

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- | | |
|--|--|
| <input type="checkbox"/> Coloured covers/
Couverture de couleur | <input type="checkbox"/> Coloured pages/
Pages de couleur |
| <input type="checkbox"/> Covers damaged/
Couverture endommagée | <input type="checkbox"/> Pages damaged/
Pages endommagées |
| <input type="checkbox"/> Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> Pages restored and/or laminated/
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> Cover title missing/
Le titre de couverture manqué | <input checked="" type="checkbox"/> Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> Coloured maps/
Cartes géographiques en couleur | <input type="checkbox"/> Pages detached/
Pages détachées |
| <input type="checkbox"/> Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> Showthrough/
Transparence |
| <input type="checkbox"/> Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> Quality of print varies/
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> Bound with other material/
Relié avec d'autres documents | <input type="checkbox"/> Includes supplementary material/
Comprend du matériel supplémentaire |
| <input checked="" type="checkbox"/> Tight binding may cause shadows or distortion
along interior margin/
La reliure serrée peut causer de l'ombre ou de la
distorsion le long de la marge intérieure | <input type="checkbox"/> Only edition available/
Seule édition disponible |
| <input type="checkbox"/> Blank leaves added during restoration may
appear within the text. Whenever possible, these
have been omitted from filming/
Il se peut que certaines pages blanches ajoutées
lors d'une restauration apparaissent dans le texte,
mais, lorsque cela était possible, ces pages n'ont
pas été filmées. | <input type="checkbox"/> Pages wholly or partially obscured by errata
slips, tissues, etc., have been refilmed to
ensure the best possible image/
Les pages totalement ou partiellement
obscurcies par un feuillet d'errata, une pelure,
etc., ont été filmées à nouveau de façon à
obtenir la meilleure image possible. |
| <input checked="" type="checkbox"/> Additional comments: /
Commentaires supplémentaires: | Continuous pagination. |

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

THE

Canadian Agriculturist.

OR

JOURNAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE
OF UPPER CANADA.

VOL. XIV.

TORONTO, AUGUST 1, 1862.

No. 15.

The International Exhibition.

LONDON, ENGLAND, July 3, 1862.

Editors of the Canadian Agriculturist :

Within the last few days I have made a visit to the implements in motion at Battersea, and am now able to assure you that they were a sight well worth seeing. The many machines in regard of every description driven by steam were surprising and instructive in the highest degree. In my previous letter I gave you some account of the improved threshing machines. I have now seen them at work, and am quite convinced of their excellence. One in particular does its work effectively, threshing, cleaning, bagging, and weighing the grain, and elevating the straw to a height of some 16 or 20 feet in a most expeditious manner. I really hope that some of our ingenious Canadian Mechanics may be here to witness the operation of many of these machines and introduce amongst us the improvements that have been made in most of them. There is a brick making machine capable of making 10,000 of the most excellent bricks in a day, grinding and pressing all at one operation. The brick making machines are also very efficient. A grinding mill with three run of stones is one of the most simple and at the same time one of the most effective mills that can be imagined. Chaff cutters are brought to the highest state of efficiency, and are doing their work at a rate that is far in advance of previous performances in this

The many very useful machines at work, illustrate the power of steam in the most complete manner. It is quite impossible for me to describe the many important and excellent inventions, but I shall forward all the catalogues as well as newspaper reports, which contain a great amount of information of a nature to interest our readers.

I went on Saturday to Farningham, a distance of about 20 miles, to see the last days' trial of implements worked by steam, and was much pleased with the manner in which the work was done. There were some five or six makers who had their machines at work. They consisted of ploughs, scarifiers, and a digger. The mode of working has been much simplified by Mr. Fowler, and his machine is admitted to be the best now in use, and in my opinion is very complete. It was his plough and machinery that I described to you at work last week, and I am quite convinced that I did not over-rate its capabilities.

The cultivator is a very capital implement; it works on the balance principle, the same as the plough, has 14 prongs, 7 on each end of the frame. These prongs penetrate the hard clay to a depth of seven or eight inches, are moved at the rate of four miles an hour, and will do an acre in an hour or even less time.

The digger is a new implement; it is the same in structure as the plough, only the mould board is of a different form. The object is to throw the ground up in a rough state, to be acted on by the frost and sun. This was exhibited this year for the first time, and was by many much approved of. One great advantage of Mr. Fowler's over Mr. Howard's mode of working these implements, is that much less rope is required, Fowler's being simply passed round a large wheel or pulley, both at the engine and anchor, while Howard's rope is at the engine, wound up on a drum. I should state that the rope is made of steel wire and weighs $2\frac{1}{2}$ lbs to the fathom. The field in which they were working was nearly a quarter of a mile in breadth, there was therefore half a mile of rope necessary in the case of Mr. Fowler's machine, and Mr. Howard's requires double the length. A full report will be out in a day or two which I will send you. I am now only giving my own impressions from the

observations I made, and from conversation with persons of experience. The official report may or may not confirm my opinions.

You will see in the English newspapers the names of other parties who had implements, and competed. The competition at this trial was entirely for the purpose of proving the merits of the machines and implements, as there were no prizes to be awarded. The contest was for the public favor alone. A traction locomotive was on the ground, moving with several cars attached to it, on the common road, from one part to another of the trial ground, and carrying numbers of the spectators. It seemed to be under the most complete control of the driver, and moved in any direction he willed with the nicest precision, turning corners and stopping and starting with more tractability than the best trained horses could have been made to show. The same machines are to be seen at the Battersea Show, careering around a circle of perhaps 60 feet diameter, crossing and passing each other as if they were going through the figure of a lively dance. It is now an established fact that these engines can be used on the common roads of this country, and their use has been legalized. From their great breadth of wheel they rather benefit than injure the roads, and cannot be objected to on that account.

The street railway has had its day here, and is at an end. The last, which extended from Kensington gate to the Westminster Bridge, has been taken up within the last few days. The agent was fined five hundred pounds for persisting in keeping it in operation after he was required by a decree of court to discontinue it. He claimed the sympathy of the public on the ground that it was the peoples' cheap mode of travel. Public meetings were called and handbills posted up with a view of procuring a reverse of the decree, but all in vain. There had been an infringement of the law, and punishment of the parties attempting to set it at defiance must follow. The annoyance to carriages, and the obstruction of the thoroughfare, was the ground of the complaint, which caused the removal of the roads. Large three horse omnibuses have at once taken the place of the street cars, and therefore the public are still accommodated with the means of travelling on the same route, which is a very important one.

The attractions here now are increased to day by the commencement of the great Rifle Match at Witherdon Common. I hope to attend this one or two days. Between the Rifle match, the Agricultural Show, the Great Exhibition building, the Crystal Palace at Sydenham, and the somewhat novel entertainment of a Dog Show, also going on, there is scope enough for the exercise of the attention of the sight-seers, of whom the numbers congregated here are not small.

The journals of the day contain articles on the marriage of the Princess Alice, just solemnized,

which are worthy of attention from their tone of heartfelt affection and regard towards the youthful Princess. I believe these articles are the true expression of the national feeling, and surely the people are blessed who can with reason entertain such feelings towards the members of the reigning family. That the prayers of millions of pious hearts in this glorious land have ascended to heaven in the most sincere and earnest manner for the happiness of the youthful pair, I do not in the least doubt.

You will perceive that on the 11th instant the crown labours of the jurors will take place. I shall have to remain here until after that date, and will probably attend the review of the Volunteer Riflemen which is to take place on the 12th, after which I shall immediately take my departure from this great city, and visit some few places in the North of England and Scotland, and thence proceed to Liverpool to embark by the steamer that is to leave on the 24th inst. My stay has been prolonged a week in consequence of the two public events above mentioned.

July 10th.

The Battersea Show is now over. I sent you some numbers of the *North British Agriculturist* which contain very correct information on the several departments in addition to what I last week sent you. I was disappointed at not seeing more horses exhibited, but the reason given by the Editor of the *North British* may perhaps account to some extent for the deficiency. The season for which the services of the best stallions are required not having terminated prevented their coming to the exhibition. No matched pairs, gig, or saddle horses were shown which made the show of horses, taken altogether, much below what I, at least, expected to see.

The principal objects of attraction this week are the International Exhibition and the Rifle match. The latter being at some distance and the weather very rainy, does not draw very many spectators; besides, persons soon tire of looking at the firing at long ranges, where not but the markers have access to the targets. I went one day, but as it was wet and uncomfortable I did not stay long. The targets, to the number of about 30, are all arranged on one side of the common, and the spectators on the other, so that it is rather a dull business for those who are not immediately engaged.

The Exhibition, however, attracts its admirers to the number of from 50 to 60,000 daily, and one never tires of visiting it, for after days of examination there is still something to be seen that is interesting and had not been seen before. The Western Annex, where the machinery is in motion, is exceedingly attractive. The effect of the vast amount of machinery in motion, doing all sorts of work, is almost bewildering; the hum is inconceivable by those who have not heard it, and yet all seems to work with life-like

wonderful precision and nicety. One cannot help being astonished at the many proofs of the ingenuity and industry of man in the displays here to be witnessed.

Numbers of Canadians have arrived within the last two weeks. It is said that there is now an addition of a million of visitors to the population of London.

To-morrow the Jurors of the Exhibition will terminate their services by assisting at the ceremony of distributing the prizes. It will no doubt be a grand affair, and there are to be distinguished persons from every country present. The position that would have been occupied by Her Majesty, had her lamented consort been still alive, will be occupied by the Duke of Cambridge. As a juror I shall have to take part in the procession and ceremony, and the day after I shall be at liberty to leave this great city, to make some brief visits to other parts of the country, preparatory to my return home. The weather still rainy. There have not been two days in succession since the first of June. Some people are of opinion that there will be a short crop in consequence of so much wet. There is however a difference of opinion on this subject. As there is a great difference in the weather in the various parts of the country, there is a difficulty in forming a correct opinion of the state of the crops. Mr. Prout, who visited his farm yesterday, only 30 miles distant, says he found there had been scarcely rain enough to turn the turnip crops, yet the very frequent showers were retarding the hay-making very much. There seems to me to be a great difference in the weather this year from what I experienced in 1851. The month of June that year was fine, and appeared to be very little different from the season in Canada, but this year it is wet and cold almost all the time. I trust that there has been a favorable change in Canada, and that the crops are coming on well.

Yours, &c.,
E. W. THOMSON.

"A World of Itself."

A correspondent in London thus writes to the *Presbyterian Witness* of Halifax, N. S., the Canadian Department of the Exhibition:

CANADA.

Canada is a world in itself, anxious to make show and able to do it. The Canadians have expended immense pains on their department and have gone to great expense. They have fewer than four Commissioners here in regard, besides a number of subordinates. Sir Logan is here to look to the mineral and geological section, and assuredly he has made most of it. They have been able by hook or by crook to exhibit about £500 worth of gold; but they carefully lock it up every night safe for fear no doubt that if any one were run away with it Canadian gold fields could

never replace it. There is a strong force of police inside and outside the building, day and night; and this being the case it is no wonder that the over cautiousness of the Canadians excites amusement. The Lumber of Canada is displayed to great advantage in a pyramid whose top reaches not quite to the clouds but sufficiently near them to be alarming. Canada wheat yields only to that of Australia.

The Photograph department is very superior indeed it is equal if not superior to anything executed in England—especially in *untouched* portraits. Our friends make the most of their magnificent scenery. Here is Niagara in fifty different forms—in oil, in water, in light, in lead, in ink; Niagara with all the bearding icicles and threatening icebergs of winter; Niagara in all the loveliness of summer—in moonlight, in sunlight; from the American side and from the Canadian side. Many other scenes are here in photograph or some other style.

We must confess it—all the lower Provinces together fail to make the impression that Canada easily produces. The space assigned to her is equal to all the rest, and she occupies it well. Her wooden trophy is overdone however, and it is no wonder the *Times* calls for its disappearance. But her minerals, her manufactures, her lumber and timber, her grain—all demonstrate her wealth and greatness. If the Canadians do not become a powerful and opulent people it is not the fault of the country. By a curious oversight, she has no place in the *Official Catalogue* issued by the Commissioners here. No doubt this will be remedied by and by; but it has annoyed the Canadians a good deal. A similar oversight happened with regard to Prince Edward Island.

THE COW.—When George Stephenson, the celebrated Scotch engineer, had completed his model of a locomotive, he represented himself before the British Parliament and asked for the attention and support of that body. The grave M. P.'s looking sneeringly at his invention said: "So you have made a carriage to run only by steam have you?" "Yes, my lords." "And you expect to run on parallel rails, so that it cannot get off, do you?" "Yes, my lords." "Well, now, Mr. Stephenson, let us show you how absurd your claim is. Suppose when your carriage is running upon those rails at the rate of twenty or thirty miles an hour, if you're extravagant enough to even suppose such a thing is possible, a cow should get in the way. You can't turn out for her—what then?" "Then 'twill be bad for the cow, my lords."

Agricultural Intelligence.

Agricultural Exhibitions this Autumn.

PROVINCIAL AND STATE.

Upper Canada, at Toronto, September 22nd—26th.

Lower Canada, at Sherbrooke, 17th, 18th 19th September.

New Y. State, at Rochester, Sept. 30 to Oct. 3.

Illinois State, at Peoria, Sept. 29 to Oct. 4.

Ohio, at Cleveland, September 16 to 19.

COUNTIES.

Stormont, at Cornwall, Oct. 8th and 9th.

North Simcoe, at Barrie, Oct. 1st.

Brockville, at Brockville, Sept. 18th and 19th.

South Simcoe, at Bradford, Oct. 2nd.

Durham West, at Newcastle, Oct. 9 and 10.

North Lanark, at Almonte, Sept. 16th.

Russell, at Osborne, Sept. 30th.

Peel, at Brampton, Sept. 17th and 18th.

North Leeds & Grenville, at Frankville, Oct. 1.

North Ontario, at Prince Albert, Oct. 7th.

East York, at Markham Village, Oct. 9th.

Meeting of the Board of Agriculture.

The Board met, pursuant to notice, on 23rd ult at the office, Toronto, at 2 p.m.

Present Messrs. R. L. Denison, A. A. Burnham, W. Ferguson, F. W. Stone, Hon. G. Alexander.

Mr. Denison, Vice-President, in the Chair.

The following communications, reports &c., were submitted and read by the Secretary.

Report of the Building committee of the new Agricultural Hall, dated March 28, 1862, showing that according to statements submitted by the Architect, Mr. Sheard, the work originally let by contract would exceed the estimate of \$12,000 by about \$400 or \$500. Certain additional work suggested as necessary, viz: glass case for shop, counter, hoist, iron shutters, gas and water-pipes, would amount to about \$1043 more, while the Architect's commission and incidental expenses would bring up the entire cost of the building to about \$14,000. The Committee decided that these additional details should be proceeded with, leaving the question of any additional rent to be paid by Messrs. Fleming & Co., in consequence of additional expenditure for their accommodation, to be decided at a future meeting of the Board. The report also contained a draft of the lease proposed to be given to Messrs. Fleming & Co., of the portion of the building to be occupied by them: Messrs. Fleming & Co., to pay at the rate of \$800 per annum in half-yearly payments, subject to any additional charges that might be agreed upon, as already mentioned, and their occupation to commence on 1st August next.

Report of the Committee appointed at a former meeting to procure suitable buildings for veterinary stables, submitting draft of a lease of premises on Temperance street, the property of Mr. John Worthington, which the committee had agreed to take for the purpose, and had caused a suitable office to be fitted up upon them for Mr. Smith, the Veterinary Surgeon; the Board to pay Mr. Worthington \$200 per annum in half-yearly payments; the lease commencing from 1st January last.

Circular of an association established in the United States, called the "Association of Breeders of Thorough bred neat Stock," for the

purpose of publishing a record of pedigree and soliciting the cooperation of breeders.

Letter from Professor Daniel Wilson, dated April 2nd, 1852, on behalf of the Canadian Institute, requesting to be informed whether the Board would rent a part of their new Agricultural Hall on Yonge Street, for the accommodation of that body. In reference to this application Professor Buckland, on behalf of the committee appointed at a former meeting to confer with the Institute, reported that they had come to the conclusion that the Building was not sufficiently capacious to afford the accommodation desired by the Institute.

Letter from the acting Secretary of the Bureau of Agriculture, Quebec, April 2nd, 1862, stating that the six flax scutching machines ordered by the government from Ireland, but arrived, one of them was presented to the Board of Agriculture of Upper Canada, one would be sent for the present to Kingston, and one to London; the other three would be distributed in Lower Canada.

The Secretary stated in reference to this letter that the mill presented to the Board had been received and experimented with, and that at present it was at Newcastle, in West Durham, where it had been lent to parties to scutch some flax grown in that neighborhood.

Copy of Lease received from Mr. Worthington of premises for Veterinary Establisher in accordance with the Report of Committee.

Copy of Lease granted to Messrs. Fleming & Co., of part of the New Agricultural Hall, in accordance with the report of Building Committee, these two leases, having both been executed and signed by the President of the Board on April 16th last.

Policy of Insurance of the new Agricultural Hall in the British American Insurance Company for the sum of Two Thousand Pounds, the rate of half per cent per annum.

Letter from the Hon Mr. Evanturel, Minister of Agriculture, Quebec, July 19, regretting inability to attend this meeting of the Board.

Letter from the Acting Secretary of the Bureau of Agriculture, Quebec, July 19, 1862, enclosing copy of letter from Mr. W. Waga, Canada Government Emigration Agent for many, asking for samples of Canadian grass and seeds of forest trees to be forwarded to Prussian Society of Acclimatization.

Letter from the same, accompanying copy of the first and second Annual Reports of Board of Agriculture of the colony of Victoria, Australia, for the years 1860 and 1861.

Mr. Denison reported that in accordance with instructions of the Board he had taken measures to defend the suit instituted by Mr. Alexander Campbell, of London, for payment of the sum of about \$600 for work on the Exhibition Grounds at that place, as referred to in a letter from his solicitor, submitted to the Board January 30th last, and which work he considered should have been paid for by the Committee, but that the case had been decided against the Board by the court, and he accordingly paid the amount.

Mr. Denison also reported that he had recently proceeded to the city of Hamilton, to endeavour to collect the sum of about \$20.00 due to the Association from the Local Committee and the Corporation of that city since the Exhibition of 1869, but had not been able to effect any satisfactory settlement.

It was then moved by Mr. Buckland, seconded by Mr. Stone, and Resolved,—that as early in the season as possible, collections of seeds, &c., be forwarded to the German Society of Acclimatization in accordance with the request transmitted through Mr. Wagner, and that copies of documents of this Board, and specimens of products, be also forwarded to the Board of Agriculture of Victoria, Australia, in accordance with the request of that Board.

Resolved,—That the County and Township Agricultural Societies, and individuals, be invited to forward specimens of natural products, seeds of forest trees, grains, &c, for the Museum of this Board in the Agricultural Hall.

Ordered,—That the Flax Scutching Mill presented to the Board by Government be exhibited at the approaching Provincial Exhibition, and samples of flax obtained for the purpose of showing it in operation.

The Board then adjourned to 9 a.m. to-morrow.

Thursday, July 24, 1862.

The Board met at 9 a. m., in accordance with adjournment.

Present: Messrs. Denison, Burnham, Alexander, Stone, Ferguson, Buckland.

Minutes of yesterday were read and approved.

Attention was called to the circumstance that very few County or Township Agricultural Societies give notice of the time of holding their Exhibitions in the Journal published by the Board, as they are required to do by law, and it was ordered that Societies be requested to give such notices regularly in future.

The Board then adjourned.

COUNCIL OF THE ASSOCIATION.

The Board met a Council of the Association at 10 a. m.

Present: The same members as above named.

Mr Denison, Vice-President, in the chair.

The Minutes of last meeting were read and approved.

The following communications, Reports, &c, were submitted and read by the Secretary:—

Letters from W. Armstrong, Esq., Toronto, March 24th, applying for the appointment of Superintendent of the Fine Arts Department of the Exhibition, and also desiring to be informed whether facilities would be afforded for taking Photographs of objects at the Exhibition.

Letter from the Governor General's Secretary, dated, Quebec 19th April, 1862, enclosing copy of a despatch from his Grace the Duke of Newcastle, Colonial Secretary, conveying Her Majesty's Gracious reply to the Address of condolence from the Agricultural Association of Upper Canada at their Convention in January last.

Letter from Mr R. L. Denison, dated Quebec 24th April, referring to the days appointed for

holding the Provincial Exhibition of Upper Canada this year, the New York State Agricultural Society having fixed upon the same days, which circumstance subsequently led to a different week being selected for the holding of Exhibition from that first decided upon by the committee.

Report of the Committee for preparing the Prize List, submitting a copy of the List as printed in accordance with instructions of the Board.

Letter from Mr Geo E. Pell, Bradford, June 12, applying for appointment of Superintendent of the Fine Arts and Ladies' Departments.

Letter from Mr. A. B. Bennett, Brantford, June 27th, enquiring whether suitable facilities would be given for the exhibition of a Steam Saw-mill, and other machinery, in operation on the ground, at the approaching Provincial Exhibition.

Letter from Messrs. Jacques & Hay, Toronto, desiring to be informed whether the Association would compensate them for the new planed floor laid in the Crystal Palace on the occasion of the visit of His Royal Highness the Prince of Wales, for purposes of the Corporation.

Letter from Mr. W. C. Cain, Wrexeter, Co. Perth, desiring to be informed on what terms the privilege of erecting a tent for photographic purposes within the Exhibition grounds will be given.

Letter from W. Edwards, Esq., Secretary of Local Committee, stating that he had notified that Committee to meet the Council of the Association at the Board Rooms this day, at 11 a. m.

On motion it was then

Resolved,—That W. A. Cooley, Esq., of Ancaster, be appointed General Superintendent of the Exhibition.

The names of certain gentlemen resident in the neighbouring States were submitted and approved of to be invited to act as judges of cattle at the approaching Exhibition, and a Committee was appointed for the purpose of selecting judges from the nominations of the County Societies for the classes generally.

Resolved,—That the President of the Board of Arts, the Vice-President of the Board of Agriculture, Professor Buckland, and the two Secretaries of the Association, be a committee for fitting up the interior of the Crystal Palace.

Ordered,—That the amount charged for the exclusive privilege of putting up one photographic tent within the Exhibition enclosure be twenty dollars.

Ordered,—That the Committee appointed to fit up the interior of the Exhibition building be also instructed to provide suitable motive power for machinery.

On motion it was resolved,—That His Excellency the Governor General and certain other distinguished persons who will probably be in this portion of the Province next September, be invited to visit the Exhibition.

Resolved,—That Mr. W. Armstrong be appointed Superintendent of the Fine Arts department of the Exhibition.

The Council then adjourned, for the purpose

of receiving the local members of the Local Committee, and to hold a meeting of the said Committee.

The Council resumed at 2 30 p m

Present: Messrs Denison, Alexander, Burnham, Stone, Professor Buckland, Hon. D. Christie, Dr. Beatty.

Moved by Hon. D. Christie, seconded by Hon. G. Alexander, and

Resolved,—That the Local Committee of the City of Toronto be called upon to report to this Board by the 1st of August the state of their preparations for the coming Show, and at the same time to state what quantity if any of the work still remains to be done, and if they have any means at their disposal to do such work.

Moved by the Hon. Mr Alexander, seconded by Dr Beatty, and

Resolved,—That the members of this Board having inspected the cattle sheds erected by the Local Committee are of opinion that they have been placed too low for the preservation of the building and comfort of the stock, and should be raised, if possible, before the Exhibition.

Moved by Mr. Burnham, seconded by Mr. Alexander,—That after receiving from the Local Committee the report caused for by Mr. Christie's Resolution, a committee of this council be appointed to provide for and erect in a temporary and cheap manner any other accommodation required, and that such committee be composed of the President of the Association, the President and Vice-President of the Board of Agriculture, and Professor Buckland.

Resolved,—That the following gentlemen be appointed a delegation to attend the New York State Show for the current year, viz: Messrs. Christie, Burnham, Stone, Denison.

The Council then adjourned.

The Royal Agricultural Societies' Show in London.

The recent Exhibition of the English Society appears to have been very successful, although in point of visitors it scarcely came up to a few previous years, when the Show was held in the centre of some of the immense populations of the northern counties. The Highland Society suspended its usual exhibition, and large numbers of Scottish Live Stock added much to the interest of the imposing and instructive scene. There was also a considerable number of Foreign cattle, from the different countries of Europe.—We subjoin the following general description of the Show from the London *Agricultural Gazette*.

The first contiguous week of fine weather of which the present season can boast has fallen to the lot of the Royal Agricultural Society, and

thus its meeting, which cannot fail of being successful, has been agreeable as well as useful. The earlier days of the show were indeed attended but by very few. A smaller number were present on Monday and on the following day than have attended on the opening days of any of the recent meetings of the Society, but that has no doubt been owing to the knowledge of the usual attendants at these meetings that the yard was to remain open for so much longer than usual, while the unaccustomed "million" beside whom the Society has this year taken up its temporary abode, are probably waiting for the shilling days of the following week; and the Society benefits indirectly if not directly from the comparatively vacant first days of its show by the longer opportunity thus given of making the existence of the Exhibition known among those who are to throng its yards on Monday.

The yards have never before been so attractive. The Implement Catalogue fills 400 pages and describes 5000 agricultural machines; the Catalogue of the Live Stock show fills 150 pages, and enumerates upwards of 2000 animals. There are 250 Short-horns, 100 Herefords, about 70 Devons, 30 Sussex cattle, 14 Long-horns, 27 Norfolks, 11 Welsh, and 9 Irish cattle, 33 from the Channel Islands, 48 of the polled breeds of Scotland, 27 Kyloes, and 70 Ayrshires—a noble show of British breeds. The Horse classes include 260 animals. 73 lots of Leicesters, a score of Lincolns, 92 lots of Cotswolds, 50 Kentish and other Long-wooled sheep, 69 lots of South-downs, as many Shropshires, about half as many West County Downs, 60 lots of Oxfordshire Downs, 13 lots of Dorset sheep, and about 100 lots of Blackfaced Cheviot and other mountain breeds, make up the show of sheep. There are 200 lots of Pigs exhibited, and there are nearly 200 foreign cattle of various kinds.

Whether as a whole, or taken in detail, the Show is altogether unrivalled. Our own leading breeds have never been better illustrated; those of more local interest have never before been anything like so well represented at any English meeting. And to these we have at Battersea to add all the additional interest of many foreign kinds. The scientific man has here a more striking illustration than has ever before been seen at once of the influence of circumstances upon the form and character and habits of an originally common stock—the practical man has here a larger variety and scope from which to choose the live stock best suited to his own particular circumstances—the spectator has a more picturesque variety, a greater quantity and a larger field. In particular the foreign breeds and their attendants are a most interesting addition to the ordinary attractions of the show yard. We have the Dutch cow, breed, black and white, and large and compact, yielding abundance of good milk; and a large Swiss dairy breed, also black and white.

allow and white, which, with their neck-bells and attendants, are here one of the leading features of the show. The French sorts are represented by (a) the Normandy, a large coarse articulated breed, chiefly dark, brindled brown and dun; (b) the Flemish, chiefly red, reminding one in form of Short-horn cows, and in colour frequently of Devons, or more exactly of the dark red Gloucester cow; (c) the Charolaise, a pure white breed of great beauty and symmetry; (d) the Pyreanean, of a light dun or yellow colour; and (e) the little black and white breed of Brittany, of which an unusually large number exhibited.

Few of the classes, however, are well filled, the exception being the Bretons, Dutch, and Swiss. Of the beautiful white Charolais but three specimens are shown. We add that there are very instructive and good classes of Spanish, and Saxony Merino sheep exhibited. Readers not desirous of referring to the particular reports which will be found in our columns during this and following weeks for a more detailed account of the several sections of the Show. It may however be mentioned here as of general public interest that the stock shown by the Hon. Colonel Hoop, bred at the PRINCE CONSORT'S Fleish, Norfolk, and Shaw Farms, Windsor, have achieved their full share of success. It will be seen that the first prize in the old Hereford Bull class and in the young Devon Bull Class are taken by MAXIMUS and CROWN PRINCE respectively. The former had been shown as a calf at Warwick, where he took the first prize in his class. His dam *Superb* was the winner of the first prize of her class at Salisbury, and was afterwards sold to H. R. H. the PRINCE CONSORT. CROWN PRINCE, on the other hand, has also been successful before. He was shown at Leeds and took the first prize in the calf class. The other specimens which have attended the stock of H. R. H. the late Prince Consort will be found in our prize list. The stock entered from the Prince Consort's Farm by the Hon. Colonel Hoop included 5 Short-horns, 9 Herefords, 4 Devons, 1 Clydesdale horse, and 3 lots of the Windsor breed of pigs.

own agriculturalists who are now thronging our metropolis? And so far as we have the means of ascertaining, the opportunity thus given at so much cost to the Society, has been seized. Stock has been sold in large numbers at great prices, and a large sale of implements has taken place. Confining ourselves to one leading feature of the show, we understand that of steam cultivating machinery Mr. Fowler has already sold at Battersea some £14,000 worth, and that Messrs. Howard have disposed of 12 or 14 sets — this being but the beginning of the results in which this show will land them. The meeting cannot fail, we feel sure, of placing the machine makers and the Society on more cordial terms with one another than has lately been the case. A body which sacrifices so liberally of its means for their benefit, as being that of English agriculture generally, will command their support. And this great proof of its energy and life which it has thus displayed will strengthen its foundations in the goodwill and co-operation of English agriculturists, where they will lie much more safely and satisfactorily than in having a large balance at their bankers or a large invested property against "a rainy day."

The following are the numbers of the visitors on the several days of the Show and the sums actually received. We understand that the total cost of the meeting exceeds £14,000, so that there is a considerable deficit to be made good by the Society notwithstanding the large receipts on the last five days:—

	No. of Visitors.	Price of Admission.	Actual Receipts.	
		s. d.	£	s. d.
Monday, June 23 ...	363	2 6	46	0 0
Tuesday, June 24 ...	806	2 7	102	5 2
Wednesday, June 25 ...	1,146	2 6 and 20s.	597	15 5
Thursday June 26 ...	5,673	5 0	1,467	1 7
Friday, June 27 ...	10,056	2 6	1,261	3 0
Saturday, June 28 ...	8,684	2 6	1,082	4 2
Monday, June 30 ...	25,112	1 0	1,504	15 6
Tues. ev., July 1 ...	38,131	1 0	1,911	6 8
Wednesday July 2 ...	31,217	1 0	1,566	15 7
			9,539	7 1
Catalogues sold (an unprecedented number)			1,050	0 0
Received on entries about ...			1,500	0 0
Total receipts—about ...			£12,000	0 0

There can be no doubt that the agricultural machine makers have exerted themselves nobly to make use of the great market which the Society has thus provided for them: and as little is there of the great efforts and success of our stock breeders and flock masters. That the Short-horn breeders have been fully alive to the advantages thus offered to them plainly appears from the enormous classes of magnificent animals they have exhibited. How great the advantages within their reach we have endeavoured to

* * * * *
The "several thousand pounds" which the ... meeting has cost the Agricultural Society, are money laid out most strictly in accordance with the aim and purpose for which the society was instituted. Nothing is more satisfactorily ascertained than that agricultural progress depends infinitely more upon the demand for agricultural produce than upon any little artificial excitement which a prize or an award of kind can give. But agricultural progress is the object of the Agricultural Society, and ... could its funds be better invested than in ... an opportunity to our stock breeders and agricultural machinists of displaying their wares among the great body of for-

show in some further remarks upon the subject in another column.

The Hereford and Devon breeders too have been wide awake. There never have been finer shows of all our leading breed, and this is also true of the more strictly local kinds—The Ayrshire, Galloway, and Kyles; the Sussex, Norfolk, and Channel Islands.

Of Sheep too the display has been magnificent. The Leicesters probably have been equalled formerly, and the Southdowns have been equal to anything that has been seen in former years. But look at the advance here made in public estimation by other classes. The immense display of that lordly sheep the Cotswold, owing probably the local indignation excited by an imagined slur thrown on them by the Society, has never been surpassed. Carrying wool which is now of the highest market value, the quantity of surface bearing it—unlike that of the Merino disposed in ugly folds and wrinkles, which are deluded on the score of increased quantity of fleece—is spread tightly over one of the best formed carcasses of which the perseverance and intelligence of our breeders can boast. Both mutton (for quantity) and fleece (for quantity and quality) are unequalled by any other kind; and it is well that the spirit of the Cotswold breeders has been called forth to make such a magnificent display as is here exhibited.

The Shropshires, too, are a splendid show, and of some other breeds reports will be found in other columns.

It is impossible to doubt that a collection so multifarious and so large, and in either view extraordinary as the produce of "a little island in a Northern sea," thus displayed before men of all countries, and fully alive to the importance of improving their own agricultural resources, must prove of immense service to English agriculturalists.

TRIAL OF STEAM PLOUGHS AND CULTIVATORS AT FARNINGHAM, KENT, UNDER THE AUSPICES OF THE SOCIETY.

We take the following from a correspondent of the *Irish Farmer's Gazette* only premising that the display of implements and machinery in Battersea Park is said to have been unrivalled, both as to extent, quality, and practical adaptation: although no money awards were given on the occasion. This opportunity of bringing their productions before the eyes of the most intelligent and enterprising agriculturists from all parts of the civilized world being deemed a sufficient compensation by the makers.

STEAM CULTIVATION AT FARNINGHAM, AND NOTES OF THE SHOW.

"On Thursday, Friday, and Saturday the trial of the different steam cultivators will

take place, at Farningham, Kent; 24 miles from the Victoria Station, London. Trains every hour. This was the announcement in all the journals; it was enough to bring out the agricultural world in force to see a rare and to them particularly a very interesting sight. So we went. The very first thing that struck us was the great preponderance of foreigners at the station—the Babel of tongues, in which English, decidedly did not predominate. A great many were going; the fare was very moderate; and the day, for London, usually fine—the only drawback was the extreme probability of accident, which they manage rather regularly on this line; and as we didn't start for a quarter of an hour after the proper time, we expected something, as a matter of course.

Twenty-four miles from London! That is a pretty stretch—that should bring us into the veritable country; far from London brick and mortar. But it didn't; for 16 or 18 miles from the Victoria Station, and it is the great city still. Everywhere along the line you see the villas rising, grounds cut up into building lots, large painted boards on either side with "The freehold to be sold for building; everything done with an eye to its becoming a suburb of London. Occasionally you see dairy or fattening cattle in luxurious old grass; sheep and lambs, almost wholly west country Downs—large, coarse species, not much known in Ireland on indifferent pasture, but now and then on clover or vetches, in pens; the hay harvest nearly over, and the country in all its glory. But the home country soon to be ran over by the bricklayers. At St. Mary Cray the country begins to appear in its natural state, and for the first time, to the native Irish eye, a strange production; not fields so much so as patches of hops, growing like enormous vines. Tickets, gentlemen—next station is Farningham. We arrive—we see around the smoke of the steam engines in the fields; we are in haste to be off across the country; when some one discovers a traction engine and three waggons ready to draw us along the way to the working ground. We jump in—we go, down an incline easily enough, slow around a sharp corner to the left, and along level road; painfully and slow up an ordinary farm waggon way; great whistling of engine, rush and scramble, and we are beside Fowler's steam plough, going steadily, and doing its work thoroughly well. There were three different kinds of Fowler's apparatus on the ground and working, but to my eye there was only one; his plough, turning four furrows *charrue a quatre socs*. Next to him was Howard, of Bedford. The ploughing the same every particular, and the whole finished in style that you don't see once in a hundred—in a thousand—times by hand. It was a more unequivocal success; the machinery moved regularly and constantly. There was not a long

at the headlands than would have been in working in a pair of horses. The ploughs were entirely under control as they are in the case of the ordinary ploughman; and, indeed, I think on account of the steadiness derived from their weight, a great deal more so. All I can say, in a word, is that it was as well finished, as thoroughly done work, as any farmer could wish to see. There were altogether ten or twelve engines and cultivators at work, but scattered over a circle of at least five miles. Coleman's apparatus did its work very well, snatching up the soil thoroughly, and rather deeper than any of the others. The Woolston system did not show to great advantage, to me at least; and far in the distance was a novelty indeed—two of the local Kent ploughs working by steam. To say one not having seen them, I may say that the rudest old Irish wooden plough is a great, handy implement in comparison; but such a prejudice, that a gentleman told me they were really superior to any, say of Howard or Horsfall's, and that he himself, farming in the vicinity on a large scale, after giving a trial to the improved implements of these celebrated makers gave them up and returned to the old style, as being the better one. It may be; but *apropos* this is forcibly reminded of the argument of Paddy-go-Easy in a similar case. The land operated upon, in nearly every instance, was over stubble, rather tenacious in some places, and rather hard and dry in others—in such a state generally, that it could not well have been turned over with an ordinary furrow with a good pair of farming horses. I like the ploughing, however, as well as Howard's because the entire green stubble was turned down, the furrows were firmly pressed together, and, I may fairly say, the ground was ready for the seed at one operation. It does not matter that no grain is about being sown; this to me, appears one of its greatest recommendations, that any surface weeds would certainly be decomposed, shut out from the atmosphere between the hard pressed furrows; whilst in the other—the Woolston system, as it may be generally designated—through the land, no doubt, is broken up, the surface undergoes but little change, and if at all, after standing some time would again be growing green. It is no practical answer to say that there should be no surface weeds; we will hardly ever attain to that perfection in ordinary farming. But if we did, the land at Farningham was very clean indeed; not the slightest trace of coltsfoot or scutch grass; while you might have immediately sown the wheat after the ploughs. I don't see how it could possibly have been done after the cultivators.

These are the ideas of a mere Irishman, as between the two systems. I must say the English farmers seem to be pretty equally divided on the subject; and it would be presumption of the first water for a poor Co. Armagh farmer

“to decide” where such “doctors disagree.” All the machines on the ground worked along smoothly; some of the engines moving themselves forward as the progress of the work required; others remaining fixed to the same spot all the day. I prefer the former, though each worked well; but, upon the whole, it appeared to me that a great many more hands—men and boys—were required to attend on any of the machines than we usually read of in the papers.

As a wind up, I may add a few notes on things in general touching the district in which the trial was held. It is almost wholly cultivated; grazing, except in the meadows bordering the Darnet, a beautiful though shallow stream, and here flowing over a pebbly bed, nowhere to be seen. Yet it is a district famous for its sheep; and on the second day (Friday), the Messrs. Russel, of Horton Kirby, sold by auction, just adjoining the station, 100 ram lambs of the west country Down breed, at prices varying from £2 6s. to £6 per lamb, or about a general average of £4 10. No doubt, they were about the finest lot of lambs I ever saw, and their breeders widely celebrated—but think of the prices. They were sold in the field in which they had been penned for a month previous, on vetches; a magnificent crop. The pens are formed by hurdles of wicker work, and are a peculiarity of the district. Each hurdle is, say, 10 feet long, with ribs about two feet apart; they are wrought up with hazel, which abounds in the country; also sometimes mixed with clean whitethorn shoots, and are capitally adapted for the purpose. When not used, they are built up in great square piles, 18 or 20 feet high, at the farm-yard, and carefully thatched over. Nowhere here, in a wide district of country, do the sheep seem to be penned on the Irish and common sense system, of giving them a ridge or so at a time, fresh and fresh; leaving them at liberty to quit the ground on which they feed when they choose. By this means the green food is kept sweet as may be, and they eat it with relish to the last. But here, a square pen is put up, with hurdles all round, the shepherd attends on the sheep constantly, they are put at least 100 to the square rood, and kept on that space till the food is consumed, or rather, till they will eat no longer. I think there must be great waste, and the system entirely of a piece with the ploughs.

The first view of the country, from the Farningham station, is wonderfully like that of the grain growing districts of the north and midland of France, and the soil, too, the very same: the cultivation identical. The hills rise in long sweeps; the incline nowhere so great as to tax the strength of the horses. Wheat, rye, barley, oats, some peas, and rarely, beans; winding along the face of the hills, undivided by any fences. Even parish boundaries are merely marked by an occasional stone: all is cultivated.

The barley on an average is equal to the best in Corly, Louth; the wheat (red) all in drills, generally strong, but thin; the white wheat, without an exception, magnificent. It is generally in flower, and so free of weeds. Oats look very poorly, but in every case I saw sainfoin growing amongst it, regular and strong. This will be cut for soiling for years to come. In mangel wurzel and turnips they are not very forward; but in potatoes, as a rule, it would pay the farmers of that district to send a special commissioner on to the Green Isle, to see how we do it. They have a very fair soil and a warmer climate than we, but they are far behind us in this crop. *En revanche*, I heartily wish our people could see how clean the land in green crops is kept; not a weed of any kind showing, and if they won't have a superior crop of potatoes, neither will they have a most undoubtedly superior one of thistles, coltsfoot, and scutch grass. The assemblage was not nearly so large as might have been expected; indeed, the local attendance was nowhere. Hodge plied the hoe, or stared in vacant wonder at the passers by. You asked him the simplest question, he could only gape out, "Doant know, shoore!" and I guess he didn't; but as to curiosity to go see the steam cultivation, he had none, neither had his *measther* the farmer, for decidedly on the ground not half the men were English! Here in their own country on a great occasion, in a great undertaking, so specially affecting agriculture, the great British agriculturist was in most limited supply. In the carriage down to Farningham there were six of us—three Germans, a couple of Yankees, and myself; on the ground the foreign element predominated, and returning in the carriage there were four French agriculturists from Tours, who took it so much as a matter of course, that on nearing London, they asked the name of that plant the Rev. Mr. Townsend recommends so much; and I replied, in Ireland we call it "whins," but in English "furze;" one of them exclaimed, "Hol! ce monsieur donc parle Anglais aussi!"—as if it had been a novelty to hear it during the day at all.

As to the show, I don't see any marked advance on the previous years in cattle, except the Herefords—a decided improvement. In the foreign section there are some excellent animals shown; some that threw rather an air of astonishment over the settled gloom on the noble countenance of the great Briton. But the show of sheep was complete—there were such pens shown. The Cotwolds outdid themselves; the Leicesters are, I think, a trifle larger than formerly; the south and west country downs are capital; but chiefest of all the Shrops. Horton has taken the first prize this year, the third time successively; and I believe, from some experience, the blood the best in England, or in Ireland either. Captain Broughton this year again secures the prize ram; and those who

have bred from the Cherrymont flock have had reason to congratulate themselves. As an instance of enterprise and judgment in selection, may here remark that Mr. Adney, of Harley, Salop, who was so successful with his Shrops, and indeed made a name for them, is uncle to Mr. Horton, of Hurnage Grange, a young man already famous; a fame which, while there is every likelihood of its being perpetuated, will do what fame does not always do—make them a fortune. Here, from the same flock, in a few years, two men with judgment, and a rare knowledge of business, have produced some of the most famous and valuable rams in the world. The prize pen of Shrop ewes, of the Messrs Crane, were universally admitted to be the best ever exhibited. On the whole, this show has been a decided success to the Shrops, and they deserve it: with which, kind reader, far well.—CURIEUX, London, 28th June, 1862.

International Exhibition.

Thinking it will be interesting to our readers we subjoin a list of persons in British North America to whom medals have been awarded and Honorary Commendations made for the articles they exhibited at the Cosmopolitan Show now being held in London. Canada has come out of the severe competition much better than could have been reasonably expected, when it is considered how late we were in commencing preparations and the small encouragement offered by the government. Much praise is due to the Commissioners for the industry and judgment they have displayed in procuring an extensive collection of materials, under many disadvantages that is in the highest degree creditable to the intelligence and skill of our people engaged in agricultural and manufacturing industry.

We learn from the report of the Commissioners, that the number of Jurors engaged in determining the persons entitled to medals and honorary mention, was 612, of whom 287 were foreigners, and 325 Englishmen. Their labours were of no ordinary kind, having extended over two months. The number of articles that they had to examine is set down at 25,000; the number of medals awarded by them is nearly 7,000, and "honourable mention" has been made to nearly 5,300 persons. The proportion of awards is greater than in 1851, but not so large as in 1855. The colonies were represented by jurymen recommended by Colonial Commissioners; and

to avoid the slightest ground of complaint on the part of exhibitors.

MEDALLISTS.

The Commissioners for Canada, for the display of woollen goods and hand-yarns manufactured in the colony.

The Government of Prince Edward's Island, for a very interesting and varied collection of woollens, mixed fabrics, &c., homespun and made, illustrative of the domestic industry of the colony.

Government of Newfoundland, for a very fine collection of skins in silver cross, and red fox, and otter.

W. Coleman, Nova Scotia, for a very choice collection of skins, fine specimens of silver, red, and cross-fox, otter and mink.

McEwen and Reid, Nova Scotia—sofas, chair, and cabinet of native wood—for excellence of workmanship.

—Snell, of Canada, for good machine-made nails.

—Strymeour, New Brunswick, for well-made horse shoes.

Captain R. Gaskin, Kingston, Canada, for a collection of agricultural hand instruments.

Tongue & Co., Canada, for an assortment of edge tools highly finished.

Hon. P. J. O. Chauveau, for the merit of his collection of educational journals and reports.

The New Brunswick Committee for the Exhibition, for their collections of woods illustrating a study of botany.

—Downes, of Nova Scotia, for his collection of animals.

Professor Howe, Nova Scotia, for the excellence of his mineralogical collection.

J. M. Jones, Nova Scotia, for his collection of fish.

J. Mosher, Nova Scotia, for good manufacture of blocks on the Bothway principle.

W. Notman, Montreal, for excellence in an extensive series of photographs.

Captain P. Gaskin, Kingston, Canada, for a collection of agricultural tools.

J. Jeffrey, Canada, for iron plough.

J. McSherry, Canada, for iron plough.

J. Morley, Canada, for iron plough.

J. Patterson, Canada, for iron plough.

Whiting & Co., Canada, for collection of agricultural tools.

New Brunswick Commissioners, for a horse-

J. Brown, Canada, for the excellence of manufacture of hydraulic cement.

G. R. Stephenson, as the representative of his son, the late R. Stephenson, M. P., F. R. S., for the extraordinary boldness of conception and the great ingenuity of the construction of the Victoria Bridge, Canada.

Lame & Co., Canada, cast iron hollow wheels, for excellence of workmanship and proved durability.

The Executive Committee of Vancouver's Island, for spar of Douglas pine, 220 feet.

Edward Stamp, Vancouver's Island, for a section of Pinus Douglassii, six feet diameter, with roof shingles and other timber specimens.

Blaikie & Alexander, Toronto, for dressed flax.

Andrew Bridge, Canada, for a tub on a new principle of construction, exhibiting much taste and ingenuity.

E. B. Eddy, Ottawa, for machine-made wooden pails and tubs, at exceedingly low prices.

C. L. Ingersoll, Canada, for a cask constructed on a new and ingenious principle, for five liquids.

James Lawrie, Canada, for planks and logs, and 21 named specimens of logs from the Ontario district.

Hugh McKee, Canada, for a scientifically-named collection of 98 of the woods of the colony, accompanied with leaves, &c.

T. Moore, Canada, for a large collection of excellent handles for tools and implements in hickory and other woods.

Nelson & Wood, Canada, for whisks and brooms of Sorghum straw, at very low prices, from 1s. 6d. to 6s. per dozen.

Duncan, Porter & Co., Canada, for 19 very fine square logs of timber.

The Abbe Provaucher, Canada, for a very extensive, accurately named and extremely well illustrated collection of the woods of the colony, accompanied with dried specimens, useful information, &c.

Samuel Sharp, G. W. R. R., Hamilton, for a magnificent collection of planks, polished slabs, veneers, and a named collection of 26 specimens, from Western districts.

James Skead, Canada, for a magnificent collection of planks, logs, and a scientifically named collection of 27 woods, all from the Ottawa districts.

D. R. VanAllen, Canada, for planks and logs, all magnificent specimens from the Thames district, and 21 scientifically named specimens.

A. L. Trimbinski, Canada, for magnificent logs of white oak, rock elm, and hickory.

Miss E. Begg, Nova Scotia, for application of native grass to plaiting and bonnet-making.

Miss E. Begg, Nova Scotia, for very fine samples of flax prepared by dew rotting.

Miss Hodges, Nova-Scotia, for baskets, decorated with pine cones and other hard fruits.

Miss Lawson, Nova Scotia, for a collection of forest leaves of the colony, so prepared as to preserve the autumn tint.

—Pryor, Nova Scotia, for a preparation of the fibre of *mililotus leucantha major*.

Local Committee of Prince Edward's Island—for a collection of wicker work, &c., including excellent flax, well dressed.

Miss E. Jardine, New Brunswick—for ornamental work of native seeds.

D. Munroe, New Brunswick—for an excellent

scientifically named collection of 21 woods, veneers, &c., accompanied with specimens, and a volume of valuable notes and observations.

E. Potter, New Brunswick—for fine carving in a wooden box.

Mrs. D. B. Stevens, New Brunswick—for ornamental work in native seeds.

Campbell and McLean, Nova Scotia, cavendish tobacco. Quality of Tobacco used, and quality of article produced.

— Barber, Nova Scotia—salmon and lobster; excellence of quality.

J. Cairns, Prince Edward's Island—salmon and lobster; excellence of quality.

D. Brown, Canada—maple sugar; excellence of quality.

New Brunswick commissioners—spiced salmon; excellence of quality.

S. Knight, Newfoundland—preserved salmon and lobster; excellence of quality.

W. Boa, Canada—for all his samples of substances used for food.

R. L. Denison, Toronto—Indian corn stalks; for extraordinary growth.

W. Evans, Canada—for collections of grains and seeds, excellent and interesting.

J. Fleming, Toronto—for seeds and grains, as excellent and interesting.

B. Johnstone, Canada—for samples of Soule's winter wheat, of excellent quality.

J. Logan, Canada—for spring wheat of excellent quality.

County of Peel Agricultural Society, U. C.—(medal to John Lynch, Sec.) for barley, peas, and two kinds of spring wheat, all of excellent quality.

A. Shaw, Canada—for rye of excellent quality.

County of Beauharnois Ag'l Soc'y L. C., (two medals awarded to growers), for flax seed, grown by C. Burguin, for grass seed grown by C. Tait.

J. Wilson, Canada—for oatmeal of excellent quality.

The New Brunswick Commissioners, for the excellence of their collection of substances used for food.

The Commissioners of Newfoundland, for a fine collection of seeds.

R. G. Fraser, of Nova Scotia, for excellent grain, of garden and field seeds.

Local Committee of Prince Edward's Island—for interesting collection of agricultural produce.

Agricultural Board of Upper Canada—for samples of wheat from various counties of excellent quality.

Agricultural Society of Huntingdon, L. C., (one medal to grower), for peas 10 bushels per acre grown by John Penis.

Agricultural Society of Wellington, U. C., for wheat of excellent quality.

Agricultural Society of Wentworth and Hamilton, U. C., (three medals to growers), for blue

stem wheat grown by I. H. Anderson, for red chaff wheat grown by John Smith, for potato oats, grown by A. Gorie, very superior in quality.

Spurr D. Wolfe, New Brunswick, for products obtained by the distillation of coal.

Executive Committee of Vancouver's Island, For collection of Agricultural seeds.

Benson and Aspin, Canada, samples of Indian corn starch. For the excellent quality of samples.

Canadian Oil Works, Hamilton, for an extensive exhibition of the derivatives of petroleum.

E. A. McNaughton, Canada, flour and potato starch. For the excellent quality of samples.

Parson Bros., Toronto, Canada, for an extensive exhibition of the derivatives of petroleum.

E. Billings, of the Geological Survey, Canada, for his published decades on Canadian fossils, and his valuable general contributions to palaeontology.

English and Canadian Mining Co., for the skill and perseverance with which they have opened their ground, and the discovery of deposits conformable with the stratification.

Foley & Co, Canada, for plans of mines, ores and lead, smelted in the colony.

J. Sterry Hunt, of the Geological Survey, Canada, for the instructively described series of the crystalline works of Canada, and his various published contributions to geological chemistry.

Larue & Co., Canada, for excellent cast iron railway wheels made from bog iron ore, which have run 150,000 miles.

Montreal Mining Co., for interesting series of copper ores, accompanied by sections of the workings.

A. Taylor, Canada, for good specimens of crude and prepared gypsum, with plans and sections of the gypsum mines.

The officers of the Geological Survey of Canada, for an admirably prepared selection of specimens, illustrating the mineral resources of the Province.

B. Walton, Canada, for the discovery of roofing slates.

West Canada Mining Co., for specimens and plans, illustrations of well-worked copper mine

— Williams (Bunnskillen), for introducing an important industry, by sinking the artesian well in the Devonshire strata for petroleum.

New Brunswick Companies, for general collection of the works and minerals of the colony

The Government of Newfoundland, for a general collection of the rocks and minerals of the Island.

Rev. Mr. Honeyman, Nova Scotia, for a large collection of specimens illustrating the geology of the colony.

Prof. Howe, Nova Scotia, for collection arranged by him, illustrative of the rocks and minerals of the Province.

Government of Nova Scotia, for the largest instructive collection, illustrating the occurrence of gold.

J. Scott, Nova Scotia, for column of coal, showing the entire height of the seam, 34 feet; one of the thickest known beds in the world.

HONOURABLY MENTIONED.

The following is a list of those who are honourably mentioned:

E. L. Betts, Canada, J. Hodges, Canada, and Sir S. M. Peto, Bart., M. P., a collective honourable mention for the successful execution of the Victoria Bridge, and for the ingenuity displayed by Mr. Hodges in constructing the coffer dams for the same.

New Brunswick Commissioners, models of bridges. For the utility of the works represented by the models.

Prof. Howe, Nova Scotia, for goodness of quality of specimen building stones.

T. Scarfe, Nova Scotia, good quality of common and pressed brick, and drain tiles.

Balmer & Sheppard, Canada, for the excellence of his white bricks and drain tiles.

Missisquoi Drain Tile Company, Canada, for drain tiles of good quality.

F. Claudet for a series of views in New Westminster, British Columbia.

Bowren & Cox, New Brunswick, for photographic views, being the earliest taken in that colony.

W. H. Adams, of New Brunswick, for railway springs.

—Spiller, New Brunswick, for collection of edge tools.

G. Connell, Nova Scotia, for axes.

Mrs. W. Black, for her models of fruits.

Gordon & Keith, Nova Scotia, for the excellent workmanship of their furniture.

James Thomson, Canada, for his collection of birds.

E. O. Richards, Canada, for model of water wheel.

Fleming & Humbert, New Brunswick, for oscillating steam engine.

W. G. Simpson, Nova Scotia, for model of gold washer.

Government of Prince Edwards Island, for good specimens of tanned lambskin rugs.

L. D. Sovereign, Canada, for his combined cultivator and drill.

H. Collard, Canada, for his cultivator.

S. H. Gilbert, New Brunswick, for his model of stone picker.

S. Sharp, Canada, Great Western Railway, model of sleeping and freight cars.

A. Bronson, Canada, for magnificent sections of strobos and white oak.

—Burrows, Canada, for fine sections of "lan-
cus sassaparilla."

Jacob Choate, Canada, for fine cherry wood
—A soft maple planks.

—Coutlee, Canada, for named collection of
—2 woods of the colony.

O. Gingras, Canada, for fine planks of timber.

Miss Crooks, Canada, for collection of 490 native plants.

F. X. Prieux, Canada, for a named collection of 74 woods of the colony.

E. H. Rose, Canada, for a box of very fine
—wax nut veneers.

—Truman, New Brunswick, for veneers of good quality, and a book formed of inlaid slabs, barks, &c., illustrating the woods of the colony.

N. Norman, Newfoundland, preserved curlew, goodness of quality.

Nova Scotia Commissioners, salted salmon, goodness of quality.

Rev. F. L. D'Heureux, maple sugar, illustrative.

The Agricultural Society of Huntingdon, L.C., for barley, grown by Mr. McNaughton.

The Agricultural Society of Wentworth, U. C., for collection of wheat, goodness of quality.

T. Badham, Canada, for oats of good quality.

J. Logan, Canada for barley, goodness of quality.

A. Shaw, Canada, for Indian corn and marrowfat peas, excellent quality.

C. Wilkins, Canada, Indian corn, goodness of quality.

Miss Bossoult, Nova Scotia, for water colour paintings of native flowers, as instructive.

Dr. Howe, Nova Scotia, medicinal and other plants.

W. H. A. Davis, Canada, for interesting and instructive specimens from a remarkable deposit.

H. T. McCaw, Canada, for fine instructive specimens of ores running with the stratification, and illustrating the structure of the country.

S. Sweet & Co., Canada, for fine and instructive specimens of ores, running with the stratification, and illustrating the structure of the country.

Cultivation of Winter Wheat.

From a prize essay in the American *Agriculturist*, on this topic, we select the following paragraphs:

Wheat, one of the greatest staples of the country, if rightly managed, may be made one of the most profitable of our cereals, upon almost any soil. Twenty years' experience has demonstrated to me that we hardly need fail of success, if the following mode of proceeding be strictly followed.

Selection of Seed.—Select none but the best seed of bearded wheat. The white chaff is preferable, it being worth some ten cents more per bushel in Eastern markets. Prepare a strong brine—do not depend on old beef or pork brine,—and wash as long as any filth or immature grain rises to the surface. By this process we shall expel from two to three quarts of foul seed and shrunken grain per bushel, from what would be called an "extra" article. Seed prepared in this manner will send up none but the

most hardy and vigorous plants, consequently will be less liable to winter-kill; and as like produces like, we may look for an article in the increase equal if not superior to that which was sown. Add three quarts of dry, fresh-slaked lime to every bushel of wheat; mix up thoroughly two days or two weeks, previous to sowing. *This is important—neglect the lime, and nine cases out of ten you will have more or less smut, which will depreciate the value of the wheat.*

Preparation of Ground, Seeding, &c.—The ground, if rich and strong enough, may be sown after peas, otherwise after summer fallow. In either case, manure on the surface, and plow or drag in with the wheat. I prefer to use about fifteen loads to the acre thus prepared; then, after sowing thinly, to plow it in. The seed, by coming in immediate contact with the manure, receives a thrifty and vigorous start, which it otherwise would not attain. This I think is highly important to insure success. I have never used the drill, but in its stead Ide's cultivator, which answers a good purpose. If you harrow in the seed, in no case roll afterwards, as the inequalities of the surface will prevent the snow from blowing off, and the plants will be less liable to be affected by frost. But if covered with a drill or cultivator, this precaution is unnecessary, the seed being so much deeper, and the roots less exposed. When the ground is settled in spring, go over with a heavy roller; it covers many exposed roots and often adds five to seven bushels per acre.

Have the ground well pulverized for sowing; it is useless to sow on lumpy and badly prepared soil. In case there is no manure to be had, cover the surface immediately after sowing and before the wheat starts, with a layer of straw; the wheat in a short time will come through, and prevent it from blowing off. The straw will act as a mulch, and the ground being shaded will retain the moisture; and if the soil is not very poor, you may expect a good paying crop. Two and-a-half bushels salt per acre tends to prevent rust, makes the straw strong and bright, and gives the young wheat a dark color. If any one doubts the truth of this statement, I hope he will make the experiment, and my word for it, he will at once adopt the practice. I know of no better mode to prevent the ravages of the midge than early sowing, and even this sometimes fails. The last week in August, or the first in September, I would prefer but this depends upon circumstances; if the weather is dry and not, I would rather wait until October.—Some years since I made an experiment to test early and late sowing. One piece was sowed the last week in August; one the last week in September, and one the middle of October, on the same kind of soil and treated in every respect alike. There was no difference in the time of ripening or in the quality of the grain, but the

earliest sowed produced the longest heads, consequently yielded more per acre.

I do not sow plaster on wheat, as it tends to rust, and increases the bulk of straw but not of grain.

A Two-story Milking Stool.

"Something new under the sun," in the shape of a milking stool for kicking and unruly cows, is described by a correspondent of the *Iowa Homestead*. The stool can be made of inch boards, and has many advantages over the old fashioned one. First procure a piece of board of sufficient size to accommodate the milker, and have, in addition room for the milk pail. This may be put on legs of about eight inches in height. Then upon this erect another seat or stool, covering half the space of the bottom one, for the milker to sit, thereby giving him a chance in front to let the pail remain firm and steady, not liable to get kicked over, and by being up from the ground kept free from dirt and mud, and so close to the udder as to prevent loss from milking over, &c. If a cow is in the habit of kicking, the milker, by using a stool of this description, can have both hands to prevent her heels from coming in contact with the pail, which sits firm upon the front part of the stool, steadied by his knees. He could in a short time effectually break a cow of the habit of kicking while being milked.

Horticultural.

Toronto Horticultural Society.

SECOND EXHIBITION OF THE SEASON.

The second Exhibition this season of the Toronto Horticultural Society was held yesterday in the Gardens, and was attended by a very large number of visitors. In the afternoon the band of the 30th regiment was present and played a number of select airs. The flowers, fruit, &c., were shown in the large pavilion, which in the evening was brightly illuminated, and presented a very pleasing and attractive scene, crowded as it was with the youth and beauty of the city. In some particulars the exhibition was superior to many which have previously been held by the Society, and in others a great improvement was apparent. There was a magnificent display of foliage and green-house plants, which possessed beauties for every taste and were really the first of their kind. In this department Hon. Judge Harrison was an extensive exhibitor. In one collection of twelve plants from his conservatory, there were some very fine specimens—among them the *Raphis flabelliformis*, not before shown in Toronto, and

the *Crotori Augustifolia*, a plant whose foliage is very rich and beautiful. These specimens were very generally admired. From the greenhouse of the Hon. Justice Morrison another and equally as fine a collection of plants was exhibited. Chief in this group was the majestic *Cyanophylla magnifica*, with splendidly coloured leaves upwards of two feet in length and fifteen inches broad. The plant exceeded four feet in height. The ladies, who are generally excellent judges, were warm in their admiration of this superb specimen. A new and rare collection of foliage plants from the conservatory of D. L. Macpherson, Esq., was also shown. It embraced some choice and well-grown *Begonias*; a specimen of the *Mammoptoris Nidus*, a rare plant with long, slender, smooth leaves, full hued and rich; and a little *Argyrea tricolor*, the delicate colouring of whose foliage attracted much observation. Of stove-plants Judge Harrison was a principal contributor. Of his collection two were particularly worthy of notice, as being well grown and richly flowered—*Oncidium flexuosum* and *Cattleya Mossie*. An excellent collection was also exhibited by Mr. C. Young, gardener to the Hon. Justice Morrison, among which was a very pretty plant bearing a yellow flower called *cassia cranbosa*. The foliage of this specimen was as choice as the flower was beautiful. In a separate collection of Judge Harrison's, which, by the way, carried off the first prize, were a fine *clero deudron fallax* and another, *Erythrina cristigalli*, both of which excited much comment and admiration. A third collection from the conservatory of the same gentlemen contained several superb specimens of *Gloxinia*, which secured for him the first. They had evidently been carefully nurtured and attended, and deserved the admiration bestowed upon them by visitors.—There was a good display of *fuchsias*, a plant everywhere a favorite because of the graceful rise of its stem and the brilliant and varied colours of its flowers. The choicest lot was shown by Mr. C. Young, the fruit of whose taste and skill was certainly much to be admired. Several specimens of *Calceolaria* were displayed, but they were hardly equal to those shown at former exhibitions. On the whole, the show of hot-house plants was capital, and reflected much credit upon the taste of the gentlemen by whom they were entered for competition.

Of cut flowers the display, although choice and beautiful, was limited. Mr. John Gray, of the "Lakeview" nursery, who has always something very elegant wherewith to gratify visitors to these exhibitions, displayed a superb collection of hybrid perpetual roses, most of them being new importations the first time exhibited in Toronto. Conspicuous in it was *General Jacqueminotte*, a flower which

has carried off innumerable "first prizes" at horticultural shows in England, and which went a great way towards securing Mr. Gray the first prize yesterday, which was so justly awarded him. The *Duchess de Cambacerus* and *Jules Margottin* were other varieties of roses to be seen in the collection, both being superb specimens of the "queen of flowers." Judge Harrison was the exhibitor of another collection of roses, well grown but not equal in point of beauty to those of Mr. Gray. A third, and by no means inferior lot, was from the gardens of Mr. George Leslie, one of the oldest and most experienced nurserymen of this city. An assortment of fine hardy garden roses was shown by Mr. J. Forsyth, of the Normal school; and Judge Harrison displayed some very fine roses of the Bourbon variety—among them the *Isabella Gray*, an American variety of singular beauty. No great improvement on former exhibitions was manifested in verbenas, the chief exhibitor of which was Mr. C. Young. The season is rather early for dahlias, but notwithstanding some very good specimens of this favorite flower were displayed. They were grown by Judge Harrison. The same gentleman and noted horticulturist exhibited some pretty specimens of pinks. The only carnations we noticed were grown by Mr. C. Young. They were well developed and delicately colored. The same gardener exhibited a collection of picotees, and a choice collection it was. Mr. George Leslie showed some phloxes, which, considering the season, were very good. There were some achimenes and balsams on view; and Mr. J. Bain displayed a very good collection of stocks, for which he was awarded a prize. Of table and hand bouquets seven altogether were shown. We missed from the collection the tasteful handiwork of Professor Hirschfelder, who has contributed many handsome collections to the exhibitions of the Society. Some well arranged bouquets were shown, however, by the Rev. E. Baldwin and Mr. J. Brown; and Mr. J. Fleming and Judge Harrison displayed hand bouquets of considerable beauty and merit.

The display of fruits was large and excellent. Cherries, gooseberries, strawberries, currants, raspberries, &c., were shown in great profusion; and most of the varieties were of the largest and best description. Of gooseberries Mr. J. D. Humphreys was a successful exhibitor. The collection for which he gained the first prize was fine beyond comparison—the berries being large, fine flavored, luscious. The chief contributors of cherries were Messrs. George Tattle, J. D. Humphreys, George Leslie, R. Stibbles and J. Grainger. They were all fine descriptions and deserved encomiums heaped upon them. A plate of fine white grapes was shown by Judge Harrison. Although not large they were of fine

flavor and altogether a very superior article. What shall we say of the strawberries, especially of the *Triomphe de Gand* variety, shown by Mr. George Leslie? They were certainly an extraordinary production both as regards size and sweetness. We envy Mr. Leslie the possession of such fruit. The currants and raspberries appeared to possess all the qualities that contribute to excellence. Hon. G. W. Allan, President of the Society, displayed three plates of apples of last year's growth, looking as fresh and plump as if they had just been plucked from the parent stem. Mr. Allen's secret of preserving fruits is a valuable one if the process is always as successful as in this instance. There were four varieties shown—snow apples, which are rarely kept in good condition after December, Pomme-Grise, Spitzbergen and red winter streak. One of the chief attractions of the exhibition was the house orchard trees of Mr. Macpherson, bearing fruit almost ripe and of more than ordinary size. There were pears, peaches and nectarines thickly depending from the branches of small trees not more than five feet in height—all grown in pots under the roof of the green house. It was a truly magnificent display, and did credit to the exhibitor.

The vegetable show was not so extensive as at some previous exhibitions, but everything displayed was of the best description. The lettuce, cabbage, potatoes, rhubarb, cauliflower, &c., were all very good. The principal exhibitors were Messrs. Tattle, J. Grainger and J. Brown, gardener to Mr. W. H. Boulton.—*Leader, July 17th.*

Hamilton Horticultural Society's Exhibition.

The second Exhibition of the Hamilton Horticultural Society for this season, was held in the Mechanics Institute, on Friday, 25th inst. By early dawn the gardeners and amateurs, like the birds of the morning were all astir, and might be seen with their various productions carefully wending their way to the Hall, no doubt full of hopes of the coming events.

The hot, and green-houses of W. P. McLaren, R. Juson, John Young, T. C. Kerr, and John Brown, Esqs., contributed largely to the exhibition. The green-house and stove plants although not so numerous as on the former occasion, were creditable. A collection of foliage plants from Mr. McLaren was very much admired, particularly a magnificent plant of the *Musa Cavendishii*. This noble plant from its appearance may be expected to flower and fruit next season. In describing a plant of the same species, from the gardens of John Brown, Esq., exhibited at the last May show, when I said in my report of it, that it was called by some the Indian bread tree, this is so far true, but the real

Bread tree it is not. The Bread tree proper or the plant so called by Linnaeus, is the *Artocarpus Incisa*, of the South Sea Islands. I mention this to prevent any misunderstanding.

The prize Fuchsias from John Young and R. Juson, Esqs., were very good for the time of season, they were much admired, particularly the smallest ones; the taste in growing this fine variety of plants is becoming more refined, the lesser being preferred to the greater. In the collection of Green House plants from Mr. Brown there was a fine plant of *Oncidium Flexuosum*, this beautiful Orchid species is of Brazilian nativity. The Orchidæ are a singular tribe of plants, peculiar in shape and growth, they are famous for their flowers, as well as their odd shapes and unique foliage. Some of their flowers are remarkably strange and curiously shaped. *Oncidium Papilio*, bears a striking resemblance to a butterfly on wing, others to heads and bodies of animals, the tropical varieties are rather difficult to cultivate, particularly those of them which in their nature resemble the parasitical tribe of plants.

The cut flowers were well represented, Stocks, Hollyhocks and Verbenas in abundance. The prize Carnations formed a stand of 12, from the garden of Mr. Wm. Muir, Esq., there were also two seedlings from the same garden which were commended.

The amateurs made a very good show of Cottage window-plants; but not with so many as we would like to have seen. Mrs. Sharp, Dr. Craigie and Mr. Michael were the successful competitors. Mr. Weatherston, an amateur, exhibited some very fine French Marigolds, and double Zinnias, and carried off the first prizes for the Dahlias and Roses. H. Colbeck, Esq., exhibited a few very fine spikes of *Campanula Medium*, which was very much admired, Mr. T. Racey, nursery man, and Mr. A. Peachy, gardener to E. B. Wood, Esq., Brantford, exhibited collections of Hollyhocks and Antirrhinums, Mr. Mackay from the same place, *Pentstemon*, all very worthy of notice.

The Orchard-house trees from the gardens of W. P. McLaren, T. C. Kerr, Esqs., and Bruce & Murray's nursery, attracted very much attention; they were all in a full bearing state well grown, particularly those from the garden of T. C. Kerr, Esq. The vines from Bruce and Murray's nursery, were of the sweet water variety, two years old; on the one 13, and on the other were 15 clusters of ripe fruit.

Two dishes of Peaches from John Young, Esq., and two dishes of Nectarines from Bruce & Murray's were much admired.

The collection of cherries was large and fine, especially those of Messrs. Freed, Lottredge and Fearman. Gooseberries plentiful, varieties many, those from the gardens of John Young, W. P. McLaren, and John Brown, Esqs., were the finest we have seen for a long time. Dr. Craigie exhibited Black Greens of the

catch kind, they were of a good size and an excellent flavour. Black, red and white Currants and Raspberries were in abundance, a few Strawberries and Tomatoes.

The vegetable department was very full; the produce from Messrs. Kelvington, Freed, Taylor and Wildes were excellent; the Peas, better and more fully represented than heretofore. The Rev. R. Rice exhibited a pea he calls the String pea, appears to be a rather a peculiar variety, has long and broad pods, resembles very much the Kidney bean and may be cooked in the same manner, cabbages, cauliflowers, onions, carrots, radishes, &c. &c., with two very full collections of vegetables from Messrs. Wilds and Kelvington, the whole very creditable to the market gardeners and other growers.

We had a beautiful day, a very good Show, well patronized in the afternoon and evening by the elite and beauty of the city. The ladies draw to like, the ladies for the flowers, the flowers for the ladies.

GEO. LAING.

Hamilton, July 30th, 1862.

Fruit Growers' Association of Upper Canada.

PROCEEDINGS OF MEETING HELD IN THE TOWN HALL, ST. CATHARINES ON WEDNESDAY, JULY THE 16TH 1862.

Report of the Canadian Agriculturist.

Sir.—The meeting of the Fruit Growers' Association, called for 16th inst., was organized at 2 p.m., Judge Logie in the chair. The minutes of the two previous meetings were read and approved, after which the meeting went into discussion of the Fruits on Exhibition. Of these there was a very fine collection—some varieties.

Mr. W. H. Read, of Port Dalhousie, had a fine sample of cherries, among which was a variety of great promise, large size, the Monsieur DeMezel. Also, a fine sample of Raspberries.

Mr. Freed, of Hamilton, showed 16 varieties of cherries, of the leading kinds. A really fine collection.

Messrs. Bruce & Murray, of Hamilton, exhibited a superb collection of Gooseberries, 17 varieties, many of them unusually large.

Mr. Neston, of Hamilton, also showed a very fine collection of Gooseberries, some 15 varieties, and two varieties of Plums, one of them was the early Prolific, a new and excellent Plum.

Mr. Philip Gregory, of Louth, had a fine collection of Cherries, 8 varieties. Among them were some of the best in cultivation—also 3 varieties of large currants, very fine.

Mr. J. C. Dean, gardener to Mr. James Taylor, St. Catharines, showed 5 varieties of Gooseberries, very fine, 3 varieties of large currants,

also 5 varieties of Raspberries. The above Fruits showed the effects of good cultivation.

Mr. R. N. Ball, Niagara, exhibited three varieties of cherries, and the yellow cap Raspberry, all very fine.

Dr. Waits, of Niagara, showed a fine bunch of red grape currants—a bunch of white smooth Gooseberries. Also 4 varieties of cherries, very fine.

S. Shaw, of St. Catharines, showed two plates of exceedingly fine gooseberries.

Mr. M. Y. Keating, of Louth, showed a fine sample of red cherry and white grape currants, also Napoleon Bigarreau cherries.

Mr. Sherlock, of Louth, showed a very fine sample of the black heart cherry.

Mr. T. H. Graydon, of St. Catharines, exhibited a sample of Downer's late red cherry first season of bearing—seem prolific. Also Lening's new white strawberry, very large and fine flavor. Duc de Malakoff, very large and fine; also British Queen. A ripe tomato, in open air obtained by plunging a pot in the ground. Mr. Graydon has had Duc de Malakoff strawberry to measure 7 inches in circumference the present season.

J. Cuthbert, gardener of Thomas Merritt, Esq., St. Catharines, showed 12 varieties of Gooseberries, very large.

A seedling apple from the garden of Sir A. McNab, Hamilton, of last years growth, was exhibited in a fine state of preservation.

Rev. Mr. Dixon, of Port Dalhousie, exhibited a fine sample of Triumph de Gand strawberry; also a variety of white strawberries from Lower Canada, of the Alpine Family.

Mr. D. W. Beadle, St. Catharines, exhibited 11 varieties of cherries, among which was a new seedling, pronounced by the meeting to be an unusually delicious cherry, and if it should prove hardy and prolific, will be one of the very best in cultivation.

Wm. McGiverin, Esq., of St. Catharines, exhibited a very choice collection of plants and flowers, comprising 6 varieties Begonias, 6 varieties of Caladiums, 25 varieties of Anteorhinums and Verbenas. Also 5 varieties of Gooseberries, 3 of currants, 2 of Raspberries, and a plate of black heart cherries.

R. Miller, Esq., placed on the table three plates of cherries; some most noble samples of the Napoleon Bigarreau, unsurpassed by any others exhibited.

Mr. John Tackle, of the Montebello Gardens, sent a beautiful specimen of the Carosinea Speciosa in flower.

Mr. John Holder placed on the stand seven varieties of Begonia, and several other beautiful foliage plants. A fine specimen of that most exquisitely scented Gardenia Fortunii, in flower, and quite a collection of other showy and beautiful things, among which we noticed particularly Oldenlandia Depii, Streptocarpus Rex, Musa

Cavendishii, Calandum Madriana, and that curious *Acrosichium Aleicorne*, besides some lovely Orchids in full bloom.

At the close of the discussion, the Secretary laid before the meeting a large amount of information, obtaining an answer to the questions of the Association. As the matter was too extensive for consideration at this meeting, a committee was formed, composed of Messrs. D. W. Beadle, James A. Campbell, of Grantham, and P. Gregory, of Louth, to make out a condensed report for the Winter Meeting. The President then read a letter from the Royal Horticultural Society of England, relating to the International Exhibition of Fruits to be held 8th of October, 1862. On motion of Dr. Craigie, seconded by Mr. Murray, it was resolved that the Secretary acknowledge the letter received from the Royal Horticultural Society, and state that on account of the early day named for the Exhibition, it will not be possible for us to send a sufficient number of specimens that are fully colored and matured, to give a good representation of Canadian Fruit.

A vote of thanks was then moved by Dr. Craigie, seconded by Mr. W. Holton, to the Mayor and Council of the Town of St. Catharines, for their kindness and liberality in granting the free use of the Town Hall, for the meeting of the Association.

The meeting then proceeded to the discussion appointed for this session, as follows, taking up the varieties, seriatim.

In order that all persons desirous of sending samples of Canadian Fruit to the International Exhibition of the Royal Horticultural Society may have an opportunity of doing so. I send you a copy of the Secretary's letter to Dr. Hurlburt, and the Prize List.

The accompanying letter from Mr. John Freed, of Hamilton, in relation to the cultivation of the cherry, was received by the Secretary and laid before the Association, also the letter from Mr. Wilson, of Ontario.

The meeting was one of unusual interest.—The discussions were lively and the attendance large, about forty members being present. The members adjourned at 10 p. m. to meet again in Toronto, on the 12th of November next, much gratified with the fine display of fruit and flowers and the information elicited.

D. W. BEADLE,
Secretary.

St. Catharines, July 30, 1862.

DISCUSSION ON FRUITS.

Black Tartarian.—Dr. Craigie, of Hamilton. Is one of the finest varieties in cultivation. —Mr. Laing, of Hamilton. It is very prolific, and hardy of its class.

Mr. Murray, of Hamilton. Is one of the best, hardy and prolific.

Mr. Meston, of Hamilton. Is a universal favourite, prolific and hardy of its class.

Mr. Freed, of Hamilton. The best black cherry.

Mr. W. H. Read, of Port Dalhousie. A favourite, the best black cherry, tree hardy.

Jas. A. Campbell, of Grantham. The best and largest cherry.

Mr. P. Gregory, of Louth. A good cherry and ornamental tree, have some others equal good.

Mr. W. H. Smith, of Grimsby. The best black cherry, hardy.

Mr. S. Taylor, of Pelham. A good bearer and hardy tree, of first quality.

Rev. Mr. Dixon, of Port Dalhousie. This tree does admirably, recommend for general cultivation south of Lake Ontario and Gr Western Railway.

Elkhorn or—Rev. Mr. Dixon, of Port Dalhousie. Is an excellent late variety, had never failed with me for ten years, is hardy, but trees 18 to 20 years old.

Mr. R. N. Boll, of Niagara. Is hardy.

Mr. W. M. Smith, of Grimsby. Is perfect hardy, valuable as a late cherry.

Mr. P. Gregory, of Louth. Has always borne until last year, when I had none of any but best late variety.

Mr. W. H. Read, of Port Dalhousie. Large and fine with me.

Mr. S. Taylor, or Pelham. Is very hardy and a good bearer. Valuable in its season.

Recommended for general cultivation South of Lake Ontario and G.W. Railway, as an excellent late variety.

Black Eagle—Mr. R. N. Ball, of Niagara. Is a fine cherry, hardy and prolific.

Mr. W. M. Smith, of Grimsby. Is next the black Tartarian, hardy.

Mr. James A. Campbell, of Grantham. This tree is more hardy than the black Tartarian.

Mr. W. H. Read, of Port Dalhousie. A great bearer, but quality excellent.

M. Freed, of Hamilton. With me the best, very productive, and hardy.

Mr. Meston, of Hamilton. An excellent cherry, rather a poor bearer.

Mr. Murray, of Hamilton. Is a fine fruit.

Mr. Laing, of Hamilton, an excellent fruit but an indifferent bearer.

Mr. T. Taylor, of Pelham. Sweetest cherry I grow, a good bearer.

Mr. Pawling, of Louth. It is my opinion that the above varieties of cherries succeed on a dry gravelly or sandy soil, do not do on clay.

Mr. James A. Campbell, of Grantham. These grow rapidly on highly manured soil, are a coarse bark; received for general cultivation South of Lake Ontario and G. W. Railway.

Knight's Early Black.—Mr. P. Gregory, of Louth. I have a tree 17 years old, a fine cherry, and prolific.

Mr. W. H. Read, of Port Dalhousie. Had a
but it cracked and died.

Mr. Meston, of Hamilton. Is a tree of slow
with, hardy, rather a poor bearer, quality
mod.

Recommended for further trial.

American Heart—Mr. Freed, of Hamilton.
ipeas with black Tartarian, quality very good,
not the best; not very prolific, hardy so far
known.

Mr. Murray, of Hamilton. The tree bears
and is hardy.

Mr. Holton, of Hamilton. Is a very fine
ery, hardy of its class, would recommend it
r further trial.

Recommended for further trial.

Napoleon Bigarreau.—Rev. Mr. Dixon, of
t Dalhousie. Think it is inferior to Yellow
ashish.

Mr. Jas. A. Campbell, of Grantham. Is more
ble to speck and crack than the Yellow
ashish.

Mr. Pawling, of Louth. Is the second to the
flow Spanish.

Mr. W. M. Smith, of Grimsby. Is very pro-
rive, one of the most productive and best
et cherries.

Mr. W. H. Read, of Port Dalhousie, very
lic, one of the largest, very fine, and valu-
market variety.

Mr. Freed, of Hamilton. A good market
ry, more productive than any other of that
s.

Mr. Meston, of Hamilton. Is an exceedingly
active and hardy variety.

Mr. Laing, of Hamilton. A most productive
ety.

Mr. Holton, of Hamilton. Can fully corro-
ate what has been said in favour of this
ny.

Mr. R. N. Ball, of Niagara. Is a great bearer.
omended for general cultivation, south
e Ontario and G. W. Railway.

Mon.—Rev. Mr. Dixon, of Port Dalhousie,
ld recommend it as a very good cherry.

Mr. W. M. Smith of Grimsby. Is a hardy
ity, prolific, very good.

Mr. W. H. Read, of Port Dalhousie. Do not
e it.

Mr. Meston, of Hamilton. Is prolific and
f.

Mr. H. Laing, of Hamilton. Is very good
prolific.

Mr. W. Holton, of Hamilton. Is a very valu-
cherry for Canada,—one of the most hardy
s class,—will stand but where few of its
will live.

Recommended for general cultivation south
e Ontario, and G. W. R. Railway, and
ther trial in the more northern parts of
rovince

American Amber—Rev. Mr. Dixon, of Port
-siasie. Is inferior to others of same season.

Mr. Gregory of Louth. Is hardy, medium
ty. Not very prolific.

Mr. Read, of Por^t Dalhousie. With me bears
well; good quality, and hardy.

Mr. Freed, of Hamilton. Bears well, medium
quality, a good cooker.

Mr. W. H. Holton, of Hamilton. Don't think
much of it, is too small.

Mr. R. N. Ball, Niagara. Is a second rate
cherry.

Not recommended.

Early Purple.—Mr. Freed of Hamilton,
about same time as *Bowman's May*.

Rev. Mr. Dixon, of Port Dalhousie. The
birds eat all the fruit with me.

Mr. W. M. Smith, of Grimsby, a good early
variety. Birds eat all the fruit.

Mr. W. H. Read, of Port Dalhousie. Prefers
it to *Bowman's May*.

Mr. S. Taylor of Pelham. Thrives well with
me; bears well, a good early sort

Recommended for general cultivation South
of Lake Ontario and G. W. Railway.

Bigarreau du Mai—Birds eat it, is valu-
able as an early variety.

Mr. W. H. Read, of Port Dalhousie. Is a
bird cherry, nothing but skin and bone, not
equal to the early purple.

Mr. Freed, of Hamilton. A great bearer.

Mr. W. Holton of Hmailton. Is only valu-
able as an early variety.

Not Recommended.

Black Cherry Seedling—From Sir. A. Mc-
Nab.

Mr. Laing, of Hamilton. Is a good bearer.

Mr. Jas. A. Campbell, of Grantham. Is a
cherry of fine quality.

Mr. Pawling, of Louth. A good cherry, but
there are better of the same season.

Bigarreau—or Yellow Spanish.—Mr. Jas.
Campbell, of Grantham. A hardy cherry of its
class.

Mr. Pawling, of Louth. One of the most
valuable, hardy, and good bearers.

Mr. W. H. Read, of Port Dalhousie. Is
hardy, vigorous, an abundant bearer, flesh firm.

Mr. Freed, of Hamilton. Not very produc-
tive with me, but a fine cherry.

Mr. Laing, of Hamilton. Is one of the best
cherries.

Mr. W. Holton, of Hamilton. An old Stand-
ard sort,—Stands at the head of its class, fine
for preserving, and a good market variety. Re-
commended for general cultivation South of
Lake Ontario and G. W. Railway.

Monstreuse de Meziel.—Mr. W. H. Read, of
Port Dalhousie. Is a very vigorous grower,
leaf large. Tree ornamental, is hardy, have a
tree six years old, bears well, quality very good.

Mr. Freed, of Hamilton. A very fine cherry
of the *Bigarreau* class.

Recommended for further trial

May Duke.—Mr. P. Gregory, of Louth.
Bears well, but have been unsuccessful in grow-
ing the tree, a good cooking cherry.

Mr. Jas. Campbell, of Grantham. Is the

only cherry I have known to succeed North side of Lake Ontario, is in bearing at Wellington Square, good for cooking, good for market, a valuable variety.

Mr. Laing, of Hamilton. A very good cherry, one of the first of its class, not troubled with the curculio.

Mr. W. H. Read, of Port Dalhousie. A fine cherry, good for cooking, and family use.

Mr. R. N. Ball, Niagara. Very valuable, particularly for its hardness.

Mr. Graydon, of St. Catharines. A first rate cherry.

Mr. W. Holton, of Hamilton. One of the finest for general cultivation. Tree hardy, a good cooking, a valuable variety.

Mr. Freed, of Hamilton. One of the most valuable grown for Canada, ripens its fruit gradually, excellent for cooking and preserving.

Rev. Mr. Dixon, of Port Dalhousie. A valuable variety.

Recommended for general cultivation.

Late Duke.—Mr. Holton, of Hamilton. A fine cherry in its season, very hardy.

Mr. Freed, of Hamilton. Is a firm cherry, not as vigorous as the May Duke, hardy.

Recommended for further trial.

Jeffries Duke.—Mr. Freed, of Hamilton. Is equally valuable with the May Duke, ripens its fruit a little later, a good bearer, and as hardy as the May Duke.

Queen Hortense.—Mr. Holton, of Hamilton. The tree is as hardy as the May Duke.

Mr. Jas. A. Campbell, of Grantham. Tree appears to be hardy.

Mr. D. W. Beadle, of St. Catharines, showed a fine sample of the fruit.

Governor Wood.—Mr. Graydon, of St. Catharines. A splendid cherry, in my opinion the best cherry, a good bearer.

Mr. R. N. Ball, of Niagara. A very fine variety.

Mr. Gregory, of Louth. Promises well, sweet and fine.

Mr. Freed, of Hamilton. The tree grows well, is prolific, the best early cherry, ripens near the same time as the Bigareau, or *du Mai*.

Mr. W. H. Read, of Port Dalhousie. Is well adapted for general cultivation, quality the best, a good bearer.

Mr. Laing, of Hamilton. Is one of the best, a good bearer.

Mr. Jas. A. Campbell, of Grantham. A very productive cherry, of medium size, and good quality.

Mr. Holton, of Hamilton. A good cherry, valuable where it will succeed, one of the best of the Heart class.

Rev. Mr. Dixon, of Port Dalhousie. A very excellent variety, a good bearer, and vigorous.

Mr. Murray, of Hamilton. One of the best, if not the very best, a fine bearer, hardy.

Recommended for general cultivation South of Lake Ontario, and G. W. Railway.

Belle d'Orleans.—Mr. W. H. Read, of Port Dalhousie. The best early cherry, large tree, cheeked, sugary tender pulp, and prolific.

Transparent Guigne.—Rev. Mr. Dixon, of Port Dalhousie. Is sweet, very prolific, and hardy, comes in after the Black Tartarian.

Mr. Freed, of Hamilton. Don't think it worth recommending,—is small, late, is not eaten by the birds.

Mr. P. Gregory, of Louth. Value it as dessert cherry, hangs on the tree well, is good to dry, I prefer it to some others. Not a good market cherry, yet would not like to dispense with it.

Marvel de September.—Exhibited by Mr. Freed, of Hamilton, quite green, it is of the Duke class.

Red Bigarreau.—Shewn by Mr. Freed, of Hamilton. Is hardy, very fine flesh, not good as others of same class.

Belle de Choisy.—Rev. Mr. Dixon, of Port Dalhousie. Does not bear with Mr. D. W. Read nor with me, and this was the general testimony.

Dower's Late.—Shown by Mr. Graydon, of St. Catharines.—First year of bearing it is very prolific.

Cleveland Bigarreau.—Shewn by Mr. Freed, of Hamilton. Is very productive, a show grower,—probably tender.

GOOSBERRY.

Whitesmith.—Mr. Murray, of Hamilton. One of the best English varieties, least liable to mildew, a fine grower. Should be in every collection.

Mr. Minnick, of W. Square. About best, does well on clay loam, I prune early in the spring, and put on a good coat of well rotted manure each Spring.

Mr. Laing, of Hamilton. I keep them in a moist atmosphere, and moist, not wet soil, pinch in the stools. Is one of the best varieties.

Mr. W. H. Read, of Port Dalhousie. Is a large firm berry, does not mildew when grown near water. Sulphur is a sure remedy if applied.

Mr. Freed, of Hamilton. Does well, is free from mildew.

Mr. Meston, of Hamilton. An excellent one, a sure bearer,—not the largest, mildews occasionally, have tried sulphur after the mildew set in, but it only took the leaves off. I cultivate it as a good preventive of Mildew.

Mr. Pawling, of Louth. Without special cultivation sometimes mildews. On a dry clay with south aspect, very subject to mildew. Plaster of Paris is a good preventative.

Mr. Gregory, of Louth. Even native varieties mildew with me.

fr. Thos. Snaw, of St. Catharines, exhibited a sample of Whitesmith Gooseberry, grown in dry gravelly soil, free from mildew. Recommended for general cultivation.

Warrington Red.—Mr. Meston, of Hamilton. The best Red Gooseberry, an excellent bearer, the largest, sometimes mildews, has a weeping habit, and very thorny.

fr. Murray, of Hamilton. The best Red Gooseberry, a very fine bearer, not free from dew, a showy grower, and weeping habit. Recommended for general cultivation.

rown Bob.—Mr. Murray, of Hamilton. A late variety, very large, full bearer, a little subject to being scalded, not free from mildew.

fr. Jas. A. Campbell, of Grantham. I have all the English varieties, and they are most esteemed.

fr. Minhinnick, of Wellington Square. Is as good as the Whitesmith, but very good, and subject to mildew with me.

fr. Freed, of Hamilton. Mildews worse than Whitesmith with me. Recommended for general cultivation.

sulphur Yellow.—Mr. Murray, of Hamilton. One of the best early yellow varieties, a very prolific grower. Recommended for general cultivation.

oughton Seedling.—Recommended by the fruiting as not being subject to mildew.

part of Oak.—Recommended by Messrs. Hamilton, Laing, and Murray, of Hamilton as a large and excellent variety.

Ontario, Wentworth County, }
15th July, 1862. }

Letter from Mr. Wilson.

of the Chairman of the "Fruit Growers Association,"

15.—As I cannot have the pleasure of attending your meeting, at the last moment I have spared a little time to pen a few remarks upon horticulture, which may contribute perhaps some useful information. As to the culture of the Gooseberry we have always been successful for 15 years, and never been plagued with the disease; our garden is heavy rich clay loam; the kind we raise is the large oblong, greenish variety, a sample of which I enclose for the Society to name. I believe that no one will be troubled with mildew if they would haul good loam into their gardens, if the location is good; the same remarks will apply to the grape vine. The clay soil should be manured from time to time, and kept mellow with proper cultivation. They may be propagated by cuttings; several varieties are raised from seed. The cuttings should be taken from the strongest and latest shoots of the last season's growth, about 12 inches long. If trained as standards cut out all the buds except three or four

at the upper end, to prevent the appearance of troublesome suckers around the main stem. Experience has shown, however, that the bushes will be longer lived, and much more productive, when permitted to sucker moderately, than if the whole support of the top be drawn through a single channel.

By a judicious system of pruning, the bearing wood will be frequently renewed, and the sap will be wasted upon that which has become old and barren.

The cuttings should be inserted about half their length in a bed of rich moist soil, situated on the north side of a fence, or in some shaded spot. In the second year after they are well rooted they may be transplanted to their permanent places, and from 3 to 4 feet apart, or the cuttings I generally plant at once where they are intended to grow. Being exceedingly sensitive to the heat and drouth, they require a soil at once deep and moist. A liberal application of manure should be mixed in the soil at the outset, and also each year when the ground is dug; frequent hoeings through the summer are essential to good cultivation.

HOW TO PLANT FRUIT TREES.

In the Spring of 1851, I purchased 50 apple and peach trees from Dr. Beadle, the peach branches were much winter killed, and I was obliged to cut them short; my ground was, part of it, much worn out and drowned out, the other part was 20 years old, just broken up, there was also a severe drought that season. Under all these disadvantages I planted my trees. The old orchard having been sold off during wild cat times for an enormous sum, I had to plant again and could not wait to prepare the ground.

I lost none out of the 50 the first year, though the growth was slow owing to the drouth, and they did not make much wood to stand the winter, so that this year three of my peach trees died. I got 70 or 80 more trees of various kinds this season, and planted in the same manner and they are all growing notwithstanding the repeated frosts and the long and early drouth of 1862. After this I shall think my plan much better than mulching. *Modus Operandi.*—First stake out the ground with a tape, then dig good large holes on the North side of the stake, then haul with a team a good wheelbarrow load of old chaff manure that has been well turned and rotted, put two shovelfuls in the bottom, then a good shovelful of sandy loam, have the roots of the trees dipped well in thick mud, set the tree, then put on sufficient sandy loam to cover the roots, and jar the tree so that the fine soil will descend well amongst the roots, fill up with

* Several members desired to express their entire dissent from this mode of allowing any suckers.

plenty of manure * then a light covering of soil. This way of planting immediately enriches the soil, and at the same time keeps it moist. Frequent use of the plough, cultivator and hoe is necessary to good success. Wishing your society every success

I am gentlemen, yours very respectfully,
FRANCIS G. WILLSON.

Letter From Mr. Freed.

Hamilton, July 16, 1862.

D. W. BEADLE, ESQ,

Sec. of Fruit Growers' Association of U. C.

DEAR SIR,—The cherry being one of the subjects for discussion to day, I beg to hand you the following note on the native Plum Stock, Prunis Americana of Botanists, as an excellent one upon which to bud the cherry; particularly for growing the cherry in pots for orchard-house culture, for Dwarfs, Pyramids, Wall and Trellis training, and for clay or moist soils where the cherry fails.

For Pot culture, I have not the least doubt but that it will supersede the Mahaleb or any other stock, furnishing by root pruning abundance of medium, even sized roots; a most important desideratum in pot culture.

With respect to root pruning the same remark will apply to Dwarfs, Pyramids, Wall or Trellis training. And on clay or moist soils where the Mazzard and Mahaleb stocks have failed, I have not the least doubt but when worked on this plan the trees will succeed to the entire satisfaction of the planter.

In addition to the stock bearing root pruning so well, it is also most remarkable for producing early and prolific blossom buds, fruiting the second year from the bud, and producing fruit of the highest excellence. In fact the Plum stock seems to produce the same effect on the cherry as the Quince does on the Pear.

I have a few trees only. They are now in their fifth year of growth, look very healthy and bore good crops of fine fruit.

These are some of the good qualities I claim for the Wild Plum as a stock for the cherry, and the original introduction to the public.

Yours truly,
JOHN FREED.

Letter from Secretary of Royal Horticultural Society.

ROYAL HORTICULTURAL SOCIETY, }
South Kensington, W., June 14th, 1862. }

SIR,—I am directed by the Council of the Royal Horticultural Society to express to you the pleasure with which they would receive contributions of fruit from the different Societies in

Canada, to their great Exhibition of fruit to be held here on the 8th of October.

I enclose a dozen programmes of the schedule and beg your kind assistance in obtaining through your Canadian Societies a worthy presentation of the fruit cultivated in the country.

I have the honour to be, Sir,
Your most obedient servant,
ANDREW MURRAY.

PRIZE LIST FOR THE GREAT INTERNATIONAL SHOW OF FRUIT, GOURDS, ROOTS, VEGETABLES AND CEREALS, AT THE ROYAL HORTICULTURAL SOCIETY'S GARDENS, SOUTH KENSINGTON LONDON, ENGLAND. OPEN TO ALL THE WORLD. WEDNESDAY, THURSDAY, & FRIDAY, OCTOBER 8th 9th & 10th. GOURDS, ROOTS AND CEREALS WILL REMAIN ON EXHIBITION UNTIL OCT. 18th.

Special Regulations.

I. Exhibitors must give at least five clear days notice, *in writing*, to the Superintendent, of subjects they intend to exhibit, and the area square feet of table-room required, and all roots must be sent washed and ready for exhibition. No application will be attended to after FRIDAY THE 3rd OF OCTOBER.

II. All specimens of Roots must be delivered at the Gardens not later than Monday, the 6th of October, and, if sent, the carriage must be prepaid.

III. No Fruit or Garden Vegetables will be admitted after 8-30 on the morning of October 8th, and all arrangements must be complete before 10 a. m.

IV. Cards corresponding with the entries be furnished to Exhibitors on the morning of the Exhibition at the entrance to the Gardens and the Exhibitors will be responsible for proper placing of these cards.

V. All Fruits and Vegetables must have been grown by the Exhibitor, or they will not be eligible to compete for the Prizes, except Class A and Gourds and Cereals. All subjects exhibited must be correctly named. No Exhibitor can take more than one Prize in the same class.

VI. Tickets of admission will be furnished to the Exhibitors as follows:—

For 12 Subjects and upwards exhibited, 2 passes.
For 3 Subjects and upwards exhibited, 1 pass.
No Exhibitor can take more than 6 passes.

VII. The Exhibition of Fruits and perennials Vegetables will close on Friday, the 10th, of October, at 5 p. m., after which all specimens will be given up to their owners.

* There is need of some caution in using even well rotted manure in planting trees lest they be killed by a surfeit. Note by the Sec. F. G. ASSO.

LIST OF PRIZES.

NOTE.—A dish of Apples, Pears, Oranges, Lemons, and the like, 6 fruits of each; but of lemons, 9 fruits.

FRUITS.	1st Prize		2nd Prize		3rd Prize	
	£	s.	£	s.	£	s.
Collection of Fruits. (Fruitcrere only).	5	0	3	0	0	0
Collection of Fruits. Not more than two dishes of any one kind (Private growers)	6	0	4	0	3	0
Pears, dessert, 12 dishes, distinct kinds	4	0	3	0	2	0
Pears, dessert, 6 dishes, distinct kinds	3	0	2	0	1	0
Pears, dessert, 3 dishes, ripe fruit, distinct kinds	1	10	1	0	0	10
Pears, dessert. Single dish, ripe fruit, any kind	1	0	0	15	0	10
Pears, kitchen. Single dish any kind	1	0	0	15	0	10
Pears. Heaviest 5 fruits, dessert.	1	0	0	15	0	10
Apples, dessert, 12 dishes distinct kinds	4	0	3	0	2	0
Apples, dessert, 6 dishes distinct kinds	3	0	2	0	1	0
Apples, dessert, 3 dishes ripe fruit, distinct kinds	1	11	1	0	0	10
Apples, dessert. Single dish, ripe fruit, any kind	1	0	0	15	0	10
Apples, kitchen, 12 dishes, distinct kinds	4	0	3	0	2	0
Apples, kitchen, 6 dishes, distinct kinds	3	0	2	0	1	0
Apples, kitchen, 3 dishes, distinct kinds	1	10	1	0	0	10
Apples, kitchen, single dish	1	0	0	15	0	10
Apples, kitchen. Heaviest 5.	1	0	0	15	0	10
Miscellaneous	2	0	1	10	1	0
					4	10
					£165	0

Care of Trees in Orchards.

There seems to be a diversity of opinions as whether orchards should or should not be situated with other crops. If trees appear sick and unthrifty in growth, the soil should be tilled and cultivated until they assume a healthy and free growing appearance. After that, the orchard should be seeded down to grass, not mowing thereafter, as of the first importance, annual top-dressing or mulching under each

The borer—keep him out of your orchard by means! It can be done we think, and among plans recommended, none seem more judicious than that given by a correspondent of the *Edinburgh Monthly*. He has effectually prevented the ravages of this destructive pest by covering the earth from the stem of the tree, so that the bark will harden down on the collar. It is well known that this insect never penetrates any other point than where the bark, from its contact with the soil, becomes tender. This is almost correct, and if so, similar methods will be almost as easily tried, and would per-

haps be more effectual. Among these, putting a bandage round the trees, for two inches below and six above the surface of the ground, is a good one. The bandage can be made of coarse muslin; put on once a year for three or four years, and the operation could be performed with considerable dispatch. Another mode is to cover the trunks of trees at the roots, and for five or six inches upwards with a coating of grafting wax, afterwards putting on the linen bandage if deemed necessary. The cost of thus protecting an orchard of fifty or a hundred trees would be a mere trifle as considered in regard to the benefit to be derived therefrom. It should not be forgotten that any of these plans only keep the borer from the trees after they are applied—they do not destroy those already in the tree; hence the knife and wire must be used in clearing them from their holes previous to putting on the bandages.

Our orchardists sustain a great loss by not giving proper attention to their trees. An annual outlay of five dollars, bestowed upon a small orchard of young trees, in the way of mulching, protection from the borer, &c., will in as many years, bring it into a more productive and better condition than twenty years' time, if allowed to take care of itself.

Mignonette as a Tree.

Buy a pot of ordinary mignonette. This pot will probably contain a tuft composed of many plants produced from seeds. Pull up all but one; and, as the mignonette is one of the most rustic of plants, which may be treated without any delicacy, the single plant that is left in the middle of the pot, may be rigorously trimmed, leaving only one shoot. This shoot you must attach to a slender stick, of white osier. The extremity of this shoot will put forth a bunch of flower-buds, that must be cut off entirely, leaving not a single bud. The stalk, in consequence of this treatment, will put out a multitude of young shoots, that must be allowed to develop freely until they are about three inches and a half long. Then select out of these, four, six, or eight, according to the strength of the plant, with equal spaces between them. Now, with a slender rod of white osier, or better, with a piece of whale-bone, make a hoop, and attach your shoots to it, supported at the proper height. When they have grown two or three inches longer, and are going to bloom, support them by a second hoop, like the first. Let them bloom, but take off the seed pods before new shoots will appear, just below the places where the flowers were. From among these new shoots, choose the one on each branch, which is in the best situation to replace what you have nipped off. Little by little, the principal stalk, and also the branches, will be-

come woody, and your mignonette will no longer be an herbaceous plant, except at its upper extremities, which will bloom all the year, without interruption. It will be truly a tree-mignonette, living for an indefinite period—for with proper treatment, a tree-mignonette will live twelve to fifteen years.—*Parlor Gardener.*

The Black Knot.

The knots are now making their appearance on the plum and cherry trees, and require attention. Those who will make a careful examination of the excrescence will be able to find some marks upon them, sometimes crescent shaped, like the curculio mark upon the fruit. By a very careful dissection a minute white speck may be found in the middle of the concave portion of this crescent.—This is an egg of an insect. It is believed that the egg causes this excrescence, and we suppose so, because we know that this egg becomes a grub, and burrows in and feeds upon the substance of this knot. These grubs, if raised to maturity become beetles, so like the curculio that stings the fruit, as not to be distinguished from each other. Still they may be different. There are many different kinds of beetles that look much alike. The pea-bug and the beetle from the worm in the chestnut, both look much like the curculio, but differ greatly in their habits.

When we cut into one of the little balls found growing upon an oak leaf, and find there a full grown perfect fly, and no possible way it could have got there from without, we suppose that the parent of that fly, in some way or other, caused that ball to grow, and that it grew to afford protection and food for her young. This is a natural supposition, and is probably true, although it would be hard to prove. Acting upon such a theory as regards the black knot, we should say cut them off as soon as they appear, and you destroy the embryo insect that would cause similar knots another year.

We have seen both plum and cherry trees about this city, and indeed almost wherever we travel, perfectly deformed with these excrescences, and permitted to stand year after year, mere nurseries for spreading this evil.

Many people carefully cut off these knots early in the spring, and it is well enough to do so even then, as it certainly removes a deformity, but it then avails nothing towards getting rid of the cause.

By careful watching and prompt cutting away during the early part of July, you may keep the enemy under your control, but by neglecting them for a year or two, valuable trees, or even orchards, will become worthless.—*Newark Mercury.*

Botanical.

Notes on the Coniferous Plants of Japan

BY JOHN C. VETCH.

There is probably no country in the world of the same area which produces so great a variety of conifers as the group of islands composing the empire of Japan. From Nagasaki in the south to Hakodadi in the north, conifers are everywhere abundant, and in great variety. Travellers have hitherto been enabled to explore but an exceedingly small portion of the islands, and it seems more than probable that the numerous mountain ridges of the interior produce a great number of entirely new and yet undiscovered species.

The Japanese are great admirers of all evergreens, and much trouble is taken to cultivate them. The greater portion of the timber used for building and for all ordinary purposes is that of coniferous trees. The annual demand is enormous throughout all parts of the empire, and it is said that landowners are compelled to plant a certain number of forest trees yearly, in order to replenish the stock of the country. Conifers are employed very largely for garden decoration. Clipped hedges of the *Cryptomeria*, *Retinosporas*, *Biotas*, &c., are very general, and scarcely a garden can be met with that does not contain specimens trained and cut into grotesque forms. The main roads which intersect this country are very generally planted, either side with rows of conifers. *Pinus densiflora* and *Masoniana*, *Cryptomeria japonica*, and *Thuopsis dolabrata* are the most common kinds employed for this purpose. Trees thus planted are very seldom cut down, and consequently attain a great size, and form specimens of the utmost beauty.

Altogether conifers form the most useful and the most generally employed trees in Japan. Most of the kinds which have been discovered by travellers have now been introduced to European gardens, and there being every prospect the greater portion proving sufficiently hardy to withstand our severest winters, it is confidently hoped that ere long many of the beautiful species which are at present found in Japan only will be distributed throughout our pleasure-grounds and flourish as luxuriantly as they do in their country. Subjoined is a list of the principal species which have come under my notice, either in a wild state or cultivated in gardens. The Japanese names for the several species are given as far as can be correctly ascertained.

Abies Alcocquana: *Toraonomi*—A new tree, discovered in September, 1860, during Alcock's trip to the sacred mountain of Fuyama, and named in honour of that gentleman. It grows from 90 to 100 feet in height, at an elevation of 6,000 to 7,000 feet. The timber

od, and numbers of trees are being constantly
led and sold in the neighboring towns.

Abies firma: momi—One of the finest species
and in Japan, and one which will, doubtless,
be hardy in Europe. It is a handsome and
markedly straight growing tree, found at an
elevation of 3,000 to 4,000 feet. It grows from
10 to 100 feet in height.

Abies Itoga: Itoga—Found growing on
Mount Fusiyama at an elevation of 6,500 feet.
It grows from 80 to 100 feet in height, and its
timber is highly valued by the Japanese.

Abies Jezoensis: Jesso-Matsu—A tree grow-
ing some 60 feet in height on the island of
Jesso.

Abies leptolepis: Fusi Matsu.—Found at an
elevation of 8,000 to 8,500 feet on Mount Fusi-
yama. It is nearly allied to the common larch,
but differs from it in being a more slender tree,
and having slightly different cones. It is re-
markable as being the tree which grows at the
highest elevation on Mount Fusiyama. Its
natural height is 40 feet, but on reaching an
elevation of 8,500 feet it becomes a stunted bush
10 to 2 feet.

Abies Microsperma—A species hitherto
found only in the vicinity of Hakodadi, on the
island of Jesso. Very little is known about
it as a tree, as two specimens only were seen, which
were some 20 to 30 feet in height. It promises,
however, to be one of the hardiest of its
genus.

Abies Veitchii.—A species found at an eleva-
tion of 6,000 to 7,000 feet on Mount Fusiyama.
It forms a beautiful tree from 120 to 150 feet in
height, with small and very glaucous cones.
The Japanese say that the species is peculiar to
the mountains.

Abies bifida: Saga-nomi—A variety distin-
guished from others growing in this country, by
its leaves being divided at the point into two
sharp points. It does not grow wild in the dis-
tricts to which Europeans have access, but is
regularly cultivated in gardens. The trunk of
this tree is remarkably straight, attaining a
height of 80 to 100 feet. As a timber tree it
is valuable to the Japanese.

Cunninghamia sinensis: Liu kin-momi—Not
found in a wild state, but is commonly planted in
gardens, where it forms a graceful tree with
weeping branches, from 20 to 25 feet in height.
Gardener's Chronicle.

Veterinary Department.

(Conducted by A. Smith, V. S.)

From the Country Gentleman and Cultivator.

Pleuro Pneumonia Epizootica.

Masses. Editors:—Having observed in several
of your latest numbers of the *Country*
Gentleman, some statements and enquiries re-
garding the above disease, which appears to be

still latent in the United States, I have much
pleasure in submitting the following account of
the disease to your readers.

Pleuro-pneumonia in cattle, occurring in the
epizootic form, although only known in the
United States within the last two or three
years,* is now and has been very prevalent in
the old world for many years back. In Scotland,
and more particularly amongst the dairy stock
of its large towns, it has raged with a threaten-
ing virulence and fatality scarcely to be credited,
except by those daily coming in contact with it.
I may as well state at the commencement, that
the following remarks and opinions have been
gathered and formed, from practice among the
dairy cows in the city of Edinburgh, to which
class of stock they must chiefly apply, al-
though I would not suppose that there would be
any marked difference from the disease, as it
appears amongst dairy and stock cattle in the
rural districts.

Pleuro pneumonia may be defined to be a spe-
cific inflammatory affection of the lungs and ser-
ious membranes within the thoracic cavity.—
There are many other definitions varying only
from each other in several points of minor im-
portance, but to me, the above one which I have
given, has always seemed to answer and meet
our present knowledge of the disease—more so,
when we consider how much of it is still involved
in doubt and obscurity.

Symptoms.—This disease cannot at all times
in its earlier stage, be recognized from other
affections of the lungs of an inflammatory char-
acter, for even its own first appearances are not
always marked by the same symptoms, more
particularly the type of the accompanying fever.
It has been divided into three distinct stages:

- 1st. The incubative stage.
- 2d. The active inflammatory stage.
- 3d. The hectic or exhaustive.

This partitioning off of the disease is a matter
which must be clearly understood, for while I
have no doubt but that the two latter stages are
characterized by a distinct set of symptoms,
during the progress of the disease, I at the same
time have never been able, and am of opinion
that we cannot detect the exact time when the
one stage ends and the other commences. They
seem to run into each other without producing
any distinct line of demarkation, the symptoms
of each often being mixed up in the same case
at one and the same time. As for the first or
incubative stage, which signifies the period of
time elapsing betwixt the first contraction of the
disease and its development into the second
stage, it is my opinion that it can scarcely ever
be recognized—(of course when the active symp-
toms appear, we may be sure that this stage has

* We think there is no doubt but that occasional instances
of Pleuro-pneumonia occurred in this country some years
previous to the date mentioned by our correspondent, several
of which have been fully described in former volumes of
this paper.—*Eds. Co. GLXX.*

preceded them.) We may from many circumstances have our suspicions aroused, that some one or more among a lot is affected, but as far as I am aware there are no sure symptoms which would enable us to come to a direct conclusion. I know at least that this is the case among the dairy stock in Edinboro'; even their constant attendants rarely remark anything unusual about them, until the disease is considerably advanced, and I have even in some instances, although happily they are rare, known one animal to be in the last stages, before anything like serious attention was paid to her case, so apt are their owners to attribute diminution of the appetite and milk to something trivial.

Amongst the very earliest of the symptoms, there is a disposition to restlessness, the cow moving from off one fore foot and resting her weight on the other alternately, and the urine diminished in quantity and much higher in color with a strong disagreeable odor; in unfavourable cases this condition of the urine remains all through the disease. If on this appearance of the urine, some of it be collected and tested by some competent person, and there be found to be an almost or total absence of the chlorides in it, we would be warranted in suspecting that some inflammatory disease of the lungs existed; our attention would at least be drawn to those organs requiring a careful examination. The urine is generally observed to be unusual like, just a few days before the animal begins to shy her food. They lose their appetite generally gradually at first; if they leave off feeding all at once, which they sometimes do, it is an unfavourable symptom, such cases generally running their course rapidly and fatally, and more especially if the same is observed of the milk. The udder at an early stage of this disease is very hot, the teats unusually so, and painful. There is a falling off of the yield of milk, but as I have said above, if it is suddenly suspended we have reason to apprehend the worst. Many cows continue to give milk all through the disease, even although they are not eating much, which is a favourable symptom, indicating a good constitution, and a tendency to an early return to health. The animal now appears dull and listless—back slightly arched and head poked out; the hind legs are brought forward beneath the abdomen. Many attach importance to the animals flinching on being pressed along the spine. This, however, is never a symptom of disease amongst dairy cows, as almost any cow in health will do so. The withers are cold; irregular heat of the extremities and ears, the former usually inclined to be cold; the eyes are unusually bright and injected; there is a knuckling of the hind fetlocks frequently observed in the earliest stages, indicating inflammation of the pericardium and pleural membranes within the chest; rumination is suspended; the forelegs are posed, with the toes inwards and elbows outwards, to assist respiration by affording increased chest room. The

respiration is short and hurried, averaging first from 30 to 40 acts per minute; pulse first hard and quick, averaging 76. Both respiration and pulse, however, quickly change the former become heavy and oppressed, and accompanied with a characteristic grunt at each expiration; this sound is also produced by pressing the cow over the intercostal space and it indicates the adhesion of the pleura to the inside of the ribs. The pulse, at first hard and quick, changes to a quick weak pulse, which change we generally have emaciation—the nostrils are expanded with a mucopurulent discharge issuing from them. Cough is generally present, but it is not always a symptom. At first it is dry and husky—latterly becoming short, hacking, and painful. The dung at first is inclined to be dry and hard, and deficient quantity; as the disease advances it also changes and we have diarrhoea present; this at an early stage of the complaint in young cows, and with other symptoms are favourable, is said to be a good symptom; but where it comes on last from the presence of fermented food in the stomach and the impoverished poisoned state of the blood, it is a very bad symptom.

These, the usual prominent and most important symptoms of pleuro-pneumonia, now gradually become more aggravated as debility increases. This is well marked in the staggering crouching gait, the extreme emaciation, or sional shivering, and weak tremulous posture. There is now in most cases gaseous distension of the first stomach, and an apparent bulging out of the thoracic walls, the belly tucked skin yellowish and adhering closely to the surface of the body is cold, she grinds teeth, and there is a discharge of saliva from the mouth. Along with a distension of stomach, we have frequent eructations of up the oesophagus. This is often present in the early stages, and is a good diagnostic symptom.

Unlike the horse, cows afflicted with this disease will lie down; but this is accounted for the difference in the anatomy of the part—broad flat sternum and a peculiarity in the lower articulation of the ribs, admitting room for lateral expansion of the chest. If one rib is affected, she will lie upon it or towards it as to free the other for respiratory purposes; if both are affected, she will either stand upon the sternum, and occasionally on one side alternately. Auscultation is in this disease a valuable aid in enabling us to form a correct diagnosis, but it can only be practiced by one conversant with the healthy and unhealthy sounds of the chest, or by the scientific Veterinarian—although I know many men, who long and dearly bought experience, can tell an animal afflicted with this disease, from the symptoms I have given, and without at all studying the condition of the lungs.

The duration of the pleuro-pneumonia is much in different cases, according to the

of health immediately preceding its contraction. Young cattle stand the disease well, but from two to five years old; younger and older than that again they have not the same capacity of resisting it. Cows of a medium size and weight, and well proportioned bone and flesh, such as the Ayrshire, stand well, while the other hand I have generally observed poor, ill-conditioned cross-breeds, and large-bodied cattle sink rapidly. The incubation stage is said to extend to the sixth week; and those who believe in its contagious or miasmatic character, do not consider their cattle until that time has expired; indeed they show symptoms before that time, counting the period when they were known to be in vicinity of diseased stock, often just about the sixth week, but rarely after it, unless from some other cause not recognizable. The active stage rarely lasts over eight days, as the disease becomes early hepatic, typhoid fever sets in, followed by collapse and death, often from a fortnight to a month from the time the cow is first observed ill. Those cases blast out through all the stages generally to recover tone and appetite in about two weeks, and some not as late as till the tenth or twelfth week.

The duration and comparative fatality of the disease is also influenced to a great extent by the amount and situation of the lung tissue involved; thus if both lungs are attacked at once, the disease is very bad. At other times, one lung is affected near the centre of it; this also is bad, but not so much so as the other. Sometimes it is the lower edges of the lungs, and progresses upwards and forwards. Such cases often recover, even although the whole lung becomes useless for respiratory purposes, provided the opposite lung does not become involved, and in many known cases get better where even both lungs were affected from the first, their anterior and posterior edges being chiefly implicated.

After much observation I have come to the conclusion that the danger is increased mainly as the disease nears and involves the anterior and posterior portions of the lungs, and especially if the investing membrane of the lung becomes implicated. Also the lung on the right side is the one which is most frequently affected.

My next I will follow up this subject, treating of its nature, post mortem appearance and treatment, &c.

R. RUTHERFORD, V.S.

Late of St. John, N. B.
burgh, Scotland, June, 1862.

What Horses we Need.

Agricultural Editor of the Cincinnati Times is furnishing that paper with a series of articles upon the horse. In regard to the kind

of horses needed in the United States, he says:

The United States is pre eminent for its trotters. But there is no breed of trotters except the Morgans, and the many names which have signalized the trotting courses belong to the common stock of the country. They are accidental trotters, and their qualities developed by superior training. The moral sentiment of the people is so hostile to the gambling of the race course, that running became unpopular. The carriage and buggy having taken the place of riding on horseback, trotting was a useful gait, and trotting races have been tolerated on account of it. Hence our sports of the turf are shown in these, and the training skill of sportsmen directed on trotting horses. We need skilful breeders to establish a trotting stock. It is true that the Morgans have much to claim our admiration. For general usefulness they have no superiors. Their fast gaits, medium size, endurance and excellent disposition, point them out as the best for family purposes. But still, the more showy carriage horse, such as Consternation, Messenger, Hamiltonian, Highlanders, etc., will often command a more ready sale, and the breeding of these should command greater attention than they do. Our fault is too much mixing and it is too habitually setting at defiance the adaptation of the points of the mare and stallion to each other. This evil is facilitated by the numerous classes of horses that are here. Our importations embrace every valuable kind for every valuable purpose, and their numerous crosses on the common stock have given a diversity of forms and blood that make breeding for especial purposes, such as for the carriage and buggy, no easy matter. The forms and blood of stallions generally have so little to do with each other, that a Highlander begets a Diomedé colt, and a Morgan shows an undersized offspring without the qualities which are characteristic of the breed. Even good diverse qualities neutralize each other, and the progeny exhibits either none of the qualities of the parents, or so much modified as to be of little value.

For farming purposes, heavy horses are not needed. A fast walk in the plow is the most useful gait, for experiments show that the draft of the plow is not increased by speed; hence it may be run at the same depth at three miles an hour, as at two miles, without any additional strength from the horse. A horse therefore, that will walk three miles an hour in the plow is worth a third more than one that walks but two.

A farmer, too, wants a horse that will trot his buggy eight miles an hour; and fast walking and trotting, with endurance, easy keep and kind disposition, are the qualities that all want. A slow, poking plow horse is not desirable for any purpose, save when the farmer is in new ground with the plow, and oxen are better there. Our general breeding should look to the higher qualities—to fast gaits, gentle disposition, nervous energy and intelligence; for there is as great dif-

ference in the minds of horses as in the human race.

The two-horse Yankee wagon has superseded the four-horse wagon, because a quick trip to town, with thirty bushels of wheat drawn by two horses, is much better than a slow one of fifty bushels with four horses; and speed, now-a-days is desirable, even of a Sunday, when the wagon conveys the family to church. This is a fast age in all things, and the slow, poking, dull, stupid horse is wanted nowhere.

That Government will need many more horses than it has in past times, is pretty certain. For cavalry, the good qualities I have particularized, are demanded. Whether to reconnoitre or to cover a retreat, or to pursue a retreating enemy, or surprise guerrilla parties—for all the purposes of war, a heavy cavalry horse is not wanted. Greater strength is needed for the artillery service, but even here speed, too, is demanded, and the large showy fast trotting horse of the carriage, is more desirable than the slower draft stock.

Even in the dray a good walk is important, although weight of body is absolutely necessary to resist by its momentum the jarring arising from the uneven surface of city pavements.

Choice of Animals for Fattening.

Mr. Hedley contributes the following valuable hints on fattening cattle to the Newcastle Club, and which we find published in the *Agricultural Gazette*, England. He says:

"In my close identification with fat cattle for several years, I have always found that the best animals have the most massive heads, most capacious chests, and the strongest spines. I have, therefore, evolved a few rules to go by in the purchase of lean ones, and scarcely with one exception I have found them to be applicable. The head of any of our bovine races ought to have the first consideration; this is the true index to the vital acumen, and even bodily construction, and will be found to foreshadow all good or bad that may be accomplished. Thus an animal possessed of a broad, full, spacious skull, with strong evenly-bent, deflective horns, will be found to have a thick neck at the base, wide thorax, and strong nervous system; while one with long, narrow, contracted skull, and puny, abruptly-bent horns, will be characterized by weakness, wildness, and slowness to fatten. A small, dull, sunken eye betokens hardness of touch and inaptitude to fatten; and a bright, large, open, eye, *vice versa*. A staring, dark, fiery eye often accompanies a small forehead and hereditary wildness, and when combined with small, drooping horns, and a chin with no loose skin hanging from it, is a very depreciable animal indeed, weak in constitution, predisposed to lung disease, and sterile in fattening propensities.—Animals with weakly formed heads have always small loins, and the width of these parts will

always be found in an exact ratio with strength of the head. The nose, instead of being long and fine, as Virgil, Aristotle, and several other naturalists recommend it, ought, in my opinion, to be thick, strong, and as near as possible, in proportion to the width of the frame. Thickness of nose and thickness of chest are often twins, and so are thin, irregular noses and consumption. Snipy noses oft snuff the air into frames of capacities, and are joined to mouths that crop but very small morsels at a time. My observations I have found to be applicable to any of the kinds of cattle shown at Newmarket. But besides the shapes of animals, age and class must always have especial consideration, and be adapted according to the situation; otherwise, the realization of relative profit will be uncertain."

Miscellaneous.

IMPORTANCE OF SLEEP.—One most effectual method of promoting the health of children is to allow them a sufficiency of "Nature's restorer, balmy sleep." Till they are six or seven years old, they daily require from ten to twelve hours' sleep, particularly if they have ample opportunity for exercise; as they grow older, the opportunity may be gradually diminished. Children ought to rise early, say by six in Summer and by seven or half past seven in Winter; consequently ought to go to bed, when young, by six or seven o'clock; when they require less sleep, they ought to sit up longer with safety; but there are few more injurious to children than sitting up late at night. If children sleep soundly, they are generally awake at the proper time in the morning, in humour, and will often rouse their parents to slumber by their cheerful prattle or simple conversation. To secure sound sleep for them, it is necessary that their beds be not too soft; a hair mattress is certainly the best. The bed should be so far raised by the bolster as to be on a line with the spine, so as to preserve the circulation in the blood-vessels going to and from the head. They should not be over-loaded with clothing; but during the first three or four years of their lives they need the warmth of a blanket, which can only be obtained by sleeping in blankets, especially if they sleep alone; and in this respect this is very desirable. Till a child is able to get out of bed himself, he should sleep in bed with some one whose watchfulness can be depended upon. Children should always be only permitted, but encouraged, to rise when they are awake; indeed, when they are old enough to rise without help, they should, if not stimulated by reward to get up immediately on waking. Such a habit, formed in childhood and persevered in through life, may avoid the physical and moral injury. To this end should be taken that every needful care

vided for them by the time they rise; if they are not to wait to be dressed, or to shiver for want of fire, and if they be not restricted in their play for fear of rousing the adults of the family, they will not wish to lie in bed when they have had sufficient sleep. There is not a more delightful sound to a mother's ears than the joyous laughter of her little ones in the early morning; it speaks of health and happiness, and that freedom from care which only childhood can enjoy. If children be fretful in a morning, you may be sure either that they are poorly, or that their wants are not properly attended to, by making the morning hours pleasant, you reverse the habit of early-rising easy of acquisition; when we consider the effect which such a habit will have on the physical, intellectual, and moral powers of our children through life, we cannot too strenuously exert ourselves in assisting them to establish it. The impressions first made on the mind in the morning generally come through the day, and give a colour to every event which occurs. It is therefore of great importance that children should be spoken to with kindness and cheerfulness when they first arise; and if mothers cannot themselves attend to them, they ought to impress on the minds of nurses how much trouble they may save themselves, and how much happiness they may impart to their young charge, by getting them into cheerful happy temper as soon as they arise.—*Wether's Practical Guide.*

THE PERMANENCE OF SPECIES—The mind sinks from contemplating the confusion which must ensue, if the ideas which some entertain as "transmutations" between species, either in the vegetable or animal world, had any foundation in reality.

In that most instructive series of articles which we learned AGASSIZ is now contributing to the *Atlantic Monthly*, we have not known whether we admire more the clearness and simplicity of language, or the interest with which he has enabled us to surround subjects of a recondite nature. He began with the lowly types of animal life, and has now reached Polyp Coral—the tiny builder of so many islands which now support the exuberant vegetation of the tropics and withstand all the power of the waves.

Of these Coral Polyps it appears that there are no less than five species. As to the length of time during which they have been at work, we make the following extract, referring to the reefs on the Florida Coast:—

Estimating the growth of the Coral Reef according to these and other data of the same character, it should be about half a foot in a year; and a careful comparison which I have made of the condition of the Reef as recorded in an English survey made about a century ago with its present state would justify this conclusion. But allowing a wide margin for inaccu-

cy of observation or for any circumstances that might accelerate the growth, and leaving out of consideration the decay of the soft parts and the comminution of the brittle ones, which would subtract so largely from the actual rate of growth, let us double this estimate and call the average increase a foot for every century. In so doing, we are no doubt greatly overrating the rapidity of the progress, and our calculation of the period that must have elapsed in the formation of the Reef will be far within the truth.

The outer Reef, still incomplete, as I have stated, and therefore of course somewhat lower than the inner one, measures about seventy feet in height. Allowing a foot growth for every century, not less than seven thousand years must have elapsed since this Reef began to grow. Some miles nearer the main-land are the Keys, or the inner Reef; and though this must have been longer in the process of formation than the outer one, since its growth is completed, and nearly the whole extent of its surface is transformed into islands, with here and there a narrow break separating them, yet in order to keep fully within the evidence of facts, I will allow only seven thousand years for the formation of this Reef also, making fourteen thousand for the two.

This brings us to the shore-bluffs, consisting simply of another Reef exactly like those already described, except that the lapse of time has united it to the main-land by the complete filling up and consolidation of the channel which once divided it from the extremity of the peninsula, as a channel now separates the Keys from the shore-bluffs, and the outer Reef, again, from the Keys. These three concentric Reefs, then, the outer Reef, the Keys, and the shore-bluffs, if we measure the growth of the two latter on the same low estimate by which I have calculated the rate of progress of the former, cannot have reached their present condition in less than twenty thousand years. Their growth must have been successive, since, as we have seen, all Corals need the fresh action of the open sea upon them, and if either of the outer Reefs had begun to grow before the completion of the inner one, it would have effectually checked the growth of the latter. The absence of an incipient Reef outside of the outer Reef, shows these conclusions to be well founded. The islands capping these three do not exceed in height the level to which the fragments accumulated upon their summits may have been thrown by the heaviest storms. The highest hills of this part of Florida are not over ten or twelve above the level of the sea, and yet the luxuriant vegetation with which they are covered gives them an imposing appearance.

But this is not the end of the story. Traveling inland from the shore-bluffs, we cross a low flat expanse of land, the Indian hunting ground, which brings us to a row of elevations called

the hummocks. This hunting ground or Everglade as it is so called, is an old channel, changed first to mud-flats and then to dry land by the same kind of accumulation that is filling up the present channels, and the row of hummocks is but an old Coral Reef with the Keys or islands of past days upon its summit. Seven such Reefs and channels of former times have already been traced between the shore-bluffs and Lake Okeecho-bee, adding some fifty thousand years to our previous estimate. Indeed, upon the lowest calculation, based upon the facts thus far ascertained as to their growth, we cannot suppose that less than seventy thousand years have elapsed since the Coral Reefs already known to exist in Florida began to grow. When we remember that this is but a small portion of the peninsula, and that, though we have not yet any accurate information as to the nature of its interior, yet the facts already ascertained in the northern part of this State, formed like its Southern extremity of Coral growth, justify the inference that the whole of the peninsula is formed of successive concentric Reefs, we must believe that hundreds of thousands of years have elapsed since its formation began. Leaving aside, however, all that part of its history which is not susceptible of positive demonstration in the present state of our knowledge, I will limit my results to the evidence of facts already within our possession; and these give us as the lowest possible estimate a period of seventy thousand years for the formation of that part of the peninsula which extends south of Lake Okeecho-bee to the present outer Reef.

Here we have an unequalled opportunity of judging as to the Permanence of Species. Shall we find that in these insignificant forms of life, there is any evidence of change, disorder or transmutation? Shall we find any symptoms of "progressive development," or "selection,"—any proof that the laws which separate, "each after its kind," every seed that renews and multiplies the successive generations of the living, are not just as binding at this day as ever before—were not just as binding "in the beginning," as they are now? Let Agassiz answer:

So much for the duration of the Reefs themselves. What, now, do they tell us of the permanence of the Species by which they are formed? In these seventy thousand years has there been any change in the Corals living in the Gulf of Mexico? I answer most emphatically, No. *Astræans*, *Porites*, *Mæandrinæ*, and *Mædrepores* were represented by exactly the same Species seventy thousand years ago as they are now. Were we to classify the Florida Corals from the Reefs of the interior, the result would correspond exactly to a classification founded upon the living Corals of the outer Reef to-day. * * * Every Species, in short, that lives upon the present Reef is found in the more ancient ones. They all belong to our geological period, and we cannot, upon the evidence before

us, estimate its duration at less than seven thousand years, during which no evidence of a change in Species, but on the contrary the strongest proof of the absolute permanence of those Species whose past history we have been able to trace.—*Country Gentleman*.

SAGACITY OF A DOG.—A short time ago a dog, well known to the railway officials from frequent travelling with his master, presented himself at one of the stations on the Fleetwood, Preston, and Longridge line. After looking round for some length of time amongst the passengers and in the carriages, just as the train was about to start he leaped into one of the compartments of a carriage, and laid himself down under the seat. Arriving at Longridge, he waited until the station had been cleared, then went into the Railway Station Hotel, searched all the places on the ground floor, then went on to the upper part of the building, and made a tour of inspection over the adjoining grounds; but being apparently unsuccessful, he returned back to the train, and took his old position just as it moved off. On reaching the station from which he had first started, he again looked around as before, and took his departure. It seems that he now proceeded to the Great Northern Railway Station at Preston, and after repeating the looking around performance, placed himself under one of the seats in a train which he singled out of the many that are constantly plying in and out, and in due time arrived in Liverpool. He now visited a few places which he had been with his master, of whom, afterwards appeared, he was in search. Of his adventures in Liverpool little is known; but he remained all night, and visited Preston again early next morning. Still not finding his master, he for the fourth time "took the train"—this time, however, to Lancaster. Carlisle, at which latter place the sagacity and faithfulness of the animal, as well as the perseverance and tact he displayed in prosecuting his search, were rewarded by finding his master. *Recollections of a Sportsman. By Lord Lennox.*

Editorial Notices, &c.

The Provincial Exhibition.

We beg leave to direct the attention of readers to the advertisement which appears in another place as to the days for making entries of articles in the various classes for approaching Provincial Exhibition. Attention to these dates is absolutely necessary. We have every reason to anticipate that the Provincial Exhibition this autumn will be one of the most

Altogether the most successful which has taken place, and we trust that each one of our readers will do his utmost towards realizing his expectation. The grounds have been enclosed, and the buildings put up for the accommodation of the cattle and horses are ample and substantial. There has unfortunately been a mistake made in the placing of some of them, being too low in reference to the level of surrounding ground, but this will be remedied as far as possible before the exhibition takes place. For such portions of the Exhibitions are not provided with permanent buildings, temporary structures of a sufficiently substantial character will be put up, and altogether the accommodations will be more extensive and complete than on any former occasion.

The Board of Agriculture.

The Office of the Board of Agriculture has been removed to its permanent location in the Agricultural Hall, corner of Yonge and Queen Streets, Toronto, where all business of the Board and of the association will henceforth be transacted, except during the week of the exhibition. During the exhibition week the offices will, of course, be at the Show grounds.

THE PROVINCIAL EXHIBITION

OF THE

CULTURAL ASSOCIATION OF UPPER CANADA,

will be held at the City of Toronto on the 23rd, 24th, 25th, and 26th September next.

Persons intending to exhibit will please take care that the entries of articles in the respective classes must be made on or before the mentioned dates:—

Animals, Cattle, Sheep, Swine, Poultry, on or before Saturday, August 16th.

Grain, Field Roots, and other Farm Products, Agricultural Implements, Machinery, Manufactures generally, Saturday, August 30th.

Agricultural Products, Ladies' Work, the Arts, &c., Saturday, September 13th.

Lists and Blank Forms for making the entries upon may be had of the Secretaries of Agricultural Societies and Mechanics' Institutions throughout the Province.

HUGH C. THOMSON,

Secretary Board of Agriculture.

London, August 1, 1862.

THOROUGH-BRED STOCK FOR SALE.

THE Subscriber has for sale DURHAM and GALLOWAY CATTLE, LEICESTER, COTSWOLD, and LINCOLNSHIRE SHEEP, Male and Female. 10 Durham and Galloway Bull Calves—price from \$100 to \$200; 30 Shearling Rams, weighing from 230 to 285 lbs. each—Price from \$50 to \$100 each.

JOHN SNELL,
Edmonton P.O., C. W.

Four miles from Brampton Station G.T.R.

EAST RIDING YORK

Agricultural Society Fall Show,

AT WELLINGTON HOTEL GROUNDS,
MARKHAM VILLAGE, 9th October, 1862.

All Entries to be made by the evening of the 8th, or to be peremptorily excluded.

A. BARKER,
Secretary.

THOROUGH BRED STOCK FOR SALE.

THE SUBSCRIBER has for Sale Durham and Galloway Cattle, male and female.

Leicester, Cotswold, Lincolnshire, Down and Cheviot Sheep; Cumberland and Yorkshire improved Pigs. All imported stock.

GEORGE MILLER.

Markham, June 3rd, 1862.

6t.

TO BE SOLD BY AUCTION,

On Thursday, Oct. 16, 1862,

THE well-known Herd of NORTH DEVON CATTLE, consisting of more than forty head of Cows, Bulls, and Heifers; one hundred and seventy West and Southdown Ewes and Rams; pure blooded Essex Pigs, in pairs fit for breeding.

Catalogues of description, with pedigrees, may be had fourteen days before the sale, on application at the office of the *Galt Reporter*, if by letter, prepaid. Credit of 12 months may be had on approved endorsed paper.

THE SPLENDID FARM,

Consisting of upwards of THREE HUNDRED ACRES, to be sold by private bargain, on accommodating terms.

DANIEL TYE.

County Waterloo, Wilmot, August 1862. 4d

FOR SALE.

A LOT of thorough bred improved Berkshire Pigs of various ages.

R. L. DENISON,
Dover Court.

Toronto, Aug., 1861.

VETERINARY SURGEON.

ANDREW SMITH, Licentiate of the Edinburgh Veterinary College, and by appointment, Veterinary Surgeon to the Board of Agriculture of Upper Canada, respectfully announces that he has obtained those stables and part of the premises heretofore occupied by John Worthington, Esq., situated corner of Bay and Temperance streets, and which are being fitted up as a *Veterinary Infirmary*.

Medicines for Horses and Cattle always on hand. Horses examined as to soundness, &c.

Veterinary Establishment, Corner of Bay and Temperance Sts.

Toronto, January 22nd, 1862.

THE
JOURNAL OF THE BOARD OF ARTS
AND MANUFACTURES,
FOR UPPER CANADA,

Is Published on the first of every Month,

AT \$1 per annum for single copies, or to clubs of ten or more at 75 cents. per copy; to members of Mechanics' Institutes, and of Literary, Scientific, and Agricultural Societies, through their Secretary or other officer, 50 cents per annum per copy.

Subscriptions payable in advance.

Printed for the Board of Arts and Manufactures for Upper Canada, by W. C. CHEWETT & Co., King Street East, Toronto.

IMPROVED BERKSHIRE PIGS

FOR SALE by Mr. Denison, Dover Court, Toronto.

Toronto, April, 1862.

The Agriculturist,

OR JOURNAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE OF UPPER CANADA,

IS published in Toronto on the 1st and 16th of each month.

Subscription—Half a dollar per annum for Single copies; Eleven copies for Five Dollars Twenty-two copies for Ten Dollars, &c.

Editors—Professor Buckland, of University College, Toronto, and Hugh C. Thomson, Secretary of the Board of Agriculture, Toronto, to whom all orders and remittances are to be addressed.

Contents of this Number.

The International Exhibition.....

AGRICULTURAL INTELLIGENCE:

Agricultural Exhibitions this autumn....
Meeting of the Board of Agriculture
Royal Agricultural Societies' Show in England.....
Trial of Steam Ploughs and Cultivators, England.....
International Exhibition.—The Awards..
Cultivation of Winter Wheat.....
Two-story milking stool.....

HORTICULTURAL:

Toronto Horticultural Society's Exhibition
Hamilton Horticultural Society's Exhibition.....
Fruit Growers' Association of Upper Canada.....
Royal Horticultural Society's Fruit Show, England.....
Care of Trees in Orchards.....
Mignonette as a Tree.....
The Black Knot.....

BOTANICAL:

Notes on the Coniferous Plants in Japan.

VETERINARY DEPARTMENT:

Pleuro Pneumonia Epizootica.....
What horses we need.....
Choice of Animals for fattening.....

MISCELLANEOUS:

Importance of Sleep.....
The permanence of Spices.....
Sagacity of a Dog.....

EDITORIAL NOTICES, &c.....

A Thorough Bred 2 Year Old**AYRSHIRE BULL**

FOR SALE, by Mr. Denison, Dover Court, Toronto.

FOR SALE.

A LOT of thorough bred Essex Pigs from recently imported 1st prize and who have this season taken prizes both Township, County, and Provincial Exhibition.

JAMES

Clochmor, Galt P. O., Oct. 19, 1862

Printed at the "Guardian" Steam Press, King Street East, Toronto.