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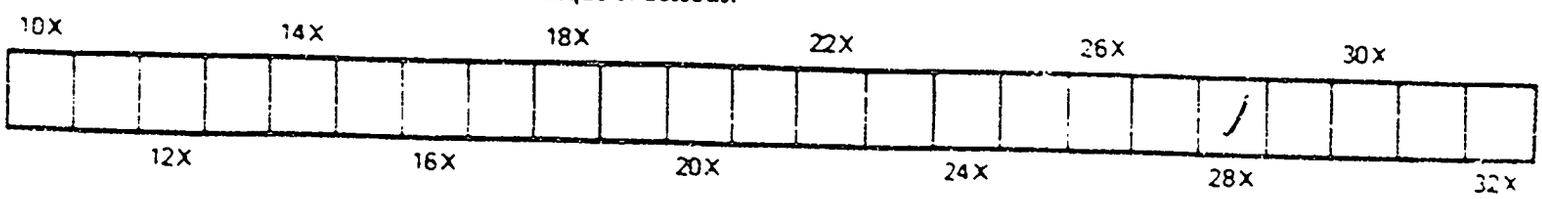


THE BRITISH AMERICAN
CULTIVATOR.

"AGRICULTURE NOT ONLY GIVES RICHES TO A NATION, BUT THE ONLY RICHES SHE CAN CALL HER OWN."—*Dr. Johnson.*

Vol. 1. TORONTO, AUGUST, 1842. **No. 8.**

THE CULTIVATOR.

"Agriculture is the great art which every government ought to protect, every proprietor of lands to practice, and every inquirer into nature improve."—*Dr. Johnson*

Toronto, August, 1842.

We have in the former numbers of this Periodical, endeavoured to bring the true state of Canadian agriculture before the public, in order to show the necessity that existed that some legislative measures should be adopted for the encouragement and protection of our agriculture, if it was desirable that it should improve and prosper. We may have failed to convince those who have power and influence in the country that such a necessity does exist, and all that we have written on the subject may be unavailing to produce any attention to our interests, or change for the better in our future prospects.—We might urge many other forcible arguments in support of our propositions, but for the present we shall discuss some other subject, merely observing, that a certain market and remunerating prices for all we could raise, would be the best and most effectual encouragement that could possibly be offered for the improvement of agriculture and of the country generally; and that without this sort of encouragement, all efforts that could be made to improve our agriculture or the country will be unavailing.

We were glad to perceive by the reported proceedings of the Montreal Corporation, that Councillor Lunn has given notice:—"That at the next meeting of the Council he would move, that instructions be given to the Market Committee, to report with all convenient speed, on an eligible site for a Cattle Market, in connection with the St. Ann's market, and that the By-Law limiting Viger Square for a Cattle Market for both markets be suspended, until the said Committee have reported to the Council." We *hope that it is an* indication of a disposition in our City friends, to pay some degree of attention to the accommodation of those who bring cattle, sheep, and swine, to Montreal for sale, to propose providing a suitable market-place for them We have often before, and for many years, urged the necessity of a Cattle Market, but to no effectual purpose.—We, therefore, are obliged to Mr. Lunn for bringing this measure forward, and we hope that the principal city in British America, containing near 50,000 inhabitants, will provide a suitable Cattle Market, bearing some reasonable proportion to the scale of other public works completed, and proposed to be constructed in Montreal. A large and commodious Cattle Market is required, and let farmers see, at last, that there is a disposition to give them accommodation. We would respectfully suggest that before the site shall be determined, the opinions of persons interested in having it conveniently and suitably placed will be asked, and receive consideration. We would suggest further, that a law should be passed, obliging all cattle, sheep, or swine brought for sale to Montreal, should be sold in the market-place on certain days—that a regular market note should be published weekly, of all stock exposed for sale, stating the number sold each day, and an approximation to the average price per head, and per hundred pounds for fat cattle. It is high time that our principal cities, who wish to introduce English institutions, should adopt something like the English plan with regard to Cattle Markets. We would also recommend that the same regulations should be adopted with regard to grain, hay, and straw sold in market, which we think might be readily done. Statistical returns of the annual produce of agriculture would give some idea of its state, and suggest the best means for its encouragement and improvement. All this information might be obtained, if only an interest was felt in the subject by those who possess influence in the country. The second Session of the Provincial Parliament is approaching. We shall see what our Representatives will do for the interests of nine-tenths of their constituents. We again urge the necessity for establishing a General Board of Agriculture under proper regulations. It is by means of such a Board, that the improvement of our agriculture will be most certainly promoted. This Board would act for this country, on the same principle that the Royal English Agricultural Society does for England. We have not here the materials for such a Society as the Royal English Agricultural Society, and we must, therefore, establish by the authority of the Government and Legislature, a Board to act in the same capacity, for the general good. They will have an excellent precedent in the English Society, to direct them in their proceedings, for the general improvement of agriculture. No local societies that can be formed in Canada, will ever produce the general improvement that might be effected by a Board of Agriculture, who would have no local partialities or prejudices, that are inseparable from local societies. We may also, by all means, have local societies, but they should be under the control and direction of the General Board, that is, if they obtained public aid to expend in premiums. We most respectfully solicit the consideration of His Excellency the Governor General to this subject, that is of so much consequence to the people of this country.

ACKNOWLEDGMENTS.

We beg to acknowledge the receipt of *The Colonial Farmer*, with the back numbers, a monthly periodical published at Halifax, N. S., by R. Nugent, and edited by Titus Smith. The Farmer is afforded at the low price of five shillings per annum, and is worthy of being supported in an efficient manner, which it no doubt will receive; as one Agricultural Society alone has ordered 250 copies—an example worthy of the notice of our Canadian Agricultural Societies in the support of their own journal.

We have also the pleasure to acknowledge the receipt of a few numbers of *The Picton Farmer and Mechanic*, an Agricultural, Mechanical, Literary, and Mercantile Weekly Journal; from the masterly style in which the above periodicals are conducted and supported, we have formed no mean opinion of the intelligence of our sister colony, and wish the publishers much success in their patriotic undertaking.

Surely, this a wonderful age for the diffusion of agricultural information and improvement!—A few years since, there were only six agricultural papers in the United States: there are now nearly 50, twelve of which have entered the field the present year. As specimens of this years' production, we have received *The United States Farmer* and *The American Agriculturist*, both published in the city of New York, in monthly numbers, each containing 32 pages; and *The Southern Planter*, published at Natchez, State of Mississippi. Either of these periodicals would bear comparison with *The Albany Cultivator*—a journal with which most of our readers are well acquainted.

TO OUR SUBSCRIBERS.

Although the terms of our journal are considered to be moderate by all, yet there are many who imagine that it may be conducted on the credit principle, and in conformity with that idea, have actually ordered it, with the CONDITIONS *emphatically staring them in the face. In order that our periodical might be brought into notice, over as great an extent of country as possible, we forwarded it to many on the credit system, we would therefore request them to forward their subscriptions at their earliest convenience, through our Agents, and beg that they will bear in mind that our Printers' bill, paper, and wood engravings have to be paid for monthly, to meet which, not only requires a numerous list of subscribers, but a prompt, energetic, and liberal support.*

Subscribers of the Farmer and Mechanic.

The July number closed our engagement with the Subscribers of that journal, and we send them the August number gratuitously. If they wish the remainder of the volume of THE BRITISH AMERICAN CULTIVATOR *sent them, they would do well to forward the subscription for the ensuing four numbers without delay.*

In an article which appeared in the May number of *The Albany Cultivator*, under the head "Statistics—State of the Country," we observed that the writer was in error in the statement he made respecting the amount of duty to which foreign grain is subjected to in England. The writer states that the duty on wheat is 100 per cent., or that the amount of duty is equal to the value of the article. By the New Corn Law, which was passed before the article alluded to was written, the highest duty on wheat is not over 65 per cent., and it falls gradually to only 1½ per cent. When wheat in England is at 66s. the quarter of eight bushels, it is only subject to a duty of 6s. the quarter, which is only 10 per cent. upon the proceeds of the sale, and leaves 60s. to the owner for his wheat. When wheat is at 72s. the quarter, the duty is only 1s. or 1½ per cent. We make our calculations upon the price which foreign grain will sell for in the English market, because it is the price which it sells for in that market that determines the amount of duty, and not what it may be worth in the "Far West States." All that foreign grain sells for in the British market is generally returned to the country from which it is shipped, less the amount of duty, and part charges, as the ships and agents employed are generally foreign. The same article stated the duty on Indian-corn to be 200 per cent.—oats 300 per cent.—barley, rye, and buckwheat 200 per cent. On the contrary, not one of these grains is subject to a duty exceeding about 70 per cent. at the highest, and this duty falls gradually as in wheat, to about 2 per cent. According to the returns lately submitted to Parliament, the duty paid on foreign grain imported into England for the last twenty-five years, did not on an average amount to over eight per cent. It is to actual results we are to look in these matters, and what amount of duty has been paid on grain, when the English Corn Law was much more strengent than at present. We would not allude to this subject, only that we know statements of the nature of those we refer to, are calculated to create bad feelings between nations and individuals. The object of the statement in *The Albany Cultivator*, we suppose to have been, to recommend a still higher tariff in the United States than they have at present. We would remind our neighbours of the United States of a few facts. The whole amount of the declared value of British manufactures exported to the United States in 1840, was only five millions and a quarter pounds sterling; while the cotton imported from the latter country into Britain the same year was near 500,000,000 lbs., which taking the average to be about 5d. per lb., would amount to over ten million pounds sterling. With the exception of tobacco, we are led to believe, that for the last 25 years, the average duty paid upon *all* the produce of the United States imported into Britain, did not amount to 10 per cent. upon the whole value; and we would ask whether the duty paid in the United States on British manufactures was as low as 10 per cent. during the same period? We ask this question, because *The Albany Cultivator* says that they only ask, "that others would do by us as we are doing by them." The same paper again observes:—"We have pushed our free trade system to the verge of absurdity, if not of ruin; we have found that the free trade system of the old world is like the handle of a jug—all on one side." So far as the farmers of Canada are interested, they may will say to their neighbours of the United States, that the free trade system existing between them at present, is—"like the handle of a jug—all on one side," and that side happens not to be their own, or any advantage derived from it.

We admit that we are strenuous advocates for protective duties against the agricultural produce of the United States, but we shall at all times endeavour to advocate the principle on the plain merits of the case, supported by facts, not by exaggerated statements, that are only calculated to lead into error and create bad feelings. The citizens of the United States are a wise people, and according to the opinion of *The Albany Cultivator*, the organ of the agricultural class in that country, the free trade system is an absurd and ruinous system. We should, therefore, learn wisdom from them, and put an end to a system which they have found to be absurd and ruinous. Indeed, until now, we were not aware that the people of the United States had an opportunity of fairly testing the merits of free trade, because we thought their tariff was a very high one, on almost every article of foreign production. We wish to be further enlightened on this subject, as to the articles in which free trade was admitted by the tariff of the United States for the last thirty years. When our immediate neighbours complain of the ruinous effects, which they allege that free trade has produced with them, no wonder the farmers of Canada should complain of the effects of free trade, considering that live stock, fresh meat, corn, and flour have been admitted, duty free, from the United States for many years past, brought in here constantly by those identical foreigners who complain of the effect of free trade upon their own interests.

The annual produce of Britain from her agriculture, manufactures, &c., amounts to £514,000,000., equal to about 2,500,000,000 dollars of our currency, which will give near twenty pounds sterling, or about one hundred dollars for each inhabitant, man, woman, and child of the British Isles. Of this vast amount annually created, only £148,000,000. are manufactures, of which only one-third is exported, so that the manufactures for the export sales hardly produce a twelfth part of the annual income derived from the industry of the nation, and of this export trade about one-third is to British possessions in all parts of the world. The British Isles, therefore, have the sources of their wealth within themselves and their colonies, and do not sell annually to foreigners more than a *fifteenth* part of their annual production. The annual produce of the United States, from her agriculture, manufactures, &c., is said to be 1,282,000,000 dollars, giving about seventy-five dollars for each of her inhabitants young and old of 17,000,000, her present population. The reported amount of annual exports from the United States in 1837 was about 120,000,000 dollars, of which considerably over half was to the British Empire. We have later returns of her exports, but we cannot lay our hands upon them at this moment.

The experiments of Barruel upon the different odours emitted from blood on the addition of sulphuric acid, prove that peculiar substances are contained in the blood of different individuals: the blood of a man of fair complexion and that of a man of dark complexion were found to yield different odours; the blood of animals also differed in this respect very perceptibly from that of man.

According to Leibig, rust is most frequently detected on plants growing on soils which contain bog-ore, or turf iron-ore. According to Sprengel, rust contains phosphate of iron, to which this chemist ascribes the origin of the disease. Our own experience confirms this opinion. We know that in soils where these ores abound, grain crops are more liable to rust, than in soils where they are not found in abundance. It is very possible that other causes may operate in the production of similar diseases, and we believe they do. It will be the farmer's interest to remedy defects in the soil, or find some means to check the causes which produce disease. One means would be to endeavour to ascertain what crops will be least affected by disease in each sort of soil, and to cultivate that kind of crops upon each. We believe that summer fallowing soil, and thereby exposing it to the influence of the atmosphere, and applying lime to it, would effectually prevent rust in the succeeding crop, in ordinary seasons. We recommend this plan above all others. Lime decomposes the poisonous salts which may be in the soil, that are unfavourable to vegetation. In British America scarcely any lime is ever used in agriculture.—Summer fallowing is not often practiced. If, therefore, pernicious salts are in the soil originally, they are allowed to remain in it, for there is no means adopted by the farmer to decompose them, or remedy the defects in the soil where these salts are present. We never will admit that the soil and climate of Canada are not favourable for agriculture, until we have seen the English system of agriculture introduced and followed up in every particular branch. When this has been done, and failed in producing good crops, we shall acknowledge that we had formed too favourable an opinion of the country.

Drilling and hoeing grain crops, particularly wheat, is one improvement that would pay well, we have no doubt. Hoeing might be done for a dollar the acre at the most, and perhaps in the whole expense of cultivation, no part would be better applied, or produce more benefit to crop and soil. We have been always of opinion that hoeing the land at the particular time it would require it, namely, about the middle of June, would have a great tendency to destroy the wheat fly; as we suppose they are at that time concealed about the roots of the wheat, among the grass and weeds. We know these improvements, to cause general benefit, or to give any effectual check to the wheat fly, must be generally introduced; because, otherwise were one farmer to take all the necessary means of cultivating his crop in the very best manner—drilling—hoeing—cleaning—doing all that could be done to ensure a good crop, and destroy the fly within his own fields, his next neighbour, who would not like any such trouble, might destroy all the effects of his labour, by having a slovenly managed crop of wheat or barley that nursed and protected the fly, and that could not be prevented from coming to the well managed crop of wheat alongside.—Hence it is, that any plan to be effectual in checking the ravages of the wheat fly must be general, or it will produce no good to the most careful farmer that he should expend his labour and capi-

tal in cultivating properly, as he will be subject to have his wheat crop destroyed by the slovenly cultivation of his neighbour.

Much has been said and published in recommendation of example farms, and of the great benefit it would be to agricultural improvement to have them established in every country. A well conducted farm in every department, would doubtless be useful as an example to any farmer who would condescend to be instructed. In the latter end of the month of June, we had the pleasure to visit the farm of Charles Penner, Esqr., of Lachine, and we derived very great satisfaction, as we frequently had done before, from our visit. Farming operations in every department is conducted in the very best manner. The horses, cattle, sheep, and farming implements are the best of their kind; in fact, there is scarcely any thing to be faulted. Mr. Penner cultivates about sixty acres of hops, and it is generally admitted that they are the most judiciously cultivated and managed, and produces the best article for the brewer that is raised in North America. This large hop plantation gives employment to a great number of persons during the spring and summer. We have calculated the probable number of hop-poles employed by Mr. Penner, and found they amount to from 150,000 to 200,000. Mr. Penner has imported a mill for grinding bones for manure, of which he makes use of a considerable quantity. He has also imported a most excellent turnip-sowing machine, which deposits the bone or other fine manure in the drills with the seed. We admired particularly a pair of iron drill harrows, for harrowing potatoes or other drilled crops. The harrows are made to fit the ridgelets exactly, so that in harrowing the potatoes before they come up, every part of the ridgelet is harrowed, and the furrows are not filled up as by bush-harrowing. We recommend to any farmer who has an opportunity to see these implements, as we are sure that Mr. Penner would allow them to be seen by any one who wished it. Mr. Penner makes use of the Cultivator in his hop plantation and in his fallows, and it is an implement that every farmer should be in possession of. It is impossible for any farmer to visit Mr. Penner's establishment without deriving both profit and satisfaction from it. We would further observe that Mr. Penner has planted several thorn hedges, both of the native and English white-thorn, and that they are in a most thriving condition. Were thorn hedges generally substituted for the wretched looking rail fences that disfigure our landscape, it would be one of the greatest improvements that could be effected in the country, and there does not exist a doubt that they might be substituted. Mr. Penner is in the habit of burning clay, taken from the banks of drains, &c., for manure, and finds it to answer well. This example might be advantageously followed in burning clay for manure.

HOPS.

The expense of forming new hop plantations is very considerable. In some districts in England, where the land is properly prepared, and all the work executed in the best manner, they estimate the cost of forming new plantations, at from seventy to one hundred pounds per acre.—This estimate, we consider, much too high certainly, but cannot speak from personal experience. The annual expense of cultivation per acre, including every item up to the period that the hops are sent to market, but not including duty, which is £2. per cwt., is estimated at £25. per acre. The average produce per acre in England from 1818 to 1812, was about to 7½ cwt. Some farmers, however, estimate the average produce at only 6 cwt. per acre. The average price of hops in England during the period referred to, was not much over one shilling the pound weight, or 115s. per cwt., including the duty of 40s. per cwt. The rent of land is not included in the expenses of cultivation, &c. Of course we may suppose with such a large expenditure on cultivation, manure, &c., &c., the hops are managed on the best possible system, in every part of the progress of their cultivation. The destruction of vermin which infest the plant is no small item of the expense. It is not in the way that hops are cultivated in many parts of North America, that English hop plantations are managed. If the expenditure is large the work is proportionately well executed in England.—Hops have to be highly manured, and any farmer may estimate what it will cost per acre to manure land well. The expense of cultivation, &c., we are satisfied will not amount, in this country, to what it is said it amounts to in England, but we know the expense will be very considerable here, if the work is executed as it should be.

We have been frequently told that it was injurious to the succeeding year's crop of hay, to suffer the after-grass or latter-moth to remain on the land the fall previous unconsumed, either by the depasturing of cattle or other means. We were, however, of a different opinion, and thought that a rich covering of latter-moth, remaining on the land in the fall and the commencement of winter, would be nearly as beneficial to the succeeding year's crop of hay, as a light top-dressing of manure would be. We have frequently proved by experience the correctness of our opinion. Last fall in particular, we had some of our meadow covered with a heavy crop of latter-moth, though the cattle were allowed to pasture in it all the fall. This year, where there was the most grass left last fall, we have the heaviest crop of hay we recollect to have seen in the country. We make this statement to show that it is not always those that are longest in the country, that are capable of giving the best instruction in agricultural management. We do not object to the depasturing of cattle and sheep on the latter-moth, on the contrary we recommend the practice, provided the soil is sufficiently dry and firm to sustain the weight of the cattle walking upon it, without being cut up by their feet; but we wish to show that the latter-moth remaining unconsumed upon meadows at the commencement of winter, will not injure the succeeding year's crop of hay, but on the contrary, will greatly increase the produce.

Though the wages of labour is low in most sections of the country this year, and the supply of labour abundant, yet farmers have no encouragement to employ labour in consequence of the low price of produce. There is abundance of work to be executed on every farm in the Province. We have upon our own farm many improvements that we see highly necessary to be made, and that we are ashamed to have undone, but nevertheless we must forego the satisfaction of doing them. There is no advantage in raising crops, if there is no market or demand.—Every thing is deranged and out of place while our markets are open to foreign competition.—If we had an abundant crop of hay, a part might be manufactured into butchers' meat, if this meat when made could be sold. In the same way, large products of oats, barley, peas, &c., that cannot be exported, might be fed to cattle, sheep, and swine; but no, our good friends the none agricultural classes would not have it so. Cheap produce from a foreign country is the thing for them, *no matter though it should be the cause of* ruin to the whole agricultural population, and check all improvement in the country.

We take this opportunity to acknowledge our obligation to William Shaw, Esqr., of London, Editor of The Mark Lane Express, the Farmers' Magazine, and one of the most efficient members of the Royal English Agricultural Society. This gentleman has for a long time sent us The Mark Lane Express, which has been of great use to us in our humble endeavours to promote the improvement of Canadian agriculture. He has also kindly offered us The Farmers' Magazine, which, from what we have seen of it, we believe to be the most useful agricultural periodical that is published in Britain or any other country. We feel encouraged when offered aid from such a friend to agriculture, as Mr. Shaw is known to be. It is from England we wish to receive encouragement and instruction, and we know perfectly well that her generous people would afford us both, without jealousy or fear of rivalry; but as kind parents to their offspring, settled in a distant portion of the same great Empire. The well informed portion of the English people are aware, that it will not prejudice their interests that Canada should yield a large and valuable annual produce, and that it would be their interest to purchase this produce from them should they require it, in preference to buying a similar produce from foreigners. All that we can spare will not be sufficient to purchase from our English friends the manufactures we require. Every shilling they would pay to us for agricultural produce would go back to them in one form or another. We tell our English friends that British America has a most excellent soil and climate, and would, if capital and labour was applied to its judicious cultivation, yield abundantly in corn, cattle, and dairy produce. If, however the produce of a foreign state is allowed to fill up our markets and demand, we cannot have any inducement ourselves, nor can we offer encouragement to others to expend labour and capital in producing what would not be likely to refund the expenditure.

We beg to offer our most greatful acknowledgments to our respectable corrospondent P. L. Simmonds, Esqr., of London, Fellow of the Statistical Society of London, and member of the Royal English Agricultural Society, for the valuable papers he has sent us, and we shall take every opportunity of communicating the contents of these papers to our Subscribers. We regret that we cannot conveniently give the Drawings of various implements sent us by Mr. Simmonds, but we expect that in a short time we shall be able to do more in this way. It is highly gratifying to find that some of our fellow-subjects in England are interested in the prosperity of our agriculture in British America. Mr. Simmonds has been unanimously elected an honorary member of the Montreal District Agricultural Society.

Let no man be too proud to word. Let no man be ashamed of a HARD FIST OR A SUNBURNT COUNTENANCE. Let him be ashamed only of ignorance and sloth. Let no man be ashamed of poverty. Let him only be ashamed of idleness and dishonesty.

AGRICULTURAL REPORT FOR CANADA EAST.

From the date of our last report to the end of June, it continued cold and wet for the season. From the first of July, however, the weather has been extremely favourable, and vegetation has made great progress. With the exception of barley and peas, the grain crops are backward. Wheat has been generally late sown, in order that it might have a better chance to escape the fly. We sowed spring wheat on the 23rd of May, and on the 16th Instant, the ear was nearly all shot out, and the fly appeared very numerous, and actively employed in depositing their eggs in the ear. To what extent they may injure the crop, it is impossible to conjecture at present, but we fear that a large proportion of it will be destroyed. Our fall wheat was not in ear before the first week of July, though sown the 6th of September last. The wheat fly appeared about the 27th of June in our fall wheat, but we expect it will not be injured to any great extent, as the ears are very large and strong, and the grain is covered with thick, rough glumes, which we believe the fly was not generally able to pierce with its ovipositor, in order to deposit its eggs. We have examined several ears, and though we found the barvæ of the fly in many grains, yet we hope the injury is not extensive. When we sowed the wheat last fall, we expected it would be in ear early in June, (we had, on one occasion, spring sown wheat, in ear the 12th of June), and thus escape the wheat fly, as we never have seen them before the 25th of June. This year, however, was unfavourable to fall wheat, as it got injured in consequence of an insufficient covering of snow in winter, and the spring was so cold that its growth was greatly checked, and it was not in ear so early by a fortnight or three weeks, as it might have been in ordinary seasons — From our experiment this year, we recommend strongly, sowing fall wheat early, on well drained and well prepared rich soil, either in drills or ploughed lightly in. By sowing in this way, on rich soil, we would expect, in ordinary seasons, the wheat would be so forward in spring, that it would be out of all danger before the fly would appear, and this we believe to be the most certain means of producing wheat at present in Eastern Canada. There is too great a risk in sowing late in spring. We know that our late spring wheat is, at this moment, extremely liable to destroyed by rust or mildew, and if it be in the slightest degree affected with this disease, while in a soft luxuriant state of its growth, the crop will scarcely be worth cutting. It may, however, escape if the weather is dry and favourable. All other late sown spring wheat is liable to the same casuality, and particularly so, where the crop is rich and luxuriant.

Barley, generally, has a very promising appearance of a good crop. Oats is backward from late sowing; and we have never before seen the crop so full of weeds, particularly wild mustard. Indeed, we have seen fields so yellow with this weed, that it is impossible to know what sort of other crop is growing with it. This proceeds from constant cropping with grain, without either summer fallow, or allowing the land to repose under grass. We believe, that in no other country are weeds allowed to prevail to such an extent as in Canada. It appears as if farmers, when they cultivate and sow a field, are indifferent whether it produces useful plants or weeds. They cut and gather whatever happens to grow in it, and cultivate and sow in the same way the succeeding year, with exactly the same prospect of gathering as much useless weeds as valuable grain, from their land and labour. It is really discreditable to farmers to have the country so over-run with weeds; and it is full time that some efficient means should be adopted to check their growth. On land suitable for peas, we have seen some excellent crops, but where the land is heavy and moist, the crop will not be good. Peas should not be sown on land that is not perfectly dry and suitable for them. Indian-corn, generally is a poor crop. On some naturally dry, and warm soils, it may prove an average crop, provided the remainder of the season is favourable; but hitherto this spring has been very unfavourable for Indian-corn. This plant, above all others we cultivate, requires a dry and warm season to produce it in perfection, even on the most suitable soils. A large quantity of buck-wheat is sown, but we cannot yet report what the crop is likely to be, as it has only made its appearance over ground. Potatoes have been planted to a great extent, but we have observed considerable failures on land insufficiently drained, and from dry rot in the seed. This spring has been very unfavourable for the cultivation of potatoes on clay soils. Such soils, were not in a good state this season, for the ploughings necessary for potatoes. The consequence is, that the earth put up to the potatoe plants in a damp state, becomes subsequently so dry and hard, that it is impossible for the crop to be good. At all times of the cultivation of potatoes, the soil requires to be dry and loose, and in moist seasons like this, it is almost impossible to cultivate potatoes advantageously on heavy clay soils. We do not, therefore, expect that there will be a large average produce from this crop this year.

The hay crop has greatly improved since the first of July. On good rich meadows, the crop will be excellent; but on old meadows that were not very fertile or sufficiently drained, the crop is yet very short and light. The mowing of hay is commenced this week in the neighbourhood of Montreal, and we hope the weather may be favourable for the hay harvest. The slightest rain falling upon hay that is once cut down, is extremely injurious to it, unless it be put up in well made cocks. We would recommend all farmers, who desire to have good hay, rather to allow their men to be idle, than cut down hay in wet weather. When hay is cut down in the wet, one hour's hot sun will destroy the colour of it, and very much deteriorate the quality and lessen the value. The farmer who cuts down his hay in wet weather is sure to lose more by the injury the hay sustains, than he can possibly gain by the saving of time. Pure timothy is easy cured, and the less it is exposed to dew, or sun, more than is necessary to dry it, the better it will be. It is a bad plan to allow hay to remain in small cocks longer than is required to save it. Clover or soft natural hay, may require some time to season in cocks; but the hay, of whatever sort, that remains long in cocks, will be more or less injured on the outside and at the bottom of the cocks: and this injured part mixed with the good part, deteriorates the quality of the whole. We therefore, from our own experience, recommend that hay should not, if possible, be exposed to rain or dew, from the moment it is cut down; that it should not be exposed to the sun, more than is necessary to dry it; that all the sap should be preserved in it as much as possible; and that it should be put up as soon as it can be dried and cured, in barns or well made stacks; putting about half a gallon of salt to each load of fifty bundles of timothy, and from that quantity to one gallon to a load of clover. We increase a little the quantity of salt applied, if the hay has suffered injury in curing, or to hay of coarse quality.— We have found the dew particularly injurious to new mown hay, that has been for any time previously exposed to the sun. It will change the colour of it as much as rain would do. To prevent this, all hay cut in the forenoon, or up to three or four o'clock of a hot day, should be put up in small cocks in the evening. If hay loses colour or sweet smell, it is a sure token that it has not been well cured. The colour may sometimes be injured by slight fermentation.; but if the hay so discoloured retains its sweet smell, its quality is not injured. It is only when fermentation proceeds so far as to cause the hay to have a sour and musty smell, that it is sure to be injured.— For the use of our own stock, we would wish our hay to ferment slightly, provided it was not from wet it had received in the process of curing. — Pure timothy, we conceive to be the best sort of hay that is known when well cured. On rich lands, that are occasionally top-dressed however, it is impossible to grow pure timothy, some clover will be sure to be mixed with it. Provided there is not too large a proportion of clover, the hay is not of less value for having some clover in it.— In England, clover sells for a higher price than any other hay brought to market. Where pure timothy grows, the crop is generally thin, and the whole produce light. A heavy crop of timothy and a little clover mixed with it, will pay the farmer best; though the price may be something less in the market. For our own consumption upon the farm, we would always wish to have our hay mixed in reasonable proportions of timothy and clover. A heavy crop of clover is difficult to cure and preserve the colour, unless the weather is very fine. It requires the greatest attention and that the cocks should be carefully made; for if not, in case of heavy rain, it will be sure to pass through them to the bottom, and if once thoroughly wet, after it has been partly dried, it never recovers its colour, or is of so much value as if it had been carefully managed. It is not for the instruction of competent farmers that we offer these remarks, but for the consideration of strangers coming to the country, and others who may take an interest in reading our communications.

The pastures are generally good this year, and the produce of the dairy abundant and cheap.— Cattle and sheep should fatten well this year, as the weather is neither too wet nor too hot, to allow them to feed and thrive. The price of butchers' meat is low, and we do not see any reason that it should not continue so all this year.— Some of the orchards in the neighbourhood of Montreal, have been much damaged this year by catterpillars, that have completely stripped them of their leaves and blossoms. Fruit, however, is of so little value here, that to lessen the quantity will not be a material loss. Labour is to be had in abundance, if the funds were forthcoming to

employ labourers. From the present depressed state of agriculture and the scarcity of money, farmers cannot employ more hands than are actually necessary to attend to the crops and harvest them. Under present circumstances, it is out of the question to think of employing labourers, in executing improvements however necessary and likely to pay. It is distressing to be obliged to refuse employment to the many poor emigrants who are constantly seeking it, and who we believe to be much in want of the means to earn subsistance. It would, we humbly conceive, be extremely desirable that public works should be put in operation this year, in order to give these poor emigrants, who have been induced, by the most flattering representations to come to this country, some means to earn subsistance. If they were able to provide for themselves for the first year, they would be able to do better for the future, after they become acquainted with the country. In public works they cannot be at a loss, because they are generally acquainted with that sort of labour. We did suppose that in Western Canada, labourers to any extent, might obtain employment; but when we have advised them to go there, they have replied to us, that there was no encouragement for them there. If employment can be obtained in Western Canada, instructions should be given to poor emigrants where to proceed, and if means were required by them to take them up the country, we conceive that a part of the public funds could not be more usefully applied, than in furnishing the means to enable these people to proceed to where they can obtain employment. It is disheartening to them, and injurious to the public welfare, that able-bodied men should be idle and wandering about Quebec and Montreal, if it were possible to give them useful employment.—These people, though poor now, may become in a very short time, consumers of British goods and payers of revenue. Indeed, they would be so now, if they only got employment. Forty thousand emigrants have already come to Canada this year, and what prospect do they meet with? A large proportion of them are idle and wandering about the country seeking work; and however disposed farmers might be to give them work, the means are wanting to employ them at any other work but what is unavoidable. We have lengthened out this report more than we intended, but we felt interested in the subject, and we hope our readers will feel the same interest in what we have submitted for their consideration.

We would observe in conclusion, that as the price of oats in our market is very low, 1s. 3d. to 1s. 4d. the minot, we would suggest the propriety of converting part of it into oatmeal for the *English* market. The price of oatmeal in the Liverpool market, by the latest advices, was from 28s. to 30s. the 240 lbs. This price would pay well, and we think it will not be less for some months. The value of potatoes has been greatly increased in the Montreal market this month, in consequence of the great number of poor strangers, and the supply being rather short. They sell at present for 2s. 6d. to 3s. the bushel. Hay is very low, from 20s. to 25s. the hundred bundles of 1,600 lbs. The latter price is seldom obtained for the very best old hay. Straw, from 12s. 6d. to 17s. 6d. the hundred bundles of 1,200 lbs. Canada wheat, 60 lbs. 7s.; barley, 2s. 6d. to 2s. 8d.; peas, 3s. to 3s. 4d; butter from 6d. to 8d. per lb.

The loss of wheat to the farmer is most severely felt. It has been the cause of deranging the whole system of agriculture. A large proportion of the arable land of every farm, might have been appropriated to the growing of wheat, but since the failure of that crop, all the land is employed in producing crops that can only be consumed in Canada. Hence, the market must be glutted with this description of produce; and if the lands in tillage could be properly cultivated, this produce might be more than doubled.—It is therefore, highly essential that every experiment should be tried in Eastern Canada, to produce wheat as heretofore.

Cote St. Paul, 21st. *July*, 1842.

MR. HOWITT'S PREMISES AND STOCK.

In an another column will be seen a correct portrait and pedigree of Mr. John Howitt's heifer *Amelia*. In the month of June last, while on a tour through the Western part of the country, we availed ourselves on that occasion, of calling on that gentleman to examine his choice herd of pure blood short-horn Durham cattle, and his superior well bred flock of South Down sheep. Mr. Howitt's is one of the largest farms in Western Canada. His domain extends over upwards of 1,400 acres of excellent land, nearly one half of which is under cultivation; and sows 200 acres of fallowed land wheat annually. His barn is the best without exception that ever came under our notice; it is 120 feet in length, and 70 feet in width, with a lean-to 30 feet wide extending the whole length of the building, which makes it 100 feet in width. There is a stone wall 9 feet high under the whole of the main buildings, which is fitted up in commodious stables of every description, and cellars for roots. The lean-to is used for the purposes of sheds for horned cattle, enclosed at each end, and supported by the wall on one side, and a rack the whole length of the building on the other, excepting passages at intervals for the cattle to pass and repass into the yard. The second story is laid with a ten inch plank floor closely jointed, which gives the whole, the appearance of immense thrashing floors. These floors are used in the summer season for granary purposes, and was covered with some hundreds of pounds worth of wheat, at the period above mentioned. The whole of the exterior of this admirable barn is well painted, which gives it an imposing appearance.

We have seen much excellent imported *stock from Great Britain, but none, in our* opinion, of a better selection than Mr. Howitt's. His heifer *Amelia* cannot be matched for beauty and symetry in shape in this Province. She is also, as her weight indicates, of mammoth size, when her age is taken into consideration; and when we saw her, was in the highest condition, although she had nothing the whole winter but wheat straw. He has a number of full bred bulls and cows, which not only does much credit to the spirited individual who bred them, but are an incalculable acquisition to the surrounding country.

South Down Sheep were always particular favourites of ours; but they were rendered more so, when we saw them in their pure state. We deem the South Downs well adapted to this country from the hardy nature of their constitution, and the quality of the wool. It is at all times difficult to give a correct written description of any particular grade of stock, hence the necessity of illustrating stock by drawings. As we conceive that the introduction of a good breed of sheep of considerable consequence to our common country, we will endeavour to give a correct drawing of one of Mr. Howitt's South Downs in our next, and in the meantime give some of their pecular characteristics:—The head small and horn-less; the face speckled or gray; the eyes full and light, but not prominent; the neck of a medium length; the breast wide, deep, and projecting forward between the fourlegs, indicating a good constitution and disposition to thrive; the shoulders on a level with the back, but not wide above; the ribs coming out horizontally from the spine, and extending far backwards; the hips wide; the space between them and the last rib very narrow; and the ribs presenting a circular form like a barrel: the back and belly straight; the legs of a medium length, and the bone fine, and the legs a speckled gray or dark colour: the belly well covered with wool, and the wool extending down before and behind the knee: the whole fleece fine, short, close, and slightly curled, and quite free from coarse hairs.

UNDERDRAINING.

In England, the process of underdraining is varied according to circumstances; but the plans most highly recommended and most generally practised, are made with draining-tiles of which there are a great variety of sorts: but as the making and burning of tiles would be attended with immense cost in this country, where manual labour bears such a disproportion to the prices of the products raised from land; and as the great object of farming to profit, is to get every thing done in the cheapest and best possible manner, we would advise the adoption of such plans to carry out the improvements in husbandry, which we may introduce from time to time to our Subscribers, as will be in strict conformity with that principle, and adapted to the peculiar circumstances of the Province.

We have seen the following plan pratised, and will be found to be durable from 12 to 15 years; and cheap, and simple in its construction. If the land intended to be drained, be of a stiff retentive subsoil, it may be effectually drained, by sinking an open drain the desired depth, then make a trench in the centre about 6 inches wide and the same in width, cover the same over with slabs, then a layer of brush, and lastly fill it up with the earth thrown out. We attach more importance to this too much neglected mode of reclaiming sour and unproductive land than many, or else it would be more practised. On sandy soils it may be dispensed with, but on heavy clay soils, it is absolutely necessary to drain the land to insure a crop of wheat. We earnestly invite our Subscribers to make experiments, if they have not already done so, on this or any other subject that would have a tendency to elevate the character of husbandry, and we wish them to forward the *operandia* and results for publication in the columns of The Cultivator.

POETRY.

SPRING.

BY MRS. EDWARD THOMAS.

(Copied from The Mark Lane Express).

When unto God your matin pray'rs are said,
The sun shines cloudlessly above your head;
The birds are warbling—the flow'rets bloom;
And no *dear one* is slumbering in the tomb.
So recently, Time's had no power to dry
The tear that falls from Sorrow's woe-fraught eye.
With limb elastic, and with heart serene,
You step, elate, along the meadows green.
You *must* be happy—Nature's with you, *then!*
Toil, care, and pain, are with the town-pent man
Their fev'rish ears drink not the lulling sound
Of gurgling brook—they cannot look around
On fair Creation's works; *all* they behold
Is artificial—to be bought and sold—
Produced by labour so intense—severe—
That they enveigh against existence *here*,
Panting to speed beyond those radient skies,
Whose light on earth is Slav'ry's sacrifice;
Gladness unspeakable is in the fields,
Each timid flow'r delicious perfume yields;
Like medicated balm an angel brings
From bow'rs of Paradise, on its fond wings;
While ev'ry breath of air that fans the face,
With renovated health the frame doth brace;
Filling the heart with that deep sense of joy,
Whose holy pureness nothing can destroy;
Bidding Man own, amaz'd, the wonderous Hand
That cloth'd in loveliness a sin-stain'd land,
Peopling with jocund birds each vernal grove,
And proving Earth still worthy of His love!
The soul with greatful admiration fill'd,
Feels ev'ry fierce discordant passion still'd;
Loses, at *last*, its taint of earthly leav'n,
And owns the purity alone of Heaven!

From the Farmer's Gazette.

Farmer, happy is thy lot;
Peace and plenty crown the spot
Which in wisdom thou hast chose;
Solid comfort ever flows
From thy quiet pleasant home,
E'en the fields o'er which you roam,
With soft accents seem to say,
Thou art happy every day.

Far from city's noisy strife,
Thine's a calm and tranquil life;
In thy garden, flowrets thrive;
From thy vines, thou will derive
Fare luxuriant, rich and vast;
From thy trees, a sweet repast;
Faithful fields will gladly bring
Treasures great, a boundless spring.

In the country's balmy air,
Health's bright visage thou may'st wear
Knowledge deep thou may'st obtain;
Richest blessings thou may'st gain;
Independence gilds thy path,
Thou true freedom ever hath;
Thine's a station, envied more
Than a prince's throne of power.

A FARMER'S DAUGHTER.

THE GOLDEN MAXIM OF SIR MATTHEW HALE.

A Sunday well spent,
Brings a week of content,
And health for the toils of to-morrow:
But a Sabbath profaned,
Whatsoe'er may be gained,
Is a certain forerunner of sorrow.

FITNESS OF THINGS.—Jeremy Taylor says that the world is a board with peg-holes, some square, and some round, and that certain men, fitted for one state of things and not for another, are square pegs which get into round holes. Nothing can adjust them to their stations, or fix them with any firmness or uprightness. Change their position, and set each right—but the change is impossible.

OUR BOYHOOD.

The memory of boyhood is ever agreeable for the close approach it makes at times to a state of perfect contentedness. We can remember when certain gratifications that we had hoped for were conceded, we were perfectly happy in the enjoyment of them, at least as long as they continued to be novelties. In manhood, to put us into possession of any thing which we desired, no matter how long we had been wishing for it, was to make us dissatisfied immediately. Its possession was the signal for discontentedness; new desires, and new hopes, new longings and cravings arose, from which we were free while the state of expectation of the object with which we had just been gratified existed. The consummation of boyish hope led for some short space into a heaven of satisfaction, a little term which we could say, "Now we want nothing more in the world." The interval, short as it might be, was one of perfect felicity. If we had for days been expecting a holiday, and it had arrived, we spent it with a companion or two in a complete fruition of hope. For at least half that day we well recollect that no void was left in our bosom, no craving desire made us restless, until the toil and fatigue of play and exercise produced satiety, and gave a desire of repose. We were always, however, keenly alive to the miseries of boyhood, for most acute miseries boyhood may have, and nothing is more unfounded and unfeeling than the notion that boys are insensible, or suffer but little from the mortification that may be inflicted upon them The painful effect there is no doubt is more evanescent than in after-life, but it cuts as deep at the moment. Of all youthful miseries, the tyranny of the pedagogue of old times was the most unsufferable; how often has it broken the manly spirit of youth, crushed its noble pride, and smothered its desire of emulation. A hundred boys, all differing in character and temperament, were formerly, like so many German soldiers, taught by the cane. They must acquire the same task, in the same manner, and in the same stated period of time. The lively and studious, the dull and acute, were treated in a way perfectly similar; and the scourge—the infamous and degrading punishment of the scourge—was the inevitable lot of him with whom it was a physical impossibility to learn the allotted portion, equally with the indolent or wilful neglecter of his duties. It is curious, that most of the shining characters in our literature in whom genius has been most eminently displayed, were rarely discovered to possess remarkable talents at school, if many of them were not thought irretrievable blockheads. Something not very well authenticated is told of Dryden's startling his pedagogue with an excellent couplet; but for the most part the slaves in after-life, the plodding man of business, the commentarist, or future college tutor, were the master's favourites. The truth is, that line and rule were made for those who cannot work without; and the favourites of nature, the mighty intelligences among men, were not to be treated like machines. Their lofty and proud spirits mutinied and rebelled against the plough-driving system of coercion. They could not but revolt secretly, and imbibe a distate for what was attempted to be forced upon them instead of being introduced by the aid of reason and suavity. This system has been very much changed of late years, except in three or four great grammar schools. We are happy we never had any thing to do with faggings and floggings. We can well remember the terrific impression they made on our mind, as our friends were afflicted by them. They gave us such a repugnance to the system, that we determined, with a resolution and coolness rarely found in one of our young years, that in case parental authority bore down the antipathy we felt against such a torture, we would run away to sea. We even went so far as to calculate on the surest means of doing this with success, and we had some peculiar local facilities in our favour. We had anticipated, which boys seldom do, the obstacles that lay in our way, and young as we were, we verily believe, had we made the attempt, we should have succeeded. It was not our destiny, however, to be driven to the trial; an excellent mother, by her interference, saved us the necessity of an act which might have been followed by a long and bitter repentance.

Man must not be broken in like a horse, if we wish him to preserve a truly high and noble spirit. Reason and shame are his legitimate controllers. A soldier once flogged may do as well for an Austrian army, where men must be automatons, as before; but in minds formed for great actions a blow destroys every valuable quality. For our part, we should even now feel an indignant blush of shame in the presence of his master or his ushers who had flogged us every week from the age of eight to eighteen. We should abhor them. How they are so complacently regarded by their scholars in after-life we cannot tell: the latter surely cannot have feelings like ours—but perhaps we are over-sensitive.

There is a great deal of honour in unsophisticated boyhood. The disgrace cast on tale-bearing ought never to be removed.—Nothing is so ill-judged as to encourage *espionage*, and to reward spies and traitors to their companions. The integrity and straightforwardness of a government proves its strength and ensures its durability. The boy who, rather than betray a companion, endures a flogging and keeps a secret inviolate, is a young hero, and has the elements of much good in him, in spite of Mr. Locke; such a spirit ought to be admired rather than censured. To encourage a tale-bearer is to sanction the committal of a new crime to obtain oftentimes the punishment of one of less magnitude. That master must be stupid and idle, who cannot obtain a knowledge of all he may require in such cases from a separate and close cross-examination of juvenile accomplices.

But we have wandered from boyhood to education. From describing a few sensations peculiar to incipient man in a state of nature, we have wandered into that state which is to fit him for artificial life. We crave pardon of the reader for the digression; but we believe that it is, after all, more to the advantage of society for men to have honest, bold, and high ideas of independence, and pure feelings of honour, than to be mere construers of ancient tongues, employed on words only, not dreaming about making them the medium for conducting the learner to virtuous actions.—*Eng. pap.*

DIFFERENCE BETWEEN PHYSICAL AND MENTAL LABOUR.—Whilst we are in hand with these four parts of the Institute, we often having occasion to go into the city, and from thence into the country, did, in some sort, envy the state of the honest ploughman and other mechanics. For one when he was at his work, would merrily sing, and the ploughman whistle some self-pleasing tune, and yet their work both proceeded and succeeded: but we that takes upon to write, doth captivate all the faculties and powers both of mind and body, and must be only attentive to that which he

collecteth, without any expression of joy or cheerfulness while he is at his work.—*Sir Edward Coke.*

EDITORIAL LABOURS.—The conductor of an able and influential paper (*The Spectator*) gives the following estimate of the labours of an editor:—"Many people estimate the ability of a newspaper, and the industry and talents of its editor, by the variety and quantity of editorial matter it contains. Nothing can be more fallacious. It is comparatively an easy task to pour out daily columns of words—words, upon any and all subjects.—His ideas may flow in one 'washy and everlastiug flood,' and his command of language may enable him to string them together like bunches of onions; and yet his paper may be a meagre and poor concern. But what is his labour, the toil of such a man, who displays his 'leader-matter' ever so largely, to that imposed upon a judicious, well-informed editor, who exercises his vocation with an hourly consciousness of its responsibilities and its duties, and devotes himself to the conduct of his paper with the same care and assiduity that a sensible lawyer bestows upon a suit, or a humane physician upon a patient—without regard to show or display? Indeed, the mere writing part of editing a paper is but a small portion of the work. The industry even is not shown there. The care, the taste, the time employed in selecting, is far more important—the tact of a good editor is shown more by his selection than any thing else; and that, we all know, is half the battle. But, as we have said, an editor ought to be estimated, and his labours understood and appreciated by the general conduct of his paper—its tone—its temper—its manner—its uniform consistent course—its principles—its aim—its manliness—its courtesy—its dignity—its propriety. To preserve all these, as they should be preserved, is enough to occupy fully the time and attention of any man. If to this be added the general supervision of the newspaper establishment, which most editors have to encounter, the wonder is how they can find either time or 'head room' to do it all."

A FACT FOR THE CHEAP-BREAD AGITATORS.—It was stated by M. Ledru-Rollin, in his address to the Court of Peers on behalf of M. Dupoty, that there are eight millions of persons in France at the present time in a state of misery. France is one of the countries to which the agitators point, where the luxury of "Cheap Bread" is to be had—if money can be procured to purchase.

AGRICULTURE AMONG THE CHINESE.—In classing the people, the Chinese place the Literati in the foremost rank, as learning is with them the stepping-stone to honour; but immediately after the learned, the husbandman takes precedence of all others, because engaged in raising the necessaries of life. Agricultural employments are thus honoured in China from wise and politic motives, the country requiring cultivation to the utmost extent, to provide for its population.

AGRICULTURAL MACHINERY.—The Highland and Agricultural Society of Scotland, has again announced a premium for the first successful application of steam to the cultivation of the soil. No premium was awarded last year, and the committee announce their intention of withdrawing the notice after the present year. The particulars with reference to the premium may, perhaps, be interesting to some of our readers, and we, therefore, subjoin them:—A premium of five hundred sovereigns, or such other sum as the directors may see proper in the circumstances, will be awarded for the first successful application of steam-power to the cultivation of the soil. By the cultivation of the soil are to be understood the operations of ploughing and harrowing, or preparing the soil in an equally efficient manner, and the other purposes for which animal power is now used; and the success of the invention will be judged of in relation to its applicability to the above purposes in the ordinary situations of farms in this country, and to the saving in time, labour, and outlay, which it may possess over animal power, as now generally employed in the cultivation of the soil.

THE ROYAL ENGLISH AGRICULTURAL SOCIETY.

BOKHARA CLOVER.

William Taylor, Esq., F. L. S. of 314, Regent-street, presented to the society a bundle of Bokhara clover, (recently cut) with a coloured engraving of the plant, and the following account of its cultivation:—

"A small packet of the seed of the clover in question, which appears to be a variety of melilotus arborea, was given me by Mr. Loudon in the spring of 1839. It vegetated freely, and grew most luxuriantly, up to the latter part of September, when it was four feet high; it was then mown, and the stalks were manufactured into strong and durable hemp. Horses eat the plant with great avidity in its young state; and to judge from its extraordinary growth the first year, it may be fed off three times, namely, the middle of June, July, and August. It stood the winter of 1839–40 well, proving itself to be a hardy plant. On the 28th of April, 1840, a small portion of it was cut, which was then 15 inches high; on the 28th of May again, height 16 inches; and subsequently on the 28th of June, height 17 inches; in August 15 inches, and in September 12 inches; the first flowers appeared in June, and by the middle of July it was covered with its highly fragrant white blossom. A large portion had been left for seed, and towards the end of September the crop was harvested, each plant producing from 10 to 20,000 seeds, the stalks being from 12 to 13 feet in height. From the experiments I have made with Bokhara clover, I should calculate that an acre would produce from 20 to 30 tons of green herbage. The first year it may be cut in June, July, and August, each cutting averaging three to five tons of green herbage. The second year, in April, May, June, July, August, and September, each month producing three to five tons of herbage. If intended to be saved for seed, it must not be cut more than three times, in April, May, and June. The roots form a sort of manure; and from two to three tons of hemp. Great advantage must be derived from its cultivation, as it forms a valuable green food for all sorts of cattle at an early period of the season; and if cut when 15 or 20 inches high, an abundant crop would be produced, yielding hay superior in quality and quantity to the common herbage plants. To judge from what has hitherto been seen of the Bokhara clover, it appears to be a valuable biennial plant, well adapted for growth in this country; nor is it unlikely that it may be found to thrive on such soils as, by agriculturists, are termed clover-sick; whereby its value would be greatly enhanced. Should it, as may reasonably be expected, in ordinary seasons, on good soils, be ready for cutting in the early part of April: farmers who have no grass, and but a short supply of hay, carrots, or turnips, would derive essential benefit from it. The Bokhara clover being a tall, deep-rooted plant, with a strong stem well clothed with foliage and blossom, it keeps the ground in a more perfect state than most other plants of the artificial grass kind, and, consequently, will be more influential in ameliorating and preparing soils for the reception of wheat crops. It is a plant capable of being cultivated with success and advantage on almost all heavy and dry descriptions of land if in a tolerable state of fertility; and it may be sown from March till June. The proportion of seed that is necessary must vary according to the quality of the land and the state of preparation to which it has been brought; on the richer descriptions of soil that are free from weeds, 8 to 10 lbs. may be sufficient for an acre; whereas 14 to 15 lbs. will not be too much for those that are of stiff quality, or which possess a less degree of fertility. As already indicated, the crop may either be mown for hay, cut every month as green herbage for different sorts of live stock, or serve for the grazing of cattle and sheep. The separation of the seed from the capsule does not require so much labour and expense as the common clovers. It is thrashed in the same manner as trefoil, and sent to the mill to free the seed from the husk. The Bokhara clover is likely to answer well, and may, in a great measure, render this country independent of foreign clover-seed. On account of its elegant appearance, and the fragrance of its blossom, it likewise deserves a place in every flower-garden."

Mr. Gibbs stated to the council, that the plant now known as the "Bokhara clover" was identical with the *Trifolium Melilotus alba*, or (as it had been formerly called) the *Melilotus officinalis alba*, a plant which had been partially cultivated in this country for the last twenty-five years, and the seed regularly imported by Messrs. Thomas Gibbs and Co, who had been in the habit of recommending the growth of a small breadth of this clover, for the purpose of mixing it with hay that might have been damaged by wet weather, the fragrance of the leaf imparting to the whole the smell of new hay; also for cutting and placing in layers with oat straw, for the purpose of cutting into chaff, stacks being formed of alternate layers of the straw and clover. Mr. Gibbs stated that this clover grew to a gigantic height, but should be cut at any early stage, as otherwise it would be ligneous or woody in stalk, the soil most favourable to its cultivation being a deep rich mould.

CRETAN MELILOT.

Mr. Taylor having presented to the society a coloured drawing of the *Melilotus Creticum*, transmitted the following account of the plant:—

"A few seeds were sent me from the Island of Crete, under the name of the Melilotus Creticum, as a plant that would be found highly useful for feeding cattle. The seed was sown the 25th of March, produced flowers in June, and by the middle of July it was covered with its highly fragrant yellow blossoms; ripened seed in August; height of the plant 20 inches. The Melilotus Creticum seems to be a valuable plant, and well calculated for growing in this country. It seems to possess all the properties sufficient to recommend it to the notice of agriculturists, particularly as its stalks are very succulent, and its foliage very abundant; and when sown in autumn, it may be cut and cleared from the ground in the beginning of June following, and the land fallowed for wheat or spring corn. It forms a valuable

green food for cattle at an early period of the season, and, if cut when in full flower, it yields a most abundant crop. It seems to be relished by all sorts of cattle, particularly milch cows, in consequence of its sweet herbaceous flavour, whether cut in a green state for food, or made into hay; and a plant well adapted for making into hay, on account of its foliage, when dried, being found to impart to the whole crop an agreeable sweet scent, similar to that of the sweet-scented vernal grass, or *Anthoxanthum odoratum*. From its beautiful yellow spikes of flowers, it will form an elegant ornamental plant in every garden."

NEW DRAINAGE BILL.

A very important bill entitled "An act to promote the Dramage of Lands in Ireland and improvement of Navigation and water power in connection with such Dramage," has been before the House of Commons, and has been lately reprinted with several alterations. It occupies seventy-six pages, and contains one hundred and sixty-two clauses.

Secs. 1 to 7 Besides the Commissioners of Public Works, two additional Commissioners to be appointed to carry the Act into execution, who will receive memorials from any persons interested in lands liable to be flooded or capable of being drained. The memorial to state the nature and extent of the land, and praying that it may be drained. Persons interested in rivers near such lands may memorial for the improvement of their navigation. Grand Juries may memorial through their Secretary, after making a presentment, for the same purpose. When a memorial is received, the Commissioners may require either the individual or Grand Jury to make a deposit for defraying the expenses of surveys, schedules, maps, &c.

Secs. 8 to 18. Commissioners, after memorial and deposit, may appoint an Engineer to inspect the land or river, and inquire into its present state—the capacity of the land for improvement by dramage, and its increase in value when improved—the improvable capacity of rivers—whether existing interests would be injured by the necessary works, and whether for that purpose it may be necessary to "purchase, remove, injure, or alter any weir, dam, mill, factory, or other building, or property." If, on the report, the Commissioners think the cost of works incommensurable with the benefits, they are to decide accordingly; and if they approve of them, they shall cause further and more minute surveys to be made, copies of which shall be open for the public inspection. Grand Juries then to appoint a committee of seven, who may attend the meeting of the Commissioners, and object to any parts of the report. Commissioners to hear evidence on oath, and to give the meeting the fullest information concerning the works.

Secs. 19 to 29. Presentment Sessions and Grand Jury may approve of works, and undertake to pay the cost of their execution; and, if they should refuse, may have the works done by securing the payment of the costs. No drainage works, however, to be commenced unless proprietors of two-thirds of the land concur.

Secs. 29 to 40. Where the weir, dam, or obstruction of a mill or factory, causes damage by overflowing, the Commissioners may make alterations and construct works to prevent the floods, and discharge the surplus water, and also declare the level at which the working water-power shall be maintained, by erecting a guage for that purpose.—Owners may object to the level, and Commissioners to decide on all such objections. Where works connected with mills or factories, by flooding, prevent the permanent improvement of the neighbouring lands, the Commissioners may alter the machinery, and the levels of the head and fall of the water, but not so as to lessen the power; but where the calculated improvements on the land are three times greater than the value of the mill or factory, the Commissioners may buy them up, and if the owners should not agree to the purchase, they may take them at such a valuation as a jury may allow. Before such a step is resorted to, the Commissioners shall make a declaration, describing the land to be improved—its actual value, and the estimated increase by means of the proposed works—the names of the assenting proprietors, the amount of injury caused by the obstructions, and the restrictions under which they may be interfered with. Then follow the proceedings before the Superior Courts or the Assistant Barrister.

Secs. 40 to 53. After publication of final notice, the Commissioners may proceed to execute the works, by ordering reservoirs and embankments to be made, and providing for their future repair—by making such roads as they may deem necessary for that purpose, and diverting the sulplus waters of rivers adjoining the reservours. Where embankments may be requisite to afford a constant supply of water to private works, Commissioners may execute them with the consent of mill proprietors, equal in the value of their working power to two-thirds of the value of the working power of the mills affected. Commissioners to raise money for the purpose on such mills or factories.—Fishing weirs may be altered or removed, making compensation to the owners. Where the mill power is improved with the owner's consent, Commissioners may rate him towards the expenses of the works, and any improvement made shall be set off against loss by temporary stoppage. Owners or occupiers not to be exonerated from making such repairs as they are liable to before the Act.

Secs. 51 to 66. The first section describes the general nature of the works to be erected under the Act, which are equally extensive and beneficial. Commissioners, after three days' notice, may enter lands and dig for materials — fill up holes and pits not found useful, and fence off such as may be. They may make drains through lands not proposed to be drained, giving compensation for the damage. They may enforce the cleansing of drains; and any party whose lands may be injured from this neglect may, after service of notice, proceed to scour them, and recover a proportion of the expenses by civil bill. If cuts or other works be made to injure roads or bridges, other more convenient roads or bridges to be made; and where existing bridges are insufficient to carry off the water, Commissioners may re-construct them. In the alteration of dams or weirs, provisions to be made for the migration of fish. When lands shall be cut through, separating the parts of a farm so as to leave on each side of the works less than a statute acre, or less than fifteen yards wide, the Commissioners, if required by owner, must purchase the entire.

The bill goes on to provide that all lands benefited by the drainage, shall be subject to the repayment of the money expended on the drainage with the interest upon the same until repaid. All lands held under the same title shall be subject to the amount expended in the drainage of any part of them.

We give insertion to the heads of this bill, in order that our Legislature may take it into consideration and give us a bill something like it. We tell our Legislature plainly that such a bill would be much more beneficial to the general improvement and interests of the country, than most of those they have passed during their last Session.

Promptness.—Promptness in mechanics is of the highest importance. The farmer who sows or reaps out of season, will not lose more by doing things out of the proper time, than will the mechanic in a long run; by neglecting to perform work and fulfil orders as promised.

The farmer sees plainly by the operations of nature around him, the importance of promptness and dispatch. If he is late in sowing, he finds that the season of genial rains and sunshine are passing away without preparation on his part, to profit by them; and the green fields of his neighbour are an evidence of his loss, and spurs him on to action.

But the mechanic has less evidences of his loss by neglect. The customer that is often disappointed, may bear the evil silently, but resolves to learn by experience and look for one more prompt for the future.

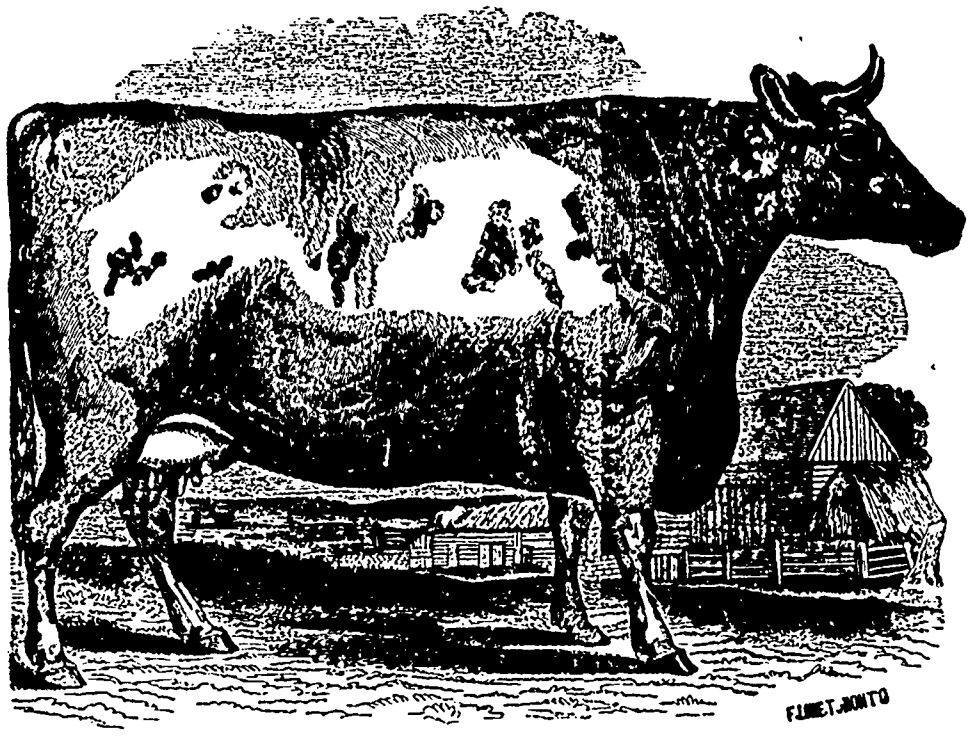
Disappointments in mechanical work are serious evils; and a great many excellent workmen, who have but little to do, are among the first in their profession in skill; and could do a large business, were they as much noted for their promptness as for their skill and ingenuity.—*Far. Journal.*

Practical Hints on Agricultural Topics.—The following hints is condensed from Loudon's "Encyclopœdia of Agriculture:—

"In salting or curing butter the use of wooden vessels is preferable, and they should be made from timber which has been previously boiled four hours, to free it from pyroligneous acid, or they should be made of the lime tree, which wood is without this acid. To feed a horse when hard ridden, or if weakly and tender, it is often useful, to give bread, or bread with ale or gruel. It is of the utmost consequence, if the journey be of several days continuance, that the baitings are sufficiently long to allow the horse to digest his food. When any young man intends embracing agriculture as a profession, whether as ploughman, bailiff, steward, land-valuer, or rent-paying farmer, he ought to undergo a course of manual labour for one year or more, in order to acquire the mechanism of all agricultural operations.—When the pupil is not destined for any peculiar county, then he should be sent to a farmer's in a district of mixed agriculture. When the pupil is intended to be settled in any particular county, he ought to be sent to a county as nearly as possible of similar soil and climate, where the best practices are in use."

Oil of Spike, or a mixture commonly sold under that name, is nothing but some spirits of turpentine, mineral tar, and some essential oil, added in various proportions.—The following is a good receipe for its preparation:—Take spirits of turpentine, one pint; mineral tar, ½ pint; oil of amber, 3 ounces; oil of rosemary, 1 ounce.—*Albany Cultivator.*

Mr. HOWITT'S DURHAM HEIFER AMELIA.



To the Editor of The British American Cultivator.

DEAR SIR,

The above is a Portrait of my Improved Short Horn Heifer *Amelia*. A light roan colour, with spots as represented in the accompanied drawing. This heifer was calved on the 19th of September, 1838, and was bred by myself. Her pedigree is as follows:—

"She was sired by *Reformer*, who was imported from England in 1833, by Rowland Wingfield, Esqr., and selected from the herd of the Rev. H. Berry, Acton Rectory, Bromyard, Worcestershire. *Reformer* was got by *Warwick*, dam *Yellow Neck*, by R. Collings' *Pilot*. Warwick was got by *Wharfdale*, dam *Pease Blossom*, by Mr. Whitaker's *Triumph*. Grand dam *Rose*, by Mr. Barns' *Arthur*. Great grand dam by Allison's Grey Bull. Great, g. grand dam by a son of *Favourite*. Triumph was got by *Prince of Waterloo*, out of Mr. Whitaker's *Moss Rose*, by *Western Comit*.—*Ross Rose* was judged to be the best cow in England."

AMELIA'S DAM.

Was imported from England in 1833.—She was got by *Nheer*, (see Coates' Herd Book) dam *Vanda*, by *Young Mark*. Grand dam *Trinket*, by *Meteor*. Great g. dam *Princess*, by *Western Comit*. Great, g. g. dam *Selina*, by *Favourite*. Great, g. g. g. dam by *Countess*, by *Cupid*. Great, g. g. g. g. dam *Lady*, by grand son of *Polinbroke*.—Great, g. g. g. g. g. g. dam *Phœnix*. Phœnix was got by a great, great grand son of the celebrated bull *Comit*, who sold for 1,000 guineas.

This pedigree will be found correct by reference to Coates' Herd Book, both on the side of the sire and the dam. She is the same animal which I mentioned in a former communication, published in *The Cultivator*, that had nothing but straw all last winter, and never was put into a building. She will weigh 64 stones, 14 lbs. to the stone; and her fattening propensity is such, that if she had first rate pasture, it would be quite out of my power to say what weight she could make.

JOHN HOWITT.

Guelph, July 20th, 1842.

THE THAMES TUNNEL.—The whole of the tunnel, nearly 1,200 feet in length, is now *completed, and will be opened in a very* short time as a public thoroughfare for foot passengers; the workmen are busily engaged in erecting the staircase on the Wapping side, which is all that remains to complete this extraordinary work. The machinery, steam engines, and surplus materials are advertised to be sold by auction, including the powerful apparatus called "The Shield," by means of which the work was accomplished. It is said to contain 150 tons of iron, and to have cost £10,000.—*M. L. Express.*

FETE OF STRENGTH.—A large number of the respectable farmers in the neighbourhood of Market Drayton, assembled at the Phœnix Inn, on Wednesday the 11th Inst., to witness the decision of a wager, when James Beardmore, the third son of Mr. Francis Beardmore, of the Dairy-house, near Drayton, (a youth only seventeen years of age), was backed to lift up from the floor, and get upon his shoulder, a bag of wheat, (of three bushels, weighing 229 lbs., bag included), with his right hand alone, unaided by his left hand, with which he was not to touch the bag. This very extraordinary fete of strength he very cleverly performed in the Market-room of the Phœnix Inn, before the assembled company, by his stooping down, laying the bag on his lap with his right hand, then turning it round his hip upon his back, afterwards hitching it up his back and bringing it to his right shoulder, kept his left hand and arm down by his right side quite clear away from it—a most unparalleled performance. The free and generous burst of old English cheers by the company, when he stood up with the bag upon his shoulder, proved the view the farmers took of the performance, which very few could do with both hands, in the middle of the room.—*Ib.*

AUSTRALIA.—Accounts of February 1st. from Sydney, in noticing a sale in the interior, of 1,000 head of cattle, at two pounds *per* head, and 5,000 sheep at *five shillings* each besides two stations, with the use of the implements, improvements, &c., given in, take occasion to observe that the purchaser of this lot, as well as other buyers who had entered into similar speculations, would ultimately, and probably within a very short time, realize a handsome fortune, wool being in good request in the home market, and stock so unprecidently low, as to make it impossible that it should not soon get dearer. Gentlemen of capital, arriving from the mother country, had a rare opportunity of commencing well upon this account, and in the hunted district, which has been long settled, stations could be purchased, with almost every rural comfort, equal to those at our English farms. We must not forget to state also, however, that the accounts from some quarters notice the existence of severe drought again, in consequence of which the flocks and herds were suffering to a most serious extent, this being in the Maitland district, and further, that the bushrangers were extremely annoying to the settlers up the country.—*Ib.*

INSTANTANEOUS GINGER BEER. — Fill a bottle with pure cold water, then have a cork ready to fit it, also a string or wire to tie it down with, and a mallet to drive the cork, so that no time may be lost; now put into the bottle sugar to your taste, (syrup is better), and a teaspoonful of good powdered ginger, shake all well, then add the sixth part of an ounce of supercarbonate of soda; cork rapidly, and tie down—shake the bottle well—cut the string—the cork will fly—and drink ginger beer.—*Ib.*

ON THE ADVANTAGES WHICH HAVE BEEN DERIVED, AND ARE LIKELY TO ACCRUE TO AGRICULTURE, FROM THE APPLICATION TO IT OF THE PRINCIPLES OF VEGETABLE PHYSIOLOGY AND CHEMISTRY. BY HENRY R. MADDEN, ESQ., M. D.

In order that soil may be advantageously subjected to continued cropping, the farmer must keep up its essential qualities by ploughing, harrowing, and any other operations necessary to pulverize it. The value of the impalpable matter in soil has been already alluded to, and we shall accordingly confine ourselves in this place to the enumeration of the practical advantages arising from a knowledge of the facts there brought forward.

The effect of ploughing, harrowing, &c., &c., is twofold: 1st. It looses the soil, and renders it more porous: 2nd. It pulverizes it; both of these are of the greatest value; while the first prepares the soil for freer admission of air and moisture, the latter renders these capable of acting chemically upon the different ingredients contained beneath its surface. The necessity of pulverizing is evident, because, as far as plants are concerned, it is of little consequence whether their roots come in contact with an agglutinated mass of powder, or a stone; both are equally impenetrable, and hence both are equally useless; so that a soil badly pulverized is in many respects similar to a very stony soil, with one exception, viz., that the masses of matter which are capable of being reduced to powder, being more porous than stone, are capable of absorbing a greater quantity of the liquids contained in soil, and thereby impoverishing the land; it is therefore of the utmost consequence for the fertility of the soil, that it should from time to time be pulverized to the greatest extent of which it is capable, without the expenditure of too great a quantity of labour. All must be aware that Jethro Tull was so deeply impressed with the importance of this pulverizing of the soil, that he frequently affirmed that, if properly performed, it might altogether supersede the necessity of manuring. Of course this idea is extravagant, but still, as it resulted from practical experience, it tends to show in a forcible light the great value of the operation. In process of time, science may enable us to employ some more efficient method for increasing the quantity of impalpable matter in soil, in a shorter period than it can be effected by the gradual disintegration of the stones by the influence of the weather, and thus render the loosest sands capable of profitable cultivation.

Soil intended for continued cultivation must have its supply of organic matter, and part also of its mineral ingredients, renewed by returning to it, from time to time, in the shape of manure, what has been removed from it in the form of crops. We have already observed that physiologists are far from being at one in their ideas regarding the exact manner in which the organic matter of soil influence its vegetation, but still they all acknowledge the practical advantages of a good supply; many, however, suppose that the value of manures consists merely in their mineral ingredients, while others place all their value in one single element of their organic portions, namely, their azote. Be this as it may, we have still the fact acknowledged by all, that to keep up the productive power of a soil, it must be supplied with manure. Much practical advantage may be gained by studying carefully the relation subsisting between the composition of a soil, and that of the manure best suited for it, because it will invariably be found that the manure acts most beneficially, which contains the best supply of whatever is deficient in quantity in the soil for which it is intended, and that much good material is constantly lost or rendered unprofitable by the absence of any attempt to accommodate the manure to the soil. When the researches of the chemist shall have enabled him to decide with accuracy as to the peculiar food best adapted for each crop, this accommodation will be capable of being carried to a much greater extent than it possibly can be at present.

But the condition, as well as the composition of the manure must be attended to, because soil must have its activity preserved by adding to it, at certain periods, substance in a state of fermentation. Numerous facts tend to prove that the success of many crops depends upon the existence of fermentating matter in the soil, and that however rich it may be in other respects, these crops can only be advantageously cultivated after a fresh addition of manure: this is particularly the case with the turnip.—Without dung the richest soil will bear but an indifferent crop; while with manure, very poor soil, if it be not too wet, will at all times give a good return. Science has not as yet been able to account for this satisfactorily, although many of her votaries are willing to acknowledge its truth, and it is obvious that an acquaintance with the fact must be of the greatest value in assisting the farmer in his arrangements, for he will of course apply dung when he intends to raise a crop requiring the existence of fermentating matter, and thus ensure its success, while he does no injury to the following crops, whose growth is, to a certain extent, less dependent on the condition of the soil.

It frequently happens that the farmer is not contented with his soil in its natural condition, on account of certain defects under which it labours, and which the recorded experience of his ancestors has informed him can be overcome or counteracted by certain processes which he may carry into effect with more or less facility, according to circumstances. The chief of these are draining, liming, and paring and burning; and our object in mentioning them here is to point out what is really effected by each, so that farmers may be prevented from misapplying them from ignorance of their peculiar mode of action.

(To be Continued).

From The Colonial Farmer.

PEAT, AND RICH MOULD.

Many writers confound these two very different substances under the name of vegetable matter, sometimes observing that a soil may be barren in consequence of the excess of vegetable matter. This language is calculated to mislead, and confuse the young student in agriculture. In Europe there have been disputes concerning the origin of peat, and some very whimsical theories formed upon the subject. Here, where there are such great quantities, and where it is constantly forming, we have only need to use our own eyes to see how it originates. Most of the soil of our swamps on barren land is peat. These swamps were originally lakes; they are for the greater part on elevated situations, and rarely have any considerable stream running through them, although in heavy rains great quantities of water run into them. There is always a considerable quantity of wood imbedded in them, mostly in a decayed state. A large proportion of the peat was originally what is technically called the "Epidermis" of vegetables, comprehending the "Ross" or hard outer bark of the trees, and the thin paper-like outer bark of the shrubs and evergreen plants. This is by far the most imperishable part of vegetables, and in a vastly greater proportion upon the slowly-growing trees and shrubs of the barrens, than on the productions of a fertile soil. Together with the "ross" of the fire, there is a considerable quantity of resin which falls from the trees with it. This is increased by the leaves of the various shrubs of barren heathy ground which generally hold a considerable proportion of resin, together with the astringent antiseptics, tannin, and gallic acid.—These last are indeed contained in the barks of nearly all trees and shrubs of the barrens in large proportions. Their taste is not perceptible in any considerable degree in the "Ross," but as this was originally bark, abounding in astringent matter, there is good reason to think it still retains it, neutralized by oxygen, for which astringents have such an affinity that they will take it from nitric aid, as any one may convince himself by putting a solution of nitrate of silver into a strong decoction of black spruce bark, or dwarf laurel leaves, when the silver will be deposited in a metallic form. There is also a considerable quantity of charcoal and a portion of the shells of small bugs of various kinds (coleopterous insects) mixed with the other ingredients. For the land where peat is found is covered with trees of the fir kind, always liable to be overrun by fires in dry seasons; and one heavy rain, after the ground has been smoothed by a fire which has burnt off the moss and strainer of small bushes, carries more material into the swamps than had entered them for seven years before, and it is at such times that the charcoal is floated in, together with the shells of innumerable bugs who had been killed by the fire that burnt off the moss in which they burrowed. When the wood of bogs is destroyed they produce moss, diminutive shrubs, and small juiceless sedges, which abounding in resin, tannin or woody matter, have very little mucilage, and for this reason decay very slowly. These substances are deprived of a part of the soluble matter they once contained by steeping in water for ages. It is not strange that this, when drained and exposed to the air should prove a barren soil; it is composed of the half decayed remains of vegetables natives of a barren soil, vegetables which can thrive only on a poor soil. To make this support the plants of a fertile soil, something must be added to it which it has not, and it must be deprived of a part of something which it has.

The vegetables which grows on fertile soils hold a large quantity of mucilaginous matter instead of resinous, and a considerable quantity of potash. When dead they change to a fine mould in which the natives of such soils grow rapidly, and of this kind of vegetable matter there is never an excess, the ground that has most of it being the most fertile. Between the fertile mould produced by the decayed leaves of cabbage, turnips, or tobacco, and the peat formed from "Ross," resin, sulphur, and decayed moss, there are many gradations; and when swamp soil is used to increase the manure, the best should be chosen. That which has been formed from the leaves and decayed wood from hardwood land should be preferred, and such is to be found in the swamps which have a considerable brook passing through them, formed from a number of rivulets which descend from a hardwood hill. The best for fuel, and least valuable for manure, is in the swamps near which the only growth of wood is of the Fir or Pine family, and very small and scrubbed. Yet

this barren peat is the best to plough in deep upon clayey ground to serve as a drain, for it will change but little in half a century; it is also useful to mix with putrescent manure in the summer to preserve it for the next season. Being itself incapable of fermentation it prevents the fermentation and decomposition of the manure. But in the spring, when to fit it for use, it is necessary to induce some fermentation it may be readily made to *heat*, by turning and *mixing* with it a portion of seaweed or of the pickle of meat or fish. Where large quantities of peat have been mixed with the soil, it is always deposited to produce sorrel, which continues to flourish for many years; some have supposed this to be caused by an acid in the peat, but it is more probable owing to the coarseness of this kind of soil which does not in the course of many years become fine and compact, and the sorrel has been observed to occupy ground manured with a mixture of wood-ashes and peat, as readily as that which was covered with peat alone.

Weeds in Grass Land.—*Ox-eye Daisy.*—This plant will probably abound in the ensuing summer, being liable to increase in dry seasons such as the last. It is a fortunate circumstance that the only two weeds which spread much in our mowing land, the Crowfoot and the Ox-eye Daisy, will both make very tolerable hay. The daisy is by many accounted worthless, because being earlier in flower than our common grasses, it is generally mowed too late. But if it is mowed when nearly all in flower, but before any of the seed is ripe, it will be found equal to the average quality of the hay in Halifax market for cows; but horses do not appear to be fond of it. When it is allowed to ripen its seed it produces a great quantity, which is generally spread with the manure over all the cultivated ground. When there is a succession of dry seasons, perhaps the best way to master it, is to give a top-dressing to the grass land sufficient to make it produce at least two tons of hay to the acre, when the daisy will be found to be mostly suffocated by the clover.—*Ib.*

Crowfoot or Cutter Cups.—This prefers moist and rich soils. Cattle eat it willingly early in the season, but it becomes so very acid when in flower that they then avoid it. It loses its acrimony by drying, and makes very good hay, but it is like the Daisy, too early for Clover and Timothy, often turning black and decaying before mowing time. Top-dressing will not diminish the proportion of Crowfoot; to get rid of it, the land should be ploughed, a crop of roots taken from it, and then be laid down with clean seed. The practice of using the sweepings of the barn floor for grass seed always serves to introduce weeds. Wherever Crowfoot forms the principal part of the crop, it should always be mowed while it is full of flowers, as it will then make very good hay for cows.—*Ib.*

Salting Meat.—The method for which a patent has been lately taken out by Mr. Payne, is thus described:—The meat to be salted is placed within a strong iron vessel, which is closed in an air-tight manner, and the air exhausted from it by means of an air pump; a communication is then opened with a brine vessel, whence the brine flows into the receiver, until it is about half filled; the air-pump is then again worked to draw off every particle of air from the meat, &c.—The brine is then permitted to fill the receiver, and a farther quantity is injected by means of a common forcing-pump, the pressure being regulated by a safe-valve loaded with about 100 or 150 lbs upon the square inch. After remaining under this pressure for about 15 minutes, the meat is cured, and may be taken out of the receiver —*Athenæum.*

Manures.—At a late meeting of the Ashmolean Society, Professor Daubeny exhibited a specimen of Mr. Daniell's New Patent Manure, which is stated by the Inventor to consist of carbonate of ammonia, sawdust, and bituminous matter. As the materials from which this new kind of fertilizer is drawn appear to consist of inorganic matter exclusively, Dr. Daubeny pointed out its discovery as an instance, amongst many others, of the means which nature has placed within our reach for increasing the amount of vegetable produce proportionately to the increase of mankind, and so maintaining the necessary ratio between subsistence and an increasing population. In a purely pastoral or agricultural community, it might be unnecessary to have recourse to any other fertilizing substances that those which the manure of animals affords; but in a highly-advanced condition of society, in consequence of the large amount of produce consumed by the inhabitants of the great towns, it becomes necessary to seek for new materials to support the loss which the soil of the country sustains. Thus bone-dust is procured from South America in such quantities, that it is computed, on the calculation that each head of cattle supplies bony matter equal to 51 lbs. in weight, that not less than one million two hundred thousand oxen are slaughtered annually in that country for the supply of bone-manure to England alone. Guano, or the dung of sea-birds, is likewise an expensive article of importation for the same purpose; but as both these sources will fail in proportion as the several countries become more peopled, it is fortunate that we may find substitutes for them in inorganic substances. Such is the nitrate of soda, so much used of late; such is the new manure invented by Mr. Daniell; and it may be confidently predicted, that by the discovery of such agents, agriculture will be enabled to keep pace with the increase of population, if the latter be not stimulated by unwise regulations; and that as animal life increases in a direct ratio to the amount of subsistence, so the nutricious effects of animal manure, by giving greater energy and vigour to the organs of plants, will cause them to draw more abundantly from the atmosphere, and thereby force a proportionately larger quantity of them into existence. Dr. Buckland thought that an important principle, respecting stimulating manures, had been brought forward, viz., that a plant, *under their action, draws more freely from* the atmosphere. In addition to the increase of human manure with population, the quantity of carbon given out by animals, and left to be absorbed by plants, is proportionately increased. He further adverted to the discrimination necessary to be exercised in restoring artificially land that has been exhausted, and instanced a case furnished by Professor Johnston, of Durham, of certain pastures in Cheshire, which had become exhausted of their phosphate of lime, by its being absorbed into the cheese made with the milk of the cattle fed there, and which were restored by a top-dressing of bone-manure.—*Ib.*

PATENT WOOD-CARVING.

We have been highly gratified by an inspection of the process and proceeds of this ingenious patent, now in full operation under the direction of Messrs. Braithwaite and Co, of Henrietta-street, Covent-Garden.—Having often lamented that the fine old art of carving in wood should have been allowed to forfeit its place in the ranks of architectural adjuncts, we are delighted at any *thing which promises to revive a much-prized* style of decoration. The tendency of the age is to extinguish art and to precipitate science. Wood-carving stood half way between the two, and seems to have shared the fate of many other mediators by being sent to the wall. The patent in question, if it does not offer a revival of its full spirit, at any rate presents a reproduction of its forms.

The process combines the double action of heat and pressure; and there are not wanting scientific reasons why the wood, subjected to this fearful ordeal, should be firmer in texture than in its natural condition. We have implied that the forms intended to be imitated are faithfully preserved; and we further consider that the tone imparted by the action of fire, is extremely gratifying to the eye by its richness and variety. The specimens submitted to our notice presented a very striking appearance, and we could not but fancy we were standing amidst the handicraft of past ages, rather than amidst the produce of a patent of to-day. Massive carved oak-tables, magnificent cabinets, bold cathedral screens, quaint reading-desks, grand bishops chairs, picture-frames, cornices, corbels, *lassi-relievi*, and other odds and ends of a dismantled cathedral-close, met our view, and at prices which, in "the present miserably poor day," are great recommendations.

We are not sufficiently acquainted with the details of its mercantile operation, to state with accuracy the comparative expense of real carving and "patent carving;" but the reduction in the cost of the latter must be a strong inducement to those *virtuosi* who have a *penchant* for things of other dates, but who dread the uncertainty of necessary outlay as well as the vagueness and incompleteness of the supply of the desired objects. A person with such a taste may now design his own pet Gothic *sanctum*; and instead of racking his taste to reconcile chance incongruities, may tranquilly superintend the pre-ordained placing of his harmonious stores. An admiral might line his cabin with sculptures of heroic deeds or Neptunian emblems, and when his perilous course is run, he may transport them to his terrestrial retreat. The churchman may decorate his *studio* with Gospel truths in action, nor fear to leave behind, in the shiftings of his useful career, these memorials of his creed. The man of literary leisure may surround himself with classical reminiscences—the geologist with an impression of the latest fossil remains; in fact, its adaptation to human tastes is unlimited, and we await *with great interest the results of this ingenious* invention.

What is of still greater importance in our view is the prospect it affords of reviving the Art of Carving, by the necessity which at present exists for the labours of the artisto-scientific chisel in adaptation of parts to the whole. We doubt not that the wealthy will prefer those efforts which are unique, and will occasionally resort to genuine carving; but for the generality of individuals, who are not so endowed, the substitution of the fine and varied forms of ancient art, for the flimsy and tasteless effects of modern cabinet-making will be a boon of which they will speedily accept the advantage.—*Eng. pap.*

A FEW SEASONABLE HINTS.

This is the most important month in the year to the agriculturist. In order that he may harvest his crops with profit to himself and ease to his labourers, the implements or tools should be in good order and of the best quality. Much of the wheat harvest will be housed before this reaches our Subscribers, therefore it will not be necessary to treat on the subject. Oats and pease should be cut before they are dead ripe, or else there will be much loss sustained by shattering. Save every blade of your straw, as you may require it before the close of the coming winter. The plan of throwing out much of the best straw in autumn, when it is not eaten, is too much practiced. A better use may be made of it thus—as soon as your grain is thrashed, either carefully stack your straw, or store it in houses for the purpose. When you cut your second crop of clover, which should be done as soon as the principal part be in flower, make it into hay, which is very seldom well cured at that season; and lay one layer of straw, and another of hay, and repeat the process to your whole crop; and we promise you that you will have good hay, and the straw will be much improved, which of itself will repay you for your trouble.

Fallowing.—This subject is of such vast importance and the field for discussion so wide, that whole volumes might be written upon it without exhausting or diminishing its interest. The few hints we gave in our last, we trust will not be lost sight of by our readers, and we hope they will make similar experiments. As we have often repeated, the drilling in of wheat would add much to the product, and *wheat-growing* would be a more certain business, as there would be less liability of the crop being winter-killed and injured by mildew. If any doubt our assertion, we advise them to lay up a few acres in rows or drills, as represented in our last, then the result will be proved by ocular demonstration; and we promise them that the advantage will be visible to the *pocket* as well as to the *eye*.

We noticed, a few days since, two fields of wheat, sown with an imported drill, which in our opinion will average 40 bushels per acre. The field in question is on the estate of Messrs. Thorn and Parsons, Esquires, Yonge Street, Vaughan. We examined the drill. It would cost about £25.

If you plough in you wheat, by all means harrow it once afterwards, and properly water-furrow. Manage your land so that there will be no possibility of the plants sustaining injury by surface-water.

The wheat-growers do not pay sufficient attention to the culture of clover. This plant is justly considered the best *food* for wheat. Much of the light sandy lands might be made the most valuable, by seeding a large proportion of it down to clover, and by turning under the green sward for wheat. In the preparation of clovery leys for wheat, many methods have been practiced with admirable success. If the land be not clean from noxious weeds and wild grasses, the best plan would be to let the clover attain as large a growth as possible, in the early part of the season, and then harrow it down in the direction you intend to plough, and turn the whole under. The seed in this case should not be allowed to ripen. Another method is to allow the clover a good start in the spring, and depasture it through the summer with sheep or horned cattle, and when the time for seeding arrives, turn under the clover, and sow and harrow in; but the plan we most admire is, to have the land in high cultivation previous to the clover-seeds being sown. Cut the first crop of clover for hay, and turn under the second as above. Gypsum should always be used on clover; and the land may be increased in fertility yearly, under judicious cultivation, by its application.

Seed Wheat.—Old seed is preferable to new, if properly secured; but if used, great caution should be observed that the germinating principle have not been injured by heating in the mow or granary. If new be used, it should be left standing until dead ripe; and the field or patch intended for seed, should have every stalk of rye, chess, and cockle carefully pulled out while standing, and if neglected, the two latter can be separated by means of a hand sieve. A good fanning machine, by two dressings, will make a sample fit for market, notwithstanding it may be very impure before commencing the operation; yet, by close examination, it will be found unfit for seed. We wish to be understood that we denounce the doctrines of transmutation of grains. New varieties of the same kind may be propagated by a judicious management, on scientific principles; but we positively assert that it would be a violation of one of the first laws of nature, that two or more kinds could be cultivated or produced from the same kind. We could as soon believe that wheat would change into rye or *vice versa*, as that it would turn into chess. The latter grain, for so we venture to style it, is not so liable to winter-kill as wheat, and will remain uninjured if inundated with water, for a number of months in the winter season; and the wheat being killed on places thus exposed, gives the chess a chance to tiller, and thus the unskilful husbandman attributes the cause to an all-wise Providence.

The Preparation of Seed Wheat is various; but the surest cure that has been discovered to prevent smut is, to every three bushels of wheat take one pound of blue vitrol, dissolve it into about eight quarts of hot water, mix it with the wheat, and stir it well five or six times, and dry it with newly slacked lime. The only preventive we have ever used is a solution of salt and water, made sufficiently strong to bear up a fresh laid egg. After remaining a few hours in the same, we dried with newly slacked lime. This has invariably proved successful with us. A man will prepare thirty bushels in a day. We advise that class of farmers who never fail to have a *smutty* crop of wheat, to prepare at least a part of their seed as above, and we warrant them that the result will be satisfactory.

The proper time for sowing fall wheat in Western Canada, is from the first of September to the fifteenth, and if not sown before the twentieth, it would be much better to sow such land with spring wheat, as it has proved a more certain crop on summer fallowed land, than late fall sown. We have seen spring wheat produce 35 bushels per acre, thus prepared. Some farmers practice sowing their wheat in August; we cannot recommend it for the following reasons:—If the fall be very open and fine, the plants will tiller if sown too early, which as virtually destroys the crop as if winter-killed—and the biennial weeds, if any are allowed to remain in the ground after the summer-fallowing operation, will get the start of the wheat in the spring, and in many instances we have seen whole crops destroyed from this cause. Some seasons it answers well; but on an average of seasons, the results of too early sowing would be as disastrous as sowing after the period above mentioned.

Water-furrowing should not be neglected, and should be performed as soon as the crops are sown and harrowed, and the angles should be opened with a spade.

In conclusion; we have directed your attention to a few subjects, that we trust will be worthy your serious consideration and practice; and hope you will obtain remunerating prices for the products of your industry and toil, and that your pockets may be full of money, and live long to enjoy the blessings with which a kind and bountiful Providence has been pleased to surround you.

MONTHLY REPORT OF THE CROPS IN CANADA WEST.

We perceive from our exchange papers that the fall sown wheat, has been partially injured by mildew, in every district in the Province; but not to that extent, that the influence from the same disease was felt in the harvest of 1839. We have seen gentlemen from almost every populous township in the Home District, and have invariably made it a point to inquire of the state of the crops in their respective neighbourhoods, and the reply has been, without exception, that the late sown fall wheat, will not produce half an average crop. Various causes have been assigned by modern writers on vegetable physiology for this disease; and although it is a subject on which we have bestowed much research, both theoretically and practically; and have noticed its action on the plant in various stages of the disease, and under a diversity of circumstances as it regards the preparation of the soil, and its natural location; yet, we are not satisfied as to the true cause, and will not give a decided opinion on the subject.

At the period of our writing this, (the 12th of August), the wheat harvest is quite over in the Niagara and Talbot Districts.

In the Home District the wheat and barley crops will not be completely housed before the 20th of the month. Spring wheat, rye, pease, oats, and barley are above an average crop. Taking the backward cold spring into consideration, we have abundant reason to be thankful, as it was thought at one time that the crops would not yield sufficient for the consumption of the country; whereas on the contrary, if the harvest hold fine, there will be a greater amount of produce of every description for exportation, of the present year's growth, than has been exported in any single year since the first settlement of the colony.

We would hope the husbandmen may receive remunerating prices for the produce of his farm; but from the report of the crops in Great Britain and the United States, we would not be justified in holding out anticipations which there would be a doubt of their realizing. Some of the American agricultural papers, have *coolly calculated* the number of surplus bushels of wheat, that the United States will have to export. The highest of these estimates that have come under our notice, is 36,000,000, of which the States of Michigan, Illinois, and Ohio will be able to spare one half of that quantity. We have not only witnessed, but felt the influence which the present mode of trade and intercourse between this country and the United States, have on Canadian agriculture; and have come to the conclusion, that unless a reciprosity of dealing be established between the two countries, and encouragement be given by the Home Government to colonial industry and enterprize, that farming in the Canadas will be a doubtful, and in many cases ruinous business.—It is thought a disgrace in this country for an agriculturist to encumber his real estate for the purpose of entering into speculation, and take the country through there will not be found one farm in thirty mortgaged.—Our American neighbours of "the plough" manage their business in a different style: almost every farmer makes it a point to mortgage his real estate to enter into some scheme or speculation, and hence four-fifths of the capital invested in agriculture is fictitious.

Supposing our neighbours transacted their business on as sure a footing as ourselves, still they have natural advantages in the new states of the Union, which act as powerful agents in depressing agricultural interests in the Canadas under existing laws—we mean the low prices which lands are brought into market, and the small outlay required to bring the same into cultivation. When all these circumstances are taken into consideration, we conceive the cause will be will understood which enables the Americans to sell their produce in our markets, at prices which would be ruinous to us. It may be said by some, why argue the question farther? by your own admission Canada must be a poor country for farming purposes. Can it be said that England is a poor country for agriculture, because bread stuffs and produce of every description can be raised in the South of France and on the borders of the Baltic, at prices that would be ruinous to the English farmer unless protected by laws? The same answer that will apply to the one case will be found equally applicable to the other.

It is obvious that the only thing the Canadian farmer can do to effect the desired change, is to petition our Provincial Legislature, and that body to the Imperial Palament. There are the milling interests, the carrying trade interests, and a variety of other conflicting interests to be sustained by members of the Legislature; so that it would be well for the farmers to be wide-awake to their own interests, and call meetings in their respective townships, previous to the opening of Parliament, so that the House may be fully aware of the nature of the protection they so much desire.

HOME DISTRICT
AGRICULTURAL SOCIETY

UNDER THE PATRONAGE OF

His Excellency the Right Hon. Sir Charles Bagot, &c. &c.

PURSUANT TO PUBLIC NOTICE, the Officers of this Society met at the Court House, in the City of Toronto, on the 10th day of August, 1842, for the purpose of making the necessary arrangement for the Autumn Fair and Fat Cattle Show.

The President EDWARD W. THOMPSON, Esqr., Warden for the District, took the Chair, whereupon it was *Resolved*,—

That the Autumn Fair and Fat Cattle Show, be held at the City of Toronto, upon the piece of ground in front of the New Gaol and Court House, on WEDNESDAY, the twelfth day of October next, when the undermentioned Premiums are to be awarded for the following Stock:—

SHEEP.

Rams.	Best.	Second.	Third.
" One Shear,	£1. 10.	£1.	10s.
" Two Shear,	1. 10.	1.	10s.
" Aged,.....	1. 10.	1.	10s.
" Lamb,.....	0. 15.	10s.	5s.

EWES—PEN OF TWO.

Best £1. 10. Second £1. Third 10s.

EWE LAMBS—PEN OF TWO.

Best 15s. Second 10s. Third 5s.

YOUNG HORSES.

HORSES UNDER THREE YEARS OLD.

Best £1. 10. Second £1. Third 10s.

MARES UNDER THREE YEARS OLD.

Best £1. 10. Second £1. Third 10s.

HORSE OR MARE UNDER TWO YEARS OLD.

Best £1. 10. Second £1. Third 10s.

SPRING FOAL OR FILLY.

Best £1. 0. Second 15s. Third 7s. 6.

YOUNG CATTLE.

BULLS UNDER TWO YEARS OLD.

Best £1. 0. Second 15s. Third 10s.

HEIFERS UNDER TWO YEARS OLD.

Best £1. 0. Second 15s. Third 10s.

SPRING BULL CALF.

Best £1. 0. Second 15s. Third 10s.

SPRING HEIFER CALF.

Best £1. 0. Second 15s. Third 10s.

FAT CATTLE AND SHEEP.

PAIR OF FAT CATTLE REARED AND FED IN THE HOME DISTRICT.

Best £2. 0. Second £1. 10. Third £1.

PEN OF THREE FAT SHEEP FED IN THE HOME DISTRICT.

Best £1. 10. Second £1. Third 15s.

SWINE.

BOARS.

Best £1. 10. Second £1. Third 15s.

SOWS.

Best £1. 10. Second £1. Third 15s

Persons intending to become competitors for Premiums, are informed that Pens have been constructed for the purpose of confining the different animals, so as to prevent their straying or being unnecessarily driven about; for the temporary use of which the competitors will be charged one shilling and three pence each.

A piece of ground adjoining the Show Yard will be appropriated for the exhibition of Stock for sale, and an Auctioneer will be in attendance to offer the same for disposal.

As an encouragement to those enterprizing farmers who have already imported Stock into this Province, and as an inducement to others to follow their example, it has been resolved that if any animal entered for competition be deemed, by the Judges, worthy of the first Prize, and if the owner of the same prove to the satisfaction of the Judges, that such specimen of Stock has been imported from Great Britain since the last Autumn Fair, he shall upon producing certificates of the age and breed of the animal, be entitled to the thanks of the Society, and receive double the amount of the Premium which would be otherwise awarded.

No person shall be allowed to compete for any of the above Premiums, unless he shall have been a member of this Society for at least four months previous to the day of the Fair, or pay the sum of fifteen shillings upon entering his Stock.

The Society have entered into such arrangements in the selection and appointment of Judges, as to prevent any idea of partiality.

No person or persons other than the Officers of the Society, are to interfere with the Judges when in the discharge of their duties, by conversation or otherwise.

In order to prevent any idea of partiality in awarding the Prizes, each competitor for a Premium shall be furnished by the Secretary, (*George D. Wells, Esqr.*), with a numerical ticket, to be fastened to each animal entered for a Prize.

The Stock in the Show Yard will not until the Premiums are awarded, be known to the Judges by the name of the owner's or graziers, but solely by the tickets and numbers corresponding with the Secretary's list.

The Stock to be on the ground by ten o'clock in the morning, and remain until three, P. M. At 12 o'clock noon, the Judges will commence their duties of inspection and decision.

The names of the successful candidates—the Premiums they shall have received—and for what adjudged—will be publicly announced by the President, at two o'clock, P. M., from the front steps of the old Court House, upon Church Street, and afterwards published.

The Fat Cattle and Sheep must be offered for sale to the Butchers, before the amount of any Premium for the same shall have been paid to their owner's.

The Secretary will be in attendance at the Office of Messrs. Wells & FitzGerald, 150 King Street, Toronto, at 10 o'clock, on the morning of the Exhibition, for the purpose of entering the names of, and issuing tickets to the various competitors. At 11 o'clock the Secretary's lists will be closed, after which hour no further entry can be made.

A Ploughing Match.

Instead of a Grain and Root Exhibition, the Society have ordered that a sum not exceeding fifteen pounds be appropriated for Prizes in a Ploughing Match, to take place on Thursday, the 13th day of October next; and that the following Gentlemen, Messrs. Torrence, George D. Wells, Gibb, D. Smilie, and N. Davis, be a Committee to obtain a field of Green sward, and make the necessary arrangements, of which due notice will be given to the public.

N. B. The above Committee will meet at the Office of Messrs. Wells & FitzGerald, 150 King Street, upon Wednesday, the 7th day of September, at 11 o'clock, A. M.

Any person having a suitable Green-sward Field within five miles of the City, will have the goodness to give notice of the same to the Secretary, George D. Wells, Esqr., before the 7th day of September next.

GEORGE D. WELLS,
Secretary, H. D. A. S.

From The Farmers' Encyclopædia.

SALT.

There is, perhaps, no saline substance that exists to so great an extent in marine plants, and which has been used for so long a period and to such an extent for those growing in inland situations, as common salt. A substance which not only abounds in all plants growing on the sea-shore, but always exists in smaller proportions, in many of those growing in upland districts. Thus, Mr. G. Sinclair obtained from 1,450 grains of wheat chaff from Bedfordshire, ashes 50; common salt 2½: from 1,450 parts of the seed, ashes 10; common salt 1-6. But from the same crop, which had been dressed with 44 bushels of common salt per acre, he obtained from 1,450 parts of the chaff, ashes 40; common salt 4: and from 1,450 parts of the seed, ashes 10; common salt ¼.

Common salt is found generally in minute proportions in most cultivated soils. Davy detected in 400 grains of a good siliceous soil from a Tonbridge hop garden, nearly 8 parts of common salt.

Besides being in small proportions a direct food for plants, common salt also seems to perform several other services to vegetation, and the same remark probably applies to other salts; for instance, when applied to the soil in small proportions, it certainly promotes the putrefaction of its organic matters.

And again, salt in common with several others, appears to excite or stimulate the plant, when applied to it in proportions not too excessive; a fact first noticed by Doctor Priestley.

Another use of common and other salts to vegetation, is the preservation of the plant from injury by sudden transitions in the temperature of the atmosphere; salted soils only freeze in intense frosts. I have repeatedly witnessed in the case of culinary vegetables, such as cabbages, brocoli, &c., that while the produce of the unsalted portions of the ground were half killed by the frost, the salted portions have totally escaped. Many salts have also the property of retarding the evaporation of the moisture of the soil, others absorb it from the atmosphere, or are of the class of deliquescing salt: such are the common salt, chloride of calcium, chloride of magnesia, cubic petre, or nitrate of soda, &c., which, in consequence, when they are used as fertilizers, they increase this property, so valuable and so essential to all cultivated soils. Thus I found by some experiments upon a rich soil near Maldon in Essex, worth 42s. per acre, that 1000 parts dried at a temperature of 212°, absorbed in eighteen hours, by exposure to air saturated with moisture at a temperature of 62°, 25 parts. But 1000 parts of the same field which had been dressed with twelve bushels of marine salt per acre, under the same circumstances, gained 27 parts; and 1000 parts of the same soil, which had been dressed with six bushels per acre, gained 26 parts. The attraction of some saline substance for the moisture of the atmosphere is very considerable. I found that 1000 parts of refuse salt manure, dried at 212°, absorbed in three hours by exposure to air saturated with moisture at 60°, 49½ parts. 1000 parts of the sediment, or pan-scratch of the salt-makers, gained 10 parts; 1000 parts of Cheshire crushed rock salt, 10 parts; 1000 parts of gypsum, 9 parts. Chloride of calcium is so powerfully deliquescent, that it absorbs sufficient moisture from the air to dissolve in it, and form a solution. Doctor Marcet found that 288 grains in 124 days absorbed 684 grains of water. 288 grains of nitrate of lime, a salt found in some of the richest alluvial soils of the East, absorbs in 147 days 118 grains. Carbonate of potash, another saline fertilizer, also absorbs moisture. Now it is worthy of the farmers' notice, that chloride of calcium is the very salt which is produced in such abundance by the decomposition of common salt by lime, in the way so successfully recommended, first by the old German chemist Glauber, by Mr. Hollingshead, Mr. Bennett, and Sir Charles Barrell; for by the slow action carried on for three months by these substances on each other, this salt and soda are produced by the decomposition; and it is not improbable that when these salts are present in the juices of plants, that by this means the attractive powers of their leaves and roots for aqueous vapour may be increased. Davy alludes to these essential, yet too little understood powers of absorption possessed by vegetables, when he says —"In very intense heats, and when the soil is dry, the life of plants seems to be preserved by the absorbent power of their leaves; and it is a beautiful circumstance in the economy of nature, that aqueous vapour is most abundant in the atmosphere when it is most needed for the purposes of life, and that when other sources of its supply are cut off, this is most copious."

Horticultural Phenomenon. — Mrs. Child, editor of the Anti-Slavery Standard, gives the following account of a remarkable rose bush in the vicinity of Boston:— "A large and very healthy barberry bush stood in the midst of a piece of ground, which a gentleman had appropriated to a flower garden. The gardener, unwilling to lose such a vigourous growth, and being minded to try an experiment, cut it off not far above the root, and grafted a slip of white roses into it. It grew rapidly, and became a thriving bush; and what was very singular though leaves and flowers remained in shape like a rose, the colour changed from white to that delicate straw colour which characterizes the barberry blossom. The arrangement of the bush, too, changed its character; the branches, instead of shooting out straight like a rose, assumed the drooping, curving line of the barberry."

Prevention of Accidents by Fire.— A correspondent of The Courier recommends that after apparel, bed furniture, &c., is washed, it be rinsed in water in which a small quantity of saltpetre has been dissolved. This, he says, improves the appearance of the article, and should it come in contact with the fire, prevents its bursting into flame, so that the fire may be extinguished with ease.—*Selected*

The neatest way to separate wax from honey-comb, is to tie the comb up in a linen or woollen bag; place it in a kettle of cold water, and hang it over the fire. As the water heats, the wax melts and rises to the surface, while all the impurities remain in the bag. It is well to put a few pebbles in the bag to keep it from floating.—*Ib.*

Common salt eight parts, saltpetre one part, well mixed together and applied to the surface of the ground connected with the trunk of the peach tree, will, it is said, destroy all worms and grubs, and promote the thrift of the tree.—*Ib.*

The following is from a correspondent of *The Albany Cultivator*:—

Keeping Eggs.—Having tried many ways of preserving eggs I have found the following to be the easiest, cheapest, surest, and best. Take your crock, keg, or barrel, according to the quantity you have, cover the bottom with half an inch of fine salt, and set your eggs close together on the *small end*; be very particular to put the *small end down*, for if put in any other position they will not keep as well, and the yolk will adhere to the shell; sprinkle them over with salt so as to fill the interstices, and then put in another layer of eggs and cover with salt, and so on till your vessel is filled. Cover it tight and put it where it will not freeze, and the eggs will keep perfectly fresh and good any desirable length of time. My family has kept them in this manner three years, and found them all as good as when laid down. I believe we have never had a bad egg since we commenced preserving them in this manner, and found them always as good as when laid down.

The trouble is comparatively nothing, for when we have a dozen or so more than we wish to use, we put them in the cask and sprinkle them over with salt; and when at any future time we wish to take them out, they are accessible and the salt is uninjured. But, mark! the eggs should be put down before they become stale, say within a week or ten days after they are laid.

Every man by this process may have eggs as plenty in winter as summer; and farmers who make a business of selling their eggs, may easily calculate the profits of preserving them in summer and selling them in winter. Eggs, where I live, sell frequently in summer at eight cents, and in winter as high as thirty-seven and a half cents per dozen. In view of these various considerations, it must be evident that no investment that a farmer can make, will be productive of so great a profit as a few dollars in domestic fowls. They will cost, probably in no case, more than fifty cents each per year for their food; the trouble of taking care of them is fully counterbalanced by the pleasure they give; and they will, or may be made to, produce each on an average, from 200 to 250 eggs besides an occasional brood of chickens.

A Cure for Consumption. — Mr. Adam Mott gives the following statement in *The Maine Farmer*:—

"A friend of mine, who resides in Industry, in this State, told me that his wife was sick of what the doctor called Consumption. She was visited by five physicians, who gave her over. She was very sick—was unable to sit up—had a very severe cough—and grew no better, "but rather worse"—she failed very fast. She recollected that she had before received benefit from the use of St. John's wort; her husband procured some of it, it was steeped, and she made it her constant drink. For four or five days there appeared to be but little alteration; but after this she grew better very fast, her health was so much improved, that in the course of six or eight weeks she was able to resume her customary occupations—she commenced weaving, and wove about 40 yards of cloth. During this time she made constant use of St. John's wort tea. What had been done may again be done. It helped her—it may help others.

The tea may be made as you would make peppermint or any herb tea to drink — by merely steeping the herb in water. The herb may be gathered any time after it is

large enough, but the best time for gathering it is in the seventh month. A supply may now doubtless be found in almost every hay mow where there is any hay. I much approve of this simple remedy."

CURE FOR DROPSY.—A friend has furnished us with the following simple cure for dropsy. It has been tried with the greatest success by several acquaintances of ours, and we ourselves have proved its efficacy in a recent case on our plantation :—

1 gallon of best Holland Gin ;
1 half-pound of White Mustard Seed ;
1 handful of Horse Radish Root, chopped up ;
6 pods of Garlic.

Mix these ingredients together in a jug, and keep the same well corked. Shake the mixture repeatedly.

Dose.—From a tablespoonfull to a wine glass full, to be given before each meal.

The most violent cases of dropsy have been cured by this remedy.—*S. Agriculiur.*

TO DAIRY WOMEN.—We have recently witnessed a method of making cheese, which, although not of recent invention, may be new to many dairy women within the circulation of our paper. It is something after the manner adopted in the manufacture of pine-apple cheese. The curd is prepared as in the ordinary way, and put in a piece of coarse canvass, a portion of the threads of which have been drawn out to make it more open, and allow the whey to escape freely. It is then hung up in the cheese-room, and requires no farther attention, as the cheese fly will not attack it, and it is not subject to mould. We have the authority of those who have tested the experiment, in saying that this method is a great saving of labour ; the cheese matures sooner, and is of better quality than if dressed. The whey is allowed to drain off, and it will do so effectually, instead of the violent pressing, which all dairy women observe, forces out a portion of what should remain to add substance and richness to the cheese. The bag containing the cheese should be made in the form of a beef's bladder. It is sometimes knit in the manner of a fish net, with small meshes, but the most ready method is, to take a piece of coarse linen, and pull out three or four threads alternately, both of warp and filling, and put in the proper shape.—*Niagara Dem.*

TO MAKE SAGE CHEESE.—Take the tops of sage, and having pressed the juice from them by beating in a mortar, do the same with the leaves of spinach, and mix the two juices together. After putting the rennet to the milk, pour in some of this juice, regulating the quantity by the colour and taste to be given to the cheese. As the curd appears break it gently, and in an equal manner ; then emptying it into the cheese vat, let it be a little pressed, in order to make it eat mellow. Having stood for about seven hours, salt and turn it daily for four or five weeks, when it will be fit to eat. The spinach, besides improving the flavour and correcting the bitterness of the sage, will give a much finer colour than can be obtained from sage alone.

WATERPROOFING.—A pint of linseed oil, two ounces of bees' wax, two ounces of turpentine, two ounces of good tar, and half an ounce of Burgundy pitch, slowly melted together, and applied to new boots, will render them waterproof, durable, and pliant

GATHER YOUR HERBS.—Just as likely as not, you or yours will be sick before another year expires, and then you or they will need doctoring, unless you contrive to prevent the necessity of a visit from the knight of the saddle bags, by a seasonable use of good and wholesome herbs. Now is the time to gather and secure them. Cut them when in full blossom and dry them in the shade. The valuable garden herbs are, sage, balm summer-savory, colt's foot, thyme, peppermint, rue, worm-wood, rhubarb, hoarhound, &c. ; and those which may be gathered from the fields and roads are, pennyroyal, thoroughwort, life-of-man, sarsaparilla, catmint, motherwort, lobelia, gold-thread, maidenhair, mellows, burdock, common dock, elecampane, &c., &c Every body can, if he will, easily secure to himself any or all these and other valuable herbs ; and then next winter, if he is sick and needs the use of them, he will have them on hand without running to a more thoughtful or provident neighbour's house after them.

Herbs, if dried in the sun, turn yellow, lose their fragrance and much of their real virtue. They should be spread out thin, say on the floor of a garret or open chamber and left to dry in the shade, being occasionally turned. When sufficiently dried, they may be tied in bunches and hung up.—*Maine Cultivator.*

ASHES.—In no one thing do farmers make so great a mistake, as in the calculations when they sell their ashes to the potash manufacturers. Every bushel of ashes is worth a dollar to the farmer in the long run. Any soil that has been plentifully manured with ashes, will not fail, under any mode of culture, in twenty years. Professor Liebig has discovered that in taking the hay from a field, the principal cause of exhaustion to the soil is the loss of potash contained in the hay, and that it may be readily restored by sowing a thin coating of ashes.— *Sandy River Farmer.*

CEMENT.—In the New England Farmer, vol. xii, No. 3, page 21, we find the following statement :—

"The late conquest of Algiers by the French, has made known a new cement used in the public works of that city. It is composed of two parts of ashes, three of clay, and one of sand ; this composition, called by the Moors *Fabbi*, being again mixed with oil, resists the inclemencies of the weather better than marble itself."

Mr. Dorr, of Roxbury, called upon us a few days ago, to look up the above article in our back volumes, and stated that he used a cement made according to the above directions, around the window casings of a stone house he was building, about the time this article appered, and it has proved as good as the statement represents. It is as hard as marble, and will stick to wood as well as to stone.—*N. E. Far.*

USEFUL RECEIPTS.

BLOODY MURRAIN.—A. Huyck, in the Albany Cultivator, says he has cured several cattle of bloody murrain, by the following receipe :—Take one pint of fat, melt it—add one gill spirits of turpentine ; then put in half a pound of sulphur, stir it till it is thin. Put it in a junk bottle, and pour it down the animal's throat.

TO MAKE OPODELDOC. — A liquid opodeldoc for scattering swellings, curing sprains, &c., may be made as follows :—Take one quart of proof whiskey, or other proof spirit, warm it over coals, but not to blaze, and dissolve in it half a pint of soft soap. When cool, put it in a bottle and add half an ounce of camphor. When the camphor is dissolved it will be ready for application, and will form a cheap and useful remedy.

TO DESTROY MOTHS.—Drive them from their holes by placing slices of leek, garlic, or onion, in a green state within their holes : their antipathy to those vegetables is so great that they will immediately leave them and expose themselves to be taken. In the month of May and beginning of June, if one sees a mole hill larger than usual, it is pretty certain that there is a nest of young within a foot or eighteen inches from it.

TO DRY CHERRIES THE BEST WAY.—To every five pounds of cherries stoned, weigh one of sugar double-refined. Put the fruit into the preserving pan with very little water, make both scalding hot ; take the fruit out and immediately dry them ; put them into the pan again, strewing the sugar between each layer of cherries ; let it stand to melt ; then set the pan on the fire, and make it scalding hot as before, take it off, and repeat this thrice with the sugar. Drain them from the syrup ; and lay them single to dry on dishes, in the sun or on a stove. When dry, put them into a sieve, dip it into a pan of cold water, and draw it instantly out again, and pour them on a fine soft cloth ; dry them, and set them once more in the hot sun, or on a stove. Keep them in a box, with layers of white paper, in a dry place. This way is the best way to give plumpness to the fruit, as well as colour and flavour.

CURRANT JAM, BLACK, RED, OR WHITE.—Let the fruit be very ripe, pick it clean from the stalks, bruise it, and to every pound put three quarters of a pound of loaf-sugar; stir it well and boil half an hour.

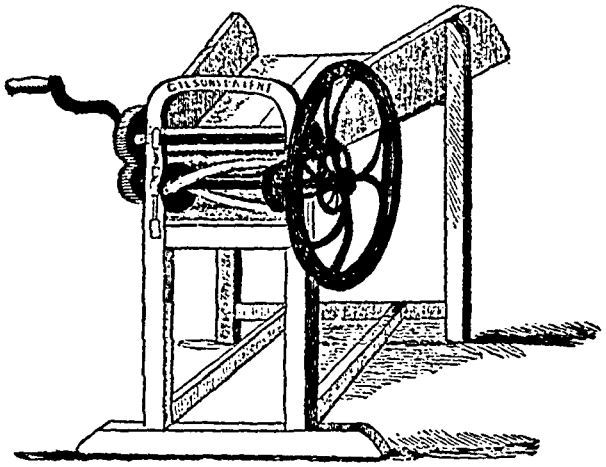
TO CLARIFY SUGAR FOR SWEETMEATS.—Break as much as required in large lumps, and put a pound to a half a pint of water in a bowl, and it will dissolve better than when broken small. Set it over the fire, and the well whipt white of an egg ; let it boil up, and, when ready to run over, pour a little cold water in to give it a check ; but when it rises a second time, take it off the fire and set it by in the pan a quarter of an hour, during which the foulness will sink to the bottom, and leave a black scum on the top, which taken off gently with a skimmer and pour the syrup into a vessel very quickly from the sediment.

TO PRESERVE RASPBERRIES.—Pick your raspberries on a dry day, just before they are fully ripe ; lay them on a dish, beat and sift their weight in fine sugar, and strew it over them. To every quart of raspberries, take a quart of red currant jelly, and put to it its weight of fine sugar ; boil and skim it well, then put in your raspberries, and give them a scald. Take them off and let them stand for two hours ; then set them on again, and scald until they look clear.

CURRANT JELLY FOR SICKNESS.— Pick your currants very carefully and if it be necessary to wash them, be sure they are thoroughly drained. Place them in a stone jar, well covered, in a pot of boiling water.—When cooked soft, strain them through a coarse cloth add one pound of fine Havana sugar to each pound of the jelly, put into a jar and cover as above. Or you may break your currants with a pestle and squeeze them through a cloth. Put a pint of clean sugar to a pint of juice, and boil it very slowly, until it becomes ropy.

We take much pleasure in recommending Mr. Harrington's improved "Straw Cutter," to the notice of the farming public, believing it to be the best article of the kind that has ever been offered in the Canadian market. It can be worked either by hand or horse power. We have not space allowed us to point out the benefit of this useful Machine, but we advise the farmers to call and examine for themselves.—Ed. Cul.

Correction.—In the 18th line from the top, first column, page 96, for "£1 10s.," read "best imported Bull, £2 10s."

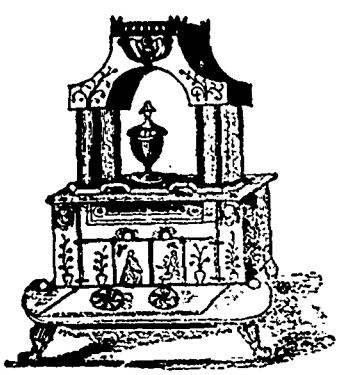


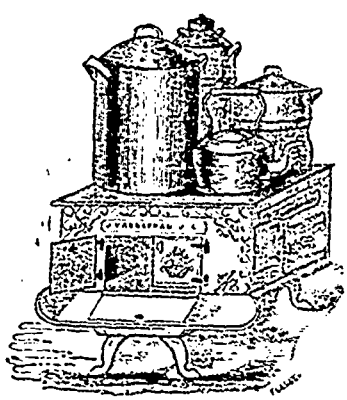
GILSON'S PATENT STRAW CUTTER.

FOR SALE by the Subscriber, a large quantity of the above celebrated Machines.

JOHN HARRINGTON, *Ironmonger*,
No. 110 King Street, Toronto.

N. B.—The above Machines are in general use throughout the United States.





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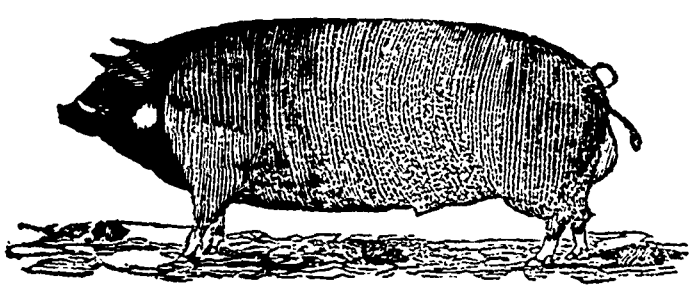
JOHN HARRINGTON, *Ironmonger*,
No. 110 King Street, Toronto.



BERKSHIRE HOGS.

THE Subscriber begs to call the attention of the Farmers who may be desirous of improving their breed of Swine, to his stock of full bred Berkshire Hogs, of which the following are for disposal on reasonable terms :—7 Pigs 6 weeks old, 5 do, 14 weeks old, and 3 Sows and 1 Boar 8 months old.

My full bred Berkshire Boar *York*, which was advertised in the January number of The Cultivator, is still in my possession, and will serve Sows for one Dollar each,

JOHN SEVERN.

Yonge Street, Toll-Gate, August 8th, 1842.

Contents of this Number.

TORONTO MARKETS:

For the Month ending 1st August, 1842.

		s.	d.		s.	d.
Flour Farmers', in barrels,		27	6	a	30	0
Wheat,	per bushel	4	6	a	5	6
Barley,	do,	1	8	a	2	4
Oats,	do,	0	10½	a	1	0
Pease,	do,	2	0	a	2	6
Clover Seed,	do,	25	0	a	30	0
Grass Seed (Timothy),	do,	5	0	a	5	6
Potatoes,	do,	1	0	a	1	3
Oatmeal,	per barrel,	17	6	a	21	3
Salt,	do,	11	3	a	0	0
Pork,	per 100lbs,	15	0	a	18	9
Beef,	do,	15	0	a	20	0
Mutton and Veal (qr.)	per lb,	0	2½	a	0	4
Butter,	do,	0	6	a	0	8
Turkeys,		2	0	a	3	9
Chickens,	per couple,	1	0	a	1	6
Eggs,	per dozen,	0	5	a	0	6
Hay,	per ton,	32	6	a	37	6
Straw,	do,	30	0	a	40	0

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