greatest injury it commits is by burrowing in embankments formed to confine water, mill-dams being often much damaged in this way. Though during the winter several families live in the same house, when warm weather comes on they pair and take to their burrows, where they rear their young, of which they have from three six in a litter, and not unfrequently three litters in a season. The muskrat is courageous when attacked; males often have fierce battles with each other. Its chief enemies in winter are the mink and the otter; upon land it is captured by various mammals and rapacious birds. When flint guns were used, it was almost impossible to shoot one while in the water, so instantaneously do they dive upon the slightest alarm; but they cannot do this quickly enough to escape the percussion gun, at medium range and with heavy shot or a ball.

The muskrat is one of the easiest of animals to entrap, and is caught in the box trap and deadfall, but oftener in the common steel-trap. The proper time to trap them is from the middle of February or first of March to the middle of April. The fur is then prime and the rats are full grown. The traps are set on logs lying partly in the water, on which is seen the signs "or excrement of the rat, which resembles that of the Norway rat, only that it is larger, on bays or feeding beds," which are formed by the rats of sedges and water plants, and on which they sit to feed, and also in their burrows. When set on a log, the trap is placed in a notch cut to receive it, and the top of the pan should be from one and a half to two inches under water. This is the proper depth in all places. The ring of the trap chain is slipped on to a stick having a hook left near the bottom and a crotch at the top. The sharpened lower end of this is thrust firmly into the bottom in water deep enough to drown the muskrat; otherwise it will gnaw off its legs and escape. Muskrats are also trapped in their houses and in their burrows in the fall; but a large proportion of those taken are so young and small as to be nearly worthless. A little of the animal's musk placed near the trap will attract them. Muskrat skins are not in such high repute as several years ago, when they were extensively used in this country and exported in large numbers to England to be made into "beaver" hats. The flesh is dark and not very inviting-looking meat. The musky secretion is saved by some trappers. It is sold for perfumery, doubtless under the name of Clivet Musk, and most likely it is just as good as that.

An old Irish story of Irish ruffianism goes as follows: A man having been fined for a brutal assault in Dublin, the sum of $5, turned in court to the unfortunate prosecutor, and said, "Bedad, wait till I get you in Limerick, where batin's so chape! shure I'll put a few marks on yez to carry to the grave wid yez!"

Household Affairs.

The winter dress for children is a serious matter for consideration. Children often suffer in this respect, for fashion's sake, much more than older persons. Their short clothes expose their tender limbs to cold which they are not able to resist; and yet it is not necessary to cumber them with inconvenient clothing. The present fashion exposes the nether limbs too much and some provision should be made for better protection. Boys with short trousers should have warm knitted woollen stockings long enough to come up above the knees, and the trousers should be tied or buttoned below the knee to keep out the cold. Under-drawers should be worn in all cases to fasten at the ankle, but this will not be a full substitute for closed trousers. Canton flannel is a warm and excellent material for under-drawers. A soft flannel under-shirt with double breast will protect the lungs. A knitted or crocheted girdle made broad and tied about the waist will greatly protect the bowels and stomach. This may be made of some bright color and will make a picturesque addition to the out door dress. The outer dress should fit somewhat loosely; there is more warmth in loose fitting outer clothes then in tight ones. For girls similar rules will apply. A very comfortable undersuit consists of waist with long sleeves and long drawers to fit around the ankles, buttoned together at the waist. This may be made of soft shaker flannel, which is of wool and cotton, or of fleecy canton flannel of good quality. Long stockings are drawn over the knee and full drawers of colored flannel buttoned over the stocking are not too warm. The outer waist should be well protected by lining and the skirts may be made scant and reduced in weight so as to relieve the shoulders and waist. A bright colored girdle or sash will be additional protection.

The Flower Garden.

There are few flowers more gorgeous in summer gardening than the lily; but it is only occasionally that we see very good success with them. Most people fail through having the roots planted where the ground is hot or dry. The lily plant, that is, the top, rather likes an open place to flower in, but the roots love a cool and shaded place. There is scarcely anything more beautiful in spring than a bed of hyacinths and tulips well intermixed. The hyacinths go out of flower just as the tulips come in. In the spring gladiolus and tuberoses can be placed between these; and if desirable, some flowering bedding plants, and in this way the gaiety and interest can be preserved from spring to fall. Crown imperials are capital things for the centre of small beds, and the regular bedding plants can go around them. Narcissus keep their foliage too long after flowering, as does the snowdrop. These can hardly be made available where regular bedding is desirable for summer. They are best in odd patches by themselves. Crocus does well anywhere. It may even be set in the grass about the lawn, as it is generally over before the first mowing takes place. But it would not be admitted into our best kept lawns. The vast tribe of lilies come in rather late for spring gardening, but few will care to be without them. Besides these there are many little items which are noted in almost all bulb catalogues, from which many interesting spring blooms can be had. No one will go amiss in looking well to this class of plants. The time will probably come when bulbs will be made a specialty by cultivators then the earth will be especially prepared fo; them, and everything made just to their likingr —[Gardener's Monthly.

A Two-and-a-Half-Dollar Christian.

There are a great many people in their religion that remind me of "Uncle Phil," a pious old darkey of the old times in Texas. Well, Phil was a fervent Christian with a great gift of prayer. He attended all the Saturday night prayer meetings on the neighboring plantations, and could pray louder and longer than any of the brethren. But Phil had one weakness—he dearly loved money, and, different from the negro generally, he loved to hoard it. Near by us lived a man who, not troubled about any scruples, would pay Phil a dollar to work in his field on Sundays. One Sunday night as Phil came home after dark I accosted him with:—

"Where have you been, Phil?"

"Oh, just knocking about, Massa."

"You have been working for Miller."

"Well, you see, Massa, the old fellow is in needs, and he jest showed me a silver dollar, and I jest couldn't stand it."

"Ain't you afraid the devil will get you for breaking the Sabbath?"

Phil scratched his head a minue and said:

"I guess the Lord 'll 'scuse me, Massa."

"No. He says 'Remember the Sabbath day and keep it holy."

Phil went off looking pretty sober, and it was not long before I heard his voice in fervent prayer back of the barn, and so I thought I would slip down near enough to hear.

"Oh Lord!" I heard him say, "I have this day ripped and teared, cursed and sweared at them confounded oxen of Miller's and jest broke the Sabbath day. O Lord! please forgive me this time; I'll never do it again as long as I live 'cepting he gives me two dollars and a-half a day."

At this point I was obliged to beat a hasty retreat, but I am thinking that poor Uncle Phil isn't the only $2.50 Christian in the world.

Gems of Thought.

No man is more miserable than he that hath no adversity.

It is the enemy whom we do not suspect who is the most dangerous.

Many people seem to forget that character grows; that it is not something to put on, ready-made with womanhood or manhood; but, day by day, here a little, and there a little, grows with the growth, and strengthens with the strength, until good or bad, it becomes almost a coat of mail. Look at a man of business—prompt, reliable, conscientious, yet clear headed and energetic. When do you suppose he developed all those admirable qualities? When he was a boy? Let us see the way in which a boy of ten years gets up in the morning, works, plays, studies, and we will tell you just what kind of a man he will make. The boy that is late at breakfast, and late at school, stands a poor chance to be a prompt man. The boy who neglects his duties, be they ever so small, and then excuses himself by saying, "I forgot—I didn't think!" will never be a reliable man. And the boy who finds pleasure in the suffering of weaker things will never be a noble, generous, kindly man—a gentleman.

There is a dreadful ambition abroad for being "genteel." We keep up appearance too often at the expence of honesty; and though we may not be rich, yet we may seem to be "respectable," though only in the meanest sense—in mere vulgar show. We have not the courage to go patiently onward in the condition of life in which it has pleased God to call us; but must needs live in some fashionable state, to which we ridiculously please to call ourselves, and all to gratify the vanity of that unsubstantial, genteel world, of which we form a part. There is a constant struggle and pressure for front seats in the social amphitheatre; in the midst of which all noble self-denying resolve is trodden down, and many fine natures are inevitably crushed to death. What misery, what bankruptcy, come from all this ambition to dazzle others with apparent worldly success, we need not describe. The mischievous results show th mselves in a thousand ways—in the rank frauds committed by men who dare to be dishonest, but do not dare to seem poor; and in the desperate dashes at fortune, in which the pity is not so much for those who fail as for the hundreds of innocent families who are so often involved in their ruin.

"My boast is not that I deduce my birth
From loins enthroned, and rulers of the earth;
But higher far my proud pretentions rise—
The son of parents passed into the skies."

Christmas Presents.

The FARMER'S ADVOCATE will make a very useful present to a nephew, neice or friend. By giving such a present you are entitled to one of our lithographs or chromos, which are sure to please. To those who wish to give a more expensive present, we would call attention to the solid silver-cased watch, advertised in this issue. As we have seen these watches, and also heard from persons who have carried them, we consider it the best watch for the price we have ever seen. You need not be afraid of s nding to Mr. Murray, as he is the leading jeweler in this city, and imports direct from Europe and the United States.

Manufacturing interests are in a highly prosperous condition in this city. Messrs. Leonard & Sons, although losing about $40,000 by damage done by fire to their premises, have rebuilt larger and better-looking buildings than those that were destroyed. They are full of orders, and no wonder. We never yet heard of one of their engines bursting. Durability and Efficiency should be the name of their engines, and Honor their motto, for they stand second to none in these points.

The Orchard.

We often hear the question "Is not fruit-growing going to be overdone?" I cannot conceive that it will ever be overdone to a greater extent than it has been and now is. If all the orchards that are annually planted were in soil suited to the natural requirements of the trees, and would receive such after treatment as is essential to the perfect development of tree and production of fruit, there would then be a strong probability of a disastrous shrink-up in Pomological values; but view the matter in a rational light and the probabilities lead in the opposite direction. Thousands of trees are planted by parties who are actuated so to do by motives inspired by the successful fruit harvest of a neighbor, without considering or estimating the years of steady toil in training and tilling the trees and the vigilant warfare against insect enemies. As soon as these essentials crop out and present themselves as indispensable to success, these emotional planters abandon the crops that dazzled them and induced an outlay of cash for trees and an appropriation of land for an orchard "Bonanza." Thousands of trees are thus annually planted only to wear out a few years of feeble existence, and then give place to some other crop. In the next place, fifty per cent. of what do struggle into bearing produce inferior grades of fruit, that a supply produced by proper management will exclude from the market. But outside of this, the consumption of fruit by our own people, in so many and varied ways, is training to a development of proportions which are as stupendous as the means of production. So that when one considers the question of overdoing the growing of fruit, we fail to discover any practical or plausible reason why fruit growers should be discouraged at the future outlook of the industry. The foreign demand is wonderful, and would be far more so if a better grade of fruit was prepared, and a more honest system was adhered to by Canadians; these defects necessity will provide the proper remedy for when the time arrives. Again, the protection against a serious loss of fruit in a green state is insured by the evaporation process, by which every reasonable advantage of a good market for the products of the orchard is guaranteed.

Notwithstanding the fairness of the prospects, there are very many men engaged in growing fruit who will not succeed—men who will lose money at it—but that class, doubtless, would fail at almost anything else they undertook, not possessing the elements of success in their natures. Therefore, upon a deliberate survey, a careful examination and investigation of the whys and wherefores, I am inclined to regard the future outlook for orchardists as being of a decidedly hopeful and encouraging character.—Ex.

Russian Mulberry.

Russian Mulberry, which has not yet to our knowledge been introduced into Ontario, is recommended by Mr. Purdy in his Fruit Recorder. A correspondent, writing from Nebraska, says:—"This valuable fruit, timber and ornamental tree was brought to this country from latitude 49°, western Russia, by the Mennonites, and is, as near as we can learn, a cross between the *morus nigra* or black mulberry of Persia and the *morus Tartarica*, a native Russian variety. The tree is a very rapid grower. Last year it made a larger growth than cottonwood trees. Trees, the seed of which was planted six years ago, are now twenty feet in height and from six to eight inches in diameter. The tree grows to be very large, often reaching the height of fifty feet, and from three to five feet in diameter, and is perfectly hardy. The timber is hard and durable, and is used in the manufacture of cabinet-ware, and proves as lasting for fence posts as catalpa or red cedar. It commences to bear when two years old, and is a prolific bearer, the fruit being about the size of Kittatiny blackberries; 95 per cent. of the berries are a jet black, the balance a reddish white. They have a fine aromatic flavor and sub-acid sweet taste, and are used for dessert as we use blackberries or raspberries. The trees this year were so densely loaded as to exclude leaves. The leaves are mostly lobed or cut with from five to twelve lobes. The bark is greyish white, branches drooping."

The annual Convention of the Western Dairymen's Association will be held at Woodstock, Ont., the first Wednesday, Thursday and Friday in February next.

Commercial.

THE FARMER'S ADVOCATE OFFICE,
London, Ont., Dec. 1, 1881.

Business during the last month has been somewhat quieter than the previous one. The cause of this is, no doubt, from the falling off in the receipts of grain, together with the decline in price of wheat and other products. The muddy roads are now very bad, and farmers would just as soon, if not rather, see them frozen up.

WHEAT.

This article has ruled very quiet, and from present indications it is likely to do so for some time. The fact is, wheat was forced up by speculation and not by the legitimate wants of the world.

The reports of wheat at the chief Atlantic seaports, from January 1st to November 19th, were 69,275,000 bushels, against 102,756,000 bushels for the corresponding period in 1880, showing the marked decrease of 33,000,000. With this large falling off in the chief cereal exports of this continent the question naturally suggests itself—Where is England getting her wheat from, in view of the increased imports which we are told she would require for 1881 and 1882? It is very certain that she either requires less than has been estimated, or she is drawing supplies from other countries than the United States and Canada. The situation is not very flattering for those who thought that wheat was going right up to $1.50 per bushel. The decline in Chicago, from the highest point touched in October, to the price to-day, is about 24 cents. This violent displacement of values could only arise from artificial or speculative causes.

A Detroit grain dealer, who is evidently somewhat "bearish," says :—

In about two weeks the head of the California and Oregon avalanche of 60,000,000 bushels will strike Europe, and about the some time the sailing fleet from the Azov and Black Seas with the first instalment of Russia's 100,000,000 bushels and the tail end of last year's crops of India. Australia, Egypt, New Zealand and Chili, will keep dropping in for the next two months, and in sixty days from this time Australia will begin to ship her new crop, then India, then New Zealand, etc., with their new crops. In the meantime our farmers hold on for the famine prices promised by the 'bulls,' and the bovine animals hold on to their dear-bought purchases. But before they get rid of them not a 'bull' among them will make a decent ox, and doubt whether a three-months old calf could be manufactured out of any one of them. Most of them will ask, like old Dogberry, to be written down an ass, and the dupes of their stories will all look somewhat assical."

PEAS.

There is not much doing in peas from the fact that they were, something like wheat, forced up too high. A decline of six pence per cental in Liverpool has not been met by holders on this side.

BARLEY

Keeps steady, and from all accounts seems likely to do so. Prices are good and farmers will do well to sell.

CLOVER SEED

Is slow and not much doing as yet. Late advices from England report a very quiet feeling there, with the disposition on the part of the trade to wait until after the holidays before taking any active action. What samples we have seen are rather small and full, there being very little purple seed, a color that is so much admired by the dealers both in England and on the continent. The crop throughout Western Ontario is very good, and the yield where threshed is said to be a full average crop. How prices will range is hard to say, but we think farmers need not look for any fancy prices this season, for, if the Western accounts are correct, there is a large crop all through the United States.

CHEESE.

There has been very little change to note, except that the factory men show more disposition to meet buyers. A good deal has changed hands the past two weeks at 11½ to 12 cents, and there is still a good deal unsold, and will be till salesmen meet the views of buyers, or there is a decided change in the markets of Great Britain, which will warrant buyers paying the price asked by salesmen. The market has been quite up to the average in quantity, but far below in quality. Much of the September make is not as good as the average August cheese of former years, and a good deal of the October is quite inferior, being soft and pasty, features that are very objectionable in a late made cheese, and that class of goods meet with very slow sale in the British markets. Could factorymen be made fully cognizant of the quality of the goods they are offering for sale they would then accept the situation much more readily, and their goods would move off freely, and in the end make quite as good returns. It is argued by some that while wheat, corn, pork, beef, lard, &c., are from 10 to 30 per cent. higher than last year, cheese is much lower; instead of being quoted at 54 to 55 shillings, it should be quoted at 75 to 78 shillings to harmonize with the general advance of all kinds of provisions. However, there is one thing that bears heavily against a proportionate advance, and that is the quality of the goods. There is no comparison between the quality of the cheese made this fall as compared with that of last year.

BUTTER

Keeps very quiet, and the only enquiry is for *strictly fine goods*, which are very hard to find. There has been some considerable fine townships and creamery shipped to New York and Boston from Montreal, for the local trade, fine butter being very scarce in these cities. We wish there was more creamery made and put up in such sized packages as would meet the wants of the home trade. We are of the opinion that much of the butter now laying around the country will have to be sold very reasonable before it will move.

PORK.

This article is a good price, and farmers will do well to market their surplus product and not undertake to feed through the cold weather. Was there a prospect of an advance later on, we feel confident that the present high price of all kinds of coarse grain would not warrant feeding the same to hogs at any profit.

FARMERS' MARKETS.

LONDON, ONT., 30th November, 1881.

	Per 100 lbs				
Wheat, Winter	$2 10 to $2 15		Flax Meal	$3 50 to $3 75	
" Red	2 12 to 2 15		Rye	none off'ring	
" Spring	none offering		Barley	1 20 to 1 30	
Oats	1 18 to 1 20		Timothy seed	2 50 to 3 00	
Peas	1 20 to 1 30		Butter, per lb	23 to 25	
Corn	1 50 to 1 60		" tub	15 to 22	
Hay, per ton	11 00 to 13 00		" crock	21 to 23	
Linseed Cake	2 00 to 2 25		Eggs	20 to 24	
Potatoes, bag	90		Hops, 100 lbs	21 00 to 30 00	
Honey, per lb	20		Wool	23 to 25	
Lard, per lb	14 to 17				

TORONTO, ONT., 30th Nov.

Wheat fall	$1 22 to $1 24	Potatoes, bag	85 to 90
" spring	1 30 to 1 35	Apples, brl	1 35 to 2 50
Oats	44 to 45	Butter, lb. rolls	22 to 25
Hogs, 100 lbs	7 25 to 7 60	" dairy	15 to 18
Beans	2 25 to 2 50	Eggs, fresh	23 to 25
Peas	79	Wool, per lb	23 to 24
Hay	9 75 to 14 00	Barley	78 to 87
Rye	90		

GRAIN AND PROVISIONS.

MONTREAL, P.Q., 30th Nov.

Wheat—		Cornmeal	$3 50 to $3 5
Can. spring	$1 40	Butter—	
Red winter	1 35	East'n Tp's	18 to 20
White winter	1 36	Brockville and Morrisburg	17 to 19
Barley	70 to 72	Western	15 to 17
Oats	38	Creamery	22 to 24
Peas	88	Eggs	20 to 25
Flour car lots—		Lard	14 to 15
Superior ex	6 00 to 6 05	Hams	13 to 14
Superfine	5 95	Bacon	12 to 13
Rye	85	Cheese	11 to 12
Oatmeal	5 00 to 5 25		

HALIFAX, 29th Nov.

Flour—		Extra State	$6 40 to $6 50
Sup. extra		Cornmeal—	
Choice	$7 25 to $7 50	Yellow k. d	3 90
Spring extra	6 75 to 6 80	Fresh ground	3 80
Strong baker's	7 30 to 7 50	Oatmeal, Canada	5 90

WHOLESALE PRODUCE MARKETS.

NEW YORK, 30th Nov.

Flour—		White	$ 50 to $ 55
No. 2	$3 20 to $4 60	Rye	67 to 1 00
Good	5 00 to 5 80	Eggs, State	30 to 32
West'n ex	7 25 to 8 25	Potatoes	2 25 to 2 50
Wheat—		Pork—	
No 2 red	1 38 to 1 39	New mess	17 50
No 1 white	1 37		
Corn—No 2	69	Lard	11 50
" yellow	70	Butter	18 to 40
Oats—		Cheese	9 to 12½
Mix. white	47 to 54		

BOSTON, MASS., 30th Nov.

Flour—		Butter—	
Choice winter	$7 50 to $8 50	Creamery	$ 33 to $ 35
Choice spring	8 00 to 9 00	Dairy	30 to 32
Corn meal bbl	6 75 to 7 75	Common	16 to 17
Oatmeal, bbl	3 25 to 3 30	Cheese—	
Oats	55	Best factory	12½ to 13
Wool—		Farm dairy	11 to 12
Western fine	41 to 42	Beans, pr bu.—	
Pulled extra	30 to 43	Hand picked	3 30 to 3 35
Canada pulled	30 to 40	Mediums	3 00 to 3 30
Combing	38 to 40	Common	2 50 to 3 00
Hay—		Potatoes, per bus	75 to 90
Coarse, ton	23 00 to 24 00	Onions, per bbl	2 50 to 3 00
Fine	13 00 to 17 00	Hops	99 to 99
Oat straw	9 00 to 10 00		

CHEESE MARKETS.

Liverpool, Eng., Nov. 30, 5 p.m.

Per cable, 55s.

LIVE STOCK MARKETS.

Buffalo, N. Y., U. S. A., Nov. 29.

Cattle—no decided change; fresh arrivals light; demand fair; all the best offerings changed hands, and the feeling was steady; a few lots of common light butchers' stock and common stockers sold at $3.40 to $3.65; several lots of mixed butchers' stock at $3.40 to $3.65. Sheep and lambs—Receipts of Western sheep were heavy. We quote: fair to good Western sheep at $3.90 to $4.50; choice to extra at $4.75 to $5; a few very prime, $5.25 to $5.50; Western lambs $5 to $5.50; extra $5.75. Hogs—Buyers well supplied; fresh receipts light; weather warmer; market fully 10c. lower for Yorkers and a shade easier on other grades; sales of Yorkers, good to choice, at $6 to $6.15; fair to good light and mixed lots, $5.50 to $5.90; good to choice, medium weights, $5.25 to $6.35; no good heavy here—quotable at $6.40 to $6.50. Pigs—$5 to $5.50.

Montreal, Nov. 28.

Good butchers' cattle sold at 3½c. to 4½c., second class 3 to 3½c., and third class 2c. to 2½c. per lb. live weight. The lean stock were difficult to sell even at the low rates of last week; 19 head dry cows and heifers sold at $19.50 each, or about 2½c. per lb. a carload of ordinary cattle at $23 each, or rather less than 3c per lb. Dry cows which will dress from 400 lbs. to 450 lbs. sold at from $18 to $24; good fat cows at from $28 to to $35; and leanish two and three-years-old steers from $18 to $26 each. A carload of sheep sold at 4½c per lb. Thirty lambs and a few good sheep brought $4.05 per head. Another lot of pretty fair lambs were sold at $3.75 each. City butchers have lately been contracting for large numbers of good lambs and sheep for their winter supply, paying from $3.50 to $4.25 each for lambs, and from $4 to $5.80 for sheep. Hogs range from $5.75 to $6.50 per 100 lbs. Dressed hogs are rather scarce, and bring from $8 to $8.25 for country killed, and $8.40 to $9.00 for city killed.

THE BRITISH CATTLE MARKETS.

London, November 7.

Best beef 8d to 8½d per lb.; inferior and secon ary, 6d to 7½d per lb.; best mutton 9¾ to 10½d per lb.; inferior and secondary, 7d to 8½d per lb. A dull tone characterized the cattle trade. About an average supply of beasts came from our own grazing districts. The demand was on a limited scale, and the the tendency of prices was in buyers' favor. The sheep pens were moderately well filled. The trade was dull and less money taken.

Liverpool, November 7.

Best beef 5d to 7½d per lb.; best mutton, 7d to 9½d per lb. The supply of cattle was much less, and of sheep larger than last Monday. The demand slow for cattle and sheep, at last week's price for each.

Glasgow, November 10.

Best beef 8½d to 8½d per lb.; inferior and secondary, 6½d to 7½d per lb.; best mutton 9d to 9½d per lb.; inferior and secondary, 7d to 8d per lb. There was a large supply of cattle shown to-day, two-thirds of which were light and inferior in quality. Of sheep and lambs there was a short supply of home stock; demand slow at previous prices.

Stock Notes.

Guelph Fat Stock Club will hold their annual Christmas Cattle Show December 15th, at the city of Guelph, Ont.

Powell Bros., Springboro County, Pa., have just received from Great Britain their *fifteenth* importation of Clydesdales for this season. All the animals came through the voyage in fine condition.

Mr. Seth Heacock, Kettleby, Ont., will sell by public auction, on December 21st, a large number of pure-bred Shorthorns, Cotswolds and Southdows. See advertisement.

During the past summer an immense amount of work has been done by the Dominion Government in connection with the Cattle Quarantine at No. 3 Fort, Levi. Some fifty men are constantly engaged on the works, and the expenditure of the Grvernment upon them during the present season amounts to some $15,000. The extent of the ground now enclosed as the quarantine station is close upon 50 acres. All last year the loss of cattle in quarantine was but one per cent., and this loss, trifling as it appears, was due altogether to natural causes. During the present year but two cattle have been lost out of 300, and three or four sheep out of 1,400 or 1,500. A great deal of draining has been done this season, and digging of wells. At present there are 175 animals in quarantine, and 125 more are expected by the SS. Texas. It will thus be necessary to keep the quarantine open this winter until somewhere about the 15th February.

The attention of our readers is called to the public sale of fine stock advertised in this issue by Mr. Frank R. Shore. The stock offered is of good quality—just such animals as farmers find most profitable to invest in.

Hon. J. H. Pope has at present in quarantine a magnificent lot of some 12 Polled Angus cattle of immense size considering their age, some of which are valued as high as $1,000 each, though but two years old. We are glad to learn that some of Mr. Pope's former investments in these cattle have yielded him handsome returns.

On Decembeer 13th., Mr. Parks, of Hollin, Ont., will sell at public auction, 20 head of fine bald Ayrshires, an entire horse, a large number of pure-bred Leicester and South lown sheep, and all his farm implements; also a farm of 200 acres. All parties interested in pure-bred stock, of the above breed should attend the sale. See the advertisements. We regret to learn Mr. Parks has suffered heavy losses by fire lately.

SALES OF DEVON CATTLE IN ENGLAND.—The sale by Mrs. Maria Langford, of Barton, came off September 8th. This herd was of what is called the Davy tribe, and has been kept up at the above place or at Rose Arb, for about 200 years, and has been successful during this time in winning many prizes. These animals brought from 17 to 102 guineas (about $50 to $510). This was a good sale, but the prices realized by Mr. George Turner, of Devonshire, five days previously, were only about half as much, being only from 20 to 40 guineas (about $100 to $200). We are surprised at this, for the herd was commenced over 100 years ago by the father of Mr. Turner, and kept up by his son, the above George T., till this sale. The latter is now 88 years old, and the most veteran breeder in all England. To show the merits of his herd, he has won more prizes on them than any man living, they being 600, numbering from his first exhibition at the Royal Agricultural Society's show in 1840, down to the present year, and also at country shows.

N. W. Ayers & Son, advertising agents, Philadelphia, Pa., U. S. A., have our thanks for a copy of their American Newspaper Annual. Ayer's Annual has achieved a *first-class* reputation, is exceedingly valuable to advertisers, and the firm are men of excellent business exactness and honorable dealing.

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FOR 1881.

VOLUME XVI.

WILLIAM. WELD,

EDITOR AND PROPRIETOR.

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LONDON, ONTARIO, CANADA.

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