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THE
CANADIAN AGRICULTURIST,
AND
Transactions

OF THE
BOARD OF AGRICULTURE OF UPPER CANADA.

VOL. V.

TORONTO, JULY, 1853.

NO. 7.

MEETINGS OF THE BOARD OF AGRICULTURE.

The Board met, pursuant to adjournment, in the City of Hamilton, on Wednesday, June 8th. Members present: E. W. Thomson, Esq., Chairman; R. L. Denison, Esq., Treasurer; Honble. Adam Fergusson; Mr. Sheriff Ruttan; John Harland, Esq., and the Secretary.

The minutes of the last meeting having been read and approved, the Secretary read letters from Wm. Matthie, Esq., President of the Provincial Association; David Christie, Esq., M.P.P., and J. B. Marks, Esq., expressing their inability to attend.

The Committee appointed for making the necessary preparations for the Experimental Farm, stated that a team and some implements had been purchased, and that the operations of plowing, grubbing, levelling, &c., had been commenced, and tenders for fencing, advertised.—The work will thenceforth be carried on with all convenient despatch.

Mr. Ruttan having been requested to prepare a plan for a dwelling-house to be erected on the farm, submitted one, which, after mature inspection and consideration, was approved: whereupon it was

Resolved,—That the Architect be instructed to furnish specifications of the house, in accordance with the plan now submitted and approved of; and that the necessary steps for the erection of the same be taken without delay.

The Secretary was instructed to apply to the County Council of Wentworth and Halton, for a grant to the funds of the Provincial Association, for the current year.

In the afternoon the Board met the Local Committee, most of the members of the latter being in attendance; W. G. Kerr, Esq., Mayor, presiding. Several matters relating to the arrangements for the next Exhibition were considered, and the reports of sub-committees received. Two localities in the immediate neighborhood of the city were afterwards examined with a view to their adoption as a site for the Show. It was unanimously agreed to accept the one lying between King and York street; the situation is high,

picturesque, and most convenient to the heart of the city and steamboat landing; the ground dry and undulating, and on the whole, exceedingly well suited for the purposes of the Show. About 25 acres are to be fenced in.

In the evening the Board again met and agreed to adjourn to Tuesday, June 21st, at 11 o'clock,—then to meet at their rooms in the city of Toronto.

ADJOURNED MEETING IN TORONTO.

TUESDAY, June 21st.

The Board again assembled this day at eleven o'clock. Members present: E. W. Thomson, Esq., Chairman; R. L. Denison, Esq., Treasurer; Hon. A. Fergusson; David Christie, Esquire, M.P.P.; Mr. Sheriff Ruttan; John Harland, Esq., and the Secretary.

The minutes of the meeting held at Hamilton having been read and confirmed, the Secretary read a letter from J. B. Marks, Esq., expressing his regret that in consequence of important country business he was unable to attend. The Minister of Agriculture was prevented attending, in consequence of official business at the Seat of Government.

Mr. Ruttan having laid before the Board the specification of the plans of a house for the farm, that were approved of at the last meeting, it was

Resolved,—That the Chairman, Treasurer, and Secretary, be authorized to enter into contracts, and take all necessary steps for proceeding with the erection of the house and out-buildings, fencing, &c., on the Experimental Farm, with as little delay as possible; and that they consult such other members of the Board as may be conveniently accessible.

The Secretary read the following letter from Frederick Widder, Esquire, first Commissioner of the Canada Company:

CANADA COMPANY'S OFFICE,
Toronto, June 10th, 1853.

MY DEAR SIR,—The increased demand upon my time and attention which has taken place, will prevent me giving much of either to the introduction of the Flax Machine throughout the various townships of the Province. I am most desirous that it should be successful, and I therefore propose to present the machine to the Board of Agriculture, with the request that you do will all in your power to promote the project. I had in view in desiring the Canada Company to purchase and send me the most improved Scutching

Machine that could be procured in England. When you pass by my office, we will arrange when and where to send the Machine.

I am, my dear Sir, your's respectfully,

FRED. WIDDER,
Commissioner.

GEORGE BUCKLAND, ESQ.,
Secr. Board of Agriculture, Toronto.

Resolved.—That the Board thankfully accept the Flax Machine offered by Mr. Commissioner Widder—assuring that gentleman that they will do every thing in their power to forward the important views of the Canada Company, in sending the Machine to this country.

The Board afterwards inspected that portion of the University ground set apart for an Experimental Farm, in company, (by special request,) with David Buchan, Esq., Bursar of the University.—A site for the House and out buildings having been agreed on,—subject to such modifications as subsequent arrangements may render necessary, the Board adjourned to next morning, at 8 o'clock.

WEDNESDAY, June 22.

The Board met at 8 o'clock A. M. The same members present as attended yesterday.

The first business which came up was the publication of the Reports, Prize Essays, and other communications, which are sent to the Board, from time to time. Much of this kind of matter has hitherto been published in the *Agriculturist*, but as materials are increasing, it was felt that a monthly periodical, consisting of only one sheet, would not be adequate, and that an annual volume should be prepared and published by authority of the Bureau of Agriculture. It was, therefore,

Resolved.—That the following letter on the subject of publishing reports and transactions, be sent to the Minister of Agriculture; and that the existing arrangements with the proprietor of the *Agriculturist*, be continued to the end of the year, and then to terminate.

To the Hon. MALCOLM CAMERON, &c., &c., &c.,
Bureau of Agriculture, Quebec.—

SIR.—The Board of Agriculture now assembled, in pursuance of adjournment, regret that official engagements have deprived them of the pleasure and advantage of your presence.

Among many important matters at present under consideration, there is probably none which may be attended with more permanent advantage to the Farmers of Canada, or secure greater credit and confidence to the Department of Government, over which you preside, than a satisfactory mode of communicating to Agriculturists, and to all connected with agriculture, the results of those experiments, enquiries, and details, which are procured from time to time, and at present sent out in the *Agriculturist*.

It appears to the Board that, however ably and anxiously conducted a monthly periodical may be, it cannot take the position or serve the important end which a carefully arranged and well-got-up annual volume, published by order of Parliament, would assuredly enjoy. It would be premature at this period to enter upon the discussion of details, but the Board can see no insuperable difficulty in carrying out such a measure, and that with more advantage to the

Agriculturists of Canada, and with high credit to the Bureau, under whose auspices it would be issued.

The Board will therefore anxiously desire to obtain at your earliest convenience, some communications from you upon this subject; and will only add their hearty pledge for a willing co-operation on their part in carrying out a measure of such high importance to the Province.

The Board have therefore appointed a Committee to confer with you on the subject when it suits your convenience to meet them; such Committee to be composed of the Chairman, Secretary, and Treasurer, of the Board.

I have the honor to be, Sir,

Your obedient servant,

[Signed] F. W. THOMSON,
Chairman.

The Secretary having stated that it was not in his power to discharge the increasing duties of the Secretaryship with satisfaction to himself, owing to the multiplicity of other important matters in his hands, it was

Resolved.—That Mr. Hugh Thomson be appointed Assistant Secretary until the 25th of March next; and that the sum of £200 be allowed for this duty:—£75 to Mr. Buckland, and £125 to Mr. Hugh Thomson.

With a view of showing our respect for, and interest in, our fellow subjects of Lower Canada, the Board appointed E. W. Thomson, Esq., Wm. Maubie Esq., Mr. Sheriff Treadwell, Baron de Longueuil, John Harland, Richard Jackson and Angus Cameron Esqs., to represent the Board and Agricultural Association of Upper Canada, at the Exhibition of the Agricultural Association of Lower Canada, to be held at Montreal in September next.

It was agreed that £25 be granted for the purposes of the Library, and votes of thanks given to the following gentlemen for donations to the same:—Hon. Adam Ferguson, for two colored engravings, illustrating the points and anatomical structure of the Horse; Wm. McDougall, Esq., for the American Herd Book; Henry Imlach, Esq., for Dixon's System of Agriculture—2 vols. quarto.

The Secretary was instructed to communicate with B. P. Johnson Esq., Secretary of the New York State Agricultural Society, with the view of obtaining Judges on blood Horses and the improved breeds of Cattle.

Resolved.—That three auditors be appointed to audit the Treasurers' accounts, and report to the Board at the next meeting; and that G. P. Ridout, Esq., M.P.P., the Chairman, and Secretary be such auditors.

After the disposal of several matters, involving points of mere detail, more particularly relating to the management of the next Exhibition, plans of the grounds &c., having been received from the Local Committee in Hamilton, the Chairman was requested to attend the next meeting of said committee, to make final arrangements as to fencing, buildings, and other necessary preparations for the approaching Show in October.

The Board then adjourned.

[Signed.] E. W. THOMSON,
Chairman.

REPORT OF THE COUNTY OF ESSEX AGRICULTURAL SOCIETY, FOR 1852.

The Annual Meeting of Essex County Agricultural Society was held in the Court House, Sandwich, on Saturday, Feb. 19, 1853. John G. Buchanan, Esquire, *President*, in the chair. The minutes of the previous meeting were read and adopted; after which the Board of Directors and officers brought forward their Annual Report, which was read by the Secretary and adopted.

REPORT.

We, the Officers and Directors of Essex County Agricultural Society, would beg leave to report (as required by the Agricultural Act passed the present session of Parliament) for the information of the Society at its Annual Meeting, and also for the Board of Agriculture for U. Canada. The following documents marked in order, will shew the Society's proceedings and transactions for the past year.

No. 1. The names of members and the amount of their several subscriptions.

No. 2, Prize list, being the account of Premiums awarded to animals and various other articles at the Society's Fall Fair and Show, held at Amherstburgh in October, 1852.

No. 3, A detailed statement of the receipts and disbursements of the Society during the year 1852, together with the reports of Township or Branch Societies in this county for the said year.

Your Board would further remark that the operations of the County Society have, during the two years of its existence, been entirely confined to the awarding of premiums for the best articles of agricultural produce; they have not appropriated any money for the purchase of improved stock, as this seems to be the peculiar province of the Township or Branch Societies, as will appear from their Annual Reports; all their efforts are directed in the way of procuring the most improved live stock. As an illustration of the great attention paid to the improvement of cattle in the several townships of this county, they carried off the highest prizes awarded to foreign stock at the State Fairs of Ohio and Michigan.

What would appear to be the interest of this Society would be the offering of premiums for the best cultivated farms or fields that yields the greatest remuneration to the farmer. Such an object might inspire a spirit of rivalry among our farmers, and in some measure compensate for the absence of a model farm which is scarcely attain-

able in this sparsely settled country: it is very doubtful whether farming conducted on a scientific basis, as performed on model farms would be appreciated in this county, owing to the great want of education among a portion of the farming community. Education is the basis of all enterprise and improvement; we would, therefore, hail as a valuable auxiliary to the improvement of Agriculture, the contemplated establishment of Township Libraries by the Chief Superintendent of Education, and also the perfecting of our common school system, so that education may come within the reach of all: and only a few years can elapse before the younger branches of our farming community will be able to lay hold of all the improvements going on around them, and also combine theory with practice in such a manner that Essex will come up alongside of those counties which are already so far advanced in agriculture.

Your Board would remind the Society that laxity in the attendance of members renders such Societies as this very inefficient. When the business of the Society is conducted by a few of its principal officers, it does not give such general satisfaction; neither is the Society answering the end for which it was established.

We would impress upon our successors in office the absolute necessity of attendance to this duty as such, and make this Society something worthy of being appreciated by the farmers of Essex. We possess a soil and climate unsurpassed by any locality in British North America, and it only requires intelligence and energy to develop the resources we have at our command. Let this Society act in conjunction with its branches in the surrounding townships, as the hand-maid of the farmer in developing the riches of his soil, and Essex will stand side by side with its sister Societies in other parts of the Province; and at no great distant day put in its claim for the Provincial Exhibition to be held on the Banks of the Detroit.

In concluding this Report your Board would beg to call the attention of the Society to the receipts and expenditure of the last year, and it may form a question for consideration whether it is beneficial to appropriate the entire revenue of the Society for premiums, in the manner we have been in the habit of doing. The purchase of choice seeds, and as before mentioned, the cultivation of the soil, might command the attention of the Society with equal advantage. However, these are subjects for the future action of the Society.

Our term of office has now expired, and we cheerfully resign our stewardship to our successors in office by wishing them all success.

Dr.	
<i>Essex County Agricultural Society, 1852, in Account Current with Isaac Askew, Treasurer.</i>	
To Cash paid Isaac Askew for services in establishing Township Societies.	£15 0 0
" Cash paid Premiums at Fall Fair...	100 15 0
" " Expenses of Fair.....	10 2 6
" " paid to John Prince for Foreign Seeds.....	9 11 1
	£135 8 7
Cr.	
By Balance on hand from 1851.....	£14 12 9
" Donation from Isaac Askew.....	5 0 0
" Society's Government Grant.....	62 10 0
" James Dougall, District balance.....	25 0 0
" Members' Subscription.....	25 10 0
" Balance due Treasurer.....	2 15 10
	£135 8 7

OFFICERS OF ESSEX COUNTY SOCIETY FOR 1853.

GEORGE BULLOCK, Esq., Sandwich, *President.*
 JAMES DOUGALL, Esq., *Vice President.*
 Col. JOHN BRUSH, *Vice-President.*
 ISAAC ASKEW, *Treasurer.*
 ALEXANDER BARTLETT, *Secretary.*

Directors:

John G. Buchanan, Alexander Whitson,
 Thomas Salmon, Josiah Strong,
 Leonard Wigle, William Sanford,
 John Maloney.

TOWNSHIP BRANCH SOCIETIES.

Colchester.

This Branch in 1852, numbered 75 members, who subscribed £18 10s. The total receipts for the year 1852, amounted to £143 1s. 5½d., and the disbursements to £139 11s. 11d., leaving a balance on hand of £3 9s. 6½d. The Society has stock on hand consisting of one Stallion, two Devon Bulls, and three Durham Bulls, in connection with the purchase and keeping of which, a considerable portion of the expenditure of the Society is incurred.

The Society held their annual meeting on Saturday the 15th day of January 1853, when the following persons were elected as officers for the ensuing year:—

GORDON BUCHANAN, *President.*
 SIMON WRIGHT, *Vice-President.*
 SCHUGLER ALARICH, *Secretary.*
 JOHN R. PARK, *Treasurer.*

Directors:

Charles W. Cornwall, Morgan Balawen,
 John S. Reasdale, William McLean,
 George Wright, John Arner,
 John Wiggle, Jacob Arner,
 Michel Wiggle.

Gosfield and Mersea Branch.

This Society in 1852 had 123 members paying 3s. each. By the report submitted at the annual meeting on January 25th, 1853, it appears that there was no such thing as a good stock of horses in the township at the commencement of the

year. The Society had expended during the year £67 10s. in the purchase and keeping of two Stallions, and had also expended £7 10s. in the purchase of a young Bull. The total receipts of the Society for the year 1852 were £123 5s. including a sum of £72 received from the use and subsequent sale of the two Stallions. The total disbursements, including purchase and keep of horses and bull, amounted to £78 8s. 4½d. leaving a balance on hand of £44 16s. 7½d.

Officers for 1853:

JAMES KING, Gosfield, *President.*
 L. NIGHTINGALE, Kingsville, *Vice-President.*

Directors:

Wm. Sandford, Wm. Hooper,
 Theodore Wigh, Wm. Drake.

Malden and Anderton.

This Society was re-organized under the new Act in 1852, and in that year numbered 81 members, subscribing 5s. each. The total expenditure of the Society for the year 1852 was £69 15s., of which £66 was in the keeping and travelling of a stallion owned by the Society. The total receipts were £82 4s. 6½; £9 5s being realized from use of stallion. Balance of cash in hand, £12 9s. 6½d.

OFFICERS FOR 1853.

JOHN PATON, *President.*
 THOS. BOYLE, *Vice-President.*
 JOSEPH GRAVELINE, *Do. Do.*
 HENRY WRIGHT, *Treasurer.*
 ALEX. BARTLET, *Secretary.*

Directors:

John Maloney, John Dall,
 William Marlyec, Jonas Fox,
 Theo. Park, Isaac Askin,
 Jas. Hunt.

Rochester, Maidstone and Tilbury East Branch.

The Directors of this Branch Society at their Annual Meeting on January 9th 1853, submitted report from which the following are extracts:—

"As this is their first report since their organization as a Society, and as their means the past year were limited to the amount raised by themselves, and the very small additional amount received as their proportion of the Government grant to the United Counties of Essex and Lambton, it has precluded the possibility of doing more than to give the matter a commencement in this section of the country; but they hope, and they think they are warranted in entertaining such hope, that their operations the present year will begin to make themselves felt advantageously.

"Agricultural operations in this section of country, are comparatively in their infancy, the lands to be operated upon being within these very few years wrested from the native forest. We have amongst us no capitalists, but men only of energetic industry and limited means, each working his 100 acres or thereabouts, according to his own ideas of the greatest advantage to be derived therefrom. Still the country has rapidly improved and is improving, and without doubt will eventually become a much prized district for

agricultural purposes. The quality of the land is generally good, some of it first rate, with a fine and heavy growth of mixed timber, rather too level in its general formation, making drainage the most difficult and expensive operation to be undertaken.

"The stock at present to be found amongst us, with few exceptions, is such as is usually found where no general effort has been made for its improvement by the introduction of improved breeds; but we trust a difference in this respect will soon be seen, and that large benefits will accrue to the farming community generally, from the formation of this Society.

Of necessity there could not this first year be anything like an exhibition, they have therefore nothing to report under that head. They have from time to time held meetings as their affairs required, and have agreed to and passed a Constitution, binding themselves together as a Society.

"They have also contributed as largely as their funds warranted, towards the *Canadian Agriculturist*, and this year hope to extend their contributions, so that it may be placed in the hands of every member."

The Society in 1852 consisted of 82 members, who subscribed the sum of £21. The total receipts in 1852 were £50 8s. 2d., and the expenditure £22 17s. 7d., leaving a balance on hand of £27 10s. 7d.

The following is a list of the officers elected for 1853:—

WM. F. WILSON,	<i>President.</i>
ROBT. TAYLOR,	<i>Vice-President.</i>
JOHN MURRAY,	<i>Secretary.</i>
EDMUND SMITH,	<i>Treasurer.</i>

Address for all, Belle River Post-Office, Maidstone, C. W.

Sandwich Branch.

The Directors of this Society make the following Report:—

"To the Secretary of the County Agricultural Society of the County of Essex.

"The Agricultural Society of the Township of Sandwich for the past year has done little or nothing for the advancement of agriculture in this Township, in consequence of not having been regularly organized; and not having had sufficient funds in hand which might be applied for agricultural purposes.

The present year, however, seems to indicate more favourable results, as the farmers generally evince a desire to become members of the Society, though not to such an extent as might be supposed in such a large and thickly populated Township as this.

"The Society, (as soon as sufficient funds are in hand) intends to purchase a Lower Canadian Stallion for the use of the Society, and it is expected that such can be done during the present spring; though from the fact of the Municipal Council of this Township having passed a By-law allowing horses, cattle, &c., of inferior breed to roam at large, it is feared the possession of a stallion will not benefit the Township.

"Very little can be said on behalf of the agriculturists of this Township; but an Agricultural

Society being now formed on a good basis will, it is hoped, create a fresh energy among the farmers, by the introduction of a superior stock of horses, cattle, sheep, &c., as well as a good quality of grain of different kinds.

The amount of money now in the hands of the Treasurer is £42 12s. 5d.

The Society in 1852 consisted of 90 members, who subscribed £41 10s. 6d., towards the funds of the Township Society, and £18 15s. towards the County Society. The Society gives no further statement of its receipts and disbursements. The following are the officers for the current year:—

FRANCOIS CARON,	<i>President.</i>
THOMAS WOODBRIDGE,	<i>Vice-President.</i>
DENIS MOYNAHAN,	<i>Secretary.</i>
WILLIAM HUNT.	<i>Treasurer.</i>

Directors :

Thomas McKee,	James H. Wilkinson.
Arthur Rankin,	S. S. McDonell,
Dominique Langlois,	Charles Hunt,
Denis Downing,	Antonie Jannisse,
	W. P. Vidal.

Collectors :

John McCrae, Leandre P. St. Amont, Edward Boismier, Thomas McKee, H. C. Guillot, P. H. Morin and Denis Downing.

REPORT OF MIDDLESEX AND ELGIN COUNTY AGRICULTURAL SOCIETY, FOR 1852.

The Board of Direction for the Agricultural Society of the united counties of Middlesex and Elgin, beg to submit to the Board of Agriculture for Upper Canada, the following REPORT:—

In reviewing the operations and results of the Society for the year which has now expired, your Board has the pleasing satisfaction of being able to state that under the fostering blessing of Heaven, and with the zealous and untiring co-operation of the members of the Society, the past year has been one of unprecedented prosperity. The various but yet concurring influences brought to bear on the Society through the county, have had the gratifying effect of stimulating each other in support of the great and vital operations of agriculture.

The agricultural, professional, mechanical and laboring classes, of the inhabitants of these counties have with praiseworthy zeal striven to outvie each other in their generous support of this great interest; indeed, so much so, as to induce your Board, in the year 1851, to apportion the sum of £30 to assist in defraying the expenses of an Exhibition for works of art and mechanism in conjunction with the Annual Show of the Society; and which in skill and utility, far exceed the most sanguine expectations. Owing to unforeseen difficulties in awarding Diplomas as certificates, and triumphs of successful competition, the money still remained with the Treasurer of the

Board until recently, when, by its order, it was paid over into the hands of the Treasurer of the Horticultural and Mechanical Association of London, as a legitimate application of its original intention,—and your Board not only feels great pleasure in the commencement of a kindred institution, but most heartily wishes it every success in the race of improvement.

It is with pleasure your Board has to state, that the influence of this Society has not only been seen, but is being felt, throughout these united counties. Several of the townships have formed Societies of their own, in connection with the parent institution, and with their active machinery at work have shown that a separate, and yet harmonious emulation amongst them, has produced the happiest results.

During the last year two more townships have organized Societies in localities, where your Board did not anticipate so warm a feeling in the general cause, and from the inspection of the subscription lists furnished, it is evidently shown they do not intend to be last in the race of general improvement.

As the present age is preeminently one of practical benefit, where facts, figures, and material prosperity, stand out in bold relief with the sentimentalism of the last century, and seems destined, in a happy combination with the cultivation of the human mind, to elevate the great mass of society, in the enjoyment of material comfort, and the refinements of civilization, your Board cannot but congratulate the farmers of Middlesex and Elgin on the advance which they have made in these essential elements of improvement in rural life, as will be more fully seen by a reference to the different schedules now submitted.

In schedule No. 1, as reported by the Secretary, it will be seen that the names of thirteen subscribers are reported which are not accounted for by the Treasurer; the supposed discrepancy arises from that number not having paid their subscriptions at the time the Treasurer closed his account. But taking the lesser number of 146, as an index to the interest taken by the united counties in this Society, in addition to the large number of 813 subscribers in the different township societies, it must strike the most casual observer that the interest in the Societies' welfare is rapidly on the increase. In schedule No. 2 it will be seen that your Board has paid the large sum of £561 9s. 4½d. for Premiums and Township Grants, including a few smaller items for expenses, leaving a balance of £82 19s. 1d. in the Treasurer's hands.

In schedule No. 3 will be found a statement of the different sums of money received and paid to the respective Township Societies.

In concluding its report, your Board feels it would be wanting in its duty, were it not to state the proud satisfaction on which it dwells, while reflecting on the past and present position of the agricultural interests in the united counties of Middlesex and Elgin.

Scarcely thirty years ago the ground on which we stand was a wilderness, traversed by the panther and the bear, and now is to be seen a city in embryo, containing upwards of 7,000 inhabitants, with a surrounding country fast rising to be the most populous in western Canada. At that period the Indian almost alone trod the desert stealthily in search of his game: now the sound of the axe, the driving of the plough, and the busy hum of industry generally, is heard and meets the eye at every turn. It has often been said that the peninsula on which we stand is the garden of Canada; and how truly! The results of the last year's agricultural industry will show.

By the Enumerator's return for the past year, we have a statement which must not only astonish and stimulate, but captivate. The products and personal property of the agriculturists of the county of Middlesex, amounts in value (and that within what the markets at this time realize) to the enormous sum of £614,856, and upwards. If such has been its progress for the last generation, what may not be expected in the next? And more especially so while we witness the fast spreading conviction, entwining itself with the feelings and habits of the people of this country, that their own and country's welfare depend upon the permanent success which agriculture can command: and that other and minor interests will advance or recede in proportion with it, as enlightened and patriotic, or selfish and contracted legislation may direct. And it is in the opinion of this Board a matter of deep regret, that its action should be again disturbed by Legislation, the effects and influence of which have yet to be tested by another year's probation. But your Board would fain hope that the results may not only show a continued prosperity, but especially to this Society, over which it has had the honor to preside; and that its members may have the proud satisfaction of pointing to the united counties of Middlesex and Elgin as the garden—and the most productive and prosperous garden—in United Canada.

All of which is most respectfully submitted.

THOMAS C. DIXON,
Chairman of the Board of Directors.

John Stiles, Esq., Treasurer, in account with the Agricultural Society of the United Counties of Middlesex and Elgin.

Dr.		£	s.	d.	1852.		1853.	By paid	£	s.	d.
1852.	Feb. 6	To balance in hand from the late County of Middlesex Agricultural Society	151	16	5½	March 17	By paid Mr. Farley for the purpose of giving notice in the Provincial Gazette in reference to Agricul Land				
" "	" "	To amount received in subscriptions from members of U. Counties Middlesex and El in Agricultural Society, to 6th Feb, 1852	32	15	0	April 20	" Premiums at Spring Exh.	2	10	0	
May 1	"	To amount rec'd. from Township of Malahide Branch.	51	5	0	May 15	" Constable for attendance Show day	0	5	0	
" "	"	" " St. Thomas "	20	10	0	Aug. 19	" Thos. Scatchard, Esq., for powers of Attorney	0	7	6	
" "	"	" " London "	31	7	6	" 28	" Commission to W. Hedge, Esq., Quebec.	0	12	6	
" "	"	" " Westminster "	28	2	6	" "	" Treas. Township of Westminster Branch	45	2	4	
" "	"	" " Adelaide "	17	10	0	" 30	" Secretary Prov. Association, Draft and Postage.	25	1	9	
" "	"	" " Williams "	29	7	6	Sept. 1	" Treas. Township of Malahide Branch	82	4	3½	
" "	"	" " Metcalfe "	19	10	0	" 4	" " Metcalfe Branch	31	5	7½	
" "	"	" " Bayham "	17	10	0	" 7	" W. Sutherland for Printing	3	12	3	
June 30	"	Arrears due the Middlesex Agr cultural Society	1	5	0	" "	" Treas. Township of London Branch.	50	6	9½	
Aug. 28	"	Amount received from the Provincial Government, being Annual Grant in support of Agricultural Societies	250	0	0	" "	" " Bayham Branch.	28	1	5½	
Oct. 18	"	Amt. of Premium awarded Mr. Joseph Lamb for the best Span of Mares, and not paid him, he not being qualified to compete for a Premium	1	5	0	" "	" " St. Thomas "	32	17	9½	
1853.	Jan. 27	Amount returned to Treas., being balance in hand after defraying expense of Notice of Application to Provincial Parliament respecting Agricultural Grounds in the Town of London, by Secretary	1	4	6	" 11	" Prens. for Fall seed-wheat, Wm. Williams, putting up bills, &c.	0	10	0	
						" "	" D. W. Hart, printing to date	7	15	4	
						" 18	" Treas. Township of Williams Branch	32	13	8½	
						" 20	" F. Talbot for Printing	1	10	0	
						Oct. 5	" Treas. of Adelaide Branch	28	1	5½	
						" 7	" 1 Delegate and 3 Judges' expenses to Prov. Show at Toronto and back.	16	0	0	
						" 9	" Piems. at Annual Exh.	81	5	0	
						" "	" James Thompson for Cedar Poles	0	15	5	
						" "	" Luke Lukes for cleaning old Market House.	0	10	0	
						" 16	" Peter McCann and 4 Constables for attendance on the day of Exhibition.	1	5	0	
						" 23	" Mr. Whittemore for attendance at Show Gate	0	5	0	
						" 30	" W. Williams, putting up bills, Show Fair.	0	7	6	
						Dec. 27	" Draft to purchase 76 copies Agriculturist, postage &c	9	11	6	
						1853.	" J. Farley, Sec, for services	7	10	0	
						Jan. 27	" J. B. Strahy, extract of minutes of County Conne.	0	5	0	
						" "	" J. Brown, Treas. Horticult. and Mechanical Assoc.	24	10	0	
						" "	" Postages and Stationery	2	7	2	
						" "	" John Alway, for making and repairing pens, 1852	2	2	6	
						" 29	" John Stiles, Treasurer, for services	7	10	0	
									561	9	4½
							Balance in Treasurers' hands to credit of 1852	82	19	1½	
									644	8	5½

ABSTRACT.

To amount in Treasurer's hands for the year 1852	£644	8	5½
By amount paid by Treasurer during the year 1852	561	9	3½
Balance in Treasurer's hands to credit of 1853	£82	19	1½

Schedule, showing the Amount of Money received by the Agricultural Society of the United Counties of Middlesex and Elgin from the Township Societies: the Amount or Portion of the Government Grant paid to each Township Society; also, the Total Amount paid by the Treasurer of the United Counties Society to the Treasurer of each Township Society respectively, in the year 1852.

Name of Township.	Amount paid by Township Societies to the United Counties Society in 1852.	Proportion of the Govt. Grant paid to each Township Society in 1852.	Total amount paid to each Township Society respectively in 1852.
Malahide	£51 5 0	£30 19 3½	£82 4 3½
St. Thomas ...	20 10 0	12 7 9½	32 17 9½
London	31 7 6	18 19 3½	50 6 9½
Westminster ..	28 2 6	16 19 10	45 2 4
Adelaide	17 10 0	10 11 5½	28 1 5
Williams	20 7 6	12 6 2½	32 13 8½
Adelaide	19 10 0	11 15 7½	31 5 8½
Bayham	17 10 0	10 11 5½	28 1 5½
	£206 2 6	£124 10 11	£330 13 5

OFFICERS OF THE COUNTY OF MIDDLESEX SOCIETY FOR THE YEAR 1853:

JOHN B. ASKIN, Esq., *President*,
 THOS. C. DIXON, Esq., M.P., *Vice-President*.
 JOHN SCATCHARD, Nissouri, *do. do.*
 JOHN STILES, London, *Treasurer*.
 JAMES FARLEY, London, *Secretary*.

Directors:

George Belton, William Elliott,
 Edward Emery, Alexander Kerr,
 John Saul, Robert Robson,
 William Moore.

TOWNSHIP BRANCH SOCIETIES.

ADELAIDE.—This Society was organized on the 30th April, 1852, and consisted that year of 70 members, paying 5s. each. The receipts for 1852, including Government Grant, were £29 6s. 5½d.: and the Disbursements, expended principally in the hiring of Durham and Ayrshire Bulls, amounted to £21 12s. 9d.: leaving a Balance in the Treasurer's hands of £7 13s. 9d. *Treasurer* for 1853, Mr. JAMES KEEFER; names of other Officers not returned.

DELAWARE AND CARADOC.—A Branch Society was formed in these townships on the 26th Oct., 1852, and 87 persons then signed the Declaration, subscribing altogether the sum of £23. This being the first year of the operations of the Society, no further report of receipts and disbursements has been received. The following gentlemen were elected as Officers for the year 1853:

W. LIVINGSTONE, Esq., Caradoc, *President*.
 H. JOHNSTONE, Esq., Delaware, *Vice-Prest.*
 HORATIO JELL, do, *Secretary*.
 DR. A. FRANCIS, do, *Treasurer*.

Directors:

Wm. Lee, Caradoc. Major Heyne, Delaware.
 Brock Burwell, do. Alex. Montgomery, do.
 J. P. Bateman, do. Gilbert McKay, do.
 Jos. Seabrook, do. John Woodhall, Kilworth,
 John Tull, do. Delaware Township.

LOBO.—This Branch Society was organized in January, 1853, and a list has been returned of 139 member subscribing £35. The following is a list of Officers:

	Names.	P.O. Address
<i>President</i> , . . .	JAMES McCOLLON,	Amiens
<i>Vice-President</i> ,	JOHN ZAVITY,	do
<i>Treasurer</i> , . . .	HUGH CARMICHAEL,	do
<i>Secretary</i> , . . .	ROBERT ADAMSON,	Lobo

Directors.

George Alway,	do
Hugh McIntyre,	do
William Morrison,	do
John Lymont,	do
William Wood,	do
Thomas Caverhill,	do
William Jestin,	Amiens
Abraham Niff,	do
John Marsh,	do

LONDON.—This Branch Society submitted their Second Annual Report in January, 1853, with a list of the subscriptions, prizes awarded in 1852, receipts and disbursements, &c. The Society in 1852 numbered 109. The following is an Abstract of their Accounts for that year:—

1851.	£	s.	d.
Jan. 1. Balance in Treasurer's hand,	18	0	10½
1852. Paid by Members,	31	7	6
To amount of Public Money,	18	19	3

Total amount,	68	7	7½
	58	16	3

Jan. 25. Balance in Treasurer's hand,	9	11	4½
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1852. By Cash paid at Spring Show Fair,	13	15	0
“ for Printing & Judges' dinners,	0	12	6
By Money too late to return to Govt.,	3	0	0
“ Paid at Fall Show,	35	17	6
By Cash for Judges' dinners'	0	15	0
“ for Printing,	2	6	3
“ to Secretary,	2	10	0
	58	16	3

President, . . . GEORGE ROBSON, St. Johns
Vice-President, WILLIAM FRANKS, Elginfield
Treasurer . . . ALEX. MONTGOMERY, St. Johns
Secretary . . . JAMES GOULDREY.

Directors.

George Calvert,	William Balkurll,
John Standfield,	Captain Patterson,
Francis Walden,	George Doughless,
Thos. as Martin,	John Long.
Robert Fergusson,	

MALAHIDE.—This Township Branch was re-organized under the new Act on the 8th January, 1852. The Society in 1852 consisted of 215 members, who subscribed £54 15s. The total Receipts for the year, including a balance of £57 6s. 9d. on hand from 1851 and the apportionment of the Government Grant, amounted to £149 13s. 6d.: and the Disbursements amounted to £120 15s. 6½d.: leaving a balance in the Treasurer's hands, on the 10th of January, 1853, of £28 17s. 11½d. The Society also had the following property:— 1 stallion, 3 bulls, 24 rams, and

3 boars. Debts due the Society for 4 bulls, sold at six months' credit, in September last, £19 18s. Due for use of Stallion £2 10s. The following is a list of the Officers elected for the current year:

GILBERT WRONG, Esq., *President*; Post Office, Gravesend, C.W.
 LEWIS J. CLARKE, *Vice-President*; Post Office, Aylmer, C.W.
 PHILIP HODGKINSON, *Secretary and Treasurer*, Post Office, Aylmer, C.W.

Directors:

John Marr, Raymond Vanvelger,
 Jacob Burk, Richard McCurdy,
 John Sanders, Jonathan Thompson,
 Charles Ross, Henry Wolley,
 James McLachlin.

METCALFE BRANCH.—This Society has been in existence 3 years, and made their 3d annual report on the 24th January last. In 1852 it consisted of 60 members, who subscribed £19 10. The total receipts of the society for 1852 were £49 15s. 4½d. and the total expenditure £31 15s. 3d. leaving a balance on hand of £18 0. 1½. In concluding their report the directors say:

In a Township second to none in fertility of soil and good grazing capacities in Western Canada, it is to be hoped that the cause of Agriculture will continue to flourish as heretofore, the Rail Roads which are being constructed on either side and almost touching this Township will afford a choice of markets, and it is believed by your Directors that a great change for the better will be realized by the farming community generally, and more particularly by the farmers in this section of Canada; who up to this have been almost without a market. But this state of things is about to be numbered with the past, the wealth and resources of the Country, are being developed, and the time is fast approaching, when the farmers of Western Canada will no longer be considered as but little better than hewers of wood and drawers of water. Officers for 1853:—

ROBERT BROWN, *President*.
 JAMES CAMERON, *Vice-President*.
 ROBERT L. JOHNSTON, *Sec. & Treasurer*.

DIRECTORS:

George Mortimer, Archibald Walker,
 Issac Dickison, Joseph Ramsey,¹
 William Harris, Thomas Boyd,
 Thomas Hardy, all to Napier P. O.

WESTMINSTER BRANCH.—This Society consisted in 1852 of 89 members who subscribed £28 2s 6d. The total receipts for the year were £47 15s. 4d., and the total expenditure including prizes at Fall and Spring Fairs, ploughing match, printing expenses &c., amounted to £41 11s 1½d, leaving a balance on hand of £6 4s. 2½d. The following is the list of officers for the year 1853.

RICHARD FRONK, *President*.
 THOMAS BATY, *Vice-President*.
 GEORGE MURRAY, *Treasurer*.

Committee.

John Cochrane, James Rae,
 W. J. Hayton, A. Kerr,
 Wm. Grieve, W. Beattie Sr.,
 Francis Nichol, John Bogue,
 William Murray.

WILLIAM BRANCH.—This Society numbered in 1852, 63 members, who subscribed £22 7s. 6d. There was paid in premiums during the year the sum of £28 5s. The receipts of the Society for the year amounted to £35 18s. 9½, and the disbursements to £31 16s. 3d., leaving a balance in the Treasurer's hands of £1 2s. 6½d. At the fall Fair in 1852 there were exhibited 58 horses, 71 horned cattle, 96 sheep and 4 pigs. The following are the list of officers for 1853:—

GEORGE SHIPLEY, *President*.
 ROBERT WAUGH, *Vice-President*.
 JAMES L. NICHOLS, *Secretary*.
 HENRY ROUTLEGE, *Treasurer*.

Committee.

Thos. Routlege, L. G. Shipley,
 John Bell, William Shipley,
 Angus Stewart, David Stewart,
 Arthur Shirwell, George Robson,
 John Dorman.

ST. THOMAS BRANCH.—This Society has given a full return of receipts from members, and of expenditure in expenses and premiums for the year 1852 but no further report of proceedings. The balance on hand on 1st January,

1852 was	£66 5 0
Amount received during the year from Subscribers and Treasurer of County Society	£57 12 10
	£123 17 10

Expenditure.

Amount paid to County Treasurer	£20 10 0
Various expenses	11 4 6
Amount paid in premiums &c. 1852,	28 15 0

	60 9 6
Balance on hand 1st January 1853,	63 8 4

£123 17 10

The Agriculturist.

TORONTO, JULY, 1853.

JULY,—THE FALLOW, &c.

July is an important month to the farmer. Before these remarks reach our readers, the hay making season will have pretty generally commenced throughout the Province, and harvest will very shortly follow. At intervals also during the month the fallow for Fall Wheat will receive attention, and to this subject we propose to devote a few plain practical remarks.

In Canada, as yet, the greater portion of land intended for Fall Wheat is prepared by what is called "summer fallowing," or leaving the land during Spring and Summer without a crop, and giving it several ploughings and harrowings. There are several objects attained by fallowing.

Weeds, if the fallow is properly conducted, are destroyed, the land is reduced to a fine state of tilth, and to a proper condition, mechanically, to receive the seed, and it affords a convenient opportunity of applying the barn-yard manure to the fields. In regard to the influence of the fallow upon the fertility of the land itself, the former popular idea, that after some years' cropping, the soil, like a weary man, or animal, required rest, and received strength by being allowed to lie idle for a season, has pretty nearly exploded, and the generally received opinion now is, that fallowing is beneficial from the superior opportunities it affords of reducing the soil to a fine state of cultivation mechanically, of eradicating weeds, applying the manure, and of getting the seed into the ground in good season. And verging a little upon theoretical ground, it is also believed that the particles of the soil being more thoroughly exposed to the influence of the rains and the atmosphere, become thereby more completely decomposed and disintegrated, that thus what is in part a chemical, and in part a mechanical, amelioration takes place, and that certain chemical or mineral properties are by this process of disintegration, set free from the particles of earth in which they had been locked up, and are made available for future use. There is no actual addition or recruiting of the elements of fertility, received by the soil, except what are administered in the shape of manure, from lying fallow, but a further draft is made upon those which were already present, and they remain in the soil in a condition to be used by the next growing crop. On this point Liebeg says :

"Among the effects produced by time, particularly in the case of fallow, or that period during which a field remains at rest, science recognizes certain chemical actions, which proceed uninterruptedly by means of the influence exercised by the constituents of the atmosphere upon the surface of the solid crust of the earth. By the action of the carbonic acid and oxygen in the air, aided by moisture and by rain-water, the power of dissolving in water is given to certain constituents of rock, or of their debris, from which arable land is formed: these ingredients, in consequence of their solubility, become separated from the insoluble constituents."

"These chemical actions serve to explain the effects produced by the hand of time, which destroys human structures, and converts gradually the hardest rocks into dust. It is by their influence that certain ingredients of arable land become fit for assimilation by plants; and the object of the mechanical operations of the

farm is to obtain this result. Their action consists in accelerating the weathering or disintegration of the soil, and thus offers to a new generation of plants their necessary mineral constituents, in a form fit for reception. The celerity of the disintegration of a solid body must be in proportion to its surface; for the more points which we expose to the action of the destructive agencies, the more rapidly will their effects be produced."

In regard to the *modus operandi* of conducting the fallow, it is pretty generally conceded that it is preferable, especially if the soil be of a tenacious description, or infested with weeds of a troublesome character, to give the first ploughing in Autumn. By this course the soil will receive the benefit of the disintegrating influences of the winter atmosphere. The field should also be turned up with a deep furrow, in order to bring a portion of the subsoil to the air; and it is advisable, in the Fall, to plough into narrow ridges, deepening the dead-furrows, and opening cross-drains through all the low portions in much the same manner as if the field were in crop,—for if a portion of the field lies under water during Winter and Spring, much of the benefit of the Autumn ploughing will be lost, and operations will be retarded in Spring.

About the beginning of June, or as soon as the other work of the farm and the state of the ground will permit, it will be time to give the field the second ploughing. By giving this ploughing in good season, before the weeds have made much progress, the growth of the latter will be pretty well checked; and by proper subsequent cultivation, that desirable result, a clean field, will be obtained. But in order to do the work effectually, care must be given to the cultivation, that the implements are in proper order, the work not done in a slovenly manner, and no space containing the roots of weeds left unturned between the furrows.

It is usual to apply the manure with either the second or third ploughing; and in regard to this, it is very desirable that some more economical mode than that generally adopted, should come into use. The method in most common use in Canada is to throw the manure into large heaps in the barn-yards in Spring, where it undergoes a violent heat, and where it remains till it is convenient to carry it to the field, when it is drawn out and distributed in small heaps over the surface of the field, where it again remains till it is

convenient to scatter it and plough it under. By such a method there can be no doubt that much of the value of the manure is dissipated by the sun and rains, and much of it when ploughed in is dry, coarse, and nearly worthless. A slight improvement upon this plan, and which indeed is adopted by many of our better farmers, is in turning the heap in the barn-yard, before it undergoes too violent a heat, and if possible preventing the rain from washing away the valuable soluble properties, by either having the heap under cover or in such a situation that either the drainage will not escape, or that it may be received in tanks, and again used in dry weather to saturate the heap, or be otherwise rendered available. By the second turning the manure heap becomes of a more even quality for distribution over the field, and while the violent heat of a portion is prevented, the general decomposition of the whole is sooner obtained. A further improvement, although it involves some labor, is in covering the heap when first thrown up, with a few inches, or a foot depth of earth, from some mound, foundation of old fence, or bog, if there be such a thing on the farm. This will prevent the escape by evaporation of valuable properties, and on the subsequent turning, will become incorporated with the heap and add to its value. Then on drawing the manure out to the field, if it be immediately, or as soon as practicable, ploughed under, instead of remaining as is often the case for two or three weeks exposed to the weather, a further saving of its valuable properties is effected.

But having in these few common-place remarks drawn upon all our available space, we must defer further observation to a future occasion.

THE JOURNAL OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND. Vol. XIII. PART 2. 1852. London; JOHN MURRAY.

This volume contains the usual mass of valuable, practical, and theoretic information for the agriculturist. "Practice with science" is its appropriate motto; and never has there been an age of which this admirable conjunction was so peculiarly the characteristic. In arts—in manufactures—in commerce, practice and science have long been combined, each lending to

the other its light and aid. But in agriculture the earliest of all arts, science has been ignored by empiricism and tradition. Attachment to old methods, old laws and the economics of monopoly have combined to retard improvement. Fortunately, the spirit of the age, as well as the necessities of increasing wealth and population, all tend in the path of progress; so just as the agriculturist was beginning to learn that possibly, by the aid of new exertions, new machinery, and chemical discoveries, he could increase production, the old prop of protection on which he leant was removed, and the impetus of competition and independent exertion given to him in the application of his new discoveries.

That such publications as the journal now before us must tend materially to "speed the plough" cannot be doubted; and the only regret we have is, that it is published at a price so high as to be beyond the means of a large section of the farming class to whom its teachings would be invaluable. In this second part of the thirteenth volume, the "Farming of Cumberland" is continued. Cumberland is famous in many ways; its lakes are not better known for their variety and beauty, than is Cumberland lead celebrated as the best for the pencils which may sketch those fairy scenes. Few of our readers who enjoy the luxury of sea-coal fire require to be told how rich in this valuable mineral is this district, Whitehaven being sufficiently celebrated for the quality and quantity of its coal-fields. It may be pleasant, to learn, that if we receive their coal, they take Irish cattle. Cumberland has been from time immemorial a cattle-breeding country; and in addition to its home breeds, the writer informs us that it imports great numbers from Scotland, Ireland, and the Isle of Man. For such traffic with the North and North-East of Ireland it is conveniently situated, and possesses excellent seaport. Of the various breeds of horses, cattle, sheep, pigs, and poultry, peculiar to the country, and of their treatment, the reader will find accurate details in the Report. We have been particularly interested, and so, probably, will the general reader, with the following account of "The Shepherd's Dog:"—

Well might a popular writer say, "Without the shepherd's dog, the mountainous land in

England and Scotland would not be worth six-pence. It would require more hands to manage a flock of sheep, gather them from the hills, force them into houses and folds, and drive them to market, than the profits of the whole would be capable of maintaining." And though this may be true as regards the wild and headstrong sheep of the Scottish mountains, it is also correct as applied to our own; and most of the difficulties of gathering and driving will vanish in the presence of a really good dog. The sheep seem to know as if by instinct, before they have been many minutes under the charge of such a dog that all their efforts to break away are fruitless, let the flock be ever so wild and numerous, or the field of operation ever so rugged and unfavorable.

It is surprising to observe what cunning a dove of pure Herdwicks will sometimes exhibit in their endeavors to battle an ill-trained dog. While the driving or gathering ground is favorable to the dog, all goes on well enough; but no sooner do the wily creatures discover a suitable opportunity, than perhaps one or two break off on one side, and, while the dog attempts to head them, others steal away in different directions on the other side; while the dog attends to their mischief increases, and nearly the whole flock will disperse, to the utter discomfiture and amazement of the dog; but if at this juncture the tactics of a clever dog are brought to bear on the flock, in an astonishingly short period the whole of them will be subdued and brought into order, and may be driven without difficulty so long as the master-spirit is within call.

Some dogs have the faculty of discovering sheep when buried to a considerable depth under the snow, as happens occasionally. A dog possessed of this quality is of immediate value equal to the amount of the sheep he releases or marks. A single dog has been known to point out unerringly the locality of many scores of drifted sheep in a day, even when several of them were at a depth beyond the reach of a shepherd's snow-pole. In the great Martinmas snow storm of 1897 (by far the heaviest fall within the present century), the writer was personally engaged though very young, as-isting to search for and release about 400 sheep, being part of a flock of Herdwicks which had been turned out on the common from the fold late in the evening before the snow began to fall. The darkness prevented them from reaching their known heap; and the storm coming suddenly, and falling very heavily, the poor animals were surprised at a disadvantage, and nearly all were covered up in hollows, under wall, and other places where they had sought shelter. To add to their confusion the wind veered during the night, while the snow was falling, from south-east to north-west, and thus all chance of escape was cut off; for those the first part of the storm had left uncovered were drifted under a still greater depth by the enormous masses of loose snow whirled about by the wind, and blown in exactly the opposite direction to that of the first fall. After a fearful night of tempest, and of useless foreboding on the part of the family, at day break next morning not a sheep of the flock turned out was to be seen, for every one was drifted over, and none

could tell where a single sheep was to be found. All hands were put to work probing in the drifts with long poles, and here and there a few sheep were discovered, after much laborious exertion and dug out. An untutored sheep dog, not quite a year old, was one of the party, with three or four older dogs of the same kind. The older dogs took little notice of what was going on, but the young one began to be very curious about the proceedings, and amid his gambols among the snow, would every now and then return to the working party to peep into and sniff about the holes they made with their poles. In a little time he seemed to take still greater interest in the work, and went from hole to hole, examining and smelling at them as the poles were drawn out. He was purposely unnoticed, to see what the result would be, and to avoid diverting his attention. He remained looking intently into one of the holes after the men had gone some distance; and all at once a new light seemed to break in upon him, and he began to scratch the snow with all his might. This was just what was desired: and when he was seen to be in earnest the men returned and dug down through the drift for seven or eight feet, encouraging the anxious whelp, and deeper than their poles could reach, they found a cluster of five or six sheep huddled close together. When these were released, the dog barked and howled with delight and no doubt the owner and his assistants felt that the sagacious animal was in a fair way to lighten their labors, as well as to save much property which was in imminent risk. From that moment the dog was the principal and by far the most valuable actor. For a while he would insist on helping to scratch out the half-suffocated sheep; but as he got to understand the matter, he merely indicated by a few scratches the locality of the buried sheep, no matter how deep they were, and on he went to others, with all the importance of an old hand.

The dog being so anxious, and the peril of delay so great, no cessation of labor was indulged in till evening, when all were obliged to leave the exciting duty from sheer exhaustion and cold. The result of this, the first day's labor, was the releasing of over two hundred sheep living, and likely to live, and about a score smothered. The following day, by the exertions of the same young dog, several more were dug out, some living, but many dead; and few indeed were passed over without being marked by the young creature, whilst the older dogs stood listlessly by, though infinitely more accustomed to sheep, and trained to almost perfection in other duties. Day after day added to the numbers of both living and dead till finally all were found; but the loss amounted in this lot, and on the rest of the farm, to nearly two hundred sheep. The last living sheep discovered was on a new year's day. It had taken shelter in a hollow under a whim, and had remained in the small space of a five feet cave from the 18th of November, with nothing to eat but what it could nibble from the prickly lush; and when liberated on a bright frosty day, it appeared nearly or quite blind.

The dog above mentioned exhibited another trait of intelligence and calculation of a remark-

able kind. His master was a constant church-goer, and the parish church was more than a mile distant. By some singular process, the animal arrived at a true knowledge of the day when his master attended church, and of the hour, and almost minute of his leaving again; and was as punctual in going to meet his master about two-thirds of the way.

Another instance among many, of the sagacity of a Cumberland sheep-dog deserves to be put on record. A plot of low and level ground near Manchester Castle, called Hestholm Marsh, is usually covered twice in the day by the tide, and sheep were constantly depastured on it, with a field on a higher level to retire to on the rising of the tide; but the stupid animals, being fond of the salted grass, were sometimes surprised and impounded by the tide, and then the dog's services were requisite in the rescue. In a little time he learned to go down and clear the marsh of his own accord, as constantly as the tide flowed during daylight; and thus was the means of preventing all loss by the waters, so long as he was able to attend to his self-imposed duty.

There may be little remarkable in dogs executing duties occurring daily and at the same hour. Many dogs have learned to bring the cow's home at the regular milking hour, without special directions; and one well known by the writer, performed this service with great punctuality for many years, as well as hastening home from other work every day, to be present whilst an unruly bull was let out to water.

There is an old saying, and one not devoid of truth, that "the laziest shepherd invariably has the best dog;" but necessity is as powerful an agent in this case as indolence, for no shepherd can have better trained dogs than the one at Stockhew Hall, who has numbered four score years, and whose daily range few young men would willingly undertake. Another old man, a rheumatic cripple, almost unable to walk, and mounted on an ass from morning till night, has the sole care of a large stock farm; and, with the aid of his two dogs, can ride into the flock in any part of the fields, and lift a sheep before him on the ass and ride away with it.

REAPING MACHINES, NITRATE OF SODA, &c.

Amongst the other articles of importance in this volume is a "Report on the Exhibition and trial of implements at the Lewes meeting," in which the various defects or perfection of those several reaping machines, which have of late years attracted so much attention, are closely analysed, and fairly set forth. Nothing can exceed the admirable performance of these machines, each in its peculiar way. The comparative perfections are condensed in the Report. Hussy's machines are "cheap handy implements, which will be found to work well, if used only when corn is dry, and where it has little undergrowth of clover." The cutting principle of

the M'Cormick machines is reported as much improved, and as being "simple and efficient;" but to Bell's reaper, as to its mode of delivery, the meed is given of superiority over all others. Besides its power of cutting its way into the crop, and of laying the swathe to either side is highly in its favor. But its difficulty of steerage and awkwardness in turning, the writer conceives to be "unavoidable when the propelling power is placed behind the machine." With the concluding observation, our own ocular experience leads us entirely to agree:—

Finally, it may be stated that, though none of the reapers can yet be considered completely satisfactory, the experience gained during the past season will, doubtless, enable the manufacturers to turn out serviceable machines calculated to render real assistance to the farmer; and after a long and patient examination of the performances of this class of implements, the writer is convinced that no long time will elapse before the great bulk of both corn and hay crops in this country will be cut by machine.

An article on the sources and the supply of cubic saltpetre, salitre, or nitrate of soda, and its use in small quantities as a restorative to corn crops, by Mr. Pusey, is highly suggestive. The writer says:—

Last Spring finding that about ten acres of barley, sown very early—that is, in February, had suffered severely by frosts unusually sharp for the season, I determined to try the experiment of applying as a restorative some nitrate of soda, but to use it, as the land was in good order, in a much smaller dose than was ever given before, 12lbs per acre. It was accompanied with twice the quantity, 8lbs. of common salt, which does not act as a manure, at least on this land yet seems necessary for correcting the luxuriant vegetation caused by the nitrate. A long strip (perhaps half an acre) was left undressed on one side to serve as a test. Small as was the dose, it acted immediately, for the barley so treated soon recovered its color; and acted thoroughly for until harvest the barley stood half a foot higher than on the undressed portion. The result on threshing out was most satisfactory, for, while the undressed portion gave only 40 bushels, the remainder, though so gently treated, yielded 47 bushels per acre. The cost of the dressing was 6s. for the nitrate, 4d. for the salt; 6s. 4d. in all, the value of the seven bushels gained was 26s. and the profit, therefore, 300 per cent. Indeed, I might justly assume a yet larger profit, for, contrary to former experiments with nitrate, the nitrated corn was superior to unnitrated in quality also, to the amount of about 2s. per quarter, which would give a further profit of 10s. on the other forty bushels, on a total return of 36s. per acre, for an outlay of 6s. 4d., to say nothing of the straw, which might cover the trifling labor.

It will be admitted that this at least was no garden experiment, being a fair-sized trial upon a whole ten-acre field.

The result was beyond my own expectations; and not the least curious question on the action of the manure is the question, how so small a quantity of any salt could be spread equably, sown by hand it was, or by any machinery even, so as to act uniformly upon the entire crop. Of the quantity used the weight gives of course no distinct notion, but I find that 42lbs. weight of nitrate are not more than will three times fill a man's hat, and certainly it is marvellous that three hatfuls of any substance should increase so much and so regularly the corn upon a whole acre of land. Even the acre, however, does not present itself as a familiar measure to any but practical farmers. It will be useful, therefore, to take a further illustration. St. James's Park contains, I believe, 46 acres. If that entire space from Buckingham Palace to the Horse Guards, including on each side the Mall and the Budge-row, were cropped with barley, one small one-horse cart-load (17 cwt.) of nitrate would [under the circumstances of the experiment above described] increase the yield by 80 sacks, or eight cartloads of grain. I may be excused for dwelling on this disproportion of cause to effect, because even in agriculture, we are now so habituated to the wonders of science, that our minds become blunted, and, which is material, less ready to enlist those marvels practically in our own service. But if our fathers, at the opening of this century only had heard that, with one cart-load of a new powder, and two cartloads of salt to restrain its vigour, an effect could be produced which would have cost them certainly *four hundred* cartloads of dung, they would have been as much surprised as by learning that the journey from London to Oxford, instead of seven, would occupy little more than one hour. Evidently, then, we too in agriculture have found a new power of our own scarcely inferior to steam in mechanics; and though, like steam, it may cost us time to gain certainty in its use, we must no more shrink from testing its qualities than we would discard the service of fire or of wine, because those mighty stimulants also of body or mind become fatal, if applied in excess.

A letter on "Trunk Drainage;" a "Report on Innoculation for Pleuro-Pneumonia in Cattle;" and a very able prize essay on the "Neglect of Chemistry by Practical Farmers—their Causes and Remedies," by Edward T. Hemming, will be found to deserve close study. A large portion of the volume is occupied with tabulated results of analyses in agricultural chemistry of the highest importance, and which have involved vast labour and research. As a whole, this volume is one of great interest and value.

No tool should be put away while wet or dirty or out of repair.

EAST OXFORD FARMERS' ASSOCIATION.

At the last meeting of this Association, held at the Town Hall, on the 23rd ult., the following excellent address was delivered by Mr. Goodwin, of Woodstock:

MR. PRESIDENT AND GENTLEMEN:

It affords me much pleasure in responding to the invitation now given me, to offer a few remarks on the subject of Agriculture.

It would be presumptuous in me to attempt anything more than a simple exposition of some of the leading characteristics of the Science of Agriculture; as I have, for some years past, paid but little attention to the practical operations of farming. In regard to the importance of Agriculture, it is unnecessary for me to address you. An art on which nearly the whole human family, and thousands of domesticated animals constantly depend, ought to command the attention of the most exalted minds. The establishment of Agricultural associations, both provincial and local, and the liberal aid granted by the Legislature annually, are manifestations of the deep interest generally felt upon the subject throughout the Province; while individuals, both in public and private capacity, are endeavoring to assist and encourage the agriculturist in every possible manner. Nor is science less willing to render all the aid within her power to benefit our population [eighty per cent. of whom are employed in this most ancient and noble pursuit]. The application of Chemistry and Geology to Agriculture, as taught in the Normal School, and nobly patronized by the Governor General himself, must be a source of gratification to all employed in tilling the soil. With these few preliminary remarks, I shall, with your permission, proceed to the consideration of *Geology*, as connected with the pursuits of the Farmer, and afterwards to the *Improvements of the Soil*, by mechanical means, viz., *draining*. As the soil on which the general vegetation of the globe grows is the only source from which the inorganic food of plants can be derived, we are led to inquire into the nature and origin of soils. However much soils may differ in: their origin, their physical properties, their chemical constitution, and their agricultural capabilities,—they all possess the common character of containing a certain amount of organic matter. Oats and rye will grow upon land containing from 1 to 1½ per cent.; barley, where 2 or 3 per cent. is present; but good wheat soils contain generally from 4 to 8 per cent. of organic matter; and yet the presence of such substances is not alone sufficient to produce fertility. The earthy part of the soil, which, in general, does not constitute less than 96 per cent. in weight, consists principally of these ingredients:

1. Of silica, silicious sand or gravel.
2. Alumina—generally in the form of clay.
3. Lime, or carbonate of lime.

Pure, or agricultural clay, consists of about 60 of silica and 40 per cent. of alumina, with oxide of iron, for the most part chemically combined.—The strongest clay soils consists of pure clay, mixed with sand, from 5 to 15 per cent. Clay loam contains from 15 to 30 per cent. of fine

sand. Loamy soil consists of pure clay and from 30 to 60 per cent. of sand. A sandy loam contains from 60 to 90 of sand. A sandy soil contains no more than 10 per cent. of pure clay.—In each of the soils above described the siliceous sand may be separated by mechanical washing. But the above classification has reference only to the clay and sands, while we are fully aware that lime is an important constituent of soils.—We have therefore marly soils, in which the proportion of lime does not exceed 20 per cent.—Calcareous soil contain upwards of 20 per cent. of Lime. These are also denominated calcareous clays, calcareous loams or calcareous sands according to the quantity of clay and sand which are present in them. Lastly, vegetable moulds, which are of various kinds, contain from five to ten per cent. of organic matter. The method of determining the amount of vegetable matter, sand, or clay, for the purposes of classification, is to dry well a portion of soil and weigh it, then heat it to dull redness; the loss in weighing it again is the quantity of organic matter—chiefly vegetable, with a little water. After being burned, take 100 grains, let it be put into half a pint of water, with half a wine glass full of spirits of salts, and frequently stirred. The loss by this treatment will be the per centage of lime. A fresh portion of the soil may now be taken and washed, to determine the quantity of silicious sand it contains. If the sand, after washing, be supposed to contain lime, it may be separated as previously stated, by applying spirits of salts.—Having hastily glanced at the classification of soils from their chemical constituents, I shall now proceed briefly to consider their general origin. Over the greater part of this peninsula, as in Canada generally, the rocks are covered by accumulations of loose materials, chiefly of sands, gravels, and clays. This covering varies from one to two hundred feet, and the fertility of the different parts of the province must necessarily depend upon which of these layers may chance to lay uppermost. When naked rocks are present it may be observed that the actions of rains and frosts, together with the atmosphere, causes their surfaces to shiver off, and crumble down or wear away. Hence at the base of cliffs, loose matter collects and gradually forms a soil. The accumulations, of which I have alluded to as covering the rocks to various depths, consist of materials thus washed down or otherwise transported by water, winds, or by other geological means. Thus, the general conclusion may be fairly drawn that the various soils have been produced by the gradual decay, or crumbling of pre-existing rocks. It is therefore evident that wherever a soil rests upon the rock from which it has been derived, we may rationally expect it to partake more or less of the composition of that rock. Beneath the soil and the drifted materials on which it rests, we invariably find the solid rocks consisting of layers or beds of different thickness, resting one upon another and always maintaining the same relative position. These layers are denominated *strata*, hence such formations are called stratified rocks. Beneath these aqueous formations lie what are called the unstratified or igneous rocks, from their having been more or less in a melted

state. The stratified rocks are divided into the primary (the most ancient), the secondary, and the tertiary, which overlie both. Before proceeding to consider the peculiarities of the strata on which, and from which, the soil of this county, as well as that of the Western Province, rests, it may not prove uninteresting to enumerate briefly the various formations deposited in many parts of the Globe since the Silurian system was formed.

1. The *Tertiary Strata* which lies immediately below the drift is an extensive series of 2,000 feet deep, comprising vast accumulations of marine and fresh water deposits, as shells, sands, boulders, plants and remains of animals, both of extinct and existing species.

2. The *Second Strata*, the chalk or cretaceous group consists of a marine series of formations, including strata of limestone, sandstone, marls, and clays abounding in marine fossils, reaching to the depth of 1,000 feet.

3. The *Walden Formation* is a peculiar fresh water deposit of 900 feet deep. It contains beds of sandstone, clays, and limestone, almost wholly composed of fresh water snail—shells and minute crustacea, and is particularly characterised by the remains of peculiar aquatic reptiles.

3. The *Oolite formation* is a marine deposit of two thousand feet in depth, consisting of limestone and clay, which abound in marine shells, corals, fish, reptiles, and animals of the kangaroo or pouched order.

4. The *Lias formation* is a series of limestones, clays, shells and marls, of 700 feet, which contain marine shells and the remains of two genera of reptiles, the Ichthyosaurus and Plesiosaurus. The term 'Lias' is a contraction of 'layers.'

5. *Saliferous*, or *New Red Sandstone*, is a marine formation, consisting of marls and sandstones of a red colour. It is divided into upper and lower; latter contains red and white marls, also magnesian limestone. It is named 'Saliferous,' because it contains saline materials; thickness, 1700 feet.

6. The *Coal System* consists of shells, clays, ironstone, and limestones inter-spersed, with beds of coal to the depth of 5,700 feet.

7. The *old Red Sandstone* is a marine formation, containing red and green marls, limestones, sandstones, shells, corals; also, flagstones and shales. The colour is of a dull red—whence the name. It is 10,000 feet thick.

8. The *Silurian System*, upon which the soil of Western Canada rests, is a marine formation, consisting of limestones, shales, sandstones, slates, and flagstones, abounding in corals, shells of various kinds, with enclinites and trilobites. It extends to the depth of 7-170 feet. Such is a general description of the nature and descending order of the stratified rocks as they occur in Great Britain; but as these different formations have been deposited by the degradation of pre-existing rocks, it only remains for me to call your attention to the composition of the Granites, from which originally all soils were derived. The name Granite is given to rocks constituted of a mixture of three simple minerals—Quartz, Mica and Felspar, or Hornblend. QUARTZ is silica and Oxygen; FELSPAR is composed of aluminae

silica, potash, soda, lime, oxide of iron and water; Mica is composed of alumina, silica, potash, lime, magnesia, manganese and iron. The constituents of granite are decomposed principally by the carbonic acid contained in the atmosphere, as well as by the action of heat, cold and water. Hence the various stratified rocks previously described were originally formed and deposited. Now, since the mineral food of plants consists principally of potash, soda, lime, magnesia, oxide of iron, oxide of manganese, silica, sulphuric acid, and as these ingredients can only be supplied to vegetables in a state of solution, it is evident that any means which the farmer possesses to promote the decomposition of the soil, should, as far as practicable, be put into operation. There are three distinct methods of operation by which the soil may be improved. The one to which I propose drawing your attention at this time, is draining. I shall now, by your permission, endeavor briefly to state some of the benefits to be derived from the draining of land.

1st. It carries off all stagnant water, as well as the excess of rain that falls annually.

2nd. It allows rain water to filter slowly through the soil, and in so doing the various gases, such as ammonia and carbonic acid are retained by the earth, instead of being carried off with the water, injuriously washing away the solvent parts of the soil on the surface.

3rd. It arrests the ascent of water from the subsoil, and thus frees it from noxious substances, and preserves the surface from too much moisture.

4th. The descent of water causes a constant descent of fresh air through the soil, which experience has shown to be so valuable in promoting the growth of crops.

5th. When the soil is freed from the constant presence of water, it becomes drier, looser, and more friable, and consequently more easily worked.

6th. Draining is equivalent to a change of climate. In consequence of the drainage which has taken place in some parts of this county, crops of Indian corn have arrived at maturity full two weeks sooner than they formerly did, yielding 80 bushels of ears per acre.

7th. It is equivalent to deepening the soil. The roots of plants which have hitherto been confined almost entirely to the scanty depth of a few inches are now enabled to penetrate to the depth of the drains in search of food, and in so doing find a store of substances washed from the soil above, which have been accumulating for years in the subsoil.

8th. By drainage the crop will be greatly augmented. It may be safely stated that the two millions of acres of arable land in Canada would produce fifteen millions more than now if the roughly drained.

9th. Permit me to call your attention, before concluding, to a still greater benefit which would accrue to every member of the community, by the adoption of a skilful drainage throughout the country, viz: the general health of the inhabitants. It is an undeniable fact that fever and ague, which formed in some parts of Great Britain

nearly one half of the diseases of the population, have almost entirely disappeared since the introduction of draining, while at the same time the number of deaths have diminished nearly one-half. Apart, therefore, from pecuniary profit, a desire to promote the comfort of the entire community of a county or township should influence the possessors of the soil to introduce thorough draining. I am, however, conscious that the necessary expenditure on draining to advantage would fall too heavily on most, yet if half a dozen farmers would join in manufacturing their own TILES where the nature of the soil will permit, I cannot but think that the parties would be remunerated in the course of a few years. This last consideration, however, I beg most respectfully to refer to your better judgment.

Without detaining you further, I shall only express my humble and most ardent wish that your Society may long continue to be a blessing to the community, and a source of benefit and recreation to its members.

After a vote of thanks to Mr. Goodwin, the next meeting was appointed to be held at the Town Hall, on Tuesday, the 23rd of August, at five o'clock p.m.

Subject of discussion: *The Selection of Seed.*

It is desired that all the members will bring with them samples of their Fall Wheat.

(To the Editor of the Canadian Agriculturist.)

SIR,—If there is one thing of greater importance to the farmer than another, it is a careful attention in selecting good varieties of seed.

To know the goodness of seed, and its fitness for the purposes for which it is intended, constitute a part of the elements of the husbandman's philosophy. The seedsman therefore, is a valuable auxiliary, to the husbandman, not only as an individual, but as a class; upon his candour in his dealings is based his success, more especially if he possesses a taste for botanical pursuits.

A living illustration of what may be accomplished by a combination of these qualities, rare we admit, is found in the Author of the *Vegetable products of Scotland*, whose distinguished success is worthy of all admiration, I mean CHARLES LAWSON, Esq., of Edinburgh. The volume alluded to is a descriptive account of the admirable collection of vegetable products of Scotland exhibited by Peter Lawson & Son in London, and under subsequent arrangements with the British Government, deposited in the Museum of the Royal Botanic Garden of Kew.

Your agricultural readers will be gratified to learn that these gentlemen have in preparation a collection on a smaller scale, intended for presentation to the Bureau of Agriculture at Quebec.

Believing that the following description of the establishment and nurseries of this house, although published some time ago in this country, would be new and interesting to many of your readers, I have much pleasure in transmitting it.

I am Sir,
Your obedient servant
A. KIRKWOOD.

Glasgow, Scotland, June 10th, 1853.

PUBLIC NURSERIES.

OF MESSRS. PETER LAWSON AND SON, SEEDSMEN TO THE HIGHLAND AND AGRICULTURAL SOCIETY, EDINBURGH.

As now enlarged and improved by the skill and enterprise of its conductors, the establishment of Peter Lawson & Son has deservedly acquired the reputation of being the most extensive and the best arranged seminary, or seed store, in Europe. We speak from personal and particular observation, having had opportunities of inspecting many of the principal seminaria on the Continent, and most of those in Britain: and, unquestionably, there are none which can approach it, either as to convenience or completeness. Its warehouse accommodation is most extensive, comprising, with the shop and counting-rooms, a superficies of no less than 22 776 feet, or the total length of the shops, offices, and warehouses, extends to within 61 feet of a quarter of a mile. To the building, which stands alone, and forms a conspicuous architectural object in the picturesque quarter where it is placed, there are three entrances: one underneath, in the Cowgate; a second in Victoria Street; while the principal access is from George IV. Bridge. The floor entered from the bridge contains the shop, fitted up in the most substantial and elegant manner, with solid oak. On this floor, also, are a suite of counting-rooms and a well selected library, which includes all the most valuable and rare works on agriculture and horticulture. To this department of the establishment, the proprietors, with exemplary liberality, grant ready access to all who may desire it for the purpose of reference and consultation. At the back of this floor, a sample-room has been constructed, with a glass roof, in which is contained a series of cases for holding samples of the different species of seeds. This apartment is glazed in front and sides also, so that visitors, while engaged in examining seeds, have the advantage of viewing the specimens both under a vertical and a lateral light. This erection is also furnished with a glazed case, heated by gas, and partially inclosed with colored glass, for testing the germination of seed before supplying the public. It will be remembered that, some years ago, a question was raised as to which of the solar rays possessed the power of eliciting the action of germination in seeds; and that various experiments having been made toward the solution of this interesting question, it was discovered, by Mr. Hunt, that the violet ray alone possesses the chemical principle requisite for developing the vitality of the embryo. This, then, is the mode which the Messrs. Lawson invariably employ in "proving" their seeds.

Round the apartments at the back of the shop extends a gallery, in which are arranged implements of every description used in horticulture. On the floor beneath is an extensive range of warehouses, in which are kept the garden seeds: and immediately below, extends a similar range of warehouses, appropriated to the different varieties of turnip seed. Underneath is a range of warehouses for grass seeds, arranged according to a method strictly systematic. On the lowest floor are stored all sorts of heavy seeds, as grain, beans, pease, tares, clover, &c. In addition to this storehouse, or seminary, which to use a Plautinian phrase, presents a perfect "nusticus mundus," or rustic world, three entire arches of Geo. IV. Bridge are commodiously fitted up for purposes in connection with the increasing business of this extensive establishment, including carpenter's workshops, room for mending and repairing sacks, stables, &c. The total height of this range of warehouses is 60 feet, and, with the addition of the museum over the shop, 108 feet. The property is the Messrs. Lawsons' freehold; and the building, which being insulated, is the more noticeable by strangers, was erected from the designs of Mr. John Henderson, architect,

and forms a conspicuous and appropriate termination to Victoria street, formerly the West Bow of historic note.

Having thus given a rough sketch of this establishment, which in strict phrase, constitutes the *Seminarium* or seed department of the firm, we then proceed to present a slight notice of their *Plantarium* ornamental grounds. As previously stated, those formerly in their possession, in various parts of the suburbs, are no longer occupied, it being deemed most advisable to devote to the purposes of a plantarium one continuous and extensive tract, which is situated on the Granton Road, and known as the Golden Acres. In the selection of this ground, and the arrangement of its different compartments, Mr. Lawson has exhibited his well known practical and scientific skill and judgment. The most important feature in the nursery is the Aboretum, the first, we believe, formed in Scotland, arranged according to the Natural System, and comprising upwards of 1200 named Hardy Trees and Shrubs 1000 *Ericacæ*, and nearly as many *Rosacæ*. In acknowledgment of the manner in which the novel undertaking was carried out, the Highland and Agricultural Society of Scotland, in 1845, awarded Messrs. Leslie a handsome piece of plate, bearing a suitable inscription. The splendid collection of Coniferous Plants also lends its attractions to the Golden Acres, rich, in no ordinary degree, in all the more rare and valuable varieties of the genus *Pinus*, including fine specimens of the *P. Austriaca*, introduced into this country by the firm, and also of the *P. Cambra*, which latter Messrs. L. was the first to plant generally throughout Scotland, single specimens having previously only existed in localities widely scattered.

The collection of fruit and forest trees is ample and diversified, and presents all the appearance of fine healthy plants. The grounds are rich, likewise in ornamental trees and shrubs, as well as herbaceous and hedge plants, and florists' flowers. There are no fewer than 800 varieties of roses on stools, and a large collection of named grasses, native and exotic. Here, further, may be seen a thriving plantation of the celebrated tussock grass (*dactylis capillosa*), which produced ripe seed last season. The green-houses are four in number, and contain a most extensive and varied assortment of tender plants. There are, also, propagating houses and pits, which are well filled. Complete and admirable, indeed, are the arrangements which pervade the entire establishment, rendering it a finished model or pattern of its kinds. Each of the several departments of the nursery is under the superintendance of a foreman, just as if each were a separate and distinct establishment, requiring peculiar culture and attention. Our conclusions as to the extensive stock and vast variety are not deduced from the printed catalogues, issued by the firm, but from personal scrutiny; and we feel fully justified in stating we regard it as unusually rich in trees, shrubs, and plants in general demand. To cultivate others beyond the extent requisite for filling up botanical or systematic arrangements, would be to evince a total ignorance of existing circumstances, and to betray a want of professional knowledge, which those who carefully examine this extensive establishment certainly cannot lay to the charge of its skilful and spirited proprietors.

The Highland and Agricultural Society of Scotland, in 1827, conferred on Mr. Charles Lawson, the then sole representative of the firm, the appointment of their seedsman and nurseryman; and, soon after, the Royal English Agricultural Society conferred a somewhat similar honor—that of seedsman and nurseryman to that body in Scotland. The senior partner honorary member of several Foreign Agricultural Institutions, and is also conservator of the museum of the

Highland and Agricultural Society of Scotland; of which department he was originator, having formed the nucleus of the collection in connection with his seed establishment in Hunter Square. An arrangement was subsequently entered into between him and the Society, by which the collection was transferred to that body and considerably augmented. The connection of this firm with the society must have proved of great advantage, in a *practical* point of view.

The most important services, perhaps, which the firm have rendered to the agriculturists of this country, are the introduction to general notice of the Black Fir of Austria, the Italian Ryegrass, and Dele's Hybrid Turnip—the first, an important addition to our forest trees—the second, equally so as to our tillage lands—and the last, one of the most valuable roots to the stock farmer.

Messrs. Lawson have published some works of acknowledged practical utility to the farmer and gardener, the principal of which is the "Agriculturist's Manual," which presents a familiar description of the agricultural plants cultivated in Europe, and includes practical observations respecting those suited to the climate of Great Britain. Another highly valuable publication is their "Treatise on the Cultivated Grasses, and other Herbage and Forage Plants." With a characteristic spirit of progress, Messrs. Lawson have lately added to their establishment a private printing press, and have now, we understand, one or two in the course of preparation.

The skill and spirit evinced by this firm have gone by no means unnoticed. Unusual, indeed, in number, are the works of honour which they have received from the Highland and Agricultural Society in the form of plate money, medals &c. Among the principal of these may be here commemorated the following, which form a strikingly suitable conclusion to this rather rambling and imperfect sketch of an establishment, an adequate account of which, in its different departments, would demand a moderately-sized volume—a volume, too, which, to all travellers, so to say, through the Vegetable Kingdom, would afford a serviceable guide, and present features of no ordinary interest:—

- 1.—For a collection of Living Grasses, including many rare species.
- 2.—For a Report on the Formation of Arboreta.
- 3.—For the most successful Experiment on Saving the Seeds of Natural Grasses, and for Laying down Lawns to Permanent Pasture.
- 4.—For the Introduction of Pinus Astracæ.
- 5.—For the Introduction of Italian Ryegrass, and a report thereon.
- 6.—For the Importation of Seeds of Pinus Sylvestris from the Native Forests of the Continent.
- 7.—For raising the greatest quantity of Plants of the Larch from Seed imported from the Tyrol.
- 7.—For raising the best variety of Perennial Ryegrass Seed and the best White Globe Turnip Seed.
- 9.—For a collection of Roots and Seeds, distinguished for its extent, variety, and arrangement, exhibited at Edinburgh in 1827.
- 10.—For a similar collection, exhibited at Glasgow, in 1827.
- 11.—For a similar collection, do. Kelso, in 1828.
- 12.—do. do. do. do. , 1831.
- 13.—do. do. do. do. at Glasgow, 1844.
- 14.—do. do. do. do. Inverness, 1846.
- 15.—do. do. do. do. and a collection of Coniferous Plants, exhibited at Aberdeen, in 1847. the Gold Medal of the Society was awarded.
- 16.—For an Essay on the Potato, accompanied by specimens of 75 varieties.

For the eight enumerated, were conferred valuable pieces of plate, with suitable inscriptions; for the

others, gold and silver medals. Besides the above, the Royal Caledonian Horticultural and other societies have voted medals and other awards to the Messrs Lawson.

Among the ancient Romans, a gladiator who had frequently come off victorious, was entitled, "Plurimum palmatum gladiator," i.e., literally, "a gladiator of very many palms." So, semblably, may a member of this experimenting and spirited firm be, in a double sense, and even more appropriately styled, "Plurimum palmatum seminitor," a nurseryman or sower of very many palms. In fine, it may truly be said of it, "Palmam qui meruit tulit," or it merits every palm it wears; and numerous though they be, we trust it will not rest content, or recline on its palms, but go on to gain yet more and more.

SALE OF SHORT-HORNED CATTLE.

[The following account of the Sale and Exportation of Durham Stock, taken from the *Mark Lane Express* of June 6th, will be interesting to many of our readers.]—*Editor.*

On Wednesday last, the sale of a portion of the celebrated herd of short-horns belonging to Henry Harvey Combe, Esq., Cobham Park, Surrey, were submitted for sale, by auction, by Mr. Stratford, at the Bazaar, Baker-street, London, attracting a very numerous and highly respectable company of noblemen and gentlemen; amongst whom were several of the leading agriculturists and breeders of the United Kingdom, as well as from Canada and the United States. The prices realized fully prove the high estimation in which the stock were held, 20 cows, heifers, and heifer-calves were sold for £1,105 5s., averaging upwards of £60 each; the highest price was for a yearling heifer, deservedly called *Beauty*, which was purchased by Noel J. Becar, Esq., of New York, U. S., for 150 gs. This gentleman has recently purchased several other very superior specimens from some of our most celebrated herds on behalf of himself and Col. L. G. Morris, the president of the New York State Agricultural Society. Several other cows and heifers realised high prices, as *Violet*, sold to Dr. S. Majoribanks, Esq., Bushey Grove, for 135 gs.; also *Dairymaid*, at 91 gs. Mr. Le Marchant bought four lots to go to Canada, *Madrigal*, at 80 gs., *Lady Betty*, at 71 gs., *Belle*, 69 gs., *Faithful*, 65 gs. Amongst the other purchasers were the Earl of Macclesfield, Sir J. V. Shelly, Bart., M.P., H. Hall, C. Tanqueray, J. H. Vivian, and J. Whittonstall, Esqrs. After the sale of the above, a few young bulls, from the far-famed herd of J. S. Tanqueray, Esq., of Hendon, Middlesex, were also offered.—The highest price was for *Liberator*, under one year old, 80 gs. Another bull calf, *Friar Bolco*, nine months old, sold to Mr. Champion for 63 gs. The former was bought for Mr. Kelly, near Philadelphia, United States. The others brought good prices. The total amount of the sale for thirty lots was £1,617.

EXPORT OF SHORT-HORNED CATTLE, SHEEP, &c., TO AMERICA.

Seldom has it fallen to our lot to chronicle so valuable a cargo as left this port (Liverpool) on Saturday last in the *Crown*, for Philadelphia;

more particularly as relating to the agricultural interest. This may be inferred when we mention, that in the ship mentioned were sent out fifty head of the choicest specimens of short-horned cattle which could be bought in old England: several of them being purchased at high prices which may appear incredible; as probably no ship was ever freighted with anything like so valuable a cargo of this description. Twenty-four head of cattle and a quantity of sheep, the property of R. A. Alexander, Esq., Airdrie House, Scotland, were sent in her, destined for his estate in Woodford County, Kentucky, United States. Some estimate may be formed of the high spirit and enterprise of this gentleman, when we mention that for two animals alone, a two-years old heifer and a yearling bull, named the *Duchess of Athol*, and *2nd Duke of Athol*, bred in this country by Charles Townley, Esq., M.P., Townley Hall, near Burnley, he gave the large price of £525. To Mr. Strafford, of London, who had the superintendance of Mr. Alexander's cattle, we are indebted for several interesting particulars relating to the stock, and who informed us that these two animals were the produce of one cow—*Duchess 54th*—bought at the sale of the celebrated herd of Short-horns of the late Thomas Bates, Esq., at Kirkcubrighton, and bred since that gentleman's decease. We also noticed in the cargo some very fine young bulls, bought from the justly-famed herd of F. H. Fawkes, Esq., *Fanley Hall*, as well as some very choice cows and heifers from the well-known herds of Messrs. Bell, Bolden, Cattley, Combe, Downs, Fuller, Lowndes, Tanqueray, Wiley, &c. The sheep, principally of the Cotswold or New Oxford breed, were from the crack flocks of Mr. W. Garne, of Aldsworth, and Mr. John Gillett, of Minster Lovell. The other portion of the stock consisted of 10 short-horned bulls and 15 cows and heifers of the same breed, selected at very high prices for a large importing company, also from Kentucky, the agents for which, Messrs. Dudley, Garrard, and Van Metre, have succeeded, after much time and trouble, in the purchase of a splendid lot of cattle and sheep from the best herds and flocks in the kingdom. In evidence of this we may cite those of the Earl Ducie, Lords Burlington and Feversham, Messrs. Ambler, Beasley, Bell, Booth, Emmerson, Fawkes, Hall, Hopper, Maynard, Smith, Tanqueray, and Townley. They also had several fine specimens of the Cotswold sheep from the flocks of Mr. W. Garne and Mr. Lane, of Broadfield; some pure Leicesters from prime Southdowns from the unrivalled stock of Mr. Jonas Webb of Babraham; besides a valuable stallion of the Yorkshire or coach horse breed; we can only hope that they may have the good fortune to get them out safe and well, and reap the reward which such spirited exertions deserve. We believe for the freight alone, exclusive of the food and fittings requisite for such a voyage, that about £1,200 was paid, while the cost of the stock, with expenses incurred, must have exceeded £5,000.

The grain of wheat contains phosphate of lime, while the straw, which was not intended for our food, contains carbonate of lime only.

DANCING PIGS.

To the Editor of the *Agriculturist* :

SIR,—Being a constant reader of your paper and seeing how few in number your correspondents are compared with your circulation, I am induced to contribute my mite; not that I have anything instructive to communicate, but as anything relating to the habits, oddities, or propensities of our domestic animals must be amusing to many of your readers, and I trust not an unsuitable subject for your pages, I will relate what I was an eye witness to in my boyish days, of the effects of music upon the swinish multitude.

It will be known to most of your readers that when Buonaparte was banished to St. Helena and peace proclaimed, great rejoicing took place all over England. In the little village of Harworth, near Bawtry, York, had its fête, a tea party for the adults and a dance on the green for the juveniles, with a *band of music* of course, this took place in a paddock, in close proximity to a pigstye, where a sow happened to be that evening "in the straw;" and the next morning it was discovered that she had pig'd a litter of dancing pigs! You may laugh. "But truth is strange, and far more strange than fiction." I do not mean to say that they danced reels or jigs, but suppose it was the polka (polka?) they danced; however, scores of people came to Tommy Sidwell's pigs dance.

Well, some time afterwards as I was playing the flute after my day's work was done, my brother came to me and said, that a favourite sow was about pigging, and asked me to sit up with him and see that she did not overlay her pigs. I took my flute and the lantern, and we seated ourselves beside her; I to beguile time played away as before, when my brother remarked that perhaps if I did so, the pigs would be like Tommy Sidwell's.

Now some people said it was not the music, but putting rings in the sows nose during pregnancy, that had effected her offspring. However when the first pig dropped we fancied that it gave a rather unusual shiver, or jerk, and my brother begged me to cease playing: I laughed at the idea and said, that one pig would not dance well alone without a partner, and I continued playing and joking until all were pig'd; and however strange it may seem, them pigs were never still night or day for months! Even when lying asleep beside the sow they had a sort of convulsive twitching motion, and on any noise however discordant, such as rattling on the door with the dung fork, they would be all over the sty in a minute; their movements were chiefly backwards and spasmodic, not reeling or staggering, more like St. Vitus's dance than anything I can compare them to; it did not appear to affect their thriving, though I often thought their constant action must deteriorate them; as they seemed to have to hold hard on to the teats when sucking, to prevent their retrograde motion; it left them as they grew up, and none of their descendants were similarly affected, nor any that I have ever seen, heard or read of, save these; and whether it was the ringing of the sow, or the music that caused it, I leave you and your

readers to judge and comment upon it as you think fit; and with apology for my long tale, (I never like to curtail my pigs tails, but to see them curl.)

I subscribe myself,

Yours truly,

ORPHEUS PIG-TALE.

Otonabee, May 1853.

HORTICULTURE.

THE GARDEN.

The older we grow, the fonder we become of our garden. The time was, "in our hot youth, when George IV. was King," that we haunted the stream, and loved to drop the lure, softly as thistle down, on the dimpled pool. But the love of the "gentle craft" subsides somewhat with the advance of years, and seems disposed to pass away imperceptibly into a pleasure of the imagination. With the return of the sweet vernal season, the piscatory passion, indeed, duly revives, and we betake ourselves strenuously to repair our tackle, and to study "Stoddard." But were it not that then, too, Piscator junior returns home from college, and excites the weaker flame in the paternal bosom by the armor of his angling enthusiasm, and succeeds in hurrying us away to Lochard, or some cherished upland stream, we doubt exceedingly if whether the most inviting, and streams of the most perfect tint, and reports the most propitious regarding the inclinations of the finny tribe, would withdraw us from our glowing polyantheses and bright-eyed auricular.—We feel indeed, that our affections are gradually concentrating themselves on our garden; and we have satisfied ourselves, on the high grounds of philosophy, that it is wise that they should do so.

Cicero gives it as his opinion, that the superintendence of a garden is an employment appropriate to mature years; and although the Tuscan sage has left his theory undeveloped, it is not difficult to see how the pursuits and pleasure of horticulture should be in unison with a disciplined understanding and a calm breast. Perfect wisdom placed the perfect man in a garden, to dress and keep it. The place and the duty must have been divinely congenial with the exercises of an undepraved heart. The love of man's primeval calling seems yet to linger fondly in the bosom of the exiled race. The first pleasure of children is to gather fresh flowers from the daisy mead, or to play their little hands in the allotted patch of garden-ground. "Heaven lies about us in our infancy"—some faint visionary gleam from Eden seems yet to rest on the infant soul, and, with the dawn of reason, the first voice of childhood seems to say that Paradise should have been its home, and horticulture its proper vocation. It is sadly true, no doubt, that adverse lessons in gardening have come to us from Paradise—promptings of an apostate kind from beyond the Euphrates. Boyhood and the succeeding period of immature manhood, with their tumultuary passions and noisy pleasures, show themselves alien to the tranquil delights of the garden.—But "years that bring the philosophic

mind," and that chasten humanity with their mildening influence, conduct the belated pilgrim back to the garden, and teach him there to find pleasures serene and unalloyed.—*Blackwood's Magazine.*

THE LEAF ROLLERS.

WITHIN a few years the cultivators of fruit in this vicinity have had their attention attracted to a new enemy, which is highly injurious to the young pear trees. It is an insect in the shape of a worm of the color of the leaf, which about the middle of May commences its depredations on the young leaf, sometimes beginning in the centre, perforating it, and rapidly extending its ravages in every direction and increasing in size and voracity from day to day. The holes thus made in the leaf soon reach a diameter of an inch or more, and where two or three are attached to one leaf, it soon disappears. The foliage of the tree is thus rendered unsightly, and the tree, of course, must be more or less injured. Sometimes, although rarely, this insect attacks the young and tender fruit, which of course is at once destroyed. This insect is more numerous this season than usual, and if some means are not discovered to reduce the number, in a few years it may become as great a pest to the pear trees as the canker worm is to the apple trees. It has been suggested that the application of whale oil soap by means of a syringe would be beneficial—at any rate it is worth the trial.

We have consulted Dr. Harris's valuable work on Insects, in relation to the character and habits of this worm, and we find it is some rascal that is so often found rolling up the extremities of the young and tender leaves of pear trees and occasionally apple trees, and belongs to the family of "leaf rollers." The following is the description as given by Dr. Harris:

"There are many caterpillars that curl up the edges of the leaves of plants into little cylindrical rolls, open at each end, and fastened together with bands or threads of silk. The rolls serve at once for the habitations and the food of the insects; and to the latter Linnaeus gave the name of Tortrices, derived from a Latin word signifying to curl or twist. All caterpillars now put in this tribe are not leaf-rollers. Some of them live in leaf and flower buds, and fasten the leaves together so that the bud cannot open, while they devour the tender substance within. Some live in a kind of tent formed of several leaves, drawn together and secured with silken threads. Others are found in the tender shoots or under the bark of plants. A few bore into young fruits, which they cause to ripen and fall prematurely. A still smaller number of kinds live on the leaves of plants, exposed to view, and without any kind of covering over them. Most of these insects, when disturbed, let themselves down by threads, like the Geometers. Very few of them make cocoons; the greater number transforming within the rolled leaves, or in the other situations wherein they usually dwell. They are furnished with sixteen legs, and their bodies are nearly or quite naked. Many of their chrysalids have two rows of minute prickles across each of the rings of the hind body,

by the help of which they push themselves half way out of their habitations, when the included moths are about to come forth.

The moths of this tribe are mostly of small size, very few of them expanding more than one inch. They carry their wings like a steep roof over their bodies when they are at rest. Their fore wings are very much curved, and are very broad at the shoulders, and hence these insects are called *Platyonides*, that is, broad shoulders, by the French naturalists. These wings are generally very prettily banded and spotted, and are sometimes ornamented with brilliant metallic spots. The hind wings are plain, and of a uniform dusky or grayish color, and the inner edge is folded like a fan against the side of the body. Their antennae are naked or threadlike. Their feelers, two in number, are broad, of moderate length, or project like a short beak in front of the head, and are never curved upwards. The spiral tongue is mostly short and sometimes invisible. The body is rather short and thick, and the legs are also much larger in proportion than in *Deltamoths*. These little moths fly only in the evening and remain at rest during the day upon or near the plants inhabited by their caterpillars.—They are most abundant in midsummer, but certain species appear in the spring or autumn. The habits of the Tortricæ, in all their states, are not yet known well enough to enable us to group the insects together under family names.”—*Boston Journal*.

THINNING OUT VEGETABLES.

It was Cobbett, we think, who remarked, when speaking of the ill-effect of thick planting, that one cucumber plant in a hill would bear more fruit than two, two more than four and so on, and if there were fifty plants in a hill, the whole of them put together bear no cucumbers at all! The truth is, there is a much greater loss in allowing vegetables to stand thickly together, than most are at all aware of. To insure a crop plenty of seed is sown, with the intention of thinning at the proper time; but when thinning day arrives, it requires rather more nerve to commit what appears to be the merciless havoc of tearing out nine-tenths of the beautifully growing young plants, than most people possess. A crop of beets has just commenced forming handsome bulbs, precisely one inch asunder in the row; certainly something of the surgeon's temper is needed to lay nine-tenths of these withering in the sun—cucumbers are just beginning to throw out their yellow blossoms, and it seems to some a hard matter to tear out three-fourths of the dozen now growing in the hill. It must however be done—all the surplus plants in a bed of beets or turneps, or a hill of cucumbers, squashes or melons, are to be regarded as so many positive, downright weeds, obstructing the growth of the rest and yielding but little or nothing themselves. If our crops are to be crowded and stunted, we would quite as willingly have it done with pig-weeds and fox-tail, as to have them smothered and the soil exhausted by seeds of their own species.

Many years ago, when the cultivation of the rutabaga was first introduced, we could invari-

ably distinguish the crops of the novice, by the thickly growing, half-developed bulbs. “O! but they had thinned them to a very great extent—they had cut out three-fourths, and reduced them from one inch to four inches in distance, whereas none should ever stand nearer than a foot to each other, if the soil possesses any thing like a fair degree of fertility; but this looked too much like indiscriminate slaughter, and could not be thought of for a moment.—The finest specimens of garden products, which we see exhibited at horticultural shows, are those which have been well thinned and allowed every opportunity to develop themselves freely; and the same is true of ornamental plants, where a full, rich, and luxuriant growth and bloom, are obtained through the adoption of the same principle.—*Country Gentleman*.

EARLY TOMATOES.

There is probably no fruit which is at present more generally and deservedly esteemed, than the Tomato. Its medicinal virtues are more universally recognised by practitioners, and a very few gardens are destitute of it, though owing to various causes not necessary to mention, success in cultivating it is rarely attained. The soil best adapted to this fruit, where it is required early in the season, is a fine dry sand. A shovelful of old well rotted manure in each hill, will be sufficient and the plants after they come up, require only to be hoed and weeded, to insure an abundant crop. Sticks to keep the fruit from coming in contact with the dirt, may be supplied, or a few bushes placed around the plants, will be a good protection. On very rich land, the vines possess great vigor, but the maturation of the fruit is retarded, and is less rapid and healthful. For sauce, pies and pickles, as well as for a variety of other uses, the tomato is unsurpassed by any vegetable with which we are acquainted. The yield is very large, consequently a full supply for domestic purposes and uses, may be obtained from a few hills. The yellow Tomato is generally preferred to the red, though both are good. Preference is perhaps, in this, a matter of mere taste, after all. In the vicinity of large markets, as much clear profit is frequently realized from a few rods of land, cultivated in early tomatoes, as from many an hundred acre farm, which produces only the ordinary kinds of vegetables and grains.

The *Revue Horticole* contains some startling facts as to the effect of charcoal on flowers. Roses of a faded color.—The experimentalist covered the earth in the pot with pulverized charcoal, about half an inch deep. In a few days the flower bloomed a beautiful and lively color. He took away the charcoal, and put fresh earth. Next spring the flowers were again pale and discolored. He applied charcoal as before, and the deep, rosy red color was again established. Violets and petunias, the writer also found, had their colors intensified by the application of the charcoal. Mr. Cuthill, of Camberwell, a great advocate of the peat charcoal, proves it to be useful as a manure, either alone, mixed, or saturated with drainage. Mr. Burnell testifies to its use on strawberries, cabbages, and peas and beans.

THE LILY.

The following remarks from *Brech's Book of Flowers*, on several varieties of the Lily tribe, will not be devoid of interest and value to some of our readers.

The root of the Lily, or what is generally denominated the root, is a scaly bulb, the scales being laid over each other in an imbricate form, inclosing the germ, or bud. The bulb is not a root, strictly speaking, but a bud containing the embryo of the future plant. The roots are thrown out from the bottom of these bulbs, or buds, and, unlike the fibres of the Tulip, are perennial; and on their strength depends, in a great measure, the vigor of the future plant. Bulbs, long kept out of ground, are very much weakened, and a number of years will elapse before they recover strength to bloom in great perfection. After the flowering of the Lily in August, the foliage of many species decays; the bulbs then are in the most perfect state for transplanting. If they are permitted to remain long after this, and the foliage begins to start again, they will not bloom so strong the next year. The Lily should not be moved any oftener than is necessary. It is not like the Tulip and many other bulbs, which are not injured, but rather improved, by taking them up annually after flowering. The Lily will do well in any well prepared border or bed. To have them in perfection, the soil should be excavated eighteen inches deep, and filled with a compost of peat, or swamp muck, undecayed manure, or leaf mold, a foot deep; the remaining six inches may be peat and rich mould. The bulbs of strong-growing Lillies may be planted from four to five inches deep; and weaker sorts from three to four inches. In the borders, three bulbs, of the stronger-growing varieties, are enough for one group, or five, of the weaker sorts. They have a pleasing effect when planted in masses; or they may be planted in beds. Most of the species are quite hardy; but they will all be benefited, and bloom more strongly, provided they receive a covering of rotten manure before winter sets in.

Lilium Candidum.—The Old White Lily.—This species has always been considered the emblem of whiteness, and is too well known to require any description. A mass of White Lilies is always beheld with admiration, and they perfume the air with their delicious fragrance. The White Lily is, therefore, indispensable, and should be found in every garden. It sometimes attains the height of three or four feet, and is in flower about the first of July.

Lilium Mariagon.—Turk's Cap Lily.—There are many varieties of this species; some with pure white, others with purple, spotted, or variegated flowers. The petals are very much reflexed, giving them the appearance of caps. In strong soil, and the roots well established, the stems are sometimes thrown up from three to five feet, producing twenty or thirty flowers, flowering in July.

Lilium Tigrinum.—Tiger-spotted Lily.—A very common, strong-growing species; but very showy, having fine, reflexed, orange flowers, with

black spots. It has the peculiarity of producing small bulbs in the axil of the leaves. It grows from four to six feet high, flowering in August, and is a suitable plant for the shrubbery as well as the border. It is very easily propagated, as all the axil bulbs, when planted in the ground, soon produce flowering plants.

Lilium Japonicum.—The Japan Lily.—This magnificent species of Lily, and its varieties, have been introduced but a few years, and, until lately, treated as green-house plants. They are found to be as hardy as our common Lilies, and will, therefore, prove a great acquisition to the garden. * * * These bulbs have commanded extravagant prices; consequently are found in but few collections. As the price is now greatly reduced, we hope soon to see them more common.

All our native Lilies are beautiful, and very much improved by cultivation. While we are bringing together, from the ends of the earth, the treasures of Flora, let not our own be neglected. These may be taken from our fields and meadows, when in bloom, by carefully taking them up with a ball of earth, and in a few years will richly repay the trouble.

Lilium Superbum.—Superb Lily.—One of the most magnificent of our native plants; not common in the vicinity of Boston, but in many parts of the State and in New York (and Ohio) in abundance. Stem erect, straight, from three to six feet high, bearing a large pyramid of orange-colored flowers, not infrequently numberless, when cultivated, thirty or forty. The flowers are much reflexed. They are found in many varieties, with flowers from a yellow to an orange scarlet; in bloom in July.

PILLAR ROSES.

To ornament a garden, there is no kind of shrub, however beautiful, so well adapted to various forms as the rose. It can be used as a dwarf to fill the smallest beds, as a bush to plant among evergreens, and as a tall standard to form avenues of roses on each side of a noble walk. In the centre of larger circular beds it is often planted in groups, with half standards around, and dwarfs in the front thus forming an amphitheatre of roses, which, when in bloom, is one of the finest sights in the floral garden; again, as climbers, to ornament the amateur's villa, or the more humble abode of the cottager; also to plant against bare walls and palings, forming drooping shrubs, when budded on high standards, waving gracefully their boughs, laden with fragrance and bloom, in the warm days of summer and autumn; what can be more desirable? All these forms are certainly very pleasing, and however elegant their appearance, still none show off the beauty and grandeur of the rose so effectively as training it upwards to a pillar. In the gardens of the gentry of this country, pillars for roses are frequently made of iron rods, with arches of the same, or small chains hung loosely from pillar to pillar, so as to form beautiful festoons of those lovely flowers. These arches and chain festoons of roses on each side a terrace walk have a splendid effect. Sometimes the arch is thrown over the walk only, and the roses trained accord-

ingly. Those persons who may feel disposed to erect iron pillars can easily ascertain the cost of any respectable ironmonger. They may either be made of a single upright rod, or with four rods at about nine inches distant from each other, thus forming a square pillar, fastened with cross pieces of strong wire. The rose may be planted in the centre, and the branches as they grow be trained to each corner rod, and the small shoots arranged between them. Bring all the shoots to the outside, and do not allow any to twine round the rods, but tie them to each with bar matting or small string, as they can then be easily loosened from the pillars whenever they require painting—an operation that must not be neglected, as the iron would soon rust, and thereby injure the plants and be very unsightly. Previous to planting the roses the soil should be rendered rich, so that they may grow quickly, flower freely, and cover the pillars, arches and festoons, as soon as possible. This rather modern and pleasing mode of culture cannot be too strongly recommended, and for that purpose, if expense be an object, we would suggest that poles, either of oak, ash, hazel, or larch, may be used by fixing them firmly in the ground in a triangular shape, three feet apart at the base, the ends being brought together at the top, and tied with some strong tarred cord or stout copper wire, and then three roses of the same variety, or of different kinds, according to taste, to be planted, one at the foot of each pole, and trained, so that when in full foliage and blossom, a handsome tall pyramid will become apparent, forming of the beauteous and odoriferous "Queen of Flowers."—*Mark Lane Express.*

SOCIAL INFLUENCE OF GARDENING.

"Gardening is a civilizing and improving occupation in itself; its influences are all beneficial; it usually makes people more industrious and more amiable. Persuade a careless, indolent man, to take an interest in his garden, and his reformation has begun. Let an idle woman honestly watch over her flower beds and she will naturally become more active. There is always work to be done in a garden, some little job to be added to yesterday's task without which it is incomplete; books may be closed with a mark where one left off, needlework may be thrown aside and resumed again; a sketch may be left half finished, a piece of music half practised; even attention to household matters may relax in some measure for a while; but regularity and method are constantly required, are absolutely indispensable, to the well being of a garden. The occupation itself is so engaging, that one commences readily, and the interest increases so naturally, that no great share of perseverance is needed to continue the employment, and thus labor becomes a pleasure, and the dangerous habit of idleness is checked. Of all faults of character there is not one, perhaps, depending so entirely upon habit as indolence; and nowhere can one learn a lesson of order and diligence more prettily and more pleasantly than from a flower garden.

But another common instance of the good effect of gardening may be mentioned:—it naturally inclines one to be open-handed. The bountiful

returns which are bestowed, year after year, upon our little labors, shame us into liberality. Among all the misers who have lived on earth probably few have been gardeners. Some cross-grain churl may set out, perhaps with a determination to be niggardly with the fruits and flowers of his portion; but gradually his feelings soften, his views change, and before he has housed the fruits of many summers he sees that these good things are but the free gifts of Providence to himself, and he learns at last that it is a pleasure, as well as well as a duty, to give. This head of cabbage shall be sent to a poor neighbour; that basket of refreshing fruit is reserved for the sick; he has pretty nose-gays for his female friends; he has apples or peaches for little people; nay, perhaps in the course of years he at length achieves the highest act of generosity—he bestows on some friendly rival a portion of his rarest seed, a shoot from his most precious root! Such deeds are done by gardeners.—*Miss Cooper's "Rural Hours."*

CLOTH COVERING FOR HOT-BEDS.

R. G. Pardee states, in the *Rural New Yorker*, that he has used cloth as a substitute for glass in hot-beds; and although it will not hasten the growth of plants as much, he thinks it has some advantages. It does not burn up the tender plants like glass, if left on the bed in a clear day. It preserves the atmosphere and soil in a comparatively moist state. The plants are stronger and healthier, and grow, when transplanted, without a sensible check. The cloth is prepared as follows:—Take white cotton cloth of a close texture, stretch and nail it on frames of any size you wish; take 2 oz. of lime water, 4 oz. of linseed oil, 1 oz. white of eggs, 2 oz. yolk of eggs. Mix the oil and lime water with a very gentle fire heat; beat the eggs well separately, and mix well with the former. Spread this mixture with a paint brush on the cotton cloth, allowing each coat to dry before applying another, until they become water-proof.

PINCHING off the tips of the most luxuriant shoots with the thumb and finger causes many plants to grow stocky and become covered with dense foliage and flowers.—A little attention soon makes the operator expert in this process, which is far superior to using the knife in any way.

A CURE FOR DAMP.—An architectural friend remarks to us that a wall on a wet foundation may be kept dry by sawing out a horizontal joint of mortar, and pinning in a double course of slates and cement. This must be completed in lengths of about two feet at a time, and the capillary action through the bricks will be entirely prevented.—*Gardeners' Chronicle.*

DOUGHNUTS.—Three pounds of flour, a quarter of a pound of butter, one pound of sugar, four eggs, one gill of yeast, one teaspoonful of rose-water, milk enough to form a soft dough. Stand it away to rise; when light roll it out very lightly; cut it into diamonds, or any shape you choose, and drop them into a pot of boiling lard. Sift sugar over them when cool.—*National Cook Book.*

MISCELLANEOUS.

SEVENTY YEARS OF AN EPICURE'S LIFE.

Suppose Talleyrand, when entering on the tenth spring of his extraordinary career, had been placed on an eminence, say the top of Primrose Hill, and had had exhibited before his infantine eyes the enormous quantity of food his then insignificant person would destroy before he attained his seventy-first year:—First, he would believe it must be a delusion; then, secondly, he would inquire where the money could come from to purchase so much luxurious extravagance? But here I shall leave the pecuniary expenses on one side, which a man of wealth can easily surmount when required. So now for the extraordinary fact. Imagine, on the top of the above-mentioned hill, a rushlight of a boy, just entering his tenth year, surrounded with the recherche provision and delicacies claimed by his rank and wealth, taking merely the medium consumption of his daily meals. By closely calculating, he would be surrounded and gazed at by the following number of quadrupeds, birds, fishes, &c.:—By no less than 30 oxen, 200 sheep, 100 calves, 200 lambs, 50 pigs; in poultry, 1,200 fowls, 300 turkeys, 150 geese, 400 ducklings, 263 pigeons, 1,400 partridges, pheasants and grouse; 600 woodcocks and snipes; 600 wild ducks, widgeon and teal; 450 plovers, rufes and reevas; 800 quails, ortolans and dotterels, and a few guillemots and other foreign birds; also 500 hares and rabbits, 40 deer, 120 Guinea fowl, 10 peacocks, and 360 wild fowl. In the way of fish, 120 turbot, 140 salmon, 120 cod, 260 trout, 400 mackerel, 300 whittings, 800 soles and slips, 400 flounders, 400 red mullet, 200 eels, 150 haddocks, 400 herrings, 5,000 smelts, and some hundred thousand of those delicious silvery whitebait, besides a few hundred species of fresh-water fishes. In shell-fish, 20 turtles, 30,000 oysters, 1,500 lobsters or crabs, 300,000 prawns, shrimps, sardines, and anchovies. In the way of fruit, about 500lb of grapes, 360lb of pine-apples, 600 peaches, 1,400 apricots, 240 melons, and some hundred thousand plums, greengages, apples, pears, and some millions of cherries, strawberries, raspberries, currants, mulberries, and an abundance of other small fruit, viz., walnuts, chestnuts, dry figs, and plums. In vegetables of all kinds, 5,475 pounds weight, and about 2,431lb of butter, 684lb of cheese, 21,000 eggs, 500 ditto plovers'. Of bread, 4½ tons, half a ton of salt and pepper, near 2½ tons of sugar; and, if he had happened to be a covetous boy, he could have formed a fortification or moat round the said hill, with the liquids he would have to partake of to facilitate the digestion of the above-named provisions, which would amount to no less than 10,816½ gallons, which may be taken as below:—49 hogsheads of wine, 1,368¾ gallons of beer, 584 gallons of spirits, 312 do. liqueur, 2,394¾ gallons of coffee, cocoa, tea, &c., and 304 gallons of milk, 2,736 gallons of water. The following is the medium scale of the regular meals of the day, from which I have taken my basis, and in sixty years it amounts to no less than 59 tons, 5 cwt. 1 quarter, 20¾lb weight of meat, farinaceous food, vegetables, liquids, &c., out of which I

have named in detail the probable delicacies that would be selected by an epicure through life. But observe that I did not count the first ten years of his life, at the beginning of which he lived upon pap, bread and milk, &c., also a little meat, the expense of which I add to the age from ten to twenty, as no one can really be called an epicure before that age; it will thus make the expenses more equal as regards the calculation. The following is the list of what I consider his daily meals:—Breakfast—Three-quarters of a pint of coffee, four ounces of bread, one ounce of butter, two eggs, or four ounces of meat, or four ounces of fish. Lunch—Two ounces of bread, two ounces of meat, or poultry, or game, two ounces of vegetables, and half a pint of beer or a glass of wine. Dinner—Half a pint of soup, a quarter of a pound of fish, half a pound of meat, a quarter of a pound of poultry, a quarter of a pound of savoury dishes or game, two ounces of vegetables, two ounces of bread, two ounces of pastry or roasts, half an ounce of cheese, a quarter of a pound of fruit, one pint of wine, one glass of liqueur, one cup of coffee or tea; at night, one glass of spirits and water. Now that I have given these important details, perhaps you will give me some little credit for my exactness and severity respecting the attention which ought to be daily paid to the indispensable and useful art of cookery by our middle classes.—*Soyer's Modern Housewife, latest edition.*

LIFE IN CITIES.

It is not to be denied that the evils are enormous. If towns give us the highest view of man's range of moral attainment, so do they open up the deepest abysses of human degradation.—There is no reason to suppose that the intensity of moral evil in cities is less than it ever was, although the limits and influence of practical Christianity may be continually widening. Evil can and does acquire concentrated strength, as well as good. In modern times there have been very great external changes; the work of the scavenger, the painter, and the policeman, by which evil has been not so much removed as placed out of sight. We have not only whitened the sepulchre, but encrusted it with marble, and not a few ostentatious inscriptions; but it still contains the rottenness and the dead man's bones. Two sets of circumstances produce the evils of towns, those which may be called moral and those which are physical. Crowding develops not only the intellect, but the passions, so as to render vice, where it exists, early, contagious, and malignant, and therefore to demand moral correctives of proportionate force. But into this all important subject the purpose in hand does not lead us. It requires only a reference to certain physical causes, which are continually operating upon the health, and through the health upon the morals, of all who live in towns. The majority of those persons who subsist, whether as artizans or as laborers, by the receipt of wages, are in many respects more favorably placed for the highest ends of life than that uneasy, struggling, shop-keeping class which seems so much above them. They are free to live far less in show and more in reality. They are in constant

contact with those rough stubborn facts of nature which, under their hands are continually becoming smooth, and orderly, and beautiful. The work which they produce, or the services which they render, may be for a class too languidly luxurious to appreciate their worth; but the honest toil is not the less moral and bracing. The poor weaver, in the midst of his privations, sees the rich velvet spread out beneath his hands, not without a feeling of pride. The mason, the brick layer, the carpenter, must have similar thoughts when on the one leisure evening they stroll through those long lines of sumptuous palaces which are the creations of their industry. These and all other obscure workers, whose lives are not spent in the receipt and computation of money, but in tough, obstinate conflict with difficulties, can never be forsaken by that sense of dignity and self respect, which are part of nature's wages for all real toil. The existence of such men in all cases might, and in some cases does, exemplify that ideal of "plain living and high thinking" which the poet could only see in the past. We have it amongst us, though the cases are few; science and poetry and thought making noble and beautiful this common working life.—*Lalor's Money and Morals.*

PREPARATION OF FOOD FOR HOGS.

It is a general opinion and believed to be founded on correct observation, that the food given to hogs should be slightly soured, in order to produce the greatest possible effect in improving their condition. In corroboration of this opinion, in Germany and some other parts of Europe, horses are fed on bread that has been fermented so as to be a little soured, and it is said to be more economical than feeding them with grain.—Bread which is brought by the process of fermentation very near to the point of acidity, and that in general use amongst our German population, quite to that point, is well known to be more wholesome and much more nutritious than unleavened bread. Hence it is not unreasonable to suppose that all farinaceous substances fed to animals would be more economically and beneficially applied by being first slightly fermented. In order more effectually to accomplish this object in preparing food for hogs, two tubs should be procured of such size as would be adapted to the number to be fed, in which to prepare their food; these should be used to feed from, alternately; the materials in one would be undergoing the necessary preparation, while feeding from the other. The weather being generally cool while hogs are fattening, the process of fermenting progresses slowly and if it is very cold, it is entirely suspended, unless artificial means are resorted to, to keep it up. Pieces of stale bread, that are no longer fit for family use, and which find their way into the swill tub, are uniformly found to put the whole contents into a state of fermentation, if suffered to remain for a few hours. This has suggested the opinion that a small quantity of yeast which is a cheap article, might with advantage be added to the contents of the tub containing the food for swine, in order to more quickly and thoroughly bring it into a complete state of fermentation and advance

it to slight acidity before it is fed. This addition need not often be made, provided the tub was replenished with food before it was quite emptied of its fermented contents, and in this way it could be kept up during the feeding season. Corn or other grain that has been steamed, boiled, or well soaked, is very susceptible of the influences of yeast. Starch makers and distillers use it in order to prepare the grain, so that they can extract their respective articles of manufacture from it with more facility, and in greater quantities; and it appears reasonable to suppose the stomachs of animals would have their labor abridged, and would be enabled to extract a greater quantity of nutriment from a given quantity of grain or vegetable matter thus prepared, than when it is fed to them in the usual way.

The stages of fermentation are the saccharine, the vinous, the acetous, and the putrefactive; the first is exhibited in malting of barley, which is rendered sweet by it; the second is shown in the working of cider or beer; the third is noticed in the souring of bread, and in the formation of vinegar, and the fourth is discovered in the decomposition of bodies generally. In the preparation of food for hogs, it is believed it should advance to the third stage but not pass through it, for after it enters the fourth and last stage of fermentation, it would be very prejudicial to the health of animals, and could not contribute to their nourishment in any way whatever.—*Farmers' Cabinet.*

SUSCEPTIBILITY OF ANIMALS TO ATMOSPHERIC CHANGES.

In the common sensations of life we perceive a distinction according as the exciting cause is agreeable or otherwise, whether it presents itself as pleasure or dislike, bodily strength or weakness, activity or fatigue, warm or cold, by pressure or tension of the atmosphere, &c. By these combinations of sensations all animals, in which they are strongly developed, are enabled to anticipate atmospherical changes before the most delicate instruments give any indication of them and in a minor degree the same is traceable in persons of great nervous susceptibility. In the animal world it extends not only to creatures of the land and of the air, but also to those which inhabit the water.

The actinæ throw out their feelers and expand themselves when a continuance of fine weather is to be expected, but withdraw and contract themselves, even in a room, when a change is impending. The muscles, before the approach of storm, spin several new threads to secure their hold on the rocks; and leeches, rise to the surface of the water before rain. Spiders enlarge their webs during fine weather, but spin only short threads; work seldom, or hide themselves in corners, during rain. Many beetles, by their active flight and humming sound, give tokens of the marrow's brightness. Before rain bees remain either in their hives or in the neighborhood of them; and ants convey deep into their cells the pupæ which they expose to the sun in fine weather.

The leeches rise anxiously to the surface of the water before a storm, and hence in Germany they

are called weather fish, and are kept in glasses, where by their uneasy movements they denote a change twenty-four hours in advance, and from the same cause many fish forsake the sea for the rivers; the groundling is roused into activity; the silurus leaves the deep water; and the eels become lively. If the lightning strikes the water the perch sickens and dies; the snake and the slow worm are restless before a storm; toads leave their concealment before rain; ducks are busily active, and swallows fly lower.

Before a storm breaks forth many birds, such as the crossbill and plover, are uneasy, and show themselves less, and while many species of water-fowl hurry for shelter to the shore, the petrel, as if rejoicing in the coming conflict of the elements, dashes forth and defies its power. If the atmosphere be lowering in the morning, pigeons feed rapidly and return to their cots; and the hare hides itself, but the mole comes to the surface of the ground, and the squirrel seeks its nest and shuts its entrance. This susceptibility of atmospherical change influences also materially the natural economy of some animals; the wild rabbit, for instance, which feed chiefly in the evening or at night, comes forth at noon-day, if the weather portends rain, and loses its natural timidity in its eagerness to procure food.—*Thompson's Passions of Animals.*

ON THE ARTIFICIAL PRODUCTION OF FISH IN OUR RIVERS.

We give the following very interesting account of the artificial production of fish, from the *Farmer's Magazine*. The subject is attracting much interest abroad, and will doubtless be practically tested here.

Not unconnected with the Agriculture of the country, and certainly not uninteresting to the rural improver, are the wonderful discoveries just brought to bear on the artificial production of fish in our rivers. The whole subject seems to open out a source of profit to the speculator, of interest to the naturalist, and of the increase of nation's food. The capture of salmon—brought now to perfection so great, that our rivers are about denuded of that prince of fishes—ceases to be either skillful or surprising before the schemes in operation for breeding that fish. Not only has it been tested by the stocking of the French rivers and streams of the Vosges, the Moselle, the Upper and Lower Rhine, but the spawn has been successfully transported to New Zealand.

A recent number of the Journal of the Highland and Agricultural Society of Scotland attributes the discovery of the plan to Mr. John Shaw, of Drumlanrig, so far back as 1833, and further proved by the Rev. D. S. Williamson, ten years afterwards. But the scientific world seems to have been still earlier at work; for, in 1764, Professor Jacobi, of Berlin, discovered that the roe of fish was fecundated after the ejection by the female; and more that the roe and milt extracted even from dead fishes possessed the vital power, and even when dead two or three days that this power is not lost. The Professor also mentions how fish may be thus introduced into new districts, and even carried to other countries.

During the course of last summer, a small pamphlet, on the artificial production of fish was published by Reeve & Co., which called particular attention to the French adoption of the joint discoveries of the German professor and the Scottish gardener, in filling the French streams and rivers with millions of fish of the most valuable kind.

Mr. Boccus last year undertook the arduous task of transporting fecundated trout spawn to New Zealand. Gravel was placed in large iron boxes, with a supply of river water, in order to effect the necessary change; for in water totally stagnant the fish will not be produced. Owing to the warmth of the tropical atmosphere, in the journey the young were produced before the ordinary time. The usual period varies from 70 to 100 days, according to temperature; but in this case we believe Mr. Boccus found them produced in about 42 days. The effect of a stream was obtained by constant dropping from a tank above the iron box; the water in which was, we believe, purified by the valisneria.

The originators of the French practice were two fishermen of the names of Gehin and Remy, of La Bresce, who, finding the fish fail in their streams, began to collect the spawn and apply the milt themselves, which they deposited in boxes or baskets full of holes, and placed them in situations of safety in running streams. A French paper says, "Applying this operation, the year afterwards, to a great number of fish, they obtained several thousand trout; and, in a year or two more, the numbers had literally increased to millions."

The French government considered the matter of sufficient importance to take it up, and these two fishermen were taken into its pay, and made to apply the principle to the streams of the districts we have mentioned. The same paper goes on to say; "They have done so with the most singular success; rivers and lakes, in which there were no fish, now literally teem with them."

The plan is to be further encouraged. A commission of savans is appointed to superintend the process. Salmon, perch, tench, and even lobsters are to be domesticated—so far at least as being bred and reared, out of the reach of their numerous enemies.

Perhaps no animal will multiply so fast as the fish. The tenches produces 35,000 eggs, the mackerel 546,000, the cod fish 1,357,000. The herring produces also vast numbers, and, if only 2,000 of any one of these came to perfection, there would be in the second year, 12,000,000, in third 2,000,000,000. To protect only, therefore, is to ensure the production of millions of fishes; but how any fish now happens to escape their enemies, natural and artificial, seems positively more wonderful than their powers of production.

The breeders of fish artificially in this country are Mr. Boccus, Mr. Gurney, of Caithlton, and Mr. Young, of Lochshin. What should hinder the plan being tried by all the landed proprietors near the sides of all the rivers in this and the sister kingdom? and especially why not try to introduce the salmon into rivers where it has not yet been found? Mr. Shaw appears certainly to have been the first to show the par and the smolt to be only stages of the salmon; and to prove that by the construction of side ponds,

with a small stream running over them, with sufficient water to keep them covered, but not to be too deep, so as to favour the development of the spawn with as much rapidity as possible, the work will be done. The small fish will thus be preserved from their larger enemies until they have an opportunity of shifting better for themselves, and vast supplies will be afforded to the sea, to return again, either to the same spot, or most certainly to the same river in another year. The grisle, or young salmon of from $2\frac{1}{2}$ to 3 lbs. weight, has been sent to market, the spawn from which they have come having only been deposited in the preceding October or November, three months of this to be allowed for hatching—and often a longer period. A grisle weighing 6 lbs. in the month of February after spawning, has, in its return from the sea in September, weighed 13 lbs; and, according to Jessie, a salmon fry of April will in June weigh 4 lbs., and in August 6 lbs.

Taking the rapid growth, the immense powers of reproduction, and the command which the artificial production seems to have upon the fish, we hardly know a subject of greater national importance than the encouragement of these invaluable experiments—if so they can now be called, after success so abundant.

We would strongly urge the thorough investigation of the subject, and the construction of breeding-ponds near the heads of our principal rivers, properly secured. The experiment has interest in itself enough to repay the trouble—for expense there seems to be but little—and, if Jacob is right, almost every purchaser of a male and female salmon has the power of putting the process into operation. Might not the Royal Agricultural Society of England investigate this subject with profit and advantage both to landlord and tenant?

LIFE IN PHILADELPHIA.

Some person on a tour from Davenport, Iowa, to the City of Brotherly Love, writes the following interesting letter to the Davenport *Gazette*, giving a condensed view of mercantile life, so far as he has gained information:—

Philadelphia, March 27, 1853.

Dear Sir: Here am I in the city of "Brotherly Love;" and notwithstanding they frequently get up a riot here, and more frequently cut one another's throats, the mass of the citizens appear to be quite as orderly and intelligent as the citizens of Davenport. But it is evident that the wealthy portion of the population, as well as the majority of the middle classes, consider their principal mission on earth to be to dress fine and promenade before each other, in order to exhibit their good looks and the merchandize they carry on their backs, in the shape of silks, satins, velvets, broadcloths and various articles of silver, gold and stone ware. I have taken considerable trouble in collecting statistical information, respecting the actions of, and the manner in which these people live; their ability to keep their families, and the preparations they are making for old age, &c. I have ascertained that the children of the wealthy are most generally brought up in extravagance and idleness, that they

receive but little instruction that tends to their future usefulness, and the example of the parents of a majority of the families is rather a discouragement than an advantage to their offspring. The children are taught to consider that music, dancing and dressing, according to the fashion of the day, are the most essential portion of their education; the consequence is, that the third generation run through with their grandfathers' estate; that is, provided their fathers did not spend it all before them; and I now find the fourth and fifth generations, of once wealthy families, boating oysters from the bay, and stitching broadcloth for their now more wealthy neighbors, who are descended from honest hard-tisted blacksmiths and bricklayers. It may not be uninteresting to you to know how the numerous class, the slopkeepers—big and little—work their way through the world. Dress and extravagance are the support of many of this class,—they eat, they drink, they dress and die as they began, with a stock of goods purchased on time, and renewed from year to year throughout their lives. But, you may say, are there not a few of this numerous class, who surround with their neat fancy shops one hundred squares of that great city, who better their condition by their business? Yes, there are a few, and but a few. I have, after much inquiry, ascertained that in the wholesale department seventeen out of each hundred fail without paying their debts; that twenty one out of one hundred fail, but pay their debts; that thirty-eight out of one hundred are able to keep their families and square with the world, but nothing more; nineteen out of one hundred retire, and are classed with the upper ten; three out of one hundred are classed with the one hundred thousand and upwards; two out of one hundred class with the half million and upwards. In the retail department twenty-two in one hundred fail; eighteen in a hundred, after paying rent, cannot, with every exertion and strict economy, procure a sufficiency of proper food, but subsist by depriving themselves of certain articles, such as butter, fruit, groceries, &c.; nineteen in a hundred are enabled to keep their families respectably and pay their debts; for ten in one hundred dress extravagantly, visit the watering places, and live up to their income; seventeen in one hundred leave a stock of goods paid for, and a home for their children; nine in a hundred retire with the upper ten; and one in a hundred rates with the half million and upwards.—Yours, &c., A. C. F.

IMPORTANCE OF STRAW.—Twenty tons of straw will, by littering and foddering well-fed cattle, make at least 100 tons of dung. Good crops of wheat, barley, and oats respectively may yield 20, 18, and 25 cwt. of straw per acre. But of course the produce is exceedingly variable on the same soils in different seasons, and on different soils in the same season.

LIQUID MANURE.—A writer in the *Rural New Yorker* states that in Scotland it has been ascertained that the quantity of liquid voided by one cow daily, is $2\frac{1}{2}$ gallons, or about 450 gallons in six months; but if fed upon turnips, one cow will give a gallon of urine for every twelve pounds of turnips consumed.

HINTS ABOUT FURNITURE.

The prevailing evil of the present day is extravagance. I know very well that the old are too prone to preach about modern degeneracy, whether they have cause or not; but, laugh as we may at the sage advice of our fathers, it is too plain that our present expensive habits are productive of much domestic unhappiness, and injurious to public prosperity. Our wealthy people copy all the foolish and extravagant caprices of European fashion, without considering that we have not their laws of inheritance among us; and that our frequent changes of policy render property far more precarious here than in the Old World. However, it is not to the rich I would speak. They have undoubted right to spend their thousands as they please; and, if they spend them ridiculously, it is consoling to reflect that they must, in some way or other, benefit the poorer classes. People of moderate fortunes have likewise an unquestioned right to dispose of their hundreds as they please; but I would ask, Is it wise to risk your happiness in a foolish attempt to keep up with the opulent? Of what use is the effort which takes so much of your time, and all of your income? Nay, if an unexpected change in affairs should deprive you of a few yearly hundreds, you will find your expenses have exceeded your income; thus the foundation of an accumulating debt will be laid, and your family will have formed habits but poorly calculated to save you from the threatening ruin. Not one valuable friend will be gained by living beyond your means, and old age will be left to comparative, if not utter, poverty.

There is nothing in which the extravagance of the present day strikes me so forcibly as the manner in which our young people of moderate fortune furnish their houses.

A few weeks since, I called upon a farmer's daughter, who had lately married a young physician of moderate talents, and destitute of fortune. Her father had given her, at her marriage, all he ever expected to give her, viz., \$2,000. Yet the lower part of her house was furnished with as much splendor as we usually find among the wealthiest. The whole two thousand dollars had been expended upon Brussel's carpets, alabaster vases, mahogany chairs and marble tables. I afterwards learned that the more useful household utensils had been forgotten; and that, a few weeks after her wedding, she was actually obliged to apply to her husband for money to purchase baskets, iron spoons, clothes lines, &c., and her husband, made irritable by the want of money, pettishly demanded why she had bought so many things they did not want.

Did the Doctor gain any patients, or she a single friend, by offering their visitor water in richly cut glass tumblers, or serving them with costly damask napkins, instead of plain soft towels? No; their foolish vanity made them less happy, and no more respectable.

Had the young lady been content with Kidderminster carpets, and tasteful vases of her own making, she might have put one thousand dollars at interest; and, had she obtained six per cent., it would have clothed her as well as the

wife of any man, who depends merely upon his own industry, ought to be clothed. This would have saved much domestic dispute; for, after all, human nature is human nature, and a wife is not better beloved—because she teases for money.—*Mrs. Child.*

AUSTRALIA A LAND OF CONTRARIES.

If there be any land on the face of the earth, which to an Englishman's eyes must appear a land of contraries, as compared with his own country, Australia is surely that land. It is our literal antipodes. When it is day with them, it is night with us, and when we are all hard at work, they are "in the arms of Murphy." When they have their longest days, we have our shortest; and when it is summer with them, it is winter with us. Their Mad-day is in autumn; and while our trees are budding, theirs are in the scar and yellow leaf. They begin to wear their summer dresses in October, and commence putting on top coats and pea-jackets in June.

Their Christmas is in summer; and when mosquitoes are flying about, and the sun's heat is severe, the Yule-log, as may be easily imagined is somewhat superfluous; and to dance Sir Roger de Coverly at Christmas, with the thermometer standing at 95 in the shade—think of that, shade of Christmas! Without clear frost, Christmas in England is nothing; but Christmas with mosquitoes and hot winds! "Snap-dragon" in the dog-days! hot, spiced claret in the height of summer!

The climates, winds and seasons in Australia, are all reversed. The North wind does not blow cold, as with us, but hot like the sirocco. The south wind—

The sweet South,
That breathes upon a bank of violets,
Stealing and giving odor,

in Australia brings rain, sleet and hail. The sun courses over head in the North, and not in the South; in the North are the tropics, in the South are the polar regions. Australian poets have to reverse their tropes and instead of singing of—

Old January wrapped well
In many veeds to keep the cold away,
they sing in the language of an Australian bard—
When hot December's sultry breeze
Scatec stirs a leaf on yonder trees!

Soils, streams, vegetables and animals are equally puzzling in Australia. The richest soils are often found on the tops of the hills. The valleys are cold, and the hill tops warm. Rivers flow from the neighbourhood of the coast into the interior, where they become lost. Trees don't shed their leaves, but only their bark; and most of them in Australia afford no shade. The cherries grow with their stones outside. The birds don't sing, the dogs don't bark, the bees don't sting, the flowers don't smell. The mole (*ornithoryncus*) is a fish and the kangaroo carries its young in a nest attached to its body. Australian swans are black, and Australian eagles are white. Cuckoos coo in the night, the owl hoots in the day, and the Australian jackass is a bird! But above all things, the working people in Australia are not poor! That is perhaps the most crowning and satisfactory contrariety of all.—*English Paper.*

WOOD GAS.

The city of Wilmington, North Carolina, is now, for its size, the cheapest lighted city in the United States. The whole apparatus, including mains, gasometer, &c., cost but \$18,900. This includes their transportation from Philadelphia, with, also, the pay and passage of workmen. By reference to Ure's Chemical Dictionary, a standard work, it will be found a ton of coal or thereabouts yields about 10,000 cubic feet of gas. This is after eight hours' distillation from the best selected coal. By actual experiments it has been found that a cord of wood will produce 92,000 cubical feet of gas. It will be perceived at once this renders wood gas much cheaper. Besides, it is a well ascertained fact, that wood-oils in the production of light are 7 to 3 in favor of ligneous oils over coal. One reason that they have been so little used is, that they require to be distilled from wood previous to use; but this difficulty, it is said, has been obviated by a simple and cheap apparatus, invented and patented by Dr. McConnell. This invention places the use of gas within the reach of all rural villages, and will render every one, who chooses to be so, *independent of the gas companies*, for by its means they can manufacture their own gas, at a much cheaper rate than it can now be supplied by any company chartered within the United States. This gas has not the offensive smell of that produced by coal, and can be passed directly from the retort through the washer or condenser to the gasometer without further purification.

This discovery promises to open a new field of commerce; the vast amount of pine wood in Lower Virginia and North Carolina, now considered of no value, will be brought into market for the purpose of manufacturing gas, and the charcoal left after destructive distillation will pay the whole expense for manufacturing. Wood can be purchased in North Carolina, and delivered at Wilmington, or in Pimlico Sound, for one dollar per cord; the transportation, &c., would not bring the cost up beyond four dollars. Wood, at five dollars per cord, yields 92,000 cubic feet of gas; coal, at six dollars per ton, only 10,000 cubic feet. An apparatus for manufacturing wood gas could be put up for one-seventh the cost of that for manufacturing coal gas. It is estimated that the city of New York might be lighted for one dollar a thousand feet, and yield a handsome profit to the manufacturers; whereas the city now pays three dollars per thousand feet. We understand that a company has been projected in this city, by W. D. Porter, Esq., a son of Commodore Porter, for profitable employment of the patent.—Persons desirous of acquiring information upon the subject, may procure it by applying to him at his residence, No. 264 Tenth street, or at the office of Edmund J. Porter, No. 6, City Hall place. *New York Evening Post.*

HOW DO PLANTS MIX?

Some remarks which appeared under the above head, in this paper of February 26th, gave rise to a communication on "Mixing at the Root," in the number for March 19th. A question in reference to the subject having been submitted to

Professor Gray, of the Cambridge Botanic Garden, he has kindly furnished the following note:

No principle of vegetable physiology known would justify the conclusion that plants can "mix" or cross-breed from the root or tubers, by being planted together. It would be the same as if a graft of one variety of apple set in a tree affected the *ungrafted* or natural branches.

The fact adduced by you New Jersey correspondent is doubtless capable of explanation on other grounds. In herbaceous plants, particular sorts or varieties produced by long-continued cultivation, frequently show a tendency to revert to their original form: some individuals will show this more than others, and hence the difference in different potatoes of the same field. These differences of color, &c., are not permanent and stable, but are liable to vary from year to year, more or less, from inherent causes; but such variation gives us no reason to infer that one individual is affected at all by another growing near it.

—*Boston Cultivator.*

ASA GRAY.

A GREAT BORER.—The shipworm, or teredo, is a bivalve shell-fish, which, as if in revenge for the unceasing war waged by mankind against its near relative, the oyster, seems to have registered a vow to extinguish the vitality of as many human beings as lies within its power. That power, though exercised by an insignificant fish, is a prodigious one; for, ever since mankind turned attention to nautical affairs, and went to sea in ships, the teredo has unceasingly endeavored—unfortunately with too much success—to sink those marine conveyances. Nor have vessels alone been the object of attack; for many a goodly landing pier has it riddled into shreds, not to speak of bolder attempts, such as the endeavor to swamp Holland, by destroying the piles of her embankments. The shipworm is the only mollusk that has ever succeeded in frightening politicians; and more than once it has alarmed them effectively. A century and a quarter ago, indeed, all Europe believed that the United Provinces were doomed to destruction, and that the teredo was sent by the Deity to pull down the growing arrogance of the Hollanders. In our own country, although we undergo no danger of being suddenly submerged, as our Dutch neighbors might be, we have suffered seriously in our dockyards and harbors by the operations of the shipworm, to which the soundest and hardest oak offers no impediment. As a defence against it, the underwater portion of the woodwork in dockyards has been studded with broad-headed iron nails.—*Westminster and Foreign Quarterly Review.*

DEPTH OF DRAINS.—A writer in the *Agricultural Gazette*, who represents that he has had great experience in drainage, concludes that the proper depth of drains must depend on the texture of the soil—that the depth should be the point where saturation is arrested. Experienced persons, he says, can readily tell where this point is; and those inexperienced may easily ascertain it by having three short drains made early in autumn—one 2½, one of 3, and one of 4 feet deep. The drains that first discharge the water after a rain will be at the right depth for that soil.

AGE OF ANIMALS.—A bear rarely exceeds twenty years; a wolf twenty; a fox fourteen or sixteen; lions are long lived—Pompey lived to the age of seventy years; a squirrel or hare seven or eight years; rabbits seven. Elephants have been known to live to the age of 400 years. When Alexander the Great had conquered Phorus, King of India, he took a great elephant which had fought valiantly for the king, named him Ajax, dedicated him to the Sun, and let him go with this inscription "Alexander, the son of Jupiter, hath dedicated Ajax to the Sun." This elephant was found with this inscription 350 years afterward. Pigs have been known to live to the age of thirty years; the Rhinoceros to twenty. A horse has been known to live to the age of sixty-two, but averages twenty to thirty. Camels sometimes live to the age of one hundred. Stags are long lived.—Sheep seldom exceed the age of ten. Cows live about fifteen years. Cuvier considers it probable that whales sometimes live one thousand years. Mr. Malleiton has a skeleton of a Swan that attained the age of two hundred years. Pelicans are long lived. A tortoise has been known to live to the age of one hundred and seven.

THE PLANT NAME POSTS IN KENSINGTON GARDENS.—The other day an old lady took one of these for a head stone, and, after reading two long Latin words, said, "Oh, he was evidently a foreigner, but it's a shame they didn't give him Christian burial." As we walked through, the other morning, and very pleasant the green turf looked, when the sun was good enough to touch it, we heard a positive repetition of the error.—A stolid-looking woman was studying one of them, and we heard her read, in a well-satisfied tone, rightly or wrongly we did not stop to see—"Rosa Tormentosa? Ah! that was a very naughty girl, you may depend on it."—*Agricultural Gazette.*

MR. EDITOR:—Mr. Rhodes, dairyman, of London, (England,) about the year 1830, made a dreadful oath that he would have upwards of a thousand live milk cows in his dairy, but strange to relate, he never succeeded to get together more than 999! If he purchased a number, say 10, before he got them to his dairy he would find some of his cows dead, leaving only (or less than) 999. Your notice in yesterday's paper, of the large dairy of 300 cows, at Norwich, Chenango county, reminded me of the above circumstance.—*From the Buffalo Express.*

CEMENT FOR STONE WARE.—Gelatine is allowed to swell in cold water, the jelly warmed, and so much recently-slacked lime added as is requisite to render the mass sufficiently thick for the purpose. A thin coating of this cement is spread while warm over the gently-heated surfaces of fracture of the articles, and let dry under a strong pressure. What oozes out is removed directly with a moist rag.—*Chemical Gazette.*

GUANO.—The Governor of the Falkland Islands has just sent home despatches announcing that guano has been discovered in large quantities in those islands. The climate there being less dry than at Lobos, the guano is not of equal value to the Peruvian product; but there seems to be no doubt that this discovery in the Falkland Is-

lands will prove to be one of great value, both in a trading and an agricultural sense.—*Daily News.*

John Johnston, an extensive farmer near Geneva, has now on his farm 25 miles of drains. His son-in-law, Mr. Snow, on an adjoining farm, has laid 88,000 tiles and drained 200 acres of his land. Mr. Johnston says, "the whole country ought to be drained;" a remark which comes nearer the truth than most figurative ones do.

Poetry.

SATURDAY EVENING.

How sweet the evening shadows fall

Advancing from the west;
As ends the weary week of toil,
And comes the day of rest.

Bright o'er the earth the stars of eve
Her radiant beauty sheds,
And myriad sisters calmly weave
Their light around our heads.

Rest, man, from labour; rest from sin,
The world's hard contest close
The holy hours with God begun;
Yield thee to sweet repose.

Bright o'er the earth the morning ray
Its sacred light will cast;
Fare emblem of the glorious day
That evermore shall last.

GUTTA PERCHA.

1. My parent died, when I bled from her side,
To fill mankind with wonder;
2. And now I stand in the wide world around,
The green-sward above and under,
3. I hold the flower in the sunny bowers;
1. I shelter the dead in their graves;
5. I circle the hair of the maiden fair;
6. And bid defiance to knives.
7. The miser his gold often gives me to hold;
8. I aid to extinguish the fire.
9. I'm clad o'er the green, where the school-boy is seen;
10. I wait at the toper's desire.
11. I ride on the wave, the sailor to save,
When he shrieketh aloud in despair:
12. I whirl the machine, whose arms, timely seen,
Hiss as they fly through the air.
13. I've been tried, and am cast with felons at last;
14. I am balm to the wounded and torn;
15. I rival the oak; (16) the tell-tale I cloak;
17. I am fashion'd as high and low born,
18. I constantly mind the sightless blind;
19. Many garments my long arms bear;
20. By the sick man's bed, (21) by the ship's mast-head—
In various forms I am there.
22. Deep in the earth, though unseen in my worth,
I faithfully serve mankind;
23. I bear the whisper of the softest lipser,
24. And hold that when traced the mind!
25. When the emigrant lands on far-off shoals,
Perchance he'll tread on me,
26. On the rich man's table (27) in the horses' stable,
My forms you may frequently see!
Now I challenge your mind my secret to find,
28. Though I travel along by your bed,
29. I come from the south. (30) I may dwell in your mouth,
31. Or may rest on the top of your head!

The following explanation may serve to illustrate the above:

1. Refers to Gutta-percha trees, they are tapped, and the article which is then a milky juice, exudes. 2. It is used both above and under ground. 3. Gutta-percha flower-pots. 4. Lining for collars. 5. Bonnet caps. 6. Policemen's slaves. 7. Money bowls. 8. Water buckets and Engine pipes. 9. Cricket balls. 10. Mugs. 11. Lace wooves. 12. Machine driving belt. 13. Indestructible vessels for the use of prisoners. 14. Balm for slight wounds, instead of sticking-plaster. 15. Ornamental mouldings. 16. Coating of the telegraph wires. 17. Medalions and casts of celebrated and notorious persons. 18. Cord for window-blinds. 19. Clothes-lines. 20. Utensils for sleeping apartments. 21. Cordage and speaking-tubes. 22. Pipes for drainage. &c. 23. Acoustic tubes. 24. Inkstands. 25. Soles. 26. Ornamental dishes. 27. Buckets and harness. 28. Noiseless curtain rings. 29. From Singapore, &c. 30. For filling decayed teeth. 41. "Sou'wester" hat.

EDITOR'S NOTICES.

POSTMASTERS AND SUBSCRIBERS.

In consequence of complaints having been received, of Postmasters exacting postage for the *Agriculturist*; we would, for their future guidance observe, that by the special permission of the Post Master General, the *Agriculturist* is transmitted to Subscribers FREE OF CHARGE.

Received T. T. Warwick; W. R. Report of Hamilton Farmers' Club.

William Hutton, Esq., Secretary of the Board of Statistics, Quebec, will please accept our thanks for frequent numbers of the *Dublin Advocate and Industrial Journal*.

Mr. Aaron Overholt, of Rainham, will please accept our thanks, for a June and December number of the *Agriculturist*, for 1852.

TORONTO HORTICULTURAL SOCIETY.

We have space only for a few words in reference to this deservedly popular and valuable Society, whose Second Exhibition, for the present season, was held in this city on the 30th ult. The specimens of fruit, vegetables, and flowers exhibited, were pretty numerous, and generally of excellent quality. This young Society is richly deserving of a liberal patronage.

THE WEATHER AND THE CROPS.

A most beneficial change has recently taken place in the weather; the long drought which was keeping back all kinds of Spring crops, has been succeeded by warm and copious showers, so that vegetation is now making rapid progress. We think, however, that Spring grain must prove, in many localities, somewhat short, let the weather continue ever so favorable. From all parts the accounts of the wheat crop are encouraging, with, at present, very few indications of rust. The late rams have much improved the potatoes, which are in a backward state. Hay will be abundant. A correspondent residing near Cobourg, writing under date June 28th, observes:—

"Since I last wrote you, the weather has been dry and warm, and the Spring crops have made rapid progress; they have not suffered near so much from our very wet Spring as was anticipated. To-day we have had fine rains (though rather cold), which was much wanted to start the turnips and other root crops. I see the rains have had a part of my fall wheat, which was very heavy. Fall wheat, as far as I have seen, looks uncommonly well, and should it escape rust and other accidents, I think it will be a very abundant crop."

The grain market keeps steady, with an upward tendency; though from the latest intelligence from England, we see that prices are somewhat receding.

July 1st, 1852.

DURHAM STOCK.—We invite the special attention of our readers to Mr. Wade's advertisement in another column. The Messrs. Wade are well known as enterprising and discriminating importers and breeders,

whose stock have justly attained a high standing. Our readers will share with us in the regret with which we have heard of Mr. Ralph Wade's loss of some fine animals at sea, purchased, we understand, in Scotland. The pecuniary loss which Mr. Wade will sustain, we are informed, will amount to about £300. He has got some fine improved Leicester Sheep. We sincerely hope that Mr. Wade will receive such an amount of public support in his praiseworthy enterprise as will more than reimburse the heavy losses often incidental to importation.

DEATH OF THE EARL OF DUCIE.

Our last English exchanges have brought us the melancholy intelligence of the decease of this excellent nobleman and distinguished agriculturist. This sad event took place on the 2nd of June;—his Lordship's health having suffered for years from severe periodical attacks of rheumatic gout. Earl Ducie has been taken away almost in the prime of life, having but just completed his 51st year. Whether regarded as an improver of agricultural implements,—of which the *Cultivator* that bears his name is an instance.—a successful breeder of Durham Stock, a liberal land lord, or a useful and active member of society, Lord Ducie's memory will be long cherished by his countrymen. We hope to give more particulars of this distinguished man, as an agriculturist, in our next.

ADVERTISEMENTS.

IMPORTANT TO
BREEDERS OF STOCK.

THE Subscriber offers for sale Two Thorough Bred Short Horn DURHAM BULL CALVES, one 20 months old, a beautiful Roan Colour, splendid proportions, a descendant of the much celebrated "Belled Will" of England—the other about two months old, white, of unequalled Symetry and beauty, and is a descendant of "Belled Will," his Dam was got by "Bellville," the Champion of England, Scotland and Ireland, and was imported to this Province in 1851, and the first of Mr. Hopper's, celebrated herd, ever brought into Canada.

ALSO:

Two other Calves of the same unequalled breeding 3 weeks old.

Satisfactory certificates of pedigree will be furnished. For further particulars application may be made to

JOSEPH WADE,

Spring Cottage, near Port Hope, Canada West.

June, 22nd 1852.

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BUREAU OF AGRICULTURE,

QUEBEC, 28th May, 1853.

HIS EXCELLENCY THE GOVERNOR GENERAL has been pleased to appoint

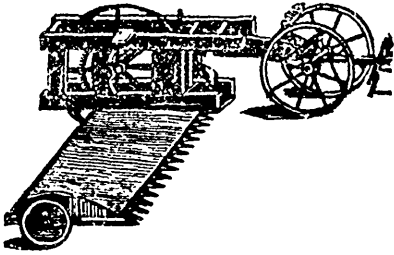
Messrs. Whitman & Wheelock,

OF No. 100 FRONT STREET, IN THE CITY AND STATE OF NEW YORK,

To be the Agents to Receive and Bond, or Pay Duties on all such Goods as may be sent from Canada to the approaching INDUSTRIAL EXHIBITION AT NEW YORK.

IMPORTANT TO FARMERS.

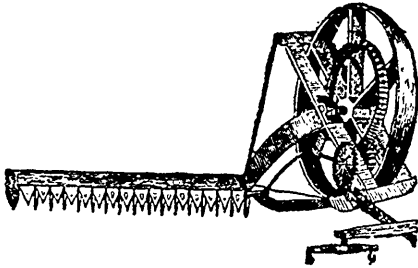
HUSSEY & BURRALL'S



IMPROVED REAPING MACHINES.

THE SUBSCRIBERS having opened an Agricultural Warehouse and Seed Store in Port Hope, C.W., are now manufacturing the above Machines extensively. Also

KETCHUM'S



MOWING MACHINE,

On an improved scale of stopping the motion on the knives by means of a lever.

These are the machines which have taken the first Prizes at the New York State Agricultural Test at Geneva last harvest, in competition with eleven different kinds of Reapers and Mowers, and they have now become the *standard and model* Machines, while others are altering and experimenting with doubtful success.

They are warranted to give satisfaction, and a fair and thorough trial is offered before the sale is made valid.

Any person wishing to purchase one of those Machines can obtain satisfactory information as to their performance and satisfaction by referring to the following gentlemen Farmers, who have used these Machines, and to whom they trust for an impartial repute:—

- | | |
|---------------------------|--------------------------|
| John Wade, Esq., P. Hope, | Seir VanCamp, Bowman- |
| Nath. Nichols, Cobourg, | ville, |
| George Black, " | R. Simpson, " |
| John Middleton, Clarke, | J. B. Warren, Oshawa, |
| Z. Pollard, " | Joseph Gould, Whitby, |
| Sam'l Wilmot, Darlington, | John Cameron, York Mills |
| John Smart, " | McIntosh & Walton, Tor- |
| | onto, |

And several others whose names are omitted. They also keep on hand the *Plows* which have taken the first Prizes at the Provincial Fair of Toronto, in 1852, (in a variety of 14 different sizes) and have since proved themselves above competition.

Wheat Drills, Seed Sowers, Harrows, and Cultivators for one or two horses, and all manner of Agricul-

tural Implements and Machines perfected for the use of the Farmer, from an Apple Parer to an eight horse Power.

Farm Produce, such as Peas, Timothy Seed, and Clover Seed, taken in exchange for machinery, and a liberal discount for cash. All articles warranted, or price refunded. Farmers wishing to purchase Machines will do a favor by ordering immediately so as to avoid any delay or disappointment.

JOHN RAPALJE & Co.,
Port Hope, C. W.

Messrs. McIntosh & Walton, of Toronto, are Agents for the above Firm, and have their implements and machines for sale at low prices.

April, 30th, 1853.

3in.

PURE BRED MALE STOCK,

AT

PRIVATE SALE AT MOUNT FORDHAM

Eleven Miles from the City Hall, New York.

I WILL Sell and Let from 10 to 12 Short Horned Bull Calves; 4 Devon Bulls and Bull Calves, and from 12 to 15 South Down Rams. The Annual Sale by Auction will be omitted this year, as I wish to reserve all the females, having recently purchased another farm, to enable me to increase my Breeding Establishment. My Hog Stock, including all the Spring Litters, are engaged. Catalogues, with full description and pedigrees of the above Bulls and South Down Rams, with the prices attached, can be obtained by the 15th of April next, from the Subscriber, or at any of the principal Agricultural Stores, or from the editors of the principal Agricultural Journals.

L. G. MORRIS.

March 23rd, 1853.

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WANTED,

A FEW DECEMBER Nos. of the "AGRICULTURIST" for 1852. Subscribers who can spare any of the above Nos. will be paid by sending them to this Office.

The Canadian Agriculturist,

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TERMS.

SINGLE COPIES—One Dollar per annum.

CLUBS, or Members of Agricultural Societies ordering 25 copies or upwards—*Half a Dollar each Copy.*

Subscriptions always in advance, and none taken but from the commencement of each year. The vols. for 1849-'50-'51, at 5s. each, bound.

N. B.—No advertisements inserted except those having an especial reference to agriculture. Matters, however, that possess a general interest to agriculturists, will receive an Editorial Notice upon a personal or written application.