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LOWER CANADA
AGRICULTURIST

MANUFACTURING, COMMERCIAL, AND COLONIZATION INTELLIGENCER ;

OFFICIAL SERIES OF THE AGRICULTURAL BOARD AND SOCIETIES

PUBLISHED UNDER THE DIRECTION OF

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AGRICULTURAL REVIEW.

OCTOBER.

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Official Dep't.

LOWER CANADA AGRICULTURAL ASSOCIATION.

SHERBROOKE, 19th Sept., 1862.

The Lower Canada Agricultural Association met the 19th day of September, 1862, on the show grounds, according to the notice inserted in the "Agriculturist."

Officers Present.

Joseph Lanouette, 1st Vice-President, C. A. Bailey, 2nd Vice-President.

Board of Agriculture for Lower Canada.

The Hon. L. V. Sicotte, President, O. E. Casgrain, Vice-President, Hon. P. U. Archambault, Hon. P. Chauveau, Hon. J. Turcot, B. Pomroy, and Rev. F. Pilote.

Board of Arts.

W. Rodden, Esq.

Presidents of Agricultural Societies for L. C.

Ls. Lévêque, Joliette; H. Brodie, Hochelaga; J. Wurtele, Yamaska; P. Cadieux, Lévi; J. B. Pouliot, Temiscouata; A. G. Martineau, Champlain; J. A. Blackwood, Shefford; H. S. Anderson, Quebec; D. G. Morisson, St. Hyacinthe; Z. Evans, Wolfe; W. L. Felton, Sherbrooke; J. H. Pope, Compton; H. G. Pierce, Stanstead.

Vice-Presidents.

James McBean, Berthier; R. Latraverse, Richelieu; W. Boa, St. Laurent; W. Fling, Compton; H. Beckett, Sherbrooke; J. Atchison, Shefford; J. Grissam, Stanstead; O. Duval, Three Rivers; J. Melrose, Montcalm; J. Dunn, Laprairie; F. S. Kimpton, Laval; M. Moody, Terrebonne; Ls. Bilodeau, Quebec; Ls. Bilodeau, County of Quebec; A. S. Rocheleau, Champlain.

Delegates of Agricultural Societies.

E. Guilbault, Joliette; E. Barnard, Three Rivers; J. LeMaitre, Yamaska; A. Lothrop, Wolfe; J. F. Deguise, Kamouraska; J. B. Délagé, County of Quebec; A. Milville, L'Islet; A. DeCaussin, Montcalm; Dr. Tétu, Kamouraska; A. N. Lecavalier, Jacques Cartier; H. Wadleigh, Stanstead; Joseph Rodrigue, Two Mountains; F. M. Guay, Lévi.

Mr. J. Wurtele, seconded by Mr. McBean, moves, that Delegates who are not in posses-

sion of certificates proving their nomination as such, be admitted to this meeting by their declaring on honour that they have been duly named, but that in future it shall be a by-law of this association to exact the production of such powers, and that the Secretary-treasurer be instructed to publish this by-law one month before the annual meeting of the directors.—*Carried unanimously.*

The Hon. L. V. Sicotte, seconded by Messrs. J. H. Pope and Ls. Lévêque, moves, that W. L. Felton, Esq., of the city of Sherbrooke, be elected President of this Association.—*Carried unanimously.*

The Hon. P. Chauveau, seconded by Hon. P. U. Archambault, moves, that O. Duval, Esq., of Three Rivers, be elected 1st Vice-President.—*Carried unanimously.*

The Hon. L. V. Sicotte, seconded by Revd. Pilote and W. Moody, moves, that Mr. Boa of St. Laurent, be elected 2nd Vice-President.—*Carried unanimously.*

The Hon. J. Turcot, seconded by Hon. P. U. Archambault, moves, that George Leclere, Esq., be elected Secretary-treasurer.—*Carried unanimously.*

The Hon. J. Turcot, seconded by Revd. Mr. Pilote, moves, that the next Provincial Agricultural Exhibition be held in Three Rivers.

Mr. J. Wurtele, seconded by Mr. McBean, moves in amendment, that the next Provincial Agricultural Exhibition be held in Montreal.

The motion in amendment being put to the vote is carried on the following division:

Yeas.—Messrs. Lévêque, J. Wurtele, H. Brodie, J. A. Blackwood, D. G. Morisson, M. L. Felton, J. McBean, R. Latraverse, M. Boa, H. Beckett, J. Atchison, J. Melrose, W. Moody, F. S. Kimpton, J. Lanouette, E. Guilbault, J. LeMaitre, H. DeCaussin, A. Lecavalier, Jos. Rodrigue, L. V. Sicotte, B. Pomroy, U. Archambault, W. Roddon, J. Dunn,—25.

Neas.—J. B. Pouliot, P. Cadieux, A. G. Martineau, H. S. Anderson, Z. Evans, J. H. Pope, M. Fling, J. Grissam, O. Duval, Ls. Bilodeau, Ls. Bilodeau, N. J. Rocheleau, C. A. Bailly, J. F. Deguise, A. Melville, Dr. Tétu, E. Barnard, A. Lothrop, J. B. Délagé, F. M. Guay, P. O.

Chauveau, O. E. Casgrain, J. Turcot, Rovd. Mr. Pilote, -24.

The principal motion being then put to the vote is lost on same division.

Local Committee.

The following gentlemen were then unanimously elected to form a part of the local committee.

His Worship the Mayor of Montreal, Messrs. W. Rodden, H. Brodie, J. Lanouette, P. Fallon, J. Smith and V. Hudson.

Resolved,—That the next Provincial Agricultural Exhibition be held about the middle of September.

The Hon. L. V. Sicotte, seconded by Hon. P. Chauveau, moves, that the thanks of this meeting be voted to the members of the Local Committee of Sherbrooke for the manner in which they had conducted this Exhibition.

Mr. J. Lanouette is then requested to leave the chair, and W. L. Felton, Esq., takes it.

Mr. Rodden, seconded by Hon. L. V. Sicotte, moves, that the thanks of this meeting be voted to J. Lanouette, Esq., for the impartial manner in which he presided over the meeting.—*Carried unanimously*.

And the meeting adjourned.

By order,

GEORGES LECLERE,
Sec. A. A. L. C.

PRIZES AWARDED AT SHERBROOKE.

1st Class.—Horses.

1st Subdivision—Heavy draught. 1st sec. Imported thorough-bred stock, the property of residents in Canada and elsewhere. Stallions 3 year old and over, weighing 1,300 lbs. and over, Beauharnois Agricultural Society.

2nd Section—Reared in Canada, the property of residents only. Stallions from 3 to 7 year-old, weighing 1,200 lbs., Laurent Colin, Longueuil; 2d, O. Camirant, Sherbrooke; 3d, John Duffy, Durham. Stallions 7 year-old and over, weighing 1,300 lbs., John Johnson, Shipton; 2d, P. U. Archambault, L'Assomption; 3d, Leonard Fortier, Ste. Scolastique. Mares, from 3 to 5 year-old, weighing 1,000 lbs., Rufus Wadleigh, Arthabaska, J. H. Pope, Eaton. Mares 5 year old and over, weighing 1,200 lbs. with their foals, R. D. Morkill, Sherbrooke; 2d, Warren Page, Compton.

3d Section—Working horses reared in Canada, the property of residents only. Pair of Horses weighing 1,300 lbs., J. H. Pope, Eaton. Single horses weighing 1,300 lbs., O. Camirant, Sherbrooke; 2d, John Armstrong, Melbourne.

2nd Subdivision—Middle Draught. 1st Section—Imported thorough bred stock, the property of residents in Canada and elsewhere. Stallions 3 year-old and over, weighing 1,300 lbs. and under, Henry Hanning, Shipton.

2d Section—Reared in Canada, the property of residents only. Stallions from 3 to 7 year-old, weighing 1,200 lbs. and under, James McGuivney, Durham; 2d, Ben. Reed, Durham; 3d, John Beattie, Durham. Stallions 7 year-old and over, weighing 1,300 lbs. and under, T. P. Terrill, Sherbrooke; 2d, John Main, Melbourne; 3d, M. A. Bessette, North Stukely. Mares from 3 to 5 year-old, weighing 1,000 lbs. and under with

their foals, Henry Mullen; 2d, O. & A. Damon Barnston; 3d, A. Boynton, Compton.

3rd Section—Working horses reared in Canada, the property of residents only. Pair of horses weighing 1,300 lbs and under, 1st prize, Miller, Bros., Durham, 2d, G. B. Capel, Ascot. Single horses, weighing 1,300 lb. and under, 1st prize, Warren Page, Compton; 2nd, Wright Chamberlain, Sherbrooke.

3rd Subdivision—Light Draught. 1st sec. Imported thorough-bred stock, the property of residents in Canada and elsewhere. Stallions 3 year old and over, weighing 1000 lbs and under, 1st prize, J. H. Pope, Eaton.

2d Section—Reared in Canada, the property of residents only. Stallions, 2 year old, weighing 900 lbs. and under, 1st. A. Cox, Hatley; 2nd, Julian Lindsay, Eaton, 3rd, Major H. Beckett, Orford. Stallions 7 year old weighing 1000 lbs and under, 1st prize, Isaac Damon, Barnston; 2nd, Lewis Hanson, Barnston; 3rd, O. L. Harvay, Hatley. Mares from 3 to 5 year old, weighing 800 lbs. and under, L. K. Benton, Stanstead. Mares 5 years old and over, weighing 900 lbs. and under with their foal, G. S. Bailey, Compton; 2nd, O. Blodgett, Ascot; 3rd, David Rankin, Brompton.

3rd Section—Carriage horses reared in Canada, the property of residents only. Pair of Horses, weighing 1,000 and under, 1st prize, A. O. Kellam, Compton; 2nd prize, A. P. Ball, Stanstead. Single horses weighing 1,000 and under, 1st prize, Stephen Edgell, Ascot; 2nd prize, John S. Sanborn, Sherbrooke.

2nd Class.—Cattle.

1st subdivision.—Production of Milk.—1st Section—Imported thorough bred Ayrshire, the property of residents in Canada and elsewhere. Bulls 2 year-old and over, O. A. Globensky, St. Eustache, 30; 3rd, Dr. J. N. Poulin, Ste. Marie 10. Heifers or cows 2 year old and over, John McIntosh, Waterville, 24.

2nd Section—Thorough bred Ayrshires reared in Canada, the property of residents only. Bulls 3 year-old and over, Alph Kimpton, St. Thérèse, 20; 2nd Geo. Smith Lachine, 15. Heifers or cows from 18 months to 3 years old, Dr. Génand, St. Jacques, 15; 2nd, Hoar. L. T. Terril, Stanstead, 10; 3rd, G. B. Capel, Ascot, 5. Cows 6 year old and over, G. B. Capel, Ascot, 15; 2nd, A. S. Merrill, Compton, 10; 3rd, Rawson De Chair, Lennoxville, 5.

3rd section—Canadian breed, the property of residents only.—Heifers or cows from 18 months to 3 year-old, O. Camirant Sherbrooke, 10; 2nd, G. B. Capel, Ascot, 7; 3rd, O. A. Kellam, Compton, 4.

1st section—Imported thorough bred Durham, the property of residents of Canada and elsewhere. Bulls 2 year old and over, Arthur Wilcocks, Kingsey, 30; 2nd prize, Alph Kimpton, St. Therese, 20. Heifers or cows 2 year old and over, Geo. Batchelder, Stanstead, 24; 2nd, F. E. Wadleigh, Hatley, 16; 3rd, John McClary, Compton, 8.

2nd section—Thorough bred Durham, reared in Canada, the property of residents only. Bulls from 18 months to 3 years old, John McClary, Compton, 20; 2nd, O. A. Kellam, do, 15; 3rd, W. H. Iothrop, Dudswell, 10; Bulls 3 year old, and over, A. A. Knowlton, S.

Stukely, 20; 2nd, Royston, Durham, 15; 3rd, P. T. Morris, St. Thérèse, 10. Heifers, or cows from 18 months to 3 years, Hon. T. Leo Terrill, Stanstead, 15; 2nd, Isaac Harvey, Hatley, 10; 3rd, A. O. Kellam, Compton, 5. Cows from 3 to 6 year old, John McClary, Compton, 15; 2nd, A. O. Kellam, do, 10, 3rd, Ed. Longley, Shefford, 5. Cows 6 year old and over, A. O. Kellam, Compton, 15; 2nd, Amos Kezar, Hatley, 10; 3rd, Ed. Longley, Shefford, 5.

3rd section—Thorough bred Hereford, the property of Canadians only.—Bulls 3 year old and over, A. O. Kellam, Compton, 15; 2nd O. E. Knowlton, South Stukely, 10. Heifers or cows from 18 months to 3 year old, John McClary, Compton, 10; 2nd, L. K. Benton, Stanstead, 5. Cows from three to 6 year old, J. H. Pope, Eaton, 10; 2nd, L. K. Benton Stanstead, 5. Cows 6 year old and over, Hon T. L. Terrill, Stanstead, 10; 2nd, Amos Kezar, Hatley, 5.

4th section—Fat cattle of any breed, the property of Canadians only.—Animals 4 year old and over, Samuel Tozer, Quebec, 18; 2nd, Wm. Flings, Compton, 15; 3rd, H. E. Rose, Stanstead, 12; 4th, G. M. Ayer, do, 9; 5th, John McClary, Compton, 6; 6th, Luther Bulard, Ascot, 3.

3rd Subdivision—Production of work.—1st Section—Thorough bred Devon, the property of Canadians only.—Bulls 2 year old and over, Artemus Stevens, Ascot, 20. Heifers or cows 2 year old and over, Stephen Comstock, 20; 2nd, Amos, Kezar, 10.

2nd Section—Working oxen 3 year old and over, of any breed.—Ten yoke of working oxen belonging to the same township, L. K. Benton, Stanstead, 30; 2nd, John McClary, Compton, 20; 3rd, Daniel H. Winslow, Ascot, 10. Yoke of working oxen, John McClary, Compton, 18; 2nd G. M. Ayer, Stanstead, 15; 3rd, George E. Rose, Stanstead, 12; 4th, William Flings, Compton, 9; 5th, F. Knight Stanstead; 6th, William Gibson, Melbourne, 3.

3rd Class.—Sheep.

1st Subdivision—Long wool.—1st section—Leicester, Cotswold, &c., the property of Canadians only.—Rams 18 months old and over, Simeon Daigneault, St. Hubert, 15; 2nd prize George Smith, Lower Lachine, 10. Ewes 18 months old and over, Samuel Bessette, St. Mathias, 15; 2nd, Samuel Bessette, St. Mathias, 10.

2nd Section—Native breeds, the property of Canadians only.—Rams 18 months old and over, Michel Dabuc, St. Mathias, 15; 2nd, McKinnon, Somerset, 10; 3rd Cyrus Whitcomb, Hatley, 5. Ewes 18 month, old and over, F. E. Wadleigh, Hatley, 15; 2nd J. Smith, Inverness, 10; 3rd, W. Chamberlain, Sherbrooke, 5.

2nd Subdivision—Short wool breeds.—1st section—Southdown, &c., the property of Canadians only.—Rams 18 month, old and over, G. Batchelder, Stanstead, 15; 2nd, John Fleming, Hatley, 10. Ewes 18 months old and over Samuel Tozer, Quebec, 15; 2nd John Fleming, Barnston, 10.

2nd Section—Native breeds, the property of Canadians only.—Rams 18 months old and over, Artemus Steaens, Ascot, 15; 2nd, Chancey LeBaron, Ascot, 10; 3rd, Arthemus Stevens,

Ascot, 5. Ewes 18 month old and over, Artemus Stevaens, Ascot, 15; 2nd, W. McCurdy, Eaton, 10; 3rd, H. Wadleigh, 5.

4th Class—Swine.

1st Subdivision—Large breeds.—1st section —Thorough bred Swine, the property of Canadians only.—Sows, 18 months old and over, C. A. Globenski, St. Eustache, 15; 2nd prize, J. McIntosh, Waterville, 10.

2nd Section—Native breeds, the property of Canadians only.—Sows, 18 months old and over, Lewis Hanson, Barnston, 15, 2nd prize, Frs. Gouin, Richmond, 10; 3rd prize, G. F. Spafford, Compton, 5.

2nd Subdivision—Small breeds.—1st section —Thorough bred Swine, the property of Canadians only.—Boars, 18 months old and over, Geo. Smith, Lower Lachine, 15; 2nd, Allen Lothrop, Dudswell, 10. Sows 18 months old and over, C. A. Globenski, St. Eustache, 15; 2nd, R. Blodgett, Ascot, 10

2nd section—Native breeds, the property of Canadians only.—Boars 18 months old and over, L. H. Wilson, Ascot, 15; 2nd, Jas. Jones, Ascot, 10. Sows, 18 months old and over, Chas. Fisher, Ascot, 15; 2nd G. E. Molson, Ascot, 10; 3rd Henry Taswell, do, 5.

5th Class—Poultry, &c.

1st Subdivision—Gallinaceans.—1st section. Trio, two hens and one cock of any breed.—1st, H. L. Wilson, Ascot, 3; 2nd D. Camirant Sherbrooke, 2; 3rd, D. Camirant do, 1.

2nd Subdivision—Palmpeds.—1st Section—Geese, trio of any breed.—1st, J. McIntosh, Waterville, 3; 2nd Thos. P. Terrill, Sherbrooke 2.

2nd Section—Ducks, trio of any breed.—1st, L. B. Lawford, Sherbrooke, 3; 2nd, A. G. Woodward, do, 2; 3rd, H. Taswell, Ascot, 1.

3rd Section—Pigeons, trio of any breed.—1st prize, George Molson, Ascot, \$3; 2nd, L. B. Lawford, do, 3; 3rd prize, Chas. Fisher, do, 1.

2nd Section—Turkeys, trio of any breed. 1st, Frank Bowen, Sherbrooke, 3; 2nd, do, do, 2; 3rd, do, do, 1.

2nd Subdivision—Not previously classified.—1st Section—Rabbits, trio of any breed.—1st Frank Bowen, Sherbrooke 3; 2nd, F. Terrault, do, 2; 3rd, F. Bowen, do, 1.

2nd Section—Not previously classified.—1 Goat, D. Cameron, Sherbrooke, 3.

2nd Division—Agricultural Implements.

1st Class—Tillage.

1st Subdivision.—Implements for Pulverizing the Soil.—1st Section—Ploughs.—Ploughs for all purposes, Samuel Tuck, Sherbrooke, 8; 2nd prize, Chas. Brooks, Waterville, 4. Ploughs for light soils, Jas. Patterson, Montreal, 8; 2nd prize, Charles Brooks, Waterville, 4. Ploughs for heavy soils, Charles Brooks, Waterville, 8; 2nd prize, Jas. Patterson, Montreal, 4. Swivel Ploughs, Charles Erooks, Waterville, 8. Stubble Ploughs, Charles Brooks, Waterville, 5. Sub-soil Ploughs, Charles Brooks, Waterville, 5.

2nd Section—Harrows.—Heavy Harrows for tenacious soil, James Patterson, Montreal, 8; 2nd prize, J. B. Capel, Ascot, 4. Light Harrows for gravelly soils, James Patterson, Mon-

treal, 8; 2nd prize, James Jeffery, do, 4. Drill Harrows, James Patterson, Montreal, 5.

3rd Section—Rollers.—Croskill Rollers, Matthew Moody, Terrebonne, 8. Flat Rollers, C. P. Malloney, Ascot, 6; 2nd prize, Jno. Gilman, Stanstead, 3.

2nd Subdivision—Implements for Weeding the soil.—1st Section—Scarifiers, cultivators, extirpators. Cultivators, James Patterson, (cultivator) Montreal, 8.

2nd Section—Double Mould-boards and Horse-Hoes.—Double Mill-boards, James Patterson, Montreal, 8; 2nd prize, Charles Brooks, Waterville, 4. Horse-hoes, James Patterson, Montreal, 8; 2nd prize; Chas. Brooks, Waterville, 4.

2nd Class—Harvesting.

1st Subdivision—Implements for Outting Crops.—1st Section—Mowers, Reapers, &c. Mowers, John Tilman, 15; combined Reapers and Mowers, Matthew Moody, Terrebonne, 20.

2nd Section—Hay Curing.—Horse Rakes, Jos. Gazail, St. Hyacinthe, 10.

2nd Subdivision—Implements for digging crops.—Potato Diggers, James Patterson, Montreal, 10.

3rd Subdivision—Implements for the carriage of crops.—1st Section—Summer Vehicles.—Scotch Carts, Thos. Copping, Sherbrooke, 4; Hay Carts, E. C. Hyatt, Ascot, 4.

3rd Section—Hand vehicles.—Wheelbarrows, Thos. Copping, Sherbrooke, 1.

3rd Class—Preparation of products.

1st Subdivision—Threshing.—1st Section—Threshing and Shelling machines. Threshing machines, one horse power, Mat. Moody, Terrebonne, 10; Threshing machines, two horse powers, do., do., 10; Clover threshing machines, do., do., 5; Four horse powers and over, G. B. Capel, Ascot, 10.

2nd Section—Cleaning machines for grain or seed.—Fanning mills, Wyatt, Quebec, 5.

2nd Subdivision.—Implements for the preparation of Food.—1st Section—Root Crops.—Root cutters, J. B. Capel, Ascot, 5.

2nd Section—Preparation of Grain and Straw—Straw cutters, H. Blodgett, Ascot, 5.

4th Class.—Transformation of Products.

1st Subdivision—Animal Productions.—1st Section—Transformation of milk in butter,—Churns, J. W. Greeny, Coaticook, 4.

3rd Subdivision—Vegetable productions.—1st Section—Sugar making—Evaporating kettles and pans, Chas. Brooks, Waterville, 3; Utensils used for sugar making, Sam. Tuck, Sherbrooke, 2.

5th Class.—Various Implements.

2nd Subdivision—Not classified.—Gates, Rich. Lewis, Melbourne, 2,

3rd Division.—Agricultural Productions.

1st Class.—Forage Plants.

1st Section—Root crops in the bulb.—Potatoes, 2 bushels, Freeman St. Ambroise, Quebec, 5; 2nd prize, J. H. Winslow, Ascot, 2. Carrots, two bushels, H. A. Ekins, Sherbrooke, 4. Turnips, two bushels, G. P. Capel, Ascot, 4. Pumpkins, the best, Chas. Fisher, Ascot, 4; 2nd prize, David Ball, do., 2.

2nd Section—Root and meadow seeds—Ti-

mothly seed, two bushels, Chancy Lebaron, Hatley, 4; 2nd prize, F. E. Wadleigh, do., 2.

2nd Subdivision—Leguminous Plants—Small Beans, two bushels, Sam. Vaughan & Son, St. Johns, 4; 2nd prize, Ed. Dean, Ascot, 2. Peas, two bushels, Amos Keezer, Hatley, 4; 2nd prize, Sam. Vaughan & Son, St. Johns, 2.

2nd Class.—Grain Crops.

2nd Subdivision—Spring Grain.—Wheat, 2 bushels, Donald McKinnon, Somerset, 4; 2nd prize, Henry Mosse, St. Foye, Quebec, 2. Barley, two bushels, M. West, Quebec, 4; 2nd prize, D. McCurdy, Ascot 2. Oats, two bushels, M. West, Quebec, 4; 2nd prize, L. Hanson, 2. Buckwheat, two bushels, James Doak, Compton, 4; 2nd prize, H. A. Elkins, Ascot, 2. Maize (Indian corn) two bushels in the cob, Isaac F. Harvey, Hatley, 4; Dan. Winslow, Ascot, 2.

3rd Class—Industrial Plants.

1st Subdivision—Textile plants.—Hemp as grown and 28 lbs. as dressed, W. Boa, St. Laurent, 12. Flax as grown and 28 lbs. as dressed, B. P. Morris, Parswood, 12.—2nd Subdivision—oil plants.—Flax as grown and one bushel seed, M. B. Southwick, St. Hilaire, 6; 2nd prize, C. A. Bailey, Eaton, 4.

4th Class—Various Productions.

1st Subdivision—Animal.—Butter, 28 lbs. Judson Lindsey, Eaton, 10; 2nd prize, Ed. Fitzgerald, Ascot, 9; 3rd prize, W. Boa, St. Laurent, 8; 4th prize, J. Farwell, Compton, 7; 5th prize, H. Camirant, Sherbrooke, 6; 6th prize, J. Bonallie, Oxford, 5; 7th prize, Dan. Jones, Ascot, 4; 8th prize, Sullivan Fisk, Compton, 3; 9th prize, Ed. Dean, Ascot, 2. Cheese, 14 lbs. Amos Keezer, Hatley, 1; 2nd prize, Squire Colby, Hatley, 9; 3rd prize, C. A. Bailey, Eaton, 8; 4th prize, John Lothrop, Duds-well, 7; 5th prize, N. W. Alger, Eaton, 6; 6th prize, Don. McKinnon, Somerset, 5; 7th prize, J. Bacheldey, Hatley, 4; 8th prize, S. M. Denison, Shipton, 3; 9th prize, J. McIntosh, Waterville, 2. Honey, 14 lbs, H. Howe, Barnston, 4; 2nd prize, W. Mitchell, Ascot, 2.

2nd Subdivision—Vegetable Productions.—Tobacco, 14 lbs. Mat. Moody, 4. Hops, 112 lbs. E. F. Bodwell, 3; 2nd prize, Chs. Fisk, 2. Maple sugar, 10 lbs. C. A. Bailey, Eaton, 4; 2nd prize, H. Howe, Barnston 2.

Extra,

1st sect. Saddle Horse. 1st prize, Geo. Douglass, Quebec; 2nd, E. P. Felton, Sherbrooke; 3d, Frs. Gouin, Richmond.

2nd sec. Colt, 1 year old. 1st, Geo. Douglass, Quebec; 2nd, Peter Bowen, Compton; 3rd, R. D. Morkill, Sherbrooke.

3rd sec. Fillies 1 year old. 1st H. A. Elkins, Ascot; 2nd, A. O. Kellam, Compton, 3rd, A. S. Boynton, Hatley.

4th sec. Colts 2 year old. 1st, Sam. Johnson, Cote St. Louis; 2nd, Geo. M. Douglass, Quebec; 3rd, R. D. Morkill, Sherbrooke.

5th sec. Fillies 2 year old. 1st, Henry Mul-len, Durham; 2nd, H. Wadleigh, Hatley; 3rd, W. Mitchell, Ascot.

6th sec. Colts 3 year old. 1st J. S. Armstrong, Ascot; 2nd, J. H. Pope, Cookshire; 3rd, R. D. Morkill, Sherbrooke.

7th. sec. Fillies 3 year old. 1st, Jas. McGui-

vray, Durham ; 2nd, Francis Bourassa, Ascot ; 3rd, Wm. Henry, Compton.

Prince of Wales' Priza.

\$50 and Silver Medal, H. R. Hanning, Shipton.

Pure Devons.

1st sec. Bulls 2 year old and over, 1st, A. Lothrop, Dudswell ; 2d, O. Camirant, Sherbrooke.

2d sec. Cows 2 year old and over, 1st W. H. Holmes, Stanstead ; 2d, A. Lothrop, Dudswell.

3d sec. Yokes Oxen 1 yr. old, 1st, J. H. Pope, Eaton ; 2nd, H. G. Pierce, Stanstead ; 3rd, J. F. Davis, Compton ; 4th, G. F. Spafford, Compton.

4th sec. Yokes of Oxen, 3 year old. 1st G. F. Davis, Compton ; 2nd, G. M. Ayer, Stanstead ; 3rd, A. A. Knowlton, South Stukely ; 4th, John McClary, Compton.

5th sec. Bull calves. 1st, Levi Cleveland, Barnston ; 2nd, Benj. Pomroy, Compton ; 3rd, Thos. Shortliff, Hatley.

6th sec. Calves. 1st prize, James Grisam, Hatley ; 2nd, A. O. Kellam, Compton ; 3rd, O. Camirant, Sherbrooke.

7th sec. Yearling heifers. 1st, T. Terril, Sherbrooke ; 2nd, S. J. Pomroy, Compton ; 3rd, Benj. Pomroy, Compton.

Sheep.

1st. sec. Ram lamb, long wool. 1st, Samuel Bessette, St. Mathias ; 2nd, Donald McKinnon, Somerset ; 3rd, P. Roy. St. Pie.

2nd sec. Ewe Lambs. long wool. 1st, Sam. Bessette St. Mathias ; 2nd, D. McKinnon, Somerset ; 3rd, F. E. Wadleigh, Hatley.

3rd sec. Short wool Ram Lambs. 1st, John Pomroy, Compton ; 2nd, F. E. Wadleigh Hatley ; 3rd, S. J. Pomroy, Compton.

4th sec. Ewe Lambs, short wool. 1st John Fleeming, Barnston ; 2nd, Benj. Pomroy, Compton ; 3rd, Artemus Stevens, Ascot.

Honorable Mentions.

James Mair. Durham ; Chancy Lebaron, Hatley ; David Ball, Ascot, for horses. Quebec, W. Freeman, for field and dairy products ; W. Clément, Shefford, for dressed leather. Sherbrooke, P. D. St. Germain and Alex. Winter, for harnesses ; B. Walton, for slates ; Madame Laroche, for a quilt ; James Benson, of Hatley, for pure Devons, 2 year old, Eadon Wyatt & Co., for Washing machines and Mangle, Harvey Lawrence of Stanstead, for Washing machine ; S. Towse, Sherbrooke ; for furniture, Chas. Brooks, Waterville, for archtops, doors and frames, and gates.

JACQUES CARTIER AGRICULTURAL SOCIETY.

Report on the Flax Crop.

Having inspected the flax crop in your district, during Wednesday and Thursday last, I now submit my report. I have to congratulate the Jacques Cartier Agricultural Society on their attempt to re-introduce the culture of flax. It presents as fine an appearance as any other crop, with the exception of potatoes and perhaps peas.

I have taken samples from every field I visited ; these samples are deposited in the Board of Agriculture, Montreal.

Considering the unfavorable seed time, and

the long drought afterwards, I think it is proved beyond doubt that flax can be grown in this Province ; in fact it only requires a little more attention to prove very remunerative to the farmer.

On examining the samples of flax, you will observe that there is a great difference in the length of the plant produced from imported seed, over that produced from Canadian seed.

The plant from the imported seed has an average length of 37 inches, while that produced from Canadian seed is only 28 inches. This leads me to impress on your society the necessity of obtaining a supply of good seed for next season.

I find in general that the seed is sown too thin, and in many instances the ground has not been sufficiently harrowed before sowing. In one field I observed that the seed was sown on ploughed land without any harrowing whatever. Where this system is intended to be adopted, no good crop need be expected.

Land intended for flax should be carefully prepared in autumn, well harrowed and cleaned in spring before sowing, and all weeds carefully pulled out as soon as the young plant attains four to five inches in length.

If farmers will only pay attention to this, sow good seed in proper quantities, no fear need be entertained of flax culture realizing the sum of sixty dollars per acre.

You will also observe that the finest specimens have been late sown ; the best was sown on the 24th of June.

I am not to be supposed from this to be an advocate for late sowing in ordinary seasons, but only to show, as I observed in my letters published in the *Witness*, that flax would likely turn out this season as good as other crops sown late. Full particulars with regard to pulling, seeding, steeping, grassing, and scutching, will be found in my letter published in the *Witness*, 24th June.

You will find also two samples of hemp, one remarkably fine, being nearly ten feet in length. If you think of awarding prizes for hemp, both will be entitled to prizes. On this point I had no instructions.

I would suggest to your Society the propriety of making enquiry as to the state of the law in this country with regard to compelling all road contractors to cut down all weeds at the proper season, as I observe that thistles and weeds of all descriptions are allowed to luxuriate on the roads in splendid style, shedding their seed, and polluting the country for miles. One season does incalculable mischief in this respect.

In conclusion I have merely to state that any further information I can give your Society, I shall be happy to afford at any time.

I remain, gentlemen, yours, &c.,

WILLIAM GAMBLE.

We have attended most of the September exhibitions where we had the honor of a special invitation, and we hope doing the same during the coming winter, provided our time will allow it. In the meanwhile we beg for reports from every county exhibiting, for insertion in the coming numbers.

Lower Canada County Exhibitions.

| | | | |
|--------------------|----------------------|------|----|
| Bagot,..... | Ste. Rosalie,..... | Oct. | 1 |
| Berthier,..... | Berthier,..... | " | 1 |
| L'Assomption,.. | St. Paul l'Ermite,.. | " | 1 |
| Richmond,..... | Danville,..... | " | 1 |
| Ottawa, No. 1,. | Aylmer,..... | " | 2 |
| Richelieu,..... | Ste. Victoire,..... | " | 2 |
| Pontiac,..... | Clarendon Centre, | " | 3 |
| Bonav'ture, No.1,. | New Richmond,.. | " | 3 |
| Gaspé, No. 2,. | Gaspé Basin,..... | " | 7 |
| Vaudreuil, No. 1,. | Vaudreuil,..... | " | 7 |
| Ottawa, No. 2,. | Thurso,..... | " | 8 |
| Nicolet, No. 1,. | Bécancour,..... | " | 9 |
| Laprairie,..... | Laprairie,..... | " | 9 |
| Bonav'ture, No.1,. | New Carlisle,..... | " | 9 |
| Bonav'ture, No.1,. | Port Daniel,..... | " | 14 |
| St. Maurice,... | Yamachiche,..... | " | 15 |
| Montmorency,.. | Château Richer,.. | " | 15 |
| Dorchester, ... | St. Anselme,..... | " | 15 |
| Mégantic, No. 1,. | Inverness,..... | " | 17 |

EDITORIAL DEPARTMENT.

THE SHERBROOKE PROVINCIAL EXHIBITION.



O much has been said on the Sherbrooke Provincial Agricultural Exhibition, that most of our readers have, no doubt, already formed their opinion as to its success or failure, according to the more or less favorable accounts which have come to their notice. We know of some farmers who

will not have the Exhibition at any other place than Montreal, and who will do their very utmost not only to find fault with exhibitions anywhere else, but will even apply all their influence to make them a failure. Again, we know of some farmers who will believe in thorough-bred cattle only, and will decidedly object to the admission of grades on the show grounds, as permitted by the new prize list. Well, as these farmers will never acknowledge a successful exhibition anywhere except at Montreal, and unless the prize list is amended, so as to exclude from competition all but thorough-bred cattle, it is out of question to meet their approbation, however successful the Sherbrooke Exhibition may have been. Unfortunately these farmers are among the most powerful, and their opinion is accepted oftentimes without hesitation as to the grounds on which it lays. Hence, those articles, in the daily press, which are calculated to throw discredit on the Board of Agriculture, and which could not stand a moment's discussion. Is that the position which our leading farmers ought to take? Have they not confidence enough in their opinions to come before the Board and stand boldly on their grounds? Surely they cannot doubt of the utmost desire of every member of the Board of Agriculture to do justice to every claim, and thankfully receive every suggestion. And this is the very rea-

son why they have admitted to the show grounds the crosses hitherto excluded. Unquestionably, had they kept on the old prize list, which awarded some \$400 a year to some of our leading agriculturists, they would have met with smooth language and general approbation. But it was represented to them that Provincial Exhibitions were made not for the few but for the many; that the improvement of our native stock was of a more general and greater importance than the raising of a few imported animals. And immediately taking this view of the question, they added to the prize list those sections which would bring on the show grounds crosses of all descriptions.

Never was the Board of Agriculture composed of men so high in public opinion and as able to do justice to the very important interests entailed upon them. They have no prejudices, and are ever open to conviction when proper arguments are brought to bear on the discussed point. Therefore, if those farmers, whose views the prize list does not meet, wish for any amendment, they must not abstain and protest by their silence, but come before the Board and discuss the matter so as to bring conviction. Again, the *Lower Canada Agriculturist* is constantly open to any suggestion on all questions connected with our agricultural matters, and we would be grateful for any occasion given us to stand by the new prize list and defend its principles. For although we have nothing to do either with the Board of Agriculture or the prize list, we fully take the responsibility of the latter, and trust we will meet with a fair discussion of its merits. Had it not been for the crosses, the show at Sherbrooke would have been a decided failure; but they alone told more about the general improvement of our stock than all the previous Provincial Exhibitions, and we are not alone of that opinion. Mr. Pope, the member for Compton, in a very eloquent speech at the meeting of the Agricultural Association, boldly stood on the same grounds, and energetically said, speaking in the name of the Eastern Townships, that they thought their exhibition far superior to any previous show at Montreal, for if there they saw a few thorough-bred cattle, exhibited by a small number of gentlemen farmers, here they might show what thorough-bred cattle would do for the community at large when properly crossed with the native stock. "A life-time of practical experience," he said, "has learnt us that crosses are the only cattle which can be raised with profit in this country. As to whole herds of thorough-bred stock, we don't want them, for we do not believe that they are as well adapted to our wants." And in this we fully concur, and have done so for the last five years. But had we hesitated to this day, the remarkably fine stock exhibited at Sherbrooke would not allow us to hesitate any more. Indeed, we might say this much, that although we have travelled for five years in Europe, visiting the most renowned agricultural districts and exhibitions, no where have we met a better class of grade animals than those exhibited at Sherbrooke; and we question very much if Upper Canada, with all their thorough-bred cattle,

could turn out thirty yoke of oxen to match those we have admired on the grounds.

But how many will believe in imported stock only, and will pronounce any exhibition a failure the moment they do not see at the show so many Durham, Hereford, Devon, &c.? It is a well known fact that they can only be found in the neighbourhood of Montreal; and if the exhibition is some distance off we cannot expect to have these animals on exhibition as numerous and as well bred. The Sherbrooke Exhibition must be looked at as the expression of the agricultural capabilities of the district and not of the whole province, which, by the average distance from the show, is practically excluded from competition.

Starting from this point of view, the Sherbrooke show was certainly most creditable in every department, and was an eloquent demonstration of the improvements realised since the last exhibition there. Mr. Baily, the vice-president of the Agricultural Association, in a spirited speech given at the meeting of the Association, very properly remarked that,—“Although the first show at Sherbrooke was a failure, still the amount of money spent on that occasion had not been lost; the grain then sown had now given a full return, since the failure of the first show had been followed by a decided success.” And for any one who has carefully been through the different departments, there cannot be another opinion. But it is well known that the Montreal farmers wish to have for themselves the Provincial Exhibition, and they will find fault with Sherbrooke by any means.”

The entries were as follows: horses 150; cattle 350; sheep 65; swine 50; implements 100; productions 200. The second day of the Exhibition as many as 5,000 people were on the grounds. But owing to the Grand Trunk Railway, acting under some unknown influence, the stipulated half-fare was raised to three-quarter-fare, and as a consequence numbers at every station refused to submit to such a mean exaction, however quite such as could be expected and returned home. Now this is too bad, and the farmers of Canada, who are the people of Canada, will soon know whether they are to be treated in this disgusting manner much longer. In the United States where railways have been built at the expense of private companies, the use of the cars is freely given to the people to go to the Annual State Fair, and here where the railway has been built by the people to a very large amount, they are allowed no reduction on the same occasions. That will certainly not do; and the Grand Trunk Company, on this occasion, has offered the strongest argument against any grant in its favour, by abusing the farmers of Canada as they have just done.

The Grounds.

There could not be finer weather than the heavens have furnished for an out-door exhibition. The journey hither was pleasant by the Grand Trunk special train, which however, we fancy the Company would have preferred to see a little more crowded. A goodly number of passengers were, however, picked up at the way stations, and a crowd got off at

Sherbrooke. There is probably no country in the world more beautiful than Canada as seen of a bright September day among the hills and streams of the Eastern Townships. The forests have assumed the many hues of autumn. The maple leaves are red, and other trees and plants begin to announce the fall of the year. In this town everything wears a holiday look—flags flying, bands playing, and people congregating in groups. The exhibition is close by the station, and a more beautiful site could not have been selected. It runs along the bank of the St. Francis, which river forms one of its boundaries without other fence, the other sides all being boarded off. We should think that 12 or 20 acres are enclosed.

Horses.

If we remember that the show at Sherbrooke was rather a Township than a Provincial Exhibition, we will be prepared not to meet many heavy draught horses on the grounds. The working oxen in this part of the country do all the heavy work in a much better way than horses could, and, what is more, at a much cheaper rate. Situated as they are at an average distance of some 90 miles from Montreal and Quebec, our two principal shipping markets, the Eastern Townships cannot compete with the shores of the St. Lawrence in the grain market, having against them 90 miles of railroad freight; but they can feed stock and produce butter and cheese, which can be readily brought to the Montreal or Quebec markets at a fair price. Moreover the soil is generally light, poor, and hilly, thus not very well adapted to the growing of grain crops, while presenting all the requisites of a remarkably fine grazing country. Pasture improves the land, when grain fields are known to exhaust it. Meadows are equally beneficial, so that where grain crops would yield a poor return, require a large capital, much manure, and hard labour, with small profits,—pastures and meadows will feed a large stock, require a small capital, little manure and labour, and give large profits. This is the position of the Eastern Townships, and they have set to work accordingly. Having a large number of oxen constantly on hand for feeding purposes, they wisely set them at farm work when needed, and then fatten them for the market. No dead-weight on the farm, and of what use would be a heavy draught horse in the Eastern Townships for nine months in the year? Again, experience has established the superiority of oxen at ploughing or teaming in newly-opened hilly land, where you meet every moment with a stump or some other obstacle, over which horses will jump and kick, doing mischief, while oxen will pass close by, slowly, doing steady work. But editors of daily papers will not remember all this, and they will report first thing next morning that the show of heavy horses was a failure, and for every other department the same. The fact is that in agriculture every one believes himself a knowing judge, and will boldly pronounce on the merits of every possible thing in the show yard.

The first prize in the heavy draught stallions was awarded to the Beauharnois Agricultural Society for an imported Clyde of remarkable

beauty. Indeed this stallion, in our opinion, would compete with any animal of his kind in the Province. He has all the weight of his breed, but not the heavy bones, nor the heavy head. His action is quite easy, and he is a first-rate breeder. In short, we have no doubt that he would have won the first prize even in competition with all the stallions that kept off from the show.

Of middle and light draught horses there was a very good show, better in number and quality than at any previous exhibition. The Morgans were generally admired. We could only get a glance at them in the ring, the exhibitors being particularly careful to cover their animals when in the stables. So we have been in the impossibility of taking notes on those we considered the best.

Cattle.

The thorough-bred cattle specially adapted to the production of beef were represented by a few very remarkable animals in every breed. Of Devons and Herefords there was a good show, better than we ever had; but the Durham class was decidedly superior, and very right it should be, as it is the only breed ever imported on the European continent to improve the native breeds in the production of beef, by judicious crosses. It is said in favour of the Hereford and Devon that they stand very high in the estimation of English breeders. No doubt, but not half as high as the Durham: and the proof of it is plain at every exhibition of the Royal Agricultural Society of England, where the show of Durhams is always as large as that of all the other breeds put together. Moreover the Durham is now met with in every county of Great Britain, but it is very seldom that the Hereford or the Devon are met with out of the few counties where these breeds have long since been extensively propagated. But how it is that we should import them to Canada in preference to the Durham, when this breed is well known as decidedly superior for the improvement of stock in the beef line, we are at a loss to understand?

To any one free of prejudice, no Hereford or Devon bull on the ground could compare one moment with the Durhams exhibited by Mr. Wilcox and Mr. Kimpton. These two animals were remarkably fine, and would have kept their prizes even with a much larger number of competitors. But Mr. Kimpton's bull, though awarded a second, might have had the first prize. The straight back, the wide girth well filled behind the shoulders, and resting on two front limbs very wide apart, the rump wide on the hips and falling square, the niceness of the bones and head, were decided advantages over his more lucky rival. But perhaps Mr. Kimpton's bull was not high enough in condition to show all his points to advantage. Among the cows there were also very superior animals.

Of Ayrshire there was a very good show, and some of the first-prize cows were remarkably fine. One belonging to Mr. McIntosh presented all the desirable points, as a milker and as an Ayrshire.

Of Crosses there was a large number, showing the influence of different blood. The Durham crosses were readily known, as well as

those of the Ayrshire; both being very differently shaped, and showing on the one hand the grazing, on the other the milking, properties of each breed. These, with the working oxen, were the best exhibition of grades we ever witnessed in Canada, and were most creditable to the Eastern Townships.

Among the fat cattle, Mr. Tozer, of Quebec, exhibited a remarkably fine heifer, which has already taken first prizes in Upper Canada and in the State of New York. This animal would certainly be noticed very favourably even at the annual Smithfield cattle show in London.

Sheep and Swine.

This class was well filled, and deserves great credit for the general improvement of our native breeds, which was apparent at the Sherbrooke show. Something more might be done, and we hope our Eastern friends will keep on crossing with choice animals, so as to again improve their stock of sheep and swine. We have been happy to meet at the Toronto Exhibition some of our Lower Canadian farmers, buying some of the prize lambs on the grounds, with other stock as well.

Agricultural Implements.

In a grazing country we could not expect a large number of Agricultural Implements, but owing to the presence of M.M. Jeffreys, Patterson, and Moody, a few implements of the best description were on the ground, which would have kept their prizes even against the whole Province. Therefore as to instruction to be derived from a good exhibition of implements, Sherbrooke offered just as much as any preceding exhibition, and even more, for we had there several late improvements, besides new Rakes, imported Ploughs and Harrows from England, a new Straw Cutter of superior make, and what is more important than anything else, two complete collections of Wooden Ploughs for every purpose, improved from the United States models, and most commendable, either with regard to shape or cheapness. Heretofore these implements were imported from the United States, and this innovation is a decided advantage.

In a future number we will give a full account of these ploughs. As to productions and poultry we have always been of opinion that they ought not to be allowed in our Provincial Exhibitions. Let the County Societies take that department and judge them in the field, and not in the bag. We learn with pleasure that already a number of Agricultural Societies are awarding prizes for productions in the field only.

We will now conclude our report on the Sherbrooke Exhibition, with the remark, that never was the meeting of the Directors of the Association so numerous, and of such high standing. The discussion as to the place of the next Provincial Exhibition was the occasion of several remarkably good speeches, evincing a great deal of interest in our Agricultural matters. This meeting is an unmistakable proof of the mighty importance the Agricultural community is about to assume, both in the estimation of our government leaders, and in the opinion of the public generally.

Farmers, Educate your Sons!

We have ever thought, that if there was a profession in the world, of which a man had a just right to be proud, it was that of the farmer; and yet no class in the community place so low an estimate upon their calling, as farmers themselves. Why is this? Has the idea, that mere physical force is the only essential qualification of the man who tills the earth, obtained such a hold of the minds of our people, that the thought of ever placing agriculture in a loftier position has been utterly abandoned? We hope not; and yet with many this appears to be the case. Is it not lamentable, in an age like ours, that any such absurd and positively injurious notions should prevail? Who is prepared to estimate the pecuniary losses actually sustained, by the encouragement of such nonsense? Millions upon millions are annually lost in the cultivation of too much land—the over-stocking of farms—errors in the rotation of crops—the entire abandonment of farm accounts—the ignoring of all improved implements, &c. When will all farmers awake to a true sense of their own interests? When will they, as a unit, resolve to place their profession where it deserves to stand, at the very head and front? Why should it not? What other profession involves so much of the scientific as well as the practical? What branch of science is not more or less intimately connected with, and what profession holds out so many powerful inducements to the man of inquiring mind—to the observer and admirer of nature's works, and to him who if he have no higher object, seeks to amass a fortune? None that we know of, which may be called legitimate. Why, then, farmers, will you not one and all improve the golden opportunities so freely afforded you? Why not educate your sons to believe that the calling of the farmer is ennobling and remunerative, if it be but intelligently pursued? Point them to the men, who, discarding the pernicious ideas already referred to, have counted upon the great work of placing agriculture in its proper position.

Have they not earned a reputation which will live when the ephemeral notoriety of politicians and speculators, will have passed from the minds of the world? Bustle and Skinner, Downing and Wilder, Bartram and Peters, all hold a high place in the hearts of the lovers of agriculture and horticulture—a place which can never be usurped.

Agriculture as a Pursuit.

Few occupations are there better fitted than Agriculture to exercise a kindly influence over the mind, and to nourish those emotions and conceptions produced by the contemplation of the sublime and beautiful. To a contemplative and intelligent disposition, it is an inexhaustible fount of suggestions worthy the attention of a philosopher. In all its branches it is constantly offering to our consideration some object of interest. Every leaf, every stone, every blade of grass, every insect, is a volume sealed indeed to the careless eye, but ready to open and reveal its mysteries to the acute observer. The objects that may be taken in at a glance are so endless in number and variety, and so full of beauty, that the mind is irresistibly

turned from them to the power, wisdom, and goodness of the Great Artist.

Many pursuits are tedious and wearisome, not only from the sameness of dull routine, but also from the want of pleasing surroundings and associations. This cannot be said of Agriculture; for while in its constant change of programme it possesses variety enough to please the most impatient, the delights of imagination and sense which are its accompaniments are the most exquisite of the works of Nature, and have been sung by poets in their most charming measures, and sighed for by the occupants of the city. How different are the thoughts suggested by the latter place. If, in the stunning and unceasing noise, a man can so far collect his senses as to think, he is continually reminded—often by sad experience—of the pride, the heartlessness, the avarice, and the selfishness of his fellow man. The massive temples of mammon which frown upon him, the brilliant display of merchandize, the bustling indifference of passers by, the endless roll of wheels in dull monotony over the pavements, and the glitter and tinsel of pageantry and procession, though they may gratify an idle curiosity, yet they leave no divine impression of exalted pleasure, or inspire us with lofty aspirations.

The sights and sounds of the country have a very soothing and tranquilizing effect on the spirit. The sweet songs of the birds, the murmuring brook, and the plashing waterfall, strike a responsive chord in every breast, and, blending harmoniously, thrill us with sensations of pure and ethereal ravishment. They even melt the heart of the savage, attune his lips to poetry, and swell his bosom with thankfulness to the Great Spirit. The velvet lawn, the grassy meadow, the undulating sea of grain, the majestic forest, the gleam of the sparkling rivulet, and the distant mountain mingling its dim outline with the sky—all these inspire us with emotions of exalted pleasure, and lift us above all that is low and groveling. They seem to reflect, as it were, their own bright sunshine upon the mirror of the soul, and fill it with pleasing visions. They waft us from the dull common-place to the fairy realms of fancy, where the imagination roams at will, and holds the senses bound in drowsy reveries, and dreamy illusions and vagaries of thought. Contrast with these the ceaseless din and jarring discord of the busy thoroughfare, and say whether it is not a strange infatuation that leads men to prefer its giddy whirl to the peaceful quiet of rural life.

While Agriculture offers few inducements to dishonesty; it seems to lead us by its wholesome influence to paths of virtue and usefulness. The farmer is assailed by few temptations, and has but little experience in those arts and deceptions by which men of traffic are constantly striving to over-reach each other. Hence he is proverbial for that frank and open dealing which marks a noble and generous disposition, unalloyed with deceit and craftiness. Relying for support, not on the patronage of others, but upon his own honest toil, he is distinguished for that careless independence which leads a natural dignity to

his manner, and lifts him in the moral scale above the tradesman, who by scheming, flattery, and obsequiousness, decoys custom to his doors. What adds a rare grace to this characteristic is its simplicity and freedom from display; for it bears the stamp of genuine dignity, and is far removed from that self-sufficient pride which looks down upon those in the humbler walks of life with haughty contempt.

In addition to cultivating the soil, the farmer enjoys ample opportunities for the improvement of his mind, and for fostering a taste for literary pursuits. The long winter evenings and spells of bad weather which are distributed at intervals like oases in the desert, can thus be turned to good account and made the means of securing a valuable fund of knowledge, as well as contributing greatly to his amusement. Nor is he, like the professional gentleman, languid and feeble from the want of proper activity, and worn out by constant mental exertion. His nervous system is braced by exercise, and his brain fed with pure blood from a healthy body. Hence it is fresh and vigorous, quick to receive impressions, and tenacious in retaining them. The thoughts of the farmer bear, in a high degree, the stamp of originality. This may be owing to his limited intercourse with society, and his habits of communion with himself; or perhaps it arises partly from that independent spirit which is so prominent a trait in his character. Therefore, judicious mental culture would render him, already the bone and muscle, the intellectual and ruling power, and he would wield a mighty influence in deciding the destinies of the country.

Finally, I ought to mention the happy effect of a rural life in dissipating the cares and troubles of the world, and lulling the wearied mind into a grateful calm. Our greatest men have courted the shades of retirement, in seasons of relaxation from business, to recruit their physical and mental energies. Leaving behind them the storms and turmoils of public life, they have welcomed their retreat with such feelings of joy as kindle the heart of the mariner when his tempest-tossed bark is entering the "haven where he would be." The truly great are fain to steal away to quiet seclusion and wholesome meditation. Ostentatious display and the giddy round of fashionable life are attractive only to the weak-minded and frivolous, who have no taste for the more refined pleasures of which we are by nature capable, and who languish into melancholy when removed from the gay circle in which they shine. They pronounce the country an unmitigated bore, and too "shockingly dull" for any one of refinement; and they, of course, derive little satisfaction either from a residence or sojourn there. The fault, however, lies in themselves, that they have no relish for what should be the highest enjoyment of the senses. Like him who has become habituated to the excitement of the intoxicating cup, they are for ever burning with a restless desire for the pomp and glitter of display, and the heartless fascinations of fashionable life. How rather enviable is that disposition which finds an unfailling mine of delight in the companionship of nature and the tender blandish-

ments of his own home circle. Time can never hang heavily upon his hands, who thus possesses inexhaustible resources within himself. He can at will conjure up cheerful thoughts and fancies to beguile his lonely hours and chase away the gloom of *ennui*. Earth is for him a paradise, and not a gloomy prison-house. In everything he discerns the finger of a beneficent Creator, and feels an indescribable pleasure in searching out his footsteps. The quiet repose and hallowed associations of rural retirement seem eminently adapted to soothe the infirmities of age, and promote that tranquil frame of mind which is then so grateful and so desirable. Many of them are of such a character as fancy has pictured in the fabled elysium as the highest and noblest enjoyments of sense. The Garden of Eden, a type of the Celestial Paradise, was beautified with the choicest gifts of nature, lavished in unsparring profusion; yet this was deemed a fitting residence for a being "little lower than the angels." May we not, then, conclude that rural life, which, in its surroundings, bears a faint resemblance to the earthly paradise, is admirably calculated to foster those feelings and conceptions which will prepare us for the proper enjoyment of the heavenly, and give us, feeble and inadequate though it be, some idea of its magnificence and enchanting loveliness?

"Is Farming Profitable?"

MR. EDITOR:—I see the above question is often asked in your journal. It might as well be asked, is trade-profitable? Can commerce be so managed, as to secure a competency to him who invests his capital in ships and merchandise, to send to foreign ports? Can the lawyer, with all his hard study and diligent application of knowledge to the various exigencies of life, secure a living for himself and family? Can the mechanic, after ceaseless labor and toil, earn his daily bread, or anything more?

Now, sir, the man who is incompetent for what he undertakes will not succeed in either of the above occupations, and it is the same with farming. He who would earn his bread by farming, and anything more, must have grounds, and must know how to cultivate these grounds,—he must know what kind of seed is suitable for peculiar soils,—he must know when to sow, and when to plant, and what preparation is necessary before putting the seed into the ground. We not only have the promise of "seed time and harvest," but we have the assurance of a crop, if the right seed is put into the right ground.

Let a man select a sterile piece of land, and, perhaps, take the wrong kind of manure, spend fifty dollars in preparing an acre of ground for the seed, and he may not find a crop that will half-pay him for his labor and expense of preparation; but let him take a suitable piece of ground, and with less than half the labor and expense, the crop will pay him 100 per cent. on his investment. It is so in every pursuit of life. In order to succeed in life, a man must understand his business, and must apply himself to whatever he undertakes. Some never succeed in anything. From the want of common understanding, they fail in everything while others, with much less labor and bustle,

succeed in whatever they feel disposed to pursue.

In all probability, no investment of a small amount pays better, than what is judiciously expended in farming. Every dollar rightly expended is sure to pay double, or treble. The gains are slow, to be sure, but the investments are generally light. Let a man be so situated that he could advantageously use \$50,000 in preparing ground for the seed, and he would be more surely remunerated than he would in buying merchandise, and selling, for cash, and on time, as business is usually conducted.

The farmer is often discouraged, because of small gains. He forgets the small amount invested. The average of those who live by farming in New England are not worth over one to two thousand dollars. How could a man with \$1000 support a family in trade, with bad debts, losses on goods purchased, &c. &c. I think, sir, from careful observation, that it will appear, that more men have become rich, I mean, what country people call rich,—from farming than from any other pursuit. A large part of the farmers in New England commence poor, with a family, and work hard. How could they succeed in trade, under the same circumstances?

A Column from Alderman Mechi.

In taking up our copy of Alderman Mechi's "How to Farm Profitably," we discover sundry little paragraphs marked for quotation a long time ago, but for which we have never yet found the space. They contain a great deal of truth, if they are written by a city farmer:

—The history of prejudice [in agriculture as elsewhere] has always been the same, viz., resistance to innovation and disbelief of progress; but that is no justification of despair; on the contrary, the evidence of all time shows that we must fight manfully against the old enemy, and shall overcome him by degrees.

—The want of drainage on clay is ruinous.

—The quantity of meat made on a farm per acre determines the quantity of grain grown. It has often been remarked that amidst miserable land, and wretched farming the laborer's cottage garden is like an oasis, but it receives, independently of deeper cultivation, 32 times the farmer's quantity of manure, for he knows that on his eighth of an acre of land he cannot expect a crop unless he keeps a pig to make manure.

—There are certain fixed expenses on land, whether we grow a large crop or a poor one; rent, tithe, taxes, manual and horse labour, and seed, becomes a very heavy percentage of charge on a minimum crop, whilst on a maximum one the expenses are proportionately diminished.

—On well laid out land, with few fences, good drainage, and good roads, there is actually much less cost of labour than on a poor, undrained farm, with wide and irregular hedges, green lanes, and choked up ditches; as most of my work is done by piece, I can estimate the difference with accuracy.

—Let him who enters on farming make up his mind to great vicissitudes in price, and in some degree in quantity and quality. It is the history of the past, and will be of the future.

If the average is remunerative it is all we can expect.

—If you buy 5 per cent. too dear, and sell 5 per cent. too cheap, your farming profit is gone. Bear in mind that there are in every market, men who are keen and thorough judges of the value of every article. If you are not so, you must find some good judge to act for you, otherwise you will soon fall a victim to superior power.

IRON AS MANURE.—A Farmer once told me that he manured his land with iron, and explained that it was the plow which furnished his manure. This is literally true, for there is a love between the air and the soil, which ends in a fructifying attachment if you will but expose them to each others influence.

—The advantage of deep cultivation is particularly shown immediately over the drains, where the earth has been deeply disturbed: many people fancy that it is because it drains quicker, but the truth is that the air has more ready access to the soil.

—Management is a comprehensive term; it implies the right man in the right place, and the right thing done at the right time. In every undertaking, warlike or peaceful, it is alike essential, but particularly so in agriculture, where the fluctuations in weather render forethought and promptitude an essentiality for profit.

—Let agriculture form an honorable portion of our general education—why should it not? Let Tull and Tusser range side by side with Homer and Virgil. Agricultural education and apprenticeships for our young farmers are imperative.

—The question of what may be profitably produced from an acre of land, is a very important one. Professor Playfair, (a first rate authority,) has I believe, stated that £250 can be and has been produced from one acre of market garden in one year; and we all know full well that in all gardens the produce is abundant compared with field culture. Why it is so needs no reply. "At blithsome morn and dewy eve," the crowds of men, women, and children issuing from market gardens are living solutions of the problem, and stand in charming relief to the solitary farm labourer, alone in a twenty-acre field, or scattered here and there over an extensive district like plums in a school pudding.

—Starvation to either man, beast or plants, will reduce them to mere skeletons; abundance of suitable food, with cleanliness and warmth, will make them comparative giants. The concentration of manure and its consequences, are plainly exemplified at our flower shows, where enormous masses of flowers and foliage are produced by one solid foot of prepared earth. In a state of nature forty times the quantity of soil would fail to produce similar results. No doubt the frequent application of moisture, when requisite, assists in producing this effect; but a knowledge of this fact should stimulate us to study irrigation, and apply our liquid manure to the roots when the plant is in vigorous growth, instead of wasting it in our horse-ponds. I know and can appreciate practically the effects of such applications.

—The necessity for diminishing the fixed expense by an increased produce, is illustrated by the statement of a first-rate north-country farmer, who says that if he spends £1 per acre, or £600 per year, for artificial manures, he makes a profit—if he omits it he makes a loss. If stock is too dear, or you are short of capital, plow in green and root crops—particularly on heavy land.

—I may be asked why I attach so much importance to drainage. Why, you might as well ask me why I attach importance to circulation, vital or monetary. Stagnated water or stagnated air, are as ruinous to the plants as they would be to our own vitality. Fix a cork in the drainage-hole of your flower pot, and you will soon have a practical illustration of my meaning.

—Essential Preliminaries to Profitable Farming:—

A thorough knowledge of your business, practical and theoretical.

Ability to buy in the cheapest and sell in the dearest market.

—To select the most able workmen of industrious and honest habits.

—To apportion rightly your land and capital.

—To maintain in economical efficiency the motive power, whether horse or steam.

Deep, frequent, and clean cultivation.

Drainage of land not naturally filtrative.

Shelter for stock.

Efficient machinery and farm implements.

Ample [and judicious] use of purchased food and manures.

Rigidly correct farm accounts, posted daily from the cash book and journal.

Estimates of the cost and return of each crop in detail.

—Before I hired a farm I would take with me a laborer, and dig a hole in every field, to the depth of 2 or 3 feet, that I might know the character of the subsoil, for herein lies the prospect of your success or failure. The agricultural pie-crust or plowed soil, to the depth of 5 inches, always looks pleasant enough and dark, but inside the pie you will too often find a most miserable contrast, inconceivably at variance with the deceptive surface which has been so long cultivated and aerated. There is nothing more instructive than the contents of a 5 feet drain cut through a field. Mere contents, when exposed to day-light, appeal forcibly to agricultural common sense with reproachful truth. It is in that 5 feet of subterraneanity that you must look for your agricultural profit or loss; and yet I have seen many farms hired without a spadeful of earth being moved or examined; and I have seen many farmers, in a very brief period, leave farms so hired, minus their capital.

Science with Practice.

By far the greater portion of the sum of human knowledge has been derived from the experience and observation of comparatively uneducated men. This portion of our knowledge is also, in its practical application, more valuable than that which has resulted from the investigations of the man of science. In the most important branch of industry—agriculture—the labors of the purely scientific man have as yet borne but scant fruit, whilst the unassisted efforts of the

husbandman have made the most sterile tracts on the earth's surface to "blossom like the rose." That practical men should have done so much, and scientific men so little, for agriculture, are facts which admit of easy explanation. Countless millions of men for thousands of years have been incessantly occupied in improving the processes of mechanical agriculture, which, as an art, has been brought to a high state of perfection; but scientific agriculture is a creation of our own time, and the number of its cultivators is exceedingly small. When agriculture shall have been cultivated as a science for several centuries, then its theories may claim that degree of attention and confidence which, as a rule, is now only given to opinions founded on practical knowledge.

There was a time, and that, too, not very remote, when it was the fashion of the man of science to look down with contempt from the lofty pedestal on which he placed himself, on the lessons of practical experience read to him by the cultivator of the soil; whilst at the same time the farmer treated as foolish visionaries those who applied the teachings of science to the improvement of their art. But this time has now happily passed away. The scientific man no longer despises the knowledge of the mere farmer, but turns to good account the information which is derivable from the experience of the latter, whilst the farmer in his turn has ceased to speak in contemptuous terms of mere "book-learning." It is to this happy combination of the theorist and practical man, that the recent remarkable advance in agriculture must be chiefly attributed, and to it we look with confidence for the solution of many of the more important problems which now claim attention.

It must be admitted that up to the present the chief results of the labors of the chemists in the domain of agriculture have merely been *explanations* of the *modus operandi* of the operations and processes originated by the husbandman. But even in his notions of the causes and effects observed by the farmer, the man of science has frequently, for a time at least, fallen into very grave error. Of this tendency to hasty and false deductions we have a striking example in the operation of burning the soil. This process was denounced in unqualified terms some years ago by the chemist; but recent and accurately conducted inquiries have proved that it exercises, under certain circumstances, very beneficial influence—and it is precisely under these conditions alone that the operation is carried on by the unintelligent agriculturist.

On the subject of the exhaustion of the soil, we find a great diversity of opinion amongst scientific as well as amongst practical men. Some contend that the soil contains an inexhaustible supply of plant-food, which only requires tillage to be made available—whilst others, acting on the maxim that always paying and never receiving leads to bankruptcy, contend that no soil which is not abundantly manured, will yield good crops and still maintain unimpaired its productiveness. This question, and every other relating to the exhaustion of the soil, cannot be answered by either the scientific or the practical man alone. In

relation to the subject the former has made very serious mistakes. Thus LISIÉ undervalues the benefits of careful tillage, and appears to regard the soil as little more than a mere medium in which the plants grow—a purely mechanical agent in the process of vegetation. If, according to LISIÉ, we restore to the soil in the form of manure exactly as much mineral matter as we remove from it in crops, it is obvious that the plants must grow solely at the expense of the manure, and the fertilizing matters of the soil must remain inappropriated. LISIÉ supports his opinion by reference to the fact that two crops of wheat can seldom be well grown in succession, though a good crop of turnips may succeed one of wheat. The same authority also states that white crops are far more exhaustive than green ones. But this distinguished man appears to have overlooked the fact that the amount of mineral matter removed from the soil by a crop of turnips, is far greater than the quantity taken from it by a crop of wheat; and that, as a general rule, all fallow crops, paradoxical though it may appear, exhaust the soil of its mineral constituents to a far greater extent than the so-called exhaustive white crops. If the chemist alone planned a system of rotation cropping, he would probably alternate those crops which he found by analysis abstracted the least and greatest quantities of matter from the soil; but the experience of the farmer would be opposed to the chemist's arrangement. In fact, there are many circumstances which influence the order of a rotation and determine the cultivation of particular crops beside the quantity and nature of the matter removed by the crops themselves, and many of these circumstances can only become known to a practical worker in the field. Who but the farmer could have discovered the fact, that it is impossible in most instances to grow more than a few successive crops of clover, whilst wheat may succeed wheat *ad infinitum*, provided abundant manure be applied or the soil be finely tilled? The chemist has not yet been able to assign any satisfactory reason for the first mentioned fact; and consequently has made no suggestion for the removal of the evil.

From these cursory remarks, some idea may be formed of the importance which we attach to the application of exact scientific principles to the business of the farmer. We do not assign to the agricultural chemist a higher place than that occupied by the practical farmer; for we believe that the science of the former has as yet conferred but few important benefits upon the practice of the latter. At the same time we admit that it is capable of aiding greatly in the exaltation of agriculture, and that unaided by it the cultivation of the soil—the earliest and most important of the pursuits of man—must ever remain an empirical art.—*Prof. CHAS. A. CAMERON, in the Irish Agricultural Review.*

Knowledge is Power.

It is an old and true saying that Knowledge is power," yet many men who are far above their fellows in knowledge are much below them in real power. They possess great funds of knowledge, but it is not in the proper shape to be used—a mere mass of interesting lumber, like the curiosities in a museum or the furni-

ture in a cabinet shop. The knowledge we possess needs arranging and systematizing, like the soldiers in an army: and then, and only then, is it powerful. It is often necessary to bring all the facts in our possession, all the knowledge we can command, to bear upon a certain point; yet because of this want of systematic arrangement work, the man of great knowledge is far more powerless than one much his inferior, who understands how to use to the best advantage the few facts in his possession.

A fine chest of tools will not make a man a carpenter. He must learn how to use them before he will be able to do so much good; and some men with a saw and jackknife will accomplish more than others could with the finest and best arranged set of tools in the world. It is not only necessary that we should possess facts and have properly systematized, but that we should have experience in their use, or the result will be a failure. Many persons engaged through most of their lives in commerce, &c., have a love for rural pursuits. They design to spend the latter part of their days in the country, and they study books and papers, and in fact amass a great amount of useful knowledge but when they come to put this knowledge in practice, instead of being wise and skilful, as they expected to be—quite shining lights, astonishing the ignorant plodding farmers—they find that their practice furnishes a great amount of amusement to their neighbors and discomfort to themselves. If they have sufficient patience and perseverance to continue in spite of discouragements, until they learn to practise what they have learned from books, until the hand as well as the head becomes skilled, they will make the very best of farmers; but without this disgust takes the place of disappointment and the discouraged amateur farmer returns to his city life, thinking himself a wiser if not a richer man.

But, how is it with the genuine farmer—he who has spent his youth and much of his man in tilling the soil. Does he, as a general rule, make use of the knowledge he possess? Does even his theory and practice agree. How very few can say at the end of a season, "I have done all things well." Is it not a fact well understood by those of large observation, that many of our most intelligent men are the worst farmers; and even some who teach the right with energy and eloquence, pursue the course which their word condemn. This seems strange to some, but it must be remembered that is hard to overcome early habits, even when we know them to be wrong.

There is now no necessity, no excuse for ignorance. The agricultural papers are found in every neighborhood, and in many sections in almost every house. They are so cheap as to be within the reach of all; and in no country in the world is agricultural knowledge so generally disseminated as in our favored land. The character of our press will not suffer in comparison with that of any section of Europe; for while we may lack some of the heavy scientific papers found in European journals, which only one in a thousand reads, nowhere can so great an amount of useful information, furnish-

ed by practical working men, be obtained as in the agricultural papers of America. Our farmers are a reading class; and for intelligence, we believe superior to those of any other portion of the world. Did we put into practice the knowledge we possess, and act according to the dictates of our own good judgment we could be in all respects above comparison.

Another season of labor is about to commence. Like the lawyer who invests all his energies and abilities for the preparation of an important case, the farmer should summon all his resources for the coming struggle. Success or failure depends, in a great measure, upon the skill with which operations are planned, and the faithfulness with which these plans are carried out. Unless we have learned something from our reading and observations the past year that will be profitable in practice, then in this respect we have lived in vain.

Why are so few Young Men fond of Farming.

Though in this country a majority of persons are probably engaged in agricultural pursuits, I have the impression that comparatively few young men are really fond of farming. Why do the sons of farmers so frequently forsake the calling of their fathers, to engage in other occupations? It seems to me, one and perhaps the principal reason may be, because parents do not take sufficient pains to make home and the business of farming pleasant and attractive. It is enough for them to clothe and feed the bodies of their children; but neglect to furnish the daily food which is necessary for the nourishment and full development of the social as well as the intellectual and moral faculties.

Are not boys on the farm too often driven, as it were, at their work, instead of being so taught as to become interested in their employment, and thus learn to love it, and perform the labor as it should be performed by intelligent and accountable beings?

“Will not the sons, if rightly taught to toil, Delight through life, to cultivate the soil?”

And though they leave the spot which gave them birth,

Still draw their sustenance from Mother Earth?”

Another account to which I will allude, though with diffidence, (for it is rather a delicate matter,) is the influence of young ladies. Do they not sometimes, to say the least, slight and shun the hardy, sunburnt sons of toil, and bestow their smiles and hearts' affections upon those with smaller, softer hands, and alas, too oft, with corresponding brains!

A third account may be the position, or place which farmers occupy in the community. Though not generally regarded as “mudsills,” they may, perhaps, with propriety be compared to the firm, substantial foundations of a building; for upon them the whole superstructure of civilized society is built and depends for its support. In viewing a public edifice, we seldom observe the plain, unpretending, yet essential foundation on which it stands; but take particular notice of the building itself, upon which art and adornment may have been lavished, almost

regardless of expense. So the learned, cultivated and refined members of society, by being conspicuous, attract attention, while the situation of the farmer is such that he is sometimes considered beneath observation, especially in populous, aristocratic places, which abound somewhat with snobs and nabobs.

The impression which prevails, at least to a considerable extent, that farming is not profitable, might be mentioned as another reason. But as the profitability of farming is a “much mooted” question, and one which some of your correspondents desire to have discussed again in your paper, I will reserve that subject as a sort of groundwork for another communication.

Make farm labor Fashionable.

At the base of the prosperity of any people lies this great principle—make farm labor fashionable at home. Educate, instruct encourage; and offer all the incentives you can offer to give interest and dignity to labor at home. Enlist the heart and the intellect of the family in the support of a domestic system that will make the labor attractive at the homestead. By means of these powerful influences of early home education, endeavor to invest practical labor with an interest that will cheer the heart of each member of the family, and thereby you will give to your household the grace, peace, refinement and attraction which God designed home should possess.

The truth is, we must talk more, think more, work more and act more, in reference to questions relating to home.

The training and improvement of the physical, intellectual, social and moral powers and sentiments of the youth of our country, require something more than the school-house, academy, college and university. The young mind should receive judicious training in the field, in the garden, in the barn, in the workshop, in the parlor, in the kitchen—in a word around the hearth stone at home.

Whatever intellectual attainments your son may have acquired, he is unfit to go forth into society, if he has not had thrown around him the genial and purifying influences of parents, sisters, brothers, and the man-saving influence of the family government. The nation must look for virtue, wisdom and strength, to the education that controls and shapes the home policy of the family circle. There can be no love of country where there is no love of home. patriotism, true and genuine, the only kind worthy of the name, derives its mighty strength from fountains that gush out around the hearth stone; and those who forget to cherish the household interests, will soon learn to look with indifference upon the interest of their common country.

We must cultivate roots—not tops. We must make the family government, the school, the agricultural fairs, the laboratories of our future greatness. We must educate our sons to be farmers, artisans, engineers, geologists, botanists, chemists—in a word, practical men, that will perpetually preserve the nation.

Agricultural Reading.

It is universally allowed by intelligent men, that the highest degree of success in any voca-

tion is attained by those who have the best practical knowledge of the principles which underlie that calling. The experience of our predecessors, with the deeds of whose lives we are conversant, affords ample proof of this assertion. Ignorance, let our pursuit be what it may, can only lead us astray; it never can guide us in the way to prosperity. To the farmer, these truths are of the first importance, showing, as they do, the necessity of a good understanding of his business. To throw light upon the subject of agriculture, by the aid of the pen and the press, has been considered a thing superfluous, and by many actually injurious. The information handed down from father to son was deemed amply sufficient for a successful career in farm-life. But the times have changed, and with the times, the opinions of men, in a good degree; and now the great question among our intelligent cultivators is, what are the means by which we may be enlightened in relation to our profession? This is a question applicable to the age in which we live, and the answers as various as the means are numerous.

I look upon the agricultural press as one of the most efficient aids of the farmer. Here is displayed the united talent of the theorist and the practical man. Here the accumulated knowledge of the past, augmented by the investigations of the present, is laid before us in appropriate form, and in language easily comprehended. The good, progressive farmer is a student, pushing his investigations with that devotion and intelligence which characterize his plaus and labors upon the farm. Standard agricultural works occupy a prominent place in his library, and the popular journals of the day, which treat of his profession, find a ready welcome and an eager perusal by his fireside. Who, then, will marvel when they witness the success of such men—men who have labored "to improve both the soil and the mind?" But we are oftentimes told that much which is written upon agricultural topics is mere speculation, and never can be applied to practice with favorable results. This we admit in a measure, but let us inquire, Is it necessary to reject all agricultural reading, merely because an occasional article is submitted to our perusal, incompatible with the principles of that science which it is intended to enlighten us upon? No intelligent farmer will give an affirmative response to a question of this nature. Proper discrimination must be exercised concerning matters of this kind, or we can never hope to profit thereby. If we read an article which at once appears to contain a multiplicity of absurdities, we do not usually allow the article to be laid aside, with merely remarking that it is incorrect, but we strive to collect evidence which will place its incorrectness in a clearer light; and in this elucidation of its falsities, our attention is often directed to subjects which might never have been considered, if there had been no occasion like this to call them forth.

I long to see the art of cultivating the earth raised to a higher state of perfection. This can be accomplished only through the instrumentality of a more varied, practical and tho-

rough knowledge of those great principles upon which it is based. I say, then, let the agricultural press—the herald of true progress in this sphere, still go on fulfilling its mission. Let the farming community, by diligent study, acquire more liberal views of their calling, and of the means for its promotion, and thus more successfully pave the way for genuine, progressive farming.

Home Duties.

Would you see woman in her most lovely character, her most popular position? Then seek her not amidst the dust and turmoil of city life, not beneath the glare of gas light in the crowded ball-room, or the round of shopping, calls, and gossiping, where, I am sorry, so many women seem so happy, but in the sweet, quiet retreat of a farmer's home.

Home is a word that thrills the hardest heart. Ah! many a worn and weary man now far away fighting for his liberty, and boldly facing the enemy, without one tremor of fear, quivers as though in pain at mention of his home, and will, when night descends in mercy over the bloody scene, weep bitter tears upon his hard, lonely cot, as he thinks of the comforts that once were his, in that beloved spot. And what makes our homes? It is woman. Sneer at her as you will, parade her failings and weaknesses before the public eye, if you choose, but for all that, it is her refining, soothing, refreshing influence, that makes home the loveliest place on earth. A man may have a place to stay, eat, and sleep in, but it is the presence of woman that makes it a home to be sought with eager steps, when work is finished for the day, if she exert her powers as she ought to make it a pleasant spot.

The farmer's life is one of toil. By the sweat of his brow does he earn his bread, and ought not woman to make his resting hours as happy as hours can be here in this weary world? shall she not beguile him from his care, make him forget, for awhile, his corn and potatoes, and indulge in a higher enjoyment than mere tilling of the soil affords? It is for her to place the easy chair beside the inviting fire, and on the hearth the soft slippers to receive the tired feet. It is for her to draw up the little table, with its dainty white cover, and place thereon a glowing light, the evening paper, and a tempting dish of apples, pears, or nuts. With such influences, can a farmer do otherwise than forget the hard toil of the day, and revel in a pleasure the city man can never feel?

And thus, to place all the refining influences of home around the farmer's hearth, the woman, the presiding genius of the spot, must not be allowed to work too hard herself. Woman will droop and pine, grow cross and fretful, forget others in thinking of her own aches and pains, if, from the rising of the sun till late into the stillness of the night, she must work incessantly, with no hope of rest, till she finds it in her lowly grave. If there are butter and cheese to make, hired men to wait upon and cook for, and no daughters large enough to help the tired wife and mother, let her hire some one to do it.

To be sure it will take quite a sum out of your yearly profits; but, my good friend far-

just, had it not better come out of the profits than out of the faithful companion you have chosen for life? Woman is often blamed and found fault with for not doing more work than she is really able to perform. If woman is true to her nature, if she is such a wife as she should be, she will faithfully do all she is able, and if she come short, know, ye men who carelessly complain, that it is lack of strength, not will.

The calm of a farmer's home is just the place for love and harmony to dwell. Jars, discords, and family quarrels should never mar the lovely scene. What more beautiful than a pretty, comfortable farm-house, nestled among trees, and surrounded by fields of waving grain and rustling corn? All the better qualities of the heart must, involuntarily spring forth amid such influences. And shall it be said that woman fails to do her duty in such a field as that? No! wives and mothers be up and doing. Let the subduing atmosphere around you quell all fault-finding, peevishness, and ill temper, and may your influence be such that the farmer's life may always be, as it often is, the happiest, to be chosen.

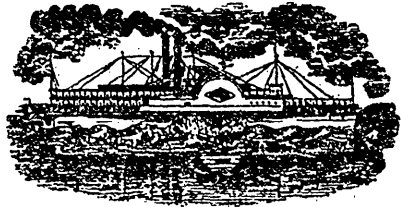
OUR SECOND VOLUME.

We cannot close with this first number of our second volume without asking from our agricultural societies more of that encouragement which has been so liberally granted to us during the past year. Never have we failed to do our utmost in the defence of those interests which it is our duty to represent as the official organ of an Agricultural Board, and Societies; and it is with the view to greater results that we now begin the Second Volume of the *Lower Canada Agriculturist* with double the matter, and double the number of engravings published last year. Coloured engravings will be immediately added, provided our conditions are accepted, and our journal will at once take that stand among the leading American agricultural periodicals, to which it is entitled by the acknowledged importance of the province of Canada. These conditions have already met with a favourable reply from twenty agricultural societies, and we trust we will find from those who have not been yet called upon to give their assent, that support which alone can allow the publication at one dollar, of 500 pages of close matter, illustrated with more than one hundred wood cuts and several coloured engravings.

To this day each society has subscribed for 20 copies of the *Agriculturist*, and has had the free publication of their advertisement, previously amounting to the same sum. We now ask from every society the subscription of 40 copies instead of 20, and we will be enabled to realise the very great improvements we have just mentioned. Several counties have for the last year taken of their own accord 40 copies, others have passed a resolution that every prize over \$2 awarded at the County Show should be accompanied with one year's subscription to the *Agriculturist*. If such a resolution was in force in every county, we would at once number 25,000 subscribers. But we do not ask for such a great result. We merely

ask for that support which will allow us to publish an agricultural periodical creditable to the farmers and to the country, and we trust we will not be deceived in our attempt to realise this very important move towards the welfare of our agricultural community.

On one of our advertisement pages will be found a tabular form to receive the names of new subscribers. If one or two were sent us by every one of our readers, we would at once double or triple our subscription list, and the result would unquestionably be a great one, and our publication would thus gain new means of improvement. We will therefore ask this favour from our subscribers, so that the first number may be addressed to every new name. If not returned the invoice will be continued.



OUR RAMBLES.

We have made it our duty to be present on the occasion of the Toronto Exhibition, which has proved most successful in every department. Indeed, Canada may now boast of its agriculture, which stands second to that of no other country on this continent, and we might say on the continent of Europe. England alone is yet before us in the way of progress, but we closely follow, and are found occasionally as far advanced in the breeding of stock and the construction of implements. The testimonies of His Excellency the Governor-General, and that of Lord Mulgrave, who both have witnessed for several years the cattle shows of the Royal Agricultural Society of England, are most gratifying to the farmers of this country, and must prove a fit reward to their constant exertions to ever realise greater improvements in their agricultural pursuits.

Why are the provincial exhibitions in Upper Canada so much more successful than in Lower Canada? For this reason,—that here commercial interests will rule all others, and while our great cities will vote any amount to the building of a railway or to improve the harbor accommodation, they will not appropriate a cent to our provincial exhibition. The consequence is that all the funds of the Association are put on expensive temporary buildings, and very little is left for the prize list and other contingent expenses, calculated to bring to the show both exhibitors and visitors.

In Upper Canada there is not one city of some importance that has not built permanent and substantial buildings, which alone are an inducement for farmers to compete, because they are sure to have their cattle and goods well protected against the weather. Besides, the funds of the Association are thus entirely available for the prize list, and a large atten-

dance is secured. The consequence is that some \$15,000 to \$16,000 are annually collected at the entrance gates, and some 25,000 visitors are to be seen on the exhibition grounds on the same day.

Let our cities erect permanent buildings, and the Agricultural Association for Lower Canada will have annual provincial exhibitions which will favourably compare with those of Upper Canada. But, till then, nothing can be done for want of the necessary funds to buy grounds annually, erect buildings, the cost of which in Toronto has amounted to some \$50,000, and besides offer a prize list high enough to induce farmers from a distance to enter for competition. Still all this has been done in Upper Canada to secure a large attendance, and experience has now proved beyond doubt that the larger the capital involved in carrying out provincial exhibitions, the larger the returns: 1st, to the city where the exhibition is held, by a larger attendance, 2nd, to the Association by larger receipts at the entrance gates; 3rd, to the agricultural community by a greater competition and a better show.

The next exhibition is to be held at Montreal, and we are informed that the Board of Agriculture are about to go to work at once, so as to secure a large provincial agricultural and industrial exhibition. All depends on the vote of the City Council. If a large sum is appropriated, and we have reason to believe it will be, no doubt the exhibition will be a successful one. Again, the neighbouring agricultural societies will be called upon to contribute largely to the general fund, with the understanding that they will be allowed free competition in return, the provincial thus replacing with advantage the local exhibitions of the neighbouring counties. We have no hesitation in saying that, by going to work properly, we can secure in Montreal just as good an exhibition as in any other city in the whole Province. But a great deal has to be done, and we trust will be done.

By the following account of the Provincial Exhibition in Toronto, every one will understand how successful it was, and more particularly why so.

The Grounds.

First, a short description of the Exhibition grounds will not be out of place. They comprise about forty acres and are a portion of what was formerly known as the Garrison Common or military reserve. They were granted to the city in 1858 by the Government especially for Exhibition purposes. They are situated almost in the extreme western part of the city, immediately south of the grounds of the Provincial Lunatic Asylum. They are low and flat, and command no view worthy of note. On the west and southern sides is a wide expanse of common through which run the Northern, Grand Trunk and Great Western railways. The track of the Northern road skirts the southern enclosure of the grounds. On visiting them one cannot but regret that since the last exhibition held there in 1853, a little more attention has not been bestowed upon them. They might have been greatly improved by plantations.

The Exhibition Buildings.

In style it resembles, although of course inferior in size, the Hyde Park Palace of 1851, and like that celebrated building, is composed chiefly of iron and glass. It is 256 feet in length, and at the transepts 144 in breadth, with a height of 56 feet. It affords an exhibition space of 32,000 feet. The roof is composed mainly of glass, of which there are about 2,000 square feet, and of the same material there are 6,000 square feet in the walls. It is of the rough-rolled plate description, and was manufactured expressly for the purpose in England, being for the sides one-eighth of an inch in thickness, and for the roof one-sixteenth of an inch thick. The gross weight of glass used was about twelve tons. It is worthy of mention that the roof has been adapted to the climate. There are no gutters, as gutters if broken when frozen would have a tendency to burst the framework, and in a year or two destroy the building. The circular portion of the roof is covered with tin. The iron castings were all made in this city, at the foundry of Messrs. Hamilton and Sons. A spacious gallery extends around the interior of the building, and adds greatly to the extent of the accommodation as well as to the beauty of the general design. To assure perfect safety the girders which support the gallery were tested to a strain of double the pressure to which they can by any possibility be subjected, and are calculated to bear five times the ordinary strain of pressure. At the last fair in Toronto the building contained at one time upward of 6,000 persons, together with an immense quantity of exhibited goods, and not the slightest depression was observed in any part.

The Machinery Shed.

At all previous exhibitions the greater portion of the machinery, including all heavy, cumbersome articles, have had no accommodation whatever, being displayed in the open air, and protected from the dew at night or the rain which usually falls during exhibition weeks only by an oil-skin covering. On this account many costly machines have suffered injury, and much complaint has been made. To remedy the evil, an extensive wooden building expressly for the accommodation of carriages and machinery has been erected immediately north of the iron and glass structure. It is the same as that building in length, namely 256 feet, and is 42 feet in breadth, and high in proportion. It is open at the sides, and necessarily so in order to admit of the entrance of the large machines expected, such as those for threshing, &c. At the east end a stand has been erected, approached by steps, from which His Excellency the Governor General and party may view this part of the exhibition when they visit it on Wednesday. This building has been put up in a substantial manner and is intended to be permanent.

The Cattle Sheds.

At the exhibition of 1858 the horses and cattle were exhibited in small frail sheds which scarcely afforded a convenient shelter to the animals, and certainly did not save them from exposure to the inclemency of the weather. A vast improvement will be displayed on this occa-

casion. Instead of a range of small stalls, hastily and therefore badly constructed, and the approaches to which were difficult and dirty, we have now three excellent and substantial sheds for the accommodation of the different breeds, and so arranged that visitors will have the best opportunity of viewing the animals and comparing their qualities, without the slightest danger of receiving an unkindly kick or wading knee-deep in mud and filth. The plan adopted is one which has for some time been observed at agricultural shows in England. Two rows of stalls—some for one and others for two or more heads of cattle—are under one roof, and between them runs an elevated platform about ten feet wide, along which visitors can pass at their leisure and examine the cattle below. The sides of the shed are open in order to afford light. The plan is an admirable one, and cannot fail to give satisfaction to the public. Nearly four hundred head of cattle can be accommodated in these stalls, a number of were brought in on Saturday. Large as this accommodation is, such his the number of entries that there is some apprehension that it will not be sufficient; and on Saturday a number of men were employed in erecting another shed to give additional space to exhibitors. This augurs well for the success of the fair, at any rate in this particular department. These sheds, of which we have given a description, are on the south side of the grounds, and like that for machinery are of a permanent character.

The Stables for Horses.

On the north side of the grounds, immediately opposite the cattle sheds, are three long, well-constructed stables for horses, each containing boxes for about 100 animals. These boxes are separated one from the other by a partition, and as the doors are supplied with strong locks the keys of which remain in possession of the exhibitor during the week, the utmost safety is assured. As it is not intended that the public should see the horses until they are brought into the ring—the stables being erected simply for their safe keeping and protection—there is no passage through them as in the case of the cattle-sheds. The ring is situated a short distance west of the stables; and into this, when the judges make their examination will the horses be brought, when the public will have a chance to view and admire to their hearts' content. In the ring only can the noble animal be seen to advantage. In the stable, covered up by a blanket it may be, his limbs motionless, his head bent and eye dull he does not create the same impression that is conveyed when he appears in the ring with others. Then he arouses into life, his head rises proudly, his limbs start into motion, and he prances around the field a thing of beauty, and seemingly conscious of his attractions and proud of them. These displays in the ring are the grandest of the exhibition; and we have heard ardent lovers of horse-flesh often declare that half an hour's view of this charmed circle is worth far more than a week's leisurely contemplation of all the other features of the fair. Certainly the horse is one of the noblest of animals, and it is highly praiseworthy in the

Association offering each year such handsome premiums to the best exhibited; for this, no doubt, improves the stock and adds to the country's wealth. The result of this liberality shows itself each year in increased entries.

The Sheep Folds.

Along the eastern wall of the grounds, and stretching a short distance also along the southern, are the pens for the sheep, 150 of them, with accommodation for 600 animals. It is to be regretted that these are not, like the other sheds described, built with a view of being permanent. But this was found impossible. When the machinery, horse and cattle sheds were erected, it was found that the local committee had expended all the money voted by the City Council, \$6,000, and \$1,178 besides. They therefore stopped, unable to proceed with the sheep and pig pens according to the original design. At this juncture the Association stepped in and decided to put up these pens at their own expense, but not in such a manner as to make them serviceable longer than the ensuing exhibition. Hence it is that the sheep will be more exposed to the weather than the bulls and the cows; but as they will not be short of their wool, they will be able to bear the rain if it does come down.

The Pig Pens.

These are erected on the west side of the grounds adjoining the wall. They number 150, and afford accommodation for about 600 of the porcine species. They will suffer no harm, but rather be gratified, if a little rain does visit their quarters; so that, presuming satisfaction on their part there will be no grumbling because the sheds are only temporary.

The Poultry Range.

This range is about 100 feet in length, and is situated a short distance east of the stables.

The coops are not elevated as at former exhibitions, but run along the ground, thus allowing visitors to view the birds from above as well as at the sides. This we think will be found an improvement. An open shed covers the whole.

The third day of the Provincial Exhibition opened in a very favorable manner, with a warm sun and clear atmosphere, and all nature in its most attractive aspect. From an early hour in the morning the roads to the fair, and the grounds in the immediate vicinity of it, bore a very busy and animated appearance. Crowds were hastening thither on foot and in every conceivable kind of vehicle. The street cars were crowded every trip, a train which ran from the foot of Brock street on the Northern railway carried every quarter of an hour a great many to the grounds, and cabmen reaped a rich harvest in driving out "loads" as fast as they could take them up. The booters outside the fair ground—of which by the by the number is much greater than should be allowed—did a thriving business in all kinds of liquor, from the mild creamy "lager" to the hardest kind of "tangle-leg," as strychnine whisky is now called. Early in the morning several tables bearing mysterious figures and hieroglyphics on their surface made their appearance, supported by individuals with keen,

roguish-looking countenances; and soon the rattle of dice and the click of silver were loudly heard in their neighborhood. These were the gambling institutions which develop themselves at fairs as well as at race-courses, and the countenance of which is a disgrace to any city.

THE HORSES.

The entries of horses of all classes are fully up to the average, numbering upward of 300. Of thorough-bred four-year old stallions there are eight entries. Among these are one or two splendid animals. The "Young Sir Tatton" of Mr. Thomas Downing, of Oshawa, is a beautiful animal, while "High-flyer," belonging to Mr. Geo. Cooper, of York township, is also a very fine horse. Among the other exhibitors, are Messrs. Simon Beattie, of Markham; James White, of Halton; and H. Quetton St. George of Whitechurch.

There are thirteen entries of three-year old thorough-bred stallions, the principal animal being that of Mr. James White, of Halton, "Touchstone," bred by the exhibitor.

Mr. Geo. Palmer, of Guelph, is the only exhibitor of two-year old stallions. The pedigree of the animal he shows is a good one, and the animal itself possesses every qualification of a good horse.

Of thorough-bred yearling colts there are two entries, Mr. Palmer and Mr. John Dew of Yorkville. Their horses are spoken of very highly.

There is the same number of three-year old thorough-bred fillies—Mr. White and Mr. Dew being the exhibitors.

Of two-year old and yearling fillie, Mr. White is the only exhibitor.

Four thorough-bred mares and foal are entered, Mr Nelson Gates, of Scarboro', being amongst the exhibitors.

There are ninety-one entries of agricultural horses of all ages, and among them are animals of the very finest quality. Stout, powerful, and well-developed in every part, they make a magnificent show, and crowds yesterday spent many hours in viewing and criticising their various points. Hon. John Ross is a prominent exhibitor in this class.

Of roadsters and carriage horses there is also a very fine show, about one hundred and fifty entries being made. Among the Toronto exhibitors in this class are Mr. John Bond, Mr. Gilbert Smith, Mr. S. S. Halliday, Mr. James Hugill, (Yorkville), Mr. Jacob Strong (Yorkville), Mr. Thomas Webb, Mr. R. L. Denison, Mr. John Ingleson, Mr. William D. Jarvis, Mr. John Boulton, Mr. A. H. B. Wadsworth, Mr. George Cooper, Mr. Thomas Bonner, Hon. John Ross, Mr. John Kidney, Mr. L. Coffee, Mr. Geo. T. Denison, Mr. C. L. Denison, Mr. Peter Huddy, Mr. B. A. McDonald and Mr. C. L. Grant.

There are forty-six heavy draught horses of all kinds entered for exhibition, embracing some of the best stock in this portion of the Province. Chief of the exhibitors in this class is Mr. John Shedden, of Toronto, whose magnificent and powerful animals attracted much observation. Mr. James Armstrong, of Toronto; Mr. John Taylor, of Toronto, and Mr. M. Sheppard, of Yorkville, also exhibited fine animals.

The show of horses is on the whole very creditable, and if it does not show improvement since last year, certainly proves that there has been no falling off.

THE CATTLE.

Of all grades of cattle there is an excellent representation, quite up to the standard of former years, and indeed above it. In no respect is the progress of a country better illustrated than by the improvement observed from time to time in its live stock. Every year a marked advance has been made, according to the evidence of those who have had an opportunity of making observations during the past decade or two; and there is abundant testimony to show that the march is still onward. No one can allow himself to doubt the vast improvement that has been made, or the substantial wealth of the country in its agricultural resources, who visits the extensive ranges of cattle-sheds on the exhibition grounds, and there sees the collection of stock from all parts of the western Province. This show is well worthy of a visit, and to none can it fail to afford satisfaction and delight. All the chief breeders of the country are represented.

Durhams.

There are about one hundred and twenty entries of Durham cattle, embracing some of the finest imported stock in the Province. Among the exhibitors of bulls we see the well known names of Messrs. F. W. Stone, of Guelph; George Miller, of Markham; George Cooper, of Toronto township; Geo. D. James, of Toronto; George Z. Rykert, of St. Catharines; John Miller, of Brougham; John Snell, of Edmonton; John S. Armstrong, of Guelph; E. C. Scrrlett, of Toronto; and the Hon. John Ross. A portion of the fine stock of the late Mr. Ralph Wade, of Cobourg, who was so successful a raiser of imported cattle, is exhibited by Mrs. Wade.

Of Durham cows and calves there are about fifty exhibited, embracing some of the finest stock of this description ever shown in the Province.

Devons.

The show of Devon bulls and bull calves is not so large perhaps as at some former exhibitions, but it is choice and satisfactory. There are about forty entries, Mr. Daniel Tye, of Wilmet, Mr. Christopher Courtill, of Bowmanville, Mr. John Pincombe, and Mr. Samuel Peters, of London, being the largest exhibitors.

There are sixty entries of Devon cows and heifers of all ages. The stock is well-selected and nearly all well-raised. The principal exhibitors are the same as of Devon bulls.

Herefords.

The display of Herefords is not very large, being confined to two exhibitors, Messrs J. W. Stone of Guelph, and James R. McMicking, of Queenston—the chief, if not the only, importers of these cattle in the Province. Among those shown by Mr. Stone are several fine bulls and bull calves from the celebrated herd of Lord Bateman in England; those shown by Mr. McMicking were raised by Mr. M. G. Remington of Cayuga Co., N. Y. There are some very fine Hereford cows and heifers exhibited by the same parties.

Ayrshires.

There is a more varied and more extensive display of Ayrshire than of Hereford cattle. The entries number upwards of seventy altogether. In this class Mr. R. L. Denison, of Toronto; Mr. George H. Ryland, of Picton; Mr. George Morton, of Leeds; Mr. Simon Beattie, of Markham; Mr. John P. Wheeler, of Woburn; Mr. Patrick R. Wright, of Coahourg; Mr. Joseph Boyle, of Flamboro'; Mr. George Stanton, of Paris; and Mr. John Torrance, of Scarboro', are prominent exhibitors.

Galloways.

There is a very good display of Galloway bulls and cows, in which a creditable part is taken by Col. Thomson, Mr. John Stewart, of Waterdown, Mr. John Snell, of Edmonton, and M. James Graham, of Woodbridge. The animals are much admired for purity of breed and general excellence.

Special Entries.

After His Royal Highness the Prince of Wales visited the Exhibition in Hamilton, he offered a special prize to be awarded annually for the best Durham bull of any age. The amount is \$60. For this, of course, there is much competition, and the merits of the different cattle are so nearly equal that the judges will have a difficult task indeed to decide the question of superiority. The following are the names of all the exhibitors—John Snell, Edmonton; F. W. Stone, Guelph; Godfrey Bentley, Cooksville; John Bellwood, Newcastle; H. P. Wellford, Woodstock; John Miller, Brougham; George Miller, Markham; George Cooper, Toronto township; John White, Georgetown; Edward Jones, Thorold; George D. James, Toronto; Donald Robertson, Queenston; John Graham, Paris; and James White, Bronte.

For the best bull of any age or breed the Association offers a diploma and a silver medal, for which there are fifteen entries; and a similar premium offered for the best animal in the yard, male or female, has brought into the field twenty-two competitors.

Grade and Fat Cattle.

In these classes there is a very good display. Among the exhibitors are Messrs. James Bellwood, of Newcastle; John Ross, of Toronto; William Montgomery, of Islington; Samuel Hodgskin, of Guelph; John Ingleson, of Toronto; and John Gill, of Grahamsville.

Sheep.

These animals, as we stated in a former article, occupy pens running along the eastern wall of the grounds. The total number of entries is about six hundred and fifty, exceeding we believe those at any previous exhibition. The whole show is highly creditable, and no doubt will prove very interesting to most visitors.

Leicesters.

Of Leicester rams and ram lambs there is a splendid show, and most of the sheep are worth their place at the exhibition. The chief contributors are Messrs. Thomas Smith, of Toronto township; Mr. Robert Gardener, of Toronto township; Mr. Alfred Jeffrey, of Vaughan; Mr. Calvin Craig, of Grafton; Mr. O. A. Coates, of Oakville; Mr. John Snell; Mr. Thomas

Teasdale, of Grahamsville; Mr. Wm. Douglas, of Caledonia; Mr. Thomas Smith, of Derry West; Mr. Christopher Walker, of London; Mr. George Jackson, of Castlemore, and Mr. George Cooper, of Toronto. There are many other exhibitors, but it would be almost impossible to enumerate them. Of Leicester ewes there is a display equally as good as of the rams.

Cotswolds.

There is a fine collection of these beautiful animals, of which Mr. John Snell is a large exhibitor. The sheep are nearly all of the best description, and chiefly bred in this country.

Southdowns.

Of the medium woolled sheep the southdowns are the most plentiful. The exhibitors are numerous, and on the whole the collection is fine.

Cheviots.

The entries in this class are not very numerous, but the sheep are excellent. The principal exhibitors are Messrs. George Miller, of Markham; Thomas Gray, of Oshawa, and David Elliott, of Strabane.

Merinos and Saxons.

There is a very attractive show of fine-wooled stock, of which Merinos and Saxons form the greater portion. Messrs. F. R. Jennings, of Cooksville; George W. Miller, of Homer; Jacob Rymal, of Wentworth; Edward Arkland, of Oshawa and Alexander Young, of Ryckmans Corners, are the principal exhibitors. Mr. Alfred Jeffrey, of Woodbridge, is the only exhibitor of fine woolled sheep not Merinos or Saxons. His collection is a very fine one, and well worth examination. It will be found in the north-east angle of the grounds.

Pigs.

The show of these animals is both extensive and good. All the different breeds—small and large, Yorkshire, Berkshire, Suffolk and others—are well represented. There are some immense "grunTERS" on view, and of the small breeds the collection is excellent. The pens are on the west end of the grounds, running along a portion of the north wall also.

The Poultry.

The range for poultry is a great centre of attraction. There is a very extensive collection of Dorkings, Polands, Jersey blues, game, Spanish and other fowls, together with a variety of ducks, geese, pigeons, and rabbits. An hour can be well spent in examining this interesting shed, which is situated a short distance west of the main entrance, to the right on approaching the Palace.

Agricultural Implements.

There is no doubt that this department of the exhibition, which embraces articles both within and without the main building, is more successful in nearly every respect than at any previous fair. The number of entries is very large, and in some articles competition is exceedingly keen and spirited. The large building erected on the north of "the Palace" expressly for such goods, is completely filled, and for want of space within it many articles are shown in the open field. In describing the more prominent and important articles, we shall com-

mence with those in the shed, which are somewhat mixed up at present, and difficult to classify properly.

Churns.

At the east end of the shed a number of churn are displayed, each presenting advantages of a special character, some of them very ingenious inventions. Mr. Marcus Lent, of Cobourg, has one which he calls "the empire thermometer churn." It has a double action dash, which revolves with great velocity and little labour. Air chambers are attached for the regulation of the temperature, the state of which is indicated by a small thermometer at the side. By this churn the patentee claims that cream can be transformed into butter in a short space of four minutes.

Another churn, of very simple construction, is displayed by Dr. J. McLunn, of Scotland, C. W. This also has a thermometer attached, with chambers for either hot or cold water. The dash in this churn is connected by the handle with a lever resembling the walking-beam of a steamboat, and is moved by a treadle. The operation of churning in this case is exactly the

same as in the old-fashioned churn, by many thought to be superior to any of the latest improvements, were it not for the extra exertion required.

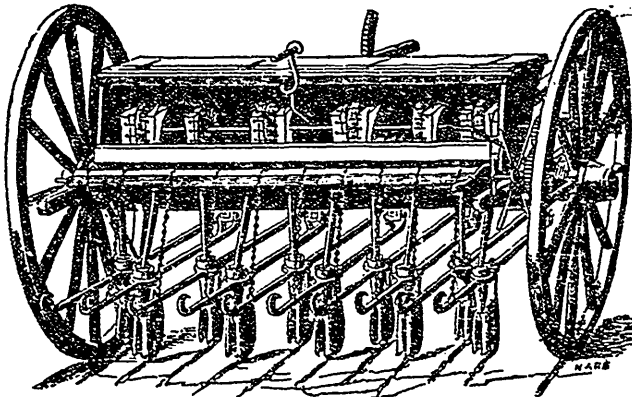
Mr. Edward Lawson, of Toronto exhibits one of Parke's patent churns, which took the first prize at London last year. In construction it is very simple, and in price cheap.

Mr. Nathan Campbell, of Stratford, shows another, the dash of which is moved by a sort of pump-handle. The labor in this is greater than in some others, but the work is very effectually performed.

Mr. Lawson, mentioned above, has a double churn to which the same principle of motion is applied.

Messrs. Dow & Johns, of Exeter, C. W., exhibit a new article of an improved kind. It has a good, easy action, and is a very excellent machine. They sell it at \$7.

A still cheaper churn is shown by Mr. J. Kinney, of Brantford. In this article there is no machinery, yet by an ingenious contrivance in the handle two motions, perpendicular and cir-



Small occupation drill for one horse.—View from behind.

cular, are obtained, thus equalling others in which the most elaborate machinery is employed. This churn is sold for \$3.

Straw Cutters.

Moving towards the western end of the shed, we next come to the straw cutters, of which there are hardly so many as at former exhibitions.

Mr. J. B. Ryan, of Toronto, shows a very serviceable cutter, simple in design and easily worked. It is an American patent. These machines are sold for \$12.

Mr. D. E. Morton has a new machine on exhibition, which appears to be highly serviceable. It has what is called a "draw cut" with feeding rollers which can be raised or lowered at discretion to increase or diminish the length of the cutting, when fitted up for horse power. Mr. Morton supplies these machines for \$20; hand-power implements cost \$2 more.

There are other straw cutters on exhibition by Messrs Hugh McLaren, of Lowville; John Abell, of Woodbridge; W. H. Wallbridge, of Belleville; Maxwell & Whitelaw, of Paris;

Thomas Gregory, of Kettleby; Haggard Bros., of Brampton; Brown and Patterson, of Whitby and George C. McKenzie, of Georgetown.

Root Cutters.

Among several root cutters exhibited, that shown by Mr. J. B. Ryan, of Toronto, seems to bear the palm. Like many valuable inventions it is exceedingly simple in design, and it does its work in a very effective manner. It is known as Cant's patent and is sold for \$14.

Grain Crackers.

There are several of these useful little machines displayed, most of them possessing merits. Those shown by Messrs. John Abell, of Woodbridge; Alanson Harris, of Beamsville and Ganson, Waterous & Co., of Brantford, appeared to us to be the best. The machine of the latter is especially worthy of notice. When driven at full speed it will crack twenty-five bushels of grain an hour, its ordinary work being about half of that. It is calculated to crack 10,000 bushels before its plates wear out, and

these can then be renewed for \$4. The cost of the machine is \$4.

Fanning Mills.

A great variety of fanning mills is shown, and some useful improvements are noticeable. The great advance that has been made in agricultural implements is well shown by the exhibition, among a number of new mills, of an old one made in 1810, and exhibited by Mr. J. Nott, of Ancaster. It is made almost entirely of wood, the only iron about it being the crank and a small screen. It is a curious specimen of a past age in husbandry, and is viewed with considerable interest by visitors.

Mr. O. W. Everitt, of Dundas, displays an excellent fanning mill, ranking with the best. It possesses all the latest improvements, and is altogether of a very superior description.

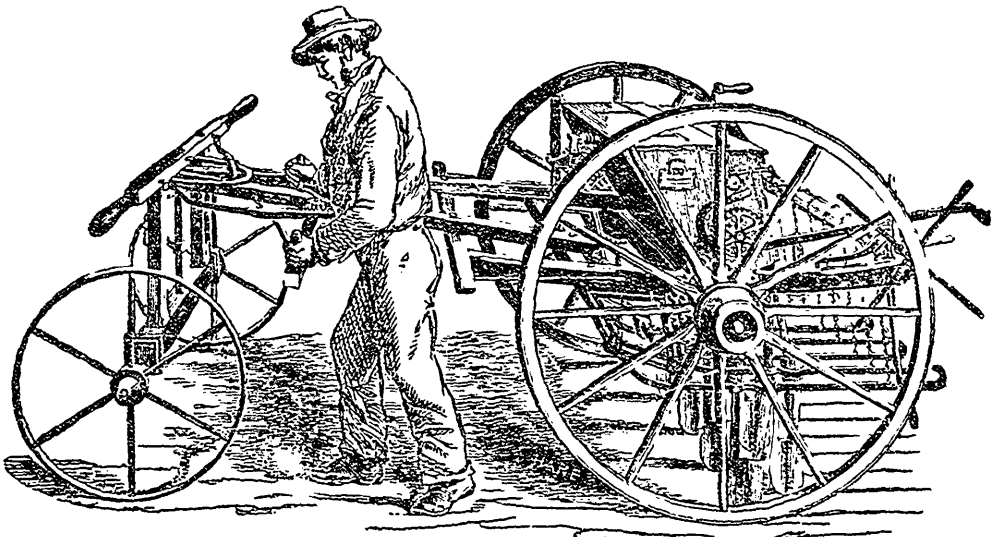
Mr. T. Wilson, of Richmond-Hill, shows a mill which he claims will clean and sift grain

of smut in a better manner than any other. He sells it at \$28.

Mr. C. Bodley has a valuable addition to a machine that he exhibits. It consists of an elevator, by the use of which the grain as soon as it is cleaned is carried up through a wooden tube and discharged into a bag ready for market. He has patented the mill, which he sells complete for \$27.

In a machine exhibited by Mr. J. Stephens, of Port Hope, by an ingenious adaptation of the screens, grass and other seed, which often become mixed with grain, are carefully separated and saved, dropping out into a box at the side. This is a very useful article, and in a few seasons would save its cost, \$26, to the farmer.

Mr. McTaggart, of Clinton, displays a mill, the hopper of which can be adjusted so as to admit of the entrance of the finest seed or



Drill for two horses with front carriage—Side View.

coarsest grain. Timothy seed which gets mixed with wheat is saved also by the use of this mill, by a peculiar arrangement of the screens. This is the lowest priced mill we saw, the proprietor supplying them for \$20.

A mill with an improved blower is shown by Mr. J. Lush, of Newmarket, who sells it at \$22.

Cider Mills.

A large number of cider mills are displayed near the carriages. Among the exhibitors are Messrs. N. N. Sampson, of St. Catharines; and George Robson, of Whitby. An immense mill is shown by Mr. John Amor, calculated to grind and press eight barrels of apples at a time. The mill is mounted on wheels, and can of course be brought to the orchard for use. Its value is \$150.

Cheese Presses.

There are quite as many cheese presses as cider mills shown, all of them having lever and screw applications. We saw no new fea-

ture in their construction worthy of note. The exhibitors are Messrs. P. D. Eckardt, of Dunville; John Amor, of Hamilton; Joel Hughes, of West Gwillimbury; John Stratton, of Willowdale; Hamilton Cole and G. Hunnington, of North Norwich. The presses range in price from \$8 to \$30, according to size and make.

Miscellaneous.

At the west end of the shed are a number of miscellaneous articles. Mr. James B. Lazier, of Port Perry, shows a number of well-made cradles, handles for tools, and other wooden articles. Mr. P. Kribs, of Stouffville, shows some excellent wooden pumps. C. Doner, of Gashel, displays a couple of farm gates, well adapted for the winter season.

Ploughs.

Leaving the machinery shed and crossing over to the wall of the Lunatic Asylum grounds, we come to a very fine collection of ploughs, iron and wooden. All the best makers of the country have sent in samples, and it would be

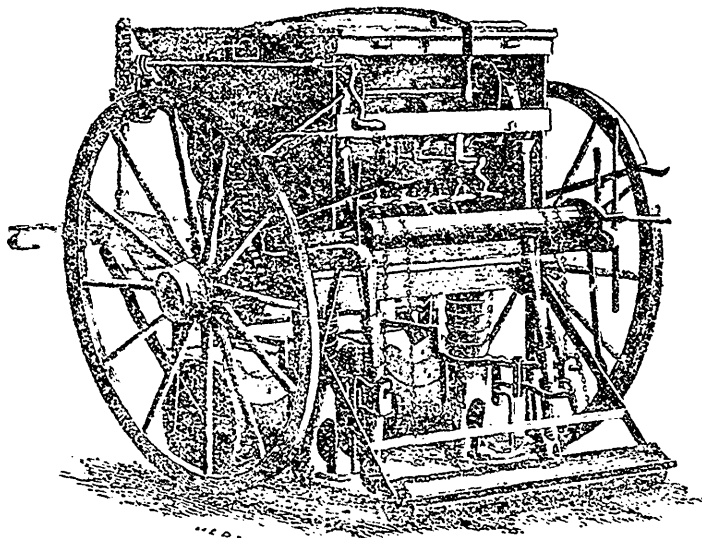
a fastidious taste indeed which would fail to find something to gratify. To every farmer a plough is an object of interest, and therefore around the locality where they are small crowds could be seen all day yesterday discussing their respective merits. Of the iron ploughs entered the following are exhibitors: Messrs. George Morley, Thorold; Edward Wilmot, Kingston; Hugh Masson, Ottawa; William Jeffery, Thornhill; George Printer, Columbus; James McSherry, St. Davids; Geo. Gray, Stratford; Thomas Grafton, Derry West; James Malloy, Seneca; Brown & Patterson, Whitby; Henry Hall, Richmond Hill; George Gray, Stratford; William Mahaffy, Brampton; Isaac Modeland, Brampton; and William Robertson, Stratford.

The number of wooden plows is large, the following being the principal makers:—Messrs. George Morley, Thorold; Hugh McLaren, Lowville; Jacob Lawrence, Palermo; James

P. Telford, Leith; Robert Anderson, Alma; James McSherry, St. David's; J. W. N. Grum, Waterford; Joseph Fleury, Anrora; John Ehrin, Cashel; James Molley, Seneca; W. H. Walbridge, Belleville; Brown & Patterson, Whitby; Joseph Lowrie, Sarnia; Richard Hill, Port Hope; Samuel Hurlburt, Prescott; H. A. Massey, Newcastle; J. Bingham, Burford; H. Franks, Toronto; John Yocum, Dunnville; Wm. Manaffy, Brampton; and Samuel Hurlburt, Prescott. Of sub-soil, mould and double-shear trench plows there is an excellent display; those of Mr. Collard, of Gananoque; Mr. Massey and Mr. Mallaby attracting particular attention.

Harrows.

The ssock of harrows is not very large, only six being entered. Mr. Peter Mallowby and Mr. Nicholas Hogg, of Derry West, both show fine, serviceable implements of this description.



Small occupation drill for one horse.—With manure attachment.

Cultivators.

Of these instruments there is an extensive display. One shown by Messrs. T. & G. Morgan, of Markham, can be made to do the duty of a grubber by a simple arrangement which admits of the removal of the shovels, leaving the forks behind. The arrangement is a novel one, and doubtless it will be found to work well.

Liquid Manure Drills.

An improved liquid manure drill for drilling with liquid two or more rows of turnips, mangels, carrots, &c., either on the ridge or flat, is shown by Mr. E. Rockey, of Saleau, G. W. It is a very useful machine. Another on a somewhat different plan is displayed by Mr. James Berry, of Wellington Square.

Seed Drills.

There is the usual variety of seed and grain drills of all sizes and shapes. We saw none in which any new principle is applied, but all

as to make are finished in a workmanlike manner. Those of Messrs. Robert Fidell, of Queensville, and James Atkinson, of Woodbridge, are excellent articles.

All the Upper Canada drills have been constructed with regard to the selling price. But year after year new improvements are made, and the price is found to rise as a consequence. Why not make at once a good implement, copied from the English patents, proved to be superior to anything in the world. We hesitate not to say that a good drill at \$100 will pay its outlay the very first year of its use; first, by the saving of one-half of the seed sown broadcast, and second, by an increased yield on every acre of land of one to two bushels. And the reasons of it are simple enough to be readily understood. The drill will place each grain at the proper depth in the soil, and at a proper distance from one another. Thus half the amount of seed will be saved, and even more. Again, experience has proved that

drilled grain will always give a better crop, on account of the air and sun finding easy access to the plants, when in regular rows sufficiently wide apart. Therefore we believe that the selling price of such an important implement as the drill should not be the only consideration for the farmer anxious to procure one, but rather the efficiency of its work,—and that is not yet realized in the Upper Canadian drills to that extent which is known to exist in the English implement.

¶ We have imported one of these drills from the London International Exhibition, and it can now be seen at the Provincial Agricultural Depot. We shall always be happy to give any information about our implements, and any visitor will meet with constant attendance and full particulars by calling at the Depot. In this number we publish cuts of the various

drills made in England, the principle of which is readily understood by a view of them, much better in fact than by the most elaborate description of each part.

Rollers.

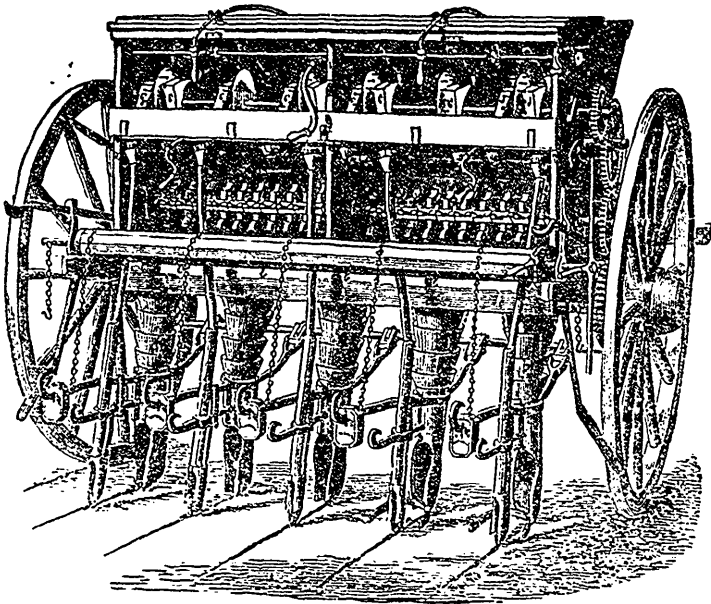
A number of iron and wooden rollers are exhibited by Messrs. Samuel Eckhardt, of Unionville; Thomas Grafton, of Perth; Andrew C. Bruce, of Glenmorris, and E. Rockey, of Salem.

Machine for making Tiles.

A very valuable machine for making drain tiles is displayed by Messrs. Hamilton & Sons, of Toronto. The construction of the machine is simple, and yet the difficult work required of it is performed with exactness and rapidity.

Reapers and Mowers

There is an extensive display of reapers, mowers, and both combined, of American and



1. Drill for two horses with manure distributor attachment.—View from behind.

Canadian patent. Some of Hibbard's machines are now manufactured at Belleville, and are now exhibited here. Of all of them we may have something more to say on a future occasion, stating now simply the names of the exhibitors. Messrs. Collins & Osborne, of Guelph; Jacob Lawrence, of Palermo, and James Modeland, of Brampton; exhibit reapers. Of mowers the following are exhibitors: Messrs. Palmer & Grant, of Grimsby; J. W. & N. Green, of Waterford; W. H. Wallbridge, of Belleville; H. A. Massey, J. Bingham, R. & R. H. Patterson, Belleville; Isaac Modeland, Brampton, and John Hewig, Napance. The following are exhibitors of the combined reaper and mower:—Messrs. L. & P. Sawyer, of Hamilton; Palmer & Grant, Grimsby; Jacob Lawrence, Palermo; J. W. & N. Grum, of Waterford; Collins & Osborne, W. H. Wall-

bridge, John Henrig, H. A. Massey, and R. & R. S. Patterson.

Threshing Machines.

Several threshing machines were on the ground yesterday, but one or two of them were not fitted up and in running order. We shall refer to them again. Messrs James Milne, of Agincourt; John Abell, of Woodbridge; W. H. Wallbridge, of Belleville; Haggart Bros., of Brampton; Joseph Hall, of Oshawa; and H. A. Massey, of Newcastle.

Portable Steam Engines.

Three portable steam engines for use on the farm for threshing, &c. are now working on the ground. They are exhibited by Messrs. T. Zealand, of Port Hope; F. G. Becket., of Hamilton; and Gauson, Waterous & Co., of Brantford. The engine shown by the latter firm combines lightness with power, and has many

other advantages which must commend it to the practical man and the farmer.

There are several other articles in this department worthy of especial mention, but it will have to be deferred to a future period.

The Dinner.

The dinner to His Excellency was given in a tent erected in the grounds of the Lunatic Asylum.

After the usual patriotic toasts, the Mayor proposed the health of His Excellency the Governor General.

His Excellency's health was drunk with great enthusiasm, the cheers being given right lustily, and being again and again repeated.

His Excellency, on rising was greeted with renewed cheers. He said—Mr. Mayor and gentlemen, I thank you most heartily and unaffectedly not only for the reception which my name has met amongst you, but for your having given me this opportunity of meeting with the bone and sinew of Western Canada. (Cheers.) I can scarcely conceive any meeting more interesting than that between the representative of the Sovereign of this great empire, and the men or descendants of the men who have conquered so magnificent a tract from nature to add to her dominions. (Cheers.) I have also to congratulate myself on the circumstance that my visit here has been made at the time of your Provincial Exhibition. I have gone through that Exhibition with great care to-day, and I may say with some little knowledge of the articles exhibited, for at home I am myself a practical farmer. (Cheers.) And I say it, gentlemen, not in any way with the view of flattering you, but I say it as the simple truth, which has commended itself also to the judgment of some of my friends about me, who have witnessed the exhibitions of the Royal Society of England, that if your exhibition on these grounds to-day were laid alongside of theirs there would be very little to choose between them. (Cheers.) I cannot but think that that is a subject of immense congratulation for this portion of the Province of Canada. Your country now, and for some years to come, must be mainly an agricultural country, and you cannot over-estimate the importance or the value to you of bringing here so good stock to start with in the race of farming competition. (Hear, hear.) I have, within the last few months, had an opportunity of traversing the greater part of this Province, certainly in rather a hasty and perfunctory manner, but I have everywhere been met by exhibitions and demonstrations of loyalty to the throne, and of personal kindness to myself, culminating in this magnificent demonstration at Toronto. And I cannot help feeling the deepest gratitude on personal grounds, and the greatest satisfaction on public grounds, at the way in which I have been received. (Cheers.) Gentlemen, this is not the compelled adulation of a servile population to the satrap of a despotic monarch; it is the unpurchaseable, spontaneous, and reasonable outpouring of a free people of their sentiments of affection to their Sovereign, their attachment to her throne, and their stern determination to maintain unbroken the unity of her glorious empire. (Great

cheering) I never entertained a doubt of the loyal feeling of the people of Canada—(hear, hear,)—and I believe that, if the occasion should unfortunately arise for the practical exhibition of those feelings, not a man in Canada would be wanting in his place when that occasion arose. (Cheers.) Gentlemen, I am in a position to state to you, that not only I myself but those who are responsible to the people of this country for the government of the country, have at heart the question of preparation for national defence as strongly as have any men at home. I trust that in a very few days a system will be promulgated to you, which will enable the people of this country, in a manner inexpensive to themselves, and little onerous in regard to their industrial avocations, to put themselves in such a position of self-defence as will ensure them against aggressive attack. (Cheers.) I beg to thank you for the kindness with which I have been uniformly received in my progress through Canada, and I beg not to thank you but to congratulate you on the loyal feelings by which you are animated. I trust that I may be enabled, during the period it shall please my Sovereign to allow me to remain in my present position, to exert some influence in developing the resources of your country; and I trust that I may hand you over to whoever succeeds me in position, largely improved in material progress, and with your loyalty and affection to the British Empire untarnished and undiminished. (Great cheers.)

The Mayor then proposed Lord Mulgrave and the sister Provinces. (Loud cheers.)

Earl Mulgrave, who, on rising was greeted with renewed cheering, said—Mr. Mayor, Lord Monck and gentlemen, I take the manner in which you have responded to the toast which you have just drunk, as an earnest of the brotherly affection and regard which exist between Canada and the Lower Provinces. (Cheers.) This regard and this affection, I can assure you, are fully reciprocated by the Province over which I have the honour to preside. (Cheers.) Unfortunately at the present moment we are separated by distance and the difficulty of communication, preventing that cordial and easy inter-communication between the colonies which is so desirable for all of us. This distance and this difficulty of communication, I trust most sincerely, may soon be overcome. Once united by an iron band, we shall be able to communicate with one another, and to interchange our articles of commerce, and nothing I believe is more likely to add to the happiness, advancement, and prosperity of all her Majesty's dominions on this side of the Atlantic, than our being united and in easy communication with one another. In this Province you have many advantages which we do not possess in the Lower Provinces. You have a climate as good as any I believe in the world. You have a soil rich, fertile, and almost virgin. You have conquered that soil from the wilderness in a manner which does infinite credit to the hardy sons of Canada. And I trust that, when the communications are made intimate between us, the Lower Provinces may learn many things from Canada. And I trust that

Canada may learn something also from the Lower Provinces. (Cheers.) We have our advantages as well as you have yours. We have a mineral wealth in Nova Scotia which I believe is almost unequalled in the world. Coal we have in abundance, and within the last 18 months we have found the precious metal which all so anxiously seek after. (Hear, hear.) This discovery as yet has not been fully developed, but I doubt not that ultimately Nova Scotia will become a gold producing Province. That this will add to her wealth and prosperity no one can doubt, and I trust that whatever prosperity she may enjoy, Canada, by a closer connection with her, may be enabled to participate in that prosperity. (Cheers.)

The Mayor said—The next toast is "The Army and Navy" (Cheers.)

Major General Napier, replied.

Earl Mulgrave again rose and said—Having in former days resided some years among you, I was vain enough to suppose that I knew something of Canada. My present visit has taught me how little I really knew of her. I have been in the habit of frequently praising Canada, but I had no idea of the rapid strides made in the last twenty years. (Cheers.) Whether I look at the extent of your commerce, at your public buildings, or at your improvement in agriculture, I am lost in amazement. And I must own that I have seen what has astonished me more than anything else. I had no conception that Canada could boast of public buildings like those which I have seen in this city (Cheers.) Yesterday had the pleasure of visiting the University of Upper Canada, and I assure you that I cannot call to mind at the present moment any modern building of the kind in England, with which that building would not favourably compare. (Cheers.) I have had the opportunity of visiting Osgoode Hall, and that also is worthy of comparison with any buildings of the old country. This afternoon I have had the opportunity of witnessing the wonderful strides made in agriculture. We may live without luxuries, without the minerals, but cannot live without the food which is required to sustain us. I have frequently visited the agricultural meetings in England, and I can assure you that I do not think I ever witnessed a larger number of specimens of what scientific agriculture can produce. (Cheers.) I do not mean to say that in some of the agricultural meetings in England you would not see individual animals which would beat those which I have seen to-day—I do not wish to flatter—but, taken as a whole, I never saw a more creditable display. (Cheers.) I believe there is nothing more calculated to improve your agriculture and your manufactures than those displays which you have so wisely instituted. As regards your commercial interests, I cannot speak so fully, because they do not so easily meet the eye. You have the advantage in this country of reaping the experience of the old. You have availed yourselves of that experience, and the result cannot fail to answer the most sanguine hopes of those who are anxious for the prosperity of this country. Gentlemen, I propose the agricultural, commercial, and manufacturing interests

of Canada, and the health of the President of the Agricultural Association. (Cheers.)

S. W. Stone, Esq., President of the Agricultural Association, briefly responded.

Col. E. W. Thomson said they were now holding the seventeenth exhibition of the Agricultural Association of Upper Canada. Many within the sound of his voice would recollect when the Association held their first exhibition in this city, what a poor appearance they made at that time. They were told that this was too young a country to attempt anything so gigantic. They did attempt it however. How they had succeeded, it did not become him to say. He thought, however, statistics could show that their progress had been great. Since the first exhibition they had advanced more than tenfold. He and half a dozen other individuals took it into their heads that if an exhibition of this kind could be held in the State of New York, it could be held here also. They did not hope to equal the New York Exhibition, but they thought they might gradually progress towards what they had witnessed on the other side. And now they had it acknowledged by all that the Exhibitions in Canada quite equalled those in the State of New York. (Cheers.) He would not draw a comparison between the Exhibition at Battersea in England and our own. But he would say that when we took into account that the population of London was equal to the whole population of British North America, we had no reason to hide our heads. Our Exhibition, if not equal, was not far inferior to the great Exhibition of the Royal Agricultural Society of England. (Cheers.) In many departments we were quite equal, and in horses we have a better exhibition than they had at the Royal Agricultural Show at Battersea. This arose from the fact that we had taken pains to improve the breed of our horses, and that our importers had brought from the old country the very best they could find. As regarded both horses and cattle, the Association had encouraged their importation by giving a large additional premium, whenever a superior animal was brought in. We had still, however, much improvement to make in implements. Manufacturers from New York State show us how much better off the people there were than ourselves in that respect. But our mechanics studied those implements, imported largely the improved implements manufactured in England, and had now exhibited for several years as fine a show of implements in Canada as ever were exhibited in any part of America. (Cheers.) But there still remained something to do. In visiting England, he had witnessed vast improvements in implements, and had seen a display far beyond what we could show here. In thrashing machines important improvements had been made which he hoped our mechanics would soon copy. He had been struck also by the portable steam engines for carrying on ordinary farm work. He hoped that before long these improvements would be introduced into Canada, and that our motto would still be Onward! (Cheers.)

Rev. Dr. McCaul proposed "Our Guests."

Lord E. PAULER said he had been requested to respond to this toast.

Dr. King, Columbia College, N. Y. was also called upon to respond. He said what he had seen had gratified him inexpressibly, and that the kind expressions which had been uttered on this occasion with regard to his country had touched him deeply. (Cheers.) We are in a state, he said, of great tribulation, but we of the North believe that, in the spirit of the inheritance which we derive from the mother country, we are contending for the noblest principles of liberty. We are contending for that, for which Great Britain has been willing to sacrifice everything she possesses rather than surrender,—the power of the constitution. When we are told that certain claims cannot be admitted, and if pressed by the Federal Government, should be resisted by arms, we would be unworthy of our descent if we did not say, take then the penalty of arms, we fight for all you have consented to be governed by, and if you say you will not be governed by that, we say you shall be, or we shall sink with our flag. He was proud to feel that in the United States and Canada they derived their blood from the same source, and he trusted the day would never come when that blood would seek to try which of the two was the best.

Hon. G. W. Allan was called upon by the Mayor to propose "the Exhibition." He had listened with pleasure to the testimony borne to the excellence of this Exhibition by those who had an opportunity of witnessing the exhibitions in England, and he was happy to bear his own testimony to the same effect. It had been matter of great satisfaction to him to compare the stock sent by Canadian exhibitors with what he had seen on similar occasions in England. (Cheers.)

Col R L. DENISON briefly responded.

Hon T D. McGEe proposed "The Press."

Hon. W. MACDOUGALL responded.

Three cheers were then given for the Governor General and Lady Monck, three for Lord Mulgrave, and three for the Queen.

To form a compost of muck, it needs to be thoroughly pulverized or reduced to a fine form by the action of the atmosphere. When thrown from its bed it is in a crude state, and should remain in the heap for a year, being forked over twice during that period. After this, it can be carted directly to the field, that is to be manured, or hauled to the stables for use as an absorbent. If the farmer can obtain a supply of muck each year, it will be better to let it remain the above length of time before using it in a compost. Unleached wood ashes or quick lime are both used with muck as a compost: we should, however, use the former, (because they are rich in potash,) in connection with the latter, as they are both powerful alkalis. Muck varies considerably in its composition, and also in acidity, and for this reason experience must teach the required amount of ashes and lime to be used with it; a sufficient quantity to induce fermentation being all that is necessary. A cord of muck contains 103 bushels. To this should be added five bushels of ashes, one of quick lime and one of salt, placed alternately in layers, and afterwards thoroughly mixed by forking or shoveling over the whole heap. Muck which was thrown out last summer, or even this spring, can be composted now, forked over this fall and again in the spring, and will then be ready for use. It will be found a most valuable manure for corn, potatoes, root



FARM OPERATIONS.

Hauling and Composting Muck.

The present is a good time for digging muck from its bed, and if possible, hauling it to the barn yard. The bogs or swamps where it is deposited, are now dry, and the muck is in a most desirable state for being thrown out and carted, providing the team can be so used. Besides, the work of harvesting is generally accomplished and the labor of the farm cannot be turned to a more profitable account. During a ride through Sidney last week, we noticed some farmers thus engaged, and the muck so hauled was being left in yards to be used this fall as a litter and absorbent of the liquid voidings of the stock.

or as a top dressing for grass or meadow lands.

Where muck was dug out in the spring or early part of summer, but from the circumstances of its location cannot be carted until winter, it would be a good plan to compost it now where it is, in the manner above described, hauling it by the first sledding to the field intended to be manured, and forking it over in the spring, adding, if necessary, a small portion of ashes and salt at the time of performing the operation. If this is deemed impracticable, it can be hauled into the barn yard in early winter, and by letting the cattle and sheep run on it during the winter and following summer,

it will by fall become somewhat mixed with the manure of the stock, and can be carted out to use on potatoes or corn the next season. Or, if the winter is not severely cold it can be thrown into the stalls behind the cattle and after remaining one day, deposited in the shed or cellar with the other manure. At any rate, if the muck is in a heap in the yard it can be used as an absorbent in the spring, and will in this way add value not only to the muck itself, but actually improve, for general purposes, the other manure.

Sea Weed as a Fertilizer.

"A young Farmer" writes as follows to the *Albany Country Gentleman* :—

The great object for which I write is to draw to the subject the attention of others of more experience than myself, and to induce them to give to the world the benefit of that experience.

The subject is the proper management of Sea Weeds, or the Drift of the sea shore, as a source of manure. I am well aware, to the greater portion of your readers, those residing at a distance from the water, the subject is of no practical importance. Nevertheless, *The Cultivator* must find its way to homes "close by the sea shore"—in New-Jersey, Long Island, Connecticut, Rhode Island and Massachusetts. The immense quantities of drift cast upon the shores of these states, amounting annually to thousands upon thousands of loads, must be of great value to those living near the water, and so situated that they can apply it to the soil.

The "drift" is a constant and inexhaustible source of manure, and never fails. It being a natural growth, the quantity does not materially vary from one year to another. There are three distinct varieties—it is not my intention, however, to give any description of them at the present time—suffice it to say when nearly arrived at maturity, their hold upon the place that nurtured them is broken, and they are cast upon the shore. "Drift" is the term usually applied to them in this state. If not gathered, it "moveth about whithersoever the wind and waters taketh it."

That it should be collected and applied to the land no one will doubt. The important question is—what is the best manner of applying it? In the natural state or decomposed? If decomposed, what is the best method of rotting it? These questions, and many others relating to the varieties, (for all varieties will not admit of the same treatment,) it is important should be satisfactorily answered.

None are better able to do so than those who have tried the various methods, and who judge from their own experience.

The easiest way of applying the drift, and as far as my observation has extended, the one the most generally practised, is to spread it on the surface, either to be "plowed in" or left on the surface as a top-dressing. There are two objections to this course which I think more than counterbalance all the good that may come from it.

1st. The seeds of many foreign and dangerous weeds are introduced into the soil, which it is nearly impossible to eradicate. 2. It is unphilosophical.

Those at all familiar with the sea shore have

observed the many curious forms of vegetable growth at the margin or limits of the highest tides. Some localities, favorably situated, abound in a great variety of weeds of all sizes, colours, and descriptions. There are also a number of varieties of grasses, and these, taken in connection with the weeds, would furnish an interesting study for the botanist. I have often noticed a kind of grass resembling the "quack" of the upland, growing however, much more luxuriantly. I have no doubt it is the veritable "quack"—its nature somewhat changed by the action of the salt water.

Now the sea weed being washed by the tide among these weeds and grasses, must become filled with their seed. Especially is this the case in the fall months, when the seeds having arrived at maturity shell and drop easily. When the sea weed is applied to the land these seeds must necessarily pass into the soil—some to grow, others to decay, because deprived of the influence of the salt water. To show that this reasoning is not visionary, one illustration will suffice. The facts of the case I can vouch for, as it came directly under my own observation.

A seven acre pasture lot, situated close to the water—"very handy to cart on to"—was covered over with drift three years in succession. It was then plowed and planted with corn. Much to the surprise of the owner when the time for hoeing came, the "quack" was so thick the lot looked like a field of wheat flourishing finely in the month of October or November. There was never known to be any quack in the field before, excepting in one small corner where the tide occasionally overflowed—a convincing proof that the quack was brought in with the sea weed. This manner of applying the drift I therefore consider hazardous, and never to be risked except under peculiar circumstances, which I may mention at some future time.

2d. It is unphilosophical. The nature of the drift is such that it decomposes very slowly, and being placed on the surface, subject to the sun and wind, it loses one of its chief virtues—its saline properties.—To be sure a small portion of the salt it contains may be "washed into" the soil by the rain, but the greater portion is evaporated and passes into the atmosphere. If it is "ploughed in," this difficulty is obviated; but the quantity that can be treated in this way is at the best but small, compared with the whole amount accumulating throughout the year.

Therefore it is my opinion, that drift should never be applied to the soil in its natural state, or at least in the condition it is taken from the shore. To be used advantageously it *must be decomposed*. To hasten decomposition, and at the same time to increase its value as a manure, it should be *composted* with other materials—the substances that are adapted to this purpose, *i.e.*, those that are the most available—those that will "pay the best."

Green Manuring.

By this term I mean plowing under green crops for the purpose of increasing the fertility of the soil. It is a well-established fact that all plants derive a portion of their nourishment or substance from the atmosphere; therefore

any crop turned under and allowed to decay, must leave the soil more fertile than it found it, by exactly the amount of nourishment which the plant received from the atmosphere.

The main object in this kind of manuring is to obtain a plant which grows quickly and produces a large amount of foliage without occupying the ground too long, and at the same time drawing as large a portion of its nourishment from the air as is possible.

But the leaves and stalks are not the only beneficial parts; we want a plant whose roots run deep, and thus raise from a considerable depth substances which are useful to vegetation, but from their depth are not available to our common crops.

The most common mode of green manuring in this country, is the turning under of sods for corn. The benefit derived from turning under a stiff sod for corn is known to all farmers, and some allow the grass to grow as late in the spring as possible, and put off plowing as long as it will do.

We all know that corn is a very exhausting crop, and yet as a general thing it receives no manure but what is derived from the decaying grass and grass roots which are turned under by the plow.

But there are various other plants which are available for green manuring, of which the common or red clover seems best adapted to our climate. It soon reaches its growth, has a large amount of leaves and stems, and its roots are large and fibrous, and run very deep. Rye also forms a very good crop for green manuring, but requires more time than clover, is more expensive, and derives more of its substance from the soil.

Johnson writes, "That in no other way can the same crop convey to the soil an equal amount of enriching matter as in the leaves and stems."

One great advantage of green manuring is that these vegetable substances, when turned under, decompose rapidly, and soon benefit the crop. Another is that grain manured in this manner never falls to the ground through weakness of the straw, but no matter how heavy the head it retains its erect position.

But we must not attribute all the benefit derived to the leaves and stalks, for the roots in some cases contain as much bulk and nourishment as the leaves and stalks. It has been estimated that the weight of the roots left in the soil by a sod four years old is equal to one-twentieth more than the weight of the grass grown the fourth year.

The best plan to bring a field under a course of green manuring, is to apply the manure on the sod for corn, which should be followed with oats in the usual manner, with a good coat of clover (say eight or ten quarts to the acre) sown among it. After the oats is taken off, the clover may be pastured lightly during the fall. Next year it should be allowed to grow until three or four weeks before it is time to sow the wheat, when the clover should be well turned under and allowed to remain until seeding time, when the wheat should be put in in the usual manner.

By this plan the manure is in good order to

act on the wheat crop as soon as it is sown, and the green clover will strengthen the straw and increase the yield of grain.

This has been my practice for several years. Last spring I sowed one bushel of plaster per acre on the clover, and this fall I shall have a luxuriant crop to turn under. But I expect to plow a portion of it before harvest, and then plow again (*shallow*) before seeding with wheat and grass seed next fall.—*Germantown Telegraph*.

Management of Strawy Manure.

A correspondent of the Country Gentleman speaks as follows in reference to the management of yard manure on a grain farm:—

Usually we have a large surplus of straw after we have used all our stock through the winter, to trample it under foot as an absorbent. Our sheep-sheds will have from two to three feet of what we call manure, in depth, which we must take out and mix with the manure of the yards, and pile it up so as to have it receive and retain the greatest possible amount of rains that fall on it. These piles *have never fire-fanged* with us; but sometimes the manure begins to fire-fang a little before we can find time to get it out of the sheds.

But why not draw this manure directly to the fields and put it to work enriching the soil? This question is constantly asked, and should be answered. The first reason is: the straw has not yet absorbed all it will and should, from the excrementitious matter mixed with it, and if it is drawn out and spread it will never absorb it. The next reason is: the whole mass is too bulky to be advantageously applied, either on the surface or to be ploughed in. In fact it cannot be plowed under (without some extra and being required to bury it in the furrows,) by any process known to us; the third reason is; two or three loads of this bulky manure will shrink into one, by the time we are ready to apply it to grass or wheat in the fall, and thus it is far less work to pile in the spring and draw and spread in the fall, than it is to take the whole crude mass out in that season of the year when the ground is full of water, and so soft that the waggon wheels cut and puddle roadways, to the great damage of the field.

Ashes for Sandy Soil.

Of all the manures within reach of the farmer, I consider ashes the cheapest and most durable for sandy soil. For clover on sandy land, it has no equal among all the manures and fertilizers of the day. The soil in this vicinity is a loose sandy soil; in fact we have, as it were, a prairie of sandy plain, such as were found in nearly every portion of our country 15 years ago. They appear never to have been charged with vegetable matter, for even when the timber was first removed, and the land cleared and put to rye or other crops, they yield liberally only for one or two years, before they required generous manuring. It is loose, porous, and without the firmness which is requisite to keep plants in their places, even if their proper food could be found. This land a few years ago, could have been bought for one-third what it would bring at the present time. The cause of this rise in the price of

land, is a liberal supply of muck and ashes. the muck is drawn on in winter and spread over the land; the ashes are applied in the spring, at the rate of 75 bushels to the acre; after corn is planted it is put on the hill or sown broadcast. The general rule is to plant with corn and put the ashes on the hill; sow to rye in the fall as soon as the corn is removed; seed with clover the following spring. The following season, after the rye is removed the seed is gathered from the clover, and the straw left standing on the ground. This is done with one of Disbree's Clover Strippers, an excellent machine for the purpose. Two bushels of seed is frequently obtained from an acre; the straw thus left standing forms an excellent substance in connection with the muck to fill the pores or open places between the particles of sand and supply proper food when acted upon by the salts around it. I have known portions of these plains, the surface of which, to all appearance, had not been covered with vegetation within the memory of man—where the blackberry vine grew weak and feeble, and five-finger vines grew few and far between, so completely invigorated and enriched in a few years, as to produce thirty bushels of clover seed to the acre. Those lands thus brought to a state of fertility, are capable of yielding a crop every year, under the application of ashes, as those lands that have never been reduced. The farms of heavy loam have heretofore considered these sandy plains of little value, as compared with theirs; but I would sooner cultivate a corn crop on them than on the heavier loam land. I can work two acres of the sand as cheap as one of the heavier lands, because the plowing and hoeing can be done with less team and help, and in much less time. Ashes here can be bought for 12½ cents per bushel, and I think are worth 25 cents to be applied on sandy soil in connection with muck. This mode of operation for the treatment of sandy soil, so as to bring it on an usual footing in point of productiveness, requires no uncommon skill, but commends itself to the practice of all—for any common manager of a farm may accomplish it without the aid of any adjuncts of chemistry, or what are called specific manures, but by using merely those great gifts of nature.

How to Improve a Badly Run Farm.

The first and most important point to be considered and attended to, is a general change of crops. Most farms that are run down, have been under a long course of cropping with one or more different small grains, such as wheat, rye, barley or oats—one of these grains generally being made a leading crop; in wheat sections, it is wheat, in other sections oats. And although rye and barley are raised to some extent, yet a large portion of badly run land has been mainly cropped with wheat or oats; while these crops are calculated to have as bad effect on land, and to give it a poor worn-out appearance as quick as perhaps any other crop, though in reality it may not be so very badly run down for other crops, besides wheat and oats. Again, such land is generally not plowed more than four or five inches deep; consequently, though the land may sooner appear to

be worn out, yet in reality it is only badly run to that depth. Hence a change of crops, and deep and thorough cultivation, may be expected to produce excellent results.

This may be illustrated by relating a little of my own experience. (And here let me say, I do not intend to state or recommend anything in these remarks, that I do not consider warranted by my own experience or observation.) I commenced farming on a small place that had been let to neighbouring farmers,—no one residing on the place for many years, before it came into my hands. As is often the case, all that was raised was taken off from, and nothing returned to the land. It had not been seeded down for a long time until the spring before I bought it, it was seeded to clover. Wheat had been the principal crop, altering occasionally with oats—the last crop, which was oats, only yielding some twelve or thirteen bushels per acre. It was so badly run out, that it was difficult to get any one to take it. The spring it came into my possession, I planted six acres to corn and potatoes, the corn yielding at the rate of fifty bushels of shelled corn to the acre, and the potatoes at the rate of 160 bushels per acre. These crops were raised without any manure, except the clover sod of the previous spring's seeding, and were undoubtedly due to a change of crops, deep plowing and good cultivation. Nor was this all; by making a general change of crops and management the land was not only made productive and profitable, but the general appearance and credit of the place was brought up and improved so much, that when I wished to sell and buy a larger farm, it sold for about double what it cost me. I have also pursued a similar course or change of crops on my present farm,—which was considerably run down—with very satisfactory results.

There are also many similar instances of the great benefit of a change of crops, that have come under my notice, but I can only make room for one or two. One is in regard to a piece of rather poor hemlock land, that, as it was not considered very good wheat land, had been kept in spring crops some years, and as the owner said, "wanted seeding down." He said he "did not expect much wheat, as it was not wheat land, and had been a going in spring crops and wanted rest; but that in order to get it in good condition for meadow, and well seeded, he was going to summer fallow and sow it to wheat." Yet that field gave 30 bushels per acre, which was an extra crop for that kind of land. In another instance, the same kind of land that had been badly run to spring crops, was sown to wheat on oat stubble, and gave over 20 bushels per acre.

Having shown that a change of crops produces good results, we would continue to make use of this fact, as far as circumstances will admit, by adopting a systematic change or rotation of crops. There are many good and sufficient reasons beside those already given, in favor of a rotation; but our readers being familiar with them, I shall proceed to consider crops should be included in rotation for a badly run out farm.

Perhaps the best way to determine this ques-

tion, will be to consider, what crops have been grown to impoverish the land. But this has already been done to some extent, in considering the necessity of a change of crops. Hence, having seen that the small grains have been the principal crops raised in running down the land, it will be best to raise as little as possible of them, and find some other crops to take their place.

Now there is one crop that I have seldom, if ever, heard charged with wearing out, or even injuring the land. True we sometimes here of land becoming "clover sick" in England. But I believe such cases are exceedingly rare, if there are any at all, in this country and more especially when plaster is sown on the clover, as it always should be on all but very rich lands. But on the contrary, while clover never impoverishes land, it is seldom raised without improving the soil and putting it into much better state for other crops; and this improvement being much greater and more surprising on badly run land than has been but seldom, if ever, clovered. Again, clover can be made a very profitable crop, as I hope to show when writing more in detail in regard to its cultivation. Now for these reasons, and many more, some of which may be given another time, clover should be the leading crop in bringing up land.

Next to clover I consider corn the best crop to go in improving the soil. The reason for this opinion can be easily made apparent to all in this way. Who ever heard of land being run down where clover and corn were the principal crops; and these crops, made good by deep and thorough cultivation and manuring, were mostly consumed on the farm as of course they should be? Such cases must be exceedingly rare, if indeed there are any. For my part, I have yet to meet with the first one. True, run down land will not continue to produce as good crops for any considerable length of time after a change as it does at first. Yet by raising clover and corn for the principal crops, and feeding a large portion of both on the farm the land may be constantly improving, and the crops after the first and principal effect of a change is worn off, be continually growing better. It is true that corn grown year after year on the same field for a long time will on most soils run down the land. But when it is grown only once in four or five years, in a judicious rotation, and everything in relation to the crop well managed, the general effect and result will be altogether different.

But, though corn and clover should be the principal crops, yet there should be some kind of grain sown after corn to seed down with. What this should be may perhaps be best determined in each particular section, regard being had not only to what would be likely to succeed best, but also to the kind of grain that clover will take the best with, it being always important to get a good seeding.

In considering the best way to improve a badly run farm, I have not alluded to undertaking for the reason that a man commencing on such a farm, more or less in debt, will have but little means or inclination to do anything

of the kind, but will rather chose to buy a farm that may be improved without it. Still there may be instances where it will be best to buy land that needs undertaking. In such cases due allowance should be made for it in purchasing, and sufficient money retained to pay at least some portion of the expense.

As good and deep cultivation and manuring which should include a liberal use of plaster and ashes, have been frequently alluded to, it will not be necessary in concluding, to do more than merely state that while they are all very important on all farms, no one need ever think to succeed for any length of time on badly worn land without giving both the strictest attention. And that, as a general change in the course of cropping and manner of cultivation will give good crops on the start; so these crops should be so managed and used as to give the largest amount of manure that may be practical to make, thus making good crops add largely to the amount of manure, which in turn will add to the amount of crops, and this course followed up, will be sure, sooner or later, to make a good productive farm.

Improvement of Pastures.

Although we have repeatedly spoken on this subject, extended observation assures us that much may still be said, before the owners of pasture-lands in this section are fully aroused to the importance of improving them. The decline in the produce of pastures, and the difficulty of maintaining the amount of live stock which farms formerly supported, is a frequent topic of remark. Yet much less is done in regard to remedying the difficulty, than might be expected.

What are the reasons for this apparent neglect? They are probably various. In some instances the owners have no capital, either in the shape of money or labour, to invest in improvements. In other instances the owners are in doubt as to any means of improvement which can be made remunerative. There are cases, undoubtedly, where it is difficult to decide as to the expediency of attempting any improvement. The practicability of rendering the land more productive is not doubted, but the question—Will it pay? cannot in all cases be answered affirmatively.

The result of a proper examination of the subject is, that the improvement of pastures will pay in some cases, and will not pay in others. How shall we decide this matter? And having settled on the lots where improvement is expedient, what course or courses of operation will be found best? A farmer of close observation can form an opinion, to some extent, in reference to the expediency of attempting the renovation of any particular pice of land. He will know by the character of the soil whether it is naturally good for grass—whether it is retentive of moisture, or whether its composition and texture will allow water to pass rapidly through and also exhale from the surface, thus rendering vegetation liable to suffer from drought, and carrying off the soluble elements of manure. Pitch pine or shrub oak lands are seldom good for grass, and are generally worth more for the growth of wood than for anything else. The white

pine or Scotch larch will often grow well on them by artificial planting, after the natural growth has been subdued. But there will be some tracts of land in regard to which it is more difficult to decide whether they will be more profitable in grass or wood, and the question may not be susceptible of actual settlement short of a practical trial with a small portion which shall fairly represent the whole.

Where improvement is decided on, it will be impossible to say, in all cases, what would be the best or most economical means. In some cases it may be advisable to plough the land, and in others the condition of the land, as to stones, may render this operation impracticable or too expensive. In some cases drainage is the thing most needed, and in others mere top-dressing with some fertilizer will be found to give the best results in proportion to the expense. A few experiments, fairly made, but on so limited a scale that the cost would be comparatively trifling, might afford a safe guide in regard to the modes of improvement which could be most advantageously adopted.

The attention of the writer has lately been called to various tracts, the owners of which are desirous of improving them if an economical course can be clearly pointed out. A great portion of this land is so stony that ploughing it is out of the question. Most of it is grown up more or less to bushes, and a considerable portion is too wet, as shown by the growth of plants which only flourish where there is too much water for those of a more nutritious character.

The first object in these cases should be to ascertain whether the bushes can be killed and grass be made to grow in their place, at such a rate as to remunerate the owner for the expense. In reference to this it may be suggested that a small piece be taken to begin with; let the bushes be cut close to the ground, in August. Sow on one portion plaster, on another plaster and wood ashes, on another ashes alone, and on another superphosphate of lime—noting the cost of each to a given extent of land. Several, if not all of the substances mentioned, will probably start the grass more or less. If the ground is naturally inclined to make a good sward,—as will be shown by those spots not covered with bushes,—the grasses will probably be so much invigorated by the manures, that their growth will check the starting of the sprouts where the bushes were cut. This result will also be aided by the feeding of the stock, which, as the grass will be rendered sweeter and more nutritious by the dressing, will feed it closely, at the same time cropping the tender sprouts, more or less, and by tramping the soil favour the growth of grass, and hinder the spread of the bushes.

Two years will probably afford a pretty good indication as to the results of the operation. It may be necessary to repeat the cutting of the bushes, to some extent. The relative effect of the different fertilizers will be obvious, and the farmer can form an opinion whether the application of any of them, or if any, what ones can be made profitable.

Much of the land to which allusion has been

made as needing drains, is the slopes of hills, not boggy, but good, solid land, requiring only to be relieved of the superfluous water in the soil and subsoil, to have the quantity and quality of its herbage doubled or quadrupled. On such tracts, a few drains might be dug to the depth of not less than two and a half feet, laid with stones or tile, according to convenience, as either will answer so far as required to test the effects of drainage. If the soil is compact, especially if there is a "hard pan," as is frequently the case, the change in its character will be comparatively slow, requiring two or three years for the drains to produce their full effects. But in this period the effect on the quantity and quality of the grass will indicate whether this operation is likely to pay or not.

BREEDERS' DEPARTMENT.

Value of Shelter For Stock.



It is seldom we see a more striking statement of the advantages of sheltering stock in increase of condition and saving of food, than the following credited to a "New Hampshire paper" of ten years since.

"The barn, or building, rather, in which my cattle for a number of years were sheltered, (if sheltered it could be called,) was in a very dilapidated condition. Expecting from year to year to be able to replace it with a new one, I delayed many little repairs which I am since convinced it would have been true economy to make several years before. I knew the animals suffered much from the cold, and to compensate for their sufferings, I fed them well; but while pursuing the system that necessity compelled me to adopt, I could not but observe, on comparing notes with my neighbors, that my cattle consumed considerably more food than theirs, while at the same time their condition was not only no better, but scarcely as good. However, I then attributed this fact to any other but the right cause. Knowing that some animals eat more than others without improving in an equal degree, I presumed that mine were of this lean kind, and thus dismissed the subject from my mind.

Feeling somewhat stronger in pocket two years since, I built a new barn. The shelter it afforded my cattle was, as you may suppose, better than the old one. The feed given my cattle during the first winter was the same in quality and quantity as that of the previous winter, but I was surprised to find in the spring there was a decided improvement in their condition over that of the preceding spring. Last winter I found that I could keep them on at least *one fourth less food than ever before*, and as I am satisfied that they have not changed their

natures, I cannot attribute this saving of food to any other cause than to the comfortable shelter provided for them in a new barn during cold weather.

I am aware that there are scientific principles upon which this change may be accounted for, but aspiring to no prouder distinction than that of a plain, practical farmer, I leave scientific explanations to those more competent than myself, being content to record the simple fact that I save one-fourth of my cattle's food, by providing them with comfortable shelter during the winter season."

Corn Stalks.

Corn stalks, well secured and cut fine, furnish an agreeable and healthy food for horses and neat cattle—for the latter, if, when cut, they are scalded by pouring on warm water, they are almost equal to what they are when green, especially for cows, causing them to produce milk of almost the richness of June. They are worth, when well cured, \$6 per ton, when hay is worth \$10.

Feeding Oats to Horses.

The same quantity of oats given to a horse produces different effects according to the time they are administered. I have made the experiments on my own horses, and have always observed that there is in the dung a quantity of oats not digested, when I purposely gave them water after a feed of oats. There is, then decidedly a great advantage in giving horses water before corn. There is another bad habit, that of giving corn and hay on their return to the stable after hard work. Being very hungry, they devour it eagerly and do not masticate; the consequence is, it is not so well digested and not nearly so nutritious. When a horse returns from work, perspiring and out of breath, he should be allowed to rest for a time, then, given a little hay, half an hour afterwards water, and then oats. By this plan water may be given without risk of cold, as the oats act as a stimulant.

Cooking Feed for Cattle.

At a late meeting of the Royal Agricultural Society of England, the question of "the expediency or otherwise of cooking feed for cattle was discussed." As this discussion has a direct and important bearing upon the same subject, discussed in some late numbers of the Boston Cultivator, it is thought it will please all farmers who will feel any interest in this matter.—Accordingly a brief synopsis of the discussion as reported in an English Agricultural paper, is herewith presented.

Mr. Frere, the Editor of the Journal of the Royal Society, said, the subject for discussion is the preparation, mixing and cooking feed for cattle and sheep. He based his remarks on Prof. Voelcker's article on straw, published in the Journal, on Mr. Lawes's report on some experiments he made at the Duke of Bedford's farm, and on his own experience during the last autumn. Mr. F. said, after discussing the subject at some length. "There are two branches for special consideration; first, whether the increased labor in preparing the feed, and the cost of apparatus, fuel and insurance would not be more than equal to the saving as claimed by some; and secondly whether the increase

of the animal fed on cooked feed is of good quality. He is inclined to think the quality of an animal fed on cooked feed is not as good as when fed on dry feed.

Pigs, for example, show any change in feeding very rapidly, but if a pig be fed on boiled Swedes, it will increase rapidly in weight, but the character of the pork will be inferior, for to use a common expression it will 'boil away.' The reason for this is, that as the animal increases, a certain amount of water is displaced and fat substituted, but if fed on boiled Swedes largely, the water will increase as well as the fat, and the flesh will boil away."

He also mentioned a case in which he had tested the merits of steeped barley in feeding cattle, with pretty nearly the same results, that is to say, that though the increase was rapid, the quality of the beef was deteriorated as compared with that which was made from feeding animals on dry barley.

Mr. Dent, M.P., inquired whether that observation would apply to pulped feed not being cooked.

Mr. F. thought it would not. There are probably hardly facts enough to enable one to judge accurately. Certainly there can be very little good in saving £20 a year, by the use of cooked feed; if it cost £10 for labour, and £10 for fuel, &c.; indeed, there would appear to be a loss in the deterioration of the quality of the beef.

Mr. Dent replied, that most farmers are inclined to give up cooking, but not so with pulping the feed. He kept from 70 to 80 head of cattle, from sucking calves up to full grown beasts, and he should be glad to hear the opinion of scientific gentlemen present with regard to the effect of pulping feed and giving it to cattle fresh before fermentation.

Mr. F. being anxious to try this point of cooking, selected 10 animals last autumn, and ordered them to be fed with 2 lbs. of boiled bean meal poured over the chaff.—After standing 24 hours, 2 lbs. of cake were added, and the mixture served the next day. One of the animals obstinately refused it, and fed on straw. This animal the poorest of the lot, was fed on unboiled bean meal mixed with straw, moistened the day before with a small quantity of malt combs or chives also moistened the preceding day; the consequence of which was that it became the very best, and weighed eight stones, [112 lbs.] more than the others of the same size.

After some further remarks by others, Prof. Simonds said that his opinion with regard to all these matters, is, that they have dealt too much with chemistry and not enough with physiology. Mr. Lawes had truly said that the question, commercially speaking, is, whether cooked feed will pay.

They ought not to be surprised that cooked feeds are not so well calculated to build up the animal and obtain a good quality of flesh. It had been said that it boiled away, and the reason given is, undoubtedly, the right one, to wit, that of feed given containing a large quantity of water, more water is absorbed in the organization of the animal than when dry feed is given.

Speaking as a pathologist, [Prof. S. is a learned veterinarian] he believes that a greater number of the diseases of the lower animals are to be traced to the bad quality of blood arising from an excess of water and a deficiency of nitrogenized feed.—He illustrated by reference to feeding ewes on turnips at the lambing season.

There is another question he said with reference to cooked feed. Admitting for a moment that it accumulates a large quantity of flesh in a short space of time, and that, for argument's sake, as so much gain, he was inclined to think that it arose from the facility it gave the digestion of the food by anti-cipating a part of the process which it undergoes, ordinarily, from the action of the gastric juice. For a simple stomached animal, like the horse, it might be different. [The reader will recall Mr. Lang's statement, lately printed in the Cultivator, that experience taught him to abandon the cooking of feed for horses.]

The question is, whether in feeding ruminant animals on cooked feed, mastication to a considerable extent is not superseded? If so then insalvation [the mixture of the feed with saliva] is superseded, and thus are the processes of nature interfered with and harm is done.

What is the action of saliva on feed?—Without discussing the intricacies of the question,—in ruminant animals a provision is made for remastication and reinsalivation. If then by cooking feed this animal function is superseded, and the feed is sent quicker from the stomachs into the intestinal canal, remastication and reinsalivation are dispensed with; and he could easily understand why, notwithstanding the increase in animal bulk, the quality of the animal might become bad.

For the same reason the fine pulping of the feed is objectionable. There is no doubt that animals may be made to eat more by cooking and mixing their feed, but on the whole he [Mr. S.] is not in favor of it, either as a means for the preservation of the health of animals or of promoting the powers of digestion.

It will be remembered by the reader that this point was dwelt upon by the writer in remarking upon what Dr. Loring said in regard to "providing against the effort of mastication." It will also be observed by the reader that this late discussion on the cooking of feed, by the learned members of that distinguished Agricultural Society fully confirms the views of the writer lately presented on this interesting and important subject of stock breeders as well as graziers and feeders of cattle and sheep.—W.

Notes on Shoeing Horses.

A pamphlet of 79 pages, with the above title has lately been published in London. From the extracts which we have seen, taken from this pamphlet, and from the high and hearty commendations of it which have appeared in the *North British Agriculturist*, and other agricultural journals in Great Britain and Ireland, we should think it well deserving of republication in this country, and quite likely to contribute to the preservation of many a horse from lameness, as well as to find an abundantly remunerative sale among

horse owners, and among farriers and blacksmiths who have any ambition to excel in their profession or business.

To enable publishers and the public to judge of the utility and merits of this pamphlet, and also to give the owners of horses among our readers, an opportunity of availing themselves of a few of the many excellent directions and items of information contained in it, we purpose to lay before them a few quotations from its pages, or the substance of some of its more valuable paragraphs in a condensed form. As a preliminary, however, and for the purpose of giving to publishers and those most immediately interested, some idea of the excellence and value of the plans and processes recommended in this practical treatise, we will first of all give our our readers a specimen of the commendations which it has received in several of the journals already referred to. After reviewing the pamphlet at some length, and giving several extracts, the *North British Agriculturist* says—"we would, in conclusion earnestly advise all horsemen, and any one who loves good and safe action, (and who does not?) to peruse Col. Fitzwygram's 'Notes,' to master the system of shoeing so simply and well propounded, and endeavour to have it carefully and honestly carried into effect. Although now for the first time set forth in type, it is, be it remembered, no new or untried plan. It has been pursued for full twenty years, under Mr. Hallen's own auspices, in the shoeing of the horses of the Inniskilling Dragoons, where the merits and strength of the system may perhaps be best seen. In no regiment of her Majesty's service, and among no like number of horses, will there be found such strong sound feet, such clean health limbs. On parade, at review, on a long march, not a shoe is lost, not a foot is bruised, not a horse is left lame behind. The system is not less successful in practice than sound in principle, and we only wish that Col. Fitzwygram would still farther increase our obligations to him publishing in a sixpenny form an abstract of so useful and practical a system."

There is great need of more light and knowledge in the business of shoeing horses, or at least of a more general acquaintance with the best methods of shoeing, and with the principles upon which these best methods are grounded, will be very generally admitted we presume—also, that in the words of an English writer of over half a century ago, "a large proportion of the horses of this country are rendered useless by diseases of their feet long before the strength of their bodies becomes in a material degree impaired." Of these diseases it has been said, with much appearance of truth, "nearly all truth, nine-tenths are traceable to faulty shoeing, and that so intimate is the connection of lameness with the foot and with faulty shoeing, that Prof. Dick, an eminent teacher of the veterinary science in Edinburgh is wont enjoin upon his pupils in every case of lameness, especially of the fore extremities to examine the foot and the shoe.

It will further be generally admitted, that the lameness and other evils resulting from shoeing are, in almost all cases, the conse-

quence of ignorance, carelessness and neglect, or foolish prejudice in favor of faulty systems, and an adherence to established customs. Some of the errors and faults of the ordinary methods of shoeing have been exposed by Bracy Clark, Mr. Miles, and writers in this journal also; but a rational and sensible system, approved and tested by practiced, and based on a competent knowledge of the structure and functions of the foot, was still a *desideratum*,"—an acknowledged and felt want. Such a system we have now, simply and clearly set forth, in Col. Fitzwygram's "Notes," if we may rely on the testimony of good a competent judges. And among the merits of these "Notes," one, and that not the least, is that the author has expressed himself so clearly and distinctly that his meaning cannot fail to be understood, and must be easily intelligible to any blacksmith or farrier who pursues them.

The most important object in the art of shoeing is according to Col. F., the preservation of the crust or outer wall of the foot. "All else is subsidiary to this, though many other points are of great importance." One of the practices which Col. F., condemns, as interfering with the preservation of the crust in its perfect integrity, is that of rasping the hoof in the way which is so common with blacksmiths, who thus try to make the foot look well. Few appear to be aware of the evils of rasping. "It ruthlessly removes the gluey superficial layer of hoof which preserves the deeper seated parts moist and tough; and it destroys the fibrous structure of the crust, and this permits the escape of its natural lubricant fluids, rendering it dry, scaly and brittle, as also unfit firmly to hold the clutches."

DOMESTIC ECONOMY.

Cooking Tomatoes.

This delicious, wholesome vegetable is spoiled by the manner it is served upon the table. It is not one time in a hundred more than half cooked; it is simply scalded, and served as a sour porridge. It should be cooked three hours—it cannot be cooked in one. The fruit should be cut in halves and the seeds out. The mucilage of the pulp may be saved, if desired, by straining out the seeds, and adding it to the fruit, which should boil rapidly for an hour, and simmer three hours more, until the water is dissolved, and the contents of the saucepan a pulp of mucilaginous matter, which is much improved by putting in the pan, either before putting in the fruit, or while it is cooking, an ounce of butter and half a pound of fat bacon cut fine, to half a peck of tomatoes, and a small peppered, with salt to suit the taste. The fat adds a pleasant flavor, and makes the dish actual food instead of a mere relish. The pan must be carefully watched, and but little fire used, and the mass stirred often to prevent burning towards the last, when the water is nearly all evaporated. The dish may be rendered still more attractive and rich as food, by breaking in two or three eggs and stirring vigorously, just enough to allow the eggs to become well cooked.

• Tomatoes thoroughly cooked, may be put in

tight cans and kept any length of time; or the pulp may be spread upon plates and dried in the sun or a slow oven, and kept as well as dried pumpkin, dried apples, peaches, or pears, and will be found equally excellent in winter and spring.

For every-day use, a quantity sufficient for the use of a family a week, may be cooked at once, and afterwards eaten cold, or warmed over. We beg of those who use this excellent fruit to try what cooking will do for it. It has been eaten half cooked long enough. It should never be dished until dry enough to be taken from the dish to the plates with a fork instead of a spoon.

TOMATO SAUCE.

Take one dozen of ripe tomatoes, put them into a stone jar, stand them in a cool oven until quite tender. When cold, take the skins and stalks from them, mix the pulp in the liquor which you will find in the jar, but do not strain it; add two teaspoonfuls of the best powdered ginger, a dessert spoonful of salt, a head of garlic chopped fine, two tablespoonfuls of vinegar, a dessertspoonful of Chili vinegar, or a little Cayenne pepper. Put into small-mouthed sauce bottles, sealed. Kept in a cool place it will be good for years. It is ready for use as soon as made, but the flavor is better after a week or two. Should it not appear to keep, turn it out, add more ginger; it may require more salt and Cayenne pepper. It is a long-tried receipt, a great improvement to curry. The skins should be put into a wide-mouthed bottle, with a little of the different ingredients, as they are useful for hashes or stews.—[Source not known.]

Lemon Pies.

Beat with the yolk of 4 eggs, two tablespoonful of melted butter, four or white sugar, the juice and grated rind of two lemons. Put into a rich paste and bake. Then beat the whites to a froth, adding two tablespoonful of grated sugar. Spread on the pies when done. Put them in the oven and bake again for three minutes. The above is for two pies.

A Plain Custard.

Boil a quart of new milk, keeping out a little to mix with two tablespoonful of flour: thicken the boiling milk with it, let it cool a little then add two eggs well beaten; sweeten and flavor with lemon or nutmeg, and bake in a deep Plate, with a crust; or, if preferred, after the eggs are added, it may set on the fire, and stir till the egg is turned, but not let it boil; then sweeten and flavor it, and dip it in cups to cool and use.

PICKLED EGGS.—At the season of the year when eggs are plentiful, boil some five or six dozen in a capacious saucepan until they become quite hard. Then, after carefully removing the shells, lay them in large-mouth jars and pour over them scalding vinegar, well seasoned with whole peppers, allspice, a few cloves of garlic, and a few races of ginger. When cold bung them up closely, and in a month they are fit for use. When eggs are plentiful, the above pickles are by no means expensive.

COLONISATION REVIEW.

OCTOBER.

CONTENTS:—Diary of Farm operations in Canada by a new settler—April, May, June, July, August, September, October, November, December.

The tenth edition of the Letters from Canada, has just been published for the use of emigrants coming to this country, and we must say that this valuable little work is just the guide best suited to the new-comers. It is written in plain language, and is a record of the most interesting facts connected with the every day work of the settler in the wild lauds. As an illustration of this we publish the following extract entitled, "Diary of farm operations in Canada."

"I have often been asked for a detailed account of the operations upon a block of wild land, or a partially-cleared farm. I have lately met with a little work, published in 1843, called 'The Emigrant to British North America,' which gives the desired information. Of course much improvement has been made in farming implements and other agricultural improvements since that time, but the same hard work has still to be done by the newly-arrived emigrant, who, however, now-a-days possesses advantages incalculably greater than could have been expected in so short a period as that intervening between 1843 and 1860.

"April 10th.—Returned, with my hired man Richard, and a load, with a horse and ox-cart, from Montreal, forty miles, two days on the road, which is very bad, the frost not quite out of the ground,—my loading all safe, consisting of the following items: a plough 17 dollars, two axes 8s. each—harrow teeth—8s. for a bush harrow, in shape of the letter A—Two logging chains 10s. each—two scythes and stones 9s. 8d., one spade 3s.—one shovel 4s.—one dung-fork 2s. 6d.—two steel pitch-forks 3s. 6d. each—three augers, 1, 1½ and 2 inches, 15s.—one barrel of pork 20 dollars—one barrel of N. shore herrings 5 dollars—two barrels of flour 27s. 6d. each—twenty apple-trees, and six plum trees, at 2s. each—sixteen gooseberry-bushes, and grape-vines, at 1s. 3d. each, amounting to 21l. 2s. 2d.

"Put my apple-trees, &c., into a hole in the garden—got a good cup of tea, saw my horse and oxen well taken care of, and went to bed—thus ended the first day of my new mode of life.

"April 11th.—My man Richard fed and watered the cattle—got breakfast with some difficulty, owing to the want of many things we ought to have got in Montreal; we had no frying-pan, for instance—herrings superb—being Sunday, went to church, morning and afternoon.

"April 12th.—Up at day light—reprimanded Richard for being out too late the night before, planted my apple, plum trees, &c., in what had been an apology for a garden—mended the fence round it—broke open our pork barrel, found it good—had some for dinner—knocked the spout off the new tea-kettle, of course cracked before—worse off than ever for cooking-utensils—borrowed a frying-pan,

* The first of this month may be considered generally as the commencement of the agricultural year.

and boiled potatoes for dinner in a forty-gallon pot—two cows calved, and a ewe yeaned two lambs.

"April 13th.—Got a supply of cooking-apparatus at a shop in the neighbouring village—commenced ploughing for wheat, making garden, &c. Hired another man for the summer at ten dollars per month, same as I gave Richard—another cow calved. This was considered a very early spring, but I have since sown wheat, on this day, two years consecutively, and might have done so oftener, had it been otherwise convenient.

"April 14th.—Hired a housekeeper at four dollars a month—sowed onions, beets, sallad, &c.—new man Charles, mending fences—drawing rails with the horse and cart—Richard still ploughing with the oxen—myself at the garden—bought four cows at 18 dollars each—two of them calved a month before—made a harrow.

"April 15th.—Sowed wheat after washing it with brine and drying it with lime—Charles harrowed it in with the horse—four bushels (our measure, which is nearly the same as imperial,) upon three and a half acres, according to the custom of the country—planted early peas and sowed garden seeds—Richard still ploughing—two ewes yeaned.

"April 16th.—Charles and myself making fence—one of the new cows calved—ploughing for potatoes and corn, first time.

"April 17th.—Same as yesterday, and same to the end of the month, except that we sowed about four acres of oats and peas mixed.

"May 1st.—All at work on the roads—finished our highway duty.

"May 2nd.—Sunday.—All to church.

"May 3rd.—One of the men churned before breakfast, with a swing-churn, lately invented—cut up a little fire-wood—too warm to plough with oxen in the middle of the day—all making fence.

"May 4th and 5th.—Wet days—made four rakes and handled and ground the new axes, one having been partially ground and a temporary handle in it before—cleared out and repaired the barn.

"May 6th.—Fine again—land too wet to plough—making fences—Richard went to the mill with a few bushels of oats to be made into meal—got the horse shod.

"May 7th.—Very warm and sultry—ploughing for Indian corn by day-light, left off at 10, and commenced again at 4 p.m., continued till dark—carting stones off the corn land—finishing my garden—got home the grist sent away yesterday.

"May 8th.—One of the principal farmers of the settlement killed by a tree falling upon him. Work same as yesterday until noon, when we all went to assist in raising a wooden building for a barn 40 feet by 30 for one of our neighbours.

"May 9th.—Sunday.—All went to church—I need not again mention this, as we never allowed anything to interfere with this duty.

" May 10th and 11th.—Drawing manure for Indian corn, ploughing in it, &c.

" May 12th and 13th.—Same work as two preceding days—and planting Indian corn and pumpkins—attended funeral of the neighbour killed on the 8th.

" May 14th and 15th.—Sowed more oats and finished planting Indian corn—killed a fat calf—sold one quarter for 6s. and the skin for the same.

" May 16th.—Sunday.

" May 17th.—To end of month clearing up an old 'Slash,' which term has previously been defined; drawing the logs together with the oxen; then piling and burning them. One wet day, sheared the sheep, which were got in before the rain came on. Commenced planting corn on the new clearing.

" June 1st and 2nd.—Sowing one and a half acres of oats on the clearing; Richard ploughing the potato land second time; Charles drawing out manure and spreading it before him; myself planting potatoes with a hoe after him: it may be here remarked, that before the stumps are all out, or nearly so, it is not possible to drill up land for this crop.

" June 3rd.—Finished the potatoes and reckoned up my crop—stands as follows: wheat three and a half, peas three, oats five, Indian corn six, potatoes five and a half—in all, twenty three acres—meadow twenty, pasture thirteen, partially cleared twenty, added to the twenty-three, makes seventy-six acres. It may be remembered here, that I said my farm contained about fifty acres of cleared land, whereas I make out seventy-six acres, but I did not then take into the account neither the twenty acres partially cleared, nor the six or seven I cleared myself.

" June 4th.—A holiday, which I have always kept in commemoration of the birth of good King George III, of blessed memory.

June 5th.—Went to a training, as it is here called. All the men in the country, with some trifling exceptions, between the ages of sixteen and sixty, capable of bearing arms, are obliged by law to muster once a year; and this constitutes the militia of the province.

" June 6th.—Sunday.—I witnessed on this evening a splendid and gorgeous sunset, far surpassing anything of the kind I had ever seen at home. Even a sunset in Italy, as a commissariat officer, settled on a farm near me, who had served in that country, declared could not be compared to it.

" June 7th to 15th.—Finished mending and making fences. Made a road through a little swamp near the rear of my farm, where I had commenced a clearing—carting out upon it an accumulated heap of chips from the front of my wood-shed—put up a small building behind my garden, which, though not always to be found on a farm—stead here, is not the less necessary.

" June 16th to end.—Hoeing corn and potatoes—excessively hot, thermometer, one day, 86 in the shade; sowed an acre of turnips on my new clearing.

" July 1st, 2nd, and 3rd.—Finished hoeing Indian corn the second time, and making fences.

" July 5th.—Wet day—ground scythes.

" July 6th.—Commenced mowing.

" July 15th.—Finished haying without a drop of rain—very hot.

" July 16th.—A fearful thunderstorm—burned a log-barn in the neighbourhood, or, as some suppose, the accident happened from a man going into it with a lighted pipe, to prevent which has been a great source of trouble to me whenever I have employed Canadian labourers—killed another fat calf.

" July 17th.—Finished off my hay-stacks.

" July 18th.—Sunday.—To church—clergyman absent at a distant settlement—prayers, and a sermon read by the school-master—weather quite cool, as is usual after a violent thunderstorm.

" July 19th.—Commenced hoeing corn the third time, or rather cutting up, with the hoe, whatever weeds had grown since the last hoeing—sold 200 pounds of butter, at 8d. per pound—cut first cucumber.

" July 20th to end of month.—Finishing hoeing corn and potatoes—commenced clearing new land, by cutting the under brush, and piling it in heaps ready for burning—this I did upon thirty acres of woodland, during the rest of the summer, when I found I could spare a day for that purpose, and in the winter to cut down the large trees, and then into lengths to pile in heaps to burn. The summer is the best season for commencing to clear land, because the brush is in full leaf, which, when dry, helps to burn it, all which a person soon learns when he comes to the country, but would doubtless like to know something about it before.

" August 2nd.—Attending a meeting of the principal inhabitants about repairing the roof of the church—steeply; gave a dollar towards the expense—bought a pew, 6l.—the two men underbrushing—first new potatoes—bought a sickle and a cradle scythe—made the cradle, having had the fingers blocked out before—a very difficult thing to make.

" August 4th to 7th.—Clearing part of the under-brushed land, for winter wheat—same until 10th, when I began reaping and cradling—continued till 21st—finished harvesting, except one and a quarter acres of late oats and the Indian corn—cut first melon.

" August 31st.—Resumed clearing land—killed a lamb.

" September 1st to 10th.—Same work, and sowed three acres of winter wheat—commenced making potash from the ashes I have saved when clearing the land.

" September 11th to 22nd.—At the underbrushing—continued at the potash. I made two barrels, which I sold for something over 15l.—my neighbour's cattle broke into my Indian corn, but did little damage.

" September 23rd.—Wet day—threshing and dressing up one and a half bushel of wheat and eight of oats—sent them to mill at night—oats weighed forty-eight pounds.

" September 24th.—Got home grist—oats produced 2 cwt. 0 qr. 14 lbs.—Got a certificate from the miller and a farmer of the weight of the oats—forty pounds being the general average weight of good oats.—Made a wooden box as a steamer for my boiler—box containing twelve bushels.

"September 25th.—Commenced ploughing—had a cow dried up and bled, and turned into the best feed to make beef.

"An ox, belonging to my neighbour, being one of the cattle which broke into my corn, died of a surfeit, as was supposed, of such rich succulent food as the green corn. This made him mend his portion of the line fence between my farm and his, which I never could get him to do before.

"September 27th.—Commenced steaming pumpkins for my hogs—shut them up—threshed five bushels of peas and oats, had them ground to mix with the pumpkins—fed the hogs with raw food for some weeks before—made a hog-trough, by hollowing out a pine log. Went to a squirrel-hunt, which I must give some account of.

"Some years, when the nuts in the woods are plentiful, the squirrels are so numerous as to do great damage to the Indian corn, when a conspiracy like the following is entered into, for the destruction of them, as well as of all enemies that may be met with, whose depredations are chiefly confined to this valuable crop. All the men, young and old, for miles round, form themselves into two bands, each under a captain, and which ever gets the least quantity of game, has to pay for a ball and supper, at the village tavern, for the whole—each kind of animal being reckoned according to its importance, thus the right paw of a bear counts for 400—of a racoon 100—squirrel one—right claw of a crow, woodpecker, or blue jay, one, &c.—By day-light of the morning of the muster, the woods were all alive with the eager hunters, and in the after-part of the day, the fields were swarming with groups of women and children, with provisions and ammunition for their several partizans, and to disburthen them of their spoils—it was truly a season of merry and joyous holiday, in which all business and work was suspended; many a small party spent sleepless nights watching for bears and racoons, for it is only then they come out—this lasted for three days, when we all met at the tavern to count up our spoils, in trembling anxiety for the award of two judges appointed to decide upon the claim for victory—the party I belonged to had 2 bears, counting 800—4 racoons, 400—473 squirrels—27 crows—105 blue jays and woodpeckers—counting altogether 1,835, and yet we lost, as the other party had nearly the same, besides one bear more.

'The child may rue that was unborn
The hunting of that day.'

"Sept. 29th and 30th.—Richard ploughing, Charles and I gathering Indian Corn; at night had a 'bee,' a term used for a mustering together of the neighbours, to assist in any work which would puzzle an individual to do alone, when all the young men and boys in the settlement came to help me to husk it. Got the first premium for it from Agricultural Society.

"October 1st and 2nd.—Same work—evening to husking bee at a neighbours.

"October 4th to 7th.—Ploughing—finished getting in the Indian Corn cutting the corn-stalks—husking ourselves at night what little we had gathered during the day; collected and brought home pumpkins.

"October 8th to 9th.—Binding corn-stalks and stacking them up to dry; collected and brought home pumpkins.

"October 11th.—Got in remainder of pumpkins, and the onions.

"October 12th.—Stacked corn-stalks, and fenced them round, together with the hay-stack.

"October 13th. Commenced digging potatoes.

"October 14th to 20th.—Finished taking up potatoes—800 bushels—ploughed over the land to the end of the month—ploughing, clearing land, &c.—Hired Charles for the winter, for seven dollars a month.

"October 22nd.—The boundless, measureless forest—the stupendous wilderness of woods, which overwhelms the whole face of the country, exhibited, in the bright sunshine and the pure atmosphere of this lovely morning, a picture as novel as it was beautiful in the eyes of a stranger; for, instead of waving their luxuriant foliage over mountain, hill and valley, in the same rich though monotonous hue of living green, the trees now had assumed a colouring which, in brilliancy and variety, exceeded all description. The soft maple is the first to commence this gorgeous display, by changing to a rich crimson; the sugar maple then follows in similar, though more sombre tints, variegated with the yellow of the trembling poplar, the orange and gold of the beech, and the serene brown of the butter-nut, while the sturdy oak maintains his deep green, in defiance of these harbingers of winter.

"November 1st.—Same work, and getting in turnips and cabbages, and all other garden stuffs—took in the cows at night. 350 bushels of turnips.

"November 2nd.—First hard frost—could not plough till noon—clearing, &c.

"November 3rd to 20th.—Under-brushing—cutting firewood—cattle out all day, and only the cows in at night. Hard frost: No more ploughing, I suppose.

"November 21st.—First snow; took in all the cattle.

"November 22nd.—A thaw and wet day—threshing more grain for the hogs. Sent it to the mill.

"November 23rd to 30th.—Ploughing again one day—clearing—killed a sheep—hard frost again, but fine weather, called the Indian summer, with a slight smoky haziness in the atmosphere, through which the sun is seen with a deadened lustre, something like a full moon.

"December 1st to 4th.—Indian summer continues—clearing and chopping.

"December 5th.—Killed my hogs.

"December 6th.—Fall of snow—threshing—cutting up and salting pork.

"December 7th.—Drawing wood home for fuel, in the log, with the horses and oxen, not being snow enough to draw it on the sled.

"December 8th and 9th.—Made an ox-sled. Cutting fire-wood.

"December 10 and 11.—Drawing fire-wood as on the 7th.

"December 13th.—Snow storm. Threshing.

"December 14th.—Drawing in stack of corn-stalks to give to the cattle instead of hay, which I cannot yet get at in my barns, it being

covered with grain, and not wishing to cut into my hay-stack till I should have room enough to take it all in at once.

" December 15.—Commenced cutting down the trees on the land I had under-brushed, and chopping them into lengths for piling. Cutting fire-wood and drawing it. Cutting, splitting, and drawing out rails for fences, and drawing out timber for a new barn, threshing and tending the cattle; getting out hemlock logs for the saw-mill, for boards for the new barn, drawing them home and making shingles, oc-

cupied our time all winter, with the exception of my journey to Montreal with butter and a few bushels of grain, which I sold, and, with the proceeds, bought some groceries and other necessaries, preparatory to my anticipated change of circumstances.

" In the following spring it was the 20th April before the snow was all off the ground, when vegetation commenced, and progressed with a rapidity unknown to the British Isles; it is indeed a disadvantage for the snow to go away earlier.

MANUFACTURING REVIEW.

OCTOBER.

CONTENTS:—The Canadian Native Oils Company.—Petroleum Gas—Flowing Wells at Enniskillen—Manufacture of Boots and Shoes in Montreal.

THE CANADIAN NATIVE OIL COMPANY.

The cause of the decline in the yield of the Pennsylvania wells is very probably due to the exhaustion of the gas which forced up the oil to the surface. We do not agree with the "uncertainties" spoken of by the Committee of the Canadian Oil Association which precedes this notice. Petroleum is neither derived from coal, nor is it of recent origin. It was formed long before the coal, and is the result of the decomposition, under pressure, of an infinite number of oil-yielding animals which swarmed in the seas of the Devonian period, long anterior to the coal. The decomposition of marine plants may have given some oil to the rocks of Canada and the United States, which are saturated with this curious substance. The shale beds of Collingwood furnish an answer to those who object to the infinite number of animals it would require to produce the oil locked up in the earth. Those shale beds are composed almost altogether of the remains of Trilobites—they extend from Lake Huron to Lake Ontario, and far west and east of those lakes. The oil-bearing rocks of Canada were once a vast coral reef, extending from the Gulf of Mexico to Lake Superior. There is the best ground for belief that the supply of oil will last for a long period, and that new discoveries will be made in different localities. But as soon as the motive power which forces the oil to the surface is exhausted by finding free access to the air, recourse must be had to pumping, and the sinking of the necessary deep wells will soon throw out all those owners of wells who are not possessed of capital. Deep shafts will eventually have to be sunk, and the oil will continue for a very long period to flow into the wells, but the cost of pumping will be so small that the price of oil may not rise much beyond its present market value. That value will be of course determined by the cheapness of other illuminators, and as the supply will doubtless be ample, we do not anticipate any considerable rise in price. The London Company have made purchases of land, we understand, in different parts of the peninsula, but it does not appear that these purchases have been made with a knowledge of the geological formation of the country or of the distribution of the accumulations of oil.

The area of oil or petroleum yielding rock is very great in Western Canada, extending over the whole region occupied by the Corniferous limestone, but the fissures in which the oil has accumulated, are probably found only in the main and subordinate anticlinal axes which run through the western peninsula. If the land purchasers for the company have not had this remarkable geological peculiarity prominently and constantly before them, in vain are their purchases of "oil lands," they may have secured good farm lots as the country settles up, but when they come to bore for oil, the returns for their labour may be chiefly couched in the words *non est inventus*.

The directors state in their prospectus, that in order to show the comparative advantage of this Petroleum or Rock Oil over all other burning Oils, the following statement, the result of careful experiment and calculation is submitted:—

| Description of Oil. | Price per Gallon. | Intensity of Light by the Photometer. | Amount of Light from equal quantity. | Cost of an equal quantity of Light in decimals. |
|---------------------------|-------------------|---------------------------------------|--------------------------------------|---|
| Petroleum or Rock Oil.... | s. d. 2 0 | 13.70 | 2.60 | 2.00 |
| Sporm..... | 7 6 | 2.00 | .95 | 20.00 |
| Camphine..... | 5 0 | 5.00 | 1.30 | 10.00 |
| Rape or Colza. | 4 0 | 2.10 | 1.50 | 6.50 |
| Lard..... | 4 0 | 1.50 | .70 | 14.50 |
| Whale..... | 2 9 | 2.40 | .85 | 8.25 |

Petroleum Gas.

The Stevenson House, St. Catherines, is now lighted with Petroleum gas. The light is very white and brilliant; and although one foot burners only are used, the illuminating power is fully equal to that of a four foot burner supplied with the coal gas in ordinary use. There is no smoke or smell perceptible during the burning; and as the works are situated some short distance from the hotel, the odor of Petroleum is not apparent. The works are constructed according to Messrs. Thompson and Hind's patented process. The success which has attended the lighting of the Stevenson House, has already induced other parties to adopt Petroleum gas. Among several others

we notice a large factory at Dundas, a factory at Hespeler, the Rossin House at Toronto. The introduction of Petroleum gas into the Rossin House will be a great saving to the proprietors. They consumed last year 578,000 cubic feet of gas, which cost \$1,734, at \$3 a thousand feet. This year the Toronto Gas Company propose to let them have the gas at \$2.50 a thousand, which, for a consumption of 600,000 feet per annum, amounts to \$1,500. Mr. Thompson's works will cost them about \$1,500, and they will cover, by the use of the Petroleum gas the entire expense in less than two years. Including every outlay, interest on capital, &c., the cost of the gas will be only \$1.70 a thousand feet, assuming that 10 gallons of oil are used for making that quantity of gas, although, if good oil is available, 7 gallons are abundantly sufficient in the process employed. One foot burners are used instead of three or four foot burners, hence the quantity of gas consumed is less than one-third. So that the actual cost per thousand, compared with coal gas, is about 60 cents against \$2.50 a thousand feet.

Flowing Wells at Enniskillen.

On Wednesday, the 13th August, Mr. John W. Sitton was rewarded for his labour by striking a large vein of oil at the depth of 153 feet in the rock. The oil immediately rose to the surface, filling the surface well (51 feet), and commenced flowing. The yield is variously estimated at from 1,000 to 1,500 barrels in 24 hours. We are glad to be able to record this, as Mr. Sitton well deserves his prize.

ANOTHER.—We learn that on Tuesday last, Mr. Wm. Webster tapped a large vein of oil at the depth of 153 feet in the rock. The flow of this well, although not as large as the one mentioned above, is amply sufficient for all practical purposes, and is as great as can be taken care of. It is estimated at about 800 barrels in 24 hours.

ANOTHER.—On Wednesday morning (Aug. 20), still another flowing well was struck. The fortunate ones this time are Messrs. J. H. Fairbanks and J. H. Eakins. The depth was but 116 feet in the rock—the shallowest one yet struck in the diggings. The yield is said to be about 500 barrels in 24 hours.

The Oil Springs *Chronicle* of Aug. 28, contains the announcement of another flowing well struck by Mr. E. T. Soles, the Editor of the *Chronicle*.

SALE OF 2,500 BARRELS OF OIL.—The Canada Oil Association sold last week 2,500 barrels of crude oil to one firm in Montreal. We understand that they have received orders for another

2,500 barrels for the same market. This is encouraging.—*Oil Springs Chronicle*.

MANUFACTURES IN MONTREAL.

The manufacture of boots and shoes in Montreal has risen to great prominence, and many persons engaged in the business have rapidly acquired wealth. The wholesale trade is in the hands of some six or seven houses. The amount of capital invested in all the works is about \$750,000, and the number of boots and shoes of all kinds manufactured averages 1,000,000 pairs. This branch of trade gives constant employment to about 1100 persons, many of whom, of course, are women and children. There are besides the following manufactures in operation:—India rubber shoes, &c., foundries, threshing machine factories, steam saw-mills, &c. The sugar refinery of Mr. Redpath is the largest factory in Montreal, and deserves special mention. Its large pile and tall chimney are visible a long way off from the city. The principal building is of stone and brick, seven stories high, the whole of the floors comprising an area of 11,766 square yards. Besides this there are two brick warehouses attached, affording storage for 8,000 barrels of refined sugar, and 2,500 hhd. of raw sugar. There is also attached a range of brick buildings, 236 feet in length and two stories high, containing the gas house, the bone house, blacksmith's, carpenter's, machinist's, and cooper's shop, and Stable; cost £45,000. The machinery is propelled by a steam-engine of 50-horse power, the boilers being equal to 150-horse power. 150 to 170 men are employed upon the premises, but a good deal of work is done elsewhere. The wages amount to £11,000 per annum, the total expenses of the establishment being £33,000 per annum. The present product is about 3,000 bbls. of refined sugar per month, and the production could easily be doubled if the demand required it. It is all sold in Canada. This factory is the first and as yet the only one of the kind in the Province.

To show that we also support to some extent articles of luxury, says the correspondent of the *Canadian News*, I may mention that there are in this city five piano manufactories, which annually turn out about 185 instruments. This year there has been a slight decrease in the number produced in comparison with the preceding one. The amount of capital invested in this branch of business is about \$40,000 to \$50,000, and the number of hands employed is about 60 men, who earn from \$6 to \$15 per week each, according to ability.

COMMERCIAL REVIEW.

Wheat.—Since receipt of last advices, the market has been very dull and depressed; and to effect sales holders have had to submit to much lower prices: No. 1 U. C. Spring, 95 to 97½ c. per 60 lbs.; Michigan Red Winter, 104 to 106 c. do. *White Pease*.—Several shipping parcels offering at 75 to 76 c. per 66 lbs. In-

dian Corn.—46½ to 47½ c. per 56 lbs. *Barley*, —65 to 70 c. per 50 lbs. *Oats*.—41 to 42½ c. per 40 lbs. *Pork*.—Mess, \$10.75 to \$11.00; Prime Mess, \$10 to \$10.25; Prime, \$9.25 to \$9.50. *Cheese*.—\$7.50 to \$8 per 100 lbs. *Lard*, —8½ to 9 c. per lb. *Butter*.—Good dairy, 16 to 17½ c. per lb.; store packed, 13 to 14 c.