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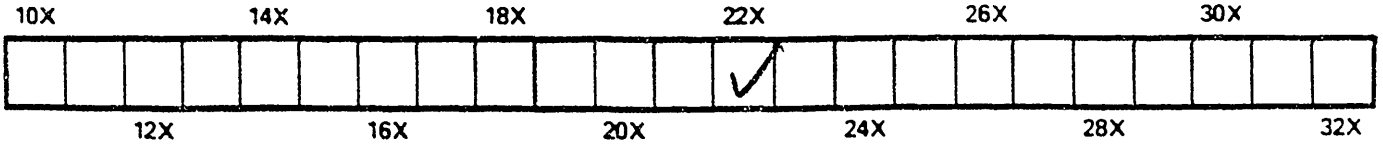

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THE PROVINCIAL EXHIBITION AT KINGSTON.

The Eleventh Annual Exhibition of the Provincial Association was held at Kingston on the 23rd, 24th, 25th, and 26th of September. The weather was, upon the whole, satisfactory. It was rather cold and windy on Thursday, and in the afternoon there was some rain, but Friday was a fine day, and large numbers of people thronged the gates until evening. The number of visitors was, probably, equal to any previous Show; though, from the large number who were admitted as members of the Local Societies, and by means of carriage tickets, which were issued liberally, and circulated freely, we apprehend the *books* will not shew an extraordinary crowd. The number of entries made in the Secretary's books was larger, we believe, than at any previous exhibition; but an immense number of articles, in nearly all the departments, were not forthcoming. Whether exhibitors found difficulty in shipping, or discovered that the expenses would be too great, we cannot say; but it is evident something of this kind induced many to change their resolution after entering their articles. Upon the whole, the Exhibition of this year is creditable to the Association, though not equal to some of its predecessors. The condition of agriculture in the vicinity of Kingston is not so good as in more western localities, and as a large portion of the Exhibition must necessarily be contributed from the surrounding country, it was to be expected that in variety, completeness, and general excellence the Show would be inferior.

The most striking feature of this Exhibition was the Crystal Palace erected by the people of Kingston in the middle of the Show ground. It is a large building, in the form of a Latin cross, and is enclosed chiefly with glass. The transepts run east and west, and north and south. There is a spacious door for entrance or exit in each of the four ends. The transports are large enough to allow a double row of stands for fruit, &c., in the middle of each, and also along each side, with space for the spectators to pass between. The convenience, safety, and ornamental appearance of this structure suggest the propriety of similar erections at other points where the Provincial Shows are likely to be frequently held. We believe it is a very general opinion that these

great annual gatherings should be held at three or four fixed points, Toronto being the centre, and that permanent buildings should be erected at these places for their accommodation. The cost of temporary buildings, which afford little or no protection in case of bad weather, and the risk which exhibitors of highly finished and valuable articles are compelled to run under the present system, are strong arguments for a more permanent arrangement. The extra cost of the present plan would more than pay the interest upon the capital that would be required to erect substantial buildings at three or four places, and the advantage to exhibitors and to the public would be very great.

Cattle.—The exhibition of thorough-bred Stock was not so good as we have seen it at former Shows. The Durhams exhibited by Mr. Stone, of Guelph, were very choice. He showed a pen of calves that could hardly be excelled in any country. Mr. Wade of Port Hope, G. Miller, of Markham, W. Miller, of Pickering, and Mr. Ferguson of Kingston, showed a few good animals each. The stock of the latter gentleman were in poor condition, which detracted from their appearance; but the breeder is not deceived by low flesh. In fact, a good judge will prefer to handle an animal in that condition. Mr. Ferguson had advertised an extensive sale on the grounds, but we were told that the bids did not take a sufficiently high range to suit his views, and but few actual sales were made. There were only some 80 entries in the Durham class, and many of these did not appear on the ground. At the Cobourg Exhibition there were 120 entries, and at the two previous Shows about the same number as at Kingston. In the Devon class, the competition this year was small. We missed the splendid herd of Mr. Locke, of Yarmouth, which formed a prominent feature of the Cobourg Exhibition. There appears to have been only 9 entries this year, against 76 last year—an unpleasant falling off. This is no doubt owing to the circumstance that the best herds of Devon cattle are owned at the west, and the trouble, expense, and risk of transporting them to Kingston were more than breeders cared to encounter. The Herefords made a poor show, both in number and quality. The President, Baron de Longueuil, of Kingston, was the principal exhibitor this year as well as the last. The Ayrshires were about as numerous as usual. There were 40 entries at Kingston, and 41 at Cobourg. The Montreal breeders carried off the principal prizes in this class. Mr. James Logan and Mr. J. Irving of that city possess some fine specimens of this excellent breed. Mr. John Boyes, of Amherst Island, who exhibited largely and successfully last year, only took one *first* prize this year. The Galloway cattle this year filled a larger space than at any previous show. There were 29 entries, against 9 last year. The chief prizes were carried off by John Fleming, of Vaughan, whose cattle are from W. R. Graham's importation. Mr. Roddick, of Cobourg, was also a successful exhibitor in this class. Grade and fat cattle made a good show.

Sheep.—The usual classes, Leicesters, South Downs, Merinos, Cotswolds, and Cheviots, were well represented. The Leicesters appear to be the most popular breed in this country. They combine the two requisites of wool and mutton in a larger degree than any other. They are also hardy and easily fatted. There were 128 entries in this class. At the London Exhibition there were 240 entries, being the largest show of Leicesters we have yet had. The Messrs. Miller, of Markham and Pickering, were not so successful this year as last. Mr. C. Walker, of London, and James Dickson, of Clarke, took the greatest number of first prizes. Mr. James Petty, of Huron, carried off the first prize for a ram, 2 shears and over, and he well deserved it. It is decidedly the best sheep we have ever seen of its class. Mr. John Spencer, as usual, carried off the chief prizes for South Downs. There were only

some 43 entries, being about the number at the last three or four Shows. Though Mr. Spencer had but little competition, his sheep were very superior. Merinos and Saxons made a poor show. The number of entries was not half as great as last year. Mr. N. Choate, of Hope, and J. Rymal, of Barton, were the principal exhibitors. The Cotswolds made a smaller show than at Cobourg. The same breeders appear on the field—Mr. Stone, of Guelph, Mr. Miller, of Pickering, and Mr. Miller, of Markham. Mr. Stone carried off the first prizes, except for shearling ram, which was awarded to G. Miller. The Cheviots appear in greater numbers this year, Mr. Dickson, of Clarke, competing with Mr. Roddick, who was "alone in his glory" at Cobourg. The prizes were about equally divided between these gentlemen. This breed of sheep, in our opinion, well deserves the attention of Canadian farmers.

Pigs.—The show of pigs was not extensive, but very good. They were nearly all contributed by breeders in the neighbourhood of Kingston. Mr. Briggs, of Kingston, exhibited some splendid pigs. The Suffolks are a splendid breed, and seem to thrive well in this country; so also is the Essex. They do not seem well provided for cold weather, but a little more care and shelter will supply the deficiency.

Poultry.—To our mind the show was an excellent one, though we heard some fault-finding among the amateurs and fanciers. The arrangement of the coops was very convenient for exhibition, and we hope the same plan will be followed at future Exhibitions.

Grain.—The show of spring wheat was the best we have seen at any of our Provincial Shows. There were 76 entries in this class. Mr. C. Anderson, of Cobourg, won the prize. The same gentleman obtained the prize for barley. The Canada Company's prize was awarded to Russell Smith, of Burford, for the best 25 bushels Fall wheat. It was the Blue Stem variety, and weighed 64¼ lbs to the bushel. The Association's prize of £10 was carried off by S. Scott, of Clarke. His wheat was the *Soule* variety, and a beautiful sample. It was not quite so heavy as Mr. Smith's, and this, we suppose, determined the question in favour of the latter. There were 18 entries for the Canada Company's prize, but we did not observe half that number on the ground. Mr. Smith also obtained the first prize for white oats. They were very heavy, but we did not learn the exact weight. The show of pease was very good; but in seeds, roots, &c., there was a great falling off, owing to the season, which has been generally unfavourable to root crops. Potatoes seem to have suffered less from drouth in the neighbourhood of Kingston than in this vicinity.

Fruits, &c.—These were exhibited to great advantage in the Crystal Palace, and made a fair show. The specimens were not generally large, but appeared to be choice. Judge Campbell of Niagara made a most creditable display of peaches. He seems, from the number of varieties exhibited, to have given great attention to their cultivation, and to have met with success. Baron de Longueiul was also an extensive exhibitor in garden vegetables and fruits. J. Cameron, of Brockville, was also a successful exhibitor. The best show of grapes was made by Mr. Lunn, of Montreal. Mr. Fleming, of Toronto, made a good display in this department. The Montreal Horticultural Society contributed some excellent specimens; indeed, but for the contributions from Montreal, the show in this department would have been very meagre. We must not omit the name of Mr. Humphreys, of this city, who carried several prizes for garden vegetables. His cabbage and cauliflower were first-rate.

Dairy Products.—The show of butter was superior to that of any former Exhibition we have attended. Of firkins there were 35 entries; and of samples less than 20 lbs. there were 50 entries. C. Gardiner, of Leeds, took the highest prize for the first, and N. Lapham, of Ernesttown, for the smaller quantity. R. Wade, jun., was awarded the first prize for Stilton cheese. The quantity of cheese exhibited was small. Honey made a tempting show.

Implements.—The display of implements was, upon the whole, a poor one. A few

excellent machines were exhibited; but, except in ploughs and combined reapers and mowers, there was little competition. There was but one large threshing machine. It was from the establishment of Massey & Co., Newcastle, and was most complete in all its parts, and admirably finished. The contest for the first prize offered to reapers and mowers, combined, was between Mr. Massey, Messrs. Patterson, Belleville, and Walton & Co., Holland Landing. The same parties had also entered their machines for the President's prize of £15, offered for the best labor-saving Implement. The machines were all of the same kind or pattern, being copies of Manny's patent. The first prize was awarded to Messrs. Patterson, of Belleville, though some doubt was expressed by the Judges as to the advantage of a castor-wheel placed under the tongue, but as this could be removed if found in the way, and the machine being in other respects better made, it won the prize. It was also awarded the President's prize as the best labor-saving implement. Mr. McDougall, foreman of the jury of judges, was anxious to defer the award of this prize until a trial of these implements could be had, but he was over-ruled, the other judges being unwilling to incur the trouble. The second prize in this class was awarded to Walton & Co. Messrs. Johnston, of Toronto Township, obtained the prize for the best Reaper. It was a copy of Seymour & Morgan's Machine, with several improvements, and was well made. There was greater competition in ploughs than in any other class. The jury was anxious to see them tried, and a field was procured for the purpose. Two iron ploughs, both from Montreal, and six or seven wooden ones, were tested with an instrument. The soil was about the worst that could be chosen for such a purpose, but it was the best in the neighbourhood. The jury, however, went at it with a will, and endeavoured to give all the competitors an equal chance. They noted the depth, width, and shape of furrow, the amount of traction, and the angle, &c., at which the furrow-slice was deposited. These data, together with the strength and durability of construction, guided the judges in making their award. They gave the 1st prize to Mr. Modeland, of Brampton, the 2d to Mr. Bingham, of Norwich, and the 3d to Mr. McSherry, of St Davids. Between the two last it was difficult to decide. Bingham's was lighter in draft, and being well handled, made a little better work.

We have not space in this Number to notice some other implements that deserve it at our hands, but will endeavour to remember them in a future Number. The remaining departments of the Exhibition must be deferred for the same reason. The official and corrected Prize List will appear next month. The lists published in the newspapers are necessarily imperfect, but they will gratify exhibitors and their friends in the meantime.

The following report of the proceedings of the Association is all we can find room for in this Number. The President's Address and the Prize List will be published in the November issue.

THE ANNUAL MEETING.

The Annual Meeting of the Agricultural Association of Upper Canada took place on the grounds, at 10 o'clock. The President, Baron de Longueil, in the chair.

The following delegates from County Associations were present:—

Kent, Alex. Millar. Joseph Smith; Huron, Charles Girven; Grey, Samuel Broadfoot, Archibald Sherratt; Bruce, W. Withers, W. Millar; Wellington, F. W. Stone, John Iles; Middlesex, Wm. Bothwell, Samuel Peters; Elgin, George Henry, Arthur Smith; Oxford, Adam Dodge, C. Place; Brant, Charles S. Perley, Charles Whitlaw; Haldimand; Charles Bain; Norfolk, Oliver Blake; Welland, John Ratcliffe, John Kerr; Lincoln, Judge Campbell, John Simpson; Wentworth, Thomas Stock, Hamilton O'Reilly; Halton, Samuel Clark, David Springer; York, Robert Davis, William McDougall; Ontario, Ebenezer Birrell; Durham, Matthew Jones, Richard Allan; Northumberland, P. R. Wright; Victoria, John Gibb, Samuel Wetherall; Peterborough, John Walton; Prince Edward, David Conger, J. P. Roblin; Hastings, B. F. Davy, Thomas Perley; Lennox, Alexander Campbell, John Hawley; Addington, John Hitchens, Dr. Ashton; Frontenac, William Fergusson, John Flanaghan; Leeds, Dr. Richmond, J. W. Hough; Lanark, Robert

Young, Wm. Wallace; Prescott, Chas. Hersey, S. M. Cushman; Russell, William Edwards; Glengary, Daniel Campbell, D. A. McPherson; Stormont, David Tate; Dundas, Charles Rundle.

A discussion arose as to the reception of W. H. Sweetman, and D. J. Barker as delegates from Renfrew, who had been appointed on the ground. It was finally resolved by a considerable majority that they should not be received.

Col. MARKS then moved that Geo. Alexander, Esq., Woodstock, be President of the Agricultural Association for next year.

Seconded by T. C. STREET, Esq, and carried unanimously.

Mr. ALEXANDER briefly returned thanks for the honor which had been conferred on him.

Moved by Mr. BURNHAM, seconded by Dr. ASHTON, that D. B. Stevenson, Esq, M.P.P., be first Vice-President of the Association for next year.

Carried unanimously.

R. L. DENISON, Esq, moved that William Ferguson, Esq., be second Vice-President, and in doing so passed a high elogium on Mr. Ferguson' exertions, in connection with the present Exhibition, especially assigning him the credit of the Crystal Palace, one of the main features of the Show.

T. C. STREET, Esq., seconded the nomination, and said he considered Mr. Ferguson's merits were such as should secure for him the suffrages of western delegates, as well as of those from the east.

O. BLAKE, Esq., moved that Charles Whitlaw, Esq., of Paris, county of Brant, be the second Vice-President, and commended him as a gentleman who took great interest in the progress of agriculture, and as one qualified to fill the office with credit so himself, and advantage to the Association.

GEO. HENRY, Esq., seconded Mr. Whitlaw's nomination.

A division being taken, Mr. Ferguson had a majority of votes, and returned thanks for the honor conferred on him.

Mr. BLAKE moved the re-appointment of R. L. Denison, Esq., as Treasurer.

Col. MARKS seconded the nomination, in a few complimentary remarks on the ability and integrity with which Mr. Denison had always discharged the duties of his office.

Carried unanimously.

Mr. DENISON briefly expressed his sense of this renewed evidence of the confidence reposed in him by the Association.

Mr. ALEXANDER moved, seconded by Mr. O'REILY, that the thanks of this meeting be given to the Local Committee of Kingston for the liberal and satisfactory manner in which they have afforded accommodation for the present Exhibition.

Carried unanimously.

Col. MARKS returned thanks on behalf of the Local Committee, and said the chief merit was due to its most active member, Mr. Ferguson.

BARON DE LONGUEIL could not allow Col. Marks to sit down, without saying that that gentleman himself had been one of the most efficient in getting up the present Exhibition.

Moved by Mr. P. R. WRIGHT, seconded by Judge CAMPBELL, that the thanks of the meeting be given to the Mayor and Corporation of Kingston, the Municipal Council of the United Counties of Lennox, Frontenac, and Addington, and such other bodies as have contributed to the funds of the Association.

BARON DE LONGUEIL, in putting the resolution from the chair, called attention to the handsome conduct of Hastings in forwarding £100, and Leeds and Grenville £75, to defray the expenses of building.—Carried unanimously.

After thanks had been moved to Judges &c., Judge CAMPBELL, of Niagara, moved that the next Annual Provincial Fair be held somewhere on the Niagara frontier. In doing so, he alluded to the success which had attended the previous fair held at Niagara, the liberality with which the district would contribute the means necessary to make the Show successful, the easiness of access from the States, and the facilities of communication with other parts of the Province, by land and water. He also urged that it was now Niagara's turn by regular rotation to have next year's Show assigned to it.

T. C. STREET, Esq., seconded the motion, and also briefly advocated the claims of the Niagara frontier.

JOHN GIBES, Esq., moved an amendment that the Exhibition of 1857 be held in the town of Brantford.

C. WHITLAW, Esq, seconded the amendment. He stated that Brantford, before the time for holding the Show came round, would be the centre of a complete system of rail-

roads. The Buffalo and Lake Huron line would bring visitors from the States. The Great Western also communicated with the States at the Suspension Bridge. The Grand Trunk too would be available; and the line from Godrich to Paris would allow a section of country to be represented at the Exhibition, which had never hitherto been, from the want of facilities of transit. Ample accommodation, too, for any number of strangers, could be provided in Brantford, and, within an easy distance by rail, in Paris, Hamilton, &c. And there was another consideration. At every Fair, it was found that the bulk of the stock and and articles exhibited was from the immediately surrounding district, and he considered they had sufficient evidence even here of what the district around Brantford could do. Mr. Russell Smith, of Burford, a resident in Brant county, had taken the Canada Company's prize for wheat, and also the first prize for oats. They could show there, too, the best specimens of stock; the gentleman who had taken the prize for the best Durham bull, being a resident within half a mile of Paris.

Mr. CLARKE, Halton, Mr. PERLEY, and Mr. GEORGE HENRY, also advocated the claims of Brantford.

A vote was then taken and resulted in Brantford being carried by a large majority.

The gentlemen from the district stated that Brantford would contribute £1,000 towards the expenses of the next Exhibition.

Mr. ALEXANDER brought before the Association the propriety of passing a resolution that in future the Fairs should be held alternately east and west of Toronto.

After some discussion it seemed to be the general impression that the matter should be referred to the County Societies, and their opinion taken on the point at the same time that they were asked to make suggestions for improvements in the Agricultural Statute.

It was then agreed that the next Fair should commence on the last Tuesday of September, 1857.

A vote of thanks was carried by acclamation to the retiring President, Baron de Longueuil, for the able manner in which he had discharged the duties of the office.

BARON DE LONGUEUIL, briefly acknowledged the compliment, and said he esteemed it a higher honor to be President of the Agricultural Association of Upper Canada, than to be President of the Executive Council. (Hear, hear, and laughter.) For, in occupying that position, he felt he was sustained by the suffrages of the entire Agricultural community. (Hear, hear.)

The meeting then separated.

At 2 o'clock Baron de Longueuil, as the retiring President, delivered the Annual Address to a large audience on the grounds. On motion of Col. Thomson, the thanks of the Association were given to the Baron for his interesting and able Address. The Prize List was then read by Professor Buckland, and afterwards the Prize Cattle were marched in procession round the grounds, and the eleventh Provincial Exhibition of Upper Canada terminated.

AN INFALLIBLE RECIPE.—At this season, when dysentery becomes very prevalent, we can recommend the following means of curing the same, which are within the reach of every person at almost every hour:—Take one tablespoonful of common salt and mix it with two tablespoonsful of vinegar, and pour upon it a half pint of water, either hot or cold—only let it be taken cool. A wineglassful of this mixture in the above proportions, taken every half hour, will be found quite efficacious in curing desentery. If the stomach be nauseated, a wine glass full every hour will suffice. For a child, the quantity should be a teaspoonful of salt and one of vinegar, in a teacupful of water.

For all diseases man is heir to, nature's remedies are simple and sure, and there is no evil in the world without its antidote. We could mention numerous instances in which the above receipe was found effective in the cure of dysentery.

THE WAY TO TETHER A COW SO THAT SHE WILL NOT BE LIABLE TO INJURY.—Take a tough light pole, ten or twelve feet long, to a blacksmith, and let him bend over each end and rivet fast a hoop of iron and insert into it a swivel ring. Attach a chain with a strap to the cow's horns, of sufficient length to reach the ground when the animal stands up; this lower end to be attached to the swivel on the pole. Fasten to the other end of the pole a chain of any suitable lenghth, with its free end, armed with its wedge-shaped piece of iron 18 inches long, to be driven into the ground with a billet of wood, and your cow can thus be tethered without any danger of entanglement, whilst the pasture will feed one third more,—fences dispensed with, and shrubbery not broken, by being run into when the animal is frantic with flies.

PROFESSOR BUCKLAND'S TOUR IN THE COUNTY OF WELLAND.

To E. W. Thomson, Esq., President of the Board of Agriculture of Upper Canada.

Sir,—I have much pleasure in transmitting to you for the information of the Board of Agriculture, some account of my recent visit to the County of Welland, where I spent a very agreeable week. I was the guest of Captain Radcliffe, the respected and indefatigable President of the County Agricultural Society, who kindly conducted me through the county, and introduced me to many of the principal agriculturalists and leading professional and commercial men. My notice of many things must necessarily be very brief, and others must be allowed to pass without even an allusion.

On Friday, June 20th, I left Toronto by the Great Western for Thorold, where I was met by my good friend Capt. Radcliffe. Thorold is evidently a rising place, and situated on the escarpment of lime and sand stone, which on the South-western shore of Lake Ontario, forms a very striking physical feature. Its close proximity to that magnificent work, the Welland Canal affords it many important advantages. Mr. John Morley is doing here a rather extensive business in the manufacture of agricultural implements. His ploughs, constructed on the Scotch-swing principle, are much approved of in the country. They are made of iron or wood, the latter being more common, and are getting into general use. I saw some good work done by them in several places.

Next day we drove through the northern portion of the township of Thorold, and called on several farmers. Mr. Wm. Ash, in what is called the Beaver-Dam settlement, has some of the most approved modern implements, and his cultivation seems good, and as a consequence his crops were generally heavy. Grade cows excellent, with a large dash of improved Durham blood, indicating the advantages where a breed of pure-blooded anim als are not kept, of crossing our best native cows with that world-renowned breed. Mr. Ash has a flock of Leicester and Down sheep, well bred and in a thriving condition. I observed an English thorn hedge, which appeared to be thriving. Mr. Russell has also a hedge of considerable extent, a portion consisting of American Thorn in a very growing state, the rest is made of the locust, which is inferior. These hedges did not appear to have suffered from the depredations of mice, which have proved so disastrous to young fruit trees in particular, during the peculiarly inclement season of last winter the subject of live hedges is beginning to engage the attention of farmers in this country, as well as in others of early settlement. As yet experience in this matter, which is in many places becoming every year of more pressing importance, has not been sufficiently extended to lead to positive conclusions as to what particular materials are the best for making live fences. Although I have seen a few instances of the ordinary English hawthorn looking healthy and promising, yet I am strongly inclined to the opinion, from all that I have observed and heard, that our own native thorn, when properly treated, will answer better. Hedges, like fruit trees, or the ordinary crops of the farm, require, and will amply repay for all the rational treatment and care that can be bestowed upon them. We afterwards called on the Rev. Dr. Fuller, who, like many clergymen in the mother country, takes a lively interest in rural pursuits, and has labored to extend the knowledge and improve the education of farmers. Mr. Fuller does not now farm extensively. He has some excellently bred carriage horses. Clover very heavy on strong clay soil. In the evening I met and addressed a small number of farmers, and a few others, in the village of Allanburgh, and afterwards spent an agreeable hour in conversation on various matters pertaining to agricultural improvement, in which Messrs Wright, Colman and McCoppin took the principal part. I learnt both here and elsewhere in the country, that the practice of sowing timothy seed with wheat in the fall, was yearly extending with

satisfactory results; the plant coming to earlier maturity. In a wet harvest—which however we are not often troubled with in this country the timothy grass must tend to interfere with the harvesting of the grain.

On Monday, June 23, we went over a large portion of the township of Stamford. Inspected the farm of Mr. Edward Jones who has long been distinguished as an enterprising and successful farmer and breeder. Mr. Jones's farm occupies an elevated portion of the ridge already referred to; it is consequently broken, and consists mainly of a heavy clay soil, which changes to a loam immediately to the east. The grain and root crops, clover and pasture, were good, considering the dryness of the season. The live stock consists of some well bred horses, strong and active, and specially suited to heavy soils. Excellent Grade cows, yielding large quantities of milk, several from Durham, with a Bull above ordinary merit: several of the cows and heifers are excellent specimens of that celebrated breed, which Mr. Jones has been very successful in introducing into that section of country. His South-Down sheep are, many of them, particularly fine, yielding a fleece of 3½ lbs.; none of the best are ever sold to the butcher. From the most casual observation it is evident that Mr. Jones is no friend of weeds. The difference in the state and appearance of the crops at this season between such as cultivate thoroughly, and those who merely skim over the surface in a hurried and imperfect manner is astonishingly great. Clean and thorough culture is the only kind of farming that in the long run can pay.

Mr. Wm. McMicking, near Queenston Heights, has likewise an excellent head of Grade Cattle, in fine condition. Such stock probably pays better than any other, not excepting even the pure breeds, as a general thing; and it is within the reach of almost every person to obtain it. Mr. McMicking has also a few good Durhams, and a Hereford Bull and two cows, of promising appearance. There are not perhaps a dozen of the latter breed in Upper Canada, and the few specimens I have seen in the United States, would be considered in that portion of England where this breed is cultivated and appreciated, as second rate animals. Although it would be idle to suppose that this breed can supplant the Short-horns—which are unrivalled for size and early maturity, yet it is highly desirable that it should be better known on this side of the Atlantic. I saw some excellent Pigs—Suffolk and Berkshire breeds, at Mr. John Lemon's, who has likewise some fine Leicester sheep, and a heavy crop of two-rowed barley.

At Mr. Ker's, Drummondville, I found quite a number of people assembled to witness a trial of mowing machines. The clover was heavy with but little timothy, and in some places it was much lodged, and consequently difficult to cut in any way. The two principal machines were constructed on Manny's principle, a combined reaper and mower, the one made by Fanlett of Niagara, worked better on the whole than Manny's own, particularly in avoiding choking in turning. Manny's machines are fast getting into general request; and mechanical skill has done wonders within the last year or two in surmounting what were thought to be insuperable difficulties in the way of constructing a combined Reaper and Mower. Mr. Ker's farm, like much of this eastern side of Stamford, is of a light sandy character, yet highly productive in favorable seasons; his cattle and sheep are good.

In the evening I met a large party, chiefly agriculturalists of the neighborhood, in the pretty village of Drummondville, and addressed them on the application of scientific facts and principles to the practical management of the farm, and other means of agricultural improvement. The evening was spent very agreeably; and upwards of an hour was devoted to asking questions and giving replies to subjects suggested by the lecturer. Messrs Lemon, Jones, McMicking, Gardner, and my friend Capt. Radcliffe, were among

those who took a part in the discussion. Altogether the meeting went off well. Mr. Isaac Culp of this village, who has been a plough maker for many years, and who obtained diplomas and premiums at our early Provincial Exhibitions, produced a model of an improved plough, which he is about to bring before the public.

On Tuesday we started for Fort Erie, where I had an engagement to lecture in the evening. From the Falls we travelled several miles along the banks of the river, saw but little good farming, the soil is a heavy clay, needing much deeper and cleaner cultivation, and in many places draining, the essential conditions of all subsequent improvements, and which appears to have been very little attended to in this section. We called on Mr. Weeks, in Bertie, whose farm principally rests on a limestone gravel, his crops looked promising; he has some excellent grade cattle, and a pure Durham Bull. Mr. Rooth, of Split-rock farm, so called from an extensive fissure in the limestone on which it rests, has good stock, and his cultivation and crops appeared above the average. Leaving the limestone we entered again on heavy clay; the land is naturally of good quality, but it much needs draining and better cultivation. Mr. Graham has a splendid farm on the Garrison Road, under superior management.

In the evening I addressed a good audience at Fort Erie, and a lengthened conversation subseqently followed, on several points of improved husbandry, and the management of Agricultural Societies, in which Messrs Lewis, Graham, Richey, Henderson and Dr. Cronyn took a principal part.

Next morning we proceeded up the Garrison Road to Ridgway, the soil becomes lighter, and the country more picturesque. Mr. Haun has a good farm here, pleasantly situated, and commanding a view of Lake Erie, and the State of New York. I noticed two very fine fields of grain, barley and wheat; of the latter, appearance would justify the expectation of 40 bushels per acre. We passed through a large portion of Humberstone; some parts of which are not very interesting, and arrived at Stone Bridge and Port Colborne, at the head of the Canal, on Lake Erie. A great amount of business is done here, and the number of vessels—some of them of large tonnage, that pass up and down the Canal is rapidly increasing. Dobie and Henderson, of Stone Bridge have established a manufactory for making ploughs and other agricultural implements, and their establishment is fast growing into notice. Wilkinson & Roote of St. Johns, manufacture Gang Ploughs, an article that is preferred by some to the Wheel Cultivator. This form of plough deserves to be better known. I regret that we had but little opportunity of seeing the township of Wainefleet, where extensive marshes prevail, and I am informed a stoned drainage has been successfully commenced. In the evening I met a small party at Merrittville, the county town. The meeting was held in a room of the new Court House, an extensive and handsome building of stone, not yet completed, after the address Messrs Burgar, Rice, C. Park, Dr. Burns, and others, took part in the conversation.

Next morning my worthy guide conducted me to Pelham, making a gradual and in some places rapid ascent from the plains to lighter and drier soils, which require a different mode of management. On our way we called and inspected the nursery and farm of Mr. Samuel Taylor, who has a pretty extensive stock of fruit and ornamental trees; many of which seemed healthy and flourishing, although the mice and severe frost of last winter had done great injury. Great numbers of peach and plum trees were wholly or partially destroyed. Mr. Taylor is trying a considerale length of Osage Orange hedge, which so far appears promising; and Mr. Lewis Wilson is doing the same with similar prospects. There are extensive Pine ridges in these elevated parts of Pelham; in many places the soil is poor and light, and agriculture, as a system, can scarcely be said to have commenced. In other places, however, the soil is highly productive, and this section is

celebrated for producing the finest quality of potatoes. Mr. J. Price cultivates liberally, and his crops were consequently heavy. I regretted we did not find Mr. John Scofield, a leading and enterprising farmer at home. I met a number of agriculturalists in the evening, and after my usual address, a very spirited conversation or rather discussion was carried on, in which Messrs Sheriff, Hobson, Deverardo, Schofield, H. Price, and my kind conductor, Capt. Radcliffe took part. Here my engagements terminated.

Upon the whole I have been highly gratified with this trip, which has afforded me good opportunities of getting valuable information, and of offering suggestions and communicating knowledge respecting the science and practice of agriculture and the management of Societies, which I trust, will prove useful. The county has been recently made independent, and a fresh energy seems now to animate the people. Everywhere I found an interest expressed in the proceedings of the Board and the Provincial Association, and exertions were being made towards securing the Provincial Exhibition somewhere on the Niagara frontier, at an early date. The stoppage of the Buffalo and Brantford Railway has been a great drawback to this county, but this impediment will be speedily removed. The Canal and the Railway afford efficient means for developing the resources of the county. I observed great improvements going on in several places in road making; a matter which hitherto has not received the attention its importance deserves. The most striking deficiency in the practical husbandry of this county, as well as many others, is the small amount of land devoted to root crops; particularly the mangel-wurzel and field carrot, productions so essential to the sustentition of a numerous and improved herd of Cattle. Draining too on the flat clay lands has as yet been but little attended to. When this is done, the various kinds of root crops may be profitably introduced on soils when under present circumstances the attempt would be abortive.

I am under great obligations to Capt. Radcliffe for his attention and hospitaity. And here I would mention that I saw some excellent silk, from worms which Mrs. Radcliffe has in her possession, and to which she has devoted much time and attention. It is quite a curiosity, and with the thriving mulberries in the garden shows what our soil and climate can produce.

Hoping that this brief and hurried sketch will not be totally unacceptable to the Board.

I have the honor to be, Sir,

Your obedient Servant,

Toronto, Sept., 1856. GEO. BUCKLAND.

CURING BACON WITHOUT SMOKE.

"Oh the trouble folks have taken
To smoke and spoil their bacon."

To smoke the best bacon, fat you hogs early and fat them well. By fattening early you make a great saving in food, and well fattened pork. Then kill as early as the weather will allow, and salt as soon as the animal heat is gone, with plenty of the purest salt, and about half an ounce of saltpetre to one hundred pounds of pork.

As soon as the meat is salted to your taste, which will generally be in about five weeks, take it out, and if any of it has been covered with brine, let it drain a little. Then take black pepper, finely ground, and dust on the hock end as much as will stick, then hang it up in good, clean, dry, airy place. If all this is done as it should be, (it ought to be done now,) you will have no further trouble with it, for by fly time in spring, your bacon is so well cured on the outside, that flies or bugs will not disturb it.

Curing bacon is like the Irishman's mode of making punch. He said:—put in the sugar, then fill it up with whiskey, and every drop of water you put in after that spoils the punch. Just so with curing bacon, after following the directions given above, every "drop" of smoke you put about it, spoils the bacon.

A NEW MILKING MACHINE.

Among the many uses to which India Rubber has been applied, is that of milking. Two or three years ago a milking machine was brought before the public which without the aid of the hand, accomplished the operation. It was composed of India Rubber, and was attached to one teat at a time. We believe it was not found of much use in practice. Another invention is now introduced to public notice, which operates on a somewhat different principle. Whether it will prove of greater value than its predecessor remains to be seen. We fear that an air-tight pail, with an air-pump attachment is not likely to continue in working order very long in the hands of ordinary dairy-maids. This air-tight invention is by Mr. Kingman, of Dover, N. H.; U. S. He comes out with a very clear description of it in the New England *Farmer* and says it works "first rate." He takes a calf for his model, and manufactures a machine calf, with four mouths, and sets him to sucking—substituting a pail for the calf's stomach—but we will let him tell his story as we find it in the New England *Farmer*:—

"In the first place, I take a large size pail, either of tin or wood, and fit on it a cover so as to make it air-tight; then I construct a small pump in some compact form, so as to exhaust the air from the pail. The pump made for my experiments (and which is described in the application for a patent) is a part of the cover to the pail, and being flat and thin, works rapidly and without friction, and does not wear so as to leak. It is only necessary to produce a slight vacuum, such as a calf might make with his mouth. I then connect four small rubber tubes, about eighteen inches long, with the top of the pail; and on the other end of each of these tubes, I fix a little cup of tin, glass or any other convenient material, about two inches in diameter and three inches deep. Over the top of each of these cups is drawn a cap of thin, flexible rubber, having a sack or mouth in the centre, of sufficient size to receive the end of the cow's teat, with a small hole in the bottom for the milk to pass through. The cap fits to the top of the cup, air-tight, by its own contraction, and also hangs around the end of the teat, but by its flexibility permits a free flow of milk into the cup and and through the rubber tube into the pail.

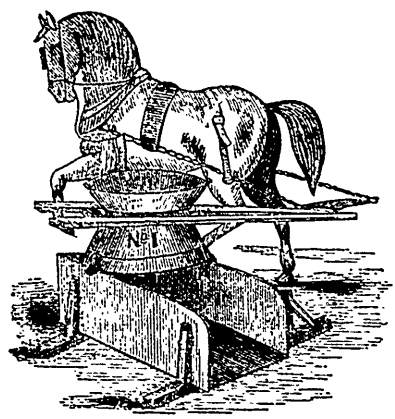
Having got the machine in readiness, I slip each of the cow's teats into one of the soft, flexible sacks or mouths, which can be done in an instant with the end of the thumb—the rubber clings around the teats and holds the cups in place. I then commence pumping slowly and easily, and the milk flows in a large, steady stream from each teat, through the tube into the pail. The cow meantime, is quietly chewing her cud, hardly knowing hat anything is going on; so perfectly is the teat sustained by the rubber suck, that the suction hardly affects it all, and there is no pulling, or flinching, or squeezing in any direction. All the while the milk is flowing at the rate of about two quarts per minute; at any rate, I have milked eight quarts of milk from my cow in four minutes, with a machine by no means perfect; because being the first and only one ever made, and got up only to experiment with, it has suggested improvements which will be embodied here, after; and I am entirely satisfied that a child or woman can milk with this machine with perfect ease, faster than four milkers, either men or women, can milk by hand.

But the chiefest recommendation of the machine remains to be mentioned. The common method of milking by hand necessarilly exposes the milk to more or less dust, dripping from the hands, and other kinds of filth, which often spoil its taste, and always gives one the idea that he is swallowing a disagreeable amount of unmentionable materials. Even the best and most careful milkers cannot avoid getting something into the pail that should not go there; this is proved by the universal custom of straining milk immediately after milking, in all cases, and by whomsoever it may have been milked.

But straining will not take out the drippings from the hands of careless, filthy milkers; and the result is, a very general complaint among consumers of the bad taste of milk, too often attributed to the adulteration or dishonesty of milkmen.

This machine, however, entirely obviates this unpleasant difficulty. The milk is drawn directly from the udder into a covered, air-tight pail, where no dust or drippings or filth can fall itself, or be thrown by carelessness. The Irish girls cannot dip their hands into the pail to moisten the teats, as is their common practice, nor can the cow step into the pail, or kick it over, so as to spill the milk.

In short, I think the *milking machine* will be a great labor-saving improvement for the agricultural community, and a genuine comfort to both the cows and the consumer. Immediate efforts will be made, after obtaining a patent, to introduce the machine to the notice of the public, and to supply the market demand for them. It is not possibe at present to say at what price they can be afforded, but probably they will not cost far from five dollars a piece."



CORN AND COB CRUSHER.

This useful machine was exhibited at Kingston, by Mr. A. Millar, of Chatham, C. W., and was submitted to the inspection of the Judges while in operation. It grinds both corn and cob sufficiently fine for feeding, and with considerable speed. There can be little doubt that it is good economy to prepare food in this way for stock. The amount of nutritive material in the cob may not be great, but we believe experiment has demonstrated the utility of mixing it with the more concentrated food which is supplied by the grain. This "Crusher" answers equally well for pease and other coarse grain, and for fatting hogs will be found very useful and economical.

We are glad to find that these mills, which have become very popular in the States, are now being manufactured in Canada. The reader will see by an advertisement in this number, that they may be ordered at any of the principal cities on the line of the Great Western Railway.

QUALITY OF LANDS ON THE MADAWASKA, &c.

It may be of interest to some of our readers to learn the situation and quality of the Government Lands offered for settlement north of the Counties of Addington, Hastings, &c. Contradictory statements are abroad, and it is therefore the more important to ascertain the real facts, and to make them known. The statements of the Minister of Agriculture will be found on our advertising sheet, but the following remarks on the character of the land on the Addington Road are from the pen of Mr. Perry, the Government Agent, who has traversed the country of which he speaks. His remarks are in answer to the following questions submitted by a friend who wished to make use of the information in a publication he is preparing:—

QUESTIONS.

1st.—Are the lands in the Back Country of Addington and Frontenac, of a quality to reward the Agriculturist for his labors?

2nd.—Are not the lands so broken by the granite hills as to isolate the Settlers, and thus mar the social interchanges of life?

3rd.—What distance lies the Settlement in getting supplies, and which is the best road to the land?

4th.—How and where will settlers dispose of their surplus if they have any?

5th.—What is the probable future of the Settlement?

To question 1st.—"Are the lands in the Back Country of a quality to reward the Agriculturalist for his labors?"

In my opinion they are. The soil is a sandy loam, more or less covered with vegetable mould. It is made up of the decomposed granite hills that crop out at stated intervals all over the back regions. The silica of those rocks is crumbled to atoms by the agency of the acids contained in rain and snow water—by the solvents in atmospheric air—and by the aid of a little obstrusive plant called litchen which thrives in our driest weather on the bare granite, and without seeming effort, by the action of its root detaches small particles, and deposits them at the base of the rocks in debris. Thus in my opinion, the soil is made up of the silica or sand of the surrounding rocks. There is a feature in the growth of the timber on the lands in question, in connection with the fertility of the soil, that I do not understand. Where hard wood predominates, the soil is a dark loamy sand; where pine takes the lead, a pale yellow sand is found. The whole drift has one common origin. The yellow sand bears by far the most lofty and gigantic trees; some having yielded to the lumbermen seven thirteen feet logs, the lumber of which was fit for the American market; and one stump which I measured and found it to be five feet two inches across, not including the bark; and yet the yellow sand gives a much less yield of grain to the farmer. Where dark loams have had a fair trial, the yield has been equal to the most favored soils of the frontier Townships—wheat, rye, oats, peas, barley and Indian corn, all flourish; potatoes and other bulbus roots exceed the growth in older Townships. I have in no instance seen clover tried, but am of opinion that at no distant day, if attention is turned towards it, that clover seed will be one of the staples of this section of the country.

The next or second question asked—Is not the land so broken by the granite hills as to isolate the settlers, and thus mar the social interchange of life? I think that if I say no to this question, I shall be fully borne out by facts; the granite ranges run nearly east and west and consequently the valleys that lie between here and the Madawaska; the first and largest valley is found beyond the rocky range, or fourteen miles north of the river Clare. This range of rocks, over which the Addington road runs by winding through its gulches, is nearly a barren waste; then you come on land that is not fit for settlement; it is about five miles from where the rocky range loses itself, to the rear of Kaladar; about six miles of the road lots are entered for settlement, making a distance of eleven miles across the valley, that in all probability will be settled. Nor is this all; many lots beyond those taken, afford a sufficient amount of plough land to ensure their settlement before you come to the next broken range, which occurs at the head of the

Massenoga Lake; and even there some redeeming qualities are found. You remember that I said the valleys run east and west, so a large settlement will find its way in there ere long. I do not wish to be understood to say, that all the area here spoken of, is fit for cultivation; there is too much broken land abounding through this district to suit me, but I wish to say that the Township of Kaladar has a fair portion of excellent land —that of Barrie, Denbigh and Asbley will be, when cleared and tilled, equal in quality of plough land, in proportion to their area after deducting the water, to either Camden or Earnestown. Anglesea, Abenger, and Effingham are more broken. After you leave the head of the Massenoga Lake, the road passes over a rough range of rocky ground covered with fine groves of pine interspersed with patches of hard-wood land, are sufficiently numerous to induce settlers to occupy probably the road line through this range; but as you approach the Madawaska river, as large in appearance as the Trent, you pass a rich rolling country watered with the purest springs, whose tiny brooks are filled with speckled trout, and whose hills are clothed with red beech, that have innumerable marks of bears' claws, that ascend and descend them annually for the Mast. If you ascend a high hill that skirts this valley at whose base the road runs, you would see down on both sides of the river the pale green foliage of the hard-wood in strong contrast with the deeper tints of the evergreens. The hard-wood land on this side occupies seven or eight miles in width and to all appearance is as wide as the other side of the river.

The 3rd question is, "What chance has the Settlement in getting in supplies, and which is the best road to the land? There are two ways for Settlers to approach the lands, and supplies can be got by either. First up the Madawaska from Bytown and Perth—this is but a winter road, and cannot be travelled until frost sets in and bridges the lakes and rivers; by this route up to this time, all the provision and provender has been sent to supply the lumbering districts on the Madawaska; and the supplies have to be got in one year before they are used: this route expensive and unsafe as an open winter or a general thaw closes the road; the other is the Addington road itself; this is much the safest, and cheapest and the shortest route, it being about forty miles nigher the bridge over Madawaska, from Kingston than from the city of Ottawa, and the whole of the Addington Road is securely bridged; so that when the snow sets in, the road is available and ere long it will be a summer road as well: the main obstruction at the present time is the first sixteen miles from Clara, on which some forty or fifty men are engaged with bars, picks, barrows, cars, &c., and with the aid of fire and sledges, are battering off the high points of the granite rocks, and filling up the low places, so that in a few weeks both settlers and lumber merchants can receive supplies any day in the year. The best way at present for people at a distance to approach the land is, to take Haye's Stage which starts on the east side of the Market House in Kingston, every Tuesday and Friday, and it will set them down within five miles of the commencement of the Addington Road, but as soon as the cars start, Mr. Hayes intends to run his Stage to Napanee, which then will be the shortest and cheapest route to the lands on the Addington Road. Tamworth, Centreville, Newburgh, and Napanee, all villages through which the stage will pass afford facilities to obtain furnishings for the settlement of shanties.

The 4th question is, How and where will they dispose of their surplus if they have any?

Every intelligent man knows that if there be no avenues to dispose of the surplus produce when raised, that it will destroy the energies of any man, however industrious he may be; he will not put forth his physical strength merely to raise grain to rot in the sacks, or perish in his granary. I assure you that this alternative will never take place in my opinion, and if it do, the time is so remote, that this generation need not entertain any fear about the matter not that there is to be no surplus raised, for if its settlers use but common and industrious habits, in the space of three or four years a large surplus must be the consequence; for the rich lands of that region will pay the farmer with no niggardly hand, but the demand will for years overreach the supply, new settlers will be consumers before they are producers; and the vast amount of lumbering all along the Madawaska and its tributaries will require more than the Settlement can yield for years. Last winter a score of sleighs passed daily at the end of the bridge I was helping to build over the Madawaska, loaded with pork, flour, oats, hay and groceries, and I was informed by some of the lumber merchants, that the supplies had hardly commenced going up. There are forty miles of a pine growing country between here and the Madawaska, not cut off; and if two miles per year should be taken, it would last for twenty years yet; and if the supply shall exceed the wants of the lumberers and settlers, the excess can be

converted into beef, mutton and pork and driven to the railroads and pass the frontier markets.

The last question is "the probable future of the Settlement?"

The answer to this in some measure must be like a fancy sketch. The imagination must stretch forward, and predict the future, it must unfold the leaf of fate; and read events that are locked up in the escritoire of time. Sages tell us that we may judge the future by the past; if so, I look forward at no distant day, for an industrious, intelligent and rich population to be spread over the lands of our interior. The first half of the nineteenth century has changed the destiny of the human race; and in no place has its effects been visibly portrayed than in our Province. We are just emerging into manhood, untramelled by customs or manners made venerable by their antiquity. The first settlers in our country had to contend with many obstacles that have no existence now, they had no Roads, nor Mills, nor Mechanics, nor had they any place to apply to for bread for their famishing children, or seed grain, if a crop failed them, nor had they teams to assist them to move the ponderous loads from their new chopped fallows. Yet by incessant toil, perseverance and economy, they prevailed and made homes worthy of themselves. And shall we, the sons of such sires, hesitate to leave the refuse shallow soils that overlay the limestone beds of the frontier townships; and go on in the rich loams of the interior where Government is constructing a good summer road, over a barrier that would have eternally shut out private enterprise. Our fathers plunged into the forest with a scanty stock of provisions on their back, followed by our mothers, with the wardrobe and cooking utensils threading their way by untrodden paths to the place where they intended to plant their vineyard. Contrast the events of their settlement with the facilities that we enjoy; we jog along by steam, we converse by lightning; and think you, that our new Settlement will be debarred the privilege of partaking of the recently developed impetus that impels forward the destinies of the human race, I tell you no! A decade will suffice to reform what formerly consumed a century; in ten years the rich valley of the Madawaska, and the no less rich tufts or valleys that lie scattered among the granite ranges between here and there; will teem with life and the bustle of commerce. The stroke of the axe, the noise of the shuttle, and the ring of the anvil, will comingle with the bellowing of the herds and bleating of the flocks, villages will rise, having churches whose tinned steeples reflect the rays of the morning sun; and as each succeeding Sabbath appears, call forth by the reverberating sounds of their bells amongst the valleys and hills, well dressed youths, the children of the present race, to worship the God of their Fathers.

THE HARVEST IN ENGLAND.—We copy the following from the *London Agricultural Gazette*:—"We have collected returns of the wheat crop from 207 districts scattered over the United Kingdom, 196 reports of the barley crop, 200 reports of the oat crop, 137 and 112 respectively of beans and peas, and 209 reports of the green crops. Of the wheat, barley and oat harvest reports, 73, 68, and 78 respectively state that the crop to be an average one; 114, 98, and 96 respectively put it at above an average; and 15, 30, and 25 respectively at below an average. We think that taking into account the extent of land under wheat which is undoubtedly much beyond an average, along with the generally favorable opinion of the crop, we may be satisfied that is now as large a quantity of home-grown wheat within the country as there ever yet has been. We quite believe that the yield of wheat will prove an unusually productive one. As to the other crops, we may shortly say that of the returns of the barley crop 30 put it as an average, 98 at over average, and 68 as under average. Of the oat crop reports, 26 put it as average, 96 as over average,and 78 as under average. The acreable produce of the barley crop is thus at least as much above an average—and we believe them both to be unusually good—as that of oats; but to the former must be added the consideration that so few acres of the barley crop probably never have been grown as has been the case this year. The pulse crops are generally good, especially those of peas, and on the green crop returns we may just add that they refer exclusively to turnips, mangel-wurzel, &c., not to grass, and hay, nor to potatoes. They are, generally, it will be seen, unfavorable. As to the hay crop, including the first cut of clover, it has been unprecedently well got, and abundant. The opinions we have had given us of the potato crop are generally favorable. The disease is spoken of in a few places, but by no means generally."

AN EFFECTUAL METHOD FOR POISONING RATS.

Mix together arsenic and any kind of grease, smear the inside holes of egress and regress. The rats if they do not eat the mixture, and they are often too suspicious to venture upon poisoned food, will yet destroy themselves by licking their coats, to remove the impure substance adhering to it, in their passage through their holes, and thus effectually destroy themselves.

This plan was successfully pursued in an old house infested with rats in the old country; in a few weeks time not one of these creatures was to be heard or seen about the place. The granary and barns were also freed in the same simple manner.

Disagreeable as is the odour of the rat and mouse, they are scrupulously attentive to keeping their fur clean from any impurity.

TO RESTORE THE BARK OF TREES THAT HAD BEEN INJURED BY MICE, &c.

Let the ragged and bitten edges of the injured trunk, or branch, be cut neatly and carefully round with a sharp knife, above and below the bare place, so as to present a perfectly smooth edge, then from the branch of a lively free-growing tree, cut a piece of bark, measuring the exact size, as nearly as possible, of the part to be covered; when you have fitted the piece nicely in, so that the edges meet without leaving any vacancy, with a little grafting wax or gum, as pine or cherry gum, smear the cracks so as to cover all the joinings, of which there will be three, bind a strip of cotton or linen cloth round the joined bark, and the work is done. This plan I once saw successfully practised in my father's garden.

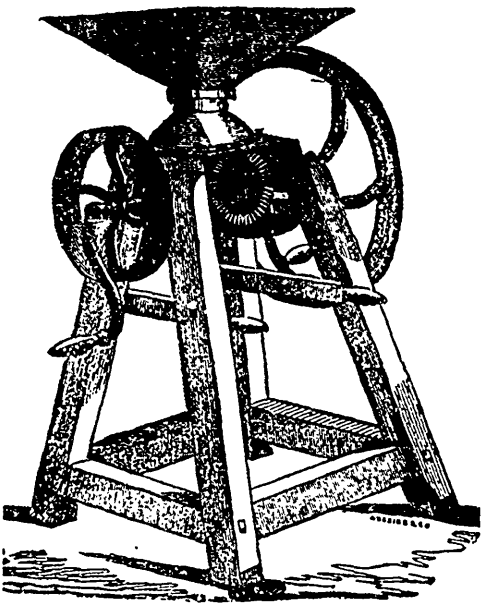
If the wound is covered early in spring, the bark thus artificially introduced, will supply the channel of communication that has been cut off, on the principle of the graft and bud system. At any rate the experiment is worth a trial, it is neither difficult nor expensive, and if successful will amply repay the gardener and farmer's trouble.

Oaklands, Rice Lake, Sept., 1856.

CLOVER FOR MANURE.—The *American Agriculturist* strongly recommends the turning under of crops of clover as a means of fertilizing the soil. It thus answers those who contend that it is simply putting back into the ground a crop grown from it:—"If we take a box of earth containing, say 600 pounds and weigh it carefully, and then sow an ounce of clover seed in it, we can continue to remove successive crops until we have taken off more weight of clover than the entire weight of earth in the box at first; and this too, without adding anything but the purest water. After we have removed this crop, we shall find the box of earth to weigh more than 600 pounds, (its original weight), at least, nearly as much more as the weight of the roots remaining in the contained soil. The clover grown has been derived from the air; and such is the case with all plants. Their principal food comes from the atmosphere, from which it has been extracted by the surface of the leaves."

HOW TO HARVEST CORN.—Let the corn remain on the stalk until it is dry and fit for the crib.

Enter the field with horse and waggon, straddle every fifth row, with a man on each side and a boy in the rear. Break off the ears as rapidly as possibly, throwing them into the wagon; this saves carrying or handling over, not being particular about taking off all the husks; secure your corn in any convenient place until winter; a pen of rails will answer. The husks that remain will keep the corn from spoiling in the crib. When you wish to market your corn put it on a floor, thresh with horses, the husks will not be in the way, rake off, run through a mill, and your corn will be bright and clean, and in first-rate condition. Two men and a boy can pick and crib two hundred and fifty bushels of ears in a day.



HAND AND HORSE GRAIN MILL.

The above represents another useful iron mill, which is much used in the States. It will grind grain fine enough for family use. It is also well adapted for what is called "chopping" grain. It is very efficient and durable, and may be driven either by hand or horse power. With the latter it can be made to grind fine about four bushels per hour, and a larger quantity if coarse. When the plates, or grinding surfaces are worn out, they can be replaced at small cost. One of these was exhibited in the foreign department at Kingston, and we presume may be purchased of Mr. Rapeljie & Co., Port Hope.

ARE THE WEEVIL ALL MILDEWED?—Our neighbor, John O. Wing, of Winthrop, met us the other day, quite *jubilant* with the idea of a first rate wheat crop another year. John's bump of hope, always large, was particularly animated on this occasion, for while we were deploring the damage done to the present crop, he was rejoicing in it, because of the extra produce that was to come off in 1857, in consequence of our present disasters On enquiring into the grounds of his prophecy, he said that he had examined the wheat in several fields during the wet weather and he found that the wet and drizzly weather which had caused rust and mildew, and shrivelled the wheat, had also brought destruction to the weevill, which he also found shrivelled and mildewed, as well as the wheat. We hope that this is true. We could well dispense with one year's crop, if, by its destruction, we should also be rid of this little great destroyer. May he be everlastingly mildewed.—*Maine Farmer.*

SMALL FARMS.—We desire to impress on the common-sense reasoning of every man, the paramount importance of having no more land in cultivation than can be well cultivated. By no means attempt to manage no more than you can manage well. Be a farmer, not a mere scraper, lazily scratching up sufficient earth to destroy the face of the soil, and throw seed away, or you will always have to scratch hard for a living. But make your farm a source of pride, and it will surely become a source of profit. Make the object to be not to have many, but rich acres.

THE WHEAT-FLY IN PRINCE EDWARD.

To the Editor of the Agriculturist.

Demorestville, Septen.ber 8th, 1856.

Sir,—In a late number of the *Agriculturist,* you advert to the ravages of the Wheat Midge; and intimate that the farmers in the sections of County where the Midge has done injury, have been remiss in informing the public through your columns, of the extent of such damage, and of the habits of the insect.

I observe, too, that the Minister of Agriculture offers certain premiums for Essays on the nature and habits of the Wheat Midge. A step altogether, in my opinion, in the wrong direction; but such a one as might be expected from a Lawyer, placed at the head of the Agriculture of this Province.

Who will be the Judges of these Essays? The Minister of Agriculture will probably be one, and other gentlemen will probably be selected, able no doubt to judge of the merits of the composition, of the style of the Essays; but who will be, very probably, entirely ignorant of the question at issue. How then can they arrive at a correct conclusion?

You are very right in complaining of the backwardness of farmers in this country, in writing for your paper. But few original communications appear; and not many of them are evidently written by practical farmers. A good reason may be given for this. As a class, we are exceedingly averse to writing; and but few of us in the rural Districts, have ever written for the press. The Midge has done a good deal of damage to the wheat in the County of Prince Edward, for the last six years. It usually appears about the last week in June, and may be seen immediately after sunrise and before sunset, depositing its eggs upon the young kernels of wheat, by inserting an apparatus with which its body terminates between the edges of the chaff. I shall give it no *learned* description. It is a small orange-colored fly, and cannot be mistaken. It deposits its eggs, as far as my observation extends, only when the *wheat is in blossom.*

This wheat-destroyer is moving westward, and will most assuredly spread over Canada and the far West. We can neither prevent its coming, nor drive it away when once amongst us. It will certainly to a great extent diminish the wheat crop; but with such care as farmers may take, I do not anticipate its total destruction. The earliest varieties of wheat, such as the Soule's and Mediterranean, sown early on well-drained land, and situated where there is a free circulation of air, usually escape. On well-drained soils, the wheat plants come forward and head out together: on undrained lands, many of the plants are retarded in their growth, the period in which the field is in blossom, is much prolonged, and the Midge has a much longer time in which to operate. The Midge is very destructive in fields of wheat which are much sheltered by woods or hills, so that there is not a free circulation of air. And I have observed that when high winds prevailed, during the time when the wheat was in blossom, but little mischief was done.

If the Minister of Agriculture would search for an earlier variety of wheat, adapted to our latitude, than what we now have, he would confer a lasting benefit on the farmers of this County.

A Young Farmer.

Yarmouth, September 22, 1856.

MR. MCDOUGALL,

SIR—I see in the *Agriculturist* for September, 1856, a communication from Mr. Wade, of Hamilton Gardens, recommending the sowing of the Fife or Scotch Wheat late, so as to escape the depredations of the wheat midge or weevil. Would you be kind enough to inform me where I could get the wheat described by Mr. Wade. I would have written to him, but I was unacquainted with his P.O. address. We have in this section of country, what is called Fife Wheat; but from my experience I do not think it would answer to sow so late as that described by Mr. Wade, or yield any thing like it. And I am anxious to get some that is good, and if you can assist me in procuring a few bushels, you will confer a favor on

Your obedient servant,

WILLIAM MICHAEL.

[We recommend Mr. Michael to send his order to Mr. Wade, Port Hope, who, if he cannot fill it himself, will no doubt put it in the hands of some person who can. There is very little spring wheat grown near this city, or we would have taken the trouble to select a few bushels for Mr. Michael.]

SOWING PLASTER.

MESSRS. EDITORS.—Can you inform me through the *Co. Gentleman*, if it will pay to sow plaster on light sandy land for wheat, oats, corn, potatoes, and meadow, and which is the best time to sow—at the time of sowing and planting, or after the crops are up and rolled in? Would it not be well to brush the grass land after the plaster is sown? I can get plaster at $1 per bag of 200 lbs.—how much will be best to put on an acre? Will it do to mix the plaster and leached ashes?—WM. LAMBERT.—*Ticonderoga, N. Y.*

Plaster is one of those special manures, which sometimes produce surprising results, and at others no visible effects whatever, without any apparent cause for this difference, but which is doubtless owing to peculiarities in the composition of soils which analysis cannot detect. Its utility can be determined only by actual experiment in the different localities where it is used. Under favorable circumstances we have seen a bushel per acre, double the growth of clover, or add fifteen times its own weight to the crop. It has proved beneficial to corn on light land, but its effects are not usually very apparent. On wheat, oats, and grass crops not clover, it is not often of much value. It is said that if sown in autumn on wheat, its best results will be produced. It is commonly sown after the crops are up, the fall of rain disolving so minute a quantity, and carrying it among the roots of plants. We see no advantage in brushing the grass. Plaster is found to be unnecessary in much larger quantities than a bushel per acre. Ashes may be mixed with it without injury, in any experiment with these two manures.—*Country Gentleman.*

SNOW BREAD.—We find the annexed paragraph in one of our exchanges. It is curious if true:—All persons where snow abounds, are not perhaps aware of the value of the fleecy flakes in making light, delicious and wholesome bread. There is no 'raising in the world so perfectly physiological, as good, fresh, sweet snow: it raises bread or cakes as beautifully as the best of yeast, or the purest acids and alkalies, while it leaves no taint or fermentation, like the former, nor injurious neutral salt, like the latter. Indeed, it raises by supplying atmosphere wherewith to puff the dough, while the other methods only supply carbonic acid gas."

CURRANT DUMPLINGS.—Pick and wash a pound of currants, dry them, and lay them on a plate before the fire. Chop a pound of suet very small and put it into eight spoon-fuls of ginger; now add the currants, and mix all well together; then beat up four eggs with a pint of milk, add this by degrees to the other ingredients, and make it into a light paste; roll it up into balls as large as a turkey's egg, with a little flour; batten them a little and put them into boiling water; move them gently that they may not stick together. Half an hour will boil them.—*Germantown Telegraph.*

WORK FOR THE SEASON.

It is fashionable in Agricultural journals to give once in a while an article with the above heading. We will follow the fashion. It is important too, and we would not omit anything important. These directions moreover, should be adapted to the wants of the reader of each paper. We will try to adapt our remarks to the wants of our's.

1. We would say to all our readers—*kill all the weeds that are ripening on your grounds.* Weeds are enormous feeders, and fast eat up the strength of the soil. Kill them *now* and destroy the seed, and your work next year in the same line will be greatly diminished. On grounds which you wish to make very clean, (we think it will pay everywhere,) pull up the weeds by the roots, being careful not to scatter the seeds, and carry them all to some corner, and make a pile of them. Let the heap lie, turning it now and then, till next fall, or till one year from next spring. By that time the seeds and roots will have rotted and the whole mass be made into manure. A speedier way and with some of the worst kinds of weeds, the *best* way perhaps is to pull up the weeds, let them dry, and then burn them. If you are careful in gathering them, seeds and all, their destruction in this last way is sure. Spanish needles, or "stick-tights," as they are sometimes called, are very abundant. Docks should be rooted out. Thirtles of all kinds should be treated in the same way.

II. *Do as much of your plowing and manuring as possible this fall.* This is good in almost all kinds of soil, as it allows the frost to soften the earth more perfectly, and kills the grubs and worms that hath afflicted us so much of late. But fall plowing and manuring are especially needful in clay soils, because it is so difficult to do the work properly in the spring, on account of the dampness of the ground. When you do your plowing this fall, see that furrows or surface drains are made to let all water run freely off. Follow these directions carefully and you may increase greatly your crops for 1857.

III. For the same reason, we would say, *Spade in a good wheel-barrow load or two of well rotted manure, with two or three shovels full of slacked lime, or old broken plastering* under each of your bearing apple trees. Do it this fall, and the next year may be a bearing year as well as this. By pursuing this course, or one very much like it, Mr. Pell of Pelham, on the Hudson, says he secures fruit from his trees every year. Try it. In spading, observe first, not to spade deep *very* near the tree. The spade will strike the roots and injure them if you do. *Secondly,* stand with your *side* towards the tree, while spading, not with your *face* towards it. By observing this caution you will break far fewer roots. Thirdly, dig as deep as you can when you get away from the tree far enough not to hurt the roots.

IV. *As soon as the leaves fall and the ground is dry enough, set out all the apple trees you wish to set out for next year.* We have frequently recommended transplanting in the fall. We repeat the recommendation now. We refer of course to the apple tree and other hardier trees. The tender trees it is safe to transplant in the spring. The advantages of fall transplanting are, *first,* it saves time, for the soil in the spring is wet. *Second,* the tree becomes firmly fixed by spring. *Third,* the mutilation of the roots and branches retards the growth of the tree in the spring. This is partially avoided by transplaning the fall previous.

Keep the apples picked up under your apple trees every day. Feed all the wormy ones to the pigs, or boil them up for your cattle. Thus you will save the apples, and (what is of more consequence,) prevent the great increase of the "millers," that lay their eggs in the blossom bud of the young fruit in the spring.

VI. *Mark the trees that bear poor fruit, and graft their tops with the best kinds next spring.* It is just as cheap for a tree to bear good fruit as poor fruit, remember this.

VII. *Pick by hand all apples to be kept during the winter.* They should be gathered and placed where they will keep cool and dry. They should not be placed in large heaps. A large airy chamber, or an open space in the barn is a good place to keep them till winter comes. Of course they should not be allowed to freeze; but above the freezing point, the colder they can be kept the better.

VIII. *All the apples you can now sell at good prices, dispose of at once.* But if you cannot sell at good prices now, and have good keeping rooms, keep all durable fruit; it will sell before spring, or in the spring.

CASE HARDENING.

To the enquiries of a subscriber, who signs himself "Young Mechanic," whether a piece of wire say ten inches long, can be made hard, while the other part remains soft as wire usually is? we answer, that it can be done by what is called "case hardening."

By this process, the iron subjected to it is covered with a thin portion of steel, or, it would be more proper to say that a portion of the outside is converted into steel.

If our friend wishes to render, say one-half of his piece of wire, or other iron, harder than the other, all that will be necessary to do will be to plunge one-half into a mixture of materials which will yield or give carbon to the iron, and it will thus become steel, and may be hardened like any steel. As this must be subjected to heat it would be well to cover over the part required to be kept soft, in order to prevent its oxydizing or being burnt, with a coating of clay or whitewash.

The material generally used for this purpose is a mixture of hornshavings, burnt leather, and sometimes bone-dust. These are put into a sheet iron case, or box, surrounding the piece of wire to be case hardened. A wire is wound around the box or covering—the joints luted over with clay mortar to keep out common air, and the whole subjected to a red heat for some time, according to the size of the thing to be case hardened, say from half an hour to three hours. The box or case may then be opened. If, on examination, the conversion of the outside is not complete, it may be subjected to a second heating.

By a little practice, our young friend will undoubtedly succeed in accomplishing what he desires in this matter.—*Maine Farmer.*

A SELECTION OF TWELVE OF THE MOST ESTIMABLE VARIETIES OF STRAWBERRIES.

Princes' Magnate—P, the largest variety yet produced in our country, rounded, and some berries compressed, scarlet, rich flavor, productive, and highly valuable. A very showy berry for market; and a very remarkable and distinct fruit. Plant extremely hardy and vigorous, with large broad dark-green foliage. The leaves never burn during summer, nor are the plants ever injured by the winter.

Prince's Climax—P, very large, conical, beautiful bright scarlet, a splendid fruit, good flavor, very productive, estimable; plant vigorous, with pale-green foliage.

Imprial Scarlet—P, second only in size to the two preceding, to which it is rather superior in flavor; the form obtuse, conical, or rounded, scarlet, handsome, and very showy, juicy, and sprightly flavor, firm, and well-suited for market, productive: plant very vigorous, foliage pale-green, very large and luxuriant, a remarkable variety, very valuable for the size and beauty of its fruit and for its other qualities. This, and the preceding variety are of larger average size than Hovey's Seedling, and much superior in color and flavor, and consequently better suited for market.

Imperial Crimson—P, large, short cone, or rounded, dark scarlet or crimson, fine color, sweet, fine flavor, productive; a first-rate berry, firm for market. It is nearly as large as McAvoy's Superior, and has the qualities for a market fruit in which that variety is so deficient.

Le Baron—H, early, very large, obtuse cone, dark-scarlet, not showy, sweet, rich, melting, highest flavor of all the large varieties, very productive for one of its sexuality, and continues long in successive bearing; foliage tall, light-green, and very vigorous, a seedling of the Old Swamstone.

Superba—P, very large, obtuse cone, bright light scarlet, a beautiful berry, juicy, sprightly, moderately sweet, very productive; foliage large and vigorous. A seedling from the Montevides or Chili, and precisely equivalent to obtaining a Pistillate variety from the British Queen.

Rosalind—P, very large, obovate, beautiful light scarlet, moderate, but good flavor, very showy, scarcely firm enough for long carriage to market, very productive; plant vigorous, with large broad foliage.

Eclypse—P, early, large, conical, splendid fruit on long penduncles, and has the remarkable property of ripening all its berries at the same time, bright scarlet, high brilliant color, fine flavor with slight acidity. It is one of the greatest bearers of all

strawberries; and a full and profuse crop may be earlier supplied for the market from this variety, than from any other: plant vigorous, with large foliage. A very striking and remarkable variety.

Ladies' Pine—P, medium size, perfectly round, beautiful light scarlet, very sweet, highest and most exquisite flavor, productive; foliage dark-green, as if varnished, vigorous growth, with large fruit stems. This most estimable fruit will be deemed indispensable by every amateur who once tastes it.

Magnificent—P, very large, obtuse cone, light scarlet, good flavor, very productive, very valuable.

Diadem—P, very large and showy, rounded, beautiful light-scarlet, pleasant flavor, a remarkably fine and beautiful berry; plant very robust, vigorous, and hardy, with tall light-green foliage, very productive: a seedling of the Iowa.

Huntsman's Favorite—P, medium size, obtuse cone, bright scarlet, very handsome, sprightly, juicy, sweet, and very fine, productive, highly valuable. This variety was selected by Professor Huntsman, from a bed of my seedlings, and was named as above.

Crimson Perfumed—P, large, obvate, or rounded, crimson, sweet, juicy, high perfumed flavor when fully ripe, very productive, valuable; foliage dark-green.

Malvina—P, large, obvate, bright crimson, juicy, sprightly, good flavor, very productive. This variety greatly resembles Hovey's Seedling, (its parent) both in the growth and foliage of the plant, and in the form of its fruit. But when contrasted, it is rather smaller, with the advantage that the berries are of a more average size, and less unequal than that variety; the color is a bright red, the berries more juicy, and of a more spirited and higher flavor, and it ripens fully a week or more before the Hovey, thus obviating the disadvantages of that variety. It is firm and well-suited for market; foliage dark-green, and luxuriant when in full growth. A grower who sent a considerable quantity to market the past season, contracted for the whole at 31 cents per quart.

Wm. R. Prince,
Flushing, N. Y.

The Plow—An Improvement Wanted.—In our volumes of last year, under the above heading, will be found an article in which we called attention to a defect in the action of plows, a remedy or preventive of which would certainly be a great improvement. The defect to which the attention of our readers was called in that article, seems the *necessary* result of the present form and mode of action of the plow, which is in reality a *wedge* forcibly dragged through the soil, lifting up that portion which is above it, at the expense of hardening or making more compact that portion which is below it. This mode of action has a tendency to harden and glaze over the subsoil, or that part of the soil on which the sole of the plow rests in its passage, and is productive of several injurious effects; as for example: 1. It makes a compact surface very hard to break through or get under in subsequent plowings. 2. It makes the lower surface so dense that the roots of plants must often find it impossible, or very difficult to penetrate it; and 3. It forms a groove in which surface-water must sometimes be retained long enough to injure the growing crops.

The above is the defect which it is desirable to get rid of. The improvement wanted is some contrivance by which this defect could be prevented or remedied. Nothing of the kind has been as yet proposed, so far as we can remember, by any of our ingenious countrymen. The following proposal was lately made at an agricultural meeting in Great Britain. The object, let it be remembered, is to preserve the bottom of the furrow in a pervious condition, and to get rid of that compactness which, in addition to the evils already named, must be a great obstacle to the perfect drainage of a clay soil. The remedy proposed consists in the adaption of rollers to the sole shoe, or in adding a hind wheel, notched or teethed, so that when following in the track of the sole shoe the notches or teeth may break up the smooth track formed by its action. The proposer of these two modes of improving the plow seems to think most favourably of the idea of rollers, (whose mode of action, however, he does not specify,) as they would not only prevent the glazing and hardening, but would in his opinion, lessen the draught.

We submit these suggestions to our ingenious inventors and mechanics, and to our agricultural brethren of a mechanical genius, in the hope that they may prove a germ of a much needed discovery or invention.—*Country Gentleman.*

RECIPES.

Tomatoes for Winter Use.—Late in the season, take tomatoes not too ripe, cut them into thick slices, salt them lightly in a flat dish, sprinkling the salt over them as you cut them. Pour off the water; put them in a jar, strewing black and Cayenne pepper through them and a few slices of onion, two wine-glassfuls of sweet oil, a few blades of mace, and vinegar enough to cover them up tight to exclude the air.

Baked Sweet Apples.—Wash well the apples; place them in a pan with a very little water, that the juice may not burn, if they are to be cooked in a brick oven; then put the apples in a jar, cover them close, and bake them five or six hours. Sweet apples should be baked long after they are tender.

Baked Sour Apples.—Wash well the apples; place them in a pan; pour in a teacupful of water and one of sugar; bake them slowly till done. Eat them with cream and the juice which cooks from them.

Buckwheat Porridge.—Take a quart of rich milk, and after boiling it hard, stir in as much buckwheat meal as will make it of the consistency of thick mush, adding one teaspoonful of salt and a table-spoonful of fresh butter. In five minutes after it is thick enough take it from the fire. If the milk is boiling hard and continues to boil the meal is being stirred in, very little more cooking will be required. It should be placed on the table *hot*, and eaten with butter and sugar, or with molasses and butter. This is sometimes called a five minute pudding; it is excellent for children as a plain dessert, or for supper. Some add a seasoning of ginger or grated nutmeg before sending it to the table.

Corn Meal Pudding without Eggs.—Take six table-spoonfuls of meal, and stir molasses enough in it to have the meal all wet, and no more; that will sweeten it enough; then take one quart of milk and boil it; pour it on the meal boiling hot; stir the meal while pouring the milk on to it so as not to have it lumpy: stir in three table-spoonfuls of wheat flour, wet with a little cold milk; salt it, and bake two hours; add spices, if you like. This will make an excellent pudding.

Queer Remedy for Whooping Cough.—The Springfield *Republican* says:—A very great relief we are assured upon practical knowledge, is obtained by wearing about the neck a fresh tarred rope of the size of a bed-cord, covered with a thin ribbon. The aroma of the tar has a wonderful effect in quieting the cough and preventing the spasms.

Ploughing.—Sandy soils may be plowed early, and while wet; but clay soils should never be disturbed till they are dry enough to crumble, or pulverise when turned up. Clay soil, being malleable, and but slightly elastic, the compression, or packing, by the mould-board, will not swell out again; and one plowing of clay land, when wet, will do it more harm than twenty good ploughings can afterwards remedy. It is on this principle, that an old road can never be made good soil.

To Preserve Herbs.—All kinds of herbs should be gathered on a dry day, just before, or while in blossom. Tie them in bundles and suspend them in a dry airy place with the blossoms downwards. When perfectly dry wrap the medical ones in paper and keep them from the air. Pick off the leaves of those which are to be used in cooking, pound and sift them fine, and keep the powder in bottles, corked up tight.

Cramp.—Those who may be subject in the night-time to that excruciating pain called cramp, will doubtless be glad to learn that by tying any kind of a bandage very tight around the leg, immediately above the knee, this unpleasant sensation will be instantaneously removed.

A Few Words about Smut in Wheat.—In harvesting last summer, I discovered an ear or head which was all smut but five or six grains. I determined to try an experiment upon it. I sowed it in the first month. Four of the grains germinated, and I did not have one head or ear of wheat—all smut. Is there any way whereby we can completely eradicate it? If so, we would like to have the information. We have a fine harvest, but a good deal complaint of smut. D. Farlow. *New Market, Randolph county, N.C.* [Smut may be in a good degree, if not entirely, prevented, by washing the seed thoroughly (the last washing in brine) and then rolling it well in dry powdered water slacked fresh lime, some hours before sowing. After being thus treated, it should not be put into bags which have had smutty wheat in them.—*Country Gentlemen.*

Revelations of the Microscope.—It would be a vain attempt were we to try to convey to our readers any idea of the great discoveries which have been made by the microscope, or of the important purposes to which it has been applied. Second only to the telescope, though in many respects superior to it, the microscope transcends all other instruments in the scientific value as well as in the social interest of its results. While the human eye, the telescope and microscope combined, enables us to enjoy and examine the scenery around us, to study the forms of life with which we are more intimately connected, it fails to transport us into the depths of space, to throw into relief the planets and the stars, and to indicate the forms and arrangements in the worlds of life and motion which distance diminishes and conceals. To these mysterious abodes so long unrevealed, the telescope has at last conveyed us. It has shown us those worlds and systems, of which our own earth and our own system are the types; but it fails to enlighten us respecting the nature and constitution of the celestial bodies, and the forms of life for which they were created.

In its downward scrutiny, as well as in its upward aspirations, the human eye has equally failed. In the general view which it commands of animal, vegetable and mineral structure, it cannot reach those delicate organizations on which life depends, or those structures of inorganic matter from which its origin and composition can be derived. Into these mysterious regions where the philosopher has been groping his way, the microscope now conducts him. The dark abodes of unseen life are lighted up for his contemplation—organisations of transcendent beauty appeal to his wonder—new aspects of life, new forms of being, new laws of reproduction, new functions in exercise, reward the genius of the theoretical and practical optician, and the skill and toil of the naturalist. With wonders like these all nature is pregnant; the earth, the ocean and the air—times past and times present, now surrender their secrets to the microscope.

The invisible life of pre-Adamite ages has been embalmed in the rocks and stones buried deep in the bowels of the earth. Its siliceous and calcareous defences re-appear in the flints, the limestones, the trachytes, the chalks, the opals, the tripolis, the polischiefers, the guanos, the soils, and the muds of every region of the globe. It is ejected from volcanoes in the arctic and in the torrid zones—it is breathed in the sirocco—it falls silently on the deck of the ship in the Atlantic and in the Pacific oceans, and it is embosomed even in the stony meteors that fall from the heavens.

The invisible life of modern times, as disclosed by the microscope, has been the subject of careful study by the naturalist and the physiologist. All space—within us, and without us, and around us—swarms with its countless millions; and on whatever speck or atom of life man rests his eye, he learns the instructive lesson, that he is not the only creature that is fearfully and wonderfully made. Descriptions and drawings of these singular structures will be found in the works of Ehrenbergh, Pritchard, Quekett, Carpenter, and Griffiith, and Henfrey, and the general as well as the scientific reader will gather wisdom and instruction from their valuable pages.

But however interesting is the study of microscopic life, and however beautiful its forms and startling its functions, the microscope claims a higher value in having given birth to the truly useful science of *Histology*, which describes the structure of animal and vegetable tissues in reference to their origin and development. The elementary tissues of animal and vegetable life have been eagerly studied both in their structure and functions, and physiologists have been thus led to the remarkable conclusion, that each integral portion of the animal or plant possesses an independent life of its own, performing a series of actions peculiar to itself, 'and,' as Dr. Carpenter expresses it, 'that the life of the body, as a whole, (like a symphony performed by a full orchestra,) consists in the harmonious combination of its separate instrumental acts—the circulation of the blood instead of *making the tissues*, simply affording the supply of prepared nutriment at the expense of which they *evolve themselves* from germs previously existing.' A single primordial cell, therefore, is the first step in created life, and from the congeries of cells, to all appearances similar and equal, are developed those various parts of the noble casket which constitutes man, and encloses his immortal soul.

To the exigencies of social life, too, the microscope has made valuable contributions. It detects the invisible ingredients, whether precipitated in atoms or aggregated in crystals, which adulterate our food, our drink, and our medicines. It displays the lurking poison in the minute crystallisations which its solutions precipitate. It tells the murderer that the blood which stains him is that of his brother, and not of the other life which he pretends to have taken; and as a witness against the criminal, it, on one occasion, appealed to the very sand on which he trod at midnight.

DEATH OF DR. BUCKLAND.

The Rev. Dr. Buckland, Dean of Westminster, but better and more widely known from his works on the science of geology, died at Clapham on Thursday last, the 14th inst. Unhappily the intellectual death of Dr. Buckland dates, not from the year 1856, but from some six or seven years ago, since which time a cloud has come over his once active mind and he has spent the evening of his life in confinement. He was born at Axminster, in the year 1784, and received his early education at Winchester School, whence he moved to Oxford in 1801. He took his degree of B.A., in 1805, and was elected Fellow of his College in 1808. In 1813 he was appointed Reader in Mineralogy, and in 1818 Reader in Geology, to the University. The geological museum at Oxford owes its chief excellence to Dr. Buckland's industry. In 1820 he delivered before the University of Oxford a lecture, which was afterwards published under the title of *Vindiciæ Geologicæ; or, the Connexion of Geology with Religion Explained.* The object of this lecture was to show that the study of Geology, so far from being irreligious or atheistic in its consequences, has a tendency to confirm the evidences of natural religion, and that the facts developed by it are contistent with the accounts of the creation and deluge as recorded in the Book of Genises.

In 1825 Dr. Buckland vacated his fellowship by accepting the living of Stoke Charity, near Whitchurch, Hants; in the same year the was promoted to a canonry in the cathedral of Christ Church, and married Mary, the eldest daughter of Mr. Benjamin Morland, of Sheepstead-house, Abingdon. In 1836 he published his Bridgewater Treatise, entitled *Geology and Mineralogy, Considered with Ceference to Natural Theology.* The *Transactions of the Geological Society* contain a variety of contributions from his pen. Among them perhaps the most practically valuable is his *Description of the South-Western Coal District of England,* which after standing the test of thirty years is appealed to by all scientific persons as a standard work. In 1847 he was appointed a trustee of the British Musem, and for two years took the greatest interest in arranging and increasing the geological collection there. He rendered material assistance in the formation of the Museum of Practical Geology, Jermyn-street.

In 1845 Dr. Buckland was preferred by the late Sir Robert Peel to the Deanery of Westminster, vacated by the promotion of Dr. Samuel Wilberforce to the episcopal bench. He set an example to other cathedral bodies by facilitating the admission of the public to view the monuments and other objects of historic interest contained in the Abbey Church. He also exerted himself as a sanitary reformer, and especially in the endeavor to secure the benefits of pure water for the metropolis; with this object in view, he wrote, he spoke, and preached incessantly while allowed the use of *mens sana in copore sano.* As a theologian Dr. Buckland never distinguished himself. The Deanery of Westminster has often proved a stepping-stone for a bishopric; Dr Buckland's two immediate predecessors—Dr. Wilberforce and Dr. Turton—were promoted respectively to the sees of Oxford and Ely.

Experiments with Cast Iron.—The War Department of the British Government is about to institute a series of experiments with cast iron, embracing the following inquiries:—Chemical analysis, specific gravity, tenacity, tension, transverse strain, compressibility, impact and elastic. The Department wishes to secure cast iron of such a quality as will best suit the purpose of gun casting and these experiments with every variety of strong cast Iron that can be procured. Iron masters willing to submit their pig iron to such an investigation are invited to send samples to Woolwich, to be tested. This, we think, is an excellent method to discover and obtain the best of pig iron. The experiments are to be tabulated and published.

High Cranberry.—This shrub, growing in the swamps around us, can be readily cultivated in our gardens as our currant, and is worth more, certainly than the goosebery. It bears rich clusters of scarlet berries. and as an ornamental tree or shrub, is far preferable in gardens to hundreds of those of foreign growth, that are obtained with great expense, and raised with a great deal of trouble. Beside, the fruit makes a rich, delicious sauce, preserve, tart, or pie, aud is invaluable in the pastry department. It can be raised where the common cranbery would fail and as it is easily transplanted, or can be raised from cutting, we are surprised that it is not more cultivated. We hope to see it generally introduced into our gardens.—*Granite Farmer.*

CURIOUS DYING SCENES.

According to Fielding, Jonathan Wild picked the pocket of the ordinary while he was exhorting him in the cart, and went out of the world with the parson's cork-screw and thumb-bottle in his hand. Petronius, who was master of the ceremonies and inventor of pleasures at the court of Nero, when he saw that elegant indulgence was giving place to coarse debauchery, perceived at once that his term of favor had arrived, and it was time to die. He resolved, therefore, to anticipate the tyrant, and disrobe death of his paraphernalia of terror. Accordingly, he entered a warm bath, and opened his veins, composed verses, jested with his familiar associates, and died off by insensible degrees. Democritus, the laughing philosopher, disliking the inconveniences and infirmities of a protracted old age, made up his mind to die on a certain day; but to oblige his sister, he postponed his departure until three feasts of Ceres were over. He supported nature on a pot of honey to the appointed hour, and then expired by arrangement. Jerome Carden, a celebrated Italian physician, starved himself gradually, and calculated with such mathematical nicety, as to hit the very day and hour foretold. When Rabelais was dying, the Cardinal sent a page to inquire how he was, Rabelais joked with the envoy until he found his strength declining, and his last moments approaching. He then said, "Tell his eminence the state in which you left me. I am going to enquire into a great possibility. He is in a snug nest; let him stay there as long as he can. Draw the curtain; the farce is over."—When the famous Count de Grammont was reported to be in extremity, the King, Lous XIV., being told of his total want of religious feeling, which shocked him not a little, sent the Marquis de Dangeau to beg of him, for the credit of the court, to die like a good Chistian. He was scarcely able to speak, but turning round to his countess, who had always been remarkable for her piety, he said, with a smile, "Countess, take care, or Dangeau will filch from you the credit of my conversion."

The Metals.—The ancients knew but seven metals,—gold, silver, iron, copper, mercury, lead and tin. Antimony was first discovered by Basil Valentine, in 1490, and that by accident, while following his alchemical pursuits. Bismuth and zinc were discovered in 1530: while from 1733 to the present period, there have been found no less than 49 new metals, by chemical research. These are known to be distinct from each other in identity and characteristics.

To ascertain the length of the day and night, any time of the year, double the time of the sun's rising, which gives the length of the night; and of its setting, which gives the length of the day. This is a method of "doing the thing" which but few of our readers probably, have been aware of.

An Excellent Cement.—Five years ago, we applied a cement composed of white lead paint, whiting, and dry white sand, to a small tin roof that leaked like a sieve, it soon became nearly as hard as stone, has never scaled off, and has kept the roof, since then perfectly tight. It was put on about the consistency of thin putty.

Slater's cement for stopping leaks around chimneys, is composed of linsed oil, whiting, ground glass, and some brick dust. It is a good cement for this purpose; also for closing the joints of stone steps to houses.—*Scientific American.*

New kind of Fuel.—A new and effective kind of fuel has been invented, in the form of balls composed of fire-clay, which, when put in the fire soon become hot, and continue heated for a long time, while, of course, they occupy a considerable space which would otherwise be occupied by coal. These fire-clay balls last an indefinite time, and are said to effect a saving of 33 per cent. in the consumption of coal.

Mildew.—Mr. William Dyer informs us that soapsuds is a sure preventive of mildew on goosberries; and that if freely administered they will even arrest the evil in an advanced stage. The publication of this may seem a little unseasonable at this time, but treasure the information up, and it may be of value another year.—*Waterville Mail.*

The Tomato.—It appears that the tomato has been used in some parts of Illinois and in the neighbourhood of Vincennes, for more than fifty years. The tomato, though now much more common than formerly, is still not to be found in many farmers gardens. This should not be. By a little labour in enlarging the list of garden esculents, the farmers' annual expenses may be materially decreased, and much may be added to their comforts.

KEEP WEED SEEDS OUT OF MANURE.—Some seeds will live through almost any usual fermentation of the heap, and besides it should not heat and ferment. Many weeds cut in flower will still ripen seed, and as a general thing the seeds of our most pernicious weeds are most tenacious of life. The fire is the proper place for them, and as ashes they are harmless and profitable.

SCOURS IN SHEEP.—The best remedy we know of for scouring in sheep, is milk thickened with wheat flour. A pint should be given twice a day till the unnatural discharge is stopped.

ONE SIDED GROWTH.—A few years ago an intelligent gentleman had a contract to set out a hundred shade trees. He took the precaution to mark the north side of each tree, and to plant the same side north when it was transplanted. By this carefulness he saves the life of almost all that he moved. In this hemisphere, the sun shining upon the southern half of a tree so constantly, stimulates the growth of the fibres on that side considerably above the other, so that in many cases, the annual rings are much larger on this side than on the other.

PRESERVING BUTTER.—"It is said" that butter will keep for a long time, if each pound be treated with one ounce of the following composition, recommended by Dr. Allan viz: Salt 2 parts; saltpetre 1 part; sugar 2 parts.

SODA CRACKERS.—The following recipe will make crackers superior to any ever purchased:—To 14 cups of flour, add 1 cup of lard, 4 teaspoonsful of cream tartar, and 2 of soda: rub these ingredients well into the flour, add three cups of water, work thoroughly and bake quick.

WIFIE, COME HAME.

Wifie, come hame,
My couthie wee dame!
O but ye're far awa',
Wifie, come hame!
Come wi' the young bloom o' morn on thy broo,
Come wi' the lone star o' love in thine e'e,
Come wi' the red cherries ripe on thy mou',
A' glist wi' balm, like the dew on the lea,
Come wi' the gowd tassels fringin' thy hair,
Come wi' thy rose cheeks a' dimpled wi' glee,
Come wi' thy wee step, and wifie-like air,
O, quickly come and shed blessings on me!

Wifie, come hame,
My couthie wee dame!
O my heart wearies sair,
Wifie, come hame!
Come wi' our love pledge, our dear little dawtie,
Clasping my neck round, an' clamberin' my knee;
Come let we nestle and press the wee pettie,
Gazing on ilka sweet feature o' thee:
O but the house is a cauld hame without ye,
Lanely and eerie's the life that I dree;
O come awa', an' I'll dance round about ye,
Ye'll ne'er again win frae my arms till I dee.

BALLANTINE.

THE CHILD OF THE COUNTRY.

Child of the country! on the lawn
I see thee like the bounding fawn,
Blithe as the bird which tries its wing
The first time on the wings of Spring;
Bright as the sun when from the cloud
He comes as cocks are crowing loud;
Now running, shouting, 'mid sunbeams,
Now groping trout in lucid streams,
Now spinning like a mill-wheel round,
Now hunting Echo's empty sound,
Now climbing up some old tall tree—
For climbing's sake—'tis sweet to thee
To sit where birds can sit alone,
Or share with thee thy venturous throne.

EDITORIAL MISCELLANY.

Toronto Markets.

Toronto is becoming a very important wheat market. Enjoying an excellent geographical position, within a few hours sail of the south shore of the lake, where there are numerous mills and a good market, as at Rochester, Wilson, Oswego, Ogdensburg, &c., in the midst of a most fertile country, into which now radiate railways, East, West, North and North-west, with abundant facilities for purchase, storage, and shipment; and possessing men of business, energy and tact, we believe that Toronto is speedily becomingthe leading market in the Provinces. The receipts of wheat for the past two months, are 275,000 bushels per week; of this about 35,000 bushels in each week have been purchased on the market, while a great deal of it has been sold by country dealers to our wholesale buyers, in lots of 1,000 bushels and upwards, being what is termed, "shipping parcels." The shipments of this season up to last week, were over 750,000 bushels, being nearly double that of the whole of any previous year. Farmers have been bringing in their wheat very freely, many of them having learned a salutary lesson by the losses experienced last year in waiting for higher prices. The ruling rates for the past month at this point have been at an average of about 7s. per bushel, which may be considered a very fair remunerating price. Present appearances do not, however, indicate a continuance of this figure. Yet, there is no telling what may occur, and observation has taught us that the fulfilment of the predictions of produce prophets is exceedingly doubtful. The best policy to be pursued is to sell when convenient, provided a remunerating price can be realized. The closing price to-day, (Oct. 7,) is 6s. 8d. per bushel.

Oats plenty by importation, but farmers are bringing in very few. They are held at 2s. 6d per bushel in store by lots not less than 100 bushels, and by retail 2s. 9d.

Peas are scarce, and meet ready sale at 3s. @ 3s. 9d. per bushel.

Potatoes have not been in such good supply as formerly, and the downward tendency in prices has been checked. The ruling figures are now from 3s. 9d. @ 4s. per bushel. In large lots they have been sold at 3s. 6d.

Apples too have become scarce, the stock of imported now on hand being small. Good keeping apples sell at 10s. @ 10s. 3d., and inferior at 8s. 9d. per brl. Farmers sell at 2s. 6d. @ 3s. per bushel. Peaches are not plenty, but considering the price, are still in fair demand. They bring from $2½ to $3 per basket. Pears becoming plenty at $5 per brl. wholesale, and 2s. 6d. @ 3s. per peck retail.

Butter.—The supply during the week has varied, and the price has fluctuated with it. Since Monday there has been more offering, and 1s. 3d. @ 1s. 4d. are the preces realized. Tub is now plenty, and is selling at 1s. @ 1s. 3d. per lb. A quantity might be had at 10½ @ 11d.

Sheep.—Some five hundred sheep brought by Mr. Mullany from Illinoies were sold to various buyers at $3½ to $4 each. This is about the current rate.

☞ We must again urge upon our friends who are in arrears the necessity of remitting as soon as possible. We are aware that there is sometimes when difficulty is experienced by Township societies in obtaining the division of the Government grant, yet, we hope that the Secretaries and Treasurers who are indebted to us will be as prompt as posssible.

CONTENTS.