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Omnium rerum, ex quibus aliquid acquiritur, nihil est agriculturâ melius, nihil uberius, nihil homine libero dignius.—Cicero: de Officiis, lib. I, cap. 42.

VOL. IV. HALIFAX, N. S., MARCH, 1881. No. 14.

Whereas, The fencing of public highways in this Province entails heavy expense and labour on farmers, and causes snow to drift in at the roads in winter.

And whereas, It is considered that fencing public highways is unnecessary, provided the law be so amended as to prevent cattle from roaming on those highways in the summer season.

Therefore resolved, That at the next meeting of this Legislature a bill be brought in for the purpose of so changing the law as to dispense with the fencing of highways to protect crops growing on cultivated lands, and also, to prevent cattle and all kinds of farm stock ranging at large on the public highway.

It is further resolved, That during the recess the Representatives in this House ascertain the desire of their respective counties, through the county municipalities and otherwise, in reference to the subject of this resolution.

In the House of Assembly on the 11th inst. Mr. McGillivray moved the above resolutions in reference to Fencing. He pointed out that the country was being cleared and roads were multiplying, and that the expense of keeping up fences was increasing as the forest decreased. There was no necessity for highways being fenced. Where the land was cultivated there could be no hardship in having the cattle prevented from being pastured on the adjoining public roads. On the contrary, farmers would be induced to keep their animals enclosed, and would reap the benefit of this practice. Considering that farming was one of the most important industries, if not the most important, in the country, he thought it was the duty of the House to do everything in its power to advance it, and to welcome any suggestion that would lead to the adoption of the improved methods.

He spoke of their being such laws in the States of the Union, and read the following from an Ontario paper:—

"We have a just and good law in this State, prohibiting any person setting any kind of fence or run at large on the highways. It is a just law, for with it, one does not get to be troubled and expensed with fencing the road for other people, and need not to do so unless he so chooses for his own convenience and to have it a good law for it gives general satisfaction to all concerned. If you have not such a law in your Province, I should strongly recommend one similar to ours as of great advantage to farmers and the public generally."

After some remarks by Mr. Harrington, Mr. Ford and Mr. Kinney, Mr. Blair, (Colchester), rose for the purpose of seconding the resolution. He considered the question to be one of greater importance than some hon. members seemed disposed to think, and believed it to be one that required the serious consideration of the people of this country. It was a very serious matter to the farmers of this country if a man who had put up a hundred yards of fence to protect his own cattle, was to be obliged to put up two or three hundred yards to keep his neighbour's cattle from trespassing upon his crop and destroying the produce. The material with which fences were made in this country was not of a very lasting character. Unfortunately they were not situated as some other provinces were, and a fence once built was built for all-time. Here the fence material was very poor, so much so that in his county it had to be renewed every seven or eight years, and if a man owned a farm of a hundred acres would

make a careful calculation, he would find that the amount spent in fencing in the course of forty years would equal the value of the real estate. The question had been agitated for some time in the county he had the honor to represent. Five years ago it had been discussed in his own neighbourhood and he was glad that the hon. member for Antigonish had brought this resolution forward in the shape in which it had been presented, so that the people would have an opportunity of discussing it and understanding it thoroughly before it was adopted as a law, and that was his reason for seconding the resolution. In some portions of the country the Municipalities had attempted to pass laws to compel the farmers to throw down their fences in the fall of the year in order to prevent the roads from being blocked with snow. He thought that in this House last year the point just referred to had been discussed. Another point worthy of consideration was the effect of the present system upon the scenery of the country. What could be more unsightly than the fences that were generally seen along the roads? What made matters worse was that the weeds and stones and brush from the farms, and sometimes from the roads, were collected and thrown under the fences, and he would like to see a law passed requiring that all this trash and rubbish be removed and ornamental trees set out, which would make a material difference in the appearance of the country, and render it worth fifty per cent more than at present in appearance.

at least, if nothing else. The practice of all thrifty farmers was to keep their cattle enclosed, and no man could expect to prosper unless he kept his cattle within such bounds that he knew where they were. If every farmer would do that nothing more was wanted. They build miles and miles of fences at a cost of thousands and thousands of dollars every year. These were the reasons why, to put it in a few words, he had risen at this time to second the resolution. Of course in some cases where pastures adjoined the highways they would have to be fenced, but that would not occur very often, and he thought that if it was looked at fairly the proposal would commend itself to the House as a reform that was much needed.

The House was subsequently addressed at considerable length, and in an able and spirited way, by Mr. Harrington, Mr. C. A. Smith, Hon. Mr. Townshend, Hon. Mr. White, Mr. A. Campbell, Mr. LeBlanc, Hon. Mr. Troop, Mr. Forl, Mr. McGray, the Hon. Attorney General Thompson, Hon. Mr. Stairs, Mr. Spence, Mr. Gayton, Mr. A. N. McDonald, Mr. Kinney, and Mr. Schaffner. Mr. McGillivray amended his resolution. The question was taken and the resolution lost on division by a large majority.

We regret very much that our limited space does not permit a report of the speeches, which, however, our readers will find in the official reports in the daily papers. Many of the speakers opposed the measure on various grounds.

In our opinion no subject of greater practical importance in relation to the development of our Agricultural Industry has been mooted in the House of Assembly for many years, and we trust it will come up again and be discussed on its merits after Members have had time to consider it carefully. Everything that entails unnecessary expense, or unnecessarily enhances cost of production in any department of Industry is an evil that calls for remedy, and if our present system places upon the improving farmer the burden of fencing against or feeding the cattle of his less ambitious neighbours, surely a sense of justice should induce us to protect him as an individual; and the important considerations that such a system is a drag upon improvement, a discouragement to the better class of cultivators, an impediment to progress, should beget in us a patriotic feeling, and a desire to root out a great public evil. It may be quite true, as was argued in the discussion, that there are districts where cultivation has not yet become so extended as to render the abolition of fences desirable, but that is no argument against the adoption of the general principle of Mr. McGillivray's resolutions, which has grown out of the experiences of hundreds of years in other countries.

A careful estimate was made by the Agricultural Department at Washington some years ago, and it was found that the annual cost of the fences of the country was greater than that of all buildings together.

We shall be glad to have the opinions of our correspondents throughout the Province on this subject, in order that it may be ascertained how far changes in our present system are desirable.

The Superintendent of the Public Gardens is actively at work propagating bedding plants, to render the garden gayer this season than it ever has been before. The Propagating House is already crowded, everything is growing apace, and a new "Pit," as gardeners call a glass house that is full of sunshine, has been erected to afford accommodation for the additional millions of plants. One of the seed boxes attracted our attention as of more than usual interest. It had been sown with seeds gathered last summer from flowers growing on the Prairie near the Pembina Mountain, Manitoba, by the two sons of B. Stokes, Esq., late of H. M. Dockyard. The seedling plants are coming away strongly, and we shall watch the progress and blooming of these prairie flowers in the Public Garden. They will be of interest also to visitors, and give them some idea of the beauty of the Prairie, brightened up as it is, in many places, with flowers. Other young gentlemen from Nova Scotia who have sought homes in the Far West might well follow the example of the young Stokes, and send some seed or root that may grow up and show the floral surroundings of our young friends in the Far West.

MR. JAMES PENNINGTON, whose *Light Brahmas* have deservedly acquired a wide reputation, sends us the following account of Artificial Hatching and Rearing of Chickens, which he has published in the *Acadian Recorder*:

Artificial hatching had its origin at a very remote date, it having been in practice among the Egyptians as well as the Chinese for centuries past, and is even carried on by them with great success. It is, however, only a modern experiment in Europe and America, and has, until the past two or three years, been far from a satisfactory one. A number of machines have been invented during the last twenty-five years on both sides of the Atlantic, some having had partial success, and others proving complete failures. The invariable process of obtaining heat from oil lamps and gas, with their attendant accidents, viz., the lamps going out at a critical moment, and the difficulty in regulating the gas jet to the required size, gave the operator most disheartening results. The great difficulty of artificial hatching in this

country is that of maintaining a regular temperature in our variable climate, and this difficulty is, I believe, entirely overcome by Mr. Thos. Christy's principle of hydro incubation, which he has put in practice by the manufacture of a machine heated by hot water. At a recent public trial in Europe, "Christy's Hydro Incubator" hatched 69 chickens out of 71 eggs. I thought it might be of interest to many of your readers if you would allow me space to describe the method adopted in Christy's machine, and I cannot better do so than by quoting from his valuable treatise, entitled "Hydro Incubation in Theory and Practice," which has now reached the fifth edition. On page 11 he writes: "The cistern is filled with hot water when the machine is required to be worked. A small part of the water is drawn off after the lapse of every twelve hours, and replaced by an equal quantity of water heated to boiling point, thus renewing the limited amount of heat which the water has lost. The cistern is so arranged that only the centre stratum of water is drawn off, and the fresh supply of boiling water cannot at once descend to the bottom compartment of the cistern, as would be the case with a perfectly plain tank, and which might have the effect of suddenly raising the temperature above the eggs, and probably spoiling them. The water in the compartment nearest the eggs is in fact, hardly displaced from the time the Hydro-Incubator is set going until the cistern is entirely emptied out, when the apparatus is not in use. It is this arrangement that ensures the beautiful regularity of heat with which the improved Hydro-Incubators work. A "low range" thermometer is always kept in the drawer, and immediately on opening it to turn the eggs the exact temperature can be seen at a glance."

The artificial hatching of chickens has never, I believe, been questioned. It is and has been, as I said before, an accomplished fact for centuries past, but the difficulty hitherto has been how to raise the chickens after they are hatched; and for this purpose Mr. Christy has invented the HYDRO MOTHER, worked on the same principle as the Incubator. By way of explanation I might say that immediately the chickens are hatched they are placed in the "Drying Box" (also upon the same principle as the Incubator and Mother) for 24 hours, when they are transferred to the "Rearing Mother." The advantages of this latter contrivance are deserving of special attention, the chief being an entire absence of vermin or parasites in the young chickens; none are trampled to death, the weak chicken getting a chance to grow stronger. The chicks thus raised grow faster and are finer birds. The hydro mother protects

the chickens at all times from rats, &c., which the natural mother cannot do, as many of us know to our cost. Her sheltering wings are always ready to receive her charge, which is not so with the hen. Who has not seen a hen dragging her brood through the damp and wet until the little ones cry lustily for shelter, and the result often is weak legs and cramp, and a loss of some of the finest chickens. Nothing of this occurs with the hydro-mother. She makes no fuss when you go to admit her charge, and rears them to become quite tame and manageable. The following letter appeared in "The Field," a well known English paper, in May last, from Mr. William Cunard, who has two of Christy's Hydro Incubators in use, which speaks for itself:—

"In the *Field* of the 22nd inst., under the heading, 'Result of Artificial Incubation and Rearing of Poultry,' you refer to a letter from the Hon. H. R. Peel, in which he says he has lost two-thirds of the chickens which had been put under an artificial mother. I believe it is now pretty generally admitted that it is practicable to hatch the eggs in an incubator; but there is an idea that it is much more difficult to rear them without hens; in fact, you say, 'The profitable rearing of chickens in large numbers, without the aid of hens, we have not admitted, inasmuch as it has never as yet been demonstrated.'

"My experience is that the Artificial Mother is even a greater success than the incubator. On April 10th we put 65 chicks under an Artificial Mother; they are about 7 weeks old, and there are now sixty-three healthy chickens living. We had almost the same success in March. I think that the incubation of chickens has in the last few years been so much improved, that before long the importation of poultry and eggs from France into this country will be materially diminished. I purchased two of Christy's Hydro Incubators this spring, with all the latest improvements, and placed them in charge of a woman who had never seen such a thing before, and I must say she has been most successful both in hatching and rearing. I have had a good deal of experience in the management of poultry, and I have satisfied my mind that much more can be done with the incubator and Artificial Mother than with the hen."

W. CUNARD.

Lebanon House, Twickenham,
May 27, 1880.

There is no reason why chickens should not be hatched out and raised in this country in January and February as well as in April and May, provided certain rules are followed, and with an ordinary amount of attention. I might say that among the advantages of the incubator itself over the hen are the following, viz., early hatching when broody hens are scarce, and at a time when suitable to yourself, also the loss of eggs from breakage on the part of the hen is avoided, and last but not least, what I have mentioned above, the entire absence of vermin. I understand that a large breeder in the United States hatched out last year 44,000 chickens in this way, and success-

fully raised them. In France in 1879 Messrs. Rouillier hatched out and raised 42,000 chickens.

I paid my first visit to the Incubator yesterday evening, it being worked by Messrs. J. & C. McLellan, Edward St., not having leisure to attend to it myself. During the evening five chickens hatched out and about seven eggs were slightly cracked, having living chickens, which would hatch during the night. Messrs. McLellan state that they would have been much more successful had they been able to obtain all the eggs at one time, but on account of the scarcity of eggs they had to set them at different times, which is a disadvantage.

THE *London Agricultural Gazette* of 31st January publishes the following letter from J. B. Lawes, F. R. S., LL. D., the celebrated experimentalist of Rothamstead:—

The *Agricultural Gazette* of January 17, contains an article upon the efficacy of gypsum as a manure for red clover, and in it refers to the result of some experiments at Rothamstead, published twenty years ago. Red clover has continued to grow upon the garden soil at Rothamsted up to the present time, both upon that which is wholly unmanured, and also upon that receiving gypsum; there is more produce upon the gypsum plot than on the unmanured, but less than there is upon the plot receiving alkaline salts.

If gypsum acted as a medium for obtaining ammonia from the atmosphere, it ought to be a better manure for the cereal crops than for clover. Such, however, is not the case.

I am disposed to think that the action of gypsum is due to its supplying both sulphur and lime to the crop; and that it may also liberate and make more available some of the organic compounds of the soil. It has been proved that the leaves of clover contain a large amount of sulphur as such, which sulphur is burnt away, and not found in the sulphate of the ash. In a soil rich in decayed vegetable matter, all the important ingredients taken up by clover may be in excess as compared with sulphur and lime; in such a case the application of gypsum may produce the wonderful results we read of in the United States. A few years ago when the agriculture of the States was in a distressed condition, I came upon a remark, made by a farmer in one of the journals devoted to agriculture, to the effect that farming was generally prosperous where gypsum produced good crops of clover. The soils upon which the gypsum produced such good results must either have been naturally very fertile, or there must have been large reserves of fertility stored up in them.

The want of special knowledge, with regard to the food available for the clover plant in the various soils in this country, makes the success or non-success of an application of gypsum a mere matter of speculation; and, while I fully appreciate the value of red clover as an agricultural crop, I am disposed to think that it has obtained credit for certain qualities to which it can lay no just claim.

If a householder finds the food in his larder or the beer in his cellar disappearing in an unaccountable manner, he is apt to think that someone has taken them; and however much those who have access to the larder or cellar may protest, and appeal to their previous good character, he may still have his suspicions. I own to have somewhat of a fellow feeling with the householder, as regards my position and that of the red clover in the garden soil. I find that an immense quantity of the nitrogen has been abstracted. I also know that the red clover does consume a large quantity; indeed, the fact is admitted by the plant, but at the same time it protests that not one particle was taken from the soil; asserts that the whole was taken from the atmosphere; offers to call M. Ville from Paris in support of this view of the case; takes its stand upon previous good character, and appeals to all the science and practice of the world for testimony in its favour!

What am I to do? the nitrogen is gone, and no other plant has had access to it but the red clover! Possibly it may have been wrong to expose the plant to temptation in the form of a large store of its favourite food; but I may say in justification that it absolutely declined to live in my service under any other conditions.

In the Return of Cattle within bounds of the Halifax County Agricultural Society, the list of the Jersey Herd belonging to Mr. G. W. Boggs, Bedford, is not fully given. The following is a correct list:

Maid of Orleans, 6.
Mermaid of St. Lambert, 7.
Cowslip of St. Lambert, 8.
Sultana, 9.
Little Buttercup, 10.

Mr. E. E. McNUTT, of Truro, N. S., has issued a Descriptive Circular of Thoroughbred Brown Leghorn Fowls. He evidently thinks Nova Scotians have not caught hen fever. He advises people to get the "non-sitting breeds," such as Leghorns, Spanish or Hamburgs. The Brown Leghorns he thinks best, as non-sitters, consistent layers, and noted for early maturity, the chicks being fully feathered at a month old, the cockerels crowing at six weeks, and the pullets laying at four or five months from the egg. Mr. McNUTT offers eggs for sale at \$1.50 for a setting of 13.

CATALOGUE

OF

THOROUGH-BRED

SHORT-HORN DURHAM

Bulls, Cows and Calves,

Imported from England per S. S. "Brooklyn" by the CENTRAL BOARD
OF AGRICULTURE OF NOVA SCOTIA,

TO BE OFFERED FOR SALE BY

PUBLIC AUCTION,

AT THE

Railway Cattle Sheds, Richmond Depot, Halifax,

ON

THURSDAY, MARCH 24, 1881.

Sale to commence at Twelve o'clock precisely.

By direction of the Central Board of Agriculture of Nova
Scotia, under authority of the Provincial Government and
Legislature.

J. DUGGAN & SONS, Auctioneers.

TERMS AND CONDITIONS OF SALE.

At the option of the Board, approved joint Notes at 9 months, discountable at any Halifax Bank, and payable to the order of the Board of Agriculture, will be accepted in payment from individual purchasers. Societies desirous of making available for this sale their Annual Grants for 1881 (payable at the end of December) may arrange to do so by previously applying to the Secretary of the Board. A discount of 4 per cent. will be allowed on all payments in cash at time of sale.

All the Cattle are required to be kept for service in the Province for a term of five years, and purchasers will be required to sign a bond to this effect before delivery.

In order to encourage the more general diffusion of Thorough-bred Stock throughout the Province, the Board have determined to allow a discount on the sale prices of 10 per cent to all purchasers from the Island of Cape Breton, and of five per cent. to other purchasers who reside at a distance of not less than twenty miles from a Railway Station. No discount will be allowed upon animals purchased for

localities within a distance of twenty miles from a Railway Station, except that of 4 per cent. for cash. Should any animals not be taken forthwith to the localities for which discount is allowed, purchasers will be required to refund whatever amounts of discount they may have been allowed.

Animals must be taken charge of by the purchasers immediately after the sale.

All the animals are in a perfectly healthy condition; none of them have been fed up for competition or sale. In the case of animals of sufficient age, the greatest care has been taken to select only those actually known to be fertile and free from all ascertainable faults.

For convenience, and in the interest of purchasers, the fullest information that can be obtained is given in this Catalogue, nothing whatever being withheld that might affect—either beneficially or injuriously—the value or utility of any of the Stock; but the animals will be sold entirely at the risk of the purchaser, with all faults and errors of description, should any appear.

Any further information may be obtained on application to the Secretary of the Board of Agriculture, Professor Lawson, Dalhousie College, Halifax, or the Auctioneers.

No delivery of animals will be given, or transfers of pedigrees made, till terms of sale are complied with to satisfaction of the Executive Committee of the Board, who will be in attendance at the sale.

These animals were selected in England by John Thornton, Esq., the well-known Short-Horn Auctioneer, and forwarded from Liverpool per steamship "Brooklyn," to Halifax, where they arrived in November. They were all inspected in England and reported healthy, and as coming from districts where no cattle disease prevailed. They were again inspected at Halifax on arrival, and reported healthy. In accordance with Quarantine Regulations of the Dominion they were placed in quarantine for ninety days. At the expiry of that period, they were again reported healthy and released so as to mix with other cattle. They are now offered for unreserved sale, to be kept in the Province for breeding purposes for five years.

CATALOGUE.

SHORT-HORN DURHAM BULLS.

LOT NO.

1—Young Ebor, (mark on horn $\frac{1}{2}$). Roan. Calved July 3rd, 1879. Bred by Mr. W. G. Garne, Broadmoor, Northleach, Gloucestershire. Sire Ebor 41499.

Dam Lady Like by Ranger 35203,
gr d Lady Day by Duke of York 23804,
g gr d Village Miss by Captain Cherry 31363,
g g gr d Village Girl by Sheriff 18822,
g g g gr d Bonhill Lassie by Booth 14180,
g g g g gr d Orphan by Lord Raglan 13246,
g g g g g gr d Maid of Aln 2nd by Crusade 7938,
g g g g g g gr d Maid of Aln by Regent 2517,
g g g g g g g gr d Edith by Borderer 3191,
g g g g g g g g gr d Eclipse by Eclipse 1949,
g g g g g g g g g gr d by Togston 5487,
g g g g g g g g g g gr d by Bolingbrook 3184,
g g g g g g g g g g g gr d by Son of Midas 435,
g g g g g g g g g g g g gr d by twin brother to Ben 660.

I hereby certify having sold the Short-Horn bull Young Ebor to Mr. John Thornton for exportation to Nova Scotia, that the bull and my herd are perfectly healthy, and that no disease exists in the neighbourhood.

WM. G. GARNE, Broadmoor.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

LOT NO.

2.—Lord Randolph, (mark on horn II). Roan. Calved October 19th, 1879. Bred by Mr. W. G. Garne, Broadmoor, Gloucestershire. Sire Sir Robert Frogmore 40719. Dam Rammentulus by Piratical 38870, gr d Red Lass by Marksman 26814, g g r d Red Lady by Experience 23900, g g g r d Red Bess by Economist 15977, g g g g r d Red Rose by Napier 13368, g g g g g r d Rosetta by Norval 9450, g g g g g g r d Roseberry by Rob Roy 7534, g g g g g g g r d Roseblossom by Gazer 7030.

I hereby certify having sold the Short-Horn bull Lord Randolph to Mr. John Thornton for exportation to Nova Scotia, that the Bull and my herd are perfectly healthy, and that no disease exists in the neighbourhood.

WM. G. GARNE, Broadmoor.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

3.—Lord Brett, (mark on horn III). See vol. 26, p. 442, English Herd Book. Red and white roan. Calved September 13th, 1879. Bred by Mr. W. G. Garne, Broadmoor, Northleach, Gloucestershire. Sire Sir Robert Frogmore 40719.

Dam Windsor Beauty by Lord Chief Justice 34507, gr d Windsor Butterfly by Royal Butterfly 20th 25007, g g r d Misleads by England's Glory 23889, g g g r d Peggy by British Prince 14197, g g g g r d Miss Folly by Prince Alfred 13494, g g g g g r d Folly by Paris 7314, g g g g g g r d Butterfly by Vanguard 5545, g g g g g g g r d Ladybird by Robin Hood 4970, g g g g g g g g r d Millicent by Anticipation 750, g g g g g g g g g r d Folly by Emperor 1014, g g g g g g g g g g r d by Young Windsor 669, g g g g g g g g g g g r d by Windsor 698.

I hereby certify having sold the Short-Horn bull Lord Brett to Mr. John Thornton for exportation to Nova Scotia, that the bull and my herd are perfectly healthy, and that no disease exists in the neighbourhood.

WM. G. GARNE, Broadmoor.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

4.—Earl of Surrey, (mark on horn IV). Red and little white. Calved April 10th, 1879. Bred by Capt. Moir, the Manor House, Colley, Reigate. Sire Fugleman 36670.

Dam Wild Eyes Gwynne by Baron Wild Eyes 19290. Baron Wild Eyes is a son of Duke of Connaught, the highest priced bull in the world—4500 guineas. gr d Rebecca Gwynne by Knight of Distington 18158, g g r d Ruth Gwynne by Exquisite 14524, g g g r d Young Dowager Gwynne by St. Thomas 10777, g g g g r d Dowager Gwynne by Prime Minister 2456, g g g g g r d White Moll Gwynne by Wallace 5686, g g g g g g r d Dorothy Gwynne by Marmion 406, g g g g g g g r d Daphne Gwynne by Merlin 430, g g g g g g g g r d Nell Gwynne by Layton 366,

g g g g g g g g g r d Nell Gwynne by Phenomenon 491, g g g g g g g g g g r d Mr. R. Colling's Princess by Favourite 252, &c.—See Coates's Herd Book, vol. 1, p. 445.

I hereby certify having sold the Short-Horn bull Earl of Surrey to Mr. John Thornton for exportation to Nova Scotia, that the bull and my herd are perfectly healthy, and that no disease exists in the neighbourhood.

I. MOIR.

The Manor House, Colley, Reigate, }
9th November, 1880.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

LOT NO.

5.—Rowland 43928, English Herd Book. (Mark on horn V). Roan. Calved September 18th, 1879. Bred by Col. R. Lloyd Lindsay, Lockinge Park, Wantage, Berkshire. Sire Earl of Horton 11th, 36588. Earl of Horton 11th is a Kirkleavington bull.

Dam Ronda by Rob Roy 29806, gr d Rosetta by Costa 21487, g g r d Rosette by Prince of Prussia 16752, g g g r d Red Rose by Horatio 10335, g g g g r d Matia by 3rd Duke of Northumberland 3647, g g g g g r d Modesty by Velocipede 5552, g g g g g g r d Crocus by Sir Thomas 2636, g g g g g g g r d by Musko 418, g g g g g g g g r d Laurustina by Comet 155, g g g g g g g g g g r d Laura by Tom 652, g g g g g g g g g g g r d Cleasby Lady by Favourite 1033, g g g g g g g g g g g g r d Lucinda by Hutton's Bull 323, g g g g g g g g g g g g g r d Lucy by Barningham 56.

I hereby certify having sold the Short-Horn bull Rowland 43928 to Mr. John Thornton for exportation to Nova Scotia, that the bull and my herd are perfectly healthy, and that no disease exists in the neighbourhood.

For Col. R. Lloyd Lindsay, V. C., M. P.,

CHAS. H. EADY.

I hereby certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

6.—Cabul 42862, English Herd Book. (Mark on horn VI). Roan. Calved November 14th, 1879. Bred by Col. R. Lloyd Lindsay, Lockinge Park, Wantage, Berkshire. Sire Earl of Horton 11th 36588.

Dam Clotilda Rock by Lord Rockville 34658, gr d Clotilda by Grand Duke of Kent 2nd 28759, g g r d Chaff 13th by Second Earl of Waiton 19672, g g g r d Clarissa by Oxford Duke 18508, g g g g r d Cecilia by Viceroy 13945, g g g g g r d Chaff by Duke of Cornwall 5947, g g g g g g r d Challenge by Morpeth 7254, g g g g g g g r d Cleopatra by Helicon 2107, g g g g g g g g r d Clarence by Henwood 2114, g g g g g g g g g r d Minna by Nestor 452, g g g g g g g g g g r d Minerva by Harold 291, g g g g g g g g g g g r d Mary by Meteor 432, g g g g g g g g g g g g r d Magdalena by Comet 155, g g g g g g g g g g g g g r d by Cupid 177,

I hereby certify having sold the Short-Horn bull Cabul 42862 to Mr. John Thornton for exportation to Nova Scotia, that the bull and my herd are perfectly healthy, and that no disease exists in the neighbourhood.

For Col. R. Lloyd Lindsay, V. C., M. P.,

CHAS. H. EADY.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

SHORT-HORN DURHAM COWS.

LOT NO.

7—Duchess of Warwick 3rd. See vol. 23, p. 450. *English Herd Book.* (Mark on horn I). Red. Calved June 30th, 1876. Bred by Mr. W. G. Garne, Broadmoor, Northleach, Gloucestershire. Sire Grand Duke of Geneva 2nd 31288.

Dam Duchess of Warwick by Earl of Warwickshire 3rd 28524,

gr d Butterfly's Duchess by Royal Butterfly 29th, 25007,
g gr d Delicacy by the Druid 20948,
g g gr d Destiny by Progression 18770,
g g g gr d Damsel by Enterprise 11443,
g g g g gr d Blonde by Patriot 10595,
g g g g g gr d Bracelet by Son of Elevator 6969,
g g g g g g gr d Blanche by No Mistake 8357,
g g g g g g g gr d Young Beauty by Young Consul 6893,
g g g g g g g g gr d Old Beauty by Fairfax 1023,
g g g g g g g g g gr d Beautiful by Speculation 1472.

I hereby certify having sold the Short-Horn cow Duchess of Warwick 3rd to Mr. John Thornton for exportation to Nova Scotia, that the cow and my herd are perfectly healthy, and that no disease exists in the neighborhood.

WM. G. GARNE, Broadmoor.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

8.—Merry Face. See Vol. 25, p. 339. (Mark on horn II). Roan. Calved January 28th, 1878. Bred by Mr. H. Bettridge, East Hanney, Wantage. Sire Rockville 2nd, 37356.

Dam Medora by Masterpiece 24561,
gr d Miss Peel by Cynic 19542,
g gr d Miss Ambler by Royal Oak 16670,
g g gr d Miss Mitford by Bashaw 12449,
g g g gr d Milford by Lord George 9314,
g g g g gr d Manager Rose by Manager 8271,
g g g g g gr d Young Rose by Raffer 7391,
g g g g g g gr d Rose 2nd by Gazer 7030,
g g g g g g g gr d Old Rose by a bull of Mr. Champion's, Blyth.

I hereby certify having sold the Short-Horn heifer Merry Face to Mr. John Thornton for exportation to Nova Scotia, that the heifer and my herd are perfectly healthy, and that no disease exists in the neighborhood.

HENRY BETTRIDGE.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

9—Roseleaf. Vol. 25, p. 349, *English Herd Book.* (Mark on horn III). Red and little White. Calved February 20th, 1878. Bred by Mr. H. Bettridge, East Hanney, Wantage. Sire Rockville 2nd 37356.

Dam Rose of Poughley by Baron Booth 1st 27815,
gr d Redheart Rose by Artemus Ward 23326,
g gr d Rynil Rose by A 1 15538,
g g gr d Rosette by Royal 13636,
g g g gr d Ringlet by Lord George 9314,
g g g g gr d Rosebud by Fitzhardinge 8073,
g g g g g gr d Red Rose by Augustus 6751,
g g g g g g gr d Red Rose by Consul 1868,

g g g g g g g g gr d Red Rose by Second Fairfax 8050,
g g g g g g g g g gr d Old Red Rose from the stock of the late Mr. Champion.

I hereby certify having sold the Short-Horn heifer Roseleaf to Mr. John Thornton for exportation to Nova Scotia, that the heifer and my herd are perfectly healthy, and that no disease exists in the neighborhood.

HENRY BETTRIDGE.

I certify the above is correct.

Nov. 11/80.

JOHN THORNTON.

SHORT-HORN DURHAM CALVES.

LOT NO.

10.—SHORT-HORN BULL CALF. (Not named.) Red and white. Calved January 15th, 1881. Imported in dam from England by Central Board of Agriculture of Nova Scotia. Sire Burgundy 37926 Eng.

Dam Roseleaf by Rockville 2nd 37356 Eng.,
gr d Rose of Poughley by Baron Booth 1st 27915,
g gr d Redheart Rose by Artemus Ward 23326,
g g gr d Rynil Rose by A 1 15538,
g g g gr d Rosette by Royal 13636,
g g g g gr d Ringlet by Lord George 9314,
g g g g g gr d Rosebud by Fitzhardinge 8073,
g g g g g g gr d Red Rose by Augustus 6751,
g g g g g g g gr d Red Rose by Consul 1868,
g g g g g g g g gr d Red Rose by Second Fairfax 8050,
g g g g g g g g g gr d Old Red Rose from the stock of the late Mr. Champion.

11—SHORT-HORN HEIFER CALF. (Not named.) Red and white. Calved January 6th, 1881. Imported in dam from England by Central Board of Agriculture of Nova Scotia. Sire Burgundy 37626 Eng.

Dam Merryface by Rockville 2nd 37356,
gr d Medora by Masterpiece 24561,
g gr d Miss Peel by Cynic 19542,
g g gr d Miss Ambler by Royal Oak 16870,
g g g gr d Miss Mitford by Bashaw 12449,
g g g g gr d Mitford by Lord George 9314,
g g g g g gr d Manager Rose by Manager 8271,
g g g g g g gr d Young Rose by Raffer 7391,
g g g g g g g gr d Rose 2nd by Gazer 7030,
g g g g g g g g gr d Old Rose by a bull of Mr. Champion's, Blyth.

12.—SHORT-HORN DURHAM HEIFER CALF. (Not named.) Red and white. Calved January 30th, 1881. Imported in dam from England by the Central Board of Agriculture of Nova Scotia. Sire Sir Robert Frognore 40719.

Dam Duchess of Warwick 3rd by Grand Duke of Geneva 2nd 31288 Eng.,
gr d Duchess of Warwick by Earl of Warwickshire 3rd 28524,
g gr d Butterfly's Duchess by Royal Butterfly 20th 25007,
g g gr d Delicacy by the Druid 20948,
g g g gr d Destiny by Progression 18770,
g g g g gr d Damsel by Enterprise 11443,
g g g g g gr d Blonde by Patriot 10595,
g g g g g g gr d Bracelet by Son of Elevator 6969,
g g g g g g g gr d Blanche by No Mistake 8357,
g g g g g g g g gr d Young Beauty by Young Consul 6893,
g g g g g g g g g gr d Old Beauty by Fairfax 1063,
g g g g g g g g g g gr d Beautiful by Speculation 1472.

ABORTION among cows must be very prevalent in the Northern States at the present time, if the numerous letters on this subject in the *Country Gentleman* and other papers are correct indications of painful and expensive experiences. During the last twenty years I have carefully watched the alternative ups and downs of this disease or distemper in Central New York, especially in Herkimer, Oneida and Madison Counties. In the issue of the 5th of April, 1866, of the *Country Gentleman*, can be found a communication from me upon this subject, in which I took the ground that the primary cause of abortion in cows, was the fact that the lands in the oldest dairying sections of those counties were deficient in the phosphatic elements of a true soil, induced by reckless cropping of hay, grain and pasture, without any return to the soil in the shape of manure or rest; consequently it is lacking in certain ingredients necessary to the health of the cow, and the natural development of the fetus. I also named secondary causes, such as allowing steers, when yearlings, to run with forty or fifty cows; feeding whey and slops, producing atrophy; sympathy between the cows; so that one aborting brings on the same evil in all that are thus predisposed; and milking cows too long, and not giving them sufficient chance to recuperate and supply nutriment to the fetus, especially where the cows are not well fed. To remove the primary cause of abortion in cows, I recommended to the land a dressing of bonedust and superphosphate of lime, on account of the effectiveness of such practice in Cheshire, England.

CAUSE AND EFFECTS OF ERGOT.

On the 13th of January, 1870, I heard President Prentice address the American Dairyman's Convention at Utica on the subject of ergot. He pointed out its effects upon animals, but he did not state the primary cause of ergot or smut. Immediately after this I wrote a very long article on abortion in cows, which was published in the *Utica Weekly Herald* of Feb. 15, 1870, in which I took the ground that a lack of certain elements in the soil, especially the phosphates, was the cause of the lack of similar elements in the plants, and that this lack was the cause of ergot, or smut, and they became the primary cause of abortion among cows, and I have not changed my opinion since that time. To be enabled to produce a natural animal, you must provide naturally complete plants or foods from a complete soil. It is a fact that cows are attacked with atrophy, or wasting of frame and flesh, on the same lands on the Black River, near Forestport and Beltingestown, in Oneida County, where the spring water, soil and subsoil are free

from lime, the bed-rock here being the Adirondack Laurentian.

I have followed dairying for 35 years, and for the last twenty years have kept from 40 to 60 cows. I never had an attack of abortion among my cows except in January, 1875. In one barn there were 12 abortions in three weeks, out of 30 cows. These were produced from feeding hay cut, rather late from an orchard, where the trees shaded two-thirds of the surface of the ground. The leaves of the timothy grass of this hay were nearly all brown with dark bars of smut, which I examined through a microscope. Those cows which had aborted I kept over, and have some of them at this time, but they have not aborted since. My cow stable is 56 by thirty feet, with 12 feet posts, well ventilated overhead. The sills rest upon stone pillars, from 2 to 4 feet from the ground, and the cows are tied with a chain around the neck attached to a ring, sliding up and down on an inch rod 3 feet long, with a short partition between every two, and the partitions are 7 feet apart from centre to centre. Two bolts through the partitions at a stud hold the two sliding rods firm. This method of fastening allows a cow the free use of her head and neck, and the partition is short enough to allow a milker all the room he needs.

I know, if I know anything, that this smutty hay was the cause of abortion among my cows in 1875. When four of these cows had aborted, I went overhead and inspected the hay, and found it as above described. I told my sons not to feed that hay till the cows had all come in. They then commenced feeding from my early cut hay, and the abortion stopped. In two weeks time they thought that they could feed the hay from overhead easier than the early cut hay from the big mow at one end of the barn, and did so, when the abortion re-commenced in earnest. I could have aborted the whole dairy of 30 cows, and certainly should if I had not again fed the early cut hay.

When the grass of meadows is principally timothy, and mowed year in and year out without being manured, the timothy roots exhaust the soil within their reach, and the leaves begin to turn down and "brand" over before the head is in flower. *Hay from timothy in this condition is unfit of itself to afford sufficient nourishment to a cow in calf; but if it is supplemented by proper ground food, they may pull through in a fair condition; although I think it would be wiser to feed the meadow than to extract the cows.* Good, sound meadow hay, timothy or clover, will keep a cow or an ox in fine condition all winter, without any extra food. But corn fodder grown anywhere, and hay or straw grown upon

land partially exhausted, must be supplemented with bran, oats and corn meal, or some other meal.

Your practical correspondent R. G. D., Pittsford, Mass., will see that I have answered his query in the affirmative; that is, according to the light given me by my experience and observations. I have oftentimes been struck with the justice of Agassiz's remarks upon observing. If practical men like R. G. D. would give their observations publicly through suitable mediums, the world would become wiser in less time than otherwise—*John R. Chapman, Madison Co., N. Y., in Country Gentleman.*

ST. ANDREW'S AGRICULTURAL SOCIETY, ANTIGONISH CO.

At a special meeting of the officers-bearers of this Society held to-day at the Secretary's Office, the following resolutions (with others) were passed unanimously.

Resolved, That two thorough-bred Short-Horn Durham Bulls be imported from Ontario in April next.

Resolved, That Allan McDowell, Esq., Alex. McDonald, and the Secretary be a Committee to purchase said Bulls.

When this importation is made the people of such fine districts as Upper South River, Marydale, Beauty, and Caledonia, will have a chance of enrolling themselves members of our Society, and such an action on the part of our efficient officers-bearers peaks volumes for them and shows that they have the interest of those people at heart. Through Allan McDowell, Esq., our delegate to Ontario last spring, and who has won laurels for himself and our Society in the selection made, we will be enabled to make the importation with better advantage to our Society. Com.

March 1, 1881.

A COMPANY has been organized in Windsor, and propose to apply for incorporation as the "Maritime Reaper and Mower Company," with a capital of \$100,000 for the manufacture of mowing machines, horse rakes, reapers, steel ploughs, and other agricultural implements. It is estimated that the annual cash value of these goods imported from Ontario and the United States, amounts to \$150,000. Windsor possesses undoubted advantages for such a manufactory. The large and increasing demand for this class of goods warrants a direct and ready sale, which must constantly increase, and the necessity for manufacturing them within our own Province must be apparent to all, as the American and Ontario manufactories have already monopolized the trade in the past and will continue to do so to our loss, by taking

the money out of the Province, and at a greater cost than they can be produced for at home. The establishment of a Manufactory of this kind must be of great benefit to the Province as tending to make a large and growing trade, and giving employment to a large number of skilled workmen, and increasing the wealth and prosperity of the community, as well as being, if well conducted, a remunerative investment for capital, which is a present unemployed. The estimated cost of the factory necessary for the supplying of the trade will be about \$50,000. The following gentlemen have been appointed Provisional Directors:—Messrs. Geo. Churchill, J. E. Newcombe, Hantsport; Israel Longworth, Truro; C. F. Eaton, Cornwallis; and Allan Halby, W. H. Blanchard, Alexander Forsythe and Edward Curry, Windsor.—*Herald*.

AYRSHIRES.

THE Subscriber offers for sale Two very fine young AYRSHIRE BULLS, bred from First Prize Stock.

Prices reasonable.

C. P. BLANCHARD.

Hillside Farm,
Truro, N. S. Feb 1

WANTED TO PURCHASE

BY the WAUGH'S RIVER AGRICULTURAL SOCIETY, a Thorough-bred DURHAM BULL, from twelve to eighteen months old.

Any person having such for sale will please correspond with the subscriber, stating price, &c., &c.

Waugh's River,
Feb. 22, 1881. D. NELSON,
Secy to Society. Feb 1

WILL be SOLD immediately after sale of Government Stock, at RICHMOND DEPOT, 24th March, Short-Horn Bull "DUFFERIN," 92 New Register, rising 4 years old, owned by J. Kitchin, Esq., River John, and originally purchased from Herd of Senator Cochrane, Compton, Quebec. Weights 1800 lbs. Feb 1

TO be SOLD at PUBLIC AUCTION, at RICHMOND DEPOT, on Thursday, March 24th, immediately after the sale of Government Stock, the following animals, owned by J. W. Manseson, Cornwallis:

4 AYRSHIRE BULLS AND 1 DURHAM BULL.

All thorough bred, and the owner will guarantee Certificate of Registration in the New N. S. Herd Book.

J. DUGGAN & SON,
Auctioneers. Feb 1

SHORT-HORN STOCK.

THE Subscriber intends offering at the Government Stock Sale the following HEIFERS, all of which are of good pedigree and registered in the New Stock Register of Nova Scotia:—

- 1st.—"VIOLET," No. 56, vol. IV., page 70, Journal of Agriculture.
- 2nd.—"EVELYN," No. 70, vol. IV., page 71, Journal of Agriculture.
- 3rd.—"ELMIE VANE," No. 79, vol. IV., page 81, Journal of Agriculture.
- 4th.—"RED LILLY," No. 80, vol. IV., page 81, Journal of Agriculture.

C. F. EATON.

Lower Canard, Dec. 27, 1880. Jan 1

JUDKINS & BEATTIE, CATTLE SALESMEN,

Metropolitan Market, London.

BANKERS: London Joint Stock Bank,
Charterhouse Street, London, E.C.

Mr. SIMON BEATTIE, Mr. R. JUDKINS,
Prosson Hall, 8, Pall Mall, S.W.,
Aunan, SCOTLAND. Piccadilly Park,
London.

FOR SALE

THOROUGH-BRED AYRSHIRES.

BULL "Prince Napoleon," calved 31st August, 1879.
BULL CALF "Prince Leopold," 10 months old.
BULL CALF "Capt. Jinks," 5 months old.
HEIFER "Nellie," 3 years old in April.
G. W. SANDERS.
Hebron, Yarmouth N. S., Jan. 31st, 1881. Feb

BROOKSIDE STOCK FARM.

AYRSHIRE CATTLE FOR SALE.

TWO very fine Ayrshire Bulls, fourteen and fifteen months old. Two or three superior Yearling Heifers, all from imported stock, and registered in the Nova Scotia Register. Terms made to suit.

apply to
J. A. McCURDY,
Oxblow, Hantsport, N. S.

HALIFAX SEED STORE,

192 ARCADE ST.
(ESTABLISHED 1866)

Field, Vegetable, Garden & Flower SEEDS.

Of every description and superior quality.

CATALOGUES ON APPLICATION.

AGRICULTURAL SOCIETIES and Granges liberally dealt with, and personal attention paid to all orders. Special prices quoted for large quantities.

ALFRED SAUNDERS, Practical Seedsman, Prop. Feb

PURE HIGH GRADE

FERTILIZERS!

"CERES" SUPERPHOSPHATE manufactured by the Edwan Phosphat, Company, analyzed by Professor Lawson;

ALSO,

PURE BONE MEAL
NITRATE OF POTASH.
GERMAN POTASH SALTS.
SULFURIC ACID.
SUPERPHOSPHATE DISTRIBUTORS.

At lowest Market Rates, for sale by
JACK & BELL,
General Agents Edwan Phosphat Co.,
Office Pickford & Black's Wharf.
Box 365. Feb 1

PIGS WANTED.

PERSONS having thorough-bred PIGS for sale are invited to send particulars of breed, age, and price, to PROFESSOR LAWSON, HALIFAX, who has lately received numerous enquiries as to where such can be obtained. Ellesmere, Berkshire or Chester Boars and Sows from six to twelve months old are most saleable.
Halifax, Dec. 31, 1880. Jan 1

LUCYFIELD STOCK FARM. OLD WINDSOR ROAD, Between Bedford and Beaver Bank Stations.

TWO Thorough bred Yearling Short Horn Durham Bulls for sale. Both were bred on the Farm from Stock imported direct from England, are in good serviceable condition, and well suited to Agricultural Societies. They will be sold at low prices and on accommodating terms. Apply to Prof. Lawson, Halifax.
15th February, 1881. Feb

SEED POTATOES FOR SALE.

A FEW barrels of new varieties of potatoes consisting of Matchless, Pride of America, Silver Skins, and a few barrels of Beauty of Hebron. The yield for 1880 was—Matchless 180 lbs. from 1 lb.; Pride of America, 147 lbs. do; Silver Skins, 130 lbs. do; Beauty of Hebron, 130 lbs. do. Price of the first three varieties, per bushel, \$3.00; barrel, \$6.00. Beauty of Hebron, bushel, \$2.00; barrel, \$4.00.
CHARLES W. SMITH,
Sandbeach, Yarmouth, N. S.
January 20th, 1881.

FOR SALE.

THE splendid thorough-bred Ayrshire Bull "BELLARILL," raised by P. Jack, Esq., from stock imported direct from Scotland by the Board of Agriculture. BELLARILL was sold in 1879 by Prof. Lawson to the Annapolis Royal Agricultural Society, and has got some good stock. His girls over 6 feet, and is very kind. Apply to—

J. G. WOODBURY,
Annapolis.

J. B. FRASER,

SHUBENACADIE, COLCHESTER CO., N. S.,

BREEDER OF

Short Horn Cattle, Shropshire Sheep and Ellesmere Pigs,

All from imported English Stock. Winner of the First Prize at Provincial Exhibition in Halifax in 1879; also at Kentville in 1880, for best Herd of Short Horns.

Several BULLS for sale on reasonable terms, all first-class animals with certified Pedigree. Also some young PIGS, about 2 months old, BOARS and SOWS, Pure Ellesmere. Dec

FOR SALE.

AYRSHIRE COW "LILLY 2ND," in calf.

AYRSHIRE HEIFER "LILLY 5TH," in calf.

AYRSHIRE HEIFER CALF "LILLY 6TH," 9 months old.

AYRSHIRE BULL "WALLACE 3RD," 2 years old in March.

AYRSHIRE BULL CALF "LORD DUFFERIN 2ND," 9 months old.

—ALSO—

A FEW HEAD GRADE JERSEY.

HENRY BURRELL, Sen'r.

Yarmouth, N. S., Dec. 15, 1880. Jan 1

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