

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

Coloured covers/  
Couverture de couleur

Covers damaged/  
Couverture endommagée

Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée

Cover title missing/  
Le titre de couverture manque

Coloured maps/  
Cartes géographiques en couleur

Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)

Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur

Bound with other material/  
Relié avec d'autres documents

Tight binding may cause shadows or distortions along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Additional comments:  
Commentaires supplémentaires:

Coloured pages/  
Pages de couleur

Pages damaged/  
Pages endommagées

Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées

Pages detached/  
Pages détachées

Showthrough/  
Transparence

Quality of print varies/  
Qualité inégale de l'impression

Continuous pagination/  
Pagination continue

Includes index(es)/  
Comprend un (des) index

Title on header taken from:  
Le titre de l'en-tête provient:

Title page of issue/  
Page de titre de la livraison

Caption of issue/  
Titre de départ de la livraison

Masthead/  
Générique (périodiques) de la livraison

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

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

THE  
CANADIAN AGRICULTURIST

AND

TRANSACTIONS

OF THE

BOARD OF AGRICULTURE OF UPPER CANADA:

A MONTHLY JOURNAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE, SCIENCE, AND DOMESTIC AND RURAL ECONOMY.

---

ILLUSTRATED WITH ENGRAVINGS.

---

EDITED BY

GEORGE BUCKLAND, PROFESSOR OF AGRICULTURE, &c.

**VOL. V. 1853.**

TORONTO:

WILLIAM M'DOUGALL, PROPRIETOR.

MDCCLIII.

# INDEX.

	PAGE.		PAGE.
Address, by A. Cameron, Esq.....	33	Canadian Institute.....	141
-----A. Knowlton Esq.....	35	<i>Canadian Journal</i> .....	61, 191
-----J. Ha Land Esq.....	65	Canada Wheat Growers.....	60
-----A. Cameron Esq.....	215	Cancer, Remedy for.....	252
-----Annal. of the President. Provincial Agricultural Association.....	331	Canadian Fencing.....	368
Aerial Navigation.....	60	Cancer, Caution in reference to.....	188
Age of Animals.....	222	Care and Grape Sogon. Profusion Crop on.....	53
Agricultural Societies, Hints to.....	567	Canadian Agricultural Society's Report for 1852..	161
Agricultural Association, Annual Meeting.....	301	Carrots, White Belgium.....	158
-----Officers of 1853.....	4	Cattle for Hires.....	189
Agriculture Education.....	136 147, 225	Castation, best mode of.....	364
Agriculture at Invention, Origin of.....	81	Cattle, plan for importing.....	354
Agriculture and Coal Fields of Ohio.....	10	Cattle, Improved Breeds of.....	235
Agricultural Statistics.....	190	Cattle, Points of excellence in different Breeds..	289
<i>Agri Cultural</i> , Postage Free.....	177	Cattle, communication of ideas among.....	365
<i>Agricultural</i> for 1854.....	366	Canadian Agricultural Society.....	36
Alpine Horns, The.....	125	Census, The Agricultural.....	6
American Autumn, Phenomena of.....	92	Census Petrus U. C. Abstract of.....	56
Ancient Egypt, Agriculture of.....	116	Census, Statistical Comparisons.....	29
Animals, Experience of.....	26	Charcoal Effects on Flowers.....	213
Apples, How to Secure.....	29	Chemico-Agricultural Society of Ulster.....	232
Apples, How to Bake.....	52	Chemistry and Pharmacy.....	124
Apple Parading Dumpling.....	319	Chest, to expand.....	183
Apple Jelly.....	95	Chilblains, cure for.....	63
April No. of <i>Agri Culturalist</i> .....	97	Chimneys, how to build.....	246
Atkins' Automaton Reaper.....	216	Chinese Banks.....	60
Atmosphere, its effects on life.....	187	-----bury, Power.....	368
Atmospheric changes, susceptibility of animals to.	217	Chisel, S-ed.....	185
August No. of <i>Agriculturalist</i> .....	225	Clover Seed Trash: and preparing.....	257
Australia, A Land of Contraries.....	220	Cover as a preparation for Wheat.....	119, 257
Australian Night.....	125	Civil Era of Great Britain.....	158
Australian Diarrhoeas.....	182	Cochin-China Fowls.....	94
Australian Grain, Experiments with.....	11	Cochin-China Phobias.....	77
Bajaama Top Show.....	265	Common School Education.....	72
Baron de Longueuil on Bone Manure.....	51	Company, Behaviour in.....	61
Barret's Patent Flour Mill.....	186	Competition at Exhibitions of 1852 and 1853, -----comparative view of.....	338
Beetle, the.....	373	Cookery, Philosophy of.....	53, 87
Birmingham Cattle and Poultry Show.....	46	Con Exchange, Toronto.....	127
Black Currants, Cultivation of.....	85	Cotton from India.....	62
Black Dye.....	30	Couch or Twitch Grass.....	188
Blue Bird, The.....	103	Cough, Recipe for.....	63
Board of Agriculture of Upper Canada.....	67	Counties' Court House, York's, Ontario and Peel..	73
-----Officers of 1853.....	4	County Reports, Prizes for 1853.....	4
-----Annual Report of for 1851 and 1852.....	1	Cow's holding up the milk.....	372
-----Measings of.....	129, 193, 373	Creeping Plants of Ceylon.....	188
Board of Agriculture Lower Canada.....	138, 103	Crowther the Botanist.....	282
Bone Manure.....	51	Curate's Pudding.....	30
Bounty, On the Study of.....	247	Curing Meat.....	157
Books, list of Agricultural.....	375	Currant Wines.....	251
Brandford Agricultural and Horticultural Society.	142	Cyclopedia of Agriculture.....	89
Breeding Principles of.....	50	Dairy Husbandry.....	15
Brickmaking, Improvements in.....	55	Damp a Cure for.....	215
Brown's Patent Grain Rake.....	15	Dancing Pigs.....	211
Bureau of Agriculture.....	103, 178	Dean's Double Reflector.....	352
Butter Making.....	15	Death, Reputation, Her.....	60
Butter Firms, Improvement in.....	255	December No. of <i>Agriculturalist</i> .....	353
Cabbage, on the Cultivation of.....	142	Declivity of Rivers.....	245
Cabbage, to head in winter.....	286	Denis R. L. on Ventilation.....	141
Cake, an excellent and cheap.....	63	Devon Cattle, Letter on.....	52
Cameron A., Addresses of.....	33, 345	Dew, Physiology of.....	27
Canada, Progress of.....	42, 73	Dog Power.....	368

	PAGE.		PAGE.
Domestic Manufactures.....	245	Gooseberries, Cultivation of.....	86
Domestic Receipts.....	95	Goose Padding.....	96
Dough Nuts.....	215	Grafting Wax.....	286
Draining Tiles.....	159	Grafting, Propagating by.....	53
Drains, depth of.....	177, 221	Grain, When should it be cut ?.....	236
Drowning, memory quickened in.....	373	Grains, Standard weight of.....	95
Ducie, The late Earl of.....	234	Grape, Cultivation of.....	272
Durham Cattle, Hon. A. Ferguson on.....	69	Great Borer, The Shipworm.....	221
Durham Steer, Weight of a.....	49	Greenhouses in Winter.....	128
Durham Stock.....	223	Guano, at the Falkland Islands.....	222
Earl Ducie, Death of.....	223	Guano, Australian.....	155
Earl Ducie's Stock, Great Sale of.....	343	Guelph Farmers' Club.....	65, 358
East Oxford Farmers' Association.....	206, 255	Gypsum, On the use of.....	226
Editorial Achievement.....	255	Hamilton Town's Farmers' Club, 109, 147, 225, 299, 356	356
Editor's Notices, 64, 96, 127, 159, 190, 223, 253, 287, 320, 352.		Harland, J., Address of.....	65
Eggs, Method of keeping.....	278	Hard water.....	370
Eggs, Pickling.....	63	Haymaker, The Original.....	93
Electricity, its influence.....	28	Hedges in Australia.....	128
England, Prospects of.....	92	Henwife, y.....	318
English Language, power of.....	189	Hereford Cattle, W. H. Sotham on.....	12
Enterprise, Importing Stock.....	284	Herefords, vs. Shorthorns.....	117
Epicur's Life, 70 years of.....	216	High English Farming.....	184
Essex County Agricultural Society, Report for 1852.....	195	Hog, Points of a good.....	26
Evans Mr., Retirement of.....	138	Hogs, Preparing food for.....	217
Exhibition of Provincial Association.....	177	Holland, Reclaiming Sandbanks in.....	158
Extensive Draining.....	222	Horse, Speed of the.....	249
Eye Water.....	95	Horse, Training for the Saddle.....	239
Fallow, The.....	201	Horse, To manage a rearing.....	93
Farm Boundary Lines.....	183	Horses, Want of appetite in.....	242
Farmer, Horace Greely a.....	62	Horses, on preventing glanders in.....	361
Farmers, Prospects of.....	241	Horticultural Society of Toronto.....	140
Farmers' Association East Oxford.....	7	Horticulture,.....	23, 53, 84, 212, 243
Farmers' Clubs.....	19, 68	Hotbeds, Cloth Covering for.....	215
Farmers' Journal, and Transactions of Lower Canada Board of Agriculture.....	191	Husbandry, The Father of.....	83
Farmers, Valuable Hints to.....	82	Hussey's Reaping Machine.....	160
" Farming and Gardening Made Easy".....	120	Hutton W., Priz- Medal to.....	49
Farming, Importance of.....	241	Ice, a cure for Cholera.....	255
Feet, taking care of.....	55	Icehouses.....	313
February No. of <i>Agriculturist</i> .....	33	ILLUSTRATIONS.	
Fences, best for Canada.....	356	Prize Heifers.....	9
Ferguson Hon. A., Letter of.....	50	Brown's Patent Grain Rake.....	15
Ferguson Hon. A. on Durham Cattle.....	69	Operations of Layering.....	24
Filter, a cheap.....	252	Propagating by Grafting.....	53
Fish, Artificial Production of.....	218	Hussey & Burrall's Improved Reaper.....	142
Fish, new mode of incising.....	108	Ketchum's Mowing Machine.....	142
Flat Roofs.....	55	Icehouse.....	314
Flax Culture.....	41, 365	Atkins' Automaton Reaper.....	3. 6
Flax Fibre, new mode of preparing.....	79	Rural Architecture.....	350
Fleming J., Advertisement of.....	128, 159	Implements at Smithfield Show.....	45
Flour, Manufacture of.....	21	Indigestion, Causes of.....	285
Flower, Mysteries of a.....	278	Indian Corn Sugar.....	27
Flowering and Fruiting.....	54	Ink Stains, to remove.....	63
Fossil Remains.....	61	Insects, Strength of.....	189
Fowls, new and improved breeds of.....	75	Intemperance, Victims of.....	28
Frontenac Agricultural Society.....	103	Irish Character, Misrepresentation of.....	317
Frozen Region, Vegetation of.....	249	Irish Produce at Smithfield Cattle Show.....	44
Fruit Rinds indigestible.....	251	Iron Pavements.....	55
Fruits, on rearing common kinds.....	84	Jackson Sponge Cake.....	30
Fruit Trees, Planting.....	23	January No. of <i>Agriculturist</i> .....	m. 1
Pruning.....	375	<i>Journal of the Royal Agricultural Society of England</i> .....	203
Furniture, Hints about.....	220	July No. of <i>Agriculturist</i> .....	193
Gananoque, Village of.....	74	June No. of <i>Agriculturist</i> .....	161
Garden, Agricultural, and Flower Seeds.....	104	Kensington Gardens.....	222
Garden, The.....	212	Ketchum's Mowing Machine.....	160
Gardening, social influence of.....	215	Killarney, Great National Show at.....	293
Garden Visitors.....	319	Kirkwood A., Letter from.....	208
Gentleman, Picture of a.....	61	Knowlson J., Address of.....	36
Geological Calculation.....	286	Lambton County Agricultural Society's Report for 1852.....	97
Gigantic Asparagus.....	190	Large and Small Roots, Comparative value of.....	274
Gigantic Seaweeds.....	28	Leaf Rollers.....	212
Gingerbread Cake.....	30, 95	Lectures by Professor Buckland.....	3750
Gold of Pleasure.....	180	Leroy, Andre, Nursery Advertisement.....	321
		Life, First Necessary of.....	66

INDEX.

	PAGE.		PAGE.
Life in Cities.....	219	Philadelphia, Life in.....	219
Life in Philadelphia.....	219	Pillar Roses.....	214
Life Preservers.....	55	Plant Fly Trap.....	244
Lily, Varieties of.....	214	Planting, Taste for.....	24
Lime as a Manure.....	228	Planting Trees and Shrubs.....	53
Lime in Soils.....	189	Plants, How do they mix?.....	221
Lime Water for Hens.....	61	Plants in Rooms.....	286
Liquid Glue.....	63	Plants, Multiplication of.....	23
Liquid Manure.....	121, 219	Plough, Superseded.....	312
Live Fences.....	270	Ploughs, Judging of.....	119
Lower Canada Agricultural Exhibition.....	341	Plum, On the.....	311
Lower Canada Board of Agriculture.....	103	<b>POETRY:</b>	
Lower Canada Journal and Transactions.....	64	Poetry, on the pleasure produced by.....	281
Lungs, Development of the.....	247	The Butterfly.....	31
Machinery, wages heightened in consequence of improvements in.....	94	Wisdom.....	31
Manure.....	89, 365	The Faded Heather.....	60
Manure, The best kind of.....	278	Good Night.....	62
Manures, Sheltering of.....	287	Twilight.....	62
Manures, Classification of.....	238	Flowers.....	94
March No. of <i>Agriculturist</i> .....	65	Honor to the Plough.....	126
Markets, &c.....	127	The World.....	127
Masson J., Advertisement of Stock.....	256	The Green Lanes of England.....	155
Matthie W. Communication from.....	325	Spring.....	159
May No. of <i>Agriculturist</i> .....	129	Patience.....	159
McCaul Dr., Testimonial to.....	45	Eliza.....	190
Mechi's Latest Improvements.....	295	Saturday Evening.....	222
Mental Powers, Preservation of the.....	177	Gutta Percha.....	222
Middlesex and Elgin, Report for 1852.....	197	Lite's Harvest.....	253
Milk, Bread, and Butter Trees.....	94	What is Home?.....	256
Millet, &c.....	298	The Dying Child and the Flowers.....	281
Mine's Domestic Poultry Book.....	254	The Rich man and the Beggar.....	288
Mocking Bird of America.....	284	The Thrush's Nest.....	288
Mole, The, A Sub-cultivator.....	146	On the Death of a young Lady.....	319
Morris L. G. Pure Bred Stock.....	128	The Partition of the Earth.....	349
Mount Etna, Eruption of.....	25	A Rustic Plant.....	349
Mowing Machines.....	255	Death of the Robin.....	374
Murrain in Cattle.....	119	Points of Excellence in Cattle.....	289
Muscular Power, Statistics of.....	94	Points of the Short Horn Bull.....	290
Nasturtiums, to pickle.....	30	of the North Devons.....	290
Needlework, Beautiful Specimen of.....	255	of the Heretoids.....	291
New Agricultural Machine.....	19	of the Devon Bull.....	291
New English Crystal Palace.....	283	of the Ayrshires.....	292
New Year, The.....	5	Poisoned Valley, Guevo Upas.....	250
New York Crystal Palace, Canadian Department in.....	289	Polieness between brothers and sisters.....	125
New York State Fair.....	342	Potato, Cultivation of.....	152
Niagara Falls and Lake Erie.....	61	Potato disease, Report on.....	20
Nitrate of Soda, &c.....	205	Potatoes, Experiments with.....	11
Normal and Model Schools.....	141	Mode of using in Norway.....	156
Normal and Experimental Farm.....	339	Potato Plant, The.....	80, 272
Notice to Subscribers.....	4	Poultry, Points worth knowing about.....	177
November No.....	321	Poultry Show, Great Metropolitan.....	75
Nursery at Angiers, France.....	352	Precaution against Fire.....	255
Ocean, Depth of the.....	124	Preserving Fruits without sugar.....	93
Ocean, Highways of the.....	157	Prize Heifers, S. B. Chapman's.....	8
Ohio, Agriculture and Coal Fields of.....	11	Prize List Provincial Exhibition, 1853.....	166
"Old Countryman," The.....	320	Prizes awarded, at Provincial Exhibition, 1853.....	327
Onion Worm, The.....	81	Productive Farming.....	311
Oxford County, Rapid progress of Agricultural Society; Report for 1852.....	47, 101	Professor Buckland, Presentation to.....	140
Oxford "Gazetteer,".....	31	Lectures by.....	114
Paige's Threshing Machines.....	288	Professorship of Agriculture.....	114
Paint for Brick Houses.....	251	Programme for Exhibition of 1853.....	267
Parsnip Wine.....	36	Provincial Agricultural Association of Upper Canada; Annual Meeting.....	324
Parson's H. Letter of.....	71	Annual Address of the President.....	321
Pastures, Permanent.....	154	Provincial Exhibitions, President's suggestions for improving.....	13
Patents of Invention.....	168	Provincial Exhibition of 1853, Report of.....	302
Patent Sewing Machine.....	190	List of Prizes awarded at.....	327
Peaches, How to dry.....	286	Provincial Exhibitions of Upper and Lower Canada.....	253
Pear, Blight and Insects.....	243	Pruning.....	54
Pear Trees, Improving Old.....	243	Public Nurseries in Scotland.....	2, 9
Peterborough County Agricultural Society, Report for 1853.....	131	Pudding, Economical Family.....	63
		Quackery of Agricultural Science.....	297

	PAGE.		PAGE.
Rapping Delusion. Victims of .....	60	Stock, Loss in Drivining to Market.....	93
Raspberries Cultivation of .....	85	Stone, Artificial .....	41
Raw and Cooked Food.....	189	Stone-ware, Cement for.....	222
Razors .....	30	Stormont Agricultural Society .....	96
Love of Reading .....	374	Strawberries, Cultivation of.....	81
Reaping Machines.....	141, 205, 311	—, Great Crop of.....	25
— Trial of.....	271	Straw, Importance of .....	180, 219
Receipts.....	63	— as a Covering .....	125
Red and White Curran's .....	87	Submarine Telegraph Company .....	27
Report on Crops in Northumberland County.....	309	Subsoil Companion Plough.....	18
Reprints, premium for .....	355	Sunburn, To remove .....	96
Respect for the Aged .....	28	Su fices, Laying out.....	212
Restitution .....	255	Swine, feeding and rearing of.....	362
Rifle, Burton's .....	241	Tea Roses, Wintering of .....	214
Rotation of Crops .....	51	Tewkesmoyle Agricultural Seminary .....	96
Royal Agricultural Society of England.....	257	"The Popular Educator".....	191
Rules and Regulations for Exhibition at Hamil- ton, 1853 .....	165	— Thinning out Vegetables .....	213
Rural Architecture .....	370	Thorn Hedges .....	315
Rural Economy .....	315	Tillage, Improved Systems of .....	82
Sabbath, The .....	252	Time, Preciousness of .....	51
Sale of Mr. Vail's Stock .....	50	Tipplee Farm.....	276
Salt .....	95	Tomatoes, To Pickle .....	30, 96
Science and Agriculture .....	219	—, Early .....	213
Science Answering Simple Questions.....	218	Tooth Powder .....	63
September Number .....	257	Toronto, Progress of .....	73
Sev rance's Threshing Machine.....	32	— Horticultural Society.....	223
Sewing by Machinery.....	285	— University Convocation .....	155
Sheep, How to Catch a.....	247	Transactions of N. Y. State Agricultural Society .....	31
Sheep husbandry.....	358	Transplanting Evergreens.....	286
Sheltering Trees and Plants .....	54	Treadwell, C. P., Address by.....	321
Shepherd's Dog, The .....	285	Trees, What are they made of .....	245
Shingle Machine.....	252	Trees, motion of sap in .....	371
Shoeing Horses .....	35	University College, Toronto .....	344
Short Horn Cattle, Sale of.....	210	Vegetable Poisons.....	93
—, Export to America.....	210	Vegetables, How to enlarge .....	243
Silk, To Clean .....	96	—, Source of Nutrition in .....	246
Slate, Uses of.....	188	Vegetable Serpent.....	269
Sleep, A few words about.....	159	Ventilation .....	123
Smithfield Fat Cattle Show .....	43	Ventilation, g. Ruttin's System of .....	144
Smithfield Show, Irish Produce at .....	41	— Railway Cars .....	253
— Implements and Machines at .....	45	Vocal Music Society of Toronto .....	48
Soap Plant, the .....	373	— "Voyage to California," A.....	191
Soils, Classification of .....	277	Wade, Joseph, Advertisement of Stock.....	223
Somnambulism, Curious Case of .....	62	Wade, Ralph.....	256
Sotham, W. H., on Herefords .....	52, 117, 186	War's, Cure for .....	96
Sowing Machine .....	95	Washing Paint .....	95
Sponge Cake .....	5	Weather, Crops, and Markets.....	63, 223, 255
Starch, To make .....	30	Willingdon County Farmers' Club.....	150, 181, 220
State and Provincial Fairs in 1853 .....	287	Wheat Fly.....	310
Statute, The new Agricultural .....	6	Wheat, new variety of.....	363
Steam, Condensed History of.....	230	Whitby Agricultural Society.....	62
Steam Cultivator.....	312	Wit's Universal Rival.....	61
Steam Engines on Farms.....	252	White, P. P., Paper for .....	301
Steam Plough .....	30	Wood Gas.....	221
Steers, Training of.....	240	Yeast.....	56
		York County Spring Fair .....	156

THE  
CANADIAN AGRICULTURIST

AND

Transactions

OF THE

BOARD OF AGRICULTURE OF UPPER CANADA.

VOL. V.

TORONTO, JANUARY, 1853.

NO. 1.

FIRST ANNUAL REPORT OF THE BOARD OF  
AGRICULTURE OF UPPER CANADA,  
For 1851-52.

*(Printed by Order of the Legislative Assembly, First  
Session, Fourth Parliament, 16 Victoria, 1852.)*

To His Excellency the Governor General of Canada.

MAY IT PLEASE YOUR EXCELLENCY,

The Board of Agriculture of Upper Canada, established by Act 13 and 14 Vic., cap. 73, have the honor to lay before Your Excellency a brief Report of their proceedings.

The first meeting of the Board was called agreeably to statute, by the Provincial Secretary, in the City of Toronto, July 2nd, 1851, and three days were spent in deliberation. Three meetings have been subsequently held, viz: on November 4th, 1851, April 20th, 21st, 22nd, and August 14th, 1852.

The Board being constituted by statute the Council of the Agricultural Association of Upper Canada, and are thereby invested with full powers to conduct the affairs of that institution during the interval of its annual meetings. Much time has been spent in the consideration and disposal of numerous details of business, which need not be here introduced, as they would not be regarded with much interest in a Report of this nature. Condensed statements of the proceedings, taken from the Secretary's minutes, have been regularly published in the Upper Canadian Agricultural Journal.

Among the first things that engaged the attention of the Board, not immediately connected with matters arising out of the current business of the Provincial Association, was the consideration of the draft of a new and improved Agricultural Bill, which passed into a law during the last Session of Parliament—much time and consideration were bestowed upon the maturing of this measure, previous to its introduction to Parliament, not only by the Board, but also by several individuals, who possess a practical knowledge of the state and wants of the Country, and feel

a deep interest in working out their proper and adequate supply. Under the previous Act a large number of Agricultural Societies have been organized in this section of the Province, several of which continued in successful operation, and the result beyond a doubt has been a considerable improvement to the Agriculture of the Country. It was felt, however, by the Board, as well as by others whom they consulted on the subject, that there existed under the old Act a great want of system and unity of action among Agricultural Societies, with no adequate provision for giving due publicity to Reports of their proceedings. In these important respects the new statute applies an efficient remedy, and notwithstanding a few alterations in that Act, which the Board is desirous of recommending to the consideration of the Legislature, they are strongly of opinion that the main principles and features of the Law are sound and salutary.

With a view of giving publicity to their proceedings, and whatever reports or essays might be prepared under their jurisdiction, the Board found it expedient, before the close of last year, to make suitable arrangements with the Proprietor of the "Canadian Agriculturist," a monthly journal published in Toronto; which object, by these arrangements, has so far been satisfactorily attained. Much useful and interesting matter has thus been speedily brought under the notice of farmers and others, in all parts of the country. Two prize reports, one of the County of Wellington, and the other of Hastings, with several Agricultural essays—among the latter those of Messrs. Hutton and Lynch may be specially mentioned—have been published in the journal during the present year, and they cannot have failed in producing a beneficial influence on the Agricultural mind of the country. Although the arrangement with the "Canadian Agriculturist" is only for the current year, the Board confidently hopes that increased facilities for the future will be extended to the cheap publication, and wide dissemination of agricultural knowledge.

and improvements, among the entire farming community of this young and rapidly advancing portion of the British dominions. The frequent periodical publication, at the lowest possible charge, of whatever is interesting and suggestive to the Agriculturists of the Province, so as to reach the remotest settler where a Post Office is established, must be regarded as an object of primary importance, and as essential to the progressive development of the Agricultural resources of the country.

The Board has much satisfaction in being able to report favorably of the steady progress of the Provincial Association, an institution which every year possesses more and more the best wishes and confidence of the country. An Annual Exhibition has now been held under its management for six years, which, taking place in different and sometimes widely-separated parts of this section of the United Province, will necessarily vary, more or less, according to local circumstances, both in the number and quality of stock and articles shown, and the amount of visitors in attendance. Still it must be apparent, even to the most superficial observer, that a *progressive advance* has been made almost from the first meeting of the Association, to the present time, when the seventh Exhibition is about to take place in this city. These Exhibitions, while they have been successful in stimulating talent, ingenuity and industry in the Province, not only in Agriculture, but, more or less, in all the industrial and civilizing arts practised among us, have also awakened up attention abroad, particularly in the mother country, to the immense resources of Canada, and its advantages as a field for emigration, and the profitable employment and investment of capital. The Parliamentary grant, voted the two last years, has enabled the Directors to increase very materially the ordinary prize list, to offer liberal premiums for new objects, and to keep the Association free from debt.

With reference to the Agricultural statute, passed last Session of Parliament, the Board would respectfully recommend a few modifications, such as the rendering of each County belonging to United Counties, "distinct and independent for Agricultural purposes under the said Act, whenever desired." Several "United Counties" have already experienced difficulty for want of independent action in each County of such union. The sum of £17 10s. required under the present Act, to be raised by Township Societies before they can legally organize and receive Parliamentary aid, might be advantageously reduced to £10, as the present amount prevents the formation of Agricultural Societies in remote and thinly peopled Townships.

Agriculture having at length been recognized as of sufficient importance to entitle it to a dis-

tinct Department in the Government of this Province, a fact most significant and encouraging to all patriotic minds, who look to the advancement of Agriculture as the permanent source of wealth and the basis of a nation's strength and prosperity, it is here most respectfully suggested, that the statute under which the Board of Agriculture is constituted, should be so far amended as to include the Minister of Agriculture and the President of the Provincial Association, for the time being, as *Ex-officio* members of the Board of Agriculture.

The Board have given their earnest and best attention to the important object defined by the statute under which they were appointed, 13 and 14 Vic., cap. 73., clause 12th. "Be it enacted, That it shall be the duty of the said Board to prepare as soon as practicable and present to the Legislature, a plan for establishing an Experimental or Illustrative Farm in connection with the chair of Agriculture in the University of Toronto, or in connection with the Normal School, or otherwise, as they may deem best, and to make any recommendation they may think expedient for extending Agricultural education throughout the Province."

The senate of the University of Toronto, in a statute establishing a chair of Agriculture in that seat of learning, have provided grounds for an Experiment Farm, which it is proposed shall be placed under the control of, and supported by the Board of Agriculture.

The University Statute provides, that not less than fifty acres of the Park ground shall be granted to the Board, free of charge, for a term of ten years, and if at the termination of that period, it should be deemed expedient to dissolve the connection, the University engages to take all buildings erected by the Board of brick or stone, at a price to be determined by valuation.

Soon after the appointment last spring, of the Secretary of the Board to the Chair of Agriculture, it was deemed expedient, as the University Grounds were about to be put under a course of improvement, that the Board should take some introductory steps for securing and bringing into a proper state of cultivation, that portion which had been assigned for the purposes of Experimental Agriculture, in connection with scientific, united with practical teaching in the University, by the newly appointed Professor. About 25 acres have accordingly been brought into cultivation, and the Board are of opinion that the grounds are very suitable for the purposes of Agricultural Education, and the testing of new and improved varieties of plants. But in accordance with the before mentioned clause in the Act 13 and 14 Vic., cap. 73, they have refrained from making final arrangements with the authorities of the University, till they had



submitted their plans for the consideration and approval of Your Excellency and Council, and the other branches of the Legislature.

The objects which the Board recommend in establishing an Experimental Farm on the University Ground may be thus briefly stated:—  
 First, to afford the Professor of Agriculture a ready means of giving practical illustration and effect to his class lectures in the University,—  
 Second, to import from abroad new and improved kinds of seeds, plants and implements, chiefly with a view of testing, by experiments carefully conducted on the farm, their adaptation to the climate, soil, wants and markets of this country, and in all cases of a favorable result, to distribute such productions on easy terms throughout the Province. An occasional importation of improved breeds of animals, the offspring being sold and distributed through the Province, would be an efficient means of advancing this very important department of husbandry, and would tend to increase materially the wealth and progress of the country. It is believed that in thus connecting the science and practice of Agriculture in their various bearings on each other, in our Provincial University, it will be made more subservient to the public good.

The Board are desirous that these fifty or sixty acres for experimental and illustrative purposes, should not be mistaken for a Model Farm, which should consist of a larger area, and which would consequently involve a much greater outlay and risk. Whether Model Farms, strictly so called, are adapted to the present wants of this young country, fairly admits of a question. But something should at once be done to connect the leading facts and principles of Agriculture with the routine of instruction given in all the schools and colleges of the Province; and if small portions of land could be set apart for such purposes, the instruction would prove far more practical and efficient.

The Board will feel much pleasure should the plan of an experimental farm on an inexpensive scale meet the approval of the Legislature, so that they may feel authorised in taking final steps for the carrying out of the same. The principal difficulty lies in the necessary outlay for the commencement. A grant of £500 would enable them to do so, with every prospect of success; and it is believed that the ordinary amount of funds placed at their disposal, would after the necessary preliminary expenditure had been made, nearly or quite meet all exigencies hereafter.

Annexed is a statement of receipts and disbursements for the past year.

All which is most respectfully submitted.

E. W. THOMSON,  
 Chairman Board of Agriculture.

Toronto, September 10, 1852.

Receipts and Expenditure of the Board of Agriculture of Upper Canada for the year 1851-2.

		RECEIPTS.		£	s	d.
1851.	June 10.	Balance in hand .....		227	13	0
"	"	Donation from Agricultural Society of Frontenac, Lennox and Addington .....	25	0	0	
"	"	R. L. D. nison, Life Mem. Sub. William Gamble, do do .....	2	10	0	
"	14.	Cash from Dinner Stewards at Niagara .....	13	18	9	
Sept. 6.	"	Canada Company's Grant .....	25	0	0	
13.	"	Parliamentary .....	1000	0	0	
15.	"	County of Middlesex Ag. Soc. .....	25	0	0	
23.	"	Northumberland do do .....	12	10	0	
"	"	Simcoe do do .....	10	0	0	
"	"	Carleton do do .....	25	0	0	
"	"	No. folk do do .....	20	0	0	
24.	"	Billa Flint, Life Mem. Sub-cr. .....	2	10	0	
26.	"	John S. McDonald do do .....	2	10	0	
27.	"	625 Badges sold at Brockville Exhibition .....	156	5	0	
"	"	975 Single admission T'kets. 12 Horsemen's Tick-ets, 15s. Carriage. do 17s. 6d. ....	4	12	6	
"	"	Extra Entries .....	1	19	4½	
Oct. 2.	"	Cash of J. Masson .....	10	12	0	
"	"	County of York Agricul. Soc. County of Hastings do do .....	30	0	0	
1852.	March 4.	Treasurer of Brockville Local Committee .....	165	16	1	
"	May 9.	do do do Lanark and Renfrew Agr. Soc. ....	46	6	9	
			10	0	0	
			2127 15 ½			
		DISBURSEMENTS.				
1851.	Sept. 25.	George Crawford, Treasurer of Loc 1 Committee for Fencing, Buildings and local expenses. Premiums at Brockville Exhibition .....	400	0	0	
"	"	E. Williams, Rochester, Hire of Tents .....	883	13	0	
"	"	Printing Premium Lists, Bidges, Cards, Ribbons, &c. Clerks at Show .....	65	14	6	
"	"	Wilson's Bill for Refreshments for Judges, &c. ....	26	12	6	
"	"		33	10	6	
1852.	Jan. 10.	H. Y. Hind, Lectures for Distribution .....	12	2	8	
"	June 7.	John Hailand (Prize Report) Wm. Hutton .....	20	0	8	
"	"	John Lynch (Gold Medal) .....	15	0	0	
Sept. 3.	"	W. McDougall, Printing Transactions, &c. ....	112	10	0	
"	"	Board of Agriculture, 1 year's expenses as allowed by statute .....	70	0	0	
"	"	Secretary's Salary 1 year .....	100	0	0	
"	"	Treasurer's " " .....	50	0	0	
"	"	Books for Library .....	50	0	0	
"	"	Work on Experimental Farm; Seeds &c. ....	5	3	3	
"	"	Sundries .....	11	14	5	
			1952 1 5			
Recei pts brought down...			2127	15	1	

Balance in hand, September 10th, 1852 .....

E. W. THOMSON, Chairman, }  
 GEO. BUCKLAND, Secretary, }  
 ALEX. SHAW, }  
 R. L. DENISON, Treasurer. }  
 Auditors.

BOARD OF AGRICULTURE OF UPPER  
CANADA.

Officers—1853.

E. W. Thompson, Esq.....	Chairman, Toronto.
Hon. Malcolm Cameron.....	Min. Agricult., Quebec.
Hon. Adam Fergusson.....	Woodhill, Waterdown
Henry Rutlan, Esq.....	Sheriff, Cobourg.
R. L. Denison, Esq.....	Toronto.
David Christie, Esq., M. P. P.	Brantford.
John Harland, Esq.....	Guelph.
Prof. Buckland.....	Secretary, Toronto.
Wm. Matthie, Esq.....	Pres. Prov. Association. Brockville.

The Office of the Board is in the building adjoining the Government House on the corner of King and Simcoe Streets—recently occupied as an office by the Rev. Dr. Ryerson, Chief Superintendent of Public Instruction.

AGRICULTURAL ASSOCIATION OF UPPER  
CANADA.

Officers—1853.

Wm. Matthie, Esq.....	President, Brockville.
C. P. Treadwell.....	1st. Vice Pres. L'Original.
D. Christie, Esq. M P P	2nd. Vice Pres. Brantford.
R. L. Denison, Esq.....	Treasurer, Toronto.
Prof. Buckland.....	Secretary, Toronto.
Prof. Croft.....	Consulting Chemist, Univer- sity of Toronto.
Mr. James Fleming...	Seedsman, Yonge Street Nur- sery, Toronto.

The Annual Exhibition will be held in the City of Hamilton on the 4th, 5th, 6th, and 7th days of October, 1853.

PRIZES FOR COUNTY REPORTS.

Some inquiries having been made to the Secretary respecting the conditions of the prizes offered by the Board for County Reports, it is deemed expedient to reprint from the last premium list the regulations respecting them. These premiums are open to general competition, and the time for sending in the reports should be strictly observed. The Board being desirous of getting as full and comprehensive a report of every County in Upper Canada as possible, it will be necessary to state all such particulars and details of farm practice, &c., as may be requisite to the thorough understanding of the subjects treated of.

PREMIUMS

FOR AGRICULTURAL REPORTS OF COUNTIES IN UPPER CANADA FOR 1853. OPEN TO GENERAL COMPETITION.

For the best County Report (Wellington and Hastings excepted)	£20	0	0
2d Do. - - - - -	15	0	0
3d Do. - - - - -	10	0	0
4th Do. - - - - -	5	0	0

These Reports, in addition to the usual information required respecting the condition of Agricultural Societies within their range, should describe the various soils of the County; modes of farming; value of land; amount of tillage and average of crops; breeds of live stock; implements and machines in use; methods of preserving and applying manures; sketch of past progress, with suggestions for further improvement. The manufacturing and commercial conditions of the county should likewise be stated, together with any other facts that would illustrate its past history or present condition.

All statistical information should be condensed as much as possible, and when practicable, put into a tabulated form. The main object of each report should be to afford any intelligent stranger who might read it, a concise yet an *adequately truthful* view of the Agricultural condition and *Industrial pursuits* of the County. While all unnecessary particulars are to be avoided in the preparation of these Reports, *completeness* should as much as possible be constantly kept in view.

The Reports must be sent in to the Secretary of the Board of Agriculture, accompanied by a sealed note containing the name and address of the writer, *on or before the 1st of April, 1853*; and no report will be received after that date. Such reports as obtain premiums will become the property of the Board.

## The Agriculturist.

TORONTO, JANUARY, 1853.

NOTICE TO SUBSCRIBERS.

We send this number of the *Agriculturist* to all single Subscribers on last year's list, with a few numbers to each Society. Those who intend continuing the work will confer a favour by intimating their wishes to us immediately, that we may be enabled to decide how many to print. The remaining numbers will not be sent unless specially ordered. It is not impossible that the Board of Agriculture may have more matter than can be compressed into twelve numbers, and if extra numbers should be issued, the price will not be increased to regular Subscribers. We expect to have arrangements completed early in spring for illustrating more fully, and otherwise improving this Journal.

The *Agriculturist* will hereafter pass through the Post Office *free*, which will, we trust, operate as an additional inducement to Societies as well as individuals to order the paper.

## THE NEW YEAR.

The year 1853 commences auspiciously for Canada. Most of the difficulties that were so keenly and extensively felt not even half a dozen years ago, are now either wholly overcome, or are in a certain and speedy way of removal. The labours of the farmer, the last season, were crowned with ample crops, and the price of almost every article that he raises has now reached a satisfactory and remunerating point, with the cheering prospect that this state of things, being the result of a steady and healthy progress, will be continued. Nor is it the Agricultural interest alone that is looking up, for in a country like this, whose mainstay is agriculture, whenever *that* is advancing and prosperous, all other interests, which are more or less dependent on or connected with it, must necessarily participate in the onward movement. Whether, therefore, we look at the state of our agriculture or commerce, or to that of our revenue and credit, and the steady progress which the country is making, as a whole, socially and physically, there appears on all sides, the most satisfactory reasons for contentment, thankfulness and perseverance.

Canada is only just beginning to be subjected to the powerful and benignant influences of the great civilizer of modern times—the *Railway!* It is true that, hitherto, such have been the advantages afforded by our unparalleled lakes and rivers, that railways have not been such a desideratum as most other countries have experienced naturally less favourably situated. But Canada is rapidly outgrowing the means of transit furnished her by nature, liberal though they be, and a system of railways, already extensively commenced, will in a few years connect the extreme eastern and western points of this immense territory—probably the shores of both oceans—and thus facilitate the settlement of a yet almost unbroken and interminable wilderness with a free, industrious, and ever advancing population. The virgin soil of these regions is unsurpassed in natural fertility by any portion of the temperate zone, while their forests of gigantic growth, and mineral resources, only wait the genius and industry of men to convert them into inexhaus-

tible sources of wealth and enjoyment. If Canada possess no gold equal to some of her younger sisters in the southern hemisphere, she has unquestionably in larger abundance the material for building up and maintaining a strong and vigorous community;—an almost boundless area with a fertile soil; forests abounding in the most valuable varieties of timber; unequalled water advantages; a bracing climate; the means of instruction, both mental and religious, steadily advancing; and as free municipal and political institutions as are to be found on the face of the whole earth. With these great advantages, what is to hinder the continuous increase of this important section of England's magnificent Empire in wealth and knowledge, in virtue and happiness? Only let us continue to cultivate sedulously the agricultural, mechanical and manufacturing arts;—diffusing far and wide the blessings of useful knowledge, and the spirit of a sound and elevating literature; evincing mutual respect and forbearance towards all classes of the community; maintaining the internal state of tranquility which now happily prevails;—let each strive earnestly for the attainment and perfection of these objects, in a spirit of moderation and charity, and all will be well; the country will, in the highest sense of the word, continue prosperous, and under the blessing of Providence, will go on increasing in all those qualities which render a people wise, virtuous and happy.

We have been led into this train of thought by the advent of a new year. The pages of this journal will always be open to such as may wish to communicate information on any of the industrial pursuits, which obtain among us; particularly the one to which this periodical is more especially devoted. Most farmers could easily contribute something useful to the common fund of knowledge, if they would. We hope that the number of our correspondents and subscribers will this year receive such an augmentation, as will enable us not only to sustain the *Agriculturist*, but likewise to improve its character, and thereby increase its usefulness. To our subscribers, one and all, we beg to express our wish of a "*happy new year.*"

## THE NEW AGRICULTURAL STATUTE.

We published this Act entire in the December number, and all who have the management of Agricultural Societies should read it carefully. Societies legally formed, are not required to re-organize under the new statute. We wish to call the attention of office-bearers particularly to those clauses which require Township Societies to hold their annual meetings in the month of *January*, and to send in their reports to the Secretary of their respective *County Societies*, in time for the annual meeting of the latter in *February*. The whole of the reports are to be sent in to the Board of Agriculture on or before *the 1st of April next*. It is of the greatest importance that Societies should prepare their Reports with care, giving pretty full details on all points of interest or moment as it will be on these materials that the Board must mainly depend for making up their Transactions.

## THE AGRICULTURAL CENSUS.

We have received the details of the Agricultural census as printed by the Board of Registration and Statistics. These details are given with respect to Counties only, and except in the case of the new County of Bruce, appear to have been collected with a good deal of care, and it may be presumed with accuracy. We published in a former number the "totals" under the different heads for both sections of the Province. We need not repeat these totals, but it may be interesting to compare the productions of the several Counties. The great staple of Upper Canada is wheat, which for the year 1851, amounted to the enormous quantity of *twelve millions six hundred and ninety-two thousand eight hundred and fifty-two bushels* (12,692,852) worth at 3s 9d per bushel, the respectable sum of \$9,519,639. It is extremely probable that this is not all the growth of 1851, for a large portion of the previous year's crop was still in first hands, and would be very likely to get into the returns, unless special care was taken to prevent it.

The following is the return of the number of acres under cultivation, the number of acres under wheat, and the number of bushels grown in 1851 in each of the Counties in Upper Canada.

Counties.	Under Cultivation.	Acres of wheat.	Produce.—Bushels.
Addington .....	82657	9142	78268
Brant .....	117417	32858	625741
Bruce .....	2272	489	9796
Carleton .....	91094	14404	224451
Durham .....	146312	31339	617588
Dundas .....	43645	7308	111979
Elgin .....	110159	24168	413435
Essex .....	46460	9243	127769
Frontenac.....	81758	8451	94132
Glengary.....	68018	10007	142455
Grey .....	31401	9409	121379
Grenville .....	69872	8891	119000
Haldimand.....	79279	21942	376475
Halton.....	109496	26320	491517
Hastings.....	129950	26681	268003
Huron.....	54976	15400	214758
Kent.....	64260	16493	298338
Lambton.....	34497	6721	92057
Lanark.....	120073	13930	179378
Leeds.....	120923	20666	238953
Lennox.....	44065	5046	30281
Lincoln.....	82424	22794	335487
Middlesex.....	136947	29078	453896
Northumberland .....	146099	28502	431421
Norfolk.....	94367	22217	353636
Ontario.....	143882	37523	665798
Oxford.....	135232	32863	611251
Peel.....	128642	37104	598975
Perth.....	58116	15081	204523
Peterboro.....	69574	15596	253510
Prescott.....	32920	3569	44891
Prince Edward.....	121022	22354	192408
Renfrew.....	36890	4676	64141
Russell.....	6025	813	9814
Simcoe.....	109192	26762	432421
Stormont.....	44951	6710	97429
Victoria.....	56878	17969	263301
Waterloo.....	131806	20810	518659
Wellington.....	119081	28126	433659
Welland.....	56467	12795	423508
Wentworth.....	125539	27718	432683
York.....	212276	50147	991608
Total.....	3697724	782115	12692852

Several of the fashionables of St. Petersburg lately conceived the idea of smoking tea instead of tobacco, and at all the tobacco shons in that capital, cigarettes made of it may be purchased.

The grape harvest of Europe the past season, seems to have been almost a total failure. Those in Madeira have been entirely blasted and a disease as singular as it is universal, has affected the vine in Italy, Greece, &c.

The price of Wheat rose in Galt on Wednesday morning to 3s. 9d. cy. or 6s York, per bushel, and a very considerable quantity is being sent in to our mills. Flour has risen to 11s. 3d. per 100 pounds. The quantity of pork sent in last week has been far beyond all previous experience, 19 tons having been taken in by one house in Galt in little over 24 hours!—and probably most of the dealers in Galt made a like amount of purchases at the same time. The price varies, for merchantable pork, from \$1½ to \$6½ per 100 pounds. Poultry is plenty and cheap, and there is some, but not much, venison offering for sale. The farmers of Dumfries may well say they have seldom seen a more comortable Christmas.—*Galt Reporter*.

## EAST OXFORD FARMERS' ASSOCIATION.

To the Editor of the Canadian Agriculturist.

SIR,—I have been requested as the Secretary of this Association to transmit the report of the proceedings of the last meeting for insertion in your journal. The following address was delivered by the President, Geo. Alexander, Esq., on opening the meeting:—

"He felt that it was not necessary that he should again dwell upon the benefits likely to result from the practical working of this Association, but would at once proceed to the consideration of the first subject named for discussion at this meeting. The prefatory remarks which he proposed making would doubtless be very imperfect, and open to criticism. H. (Mr. Alexander,) would desire to say that he felt deeply his inability to lead a movement of this interesting and important character, and must beg of them to look upon him as coming here more for the purpose of deriving benefit himself, of profiting by their experience, than with any idea of his being able to impart information on agricultural matters, to them, the practical farmers of the land. He might occasionally venture to quote from works of scientific research, facts which have been given as the result of investigation and experiment; but such were not always to be relied upon, and it would be well for them to observe caution in adopting any theory of husbandry which was not fully borne out by their own experience and judgment. It is designed by public discussion to endeavour to explode everything which is erroneous and unprofitable in our present system, and to introduce whatever is found to be an improvement.

"The stock which is raised upon the farm constitutes in all countries a very valuable part of the produce. It is a never-failing source of return and wealth to the farmer, if due care and attention is paid to the feeding and general management of the same. It is therefore, essential that they should possess the fullest information upon this subject. It is gratifying to observe the general desire now manifested to obtain the improved breeds of every kind of stock. This augurs much for the future prosperity of the country; for as the farmers succeed in getting better stock, so will they take the more interest in affording them the proper care and shelter. If he were asked what constituted the most pleasing landscape to the farmer, he would reply: to see grazing upon our pastures thorough bred Leicesters and South Downs (and the first cross between these produce splendid stock.) If the County Societies are worked as they may be, with energy and judgment, and with the great assistance received annually from the Government, many of us may live to see introduced into this district an abundance of the noble stock of the Devon, Durham, and the Hereford. The last named are gaining in public estimation. But whatever stock the farmer possesses they must be properly cared for. While regular feeding is enjoined, we cannot dwell too much on the necessity for proper shelter from the cutting north-west winds, and deep snow storms of our severe winter.

"He (Mr. Alexander) would desire to comment upon a very prevailing but erroneous impression which exists with regard to young stock, that it is sufficient if they can only be got through the winter in any way; be-towing the best hay, grain and shelter upon the working and fattening animals. These last are not generally better cared for than they should be, while the young stock is much neglected,

and great loss and injury is sustained in this respect. It is a reasonable to suppose that while a colt is growing, its muscles developing, and its bones forming, that the frame and physical constitution of the animal must depend upon the feeding and shelter during this stage of development. How many horses do we see that have no bottom or constitution? How much degenerate and miserable looking stock of every kind are to be found in every country? The same remarks are applicable to man. Bring up a child with proper care and food, until the constitution is properly formed and he will have health; when he has attained to manhood, he will be better able to sustain hardship and toil. This principle pervades the whole of nature; an illustration may be given from the vegetable kingdom. Fruit trees planted and grown in well cultivated soil acquire a more healthy and rapid growth, and attain to a much greater size than those which are neglected; this extraordinary difference of result has probably been experienced by all present in the management of their orchards.

"He (Mr. Alexander) knew that he would be met at all hands with the reply that our winters are so long and severe, that the farmers generally cannot do proper justice to all their stock. This brought him to the consideration of the manner in which the fodder generally should be secured, and to the subject of the economy of feeding; but before coming to these points, he would again dwell on the great advantages of having the farm yard facing to the south, and so constructed to afford shelter from the drifting storms and cutting winds; for it is an incontrovertible fact, that less nourishment is necessary where the proper warmth of the body is kept up. Numberless experiments have been tried to establish this point, one of which he would quote from Prof. Johnson's lectures: twenty sheep were kept in the open field, and twenty others of nearly equal weight kept under a comfortable shed, they were fed alike for the three winter months, having each per day  $\frac{1}{2}$  lb linseed cake  $\frac{1}{2}$  lb barley, with a little hay and salt, and as many turnips as they wished to eat. The sheep in the field consumed all the barley and oilcake and about 19 lbs of turnips each per day, so long as the trial lasted, and increased in the whole 512 lbs; those under the shed consumed at first as much food as the others, but after the third week they ate 2 lbs each of turnips less per day, and in the ninth week 2 lbs less again, or only 15 lbs per day. Of the linseed cake they also ate about  $\frac{1}{3}$ rd less than the other lot, and yet increased in weight 790 lbs or 278 lbs more than the others; this too with nearly 200 lbs less of oilcake and about 2 tons less of turnips."

"The time and manner of securing the different kinds of fodder, are very material points to be considered. After grass has attained to the full size and height, it loses by delay in cutting, and becomes soon transformed into dry indigestible, woody fibre. The same occurs to the straw of the different grains and corn stalks. Most good farmers coincide respecting the early cutting of all the grains on account of the great additional value of the straw as an article of fodder. Some writers press the early cutting of the grains for other reasons. Norton maintains that wheat cut many days before it is ripe, not only weighs heavier, but measures more, that it is better in quality producing a larger proportion of fine flour to the bushel. He (Mr. Alexander) should like to hear the opinions of those present upon this important point. We had to determine the earliest moment at which it is safe to harvest the different crops for the preservation of the grain. The great value of pease straw cut early, in wintering sheep was well known; and he was of opinion that Indian Corn might be grown more extensively with advantage in this Western

country, as a grain remarkable for its nourishing properties, while the corn stalks when cut as above and properly cured, are held by many farmers to be equal to the best hay. Norton says, "if put into small stacks in the field with the butts well out, so as to let the air in, and the tops tied together; they dry green, sweet, and tender, so that all stock relish them highly." The farmer having secured his fodder in good order, the only remaining point to be dwelt upon, was the frugal management of the same, the tuning it to the best account when there was a large stock to winter. Regularity of feeding was a great matter, and taking care that they had access to water. He was surprised that the straw-cutter was not more generally in use, it enables the farmer to feed his straw to greater advantage mixed with hay. Cut stiff, wet previous to feeding, with a small quantity of Indian meal, or ground oats, or bran sprinkled over it, was found to be very advantageous for young stock, milk cows and fattening animals. Upon a large farm, there might be a horse-power connected with the straw-cutter, which would render it a very easy matter to cut for a large quantity of stock. He saw at the Provincial Show in Toronto, a single horse-power in connection with a saw for cutting firewood; such might be used for different purposes, and effect a very great saving of labour. But he (Mr. Alexander) feeling that he had already trespassed too long on their attention, would not make any further remarks on the present occasion."

Mr. BLISSON, the Superintendent of Blandford, who generally carries off some of the prizes at the County Show expressed his views at considerable length, respecting the care and management of stock.

Mr. LEMON, (Councillor of East Oxford) explained the system of feeding practised in two of the Eastern States of the Union, dwelling particularly upon the value of Indian Corn; but was afraid it could not be grown in this Township with the same certainty of success as in other parts where he had been residing. It was probable, however, that some of the kinds might be selected to prove a more certain crop than that generally grown here. Mr. Bates of Norwich bore testimony to the great value of corn-stalks when properly cured; gave his method of stacking them; admitted the great importance of shelter to stock; giving different ideas of the construction of farm buildings.

Mr. GARRETT gave a calculation to the meeting of the expense at which turnips could be raised; he thought that with the aid of a horse hoe and cultivator, this crop would remunerate the farmer for his labour. Turnips would be a great aid in wintering every kind of stock, while the cultivation required would be beneficial to the land.

Mr. HENRY PERNS (Vice President) said that in his system, he divided his stock into three different classes, and fully explained his views on the principles of feeding, which were highly approved of by all present.

Mr. Hart, Mr. Allan, and others, replied to the different speakers. Mr. Allan bore testimony to the great advantages of the straw-cutter which he had formerly been accustomed to. He approved of the idea of connecting a horse-power with the straw cutter. Such would effect a great saving of labour to every farmer who could afford to purchase one. The subject of the comparative value of different kinds of produce having been mooted, the President stated that according to a table arranged by Boussingault, 10 lbs of hay gave as much nourishment as either 67 lbs of turnip, 38 lbs of carrots, 31 lbs of potatoes, 54 lbs of field beans, 6 4-5 lbs of oats, or 38 lbs of oat straw.

The discussion was more warmly supported towards the end, when the diffidence which was at first man-

ifested began to disappear; and I would remark that if some of the members would upon future occasions, come with full notes of their different views, a much greater amount of valuable knowledge might be published.

The President, before adjourning, expressed the hope that all would become members of the County Society. It was much to be regretted that it had been hitherto so indifferently supported. He would with all deference say, that it reflected upon a county of such importance as this, that there was not more interest taken in this useful institution. There have been various reasons assigned and excuses alleged, but none of those constituted grounds for not joining the Society, because if those parties had any improvements to suggest, respecting the arrangements or the manner in which it is conducted, the proper plan was for them to become members, and use their influence to amend whatever they thought defective. The sum of £250 is annually obtained from the Government a large part of which is at their disposal; and he would rejoice to see a large accession of members at the next annual meeting. He would also recommend to their notice the *Canadian Agriculturist* a periodical edited with much ability, by Mr. Buckland the Secretary of the Board of Agriculture. It was issued monthly and always contained a great variety of matter deeply interesting to the farmer. Twenty five persons clubbing together could procure it for half-a-dollar each per annum.

The only remark he would make at present was, that he hoped to see more of the young men at these meetings, that although they might not take part in the discussions, they would be acquiring knowledge which would benefit them in their daily pursuits. Our hopes are in the growing intelligence of those "springing up around us."

The next meeting is appointed to be held in the Town Hall, on Thursday, the 20th January next, at 2 o'clock, P. M.

SUBJECTS FOR DISCUSSION.—1. The kinds of Stock which are best suited to this climate and market, and which it is most advantageous for the farmer to raise. 2. The character and weight of horses which should be introduced by our Societies. 3. The individual merits of the different breeds of sheep, cattle, and pigs, as adapted to this country. 4. The selection of Seed, embracing the consideration of every kind of Produce—wheat, (spring and fall); oats, barley, peas, potatoes, corn, and turnips.

The members of the Committee to meet punctually at one o'clock P. M.

Yours, &c.,  
L. C. TEEPLE,  
Secretary.

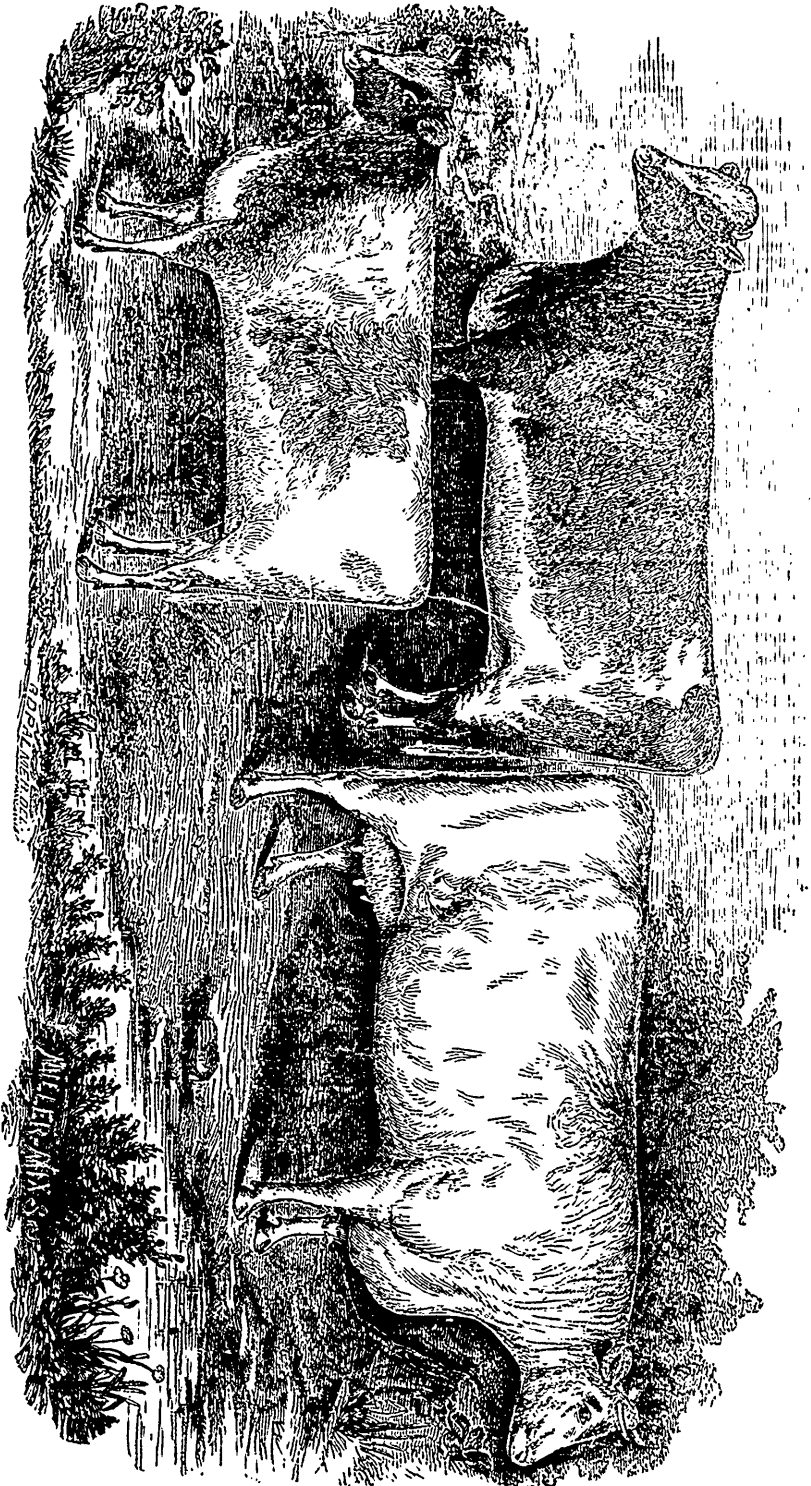
Woodstock, December, 1852.

SHORT-HORN PRIZE HEIFERS.—THE PROPERTY OF S. P. CHAPMAN MOUNT PLEASANT FARM, CLOCKVILLE, MADISON CO., N. Y.

G. BUCKLAND, Esq.

DEAR SIR,—These heifers (portraits of which I herewith send you) were exhibited at the Show of the New York State Agricultural Society, held at Rochester in 1851, and, in connection with three of my cows, Ruby, Charlotte, and Daisy 3d, won the first prize collectively, as "the three best Short-horn Heifers under three years of age, and the three best Short-horn Cows over three years of age, owned by one person."

These heifers were again exhibited at our late State Fair, held at Utica in September last.



1. DUCHESS

2. HIPPA 4th.

3. RUBY 2nd.

Duchess here won the second prize for Short-horn Cows, being herself *but three years old, and competing with aged cows*. Ruby 2d won the first prize for two-year Short-horn Heifers, and Hilpa 4th the first prize for yearlings.

At the Show of the Madison Co. Agricultural Society, held in September last, these heifers won respectively the same prizes as at the State Fair at Utica. At this Show my short-horn cow Ruby won the first-prize over Duchess. Ruby was a first premium "milk cow" at our State Fair in 1850. Charlotte was a first prize short-horn cow at our State Fair in 1849, and won a "Certificate," which is a higher prize, in 1850. Halton, bred by Geo. Vail, Esq., and formerly owned by the Hon. Adam Fergusson, also won the first prize as the best short-horn bull at our last State Fair. The second premium bull sold for \$500.

**PEDIGREES.**—Duchess, white, bred by S. P. Chapman: calved 25th June, 1849: got by the imported Bates bull, Duke of Wellington, 55 [3654], bred by Thomas Bates, Esq., Kirkleavington, Yorkshire, England; dam [Matilda] by White Jacket [5647]; g. d. [Hart] bred by and imported by the late Thos. Nollis, formerly of Blythe, Yorkshire, England. Duchess is an excellent milker.

Ruby 2d, roan, bred by S. P. Chapman calved 27th May, 1850; got by Buena Vista [B. V. by the Bates prize bull Meteor, 104—his dam, Queen 2d, bred by Chas. H. Hall, &c.]; dam [Ruby] by the Bates bull Symmetry, 166; g. d. [Willey 3d] by Mars; gr. g. d. [Young Willey] by York; gr. gr. g. d. [Old Willey] imported. See *Am. Hd. Book*, page 238.

Ruby was awarded the first prize at the Show of the New York State Agricultural Society in 1850, in class of "milk cows." She gave, in that season, during a period of eighty successive days, *over four thousand pounds of milk, her feed grass only*. 19 lbs. of her milk gave one of butter.

Hilpa 4th, roan, bred by Geo. Vail, Esq., of Troy, N.Y.: calved 9th April, 1851: got by the imported Bates bull Duke of Wellington, 55, [3654]; dam, the imported Bates cow [Hilpa] by the Duchess—Bates bull Cleveland lad [3407]; g. d. [Hawkey] by Red Rose—bull [2493]; gr. g. d. [Hart] by Rex [1375]; gr. gr. g. d. bred by Mr. Richardson, of Hart, England, from an old and celebrated milking tube of short horns. I paid for this heifer, at the age of 2½ months, \$300.

I am, Sir,  
Truly yours, &c.,  
S. P. CHAPMAN.

Clockville, New York, Nov. 16, 1852.

#### REMARKS.

We have much pleasure in presenting our readers with a well-executed cut of some fine specimens of Mr. Chapman's stock; although the engraving of Ruby, we are informed, does not do that splendid young animal full justice, and Mr. Chapman intends having another sketch

taken of her. She has beaten two imported heifers and many other fine animals at public shows, and her owner informs us that he would not accept \$1000 for her.

The celebrated bull "HALTON," formerly owned by the Hon. Adam Fergusson, who sold him to Mr. Chapman, won the first prize at the last New York State Fair at Utica, where he could readily have been sold for \$1,000, but so high is the estimation in which he is held by his present owner that hardly any price would tempt him to sell him. Mr. Chapman says that he is the finest bull he ever saw. We just mention these few facts, not merely on the authority of Mr. Chapman, for several gentlemen, both here and in the States, whose judgment and impartiality we are bound to respect, have confirmed to us more than is before stated as to the many excellencies of Mr. Chapman's herd. Mr. Chapman intimates his intention of coming to our next Provincial Exhibition at Hamilton, where we shall be most happy to see him, with as many specimens of his cattle as he can manage to bring. We trust that the "water" will form no impassable impediment.—EDITOR.

#### AGRICULTURE AND COAL FIELDS OF OHIO VIEWED IN REFERENCE TO CANADA.

To the Editor of the Canadian Agriculturist:

SIR,—I have lately returned from a tour of inspection, chiefly agricultural and mineral, in Ohio and the adjoining States: and having promised to contribute a brief review of facts, which may be considered of public interest, I avail myself of the first leisure to do so.

It must be conceded that Ohio contains some fine agricultural sections, and the splendour and general arrangements of many of the Farm Buildings, indicate the wealth of the proprietors; but they do not appear to have effected much in the way of drainage which in many sections is very much needed, and doubtless is the cause of sickness so prevalent in many parts of this fine State. Exactly similar results were experienced in some of the midland counties of England some years ago, before the drainages were effected, and doubtless from similar causes. When viewing the country as a practical Farmer, it did not appear that they are in anything superior to us Canadians, they have indeed a very fine breed of horses and very large and fine cattle, chiefly crosses of the Durham and Devon; but as sheep farmers, any one knowing his business as a flock master, would say—"they do not appear to understand it," but very few good sheep, in fact, were to be seen anywhere. In passing through any new county a true index may be found in the butchers' stalls on market days, and in this respect they are inferior to Toronto or Hamilton, both in quality and price; their best samples of wheat



are about the same quality as our own, but in the growth of Indian Corn an exception may be claimed in their favor, and their extensive system of hog fattening will pay handsome profits this year. I have much pleasure in expressing my acknowledgements of the general kindness and attention of the American farmers and people, particularly from Dr. Newbury of Cleveland, and his venerable father, one of the proprietors in the coal region, and shall be happy to reciprocate their hospitality. But for all practical purposes as an Agriculturist, I must say that I returned to my own location on the Grand River with entire satisfaction.

In examining the coal regions of Ohio it is interesting to find the similarities to some of the English mines, particularly the Forest of Dean Coal Works in Gloucestershire, the general features of the mines, the mode of working by inclined planes, or orbit levels, and other facts in which there exists a combination of circumstances to enable the proprietors to secure the extensive transit afforded by the adjoining lakes in turning to profitable account these inexhaustible resources of fuel. With regard to the probability of finding coals in Western Canada, as mentioned in a former communication, there appears to be many corresponding features with the coal field in Michigan, and these connected with the N. E. and S. W. strike through Western Canada, warrant the conclusion that the measures will be met with in Western Canada as the progress of clearing goes on; but the discovery of coal measures in Canada becomes a matter of but little importance at present, because the facilities for working the Ohio mines by the cheap mode before described, with the advantages of a canal and railroad to Cleveland, will enable the proprietors to deliver coals anywhere on the shores of the adjacent Lakes cheaper than could be done by the expensive machinery required for perpendicular shafts.

Another fact which has come under my notice is the expectation of finding Poets' clay, of good quality, a material much desired, and I beg to recommend this subject to the attention of the Provincial Geologist. There is in Brantford a large manufactory of brown pottery, in which many articles of considerable elegance are exhibited, and prove that only a finer description of material is needed to enable the proprietors to equal some of the more inferior, or second class Staffordshire ware; the manufactures at Brantford have also hitherto labored under the disadvantage of getting all their clay from the New England States, through the defective navigation of the Grand River, in which their boats have grounded and finally sunk. The best material for the finest description of Staffordshire ware in England is obtained from the mines in Dorsetshire; the late Mr. Wedgwood himself took great pains in selecting the best veins; could Potters' Clay of somewhat similar quality be found near the frontage of our great Lakes, (which appears very probable) it is not unreasonable to predict that our own manufactories would soon render it necessary to import such large quantities of this brittle material. I have only to add on this subject that having many years ago been associated with Mr. John Smith, the younger brother of the author of the first Geological map of England, in a survey and subsequent examination by boring for Potters' Clay and other minerals, on an extensive tract in the south of England, I would readily afford my gratuitous assistance in any research of the kind alluded to; the locations to which particular reference has been made, is under the silicious sands and inferior clay near the shores of Lake Erie; they more closely represent the Dorsetshire clay field than any other location I have seen on this side the Atlantic.

Having in former communications contributed some papers on Geological developments connected with Agriculture, I avail myself of this opportunity to state a few remarks on the last report of the Provincial Geologist recently received. It is decidedly the best of the series, but it is still defective and unintelligible to general readers from the absence of a Glossary or explanation of the numerous scientific terms, many of which are not to be found in Lyell, or other standard authors, but has ever been by all considered a necessary appendage. It has been further remarked that in works of this kind, "Practical utility should be the object kept in view, rather than a display of scientific knowledge." In the last Report, pages 28 and 29, we are informed of the discovery of Phosphoric Lime Stone, which is thought will greatly benefit the Agriculturists when burnt into lime. With reference to this suggestion I beg to state that, in several experiments I have never found any beneficial effect whatever from phosphorus, as such, in any shape. An experiment in a quantity of decaying wood, luminously phosphorescent, produced no perceptible effect on vegetation. Another experiment of decaying Fish also luminously phosphorescent produced luxuriant vegetation, in this case however the effect of the ammonia generated in decomposition produced a saponaceous compound, soluble in water, which explains its effect on vegetation. I beg also to suggest with reference to lime burning, that the same degree of heat necessary to drive off the Carbonic Acid, will also destroy every vestige of phosphorus. The black or dark colour lime stone requires the greatest degree of heat or longer continuance of fire to destroy the excess of carbon, from which the colour is derived.

Since writing the foregoing I have observed in Mr. Murray's Report page 30 a description of certain Bituminous incrustations in Enniskillen, County of Kent. Now this is an interesting fact, as it proves the existence to a certain extent, of mineral masses of that material in Western Canada,—trace a line on the map N. E. and S. W. as before described as the strike, it will be seen that it passes near the place referred to, it is indeed the very line which I had chalked out for my own exploration and amusement next summer. With reference to the fact stated in Mr. Murray's report, I have known similar cases in Europe where veins have ignited by the decomposition of iron pyrites, and distillation carried on until the fire has appeared at the outcrop.

I am, Sir,  
Your obedient servant,  
HENRY MOYLE.

Sheep Walk near Brantford, }  
December 12, 1852. }

EXPERIMENTS WITH POTATOES—AUSTRALIAN GRAIN, &c.

Wiltont, Nov. 26, 1852.

To the Editor of the Canadian Agriculturist:—

DEAR SIR,—Having reason to believe that potatoes, planted in the fall, in favorable situations, would be successful, I have this year planted a bushel,—they have been mulched, [a Yankee term], and I propose also mulching one-half an acre in the spring; the result, as well as some accounts of the produce of some Australian wheat, barley, and oats, presented me by Frederick Widder, Esq., I will communicate to you next year.

Knowing the great interest taken by the farming community in our Provincial Exhibition, any sugges-

tion tending to its usefulness would probably be considered; I would therefore recommend that Diplomas be granted to the *Breeders of Stock*, to the proprietors of which are awarded Premiums. In England it is usual to give Medals. It is, in my opinion, highly important, for various reasons, that the name and residence of the Breeder should be made public, whether residing in England, the United States, or Canada.

I perceive there is a long letter from Mr. Parsons in the last number of the *Agriculturist*; I shall make no reply to it, further than to observe, that as he has taken some trouble to advertize my Devons, I have none to dispose of; on the contrary, I am now, and have been, a purchaser for the last year. Your readers will, I doubt not, give fully as much credence to the reports of the *Colonist* and *Genesee Farmer*, as to one emanating from Mr. Henry Parsons. Should any of your subscribers trouble themselves to get through Mr. Parsons's ramdomontade, I beg to say it is intended for an answer to a short communication of mine in the August number of the *Agriculturist*, the truthfulness of which, in every respect, I am now more than ever convinced of.

I am, dear Sir,  
Yours truly,  
DANIEL TYE.

[We shall be glad to be made acquainted with the result of Mr. Tye's experiments with Potatoes and Australian grain as soon as obtained. Any suggestions relative to the improvement of our Provincial Exhibitions, from whomsoever they come will always be thankfully received, and we doubt not will be carefully considered by the Board of Managers. In this way a progressive advancement towards perfection will be ensured.—Editor.]

#### LETTER FROM MR. SOTHAM.

RIFFARD Livingston Co., }  
N. Y. Nov. 29, 1852. }

MR. EDITOR,—I see by your report, that the Hereford Cow and heifer owned by Baron de Longueuil were deemed worthy of first and second premiums. I was in doubt whether your judges would allow it from their *outward appearance*. These were instances of unsuccessful "in and in" breeding—own brother and sister—son and dam. Ranty 2nd was offspring of the latter. I purchased their dam in England of Mr. W. Hewer, knowing her to be closely bred, and continued to breed "in and in" from this family for twelve years. I am now satisfied with the result, having bred three blind calves. The cow and heifer above mentioned degenerated in symmetry, and appeared to lose constitution, and did not grow as they ought to do. I sold the Baron a yearling bull—"Climax"—bred from the stock of John Price, Esq. My brother purchased Cynthia, this dam, and her bull calf, now two years old, for me in 1850, of Geo. Drake, Esq., Manor farm, Essex, England. Climax was calved in America the following spring, and is as well bred as anything alive belonging to the Pigeon family on one side, and Woodlap, (the well-known prize cow at Southampton in 1841) on the other. Although the cow and heifer named above are too closely bred, there is as good blood in their veins as ever run in an animal

of any breed. I make the above statement for your readers to observe at some future show what progeny the Baron will be able to exhibit from them, the bull being no relation. It may be a good "practical" lesson to some of your readers. I have had a little experience in high and low priced cattle. I gave 70 guineas for a Hereford Cow because she was highly recommended to me by her breeder. I bought another of him at the same time, equally well bred for £22, which proved the best cow, and so did her whole family. This, with many other similar instances, convinced me that a *well bred cow*, a little deficient in symmetry, retaining her quality, will breed superior animals, if the bull is judiciously selected. Hence the importance of a well authenticated pedigree. In my opinion the price is no criterion of goodness. Some men have more money than others, and a strong desire to run them up to high prices, for the purpose of notoriety; and think when they have so purchased their credit is established. Then pay well to get portraits of many of their animals in all the papers they can, with too many "strait lines" in the engravings. However erroneous their judgment, they are great breeders at once in their own estimation. My opinion is that all who pay over \$150 for a beast is to be charged to his "tancy." Any "Coxcomb" can procure the best who has money enough, but I know such a person cannot perpetuate them without the assistance of others. All animals vary in price according to the spirit of the purchaser. For instance: Mr. Vail of Troy purchased the short horn cow "Skylark" at Mr. Allen's sale for \$100, took her to his own herd, kept her two months, improved her condition, and sold her again at his sale, subject to the same bidders, and many others more spirited. She was knocked down by the same auctioneer to Mr. Parsons for \$75. (See *Wool Grower*, the report of each sale which I send you.) Probably the latter gentleman can give us some reason why this cow depreciated in value 25 per cent in so short a time, and under such circumstances.

And now that I have him in view, I will reply to some remarks in his letter of the 23rd of April. I think it is an important item for your readers (many of whom I hold in high estimation, and in whose judgment I have the highest confidence,) to know the age of Mr. P. when "he grazed thousands of Devons, and hundreds of Herefords, as well as Scotch, Welch, and sometimes Irish." He does not say whether it was "thousands or hundreds" of S. H. but I presume he would have us to believe they "exceeded all others." Now, Mr. Editor, if I mistake not, Mr. P. was in Ohio, in 1833, where he grazed neither of the above named cattle. Probably he will tell us in his next letter where it was, and how many acres he fed this enormous quantity upon, and whether they "handled soft" when ripe, your readers will then be able to form some idea of *youthful capability*, and will have a better opportunity to discern from whence "the bile oozes from every pore;" which issues the most "trash," gets the "hard raps," tells the "untruths," swallows the "bitter pill," is the most "cruel," has the most desire to "gull," his readers, has the most "sel-

fish motive," is "blowing his loud trumpet," is most "straightforward," is the greatest "rodomontade," or is "gasconading;" which has the most "puerility and pretensions;" possesses the greatest share of "malicious feeling;" makes the most "false statements," or is the most "contemptible," &c. &c. I am perfectly willing to leave all these hard words to your readers—they may reflect back upon the writer when the truth comes to light. Notwithstanding Mr. Parsons tells them "I am the man." He may have to exclaim in his own language "Oh the Gods" &c. "where am I."

Mr. Parsons says in one part of his letter that he had always seen a number of beef cows of mine at our fairs. In another he says: "At Black Rock, where I understand he has said he could not get his Herefords fat." Will Mr. P. please to tell your readers which of these he intends for the truth.

I think it no more than proper that the name of the person he "under-tands" it from should be known. I deny the charge, and will prove it. Probably it was the same gentleman who "very quietly assured him" that I told him that hard handling was characteristic of the Hereford Bulls." I deny both these charges *in toto*, and will defy Mr. P. to find a Hereford Bull that has not a moderately thick mellow hide with elastic handling under it, when in good store condition. Mr. P. says he can prove what he writes any day. Why not do so then when he writes?

Another point: will Mr. P. name one breeder of S. H. that makes it a practice to feed the steers he breeds. I know but few of them do so, and I also know that I can go into Darlington fair, in the County of Durham, at any time, and buy any reasonable amount of Short Horn steers. If Mr. P. will refer to the report of these fairs, he will invariably see "coarse and inferior cattle quite a drug," or some similar sentence. I ask him to refer to the Hereford fairs, and he will find just the reverse. The former is the district of the Short Horns, the latter of the Herefords, and where very few other breeds are offered. The Hereford steers are generally bought up a day or two before the fair, and often at the breeders own premises. I have been waiting patiently for Mr. P.'s friend's answer as to what that "Niagara Short Horn Cow really is." I hope that judge of Short Horns is not one of that clique of "quiet gentlemen," but one who will come out with the truth without fear or favor.

I will now tell you a circumstance that happened a short time since. A certain gentleman who was once a Short Horn breeder, whose name I am willing to mention, if necessary, had an order for a number of cattle and sheep to send to Cuba. He purchased several Short Horns, Devons, and Sheep of other breeders, and a pair of yearling Herefords of me. The following statement is in a letter I send you to me from a gentleman who assisted in the purchase. Please return it to me. "The two yearling Herefords purchased of you in 1844 were sent to the Island of Cuba, and as far as I know are still living. They are the only two animals that survived which accompanied them. The Short Horns,

Devons, and Sheep, all died soon after their arrival."

Does not this speak something in favor of the constitution and hardness of Herefords? But how quietly this secret was kept; or did the gentleman "quietly assure" Mr. Parsons of it. I wish some of these very quiet gentleman would tell their own stories; it would be more manly than leaving it to Mr. Parsons to do it for them. In my next I will give you my ideas of hard, soft, and mellow handling.

I am, dear Sir,

Yours sincerely,  
WM. H. SOTHAM.

P. S.—Since reading Mr. Parsons' letter to Mr. Tye in your last number I shall not be surprised at what his vanity may lead him to do. I think that letter thoroughly answers itself, and needs no further comment. Some of your readers say they should have liked it better if it had been "more brief." It "may or it may not" be called "*ad captandam* style of writing."

[As this controversy has been too much characterized by offensive personalities, and as there appears no evidence of improvement, in this respect, the longer it proceeds, we feel, as most of our readers doubtless do, that its termination has now become desirable. To any short explanations from either Mr. Sotham or Mr. Parsons, our pages shall be open; and Mr. Sotham's views on the "Handling of Animals," will be acceptable, if divested of personal reflections, and allowed to stand upon their own evidence and merits, of which our readers will be the proper judges. Throughout this discussion our only wish has been that truth might be elicited, and we have endeavored to act fairly by both parties; and we have now come to the conclusion that no advantages are likely to come out of it, by being pursued in its present form and spirit.—EDITOR.]

#### FURTHER SUGGESTIONS FOR IMPROVING THE MANAGEMENT OF THE PROVINCIAL EXHIBITIONS, BY THE PRESIDENT OF THE ASSOCIATION.

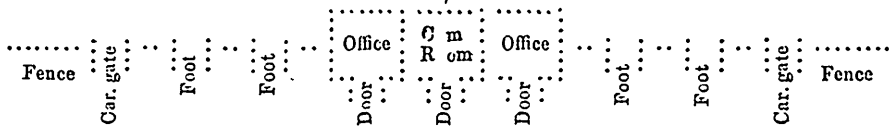
For the Canadian Agriculturist.

SIR,—In my note accompanying the last communication, I stated, that a wish, which, I felt assured was fully united in by the other officers of the Association, to see our Canadian Exhibitions conducted upon a system as free from objections as possible, induced me to take the liberty of offering the suggestions then made. The same object in view impels me again to offer for insertion, further matter for consideration.

*Tickets and Badges.*—In a recent number of a foreign Agricultural paper it was suggested that the substitution of tickets of admission to agricultural exhibitions for badges was desirable, inasmuch as improper use had been made of the latter, which could not well be made of the former. From what has come within my own knowledge I think there is little doubt but the transference of badges may have been practised to some extent at our exhibitions, and to whatever extent that has been the case, the primary interests of the Association have suffered accordingly. Would it therefore not be worthy the consideration of the Association, the restriction of the use of badges to the officers, the members of the local committee; the representatives of the county societies; the judges; the members of the Press and privileged Visitors. And that a tariff of prices be adopted in the sale of tickets, which, while preventing the abuse

of the badge system, would secure all its advantages—namely, convenience in making change, and ease of admission, at a moderate price, without recourse to the officer for tickets. The tariff might be made to embrace—single, family, and horse-men's tickets—also by the half and full dozen at reduced rates.

*Entrances to the grounds.*—Instead of having only one carriage way and two foot passenger gates, one on each side of the carriage way, as at the last show, when there was much crowding, confusion, and delay to those who desired to pass quietly and quickly, and loss to the exhibition funds by persons passing without paying, I would suggest that the office booths be so constructed that there could be a carriage way near to each end, and two foot passenger gates in the space between the carriage way, entrances and the ends of the said offices—say, something like the following sketch :



This would give additional accommodation beyond what has hitherto been afforded. In connection with the subject of improvement in entrances it may be remarked, that it would also be most desirable that some of the members of the local committee take turns in overlooking the approaches and seeing that constables did their duty, and at the same time were not imposed upon. "A little brief authority" would have a salutary effect in this respect, as well in preventing crowding and confusion. By having the office booths placed on the plan suggested, and a board left off the end of each facing the gates, an eye upon the entrances could always be kept from within if necessary.

*Plan of grounds and printed list of entries.*—Should the Association adopt the plan suggested in a late number of your journal, of having the list of entries filled up and returned from each County one month before the date of holding the Exhibition, would it not be an improvement on the part, to have printed in small cheap pamphlet form, a catalogue of the contents of the various entries returned to the association, omitting, however, the names of Exhibitors. The cattle, productions, &c., from Canada East, and from the United States could also be embodied in the pamphlet, providing intending exhibitors desired to avail themselves of such publicity, which very many no doubt would, and furnish lists of their intended contributions about the same date as from counties in Canada West. Forming part of this pamphlet, might also be introduced a sketch of the proposed exhibition grounds, showing generally where the various classes of productions would be found; as well as any other explanatory matter which the Association might deem desirable to embody. The pamphlet might be got up by one of the many enterprising Canadian publishers at short notice, and at a moderate cost; the Agricultural Association paying a bonus to the publisher to enable the work to be sold cheaply, and ensure against loss. The contents of the pamphlet would be found most useful and convenient in the hands of visitors to the exhibitions; and to those who are not agriculturists or mechanics, and do not have an opportunity of seeing or at any rate do not take much interest in the premium list published before the show, or the list of awarded pre-

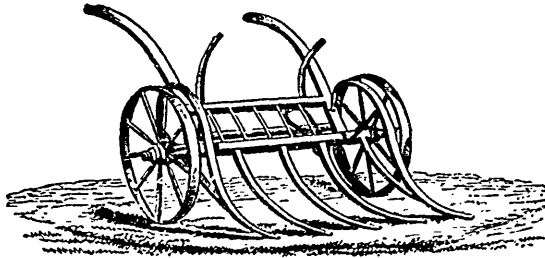
miums published after, in the Agricultural Journal it would serve as a remembrance of the pleasure enjoyed, and a record of what they saw at the exhibition; as well as showing to their absent friends and children what was exhibited, and in so doing, an enlarged interest and pride might be stimulated and diffused among all in this valuable Canadian institution.

*Attention to distinguished Visitors and the Press.*—Complaints have been made that at the last exhibition there was no sub-committee to receive distinguished and other visitors from a distance, and provide for them information as to where they would find ready and comfortable accommodation, and to show them those other little, but to strangers, most acceptable attentions, and which adds so much in conveying favorable impressions abroad. The members of the press from a distance should have special attention in regard to providing for their accommodation; and to the whole press every source of information connected with the exhibition should be opened, as it is through the circulating press—which, it may be said, now reaches every man's home, whether he lives in a log shanty in the woods, or in a cut stone house in a distant city—a knowledge of the collections, and of the sayings and doings is made to flow. To remedy and prevent a recurrence of this cause of complaint, let a portion of the local committee be appointed some days before the date of the exhibition, whose duty it shall be to look out for the necessary information and prepare it so that it may be had at the Society's office on the ground's, by application on the part of the visitors for whom it is intended—or at the principal hotels to which strangers upon arrival naturally first go. To show attention on the grounds and give information as before referred to, a committee whose duty it would be, might be formed on the first day of the exhibition, of those gentlemen who are ex-Presidents, Presidents and Vice Presidents, and who may be present,—but in the absence of a sufficient number of such, others might be selected who would be willing to act during the continuance of the exhibition.

W. MATTHIE,

Brockville, December 1, 1852.

BROWN'S PATENT GRAIN RAKE.



This new implement for raking and binding grain has been invented and patented by Mr. W. Brown of Toronto, and is manufactured by him here and sold for six dollars. It is a very simple and ingenious implement, and will be found well adapted for the purpose for which it is provided. It is almost entirely made of wood so that any mechanic can easily put it in repair, but from the simplicity of its construction it may be worked for many years without any danger of its going wrong. It will be observed by the cut that it has five teeth, these are so bent as to throw up the grain, and when a sufficient quantity has been raked up to form a sheaf, there is a step which is worked by the foot for the purpose of holding it until it is bound. By this means it is an improvement on the American Grain Rake, as it not only gathers the grain, but throws it up for binding, and where grain is ripe it does not get thrashed out by being gathered with this rake as it does with the common hand rake. With this implement one man will follow two cradlers with more ease, and do the work more cleanly, than one man with a common rake will follow one cradler. In one harvest it will far more than pay itself.

DAIRY HUSBANDRY.—BUTTER MAKING.

In no department, probably, is there greater room for improvement in Canadian farming, than the proper selection and management of dairy stock, and the making of butter and cheese; articles constantly increasing in demand, and consequently improving in price. If the present low price of wheat should continue, our farmers will be obliged to discover other sources of profit, among which the dairy holds out, we think, the best prospects; although we have as little expectation as desire ever to see wheat culture occupying a subordinate position, in a country so eminently calculated, by soil and climate, for its successful prosecution. What we require is the development of the various branches of Agriculture in their full and harmonious proportions.

In the current number of the "Journal of the English Agricultural Society," there is a prize Report on the production of butter, by Mr. Thomas Rowlandson, in which the theory and practice of the art are discussed at considerable length, and with much ability, the various investigations which have hitherto taken place, and the essays which appeared on the subject, being freely laid under contribution for the purpose. In the treatment of dairy cows, the injurious effects of want of repose are prominently dwelt upon, as diminishing the quantity of milk. Protection from cold is equally essential to the production of milk in large quantity, as the most nutritious food;

and cases are cited in the Report to show the loss sustained in the twenty-four hours, as indicated by experiment, from inattention to these particulars. By exercise, an increased quantity of oxygen is inhaled into the system; and this oxygen unites with part of the butter and consumes it. When a cow is harassed, and runs to escape from the annoyance, her milk becomes very much heated, diminishes in volume and richness, and speedily becomes sour. When undergoing exercise heat is evolved by the combination of the oxygen with the butter, which in turn elevates the temperature of the milk, and acetous fermentation being induced, the milk becomes sensibly sour. The quality of the food has also much to do with that of the milk. The quantity of casein in the milk, for example, is intimately connected with the nature of the food, being more abundant when supplied with bean and oatmeal, than when partially fed on potatoes—a circumstance which shows us that within certain limits the quality of the milk may be made to vary in its composition by regulating the food.

On being drawn from the cow the milk should forthwith be placed in shallow vessels, for which purpose the glass pans are preferable to any other. The depth of the milk in these pans should not exceed four inches, and it is stated that two inches is the best depth. In a dairy maintained at a proper temperature, the cream should be gathered every twenty-four hours, and in very hot weather the milk should not stand more than eighteen hours. The butter may be obtained from the milk by either of the following methods:—

1. Sweet cream churned alone.
2. Sweet milk and its cream churned together.
3. Sour cream churned alone.
4. Sour milk and its cream churned together.

### 5. Scalded or Devonshire cream churned alone.

Of the comparative produce obtained by treating a quantity of milk by each of these methods, we have the following account:—On the 24th May, the Milk of four cows was drawn into the same vessel, and divided into five portions of six English pints each, the temperature ranging from 55 degs. to 60 deg. On the following day the air was very hot, 76 degs., but that of the milk-house was kept about 60 deg., by the constant evaporation of water. On the 26th, thirty-nine hours after the milk had been drawn from the cow, it was removed from below the cream of No. 1 and No. 3, by a syphon; the cream from No. 1, and the milk and cream from No. 2, were immediately churned in glass vessels:—

No. 1.—Sweet cream churned alone. From previous trials it was found that the addition of cold water to thick cream facilitated the separation of the butter; half a pint of water was added to the cream, the temperature of the mixture at the commencement of churning was 62 degs.—In 15 minutes butter appeared in grains; the churning was continued for 12 minutes longer, or 27 minutes in all, when the temperature was found at 70 degs. The butter was collected, but from the warmth of the weather was very soft. It was put into cold water until the next day, when it was worked and washed in the usual way, and weighed 1,386 grains. It was of a good colour, and perfectly well flavoured.

No. 2.—Sweet milk and its cream churned together. The mixture of sweet milk and cream was churned at the same time; though cold water was added after one half hours' churning, no butter was seen. The churning was continued three hours without obtaining butter.

No. 3.—Sour cream churned alone. On Thursday, the 28th of May, the cream of No. 3, which had been separated on Tuesday, and placed in the milk-house, was now slightly acid, and was churned after half a pint of cold water had been added to it. In twelve minutes butter appeared; and in eight minutes more had united into one mass. During the churning the temperature of the cream had risen from 54 degs. to 63 degs. The butter, when well washed and worked, weighed 1,756.5 grains; the colour and taste were very good.

No. 4.—Sour milk and its cream churned together. On the same day, 28th May, the milk and cream which had become acid were churned together, and half a pint of cold water was added. It was full fifty-seven minutes before any butter appeared, and before the churning appeared to be completed, one hour and fifty minutes had elapsed; showing clearly that more time is required to churn milk and cream together than to obtain the butter from cream alone. The butter was diffused in small grains, and when washed and worked as long as any colour was communicated to the water, it weighed 1,968 grains; colour paler than the last, but of good flavour.

5.—Clouted cream churned alone. On Tuesday, the 26th, the milk and cream of No. 5 were

placed in a vessel of warm water until the temperature of the milk rose to 156 degs., a Devonshire dairymaid assisting in the operation. The milk was drawn from below the cream by a syphon, the latter being kept cool until the following day, when it was churned.

It was ascertained that by churning the milk of Nos. 1 and 3, a few more grains of butter could be obtained on some occasions, but on no occasion from No. 5, so completely does the scalding process separate the butyraceous matter from the milk. The butter of No. 5, when well worked and washed, weighed 1,998 grains. It had a rich yellow colour, and tasted agreeably.

Similar experiments were repeated, the result of which was, that the largest amount of butter was produced by the Devonshire method; the next in quantity by churning the milk and cream together when a little acescent; the third in quantity was afforded by cream kept till it was slightly sour. The smallest quantity was obtained from sweet cream; but on no occasion was butter obtained by churning sweet milk alone.

In order to decide on the keeping qualities of the butter obtained by the four processes previously detailed, samples were exposed to the free action of the atmosphere. No. 1 was always found to remain longer without any rancid taste than the other kinds; No. 3 and No. 4 were nearly on an equality—if any difference, it was in favour of No. 3; No. 5 became rancid more quickly than No. 3 and No. 7. When salted for keeping, rancidity appeared in about the same order, commencing in No. 5, or the butter from scalded cream; next in No. 4, from some milk and cream; then in No. 3, or sour cream; and lastly, in No. 1, obtained from sweet cream. The rancidity was supposed to arise from varying proportions of casein; and on instituting experiments to ascertain this fact, it was found that casein existed in lesser proportion according to the power of the butter in preserving its freshness.

In order to ascertain the effects of overchurning, cream of six pints of milk was separated by a syphon, and churned in a glass vessel. The butter was formed in about half an hour; but the churning was continued for half an hour longer, when the butter had lost its fine yellowish, waxy appearance, and had become pale and soft, while very little liquid remained in the churn. This butter could not be washed and worked until it had remained some hours in cold water, being so exceedingly soft when taken out of the churn. After washing, it was pale, rather soft, and weighed 2,566 grains, which was evidently beyond the due quantity, when compared with the other experiments on the same quantity of milk, which gave the following results:—

No.		Grains.
1	The sweet cream overchurned, yielded	2566
2	The acid cream duly churned	2187.5
4	The acid milk and its cream duly churned,	2397.5
4	Scalded cream duly churned	2671

The butter of No. 1 tasted insipid, never became firm, and soon turned rancid. It was found

to yield an unusual quantity both of casein and watery fluid, which could only be separated by melting the butter.

It is a common opinion in some districts, that by adding hot water to the churn, more butter is obtained than by using cold water. Experiments made for the express purpose did not show that the weight increased very much, and it was attended with a perceptible deterioration in quantity, giving it generally the appearance of over-churning.

The results of the experiments above detailed are,—

1st. That the addition of some cold water, during churning, facilitates the process, or the separation of the butter, especially when the cream is thick, and the weather hot.

2nd. That cream alone is more easily churned than a mixture of cream and milk.

3rd. That butter produced from sweet cream has the finest flavour when fresh, and appears to remain the longest period without becoming rancid.

4th. That scalded cream, or the Devonshire method, yields the largest quantity of butter; but if intended to be salted is most liable to acquire a rancid flavour by keeping.

5th. That churning the milk and cream together, after they have become slightly acid, is the most economical process for districts where buttermilk can be sold; whilst at the same time it yields a large amount of excellent butter.

Mr. Rowlandson further observes, that milk is composed of casein, butter, sugar, water, and a small amount of inorganic salts; it has also been stated that the covering of the fatty globules of the milk is dissolved by acetic or lactic acid; seeing this, it is easy to conceive that cream or milk, a little acetous, will "give" the butter with less labor in churning than when the milk cream is void of acidity. Milk like the juice of fruits, such as the grape, apple, pear, &c., contains the principal ingredients requisite for the vinous fermentation, viz., sugar, and a protean compound—soluble albumen—the latter liable to enter into rapid changes when exposed to the influence of the oxygen of the atmosphere; by which means it becomes converted into a ferment, which has the property of slowly, in the first instance, converting the sugar of the milk into alcohol, which latter, by further oxidation, is converted into lactic acid, the lactic acid acting upon the coating of the fatty globules as previously noticed. This action invariably takes place during warm weather, the original fermentative action being somewhat similar to that of the mode of brewing beer at a low temperature, as practised in Bavaria.—Dr. Lyon Playfair has, however, stated that in winter a different action takes place—namely, that during cold weather the temperature is not sufficiently elevated to cause vinous fermentation, and that the action of the oxygen, in the first instance, at this season, is confined to the casein, in other words, the putrefactive fermentation takes place. It is impossible, therefore, to make good butter from milk undergoing such a change

as is here named, for when incipient putrefaction has once commenced, it cannot be arrested by ordinary means, and is consequently imparted to the minute quantity of casein remaining in the butter, and is never wholly extracted; such butter speedily becomes rancid, even in winter, notwithstanding the low temperature of that season is unfavourable to the promotion of putrefactive changes.

The reason why sweet cream requires less churning than cream and milk mixed, arises from the circumstance that in cream alone the absorption of oxygen, which takes place at every agitation, is diffused throughout a much smaller quantity of liquid, the lactic acid formed is consequently much more concentrated, and acts with greater energy on the outer coating of the butter globules; butter, therefore, comes more quickly. It must be observed that, however sweet the cream may be, when placed in the churn, butter is never formed until after the formation of lactic acid. In making butter, sweet cream is a relative, rather than an absolute term, for in fact acetousness commences within a few hours after the milk has been set to stand. In endeavouring to obtain butter from sweet milk alone, the labor required to form the butter is excessive, for in this instance the quantity of oxygen that can be absorbed through the influence of agitation is proportionally decreased in the ratio of the increased quantity of liquid throughout which the butter is diffused; whilst, at the same time, a larger amount of oxygen is required in order to convert a portion of the sugar of milk into alcohol, and ultimately into lactic acid. But in a closed churn a long time elapses before these changes take place; consequently, we need not be surprised to find that Dr. Traill and others failed to obtain butter from a sweet milk alone; yet on one occasion the experiment was tried in Carlou, butter was obtained from new milk under the inspection of the writer, but it took upwards of five hours to produce it, and the butter was of inferior quality, having all the characteristics of overchurned butter. The reason why it is found requisite in practice to churn milk and cream mixed at a higher temperature has a marked influence in promoting chemical changes. Reasons have already been assigned why the lactic acid, formed in milk alone, must be in a much more diluted form than that which will be found in cream slightly acetous; in order to compensate for this, a higher temperature and longer time is required to produce the desired effect.

The preceding phenomena are in strict accordance with the character of the churn used in the various districts where the lacteal products of the cow are churned in different forms. Almost invariably, certainly over the most extended area, the common barrel churn is used in those districts where cream is churned alone. By the barrel churn a large quantity of butter may be made from cream, with a moderate degree of rapidity, and at a comparatively slight expenditure of labour, particularly as cream, when put into the churn, is almost invariably in some degree acetous, generally enough so for the purpose of obtaining the butter without requiring to be further

oxygenized. No practical benefit is obtained by using cream quite sweet, as the increased labour required in churning far more than counterbalances any slight advantage which butter so made may derive for the purpose of keeping. If proper care is taken in "making up" the butter formed from cream slightly acid at the time of churning, it will maintain its freshness equal to that made from fresh cream; and at the same time avoiding the risk of overchurning, which will always be much greater in churning fresh than sour cream. For churning milk and cream the barrel churn is wholly inadequate, the upright churn, or one with revolving dashers, being requisite in order to sufficiently oxygenize the milk, for which purpose this form of churn is well adapted, as there always remain sufficient openings to admit the atmosphere; whereas barrel churns, are hermetically sealed during the act of churning, the operation having to be stopped occasionally for the purpose of opening a vent-hole, which is occasionally done to allow the escape of the gas evolved during the "breaking" of the cream.

The American churn varies only from the ordinary square churns with revolving dashers, in the circumstance that, instead of the dashers being open, the back of the dasher is a flat piece, without any perforation, having raised edges and four transverse pieces, dividing it somewhat similar to the shelves of a book case. When the dasher is turned round, the nests formed as described convey and force into the milk or cream a quantity of the atmosphere equivalent to the cubic contents of the hollow space, which will remain in the interstices alluded to, when their edges comes in contact with the fluid; in order, therefore, to produce the greatest action, the fluid ought to be on a level with the edges of those interstices; this will occur when the latter are in a perfectly horizontal position. This form of churn is the best for churning sweet cream, and will undoubtedly produce the butter from milk and cream, in any form, in much less time than any churn that has yet been introduced; but for working large masses of fluid, the labour would be excessively heavy, and in large dairies, where milk and cream are churned together, steam or other power would be required; it also remains to be yet tested on a large working scale, whether the butter will prove as good as that churned by the ordinary methods. Mr. Robinson, of Lisburn, has for some time introduced a churn from France, which is very neat and simple, and well adapted to gather the butter, having a grating for the purpose, to which also heating or cooling appliances can easily be adapted as the season or case may require.

Churning should be regulated by a thermometer, cold water being applied in summer, and warm water in winter, to obtain the proper temperature, particulars of which have already been given. When the butter is made from cream alone, early, in the morning (about 4 o'clock) is the best period of the day for the purpose. When a change is heard in the sound of the churn, and an equal resistance is felt against the dash-

ers, the butter may be expected to form very shortly.

After the butter is taken from the churn it must be well squeezed or "worked" by the hand, and all the water that possibly can be, should be pressed out, it being for this purpose kneaded, washed, and rolled out several times with clean cold water, and the last time a little salt should be kneaded into the mass, which will have the effect of causing the greater part of the remaining caseous matter to exude when subsequently washed in cold water, salt appearing to have the property of dissolving casein, as it does the albumen of bones, in pickled meats; the whole secret of Dutch butter-making consists in this circumstance. If intended for very long keeping, a small quantity of saltpetre may be added, which will prevent, in a great measure, the tendency of any remaining caseous matter entering into the putrefactive state—the cause of rancidity—the difference in quality between salt used in England and Holland having nothing to do with the superior keeping quality of the latter. If properly made, half an ounce of salt to 1 lb of butter is sufficient if intended for keeping; and  $\frac{1}{4}$  oz. of salt to the lb. if intended for immediate use. The circumstances connected with the formation of butter from clouted or scalded cream have already been sufficiently detailed; for immediate use the quality is not equal to that formed by ordinary methods, and for keeping is wholly inadmissible; the superior weight obtained is attributable to the quantity of casein and coagulated albumen, mechanically mixed with the butter, which it is impossible to eradicate by any subsequent means.

It may be important occasionally to know that a little saltpetre dissolved in warm water, and mixed with the cream taken from milk with a turnippy flavour, entirely eradicates it in the course of churning.

A fictitious colour can be given to butter by the use of annatto, or the scrapings of the red part of carrots; but neither will give the appearance of fine grass butter. All such practices are to be deprecated; the latter described mode, however, is the preferable one, in case artificial colouring is considered desirable.

#### A SUBSOIL COMPANION PLOUGH.

The Oxford Journal, in speaking of the Stow-on-the-Wold and Chipping Norton Agricultural Society, England, says:—

"As soon as the ploughing was over, the company congregated to witness the trial of a subsoil companion plough, manufactured and patented by Mr. Gillet of Brailles. This plough is so constructed that it combines all the features of an ordinary plough with the addition of a subsoil plough, which may be used at the same time, or detached or suspended if necessary. The combination of these advantages naturally excited considerable interest as to whether the implement could fulfil what was said and expected of it, and its trial was looked on with great anxiety. The land selected for the trial was by no means adapted for it, because it was light and rocky,



and therefore the plough could not sufficiently develop its powers, and this was admitted on all hands; but the inventor felt satisfied that even under such disadvantages it would give a tolerable idea of its value and importance. In that conviction he was fully borne out by the trial, for the work was well executed, and the subsoil plough, taking the lower furrow and following in the horses' track, showed at once its perfect applicability, especially for stiff, heavy land, where the horses' tread renders the ground so hard as to prevent the possibility of the water getting away. For all root crops this implement appears to be admirably adapted, and in ploughing for beans, or after turnips, the manure can be most advantageously ploughed in, so as to leave it near the surface, which every one is aware is a most desirable object. The general opinion of all who examined this plough, and witnessed even this trial, was that it was one of the most valuable implements that had yet been brought before the notice of the public, for it not only possesses the advantages of ploughing and subsoiling at the same time, and with one operation, but the cost of this combined power is but a trifle beyond the ordinary plough, and the subsoil can be attached to any plough, while the draught is but slightly increased by it. The cost of the plough complete does not exceed six guineas, and of the subsoil alone to be attached to any other plough, two guineas, so that the expense is not likely to interfere with the demand for an implement which must come into general use as soon as parties become acquainted with its merits. We understand that the patentee has already received numerous orders, and of all the improvements which have been devised for the preparation of the land to receive seed, there is not one which is so calculated to effect its purpose in a more successful manner, and there is no implement of the possession of which a farmer may be prouder. It is not anticipating too much to say that within a twelvemonth there will be scarcely an occupier of stiff, heavy, clay soil, who will not have this implement in operation, for all those who have used it (and it has been at work a short time already) concur in saying that it does most effectually fulfil all that it professes. Great credit is due to the parties who have brought their skill and judgment to bear upon an implement which many were inclined to think admitted of no improvement, but the reverse of which has been developed in so eminent a degree that we doubt not that the inventor will for many and many a year be regarded as one who has conferred a benefit on Society to an extent that perhaps he little anticipated."—*Mark Lane Express*.

A NEW AGRICULTURAL MACHINE.

The Albany *Argus* describes an invention which is designed to supersede the plow, the harrow, the roller, and the man who sows the seed. It says:

"Yesterday we were shown the model of a new, and what purports to be a valuable improvement in one of the laborious department of the agriculturist, and for which the inventor procured

a patent in April of the present year. It embodies in one implement the capacity for plowing with four plows, scattering the seed in the furrows, harrowing and rolling. The plows are ranged at suitable distances, in front of the carls, and the number can be diminished at pleasure, or four used. Immediately following and attached to the plow, are the buckets for the reception of the seed—con—included and from which it is distributed. The harrows follow, behind the wheels of the cart, and the rollers bring up the rear. On the platform of the cart, and forming a part of it is a basin of the same width, which is the receptacle of the seed. Its position is immediately over the buckets, and as the cart goes forward, it is so arranged as to allow the seed to fall, in suitable quantities, in the buckets, below. The platform is large enough for the driver, and will also accommodate several bags of grain. The harrows are also the width of the cart, in two pieces, as are also the rollers, for more easy passage over the ground. The entire arrangement can be removed with ease and the cart used in other capacities upon the farm.

The inventor is Mr. Henry Beebe, a young mechanic of this city. While it appears to be a valuable improvement, and has received the approbation of many distinguished agriculturists, its utility remains to be tested. There is scarcely a doubt, however, that on prairie land it will prove a valuable acquisition to the implements of the farmer."

FARMERS' CLUBS.

To the Editor of the *Canadian Agriculturist*:—

Amongst the various methods for encouraging Agricultural Improvements, the forming and keeping up of Farmers' Clubs, should not be overlooked.

Clubs for the discussion of subjects connected with Agriculture have been common in Britain for many years, and much of the improvement that has taken place in the practice of agriculture in that country, may be traced to their influence, as from them have sprung many of their flourishing agricultural societies; and no doubt but the same beneficial effects would follow, the more general formations of such clubs in this country. Indeed there seems to me to be more need for them here than in Britain,—for there the constantly returning fairs and markets bring the farmers frequently together, affording them opportunities to talk over their pursuits, experiments and prospects. In this country besides the want of frequent fairs and markets, the farmers in every locality come often together from almost all the different counties of Great Britain and Ireland, (besides those that may be natives of the country;) there is consequently a want of that general social feeling, which is common among those that have been brought up and educated in the same neighborhood.

As the labors of the year may be said to be now brought to a close, and as farmers generally enjoy more leisure at this season of the year than at any other, the present is the proper time for farmers to turn their attention to the formation of clubs in those townships or neighborhoods, (for there might often be more than one in a township,) where they do not already exist, as besides the information which might be acquired at these meetings, it is a very pleasant way of spending an occasional winter afternoon or evening with our neighbors and friends, discussing the topics we are best acquainted with, and in which we are most deeply interested.

In the formation of a Club it is of great importance, at the out-start, that a fit and proper person be selected for chairman—a person of discretion and prudence—one whom the members generally respect; one who is generally looked up to as a pattern in his calling; one who has the necessary tact to draw out the information which each person present may possess on the subject under discussion; and, one who, if need be, can repress those that are inclined to take up more than their due share of the time of the meeting.

The officer next of importance to the success of the Club is the Secretary; it will tend greatly to advance the interests of the Club if he is able to make brief reports of the various subjects discussed at its meetings for the local or general newspaper of the place; giving an outline of the views advanced by the different speakers, and as the Press would spread abroad all the valuable information thus reported, I have no doubt, whatever, that every township of the Province can find farmers to fill—and fill well—the offices of both Chairman and Secretary, if they can only be prevailed upon to try.

I believe it answers very well at each meeting of the Club to appoint the subject for discussion for next meeting—or the same subject, if need be, may be continued for several meetings—then the subject is given out before-hand, the members will naturally turn their minds to the subject, and call up from the store-house of their memory, their experience on the particular branch of their calling they are about to discuss; for it is the facts and experiments of the *practical part* of the community that is wanted, and not mere speculation and theory. Each member should come prepared not only to hear the views of others but to express his own, however briefly, and thus add to the general stock of knowledge. If some such plan was generally followed in this Province, a mass of facts would ere long be brought out that would help greatly to promote and advance the interests of the farming community.

I have no doubt that if Farmers' Clubs were commenced and kept up with spirit, their favorable effects would soon be seen in the improvement of all the various departments of the farmer. Our stock would be improved, new and better implements would be brought into general use for the cultivation of the soil; new and more productive varieties of seeds and roots would be more quickly and generally diffused; the yield of our various crops would be augmented; the products of household manufacture would be increased and the quality improved; and as farmers would become better acquainted with each other, they would cultivate a more social and neighborly spirit, and feel a deeper interest in each others welfare, and as a natural consequence a more liberal and enterprising spirit would be generally infused throughout the community. Such meetings too, would accustom our farmers (more especially the younger part of them) to arrange and condense their views of the different subjects connected with their calling, and would tend to encourage them to write for the Agricultural Press of the country, which you are aware, Mr. Editor, is very much wanted. It would be useful, where practicable, to combine with the Club an *Agricultural Library*, to be procured and kept up by a small subscription from each member; as in many parts of the country good agricultural works are not easily obtained. And though such a library would be necessarily small at first, yet if well attended to it would in a short time become valuable, and help to keep the Club together, be useful for reference, and help to awake and promote reading and thinking habits among the members generally.

#### A TENANT FARMER.

November, 1852.

#### REPORT UPON THE POTATO DISEASE AND ITS CURE BY DRESSING THE SEED BEFORE PLANTING.

FROM THE "IRISH AGRICULTURIST."

To the Council of the Royal Agricultural Improvement Society of Ireland.

The Secretary reported that having had a call from Mr. George Eaton, gardener to Sir Thomas Butler, Bart., of Ballintemple, county Carlow, and heard the former explain in detail a variety of experiments in growing potatoes, whereby Eaton stated he had discovered a mode of growing perfectly healthy tubers, he addressed a note to Sir Thomas Butler, on the subject, and received a reply stating that Eaton had succeeded in so dressing and planting his potato-seed as to grow sound crops of good quality, and that "this year, although the crop in the fields of Ballintemple is injured to nearly the extent of one-half, and not a field in the neighborhood has escaped without considerable injury, I can safely assert, that in

about one Rod of ground which has been planted in the garden, not a solitary plant has been affected."

The matter being one of national importance, and the honorable baronet, who advised Mr. George Eaton to apply to this office, having vouched for the fact of perfectly good and healthy potatoes being grown by Mr. Eaton in Sir Thomas Butler's gardens, I considered it my duty to make a preliminary investigation of the grower's case, and to report thereupon to the council as follows :

1. Mr. George Eaton explains that he was in the employment of the late Countess of Belvedere for seven years as land-steward and gardener, during which time he obtained seventeen prizes from the Westmeath Horticultural Society at its meetings held in Mullingar; some of these prizes being given for the best early potatoes.

He afterwards lived in the service of the Right Hon. the Earl of Meath, during which time he was awarded at the Royal Dublin Society's Show two medals for the best sample of Indian corn grown by him.

He left Lord Meath's service in April, 1849. In September thereafter he went to a Mr. Dawson of Cullamore, where he was till January, 1850, when he went to Sir Thomas Butler, and with whom he has been till lately.

2. Mr. Eaton explains that subsequent to the violent attack of the potato disease in 1845, he was doubly careful in *grazing, preserving, and selecting* the seeds for his crops, but still they failed to a large extent. But it occurring to him that the virus of the disorganization either proceeded from small insects which he saw in the roots of the plants, or that these injurious insects resulted from a deleterious fluid or substance in the tuber, which was foreign or opposed to the plant's healthy development, he (Eaton) be-thought himself of applying a compound dressing of certain substances to the potato tubers when cut for planting, in order to ascertain, if possible, whether such deleterious fluid, or injurious insects, were the cause or effect of that vegetable disorganization which preceeds or follows from the potato disease.

Accordingly, in 1848, he took some potato seed, purchased from Mr. O'Farrel, seedsman, Dublin, and sowed the same in a melon bed, in the month of April. The seed sprouted, and the plants grew up vigorously till about the middle of July, when they were blighted in a single night. Eaton then took up the plants, and cut them down to about four or five inches in length. The one-half of them he planted upon a garden border, and the other portion he replanted in the melon bed. The latter he dressed with his composition before setting. These grew vigorously and were taken up in November, the tubers being the size of hen-eggs, and perfectly sound. Those plants which had not been dressed with the composition were taken up at the same time, and were found to be generally diseased, many rotten.

The next experiment he made in February, 1857, by cutting large seed, applying it to two dressings of his compound, then planting. At

the same time he planted similar seed alongside of the dressed potatoes. When the dressed ones came to maturity, they were all sound and of excellent quality. Their haulms were vigorous and healthy all along, showing at no time any symptom of blight, and only colouring from the fading process inseparable from the ripening of the tuber. The others, which had not been dressed with the compound, but were planted alongside of the dressed ones, showed the disease upon the stalks at an early stage, getting worse and worse; and when the tubers were taken up they were much diseased.

In order to satisfy his mind that his system was not an exceptional case, but might be held to apply generally in the preparation of seed, so as to avert the potato disease, George Eaton, in February, 1852, planted potato seed cut, dressed, and undressed, exactly as in the experiment and process described above, as gone through in 1851. Those grown from the seed dressed with the compound were all sound in haulm and tubers, as above explained in the experiment of 1851. The potatoes now on the council-table are the roots so grown from dressed seed; and judging from the healthy streaky texture of the skin, and the depth of the eye of the tuber, no potatoes seen by me since the first appearance of blight seem so vigorous and safe to be used as seed; but whether they would grow perfectly healthy without being again dressed with Mr. Eaton's compound is very doubtful. He says, that in the experiments of 1851 and 1852, the dressed and undressed seed was set plot beside plot, and that while the haulm of the compound dressed seed grew always healthy and the tubers sound, the seed which had not been prepared with the compound, produced haulms and tubers [alongside of the others] affected and diseased in the same manner as the ordinary crops of the country.

Mr. Eaton says that his preparation and application would not increase the price of seed potatoes more than 10s. per acre, if quite so much.

A few hours after the dressing is applied the cut seed emit a thickish, dark-coloured fluid, which has a most disagreeable stench.

He has experimented successfully upon Beldrum, Pink-eyes, Bangers, and Ox-nobles, and will undertake to extract the deleterious matter from any kind of potato.

TITOS. HARKNESS, Secretary.

September, 1852.

#### MANUFACTURE OF FLOUR.

The *Boston Courier* gives the following sketch of the manufacture of flour as it is pursued in the immense mills in Western New York:—

Very few of those who have never been west of the Hudson River, in the State of New York, have any definite idea of the extent of flour manufactured in such localities as Oswego, Rochester, or Black Rock near Buffalo. The enormous brick structure for manufacturing purposes at Lawrence, Lowell, and Manchester,

are very well understood, but a Cyclopien pile of stone nine stories high, erected for the sole purpose of storing and grinding wheat, is seldom thought of. Take city of Rochester alone. where some thirty mills are just now commencing their full operations on the rich wheat crop of the Genesee valley, consuming each, from four hundred to three thousand bushels of wheat per day, and pouring the results in the shape of wheat flour into the commercial laps of the eastern cities, from whence it is disseminated in life sustaining currents not only through the manufacturing districts of New England, but through a large proportion of the whole commercial world.

A large flouring mill requires an immense propelling power, but employs very few hands in proportion to the amount of business done, compared with either a cotton or woollen mill. The grain literally goes through the mill and comes out flour, without the intervention of a human hand. A few men superintending and controlling the powerful machinery, and guiding the operations, are all that are required. They sit about, apparently careless and unconcerned, among huge wheels in swift revolution, which by one mis-step would crush them as inevitably as a foot fall would crush a worm.

A canal boat load of wheat is moored in the basin beside one of the mills. A system of elevators is let down, consisting of a series of sheet iron buckets rivetted upon a broad leather belt, passing between two pulleys, one in the weighing-room of the mill, and the other resting near the wheat in bulk in the hold of the boat. Four men with scoops immediately commence shovelling the grain into the ascending buckets, which as they reach the upper pulley and reverse their direction in the descending line, spill their contents into the neighbouring scale pan. When this is filled and weighed it is passed down by a trap in the bottom of the pan into the bin below, whence it is again elevated to the attic and deposited in a horizontal trough running the whole length of the mill. Within this trough revolves a screw-shaft, which carries along the grain and drops it at any required point, by means of sliding gates in the bottom of the trough, through which the wheat drops if any one of the series is left open. From this lofty elevation it passes into the smut beaters and blowers, thence through the ches and cockle screens down again to the ground floor into the hopper of the grinding stones, where the grain is cracked into a commingled mass of flour, middlings, shorts and bran.

But this bruised mass of what was once beautiful wheat, has not reached its lowest point of descent yet; for,

"In this lowest depth a lower deep,  
Still gaping to receive it opens wide,"

and it falls from the stones into the cellar of the mill, whence it is again re-elevated to one of the upper stories and deposited on the floor of a huge room, called the cooling-room, where it is stirred by the long arms fixed at right angles in an upright shaft. The ground wheat as it comes from the stones is very hot from the severe friction and crushing it has undergone, and it is deposited in the cooling-room, near the wall, in a large and continual stream from half a dozen sets of mill stones. By the operation of the machinery in this room the ground wheat is made gradually to approach the centre under a continual stirring process, and there drops through a trap into the bolting chest, in which revolve half a dozen long cylinders covered with cloth of the most beautiful texture imaginable. These bolting cylinders are slightly inclined one way or the other, and the contents gradually work along from the finer into the coarser bolts, that which remains growing less and less in quantity, until the refuse bran is finally poured out of the end of the last bolt. The various qualities of flour, &c., drop from these bolts into the packing bins on the floor ready to be barrelled for the market.

All this is done as we have said, by machinery, almost without the intervention of a human hand, and is, besides, a very quick process.—Wheat which lays in bulk in the hold of a boat to-day, may be flour on its way to New York or Boston to-morrow. We have in this city two mills in which this operation is performed, but we must go west of the Hudson if we would see the manufacture of flour on a large scale. We never expect to see the time when a flock of sheep is passed through the mill, and come out mutton dressed ready for the market, and cloth ready for the tailor. We never expect to see the cotton plant turn out woven fabrics without the intervention of pickers, cotton gins and looms, with the thousand hands necessary for their attendance; but in the manufacture of flour we do see now manual labour comparatively superseded by machinery which is the result of human ingenuity and skill.

**TO BAKE APPLES.**—Sweet apples properly baked and eaten with milk are excellent. The best method of baking tart apples is, to take fairest and largest in size, wipe them clean, if thin skinned, and pare them if the skin is thick and tough; cut out the largest portion of the core at one end, and place the fruit on well glazed earthen dishes or pans, with the end which has been cored upwards, and fill the cavity with refined powdered sugar. Then place in the oven or other apparatus for baking until sufficiently cooked. Then take out, and when cold they are perfectly delicious.

## HORTICULTURE.

## PLANTING FRUIT TREES.

[The following useful observations are from the *Guelph Advertiser*, and the plain practical directions they contain will no doubt be of service to some of our readers. We had the pleasure of seeing Mr. Hubbard's Nursery a year or two ago, and felt much gratified at the progress which fruit-raising, as well as other departments of Horticulture, are making in a new and rapidly improving district, which has already won a reputation for improved husbandry and stock-breeding.]

"I feel it my duty to all who have favoured, or may favour, me with their patronage, to offer a few remarks relative to the planting of fruit trees. Many persons plant a tree as they would a post; and many an orchard rudely thrust into the ground struggles half-a-dozen years against such adverse circumstances before it recovers from the effects.

In planting an orchard let the ground be made mellow by repeated ploughing. For a tree of moderate size the hole should be dug three feet in diameter, and at least twenty inches deep. The hole should then be filled up to within six inches of the surface with some compost or well-rotted manure; in every instance the surface soil should be well mixed with manure, if used. Shorten and pare smooth with a knife any bruised or broken roots, place the tree in the pit and hold it upright while another person is making the earth firm gradually around and among the roots; at the same time with the hand, spread out the small roots, and fill in the earth nicely around each of them. Nine-tenths of the deaths by transplanting arise from hollows being left among the roots by a rapid and careless mode of levelling the earth among them. When the pit is two-thirds filled pour in a pail of water, which will settle the soil, and fill up any vacancies that may remain. Wait until the water is fully absorbed, and then fill up the hole, pressing the earth moderately around the tree with the foot. The moist earth being covered by the loose surface soil, will retain the moisture for a long time. We rarely find it necessary to water again after planting in this way, and a little manure or litter placed around the tree upon the newly moved soil will render it quite unnecessary. Frequent surface watering is injurious, as it causes a hard crust on the top which prevents the access of air and light, both of which are absolutely necessary to the growth of the tree. Fruit trees should not be planted too deep; probably not more than an inch

deeper than they stood in the nursery. It would be well to heap a little mound about the stem during the winter, as it will prevent the frost from raising the tree, and also keep off in a great measure the attacks of the mice; although bass wood bark around the stem is preferable in this respect.

Young trees cannot be expected to thrive in a sod land. When it is necessary to keep a young orchard in grass, a circle should be kept dug around each tree, but the cultivation of the land will cause the trees to advance more rapidly in five years than they will in ten when it is allowed to remain in grass.

The staking of trees is important, and so is the after culture. The proper distance apart for standard apples is thirty feet each way. The most important consideration for the planter, should be the securing of good varieties. As to the season for transplanting, I think it of little or no consequence whether spring or fall, provided the above hints are attended to.

I have said more than I intended, and fear that I have trespassed on your space.

I am, yours,

E. HUBBARD,  
*Guelph Nursery.*

[We direct the attention of our readers to the foregoing remarks with confidence that they may be relied on; not less from our knowledge of the writer's experience, than from the substantial evidence which accompanied the document, of his ability and capability to produce as fine a fruit as the most fastidious could desire.]

## PLANTS MULTIPLIED NOT BY SEED.

## PROPAGATING BY OFFSETS, LAYERS, AND SUCERS.

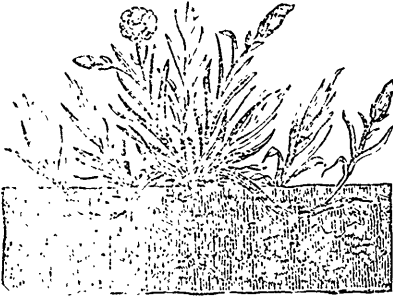
Many plants, instead of having a number of crowns or eyes, have only one, and send off short stems like the daisy and houseleek, or large runners like the sweet violet, the ground ivy, and the strawberry, with young plants at the end, which readily take root, and may either be allowed to do so after cutting the runner, or before the separation, if it is required to make them rather stronger.

The time for doing this must be in some measure regulated by the growth of the offsets, and by the season of the year; for it is important that all such plants should be well rooted and established in the soil, before the usual period for the commencement of the autumnal frosts.

When the offsets are not naturally capable of forming roots of themselves, as in the carnation, an operation called *layering* is performed, which consists of interrupting the passage of the pulp downwards, by making an upward slit with a penknife-half through the stem, and by several other methods; then, fixing the cut part a little

under ground with a hooked peg, root fibres will form, and the root layer may, of course be removed, and planted elsewhere.

The operation of layering being an important one, and capable of being performed on a great number of plants, it is highly necessary that it should be properly understood. Much depends on the manner in which the slit or incision is made; for, in layering carnations, if, by any means, the knife be suffered to pass more than half way through the stem, it will be exceedingly liable to be broken, or even to rot off; therefore, the knife (which must be a very sharp one) should be guided with great care, and the incision commenced about a quarter of an inch below the joint; then cut off, neatly and smoothly,



The operation of layering shown in the Carnation.

the tip or end of the tongue thus formed, as if this is left jagged or rough, it will absorb too much moisture, and be very liable to rot, thus preventing the layer from rooting. The layer should in no case be placed deeper than an inch in the soil, and a little fine and rich mould should be introduced to cover it, which will prevent it from becoming too wet. Unless the slit in the stem is made to pass through the middle of a joint, it will never succeed in forming roots.

The lower part of the stems intended to be layered, should be deprived of their leaves; these must not be plucked off, but cut with a sharp knife, to within a short distance of the stem, and none of the leaves should be left that would be buried in the soil when the shoot is fastened down. Carnations should be layered as soon as the flowering season is nearly over, and none of the stems which had produced flowers should be employed for this purpose.

Many other plants, such as double wallflowers, lilacs, honeysuckles, roses, sweetbriar, laurels, and most shrubs and evergreens, may be propagated by layers, it being a very certain, as well as an easy mode of getting a number of plants. In layering roses, however, and other plants of shrubby habits, a different method must be adopted to that of layering carnations, for with carnations, the stems being exceedingly brittle, it is necessary to *tongue* them, in order to check the flow of the pulp; but with shrubby plants, such as roses and laurels, all that is required is to run a penknife through the shoot to be layered, at a bud or joint, and having slightly twisted the shoot, so as to open or crack the bark round the part so cut, bury it to about three inches below the surface of the soil, securing it with a hooked peg,

and treading the soil slightly round it, so as to place it almost erect. In this state it will soon form roots at the joint in which the incision was made, and may then be separated from the parent plant, and planted where required.

From the roots of some trees which lie near the surface of the soil, a quantity of young shoots are produced called *suckers*. These are generally very unsightly, and deprive the tree of much of that nourishment which should be devoted to the support of the flowers and fruit. They should, therefore, never be allowed to remain in such situations, even though they were destroyed; but they are all capable of forming a fresh plant, if taken up with care. They are generally most abundant about the roots of gooseberries, currants, plums, lilacs, and roses, but are found occasionally with most shrubby plants or trees. The suckers of gooseberries, currants, and fruit trees, should always be eradicated and thrown away, as they will never produce good fruit; those of lilacs, and other flowering shrubs and trees, may be removed in the autumn, and planted in any required situation, provided care is taken to fit them with sufficient roots, and, if possible, with root fibres and their tips attached to them; but, even these are inferior to the plants produced from layers, as they will not come into flower for a great length of time, while layers usually bloom much sooner.

Roses, especially the common sorts, produce excellent suckers, which answer well for stocks, to bud the choicest sorts upon. The suckers from the better kind of roses, will flower best if converted into layers.

In the monthly rose, suckers make the best plants, as they do also in the sweetbriar; but this does not produce many. Such suckers, when long and easily bent, may also be treated as layers; and as many new plants may be obtained as there are buds on the sucker, by making a ring-cut through the bark below each bud, and laying over the whole sucker, when pegged down, a shallow covering of rather dry earth, when a stem will rise from each bud, and roots grow from each ring of bark that has been cut—a good mode of multiplying rose trees.

#### THE TASTE FOR PLANTING.

Our agricultural and horticultural periodicals are doing great things in popularizing this taste among our country people, and planting *once the fashion*, everybody's house will be smothered in trees and climbers. Railroads, too, help the people to travel. They thus see what other folks do; and they—that is the most observant of the travellers—go home and do likewise. Rely upon it, the taste for planting is in progress. Compare the recently built farm houses all over the country, with those of our boyhood, and mark the change! Then, they were utterly bare of trees as of out-houses; and all alone by themselves, naked, inhospitable, and desolate to the eye. Now, even the same old tenements, inhabited by people of better taste, are changed in their outward style; various offices are attached, and they are comfortably nestled amid the deep sha-

dow of fine trees, and rejoice in plats of shrubbery and flowers.

It is wonderful to compare the taste of the labouring English with that of the same class of people in our own country. The one you can scarcely keep from cultivating his flowers; and if he, himself, has no time to attend to it, his wife and daughters will. The other you can neither drive nor coax into the slightest attempt of the kind. I have a quiet little cottage at the end of my principal farm—the tenement itself humble in appearance—scarcely worth one hundred dollars. I put into it an American “hired man,” who chopped wood in winter, worked on the farm in summer, and was a capital hand at all sorts of rough labour. I had some fine young forest trees about the place, a comfortable garden stored with currant bushes, roses, and such like little affairs, as would make a labourer’s home cheerful—for I like to see everybody about me in the enjoyment of such little pleasant things, not costing much, and looking pretty. When he removed into it, I told him how comfortable and convenient these little appendages would be about the place, yet observed the incredulous staring look he gave me by way of reply. To cut the matter short, during the year the man occupied the place, his “young barbarians” hacked into, girdled, and spoiled several of the trees; the currant bushes were mostly stripped of their branches to carry into the “shanty” to pick the fruit from, while the cow came in to browse the remainder. The pig was let loose into the wretched, weedy garden after the potato and cabbage patches were cleared, and he rooted up the roses and hollyhocks, and the place was sadly in ruins. When I remonstrated against such vile destruction, the answer was, that “they had no use for such knick-knacks, and did not see the use of them!”

This man “walked Spanish,” of course, at the end of his year, and was succeeded by a quiet English labourer in like capacity, bating the “wood chopping”—Englishmen usually knowing little of such labour. And now came a change truly. “Oh, what destruction has been made here,” he would often exclaim. “I must fix these little things all up again. A nice bit of fruit we’ll get from these currants, and properly trimmed they’ll grow some goods again; and sit, may I go into your *house-garden* and take up a few side-roots from the peonies and roses, and sum’unt of other things that can be spared and put in here? For I hate to see a place naked, and without something to rest one’s eye upon of a Sunday, and to give my wife a flower pot now and then.” “To be sure you can,” was the reply, “and the more of them the better.” All this was done in the course of the spring and no time lost either—for it was accomplished out of the regular working hours; and in less than a twelvemonth the place was turned into a little paradise, where I often drop in and take a quiet chat as I pass, and learn from the labourer and his good-mannered wife, much of the humble and rural life of England.

The parallel will hardly, perhaps, hold good with the higher classes in America, but the dif-

ference in the taste of the two people is surprising. This difference is partly incidental to the newness of our land, but much more owing to a *want of taste*—that’s the flat reason. Here, we go blundering and daundering along looking to the “mainchance,” and to the mainchance only, as if to gather together dollars and estates, with which to bespoil our children who are to come after us—and in which latter purpose we usually succeed to admiration—were the only objects worth striving for in life! On the whole, however, we are improving—but not half fast enough.—*Horticulturist*.

GREAT CROP OF STRAWBERRIES.—We have so often chronicled accounts of the immense crops which have been produced from beds of our Seedling that we scarcely deem it important to do so again; but our friend, Mr. C. Waring, of Boston, has just handed in the following, which is so remarkable that we make no further apology for giving it to our readers:

“Mr. William Gore, of Freeport, Me., raised on a piece of land eleven feet by forty-three, the past season, three and a quarter bushels of Hovey’s Seedling strawberries.—The bed was six years old. The land on which these berries were raised, when purchased by Mr. Gore a few years since was considered almost worthless; it bore weeds of an inferior growth; but under his peculiar care and cultivation it has become very productive; it was moist, dark sandy loam. He dug deep ditches and filled with cobble stones, which were covered with seaweed, then a top dressing of such earth as he could obtain, with manure well incorporated by deep plowing. His garden vegetables and fruits show what may be done by a little care and attention. A few summer potatoes reached our Faneuil Hall Market the past season, raised by Mr. Gore, which were equal to any ever brought here during winter. He has filled his ground with choice fruit, and has lately purchased twelve acres adjoining, though now in a very unproductive state.”

This is at the rate of nine thousand six hundred quarts to the acre, or about one quart from every four and a half square feet of soil. A greater yield than this on so large a piece of ground we think was never made; and this too on a bed six years old. If any one can beat it we should be glad to record the name of the successful cultivator.—*Hovey’s Horticultural Magazine*.

THE ERUPTION OF MOUNT ETNA.—Letters from Sicily state that the eruption which commenced on the 20th of August still lasts, causing alternate hopes and fears according to the increase or diminution in the quantity of lava that flows forth from the fiery mount. The new crater that opened on the 8th of November, pouring forth a fresh current, had up to the 9th, descended as far as the Volla della Sciancato, 5 miles distant from Zafferana Etna. The mountain continued to send forth loud reports and to shoot up globes of thick smoke interspersed with fine ashes.

## MISCELLANEOUS.

## POINTS OF A GOOD HOG.

I could caution the reader against being led away by a mere name, in his selection of a hog. A hog may be called a Berkshire or a Suffolk, or any other breed most in estimation, and yet may, in reality possess none of this valuable blood. The only sure mode by which the buyer will be able to avoid imposition is, to make names always secondary points. If you find a hog possessed of such points of form as are calculated to insure early maturity, and facility of taking flesh, you need care little what it has seemed good to the seller to call him; and remember that no name can bestow value upon an animal deficient in the qualities to which I have alluded. The true Berkshire—that possesses a dash of the Chinese and Neapolitan varieties—comes, perhaps, nearer to the desired standard than any other. The chief points which characterize such a hog are the following: In the first place sufficient depth of carcass, and such an elongation of body as will insure a sufficient lateral expansion. Let the loin and chest be broad. The breadth of the former denotes good room for the play of the lungs, and a consequent free and healthy circulation, essential to the thriving or fattening of any animal. The bone should be small and the joints fine—nothing is more indicative of high breeding than this; and the legs should be no longer than, when fully fat, would just prevent the animal's belly from trailing upon the ground. The leg is the least profitable portion of the hog, and we require no more of it than is absolutely necessary for the rest. See that the feet be firm and sound; that the toes be well together, and press straightly upon the ground; as also, that the claws are even, upright and healthy. Many say that the form of the head is of little or no consequence, and that a good hog may have an ugly head; but I regard the head of all animals as one of the very principal points in which pure or impure breeding will be the most obviously indicated. A high bred animal will invariably be found to arrive more speedily at maturity, to take flesh easier, and with greater facility, and, altogether, to turn out more profitably, than one of questionable and impure stock; and such being the case, I consider that the head of the hog is, by no means, a point to be overlooked by the purchaser. The description of head most likely to promise, or rather to be concomitant of, high breeding, is one not carrying heavy bone, not too flat on the forehead or possessing a too elongated snout—the snout should be short, and the forehead rather convex, curving upward; and the ear should be, while pendulous, inclining somewhat forward, and, at the same time, light and thin. Nor should the buyer pass over even the carriage of a pig. If this be dull, heavy, and dejected, reject him, on suspicion of ill-health, if not of some concealed disorder actually existing, or just about to break forth; and there can not be a more unfavorable symptom than a hunched, slouching head. Of course, a fat hog for slaughter, or a sow heavy with young, has not much sprightliness of deportment.

Nor is color altogether to be lost sight of. In the case of hogs I would prefer those colors which are characteristic of our most esteemed breeds. If the hair be scant I would look for black, as denoting connection with the Neapolitan; but if too bare of hair, I would be disposed to apprehend too immediate alliance with that variety, and a consequent want of hardihood, that, however unimportant, if pork be the object, renders such animals hazardous speculations as stores, from their extreme susceptibility to cold, and consequent liability to disease. If white, and not too small, I would like them as exhibiting connection with the Chinese. If light or sandy, or red with black marks, I would recognize our favorite Berkshire; and so on, with every possible variety of hue. These observations may appear trivial; but they are the most important I have ever yet made, and the pig buyer will find his account in attending to them.—*Rural Hand Book.*

## EXPERIENCE OF ANIMALS.

Animals are prompt at using their experience in reference to things from which they have suffered pain or annoyance. Grant mentions an orang-outang which, having had when ill, some medicine administered to it in an egg, could never be induced to touch one afterwards, notwithstanding its previous fondness for them. A tame fox has been cured from stealing eggs, and poultry by giving them to him scalding hot from the saucepan. Le Valliant's monkey was extremely fond of brandy, but would never be prevailed on to touch it again after a lighted match had been applied to some it was drinking.

Two carriage horses, which made a point of stopping at the foot of every hill, and refused to proceed in spite of every punishment, were considered beyond cure, but it was suggested at last that several horses should be attached to the back of the carriage, and being put into a trot be made to pull the refractory horses backwards.—The result was perfectly successful; for thenceforth they faced every hill with speed, and were not to be restrained till they reached the summit. A dog which had been beaten while some musk was held to its nose, always fled away whenever it accidentally smelled the drug, and was so susceptible of it, that it was used in some psychological experiments to discover whether any portion of musk had been received by the body through the organ of digestion. Another dog, which had been accidentally burned by a lucifer match, became angry at the sight of one, and furious if the act of lighting it was feigned.

There are, besides, so many instances recorded of even higher degrees of intelligence, that it is impossible to deny that animals arrive at knowledge of cause and effect; Strende, of Prague, had a cat, on which he wished to make some experiments with an air pump; but as soon as the creature felt the exhaustion of the air, it rapidly placed its foot on the valve, and thus stopped the action. A dog having a great antipathy to the music of the violin, always sought to get the bow and conceal it. The well known story re-



corded by Plutarch proves the application of accidentally acquired experience. He says that a mule, laden with salt, fell accidentally into a stream, and having perceived that its load became thereby sensibly lightened, adopted the same contrivance afterwards purposely; and that, to cure it of the trick, its panniers were filled with sponge, under which, when fully saturated, it could barely stagger.—(*Passions of Animals.*)

#### PHYSIOLOGY OF DEW.

Dew is a dense, moist vapour, falling on the earth in the form of mizzling rain, while the sun is below the horizon. The most plentiful deposits occur when the weather is clear and serene; very little is deposited when the weather is not so. It is well known, likewise, that a reduction in the temperature of the air, and of the surface of the earth, always accompanies the falling of dew, the surface on which it is deposited being, however colder than the air above. The phenomena admit of an easy and elegant explanation from the well known effect of the radiation of caloric from bodies. This radiation constantly taking place in all bodies, it is obvious that the temperature of any body can remain the same only by its receiving from another source as many rays as it emits. In the case of the earth's surface, so long as the sun remains above the horizon, it continues to receive as well as emit heat; but when the sun sinks below the horizon, no object is present in the atmosphere to exchange rays with the earth, which still emitting heat into free space, must consequently, experience a diminution in its temperature. Thus the earth becomes not only many degrees cooler than the superincumbent air; and, as the atmosphere always contains watery vapour becomes condensed on the cold surface; hence the origin of dew, and if the temperature of the earth is below thirty-two degrees, of hoar frost. And, since the projection of heat into free space takes place most readily in a clear atmosphere, it is under the former condition that dew and hoar frost are formed; for if the radiant caloric, proceeding from the earth is intercepted by clouds, and interchange is established, and the ground retains nearly, if not quite, the same temperature as the adjacent portion of the air. Whatever circumstances favour radiation, favour also the production of dew; and, accordingly, under the same exposure, dew is much more copiously deposited on some surfaces than on others. Gravel walks and pavements project heat and acquire less readily than a grassy surface. Rough and porous surfaces, as shavings of wood, take more dew than smooth and solid wood. Glass projects heat rapidly, and is rapidly coated with dew. Bright bodies attract dew much less powerfully than other bodies. Dew acts an important part in the processes of agriculture, and in the nutrition and growth of plants. Large quantities of the most active agents escape from the earth during the processes of decomposition and evaporation, in the shape of gases, and these combined with the aqueous vapour are deposited by the dew on the earth, or on the plants, and in either case are

available to nutrition. Hence the advantages of frequently stirring the earth, and keeping the surface in a pulverized and absorbing state. In some parts of the world it rarely rains, but the dews are so copious, that vegetation does not seem to suffer from the want of water. Spreading a substance, no matter how flimsy, as a thin cloth, over vegetables, will preserve them from severe frosts; it is not allowed to touch them, acting by intercepting the heat. Every one has observed that plants liable to destruction by frost, remain green much longer under the shade of trees than when exposed. Thus potatoes or anything else planted in an orchard, will be unhurt by frost as far as the branches of the trees extend while the tops in the uncovered spaces will be wholly prostrated.

#### SUGAR FROM INDIAN CORN AND OIL OF VIETRIOL.

We learn from the American Artisan that a patent has been granted Mr. Geo. Reily, of New York city, for a process which is thus described:

A quantity of corn meal is placed in a boiler, to which is added nearly an equal quantity, by measure, of water, together with a small proportion of oil of vitriol, or sulphuric acid. The mixture is then boiled at a very high temperature, when common brown sugar is produced, held in solution, of course, with the acid. A quantity of common chalk is now thrown in, which has the effect to remove the vitriol from the sugar, the vitriol uniting to the chalk, and falling with it as sediment to the bottom of the boiler. The liquid sugar is then drained off into another vessel, boiled down to molasses, and finally crystalized and clarified in the usual manner. Though sugar is produced, yet the nature and strength of the vitriol is not altered, neither is the original quantity diminished. The same vitriol would, therefore suffice to convert an indefinite amount of meal into sugar.

The Artisan says the process is no more strange than the phenomena presented by the combustion of a tallow candle. How few know that a tallow candle is, in effect, a gas light, the melted tallow, or carbon, being raised by capillary attraction to the centre of the flame, which being hollow forms a retort wherein the tallow is subjected to an immense heat, and thus converted into illuminating gas, in precisely the same manner as the carbon in the huge retorts at the gas manufactory is turned into gas.

#### SUBMARINE TELEGRAPH COMPANY.

At the usual half-yearly meeting of this company, held in London, on Tuesday, 7th Dec., Lord De Mauley presiding, a very favourable report of the affairs of that company was read by the secretary. After relating the advantageous arrangements entered into with the Dover and Calais Company, and the intended amalgamation with the Belgium Submarine Telegraph when opened to the public, the report concluded by stating that "the receipts of the first six months

working of the submarine telegraph between France and England enabled the managers to pay a dividend of 5 per cent. per annum on £85,000 (the capital of that company,) and since that period the amount of business has been almost doubled, while the expenditure, owing to the very beneficial agreements entered into for the transmission of messages from Cornhill to Calais, by the subterranean telegraph, in conjunction with the submarine telegraph has been greatly diminished. The report was unanimously adopted, and the retiring Directors, Lord De Mauley, Sir James Carmichael, Mr. F. Laing, and the Hon. F. Cadogan, were re-elected, after which the meeting adjourned.

The following towns in the Netherlands have just been connected with Great Britain by means of the submarine telegraph wires:—Amsterdam, Breda, Rotterdam, Haarlem, Dordrecht, and La Haye, &c.

#### RESPECT FOR THE AGED.

There is something venerable in age. In all nations the highest respect has been paid to it. The hoary head, says Solomon, is a crown of glory, if it be found in the way of righteousness. The patriarchs were a kind of Lares among the tribes of their descendants. Among the Egyptians the young were obliged to rise up in the presence of the old, and on every occasion resign them the honorable seat. The Spartans borrowed this law from them, and rigidly enforced it among their youth. They never thought of its "breaking the spirit" of their rising warriors to require of them this submission. Job sets it down as a deplorable degeneracy among his people, that they who were younger than he, held him in derision. It stands imperishably recorded as one of Heaven's high commands, that honor is to be given to father and mother. This is to the command "with promise," a promised blessing to those who obey but an implied curse, yea, a cutting off from the land to these who disregard it. It has been supposed that our republican institutions are not favorable to the growth of this spirit.

There is more need, then that it be assiduously cultivated. The mind even in infancy should be deeply imbued with it—And "venerate the aged," should be, with our whole people one of the fixed maxims of life, no one allowing himself any departure from it.

#### VICTIMS OF INTEMPERANCE.

The following melancholy accident is from the London *Free Press* of Thursday last. An inquest was held by Dr. Wanless, on the body of John Armstrong, found lifeless on Saturday last. It appeared that on the previous Thursday he had been drinking at John Willey's tavern on the Egremont Road, Adelaide. It is stated that being intimate with the keeper of the house, he had been in the habit of helping himself to liquor, which it is supposed he had done on the present occasion, and then started for his home, while the inmates of the tavern were engaged in some out door occupation. The night was dark and rainy, and it appeared from the tracks made that after proceeding some distance he had endeavored to trace his way back to the tavern; when he had fallen. The body was found frozen; with marks of

violence on the face, but only such as might have been occasioned by the fall, and not sufficient to cause death. The verdict attributes his death to intemperance and exposure to the weather. He leaves a wife and children.

#### GIGANTIC SEA-WEEDS.

On the north-west coast of North America, there is a tangle, named *Nereocystis*, having a stem which measures, when full grown, 300 feet in length, and bears at its extremity a huge float six or seven feet long, shaped like an enormous cask, and crowned by a tuft of more than 50 forked leaves, each of them from 30 to 40 feet long! Among this submarine foliage the sea-otter lies in wait for its prey, and when tired delights to rest and sleep on its enormous bladders. Yet all this mass of vegetation is moored by a stem as thin as a whip-cord. The Aleutians use these thread-like stalks as fishing-lines. Prodigious as are the dimensions of this "sea-otter's calbage," (the name by which it is popularly known) they are surpassed by those of the *Macrocystis*, a sea-weed exceedingly remarkable on account of its extensive range, being distributed along the American shores of the Pacific from the Arctic to the Antarctic Oceans. This astonishing alga grows to a length of nearly 1,000 feet. Such giants strike the beholder with wonder. Not less calculated than they are to excite our admiration are the dwarfs and atoms of vegetable life that cluster around them. Few forms of organized beings are more delicately beautiful than many of the smaller sea-weeds, and the study of them with the aid of the microscope is a source of never-failing delight to all who engage in it.

#### ELECTRICITY: ITS INFLUENCE IN VITAL PROCESSES.

A correspondent, "W. G.," sends us an essay on this subject, which, however, is, in the main, neither so new nor so conclusive as he appears to regard it. Between some of the phenomena of life and some of those of electricity there are certainly strong and beautiful analogies; but there are the like analogies amongst the phenomena of electricity, heat, and life; and yet it cannot be decisively ascertained that even these are identical, far less electricity and life. Nevertheless, that all three—electricity, heat, and light, are intimately associated with vital action, there cannot be a doubt. With these few introductory remarks, we give, without further comment, what we regard as the strongest points in the essay alluded to:—"May not that great binding chain of the universe—that universal power—that wonder-working principle, whose intensity continue; the same at all accessible distances from the earth's surface—'electricity'—be also the origin and universal cause of vitality and life, both animal and vegetable, and by which the instantaneous action of thought and feeling is telegraphed throughout the animal frame? Let us inquire; and by way of illustration we will take an acorn and an egg. Now, it is well known that neither an acorn nor any other seed will germinate if kept dry, nor will an egg produce a chicken at the common temperature of the atmosphere (at least in this country), but both will inevitably perish if their position be not changed. . . . . If the acorn, or a grain of wheat or any other plant, be buried in moist earth, all the requisite conditions necessary to its growth are fulfilled, because we surround the seed with the means from whence the nutriment for the organisation and construction of the plant is derived,

and the electric circuit being completed by that simple act, such nourishment is distributed by the circulating current generated as has just been pointed out, and this electro-chemical process constitutes in fact the vitality of plants. The suspended vitality of seeds may be regarded as analogous to the broken galvanic or electro-telegraphic circuit in which the electrical action is suspended."—*Correspondent of the Builder.*

**THE CENSUS—STATISTICAL COMPARISONS.**

The following interesting comparative tables have been furnished to the press by the Secretary of the Board of Registration and Statistics :

**WHEAT.—UPPER CANADA.**

	Bushels	To each inhabitant.
Wheat crop of 1841 was	3,224,991	or 6.69
Do. 1847	7,558,773	12.45
Do. 1849	9,705,082	12.08
Do. 1851	12,692,842	12.22

**LOWER CANADA.**

Wheat crop in 1843 was	942,832	or 1.36
Do. 1851	3,075,868	3.46

**UNITED STATES.**

Wheat crop in 1839 was	84,832,272	or 496
Estimated by Patent Office 1847	114,245,500	5.50
Crop of.....1849	100,685,637	4.33

In order, however, to institute a fairer comparison let us divide the States into 3 classes, viz. :

**1st—States growing over 6 million bushels.**

	Bushels.	Population	Bushels per head
Pennsylvania	15,367,691	2,311,786	6.25
Ohio.....	14,487,351	1,980,408	7.32
New York...	13,132,488	4,148,182	3.16
Virginia.....	11,332,616	1,421,651	7.20
Illinois.....	9,414,575	851,471	11.06
Indiana.....	6,214,458	988,416	6.29
Total....	69,847,189	11,701,924	5.97

**2nd—States growing over 1 and less than 6 million bushels.**

Michigan...	4,925,889	396,654	12.39
Wisconsin...	4,386,131	305,191	14.03
Maryland....	3,494,081	583,031	7.71
Missouri....	2,981,652	682,043	4.38
Kentucky...	2,140,822	982,405	2.15
N. Carolina..	2,120,102	868,903	2.45
Tennessee...	1,619,381	1,002,625	1.61
New Jersey..	1,601,190	481,555	3.27
Iowa.....	1,530,581	192,214	7.96
Georgia....	1,088,534	905,999	1.21
S. Carolina..	1,066,277	668,507	1.60
Total....	27,865,240	7,078,131	3.93

**3rd—The remaining States and Territories.**

	2,791,470	4,466,246	0.63
	Bushels.	Inhabitants.	Each.
Total...	100,503,899	22,246,301	433

**Increase :**

U. States 1839—84	823,272 bushels.
" 1849—100,503,899 "	

15,680,627 or 18.49 per cent. ten yrs.

U. Canada 1841—3,221,991 bushels  
" 1851—12,692,852 "

9,470,861 or nearly quadrupling itself in 10 years.

**Bushels. Population.**

Pr. Ed. Island, 1817	219,787	62,678 or 3½
Newfoundland, 1850	297,157	276,117 or 1.08
New Brunswick, 1850	206,535	193,800 or 1.06
The Eastern States in 1849 raised 1,099,997 bushels, population 2,668,106, or 0.41 each.		

The population of Upper Canada is 952,004, and allowing 5 bushels for each, 4,760,020 bushels. For seed at 1½ bush. per acre 1,173,173 "

5,091,305

Leaving for export.....6,761,668

More than sufficient to supply the consumption of the whole Eastern States.

Were the population of Lower Canada to consume flour at the given rate it would require:—

890,261 at 5 bushels each.....	4,451,305.
Seed.....	640,000

5,091,305

Grown.....2,075,868

2,015,437

Leaving a surplus of wheat in Canada 4,746,231 bushels, or at 4½ bushels for each to 1,054,178 barrels flour.

**HOW TO SECURE AND KEEP APPLES.**

We extract the following judicious suggestions from an article on "Work for the Month," by the editor of the *Me. Farmer* :

The first requisite in the preservation of apples is to avoid bruising them. The slightest bruise will induce rotting. It is said that Wm. Pell, the great orchardist of New York, who ships so many apples to England, took some of his apples and merely *dented* them with his thumb. He marked them, put them in barrels with the others and wrote to his agent in England to whom they were sent, to observe what effect this slight pressure had upon them. It turned out that these apples began to rot in the very spot of the indentation, and became spoiled in consequence.

Every one who has paid any attention to the subject, knows that the decay of a bruised apple commences in the bruised part.—Why shouldn't it? The juices of the apple are nicely packed away by nature along with the flesh or pulp, in little cells nicely lined or covered by a delicate membrane which keeps everything in its place and preserved for its time of maturing—crush these and you let everything loose and decay will take place in everything else in like circumstances.

In order, therefore, to preserve apples as long as possible, it is absolutely necessary that there should be no bruises upon them. They should be handled carefully after being picked. Some will pick them from the trees very carefully, and then handle them very roughly afterwards. They will pour them from the baskets on to the ground,

or more properly speaking, "sluce" them out of the baskets into the barrels with a violence enough to bruise them almost as badly as if they had dropped naturally from the trees.

It is best if it can be done conveniently, to place apples, after being picked, in a pile in some shed or large cool room, and let them sweat, as it is called. This sweating is nothing more than the exudation of watery particles through the skin. The apple, in consequence of this loss, shrinks a little and becomes drier, and consequently there will be less tendency to rot. They may then be wiped dry, and packed carefully in barrels and headed up. The barrel should then be kept in a dry, cool place—the drier and cooler you can keep them and not have them freeze, the better they will keep.

**TO PICKLE TOMATOES.**—Throw them into cold vinegar as you gather them. When you have enough, take them out, tie some spices in a bag, and scald them in good vinegar. Pour the vinegar hot over the tomatoes.

**THE CURATE'S PUDDING.**—To 1 lb of mashed potatoes, while hot, add four ounces of suet, and two ounces of flour, a little salt, and as much milk as will give it the consistency of common suet pudding. Put it into a dish, or roll into dumplings, and bake a fine brown.—*Lady's Book.*

**JACKSON SPONGE CAKE.**—Take one cup of flour, one cup of sugar, three eggs, and one teaspoonful of cream tartar, stir them well together, then dissolve one-fourth of a teaspoonful of saleratus in a tablespoonful of hot water, add to the cake, stir briskly and bake half an hour.

**TO PICKLE NASTURTIUMS.**—Pick them when young on a warm day; boil some vinegar with salt and spice, and when cold put in the nasturtiums; or they may be put into old vinegar from which green pickles or onions have been taken—only boil it up afresh.

**COMMON GINGERBREAD.**—Half a pound of butter, half a cupful of ginger, one pint of molasses, two pounds of flour, one tablespoonful of saleratus. Rub the flour and butter together and add the other ingredients together. Knead the dough well. Roll it out, cut in cakes, wash them over with molasses and water, and bake them in a moderate oven.

**STARCH.**—There is no better way that I have ever tried, for making nice starch for shirt bosoms, than to boil it thoroughly after mixing, adding a little fine salt, and a few shavings of a star or spermaceti candle. I have found the star or spermaceti candle, quite as good as the sperm. Let the starch boil at least ten minutes, and it will give a gloss, if neatly ironed, fully satisfactorily to the exquisite taste of a dandy.

"The New York Tribune says:—“Mr. Joseph Boers of Keyport, has five large sheep in his flock, (of the Leicester, English breed) which he intends to have on exhibition during the continuance of the World's Fair, next Summer. The aggregate of the five sheep is 1,560 lbs. the largest being 378 lbs. in weight. The largest sheep in England, which Mr. B. has any account of, weighed 368 lbs. This large sheep of Mr.

B.'s yielded a fleece this past season, weighing 13 lbs.,—an ordinary fleece weighing from 3 to 4 lbs. The above five sheep are now in town, on an introductory excursion, and visited several of the newspaper offices, yesterday, in their farm carriage. The owner intends to keep them in good order until the World's Fair opens, when he expects that their size and weight will be somewhat increased.”

The dues for Irish lighthouses are to be immediately lowered, so as to make only one sixteenth part of a penny per ton, payable by coasters. Consequently, a vessel will have the benefit of eight different lights for a halfpenny per ton. The alteration is to come into force on the 1st of January, 1853.

*Fraser's Magazine*, for December, says, “A few years ago, say even this day five years, M. Louis Napoleon Bonaparte was three years in arrear of rent in the parish of St. James. He could not pay his tailor's, or his upholsterer's, or his wine merchant's bill, or meet one half of his engagements in the city or in the West-end.”

**BLACK DYE.**—For 20 yards of dark blue cloth a bath is made of two pounds of fustic (morus tinctoria), 4½ lbs. of logwood, and 11 lbs. sumach. After boiling the cloth in it for three hours it is lifted out, 11 pounds of sulphate of iron are thrown into the boiler, and the cloth is then passed through it during two hours. It is now aired and put again into the bath for an hour. It is, lastly, washed and scoured. Experience has proved that madder prescribed in the ancient regulations only gives a reddish cast to the black, which is obtained finer and more velvety without madder.

**STEAM PLOW.**—The Illustrated London News states that James Usber, of Edinburgh, has succeeded in overcoming the obstacles to the application of the steam to plowing, and completed a machine which has been successfully tested in the presence of many practical farmers, who expressed their surprise at the superior manner in which the work was effected.—The machine cost £300 and is adapted to plowing, threshing, rolling and harrowing, and travels 2.550 yards per hour, turning over 50 inches in breadth, which is equal to seven acres in ten hours, at a daily expense of 17s or 18s, which is about 2s 6d per acre, while it costs 9s to 10s to plow an acre with horses.

**RAZORS.**—Barbers often tell us that razors get tired of shaving, but if laid by for twenty days, they will then shave well. By microscopic observation, it is found that the razor from long stropping by the same hand, and in the same direction, has the ultimate particles of fibres of its surface or edge all arranged in one direction like the edge of a piece of cut velvet: but after a month's rest, the fibres re-arrange themselves heterogeneously, crossing each other and presenting a saw like edge, each fibre supporting its fellow, and hence cutting the beard, instead of being forced down flat without cutting as when laid by. These and many other instances are offered to prove that the ultimate particles of matter are always in motion; and they say that in the process of welding, the absolute momentum of the hammer causes an enlargement of orbits of motion, and hence a re-arrangement as in one piece; indeed in the cold state, a leaf of gold laid on a polished surface of steel, and struck smartly with a hammer, will have its particles forced into the steel, so as to permanently gild it at the point of contact.—*Scientific American.*

## Poetry.

## BUTTERFLY.

Child of the Sun! pursue thy rapturous flight  
Mingling with her thou lovest in fields of light  
And, where the flowers of paradise unfold,  
Quaff fragrant nectar from their cups of gold  
There shall thy wings, rich as an evening sky  
Expand and shut with silent ecstasy!  
Yet wert thou once a worm, a thing that crept  
On the bare earth, then wrought a tomb and slept.  
And such is man; soon from his cell of clay  
To burst a scruple in the blaze of day.

## WISDOM.

Ah! when did wisdom covet length of days?  
Or seek its bliss in pleasure, wealth, or praise?  
No; wisdom views, with an indif'rent eye,  
All finite joys, all blessings born to die,  
The soul on earth is an immortal guest,  
Compell'd to starve at an unreal feast;  
A spark that upward tends by nature's force,  
A stream diverted from its parent source:  
A drop dissever'd from the boundless sea,  
A moment parted from eternity!  
A pilgrim panting for a rest to come;  
An exile anxious for his native home.

MRS. H. MOORE.

GUILT, though it may attain temporal splendor,  
can never counter real happiness.

It is stated that winter has not set in so early in the season in Iowa during the last twelve years as it has this year. Snow has covered the ground since the 10th day of November.

A Lecturer addressing an audience contended with tire-some proximity, that art could not improve nature, when one of his hearers, losing all patience, set the room in a roar by exclaiming, "how would you look without a wig?"

A new society, says an exchange paper, is in formation, to be called the "Total Abstinence from Physic Society," whose motto is to be "Be-ly, Water, and Benevolence." All its members are expected to grow fat and facetious.

PRECIOUSNESS OF TIME.—Coming hastily into a chamber, I had almost thrown down a crystal hour-glass: fear, at least I had, made me grieve as if I had broken it: but alas! how much precious time have I cast away without any regret! The hour-glass was but crystal, each hour a pearl; that but like to be broken, this loss outrig; that but casually, this done wilfully. A better hour-glass might be bought; but time lost once, lost ever. Thus we grieve more for toys than for treasure. Lord, give me an hour-glass, not to be by me, but in me. "Teach me to number my days." Art hour-glass to turn me, "that I may apply my heart to wisdom."—*Fuller's Good Thoughts.*

A CHRISTIAN BURIAL PLACE.—We will not call it, with the Egyptians, a place of "Eternal Habitations," because the Christian's only everlasting tabernacles are those "not built with hands eternal in the heavens."—"The prophetic faith even of the half-instructed Hebrews, catching a beam of truth from the later revelation they waited for, named their burial places, 'homes of the living.'" I like the name chosen by the Moravian brethren, "Fields of peace;" fit designation for the final halting ground of their quiet, affectionate lives:—and that of the German's "Good's Harvest Field." Our own word "Cemetery," is Christian; for it means literally a sleeping place,—and is so justified by that touching announcement from Jesus, "Our friend Lazarus sleepeth."—*Huntington.*

## EDITOR'S NOTICES.

## RECEIVED.

"Baron de Longueill, on Bone Manure."

"Mr. Knowlson's Address."

"Mr. W. H. Lotham."

"THE OXFORD GAZETTEER;" by T. S. Shenston, of Woodstock.

We are indebted to the Warden of the County of Oxford, for a copy of this work, which appears to have been compiled with much care, industry and judgment. From the hasty glance we have been able to take of it, it appears to contain in a systematic form, all that is of importance to know respecting the County of Oxford, and we think the example is well worth following by other counties. The agricultural census and other valuable statistical information seems very complete. It seems a pity that so much of this kind of information, which is obtained by much labour and cost to the country, should be comparatively useless for want of publicity. In this respect alone the author of this Report is entitled to the thanks and encouragement of the public. The *Oxford Gazetteer* consists of upwards of 200 pages, neatly bound in cloth, containing a well executed map on a large scale of the county, with a good likeness of the Hon. Francis Hincks, the Member for the county; and may be had, *postage free*, by enclosing *one dollar* to the author, at Woodstock. We shall probably hereafter notice more in detail some portions of this work. In the meantime we cordially recommend it to the attention and support of the public.

## TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY FOR 1851.

We are indebted to B. P. Johnson, Esq., for another Annual Report of this important Society. Its contents are varied, and embrace many subjects of the greatest moment to the farmer. A cursory glance, which as yet we have only been able to give, convinces us that the present volume is in no way inferior to its predecessors, and that it will be read with both pleasure and profit by all who take an interest in the progress of theoretical and practical Agriculture. It consists of nearly 800 pages, with a number of illustrations, and has appended to it a very excellent report on the Great London Exhibition, by the able Secretary, Mr. Johnson, who was deputed by the State of New York, as an agent to the World's Exhibition. Mr. Johnson's performance occupies another two hundred pages, and contains several en-

gravings. Beside the Annual County Reports and full particulars of the financial state of the Society, which is, we are happy to observe, highly satisfactory, the volume contains several valuable prize essays, and an address delivered before the annual meeting of the Society, by the talented and lamented Norton. Rarely do we meet with advice so sound and practical, mingled alike with cautious and encouragements so necessary, as in this last production. The Addresses of the President, J. Delafield, Esq., and Hon. S. Douglass, will be perused with no ordinary interest; and the elaborate article on a general view and agricultural survey of the County of Madison, is a paper that would of itself give an enviable character to the transactions of any Agricultural Society in any country of the world. We shall advert hereafter to this valuable storehouse of agricultural information.

## Letters Patent.



TIME & LABOR SAVED ARE MONEY EARNED

B. P. PAIGE & Co., SOLE PATENTEES.

THE Subscribers have secured to themselves the exclusive right to Manufacture and vend to others to use, in the Territory of Upper and Lower Canada,

SEVERANE'S PATENT IMPROVED HORSE-POWER AND THRASHING MACHINE,

One of the most Valuable Machines ever invented for saving labor and time, respectfully inform the Public that having greatly enlarged their Extensive Establishment on Wellington Street, now extending through from Prince to George Street, which will give them ample room and accommodations, they trust, to enable them hereafter to supply the whole Farming Community of Canada, with a machine that will thrash and clean more grain in a day with less expense and more neatness than any other Thrashing Machine in use, and requiring but Two Horses.

We beg leave to say to our Customers & Friends, that we are again prepared to furnish those in want of Thrashing Machines, with an article superior even to those heretofore manufactured by us. Our long experience in making, and the very liberal patronage we have enjoyed in the sale of our Machines, has, together with a constant determination to produce an article that will never fail to excel all others, caused us to watch carefully all the improvements that could be made from time to time, until now we feel confident in saying, that for durability, neatness of Work and amount of it they can do, our Thrashing Machines are unequalled by any in use, and while the grain is thrashed clean, and none of it broken or wasted, it is at the same time perfectly cleaned, fit for the mill, or any market.

One of the above named Machines, will give a man, with proper diligence and attention, an income of from five to eight hundred dollars a year, as ap-

pears by the statements of a great number of gentlemen, who thrashed last season, and have kindly given us permission to refer customers to them for information in regard to the operation of our Machines.

Whereas, Letters Patent were obtained, bearing date March 5, 1849, on said Machine, the public are cautioned against purchasing, using, and manufacturing any imitation article, as all infringements will be dealt with according to the law of the land. All the genuine Machines will be accompanied by a Deed signed by B. P. PAIGE, the owner of the right, giving the purchaser the right to use or transfer the same.

All orders addressed to us, or to WILLIAM JOHNSON, our Agent, will be promptly attended to. Machines shipped to any Port in Upper or Lower Canada, and every one warranted to be as good as recommended.

B. P. PAIGE & Co.

The Agents for the sale of the above Machine in Canada West are as follows:—Workman, Woodside & Co., Toronto; Joswell Wilson, Ancaster; Horatio A. Wilson, Westminster; M. Anderson & Co. London; Mr. Samuel Young, A. Aphodel. C6s 6m  
Montreal, August, 1852.

## Important to Stock Breeders!

FOR SALE,

A VERY superior Four-Year Old BULL, bred from a thorough-bred Durham Bull, and thoroughly imported Hereford Cow.

For further particulars, apply, if by letter (post paid) to the subscriber,

JOHN IRELAND,

Crosby Corners, P. O.,  
Markham, Canada West,  
December 23rd, 1852.

tf.

UNIVERSITY OF TORONTO.

Theory and Practice of Agriculture.

PROFESSOR BUCKLAND'S COURSE OF LECTURES, embracing the History, Science, and Practice of Agriculture, will be given during Hilary Term, commencing January 10th, 1853. Three Lectures a week. Fee, \$1 for the Course.

## The Canadian Agriculturist,

EDITED by G. BUCKLAND, Secretary of the Board of Agriculture, to whom all communications are to be addressed, is published on the First of each month by the Proprietor, William McDougall at his Office, corner of Yonge and Adelaide Streets, Toronto, to whom all business letters should be directed.

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 excepting 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.