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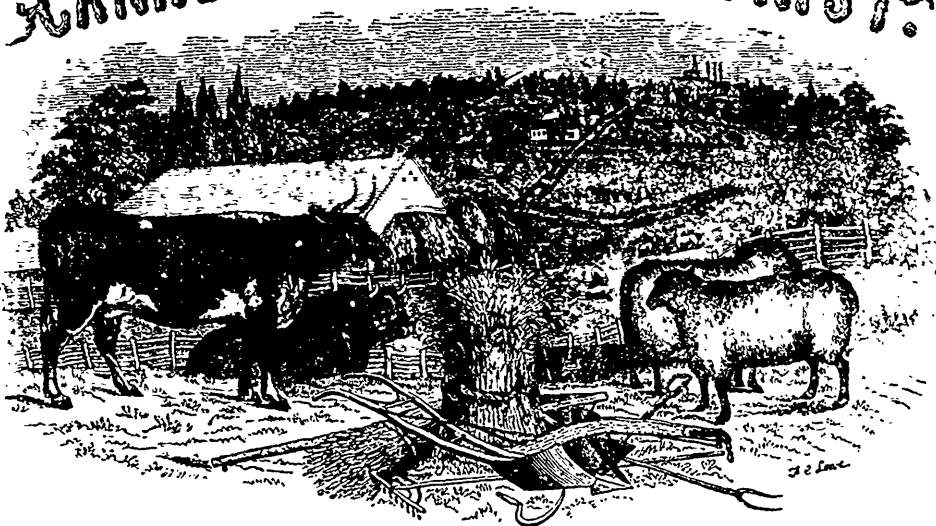
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# CANADIAN AGRICULTURIST.



"The profit of the earth is for all; the King himself is served by the field."—Eccles. v. 9.

GEORGE BUCKLAND,  
WILLIAM McDOUGALL,

{ EDITOR, }  
{ ASSISTANT EDITOR. }

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No. 7.

## The Canadian Agriculturist.

Published Monthly, at Toronto, C. W.

### TERMS:

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### SEASONAL SUGGESTIONS.

Before this number gets into the hands of our more distant subscribers, the hay harvest will be fast drawing to a conclusion. A few hints, however, may not, even now, be too late for some of our readers to benefit by. The present season has been one peculiarly unfavorable to this crop; yet it is astonishing to observe what improvements the late rains have effected, by thickening the undergrowth, and

infusing fresh vigor into the plants. Too much attention cannot be paid to *close cutting*, since (in old meadows particularly) it is the bottom which yields the greatest weight, and best quality of grass. Hence the necessity of rolling, and clearing the surface of stones, &c., at the proper season, in order to admit the close application of the scythe. Most people allow their grass to advance too far in ripening, before it is cut. In the present season this may be, in some degree, practically unavoidable, in consequence of the late frequent rains. Clover, timothy, trefoil, and, indeed, all the cultivated grasses, are in the best condition for being made into hay when in blossom; and they should on no account be allowed to ripen their seeds before being mown. In making hay, the great object is, to allow the sun and air to act equally upon the whole mass, consequently the regular exposure of fresh surfaces to such action becomes requisite; but, as all practical farmers well know, the handling of hay, during the process of making, is a matter requiring some attention, much more indeed than is often given, lest the leaf and finer portions of the plant be separated, and

lost on the ground. The revolving horse-rake, of which there are now several improved varieties, is an indispensable implement for gathering hay into rows, and in many respects supercedes the common hand rake: it is, in fact, of immense advantage in the saving of manual labour, at this busy season; and it is likewise of great use in pulling peas, raking stubble, and other operations, so that no farmer of any extent ought to be without one of the best modern construction. About nine-tenths of the weight of grass consist of water; the object of making hay being the evaporation of this water, by exposure to heat and air, so that the hay, when collected into large heaps, may be preserved, without risk of decomposition. Many people, however, in this hot climate, allow the drying process to run too far, thus materially injuring the quality of the hay. Evaporation in the open field is a natural operation, in great measure beyond the control of human art; but hay that is slowly and gradually made, under clouded skies, is found to retain more of its nutritive qualities, and to possess a more agreeable odour, than when exposed to the direct influence of a scorching sun. Hence, putting it into cocks—occasionally turned over and mixed; increasing them in size as the making process advances, is a practice universally pursued in all countries producing the best qualities of hay. Sprinkling salt in the stack, especially when the hay is naturally of inferior quality, or has suffered from wet, renders it more palatable to stock.

The remark in reference to the early cutting of grass for hay, is equally applicable to wheat, and most kinds of grain. It is a general error to suffer the ripening of wheat, for instance, to advance too far before it is cut; and the disadvantages and actual loss are thereby much greater than can readily be calculated. As soon as the grain has passed its strikingly *milky state, that is the point of time when harvest operations should commence.* It is no longer a matter of mere opinion, but a *fact*, correctly arrived at by ample experiment, and easily explainable on the principles of science, that wheat, when cut a few days previous to the thorough ripening of the grain, actually yields a *larger amount of flour.* By allowing the ripening process to proceed towards completion, the starch of the grain, which constitutes its principal nourishment to animals, becomes changed into woody fibre, a comparatively innutritious substance. Consequently, from thoroughly-ripened wheat we obtain a thick and heavy bran, with a proportionately smaller amount of flour.

We recommend our readers, therefore, to commence cutting their grain *early*, a practice we have shown to be advantageous, as regards the amount of nutritious matter in the grain itself, while the *straw*, in reference to its use as *fodder*, is equally benefitted; and this latter object alone, in a country having such long winters as ours, is one of no small importance. Besides, commencing the cutting of grain before it is fully ripe actually prolongs the period of harvest several days; an advantage which every practical farmer must be able to appreciate, in a climate like that of America; and a large portion of valuable grain, which is sure to be scattered and lost by over-ripeness, would thereby be saved.

The strictest attention should now be paid to keeping down weeds among the green crops, and on every portion of the farm: the corners of the fences and the sides of roads should undergo a strict examination. Fallows should receive a deep and clean culture, and the horse-hoe should be brought into frequent requisition among all the row crops, such as turnips, mangel wurtzel, cabbage, &c. Besides clearing the land of weeds, the frequent and deep stirring of the soil, especially in dry seasons, gives an astonishing impetus to the progress of vegetation. As to root crops, above all others, it is vain to expect a profitable return, without the strictest attention to the principles of good husbandry; and those principles may be expressed in half-a-dozen words,—*judicious manuring, with deep and clean cultivation.*

#### DEATH OF MR. SMITH, OF DEANSTON.

It is with deep regret that we announce the death of James Smith, Esq., late of Deanston, at Kingencleugh, near Mauchline. He died on the 10th of June. Mr. Smith was understood to have retired to bed, on Sunday evening, in his usual state of health, but died during the night, apparently of an apoplectic shock, brought on, it is supposed, by the over-exertion of a journey of forty miles.

This distinguished agriculturist was born 3rd January, 1789, and was consequently in the sixty-first year of his age. To his system of drainage, his turn-wrest plough, and, latterly, to the sheep-dip composition which, at the period of his death, he was engaged in bringing into use, Scottish agriculture owes some of her deepest debts. Through a determined application to the business of cotton-spinning, he

was able, at the age of eighteen, to take the complete management of the Deanston works. He competed, in 1812, for the £500 premium offered for an effective reaping-machine, by the Dalkeith Farmers' Club, and though unsuccessful, after several trials, received from the Club a piece of plate, of the value of fifty guineas, besides silver cups and a gold medal from Russia. In 1823, Mr. Smith commenced his celebrated drainage operations, which ended in the reclamation of the Deanston Farm; and, in 1831, published his pamphlet on "Thorough Draining and Deep Working." He was named one of Peel's Sanitary Commissioners, in 1843, and propounded, in that capacity, his great plan for economising sewerage manure, which, high as the name of Mr. Smith, of Deanston, stands, and widely as it is known in agriculture, is destined to extend it still further, as a benefactor of the human race, by whom the sources of reproductive industry have been multiplied through science.

#### NORTON'S ELEMENTS OF SCIENTIFIC AGRICULTURE.

*Elements of Scientific Agriculture, or the Connection between Science and the Art of Practical Farming. Prize Essay of the New York State Agricultural Society. By John P. Norton, M.A., Professor of Scientific Agriculture in Yale College. 12mo. pp. 208. Albany: Erastus H. Pease & Co., No. 82, State Street. 1850.*

We have looked through Professor Norton's new Treatise with some degree of care, and find it well adapted to the purpose for which it was mainly composed, namely, to supply correct elementary instruction in Scientific Agriculture, for the use of schools, and inquiring young men, engaged in the business of farming. The application of scientific principles to the art of cultivating the earth, management of the dairy, the breeding and feeding of animals, &c., is treated of in simple language, with scientific accuracy, and in considerable fullness. The publication is alike creditable to the talent and industry of the author, and the discriminating judgment of the valuable Society which has been the means of calling it forth. We should be happy to see it introduced into all the schools, and the family of every farmer, of this country. We shall present our readers with a very brief and imperfect synopsis of its contents.

The author first describes the *organic* and

*inorganic* constituents of plants, whence and how supplied. *Soils*, their composition, clarification, and management. *Manures*, their varieties, modes of action, and application. Composition of cultivated crops, with their application to the purposes of feeding. Milk and dairy produce generally. Nature of chemical analysis, and the applications of geology to agriculture. These topics, in connection with others of a collateral nature, are so explained and illustrated, as to be readily understood by persons who have paid but little, or no previous attention to scientific subjects.

The author's views respecting the analysis of soils, &c., by practical farmers, are so much in accordance with our own, and so well calculated to correct a false impression, which has made of late years considerable progress in the public mind, that we subjoin, without abridgment, his remarks under that head. We should be sorry to insinuate the slightest doubt of the ability of chemistry to assist the farmer in the practical details of his daily vocation; something has already been done in advancing the art of agriculture, and much more, we believe, remains to be accomplished, by invoking the aid of science; but to suppose that any practicable educational system will ever convert the farmers of a country (that is, such as pursue their calling for a living) into expert analytical chemists, appears to us perfectly wild and visionary. Many that speak and write upon these matters seem to have no definite conception of the time and patience, the deep and accurate knowledge, with the habit of delicate manipulation, which are required in every satisfactory analysis of organic compounds. The farmers must remain content to leave this business in the hands of those to whom such matters properly belong. An imperfect analysis is worse than useless, for any purpose, either practical or theoretical.

#### THE TRUE NATURE OF CHEMICAL ANALYSIS.

Among all of the subjects that have been presented to the consideration of farmers, since the work of agricultural improvement commenced, none has been less understood, even by many of those who have pretended to be its expounders, than that of analytical chemistry as applied to agriculture.

Many authors and speakers have labored to establish it as a fact, that there is no difficulty in chemical investigations, beyond what may be overcome by a few days of study: thus a large portion of the farming community have been led into the belief that when proper institutions are established, they themselves do all their own analytical work; just as they do their own ploughing, and as well as the most accomplished chemist could do it.

That such ideas as these are totally at variance with the truth, none who have ever studied the subject thoroughly can for a moment doubt.—It is a perfectly safe conclusion when any man asserts, for instance, the entire simplicity and ease of analysing a soil, that his analyses would not be of a very accurate description.

Chemistry is a science that must be studied earnestly and perseveringly, just like any other branch of knowledge which has a wide range. In order to know what is in a soil, and to determine what are the quantities of its constituents, an intimate acquaintance is necessary, not only with the substances themselves in their almost endless relations and changes; but with great numbers of other substances from which they must be distinguished, and with which they are likely to be confounded by an inexperienced person.

We can only determine quantities by means of certain chemical processes: most of these depend on the addition of other bodies, to a solution in which are dissolved those that we wish to separate. Suppose now these bodies which are thus added to be impure: obviously the whole result will be erroneous; the chemist then, must know how to distinguish with certainty between pure and impure substances, and to tell what the impurities are.

When he knows all of these things, there are still a great number of minor but very important points, that require attention. He must use absolutely pure water, must filter his liquids through paper that has very little ash, and must weigh everything upon a balance that is sensitive to at least the tenth of a grain.

I might go on and mention other requisites to a good analysis, but those already noted are sufficient to show, that great care, skill, and experience, are absolutely essential in this business; that uneducated persons must constantly be making mistakes of the most flagrant description.—The worst difficulty of all is that in many cases, not having even knowledge enough to know when they have gone astray, they actually rely upon their own work as trustworthy, and lead others to do so too.

Results produced by such proficient are unhappily too common, and are always productive of claim wherever they go. The farmer who knows even little or nothing of even chemical names, perhaps is not competent to judge of a good analysis; he cannot tell the difference between a pretender to scientific knowledge, and one who really knows something that is true and valuable. He takes these erroneous analysis as his guides, and probably falls at once into some serious mistake, by attempting to alter the supposed constitution of his soil. After he has been disappointed in this way a few times, he is very apt to condemn all scientific agriculture as ridiculous, and of no avail for any practical purposes.

What I wish to impress in this connection, is the necessity of caution in coming to such a decision. Let it first be considered, if the experiments to be carried out have been properly

and carefully made, so that there could be no mistake in that direction. Let it next be ascertained that no physical obstacles are in the way of success, and if it is found beyond doubt that there has been no error from either of these causes, then let the farmer conclude—not that chemistry and scientific investigation are useless; but that the results of analysis obtained were wrongly interpreted, or that the examinations were incorrectly made.

There is truth in science, but it is not every one who can draw it out; and the proper course in cases of an unsatisfactory nature, is to distrust the man and not the general principles.

It is easy to show that there are very serious difficulties, other than those which have been already mentioned, in the way of making perfect analyses. We will take soils as an instance.—Where mention has been made of the inorganic substances in soils, as in Table I, p. 60, it must have been noticed that the proportions of some of them were quite small, so much so as to seem of little importance. It was, however, explained that the presence of these minute quantities was absolutely necessary, so much so that our cultivated crops would not thrive without them.

Half a pound of phosphoric acid in 100 lbs. of earth, is a very unusually large proportion, even in our most fertile soils. Half a pound in 100, makes but a small figure when we come to give the composition of a single pound; it is only five thousandths of a pound. Now one pound is a far larger quantity of material than can be used with safety for an accurate analyses. The instruments employed, and the various methods of operation adopted, are such as, in nearly all cases, to forbid the use of a large bulk or weight of the substance to be examined. Consequently only a small fraction of a pound is worked upon, and from this all of the bodies present are to be separated, even down to small parts of a single grain.

It becomes at once obvious, that very great care and very good apparatus, and no small portion of skill, are requisite to an analytical chemist in the determination of these minute quantities. If any of the chemicals used in the analyses, are impure, the impurities of course have an influence upon the result: hence the chemist must know the properties of many other bodies beside those upon which he is at work, in order to be sure that he is not adding something which will prove injurious to the accuracy of his results.

There is still another, among many points that might be noticed in this connection. The processes necessary for the determination of potash, soda, and phosphoric acid, when all are present and in combination with other bodies, are in the least degree complicated and difficult. Many ways of determining them are described in books; some of these are altogether faulty, and all require much skill and knowledge on the part of the operator, that he may avoid serious errors. These bodies, it will be remembered, are among the most important that soils contain, because they

are most likely to be exhausted by cropping. A comparatively inexperienced or uneducated person, may determine iron, umina, or salilica, those bodies which make up the bulk of soils; but when they come to the most important part, the detection and separation of these small quantities, they probably either fail to find them at all, find them when they are not there, or find altogether too much.

In view of the foregoing remarks, how inconsiderate, and how unwise, are the statements of those who would lead the farming community to think that each man is in a short time to acquire the skill to determine all problems of a chemical nature, that may present themselves in the course of his experience. It cannot be acquired by any intelligent man, but he can only accomplish it after a long course of study. When he has gone through with this course, still other difficulties present themselves; to make perfect analyses, he requires a laboratory, and rather expensive apparatus of various kinds.

A good analysis must have his undivided attention, and even then will occupy him not less than from ten days to a fortnight; and what is to become of his farm in the mean time? On the other hand, if he devotes himself actively to his practical pursuits, as every good farmer must for at least a large portion of the year, his chemical knowledge rusts and he soon loses his facility and aptitude for making reliable analyses.

The truth is, that the two pursuits are dissimilar; the chemist may and should know much of practical agriculture, but still his main business must be chemistry; the farmer may and should know much of science, but his daily occupation must be in the field. His leisure time may be more greedily and profitably employed in gaining scientific knowledge, but the business of analysis, and accurate chemical investigations, must be left with those who are trained to it: all points alone which practice can not explain, must go to them.

But some objectors continue, "It is an immense tax on the farmer that he must have every soil analysed, every manure thoroughly examined; these investigations are expensive, and are unattainable for this reason, by the great majority of the community." This is quite true, but it is no less true that the great majority will never require such minute analysis. If the soils in a particular district are all formed from the same rock, one or two careful analyses will suffice to determine the general character of the whole. So with manures; a few analyses of any particular kind will settle its value, in whatever part of the country it may be used. In cases where there is any thing particularly obscure or puzzling, in a soil or field, chemical analysis must be called upon to solve the question.

In most situations, as knowledge of these subjects increases, the intelligent farmer will daily be come more qualified to experiment himself, for particular purposes, using manures of known composition: he may thus frequently arrive, unassisted, at just and important conclusions.

There are moreover, some points upon which the practical man may experiment, without becoming a chemist, and without previous instruction.

### ANNUAL REPORT OF THE CENTRAL BOARD OF AGRICULTURE OF NOVA SCOTIA, FOR 1849.

This Report is principally made up from the Agricultural Reports, about thirty in number, of the various local Societies in correspondence with the central Board of Agriculture in Halifax. Each Society states the amount of its subscriptions, including the legislative grant, and disbursements, the condition of the crops for the year, with miscellaneous remarks on live stock, improved culture, farm implements, &c. The information is interesting, and would be more useful if given in greater detail. The system in Nova Scotia of managing Agricultural Societies, &c., seems very similar to that contained in the new Agricultural Bill now before the legislature of Canada, for the Upper Province. We give the following summary, at the conclusion of the Report:—

#### *Practical Remarks on the annexed Reports.*

The collective Reports of the Local Societies in correspondence with the Central Board of Agriculture at Halifax, demonstrate that during the past season, the Potato crops through out the country have been nearly exempt from disease, the only instance of the recurrence of "blight," in malignant form, occurred in a district occupying one mile from east to west, and four miles from south to north, in the centre of Parrsborough; this tract of land was struck with the "blight," and about half the crop of potatoes lost. Another instance of its recurrence is recorded in the Westmouth Report; partial indications of disease were observable in many other parts of the country, but mild in its form contrasted with former years. There can exist no doubt that the extreme dry weather, which prevailed throughout the months of July and August, was a great means of checking the potato disease, as it must now be obvious to every observing mind, that the atmosphere is the chief repository of the disease, and we may consider our potato crops in a measure saved at the expense of the hay crop. Confidence in the potato crop is sufficiently restored to induce a speedy return to extended culture.

The wheat crops have been exempt from the ravages of "Elator Viscater," or wheat fly, which has caused devastation in its track in almost all wheat growing countries. Circumstances connected with the history of this destructive insect, warrant the belief that its course here has terminated for a time; and we think there is little risk in adopting our usual sowings. As a precautionary measure, however, a due proportion of the Black Sea, and Northern Wheats should be sown early in the month of June; by this late sowing the risk of the "fly is obviated, and these varieties will ripen in our climate after that period in all ordinary seasons. The greatest risk consequent on late sowing in Nova Scotia, is rust in the straw; this may in a great measure be avoided by adopting the following rules. Choose

ard straw varieties of wheat, for their is a greater variety in that point of view than is generally known; avoid if possible, a full east or south east aspect. Where the early morning sun strikes the field, in sultry weather, where heavy dews are prevalent, let two boys take a cord-line, and once at each end of it may sweep the dew off the crop before sunrise; this will effectually prevent rusting of the straw. This disease is only the result of moisture and of heat, inducing a certain degree of fermentation and decomposition in the cellular system of the plant, when the minute seeds of fungi floating in air find a congenial bed in the straw for germination. In reviewing the annexed Reports from various sections of the country, it is obvious that the late failures of the wheat and potato crops, have suggested many expedients, and a more general adoption of auxiliary crops; other grains have been more generally cultivated as substitutes for wheaten bread; turnips, carrots, and mangel wurzel have been substituted for the potato to stock; and we predict that when once their value is experimentally proved, they will retain their place in our green crop culture. There is another reflection impressed on the mind, which mitigates the feelings of disappointment which Agriculturists experience in reviewing the past, namely, the lessons of economy which we have learned; they will prove invaluable to ourselves and our posterity; we can now appreciate the value of the potato and wheat crops in a much higher ratio than formerly, and should those evils ever recur, we shall be better prepared to counteract their efforts. The cultivation of mangel wurzel ought to be encouraged by every Agricultural Society in Nova Scotia, its value relatively compared with other roots used in feeding stock, places it at the head of the list; its easy culture, certainty of a crop, prolific return and fattening qualities, as well as food for dairy cattle, give it preference to all roots used for these purposes. A small quantity of this root given with good oaten straw, such as that of the early August oats, is preferable to any quantity of the best hay, producing more milk, a greater weight of beef, and higher development of muscle in young stock. If our imported stock were fed with a due proportion of this root, there would be no cause to apprehend a rapid degeneracy such as we now experience.

All the Reports concur in the statement exhibiting the deficiency of the hay crop, resulting chiefly from the effects of long-continued drought throughout the summer. In some instances good crops were obtained from moist meadows, and fields in good heart. During the last few years, hay has been abundant, and farmers have naturally allowed their stocks of cattle to increase, and the consequence of a short crop of hay, is a sacrifice of stock, and years of the farmer's toils are dissipated. The Nova Scotia farmer may regard it as an axiom, that his surplus hay will be required every fourth or fifth year, and if he wishes to preserve an equilibrium in such matters, he must reserve a few stacks of surplus hay, in place of allowing an undue increase of live stock. It is evident from the Reports that much good has been effected by the various Societies throughout the country. Superior breeds of cattle, pigs, and sheep, have been imported, together with labour-saving machines, and improved implements, which not only save labour, but render work a pleasure. These facilities, coupled with the example of a few enterprising men, are effecting greater improvements in Nova Scotia than a superficial view of the country would indicate. Mental culture is also increasing throughout the country, as manifested by several of the annexed Reports.

The Annapolis Royal Society furnishes an example

worthy of general emulation. Aware of the great advantages resulting from mutual instruction, this Society has constituted a 'Farmer's Club,' and at one of its preparatory meetings some able addresses were read, twenty-five members joined the club, and eight names were recorded as subscribers to the *Albany Cultivator*. These are important steps in the right direction. The elevation of the mind is the key to domestic happiness, and moral and social enjoyment. It would be a pleasing duty to record a similar Report from every Agricultural Society in Nova Scotia. Dairy husbandry in this country is worthy of every encouragement, and Societies ought to devote a suitable proportion of their funds toward improving that important branch of Agriculture. Dairy stock, as well as the minor details of management, are susceptible of much improvement, and there can be no doubt that with ordinary attention and skill, our dairy produce would equal any thing of this kind current in commerce; and farmers ought to remember, that a good cow in the stall, like a good tree in the garden, requires only the same nourishment and attention as that bestowed on the inferior varieties, and the difference in the original cost ought never to influence the choice in favour of an inferior stock. The capabilities of the soil in many parts of the Province are satisfactorily demonstrated by the various Reports from Societies. In referring to a communication just received from the Secretary of the Guayborough Society, we note with pleasure the weights of the grain produced at the competition;—wheat weighed 64lbs. per bushel and the produce 25 bushels per acre; oats weighed 45 lbs. per bushel, produce per acre, 30 bushels. Turnips yielded 800 bushels per acre, being 300 bushels per acre over an average for drill crops. The Central Board during the present year has maintained a correspondence with forty-two local Societies. They also purchased a quantity of seed wheat: they regret however to find, that this grain (purchased as the Black Sea wheat) has proved a winter variety, and is consequently not suitable to our climate. Chemical manures have also been imported, and distributed to Agriculturists for experimental application, and Reports of these experiments have proved very satisfactory. They imported a very superior horse-power Threshing Machine, with a circular saw attached; together with rotary churns on the most approved principle, which they mean to dispose of in the most suitable manner for promoting a taste amongst our native mechanics for manufacturing such articles to supply our wants. They have also employed such means for the general diffusion of Agricultural information as seemed practicable, by engaging the editors of five newspapers in different parts of the Province, to devote a certain portion of their papers to this subject. The Board regret to state that the correspondence with local Societies throughout the country, has been interrupted, and much valuable information lost, in consequence of many of the counties having availed themselves of the power granted to draw the Provincial grant through their Sessions. The Societies in these counties did not feel themselves obligated to forward their Annual Reports to the Central Board. This arrangement has been productive of much confusion and dissatisfaction, and the Board sincerely hope, that in future order may be preserved in this important department.

The Board have in perspective the encouragement of a good system of draining and managing bog lands—the introduction of oil cake as an auxiliary to our present catalogue of animal food—and the stimulation of a good system of growing seed in the Province. They have also made arrangements for a judicious importa-

tion of seed oats, and are collecting the genuine varieties of spring wheat—with a view to the general distribution of those articles in the country. They have also made provision for importing a few of the best Agricultural publications published in America, as being best suited to our general wants.

### PROGRESS OF IMPROVEMENT.

We adopt the following remarks of an Agricultural cotemporary; they will suit the latitude of Canada:—

What a mighty field is embraced in these two words! Who is so blind as not to feel their force—who that knows aught of the past or partakes willingly of the present state of society, but knows that in them lies the secret of all our superiority and advantages! Is it not, brother farmers, most true that “knowledge is power,” and in farming as in every other avocation? Look about and see who are our best farmers—if they are not the most intelligent ones—those who “take the papers,” who think and read the most—in short, those who know the most? To be sure knowledge is but a means, a sort of improved implement, which, unless applied, is inert and worthless. A dull tool with a vigorous arm will accomplish more than the keenest idle one. But give the proper weapon to the most active and expert and then see the effect! In this view of the case, it pains us exceedingly to see the indifference manifested by many of our farmers on this subject—refusing, as they do, the simplest, truest means of improvement when offered them in the shape of an Agricultural Periodical at only fifty cents or one dollar a year. And yet they can support every thing else, and most liberally too—Political newspapers, Fashionable Magazines, Publishers of trashy Novels, to say nothing of a host of bad habits, as tipping the use of tobacco, tea and coffee, &c.; while often, too often, their stoutest advocates and truest friends are shamefully neglected! Now friends we protest against such a course. We want you to think more of your chosen avocation, and its reliance upon and use of the Press; so that it shall not thus be made the last and least object of your attention. Tell me if you can, why the Press should not and will not advance agriculture as well as Politics; and why, therefore, you, as farmers, should not take Agricultural rather than Political Periodicals, if you can have but the one class? The secret is too obvious. Such persons underrate the importance of Agriculture, and do not think it worth while to try and improve it: they don't know the power and worth of the Agricultural Press, or they

are guilty of a glaring, suicidal inconsistency in thus neglecting it.

In regard to other matters pertaining to your Agricultural practice—how is it? You are not going to be satisfied with having and doing things this year just as you did last, are you? Let's see. Wasn't that a miserable breed of hogs you fattened last year, that took twice the grain that neighbour B's did, and then didn't weigh as much? And those sheep of yours—course-wooled, are they not, so much so that you got only two-thirds as much as neighbour C. did for his? Those colts you raised and sold—were they not rather scrubby—and your milk cows, do they go dry half the year? And that natural fruit your trees bore, better than nothing to be sure, but far from being the fruit which you might have had just as well perhaps, and may now soon, if you only bestir yourself a little. Thus with improved kinds of tools, grains, vegetables, and the whole round of domestic and farm appendages. *Make a beginning*—get yourselves in the way of improvement—get something to work from, to add to—to stimulate you! If you can't get more than a single pig of neighbour B's improved breed, or one fine woolled lamb of neighbour C., or a single choice calf, or colt, or tree, to start with, *get that one*, and with care your whole stock may be improved by it in a few years.

Not that we should run mad after every new thing, or wish to try every new notion, by any means; but there is a vast fund of real, actual, solid improvement, peculiar to our age and profession, to which every farmer should have recourse, and by which he may in every sense of the word be a gainer.

### A BOARD OF AGRICULTURE.

How often has it been said “Canada is a purely Agricultural Country,” and yet how little has been done by the Legislature to forward its best interests! When we consider the importance of the profession of the hardy and sun-browned tiller of the soil we are surprised that he has never received that attention at the hands of Parliament which he had a right to look for.—And yet he has had the making of these Parliaments, has duly voted at the general election for his Representatives, and paid more than his share of the taxes, forming the oil which keeps the great palaverer Legislative machinery in motion. If the farmer has not been noticed by the “assembled wisdom,” as he ought to have been, he has himself nearly wholly to blame, in choosing some whipper-snapping lawyer with no feelings akin to his, instead of a business-like frieze-coated weather-beaten, plodding, industrious, and frugal



hard worker like himself. The provincial Agricultural Association, yet young and but of recent birth, has done something to bring the business of the farmer into notice, and reduce a system that which has hitherto depended upon chance signs and weather changes. The greatest effort of this Society, in our opinion has been in framing a Bill "to establish a Board of Agriculture, and to provide for the better organization of Agricultural Societies in Upper Canada." We find a copy of it in the *Canadian Agriculturist*, (a good paper devoted to the interests of the farming community, and which every farmer ought to subscribe for,) and as we conceive it to be one likely to aid much in the increase of national wealth, we condense its principal provisions. It provides, firstly, for the establishment of a Board of Agriculture in Upper Canada, to consist of 10 members. The Inspector General, and the Professor of Agriculture in the University of Toronto, are to be *ex-officio* members. The Chairman of this Board is to be appointed by the Governor of the Council, from amongst the members of the Upper or Lower House, but he is not to resign his seat in consequence of the acceptance of such office.— He is also to be a member of the Board of Registration and Statistics. The other seven Members of the Board are to be chosen from amongst a number selected by the Directors of every County Society—the highest seven being elected. Two members will annually retire, according to a plan laid down in the Bill. The Board is to have a Secretary who will have an office in the public buildings at Toronto. The members are to be paid their actual expenses in coming to and returning from the place of Meeting, and the Meetings are to be held pursuant to adjournment, or at the call of the Chairman. It will be the duty of the Board "to examine into, and collect information upon such questions as concern the Agricultural interests of the Province, and to take such means as they may think best to promote those interests." They will also prepare an annual report, to be laid before the Legislature for publication.

• They will prepare, as soon as practicable a plan for the establishment of an experimental or illustrative Farm, in connection with the Chair of Agriculture in the University, or Normal School, and bring such plan before Parliament for action upon it. The Governor will be empowered to issue his warrant for the payment of expenses incurred by the Board, and they will be expected to furnish an annual detailed account of their expenditure. A clear and comprehensive system is laid down in the bill for the establishment of County and Township Agricultural Societies. The object aimed at is a good one, and we are happy that a Reform Administration will have an opportunity to forward it. It is high time that the occupation of the farmer was more respected, and there is good prospect now of a very necessary change.—*Journal & Express.*

**CURE FOR TETTERS AND RING-WORMS.**—The juice of the common cranberry, expressed and daily applied, is a certain and safe cure for these troublesome afflictions, and leaves no stain nor abrasion of the skin.

## THE GREAT INDUSTRIAL EXHIBITION.

The time fixed for the Grand Exhibition of the Works of Industry of all nations is the 1st of May, 1851. It will therefore be necessary that expedition should be used, in making preparations, if Canada is to be worthily represented. A Committee of the House of Assembly have had the matter under consideration, and have made the following Report. No decision has yet been come to by Parliament, but we confidently expect that an appropriation will be made, in accordance with the suggestion of the Committee. It has been asserted that the Exhibition will fail in England, for want of funds; but we think there need be little fear of that. Public attention does not seem to be much excited to the importance of the thing in Canada. Those who have assumed to act in the matter should bestir themselves:—

*Legislative Assembly, 18th June, 1850.*

Your Committee have taken communication of the following documents, which were appended to the Message of His Excellency the Governor-General. [The various documents are then specified.]

Your Committee have also taken into consideration a letter, dated 15th June, 1850, at Toronto, from Fred. Cumberland, Esq., representing the Committee of the Municipal Council, County of York; the Common Council, City of Toronto; and the Toronto Mechanics' Institute, addressed to Col. Guy, M.P., Chairman of this Committee, enclosing a Memorandum of certain suggestions made by that gentleman in the name of those bodies.

Your Committee have examined, lastly, a Proclamation, addressed to the public of Canada, by the Committee of the Montreal District, notifying the public that a Grand District Industrial Fair will be held in the City of Montreal, in September or October next, in connexion with the International Exhibition, to be held in London, in 1851.

The citizens of Montreal have thus the merit of taking the first step in aid to the original design, and they have acted with equal promptitude and liberality, in subscribing funds to a considerable amount. It is supposed that the sums so subscribed, added to one of £100, the gift of His Excellency, the Governor-General, amounting at present to upwards of £500, will not, eventually, fall far short of £1,000. This money was originally intended, it is true, to be disposed of in aid of the District Exhibition hereinbefore mentioned; but your Committee are of opinion that it would be more calculated to excite a spirit of generous emulation, and be more in accordance with those enlarged views which are invariably conducive to the public good, that all such partial efforts should be merged into one, embracing the whole of United Canada. It is evident, too, that unless every object destined for Exhibition in England be previously compared, and the selection made here, two articles of the same kind might be exhibit-

ed there ; and whether, as it is probable, one were inferior to the other or not, this would, in fact, bring the different sections of the Province into competition in England.

Your Committee therefore learn, with satisfaction, that the subscribers in Montreal are willing to place their funds in the hands of any Commissioners to be duly appointed to superintend a Provincial Exhibition.

Your Committee would, in the first place, invite every section of the Province to contribute by subscription to the common fund, and that the same be placed at the disposal of the Commissioners to be named by His Excellency, the Governor-General. They recommend that a Commission be accordingly issued, addressed to gentlemen qualified to carry out the design, who will communicate with the Commissioners named by the Queen.

Your Committee also recommend to your Honourable House, that in addition to the amount subscribed and to be subscribed, a grant of £2,000 be made to the Commissioners to be so named, to award premiums to successful competitors, and to enable them to defray the necessary expenses, as well on the spot, as those incidental to the transmission to England of the objects selected for ultimate exhibition there.

Your Committee are of opinion that the members of the Commission should take for their guidance the documents hereinbefore-mentioned ; and that all matters of detail should be confided to them. It is further the opinion of your Committee, that one or more persons, to be appointed by His Excellency the Governor-General, should proceed to England, in charge of the objects selected for Exhibition.

On this basis your Committee recommend that an Industrial Exhibition for all Canada should be held at Montreal, on the second Monday in October next, and on the two subsequent days.

[COPY OF EARL GREY'S DESPATCH.]

Downing Street, 18th April, 1850.

MY LORD,—With reference to my Circular Despatch of the 3rd instant, I have the honour to inform you that Her Majesty's Commissioners, for the Exhibition of 1851, have taken into consideration the question of the amount of space which can be allotted, in the building to be erected in this Metropolis, to the articles sent for Exhibition from the various Dependencies of the British Crown, and that they have decided on apportioning 8,000 square feet to Canada.

It is to be observed, that of the whole gross space thus allotted to the Colonies, about one-half will be reserved for passages and other purposes, and therefore the proper allowance must be made on this account, in your calculation of the quantity to be sent.

As it is indispensably necessary that the Commissioners should, at as early a date as possible, receive information as to the extent to which the Colony, under your Government, is prepared to avail itself of the space reserved for it, you will take every means in your power for procuring such information, and transmit the same to me, distinguishing the proportion of space which will be required under each of the four main divisions, of Raw Materials, Machinery, Manufactured Articles, and

Objects of Fine Art, into which, as you are already aware, it is proposed to classify the Exhibition.

I am, &c.

(Signed)

GREY.

The Right Honourable

The Earl of Elgin and Kincardine, &c. &c. &c.

MEMORANDUM of Suggestions offered to the Special Committee of the House of Assembly, appointed in reference to the Great Industrial Exhibition, to be held at London, in 1850.

1. That Local Exhibitions shall be held in the various Municipalities throughout the Province, with the view especially of inducing competition in such articles of produce as are peculiar to such localities, and, generally, in such as are common to the Province.

2. That one Great Provincial Exhibition be established for the United Province, whither the prize articles, and others of sufficient merit, shall be forwarded from the Local Exhibitions.

3. That any Parliamentary grant to be made in aid of the representation of Canada, at the London Exhibition, shall be devoted to the purposes of the Provincial Exhibition, and the transmission from thence to London of such articles as shall be adjudged worthy.

4. That the Local Exhibitions shall be conducted at the expense of the localities, independent of the Parliamentary grant ; and that any profits therefrom shall be given in aid of the Provincial Exhibition.

5. That Parliament shall determine the place and time at which the Provincial Exhibition shall be held.

The Joint Committee would, however, suggest Montreal, as well on account of its geographical position, as of the energy with which its inhabitants have hitherto acted in the matter.

6. That, in determining the place and time at which the Provincial Exhibition shall be held, it would be prudent to avoid any union of such Exhibition with any other of an annual or local character which might involve a confusion of purposes, or a diversion of the Parliamentary grant from the special object for which it shall have been made.

7. The Montreal Association, The Agricultural Association of Upper Canada, The Kingston and Toronto Institutes, having appointed September for their Local Exhibitions, the second week in October appears to be the earliest period which can safely be named for the Provincial Exhibition.

8. That a Commission be appointed, to which shall be entrusted the conduct and management of the Provincial Exhibition, whereby an unity of action in the various localities will be best secured.

9. That some competent person shall be entrusted with the care of such articles as shall be transmitted to England from the Provincial Exhibition ; with a view, as well to their safe conduct, as to their arrangement in the London Exhibition, and, if possible, to the direction of public interest there towards those Canadian products to which it may be especially desirable to attract commercial attention.

10. It is suggested that such Commission, as that above referred to, should be appointed with the least possible delay, the localities being anxious for guidance in the course to be pursued.

FRED. CUMBERLAND,

For Joint Committee of

The Municipal Council, County of York :

The Common Council, City of Toronto :

The Toronto Mechanic Institute.

County Court House,

Toronto, 15th June, 1850.

## THE WORLD'S INDUSTRIAL EXHIBITION.

To the Editor of the Canadian Agriculturist.

SIR—

The Grand National Industrial Exhibition projected by His Royal Highness Prince Albert, and to come off in London in May, 1851, will, if carried out in accordance with the spirit and intention of its noble founder, produce incalculable benefits to Great Britain and those Colonies that participate in it, as well as to the civilized world at large. It is reported that voluntary subscriptions to aid in the furtherance of this great undertaking have reached a large amount, and it is to be confidently hoped that public liberality is only beginning to shew itself. The Imperial Government should at once come forward and pledge the Nation from the public purse in a sum equal to that which shall have been subscribed by individuals in Great Britain, to be awarded as prizes and to defray the expenses attendant upon the exhibition. The same course should be pursued in the Colonies. All the different Provincial Legislatures should vote a sum equal to the amount collected by private subscription, in order to make the necessary preparations for having the Colonies fully represented. But this grant should by no means interfere with that now given to the several Agricultural Associations established in the Provinces.

In reference to the articles to be sent forward to the exhibition, I would beg leave to differ from some persons who think that they should be restricted to those in which we can excel Great Britain and other nations. Perhaps we do possess articles which may compete with any country, nevertheless my opinion is that we should send forward the best of everything produced in the Colonies—say the different kinds of ores, both in their crude and manufactured state,—specimens of marble, gypsum and water-lime; samples of the produce of our fisheries, put up in the best manner; pork, beef, hams, butter, and cheese, in casks of finest workmanship; samples of flax, hemp, tobacco, maple sugar and beet sugar; choice samples of all the kinds of wheat, corn, barley, rye, oats, and peas, should be carefully selected and put up in packages; samples of fruit and all the varieties of garden and florist seeds; all kinds of edible roots; in general, specimens of all the produce of the Florist, the Gardener, the Horticulturist and the Agriculturist should be brought forward to competition, and although many of the articles may fail in securing prizes, they will, when offered for sale after the exhibition, command highly remunerative prices.

I feel confident that one great object of His Royal Highness in instituting this grand exhibition is to ascertain the capabilities of the Colonies, and as this cannot be certainly known unless every thing produced therein be sent forward, I would beg to suggest the propriety of the British Government sending out a vessel to each of her principal Colonies in order to transmit those articles intended for the exhibition free of charge. This would be a step worthy of the British people. It

cannot be supposed that the Colonies can contend successfully with the United States, or with Britain, France, or other European Nations, where the arts have carried improvement almost to its utmost stretch. It will, no doubt, suggest itself to the Royal mover that two sets of prizes will [be required. The first for the Colonies to compete for by themselves, and when the premiums shall have been awarded to the best colonial products they can enter the lists with all the world.

I would further suggest that Delegates be appointed from each of our District Societies to attend the exhibition, and that such Deputation consist of one Agriculturist, one Mechanic, and one Manufacturer from each District, and also a Gardener, a Florist, and an Horticulturist, from each large Town or City, and that the vessel carrying the articles for exhibition give to each of them a free passage to and from London. These Delegates being chosen from the intelligent classes in the community would bring back with them a fund of useful knowledge which would be scattered through the length and breadth of all the colonies under the Crown, the result of which would at no distant day produce the most salutary effects.

I hope that these few remarks may be well received, and that they will elicit suggestions from others that will arouse the public mind to the importance of the subject, and induce many Farmers and Mechanics and Manufacturers to aid in carrying forward this great undertaking.

Should you think the foregoing suggestions worthy of a place in your valuable journal you are at liberty to insert this communication.

CHAS. P. TREADWELL,

President of the Agricultural Society of the United Counties of Prescott and Russell.

L'Original, 21st May, 1850.

## AGRICULTURAL ASSOCIATION OF UPPER CANADA.

ADDRESS OF THE SENIOR VICE-PRESIDENT.

I have been deputed by the Directors of the Association, to inform the inhabitants of this part of the Province, that arrangements are now being made for holding the Annual Exhibition at the Town of Niagara, on the 18th, 19th, and 20th of September next.

This paper is not put forth for the purpose of urging the Inhabitants of Canada to increase their zeal and good wishes for the prosperity of the Agricultural Communities, because public opinion and public spirit have been so decidedly declared in its favour in former years, that no doubt now remains in the public mind of the usefulness and advantages to be derived from the Annual Fair and Exhibition to the people of this growing country; therefore my task is reduced to the pleasing one of merely reminding members of Agricultural Societies, and our Agricultural friends, that their subscriptions in aid of the Association for

the year 1850, ought to be remitted if possible, in the month of August next, to Thomas Ridout, Esq., Cashier of the Bank of Upper Canada, or paid into any Branch Bank for that purpose; this, together with the hope that the Government money voted for the encouragement of Agriculture, will be promptly paid to the County Societies in that month, in accordance with the intention of the Legislature, and that all the friends of Agriculture in the Parliament, (which means every body there,) will not fail in using their best endeavours to obtain a special Grant for the benefit of the Association; thereby placing the Officers of the Institution in funds sufficient for the payment of premiums, and all other demands on the last day of the Exhibition. Such arrangements will obviate and prevent the difficulties that have heretofore been experienced in carrying forward the business of the Association, and tend to give more general satisfaction throughout the whole length and breadth of the land. Many worthy farmers it is well known, make great exertions in fostering animals and crops for the purpose of exhibiting them at our Annual Show, and those who may be fortunate in gaining premiums, will be then doubly satisfied on finding the money ready on the spot, for payment of their merited claims.

Money must be had, and money can be always obtained for promoting the interests of Agriculture, provided the Agriculturists themselves will unite their exertions in the cause. Large sums from individuals cannot be expected, but by bringing the subject matter of the Institution fairly before the public, a trifle from each will accomplish the business. Probably the present is the most suitable season for setting this note forward; the seed and potatoe planting season at the eastward has been just finished; at the westward the clover is not yet generally fit for the scythe; therefore we have a less press of farming business now than at most other times, so that an hour can be devoted to inquiring into the state of our respective Agricultural Societies, and make certain that the Office Bearers in every County have voted a subscription in aid of the Provincial Agricultural Association for the present year. If this be not already done, then, let us bestir ourselves and find out the reason, and where necessary, cause a general meeting of the Society to be holden for the purpose. In this way funds will quickly go forward sufficient to carry out the arrangements of the Exhibition in all its branches in a manner that will do credit to the country, and to all concerned therein. To prevent the possibility of any misunderstanding taking place regarding the subscriptions from the several Agricultural Societies in the Province, Mr. Buckland, the respected Secretary to the Association, has been instructed to correspond immediately with the President or Secretary of each Society on the subject.

The site for the Show Grounds has been selected at Niagara, between the Town and the Steamboat landing; probably a more eligible or convenient spot cannot be easily found and a very efficient local Executive Committee has been appointed at Niagara, to make contracts for enclosing the Show

Grounds, and to make all other necessary arrangements for carrying forward the business of the Exhibition. We have great confidence that this onerous duty will be performed with ability, zeal and activity in the best possible manner; the beautiful grounds near to the Town of Niagara, the grand scenery at Queenston Heights from the monument and shrine of the lamented General Brock, and the splendour of the Niagara Falls, will all combine with the Exhibition in attracting visitors from all the cities towns and villages round the borders of the great lakes; besides, the facilities of travelling, round the lakes in the numerous elegant daily steamboats, the Through Line from Quebec and Montreal, will bring large cargoes of passengers up the River St. Lawrence. This together with a large concourse of persons from the American country, will, we trust, render the Fair and Show of Upper Canada very attractive, and we hope it may prove the best that we have had the pleasure of witnessing at this newly established National Institution.

Members of the Agricultural Societies in Eastern Canada, and the members of some of the American Societies, will be particularly invited to favor us with their presence, and to remain at Niagara during the Exhibition; the Secretary will make these invitations and the Executive Committee of Management will appoint a sub-committee to receive and introduce strangers and friends from distant parts.

JOHN BENNETT MARKS,  
*First Vice President.*

BARRIEFIELD, near Kingston,  
June 24, 1850.

#### ENCOURAGING SIGNS.

One of the best signs of the times, for country people, is the increase of agricultural papers in number, and the still greater increase of subscribers. When the Albany Cultivator stood nearly alone in the field, some fifteen years ago, and boasted of 20,000 subscribers, it was thought a marvellous thing,—his interest in the intellectual part of farming; and there were those who thought it "could not last long." Now that there are dozens of agricultural journals, with hundreds of thousands of readers, the interest in "book farming" is at least beginning to be looked upon as something significant; and the agricultural press begins to feel that it is of some account in the *commonwealth*. When it does something more—when it rouses the farming class to a sense of its rights in the state—its rights to a good education, to agricultural schools, to a place in the legislative halls, where farmers shall not be only talked about in complimentary phrase, as "honest yeomen," or the "bone and sinew of the country," but see and feel, by the comparison of power and influence with the commercial and professional classes, that they are such, then we shall not hear so much about the dangers of the republic, but more of the intelligence and good sense of the people.

Among the good signs of the times, we notice

the establishment of an Agricultural Bureau at Washington. At its head has been placed, for the present at least, Dr. LEE, the editor of the Genesee Farmer,—a man thoroughly alive to the interest of the cultivators of the soil, and awake to the unjust estimation practically placed up on farmers by both themselves and the country at large. If he does his duty, as we think he will, in collecting and presenting statistics, and other information, showing the importance and value of the Agriculture of the United States, we believe this Agricultural Bureau will be of vast service, if only in showing the farmers their own strength for all good purposes, if they will only first educate, and then use their power.

In our more immediate department—horticulture—there are the most cheering signs of improvement in every direction. In all parts of the country, but especially at the West, horticultural societies are being formed. We think Ohio alone numbers five at this moment. And as the bare formation of such societies shows the existence of a little more than private zeal on the part of the inhabitants in gardening matters, we may take it for granted that the culture of gardens is making progress at the west, with a rapidity commensurate to the wonderful growth there in other respects.—*Horticulturist*.

**WRONG APPLICATION OF MANURE.**—Many valuable essays have been published, relative to the best mode of applying manures; yet instances are numerous where farmers and others, instead of placing them in a situation to be received by living vegetables, apply them in abundance to seasoned timber, and to their own organs of respiration. For instance, they pile heaps six feet high, against their barns, perhaps under their stable windows; and the right proportion of moisture being present, when the weather becomes sufficiently warm, a decomposition takes place, and two thirds of all that is valuable escapes in gas, to poison themselves and neighbours, and annoy all who may pass to the leeward of the pile. A few moments labour in turning over the stack, would prevent this active fermentation, save their buildings, retain their manure, and preserve the health of their own and their neighbours' families.—*Gen. Far.*

### BERKSHIRE PIGS.

What has become of all the Berkshires with which the country abounded a few years ago? We have not seen a real genuine Berkshire in many a day—the few which make any pretension to the name, being at least but mongrels, and unworthy to claim any relation to the noble race which a few years ago were so much admired by all lovers of good pork. We ask, again, what has become of the genuine Berkshires?—and we

pause for a reply, trusting that some of our readers may be able to answer a question so important to the farmer.

We are not among those who believe that the Berkshires are the only breed worthy of cultivation; but we have been accustomed to consider them a very good specimen of the swinish family, and worthy of being kept in their purity, if for no other purpose than to cross with other breeds.—There may be better breeds of swine than the Berkshire, but we are strongly inclined to the opinion that there has not been, in the last three years, so good an exhibition in this department, at any of our Cattle Shows, County or State, as we were accustomed to see when the Berkshires were in their glory.

We doubt whether any of the breeds have been retained in their purity, in very great numbers, in this part of the country. The general opinion among the farmers seems to have been, that a mixture of different breeds is best suited to their wants. This view may be correct, but it would nevertheless seem necessary to preserve in their purity the animals used for breeding. They may then be crossed to suit the interest or the fancy of the breeder.—*R. N. Yorker*.

### BREAKING YOUNG STEERS—OXEN.

This is the right period to commence breaking young steers, which are coming two years old in the spring. When broke thus early, and in a proper manner, they make incomparably better working oxen. They are never refractory, sulky, or unmanageable—they become accustomed to one another, and the yoke is a second nature to them—they are more tractable, and are worked with less noise and bluster.

There is great importance attached to the habit, that they may be easily accustomed to in walking fast, and that habit is gained by never overloading them while young and thus learning them a fast gait. Of two yoke equally valuable, one fast walkers and the other slow, one will, for work, be worth one half more than the other. In fact it is one of the most important features to attend to, till they have got their full strength. Some persons effect this by driving a span of horses ahead of them, to draw the load and them too, if they do not come up to the required pace.

Always use good long yokes for farm purposes, and the steers will never contract the habit of crowding or hauling, which fault often renders them almost worthless.

The use of oxen is fast going out of fashion in the western counties, an error we are sorry to see, as there is no more useful and economical animal on the farm. The Ox-Cart is a thing that was, and there is danger that the patient, willing ox, as a farm servant, is a doomed animal.—*R. N. Yorker*.

An humble man has been aptly compared to a noble tree, whose branches are well laden and bowed down with good fruit.

## ADULTERATION OF GUANO.

We have long known that this celebrated manure, so powerful in a genuine state, has been subject to various kinds of adulteration, by the admixture of inferior, and often worthless ingredients. In a recent number of the *Gardeners' Chronicle*, it is stated that a hill of considerable size in the vicinity of London is fast disappearing: the materials, consisting of a light kind of loam, being dried on hot-iron plates, are afterwards mixed with a small quantity of genuine guano, and strongly impregnated with the fumes of ammonia, and are then palmed off on the farmers of England for African or Peruvian guano. The business doing is said to be considerable, and the profits, of course, are very great. We can hardly think, however, that in the present day such an audacious cheat can long be practised with success. It is well known that when Professor Johnston was appointed consulting chemist to the Highland Society, some years since, adulterated guano was soon driven out of the market in Scotland; and we believe that there is not now a parish in England which does not possess some one sufficiently informed to be able to detect so gross and palpable an imposition as the one above stated.

## AGRICULTURAL IMPROVEMENT IN IRELAND.

From recent information, we learn, that, from one cause or other, the important movement of agricultural improvement has been commenced in right earnest, in several parts of Ireland. The Board of Education, the new Colleges, and the great National Improvement Society, with its Provincial Branches, together with the operation of the recent law, under which entailed estates, involved in hopeless embarrassments, may be divided and sold: all these agencies seem combining for Ireland's welfare. The Secretary of the *Agricultural Improvement Society* lately presented a draft of instructions, for the guidance and direction of the Teachers employed in the several districts. Among the leading subjects, we select the following:—The necessity of turning-up and digging the tillage land deeply and well in winter, in order to expose it to the effects of frosts, and to prepare it for cultivation in spring. Ditching, underground draining, levelling all unnecessary banks and ditches, and spreading their contents, either in compost or otherwise, upon the land. The husbanding of manures,

collecting weeds, scouring ditches, and accumulating bog-mould, sand, sea-weed, or dung-heaps, &c. When political and party agitation ceases to become a trade in Ireland, and the public mind directed in earnest to her immense industrial resources, the advent of that country's greatness and prosperity may be considered at hand.

## CHOLIC IN HORSES.

We often see horses in great distress, when we attribute it to the bots. They lie down, groan, roll over, cast the head around to the flank, thus indicating that the distress is there. Although symptoms similar to these, indicate the bots, still I am persuaded the ailment is choleric in ten instances, where it is bots in a single instance. Acidity in the stomach, occasioned by sour mill feed, or whatever cause may produce flatulency, will induce an attack of choleric. For this ailment, the use of alkalies is an efficacious remedy.

I was once at the stable of an eminent owner and breeder of blood horses, in Dutchess County; and in speaking of his care, mode of culture, and success in rearing and using horses, he remarked, that the usual number in his ownership was about thirty, of all ages and characters. That it had been his invariable custom to administer a small amount of dry ashes in the food to each horse once a week. And that for the period of thirty years, he had not been troubled with a sick horse. I have for several years resorted to this practice, not indeed with the uniformity it merited, but still with satisfactory results. Now, at a period when root culture is so deservedly coming into general esteem, as furnishing valuable winter food for stock, this practice, as a preventive remedy, may be highly useful. It would not be surprising, if in some given circumstances of the horse's condition, a mess of green succulent roots might induce an attack of choleric. The celebrated horse, "Duroc," the sire of "American Eclipse," died, as was supposed, from an attack of choleric, produced by a feed of potatoes, when his system happened not to be in safe condition for such food. A small amount of this remedy, given at regular periods, would almost insure against tendencies of this sort.—*Cor. New Yorker.*

## WARTS ON HORSES.

In the cultivator of September 15th, I noticed a communication of G. Powers, wishing to be informed of something that would cure warts upon his horse, as also your remarks thereon; and would say to him, that by the application of spirits of turpentine, the warts will be entirely removed.

CURE FOR HEAVES IN HORSES.—A farmer tells us that he has recently cured two of his horses, which had the heaves badly, by the use of the following remedy: To three quarts of sweet milk add a teaspoonful of sulphuric acid, (oil of vitriol), and mix with the horse's feed. Give at first three times a week; and afterwards once or twice, as there may seem occasion, for a few weeks longer. Our informant says there was little appearance of the heaves after the first week.—*Christian Alliance.*

## BUFFALO HORTICULTURAL SOCIETY.

We had the pleasure of being present at the Exhibition of this Society, on the 2nd instant. In consequence of the backwardness of the season, this was the first Show of the year. The display of flowers and fruits was highly creditable, and the large room was well-filled in the evening with both ladies and gentlemen, who evidently felt a deep interest in the objects of this useful Society. The Show was exceedingly rich in strawberries, a greater or better display of which we never observed this side of the Atlantic; very great attention is now bestowed on the cultivation of this wholesome and delicious fruit in the Northern States: some specimens of *Hovey's Seedling* were remarkably fine. Of cherries there were several varieties, most of them good; but we fancy the May Duke and Blackhart do not attain so large a size in this country as in England. The recent heavy rains had somewhat injured the appearance and quality both of cherries and strawberries. Of gooseberries there were but few, but those were of large size; we should think the heavy soil around Buffalo favorable to the successful cultivation of this fruit. There were some gigantic specimens of rhubarb, which now seems as much relished in the New World as in the Old. Edible roots, such as carrots, parsnips, beets, radishes, &c., must be pronounced forward, and of healthy growth, considering the unfavorable character of the season. Of the flowers we can scarcely venture to speak. So rich a display of nature's beautiful productions, improved and variegated by art, was at once delightful to the eye and captivating to the heart. We should be guilty of an unpardonable omission, if we did not say that the ladies of Buffalo displayed no common degree of industry and correct taste, in the chaste and beautiful arrangement of this department of the Exhibition.

As the connection is intimate between the garden and the field, we may be allowed to observe, in this place, that we paid a visit to two eminent agriculturists in this section of the State of New York, Messrs. Allen and Sotham. Mr. Allen has about a thousand acres of the southern portion of Grand Island, in the Niagara River—a spot capable of being made one of the most delightful for a residence, and possessing great natural advantages for agricultural and grazing purposes. To the breeding of stock Mr. Allen has hitherto devoted his principal attention, and among his

present herd we noticed several fine specimens of Devons and Short Horns. He is, however, beginning to devote attention to the cultivation of fruit on an extensive scale, having already some sixty or seventy acres planted with apples, pears, plums, cherries, peaches, &c. The contiguity to the thriving and populous city of Buffalo will, we trust, make this a profitable enterprise. Mr. Sotham occupies a similar tract on the opposite shore, devoted, in great measure, to the purposes of dairying and breeding. Here are to be found representatives of that breed of cattle so much and long esteemed in Britain, the *Hereford*, which Mr. Sotham has been at much pains and expense to introduce and naturalise, from the purest and best blood in England. This valuable breed is extending in the States, and we could wish to see it introduced into Canada. Our people will probably have an opportunity of seeing and purchasing specimens of Mr. Sotham's stock, at the approaching Provincial Fair. This gentleman keeps some 70 or 80 cows, for the purpose of supplying Buffalo with milk, which, we are informed, is a profitable business, although the average price of that article is considerably lower than in Toronto.

We crossed the boundary-line on the evening previous to the celebrated July 4th, with desires strengthened, and hopes still brighter, that the two great nations here reposing by each other, and so nearly connected by ties of ancestry and blood, may long continue intimately united by those of friendship, mutual interest, and the interchange of neighborly offices. May Great Britain and America remain for ever united in the bonds of a fraternal fellowship! and thus read a salutary lesson to the world, on the advantages and blessings of cultivating the arts of peace, and of furthering the interests of a progressive civilization.

## HOW TO MAKE DELICATE SEEDS GROW.

BY PROFESSOR LINDLEY.

"How am I to sow my flower seeds?" "I have had some beautiful flower seeds given to me but I have no gardener, and I don't know what to do with them." "I don't know how it is, but my gardener never can get his seeds to grow. What shall I do?" "How deep sir, would you advise me to bury my seeds?"

Such are the sounds of woe with which our ears are not uncommonly assailed. That information is much wanted in this matter is most certain; that endless mistakes follow in the train of all vague directions nobody can doubt; that seed sowing does demand some "knack" and practice we readily admit, and therefore we shall

on this occasion utter no *vox ambigua*, but cut the matter short by saying, "Don't bury your seeds at all!"

We can quite imagine the surprise that this announcement will occasion in some minds; but we presume to hope that when we have been heard to an end, the recommendation will not be thought so paradoxical as it appears to be.

Let us, in the first place, ask why seeds are buried alive under clods of earth? Does Nature thus inter them? And if so, who or what is her grave-digger? When the acorn falls it has no power of wriggling into a hole in the ground, and when the chickweed scatters its tiny seeds they lie and grow where they fall. What reasons, then, can gardeners have for making themselves seminal sextons?

"Reasons!" says the man of learning, "I will give you fifty; firstly, a seed must have darkness and oxide of hydrogen in order to germinate; under these influences its C combines with the O of the latter, and forms CO<sub>2</sub> which is extricated; then distaste comes into play, and the amylaceous particles are saccharified; thirdly"—but hold—enough of that. "Reasons!" says Mr. POLYANTHUS, the gardener, "why how are you to keep the birds off if you do not bury the seeds? or the mice? or such vermin. How are you to keep them moist when they first chip the shell? How are they to hold to the soil when they have got a root? Reasons enough are these, I think."

Certainly. But, then, cannot all these objects be secured by other means than burial?" Let us see.

We want fine dry soil. First provide that; get the ground level, and press it gently with a piece of tile or glass. If it contains stones or clods remove them. If your seeds are very small, sift over it a little silver sand, or peat; upon this scatter the seeds *thinly*. If they are excessively small mix them before sowing with dry sand or peat, in order to separate them; and again with gentleness press all flat.

Then provide some coarse Moss—any sort will do; but Bog-moss or Sphagnum is the best—having previously soaked it in boiling water to kill insects or their eggs. Press it till its wetness is exchanged for dampness, and then, while warm, scatter it *loosely* over the seeds. Press it down; invert over the Moss a common garden pot, lay a tile on the hole, and the operation is performed.

But the little apparatus thus contrived must be watched. In a day or two lift up the pot, raise the Moss, and examine the seeds. If the moss is dry, which is not likely to happen, again damp it with *warm* water. If all is still, have patience.—Thus go on until you find your seeds *beginning* to grow. Then remove the tile from the hole in your pot, and leave them for another day. At the end of that time you will possibly find that the seeds have grown much more; if so take away a part of the moss, so as to give the young things more air and light. The next day, raise the pot on one side, so as to open it to the south. This may be done with a stone placed beneath its front

edge; but do not raise it all round, because if you do the strong current of air setting over your seedlings and through the hole in the pot will chill them. As soon as you find the seedlings green and plump and stout, the moss may be entirely removed and the pot raised higher. And very soon that, too, may be quite dispensed with, unless there are frosts at night, or bitter dry easterly winds by day. In the former case, replace the pot every night and take it off again in the morning; in the latter, it is wise to place a little screen between the plants and the wind. For this purpose a pantile is a capital thing, but a piece of board, or any such matter, will do.

In this way you secure all that you want in order to get a hardy seed to grow: darkness, moisture, air, warmth; and afterwards moisture, air, light, and shelter.

Let no one say that large seeds cannot thus be raised. The finest Oaks spring from acorns dropped in the forest and covered by a few leaves.—The Sycamore, the Ash, the Beech, the Horse Chesnut will all sow themselves wherever their seeds can stick to the ground until a coverlet of leaves is moistened by an April shower and warmed by an April sun. Neither have such seeds any difficulty in steadying themselves by their roots; a long fang is driven by vital impulse into the earth, and it is to that, and not to a bit of the buried neck of the stem, that the seedling trusts for support and nourishment.

We will only add one word. 'Those who have ever attempted to sow seeds upon rock-work, know to their cost how very difficult it is to make such seeds take root. The method now proposed answers the end completely, and it is the only plan, which in difficult cases, does succeed.—*Experto crede Roberto.*—*Horticulturist.*

OAKS.—Frof. Beck says the oaks of the forest are known with tolerable certainty to attain the age of 800 or 900 years, and are the most aged trees that we possess. Pines are stated by Dr. Williams, in his history of Vermont, to live from 350 to 400 years. Of the oaks comprised under the Linnæan genus *quercus*, botanists are acquainted with more than 400 species, of which upwards of one half belonged to America. In this State there are fifteen different species, as follows: Mossy cup, post white, swamp white, swamp chesnut, yellow rock chesnut, dwarf chesnut, willow, black acrub, black, red or scarlet, pine, and red oak. The white oak is the most valuable of all, being extensively employed in ship building. In England, in 100 years' time, the price of ship building was 100 per cent. Sinclair, in his code of Agriculture, stated that a 74-gun ship requires 3,000 loads of wood, the product of 50 acres, each tree standing 33 feet apart.—Hence the importance of cultivating the oak, and where the young trees are raised, the



ground should be cultivated for 20 years at least.

## THE SHAPE OF ORCHARD TREES.

(From the *Scottish Agricultural Journal*.)

Each kind of tree has its natural shape. Some trees grow spirally like the larch, or in a fastigate manner, like the Lombardy poplar; others are, in nursery language, round or clump-headed, or, like the cedar as described in the inspired volume, have their tops hid among the thick boughs.—Fruit trees in an orchard, if allowed to take their natural shape, will manifest great diversity in their mode of growth. Some pear trees will ascend toweringly, and many apple trees will assume round or ruggedly picturesque forms but in all cases it will be found that the strong limbs are centrally situated, and that the higher branches do not overshadow the lower. The “bell shaped” mode of training, so often advocated by horticultural writers, is therefore unnatural, and it is always found in practice to be insufficient.—When a young tree is to be trained in this manner, the branches are set off so as to form a hollow in the centre, like a bowl or inverted umbrella; and for a time the tree bears well; but when it begins to grow old, and is no longer annually visited by the pruner, a mass of spray arises in the centre, and at last the sun’s rays can only act on the outer twigs, and all the heart of the tree becomes barren, or only produces inferior and insipid fruit. The upward growth of spray in the centre of the inverted “bell,” shows that the natural disposition of the tree has been interfered with, and that nature is asserting her prerogative. But the evil has been accomplished; and attempts to prune a grown up tree that has been thus mismanaged, are found ineffectual, or rather tend to increase the evil; for masses of barren spray arise up wherever a branch has been cut off; the outer twigs become limber and weak, and the fruit is easily shaken off by a gale of wind. The disadvantages incident to this mode of training can never be counterbalanced by that “spreading out of the branches so as to receive the gentle dew,” which the advocates of bell training have mentioned as recommendatory of their system. A preferable mode of training is that which has been called conical or pyramidal. When a young tree, whether apple, pear, cherry or plum, is to be trained in this manner, the central shoot is allowed to grow perpendicularly, and the lower branches are bent down so as to assume a horizontal position. The tree, while still young, is so pruned as to maintain a spiral form—the lowest branches extending farthest from the stem. A full-grown tree that has been thus trained when young, does necessarily look stiff and formal, but may rather approach much nearer to the shape which it would naturally have assumed, had no training been given. In an old orchard, where the trees have been all trained spirally

when young (supposing such an orchard to be in existence), there will be found much diversity in the shape of the trees, for each will have assumed somewhat of its natural habit; but all will be in a fruitful condition, in as far as fruitfulness is affected by training. There are some old pear trees in the Carse of Gowrie orchards which had been allowed to grow as they pleased, and which had consequently assumed the aspiring, conical form natural to them; and it is uniformly from such trees that those amazingly great returns of fruit are produced which are from time to time recorded in the newspapers. When a fruit tree is spirally shaped, the sun shines on all its branches, and to some extent on all parts of them; and finely ripened fruit may be gathered even from the heart of the tree, close by the stem, and at a point of space where, in the case of a bell-shaped tree, there would be nothing but shade, gloom and barrenness. The lovers of the picturesque may object to conical training as being stiff and formal; but the objection is baseless. In the first place, as has already been remarked, the result of this mode of training will be a nearer approach to natural shapes than if the other, older, and more common mode had been practiced; and then, though the trees may have a formal shape when young, and in the course of training, it must be remembered that this is not altogether incongruous in an orchard where the trees themselves are planted in straight rows, and where every thing shows the presence of art. When fruit trees are planted on a lawn, for the sake of beauty as well as of utility, little training is requisite, and they will naturally assume, more or less, a spiral shape. Even those that are naturally round headed will have their stems ascending perpendicularly; and there will be no thick and useless spray, and no overshadowing of one branch by the one above it. It would seem that fruit trees in most of our orchards have been pruned and restrained in their growth for the purpose of making them unfruitful. Those who have studied Gavin Cree’s system of *pruning forest trees* will easily perceive the physiological advantage which a spiral headed tree possesses over one that has had its form angled by the “bell” trainer.

DEEP PLANTING is always to be avoided. We have an illustration of this error in our garden—two trees, side by side, which were planted five years ago, and were then of equal size. One was planted as deep as it previously stood, and is now twice as large as the other, which was planted a foot deeper and has produced no fruit, while the former has yielded abundantly for the last two years.—*Granic Farmer*.

### THE FITCHER PLANT.

This plant abounds in the stony and sterile parts of the Island of Java, from which were it not for this vegetable wonder, small birds and quadrupeds would be forced to migrate in quest of water. At the foot stalk of each, is a bag shaped exactly like a pitcher furnished with a lid, and having a

kind of hinge that passes over the handle of the pitcher, and connects it with the leaf. This hinge is a strong fibre, which contracts in showery weather and when the dew falls. Numerous little goblets filled with sweet fresh water are thus held forth, and afford a delicious draught to the tiny animals that climb their branches, and to a variety of winged visitants. But no sooner has the cloud passed by, and the warm sun shown forth, than the heated fibre begins to expand, and closes the goblet so firmly as to prevent evaporation, precluding a farther supply till called for by the wants of another day. This beautiful and perfect provision of nature would afford a fine theme for Thompson or Wordsworth, and would afford an illustration of the design of Providence, such as Paley would have delighted to press into his service.

**CLEANSING THE BARK OF FRUIT TREES.**—We have often recommended the use of whale oil, soap, potash, &c., for the cleansing the bark of fruit trees, and supposed that no application could exceed it for this purpose. A few weeks since we visited the seat of Robert Rennie, Esq., near the Lodi Print Works, and there saw the cleanest fruit trees it has ever been our lot to meet with. Mr. Rennie informed us that he used a solution made of one pound of best bleachers' soda, dissolved in one gallon of water, and applied it to the surface of his trees. All the fungi, dead bark, &c., are softened and readily exfoliate from the healthy part of the bark during the growth of the tree—the surfaces of the cherry, peach, plum, nectarine, apricot, and many other kinds of trees seemed polished, and of a colour more closely resembling the new growth at the ends of branches than usual; the trees were in excellent health, and we were informed that they bore superior crops to those not so treated. Within the last few days we have applied the soda wash to our trees, and for the purpose of ascertaining if so strong a solution would injure the tender parts of plants, have sprinkled it over the leaves of many tender shrubs, but as yet they are uninjured, while the inert parts of vegetables are readily decomposed by it.—*Working Farmer.*

### PRESERVES AND JELLIES.

*From Miss Beecher's Domestic Receipt Book.*

**GENERAL DIRECTIONS.**—Gather fruit when it is dry.

Long boiling hardens the fruit.

Pour boiling water over the sieves used, and wring out jelly bags in hot water the moment you are to use them.

Do not squeeze while straining through jelly bags.

Let the pots and jars containing sweetmeats just made, remain uncovered three days.

Lay brandy papers over the top, cover them tight, and seal them, or, what is best of all, soak a split bladder and tie it tight over them. In drying, it will shrink so as to be perfectly air-tight.

Keep them in a dry, but not warm place.

A thick leathery mould helps to preserve fruit;

but when mould appears in spoeks, the preserves must be scalded in a warm oven, or be set into hot water, which then must boil till the preserves are scalded.

**STRAWBERRIES.**—Look them over with care. Weigh a pound of sugar to each pound of fruit. Put a layer of fruit on the bottom of the preserving kettle, then a layer of sugar, and so on till all is in the pan. Boil them about fifteen minutes. Put them in bottles, hot, and seal them. Then put them in a box, and fill it in with dry sand. The flavor of the fruit is preserved more perfectly, by simply packing the fruit and sugar in alternate layers, and sealing the jar, without cooking, but the preserves do not look so well.

**CURRANTS.**—Strip them from the stems. Allow a pound of sugar to a pound of currants. Boil them together ten minutes. Take them from the syrup, and let the syrup boil twenty minutes, and pour it on the fruit. Put them in small jars or tumblers, and let them stand in the sun a few days.

**TO PRESERVE CURRANTS TO EAT WITH MEAT.**—Strip them from the stem. Boil them an hour, and then to a pound of the fruit, add a pound of brown sugar. Boil all together fifteen or twenty minutes.

**CURRANT JELLY.**—Pick over the currants with care. Put them in a stone jar, and set it into a kettle of boiling water. Let it boil till the fruit is very soft. Strain it through a sieve. Then run the juice through a jelly-bag. Put a pound of sugar to a pint of juice, and boil it together five minutes. Set it in the sun a few days.

**CHERRIES.**—Take out the stones. To a pound of fruit, allow a pound of sugar. Put a layer of fruit on the bottom of the preserving kettle, then a layer of sugar, and continue thus till all are put in. Boil till clear. Put them in bottles, hot, and seal them. Keep them in dry sand.

**RASPBERRY JAM.—No. 1.**—Allow a pound of sugar to a pound of fruit. Press them with a spoon in an earthen dish. Add the sugar, and boil all together fifteen minutes.

**RASPBERRY JAM.—No. 2.**—Allow a pound of sugar to a pound of fruit. Boil the fruit half an hour, or till the seeds are soft. Strain one quarter of the fruit, and throw away the seeds. Add the sugar, and boil the whole ten minutes. A little currant juice gives it a pleasant flavour, and when that is used, an equal quantity of sugar must be added.

**PREPARED MOLASSES FOR FRUIT.**—As economy is the order of the day, permit me, through the medium of your paper, to communicate to our ladies a receipt for preparing molasses for preserving fruit, &c., which renders it much better suited for that purpose than a syrup prepared from the best loaf sugar, as it is not likely to candy, nor if well prepared to ferment:—Take eight pounds molasses, bright New Orleans or Sugar House, eight pounds pure water, one pound coarsely powdered charcoal. Boil for twenty minutes, then strain through fine flannel, double—put it again in the kettle, with the white of an egg, and boil gently, till it forms a syrup of proper consistence, and strain again.

## LONG VITALITY OF SEEDS.

So completely is the ground impregnated with seeds, that if earth is brought to the surface from the lowest depth at which it is found, some vegetable matter will spring from it. I have always considered this fact as one of the many surprising instances of the power and bounty of Almighty God, who has thus literally filled the earth with his goodness, by storing up a deposit of useful seeds in its depths, where they must have lain through a succession of ages, only requiring the energies of man to bring them into action. In boring for water lately, at a spot near Kingston-on-Thames, some earth was brought up from a depth of 360 feet; this earth was carefully covered over to prevent any other seeds being deposited upon it, and it was soon covered with vegetation. If quick lime be put upon land which from time immemorial has produced nothing but heather, the heather will be killed, and white clover will spring up in its place. A curious fact was communicated to me respecting some land which surrounds an old castle, formerly belonging to the Regent Murray, near Moffat. On removing the peat, which is about six or eight inches in thickness, a stratum of soil appears, which is supposed to have been a cultivated garden in the time of the regent, and from which a variety of flowers and plants spring, some of them little known even at this time in Scotland.—*Jesse's Gleanings of Natural History.*

**THE STRAWBERRY.**—A fruit so very useful and delightful as the strawberry deserves a better name, though the old one is now so identified with its beauty that it would be a pity to get rid of it. Nobody thinks of *straw* when uttering the word strawberry, but only of color, fragrance, and sweetness. The Italian name is *Fragola*, fragrant. The English one originated in the custom of putting straw between the fruit and the ground, to keep it dry and clean; or, perhaps, as Mr. Philips thinks, from a still older practice among children, of threading the wild berries upon straws of grass. He says that this is still a custom in parts of England where they abound, and that so many "straws of berries" are sold for a penny.

## FORCE OF SAP.

Braddock, a British Physiologist, cut off the stem of a grape, five years old, and covered the wound with a piece of bladder, secured by cement and twine. The bladder, although at first drawn very close to the top of the shoot, soon began to stretch, and to raise a ball over the wound, feeling as hard as a cricket ball. In about 48 hours afterwards the force of the sap burst the bladder.

## MULCHING GOOSEBERRIES.

The English gooseberry has always hitherto mulched here: and I have been familiar with bushes of the best sorts for many years, without ever being able to gather any perfect fruit.

I have lately "mulched some bushes" which

heretofore had borne this worthless fruit. I covered the surface of the ground under them a foot deep with wet half rotten straw, extending this mulching as far as the branches grew

Imagine my delight at finding the gooseberries so mulched, ripening off finely, the fruit twice as large as I have ever seen it before, and quite fair and free from mildew.—*Horticulturist.*

**SETTING FENCE POSTS.**—Mr. Benjamin Willard, of Lancashire, Mass., gives the following, which we copy from the last New England Farmer, as his method of setting fence posts:—"I have for some time been satisfied of the economy of setting posts for permanent fence in lime mortar. I have proved the plan and have given it my sanction, for permanent record in your paper.—Air-slaked or refuse lime (at ten cents per bushel) answers; and the cost except labour: on it is not over one cent per post. We dig the holes with a spade, and have two semi-circular pieces of sheet iron to put down round the post, and after filling inside with mortar and outside with earth, draw up these pieces, and the work is done for many years. It dries hard as stone, and remains in statu quo. I set the top end down."

**VALUABLE RECIPE.**—To prevent the borer from injuring apple trees. The borer lays its eggs just within the bark, a few inches from the ground, in June. Two pounds of potash to one bucket of water—wash the tree in June, and the liquid destroys the eggs, and will prevent the recurrence of the evil the next year. This is the common practice of the orchardists in Massachusetts, and is successful.—*Portsmouth Journal.*

## RHUBARB.

The use of Rhubarb Stalks as an article of food is yearly on the increase; and, we have no doubt that, at no distant date, it will be an important article in the poor man's bill of fare. We have for many years past endeavoured to get those who had small gardens to grow a root of the Victoria Rhubarb in a corner of their ground, and several grew it, only for the purpose of obtaining a prize for the best grown stalks; they are now beginning to try the cooking of it, and like it very well; but, cheap as the sugar is, they grudge the sugar that is required to sweeten it to their taste; but many are not aware that by using a small quantity of what is called baking soda—carbonate of soda—one half the quantity of sugar will suffice. [But we eat Rhubarb, not only on account of its agreeable taste of the vegetable acids which it contains, but also on account of the favourable effects of those acids on the animal economy when taken into the system as a portion of the food: it may be doubted whether we can accomplish the same objects by eating salts (oxalate and malate) of soda.—*Ag. Ed.*] When the soda is introduced after the rhubarb is boiled, a strong effervescence takes place, and the sourness of the rhubarb is greatly destroyed. Those in towns who buy it by the pound, often destroy a third of their purchase in the way in which they remove the skin from the stalk; it has now been ascertained by good judges, that there is no need whatever in removing the skin at all, when the stalks are in a proper state for

using, but just to clean them well and cut them up for use. Those who can afford it, may use blanching pots to put over their plants; it is thought by many that both the appearance and flowers are improved by means of them, and that a great saving in the quantity of sugar necessary to render them agreeable to the palate is obtained, as the leaf stalks when bleached are less harsh than when growing under the influence of light in open situations. We have grown rhubarb in various kinds of soils, but we find it to do best in rich light soil where the roots have liberty to grow and penetrate to a considerable depth. Rich liquid manure suits it well, and if much of the stagnant water that is allowed to accumulate near human dwellings, was to find its way to the rhubarb plantation, the owners would have sufficient for their own use, and a considerable quantity to sell to those who have no opportunity of growing it.—*Scotch Farmer for June.*

**PLANTING CHESTNUTS.**—At a late farmers' meeting in New York, Mr. Rice, speaking of planting chestnut timber, remarked, that he ploughed up a tract of unproductive hill-side, several years ago, and planted it with chestnuts, in rows four feet apart every way. The first sprouts coming up rather crooked and scrubby, he went over the field and cut them down close to the ground, which caused new shoots to spring up straight and vigorous. The trees are very thrifty, completely shade the ground, and grow more and more rapidly as the soil becomes strengthened by the annual deposit of leaves. So well satisfied is he with the experiment, that he is now placing other worthless lands in a similar course of improvement.

**ANSWERS TO INQUIRIES.**

Are Gooseberries and Currants best grown as bushes or with single stems?

We prefer the former, on the whole, as less trouble, and being perhaps rather harder. For the amateur, the latter mode is preferable, as affording neater, more manageable bushes—much better adapted to thorough pruning and cultivation. In pruning, a judicious trimming out of both old and new wood, is all that is necessary. The Gooseberry requires the most trimming.

How to raise tree Currants, or bushes that will not sprout from the roots:—

This is done by cutting out all the eyes or buds from that portion of the cuttings or layers, that is below the surface of the ground, and up as high above ground as you wish to have the bodies.—*Wis. Far.*

**DEFINITIONS,**

FROM A LATE EDITION OF THE FARMER'S VOCABULARY.

**PROFITABLE STOCK.**—A man's dog caught among the last half of his neighbour's sheep!

**LABOUR SAVING MACHINE.**—A pair of legs which, when put in motion, are wont to take their owner to that ubiquitous resting-place a Tavern.

**CHEATING HIS CREDITORS.**—A poor man running away from a family of six lazy, fashionable daughters.

**GHESS.**—A vile weed of common occurrence, but very uncertain origin—some supposing it natural and others miraculous. The one party claim, that according to the heathen notion of transmutation, (we beg pardon, transmiration), it comes from the soul of the

wheat after the death of the body; while the other most demeritedly insist that it comes from the seed!!

**POVERTY.**—A condition hitherto supposed favourable to health—but found of late to predispose strength to fatal attacks of the "yellow fever."

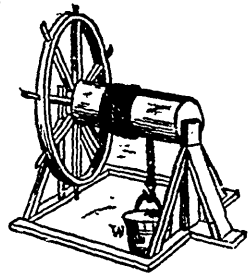
**General Science and Miscellany.**

**NATURAL PHILOSOPHY.**

No VI.

**THE WHEEL AND AXLE.**

The third mechanical power is the *wheel and axle*. Let us suppose the weight *w* to be a bucket of water in a well, which is to be raised by winding the rope,



to which it is attached, round the axle; and if this be done without a wheel to turn the axle, no mechanical assistance is received. The axle without a wheel is as impotent as a single fixed pulley, or lever, whose fulcrum is in the centre; but add the wheel to the axle, and you will immediately find the bucket is raised with much less difficulty. The axle acts the part of the shorter arm of the lever, the wheel that of the longer arm. The velocity of the circumference of the wheel is as much greater than that of the axle, as it is further from the centre of motion; for the wheel describes a large circle in the same space of time that the axle describes a small one, therefore the power is increased in the same proportion as the circumference of the wheel is greater than that of the axle. If the velocity of the wheel were twelve times greater than that of the axle, a power nearly twelve times less than the weight of the bucket would be able to raise it.

**THE INCLINED PLANE.**

The fourth mechanical power is the *inclined plane*. This is nothing more than a slope, or declivity, frequently used to facilitate the drawing up of weights. It is not difficult to understand, that a weight may with much greater ease be drawn up a slope than it can be raised the same height perpen icularly. But in this, as

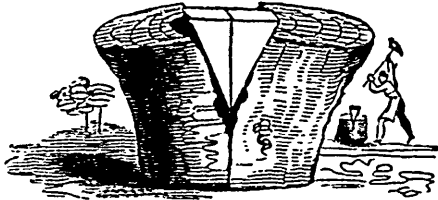


well as the other mechanical powers, the facility is purchased by a loss of time; for the weight, instead of moving directly from *A* to *C*, must move from *B* to *C*, and as the height of the plane is to its length, so is the power to the weight which it is intended to raise. Thus, if a pulley be fixed at *F*, so that the string from *F* to *w* may be parallel to *B C*, and a string fixed to the weight *w* were connected with another weight *F*: then if *F* bear the same proportion to *w* that the line *A C* does to the line *B C*, the two weights will balance each other, &

considerable portion of the weight  $w$  being supported by the plane  $BC$ , and only the residue by the power  $P$ .

#### THE WEDGE.

The wedge, which is the next mechanical power, is composed of two inclined planes. Woodcutters sometimes use it to cleave wood. The resistance consists in the cohesive attraction of the wood, or any other



body which the wedge is employed to separate; and the advantage gained by this power is in the proportion of half its width to its length. The wedge, however, acts principally by being struck, and not by mere pressure; the proportion stated, is that which expresses its power when acting by pressure only.

All cutting instruments are constructed upon the principle of the inclined plane, or the wedge. Those that have one edge sloped, like the chisel, may be referred to the inclined plane; whilst the axe, the hatchet, and the knife, (when used to chop or split asunder,) acts on the principle of the wedge. But a knife cuts best when drawn across the substance it is to divide, as it is used in cutting meat; for the edge of a knife is really a very fine saw, and therefore acts best when used like that instrument.

#### THE SOLAR SYSTEM.

Sir John Herschel well observes, that it is difficult to convey to one who has not long exercised his thoughts on the subject any adequate impression of the relative distances and magnitudes of those planets which are comprised within our own system. How much more difficult is the conception of the starry heavens—each star a sun, the centre of a system, it may be more extensive and more glorious than our own? We cannot impart to others correct notions on the subject by drawing circles on paper, or “by those very childish toys called orreries.” Some general impression may be conveyed by placing a globe two feet in diameter in the centre of a plain or bowling green.—With the sun for a centre, a circle 164 feet in diameter will represent the orbit of Mercury, the comparative size of which planet may be represented by a grain of mustard seed. Venus might be represented by a pea, moving in a circle the diameter of which would be 284 feet; the Earth also a pea, but on a circle of 430 feet diameter; Mars a large pin’s head, and the diameter of its circle 654 feet; Juno, Ceres, Vesta, and Pallas, grains of sand, moving in circles from 1,000 feet to 1,200 feet in diameter; Jupiter a moderate sized orange, in a circle half a mile across; Saturn a small orange, on a circle four-fifths of a mile in diameter; Uranus a large cherry, upon a circle more than a mile and a half in diameter; and

Neptune a good sized plum, on a circle about two miles and a half diameter. When we have attained sufficient knowledge of the comparative magnitudes and distances of the heavenly bodies, it becomes matter of astonishment to find how simple, yet how powerful and effectual, are the laws by which they are all governed, so as to keep each one of them in its predestined orbit, moving for ever at the same rate in the same constant round. It is matter of astonishment that a globe two feet in diameter should, by the simple law of attraction, acting in proportion to their several masses, keep so many other globes, varying in size from that of an orange down to a grain of sand, each circling the central globe without confusion, and some of them at the great distance of two miles and a half from the centre of attraction; but it becomes a matter of far greater astonishment to find as we advance further in our inquiries, that this very sun itself, with all its planetary orbs, is governed by a higher law of the same description, if not by the very same law; for not only is it found, on a more minute investigation, that the sun revolves on its axis, as the earth and planets do, but that the sun does not occupy the precise centre of our system, nor do the planets move in circular orbits, for these orbits are ellipses, of which the sun occupies one or other of the foci, the sun itself moving in an orbit of its own as well as turning upon its axis. Nay, more, it seems all but certain that our whole system has a proper motion as a whole among the fixed stars, tending towards a point in the constellation Hercules; and that the fixed stars themselves, which are only other suns, have all proper motions, if their immense distances and the want of some really fixed object to measure their motions did not preclude our obtaining sufficient data to enable us confidently to affirm it. We may, indeed, at length rest assured that some parallax has been detected in the nearest fixed stars, but so small as not to amount to a second. This parallax would give the enormous distance of twenty billions of miles from the earth as that of the nearest fixed star; and, consequently, make each of those stars to be at the same immense distance from its nearest neighbour. And when it is considered that the milky way is so thickly paved with stars that Sir W. Herschel was led to conclude that fifty thousand had passed under his review, in a zone two degrees in breadth, during a single hour’s observation, the mind of man fails in attempting to grasp such distances as would result from summing up the number of stars in the whole range of observation during 24 hours, each separated from each by at least 20,000,000,000,000 of miles. Some parts of the heavens are even more thickly clustered with stars—as many of the nebulae, especially a vivid oval mass in Sagittarius, about six degrees in length, four degrees in breadth, so excessively rich in stars that a very moderate calculation makes their number to exceed one hundred thousand. Some of the nebulae are even denser than this, appearing like globular spaces filled full of stars. “It would be a vain

task to attempt to count the stars in one of these *globular clusters*. They are not to be reckoned by hundreds; and, on a rough calculation, grounded on the apparent intervals between them at the borders and the angular diameter of the whole group, it would appear that many clusters of this description must contain at least five thousand stars, compacted and wedged together in a round space, whose angular diameter does not exceed eight or ten minutes—that is to say, in an area not more than a 10th part of that covered by the moon.”—*Quarterly Review*.

**A CHEAP CISTERN.**—Every house-keeper knows the superiority of rain water for washing, &c., yet how few are prepared to realize this advantage, for want of a cistern to receive it. I will give a method for constructing a cistern on a very cheap plan, which every person who wishes can have, and which will do until they can make a better one:—Take any large vessel or cask, it need not be water tight, (a sugar hoghead will do,) knock one end out—then dig a hole in the ground where you want it to stand, about a foot larger in diameter than your vessel, and six inches deeper; then make some clay mortar, with which cover the bottom to the depth of six inches; then set in the vessel and fill up the space around it with mortar well crammed in, and your cistern is finished.—*Ohio Cultivator*.

**EXCELLENT SPANISH CUSTOM.**—A recent writer says: The domestic manners of the *Malanuenas* are well illustrated, by their customs in regard to sickness and death. When a case is pronounced *de cuidada* (of seriousness) the usual visitors of the house are expected to call, regularly, in person. To avoid the inconvenience which might be caused by this, the door of the front court is left open, and upon a table within, there is placed a bulletin of the patient's condition, with information as to whether the family are willing or not to see company. There are writing materials at hand, and each visitor leaves his name, departing, as he entered, without the use of bell or knocker.

**TO CORRECT SOURNESS IN MILK, CREAM, AND BREAD.**—It is not generally known that the sourness of milk and cream may be immediately corrected by the addition of a small quantity of the common carbonate of magnesia in powder. Half a teaspoonful (about equal to four grains) may be added to a pint of milk and cream, if only slightly sour; a larger quantity in proportion to the degree of sourness. From two to three grains may be added to every pound of flour to prevent sourness in bread—so injurious to health. Carbonate of soda is sometimes employed for the same purpose, but it communicates a very unpleasant flavour to the bread; and, in the case of milk or cream, is worse than the disease.

**RECIPT FOR WASHING.**—To every twenty gallons of warm water, add one bar of soap, seven tablespoonfuls of spirits of turpentine, and one of sal ammonia, and let the whole stand for one night. In the morning, put in the fine clothes, and let them soak one hour, or, if very dirty, one and a half hours; then take out, wring, and rinse well in clean water; wring and rinse again in *blue water*—then dry. The coarse linen may then be put in the same water, and undergo the same process. *No rubbing is necessary*, and the clothes will be perfectly clean and sweet.

**NEW JERSEY MARLS.**—It is well known that certain sections of New Jersey have been greatly improved in regard to the productiveness of the soil, by the application of marl. In Monmouth county, according to Professor Mapes, in the *Working Farmer*, “lands which ten years ago were worth but ten dollars per acre, are now producing large crops, simply by coating them with a few bushels of marl, taken from within a few feet of the surface.” This marl we understand to be what is called *green sand*. Professor M. states that some of it contains 13 per cent of potash, and that the quantity required to fertilize an acre, does not exceed one hundred bushels. Some of the marls, however, are said to contain an excess of sulphate of iron, and when they are applied in large quantities, injure vegetation. Professor M. observes, “that the continued use of marl, while it supplies many of the inorganic constituents of plants, must eventually cause the disappearance from the soil of all its inorganic matter, and hence the necessity of its renewal from time to time by the addition of decomposed peat, turf, river mud, and other inorganic matters.”

**EXPLOSION OF AIR-TIGHT STOVES.**—Prof. Horsford, in a paper lately read before the “American Academy of Arts and Sciences,” thus explained the phenomenon of the explosion of the so-called air-tight stoves. It is proper to remark that these accidents are latterly of rare occurrence, and with the self-regulating valve, which is now attached to the best of these stoves, it is believed such accidents would never happen. After the wood has been fired, and the supply of air for some time shut off, on reopening the draft, and sometimes without, occasional explosions of great violence have occurred, attended with the blowing out of the stove door, and in some instances producing still greater injury to the stove. The probable explanation is this. After firing the wood and shutting off the draft, destructive distillation commences. Inflammable gases issue from the wood, which, mingling with air derived from the pipe, or remaining still unconsumed, furnish an explosive mixture, which the first jet of flame, or perhaps the incandescent coal, causes to explode.

**ANIMALCULES ON HUMAN TEETH.**—Dr. H. J. Bowditch, of Cambridge, Mass., states as the result of many microscopic examinations of the accumulations on the teeth of healthy persons, that of forty-nine individuals, most of whom were very particular in the care of their teeth, animal and vegetable products were found in every instance except two. In those cases the brush was used three times a day, and a thread was passed through the teeth daily. Windsor soap was also used by one of those two persons, with the brush. Dr. Bowditch tried the effect of various substances, in destroying the animalcules, and especially tobacco, by which they seemed to be in no way incommoded. Soap-suds and chlorine toothwash invariably destroyed them.

**RED CEDAR POSTS.**—All kinds of Cedar are known to be very durable, but the heart of red cedar is perhaps preferable on this account to any other kind, and those parts of the tree which are most knotty, will probably last longest. E. Bourne, in the *Massachusetts Ploughman*, states that on examining some red cedar posts set by his father forty-eight years since, he found those which were taken from the butt-end of the tree a little decayed on the outside; but those from the second and third cuts of the tree, were perfectly sound.

**TO MAKE THE BEST BEEF HAMS.**—Take the hind part of a good fat animal, and make a cut all the way down into and the whole length of the bone; then cut out the bone, leaving the meat with one long cut in its centre—nearly resembling a split cylinder. Now lay it down in clean brine of good salt, that has been boiled and skimmed, and into which there has been dissolved a little sugar. Let it remain in this brine for about ten days at least; do not let it get too salt. Then lift it out and hang it on a hook to drip for about three days. Take it down when all the brine has dripped out of it, and lay it upon a table. Have ready a small quantity of fine salt, mixed with considerable pepper and ground cloves. Rub the meat with the hand, both inside and out, with this mixture, and then have ready a ball of stout hempen cord or twine. Then roll the meat firmly round, making it into a conical shape. After this, take the cord and commence at the thickest part of the meat, to roll it round, drawing firmly every coil, having each coil wrapped and drawn firmly round at one-fourth of an inch apart, up to the top or small end. The cord must then be laid down on both sides opposite, in such a way that each lower coil of cord may be cut without loosing the coil above it. This roll of beef is then the *ne plus ultra* of beef hams. It has but to be hung up for two or three days, and a slice of it (commencing at the lower part to cut) either boiled or fried, makes a dish fit to enchant an epicure. To cut it, the roll, should be laid on a table, and with a large sharp knife, it should be cut in thin slices; and when enough for a meal is cut off, it should be hung up again. Hams should never be hung in a warm situation, but in a cool, airy place. The fat and lean in this kind of ham is beautifully mixed in every slice. The seasonings assimilate themselves with the meat, and have a peculiar and agreeable flavour. Let those who make their own beef hams, try this method, and if ever they forget or neglect to do it afterwards, although it is a little more troublesome than smoking the beef, we are no judges of human nature.

**EXPLOSION IN COAL MINES.**—It is calculated that since 1800, more than 20,000 human beings have been killed by explosions in the coal mines in Great Britain. In 1847 and 1848 upwards of 700.

**CHEAP ROOF AND A TIGHT ONE.**—If a shingle roof is covered with cotton cloth, and then painted, and sand laid upon the top of the paint, and all suffered to dry, a roof will be made thereby to last twice as long as without the said covering. Cheap boards will answer as well as shingles, and the cloth will keep the roof perfectly tight from leaking.

#### MANAGEMENT OF DOMESTIC AFFAIRS.

The prosperity, happiness, and reputation of a family depend, in a very great measure, on the judicious and prudent management of the household department. With economy and skill, a family may be made comfortable, happy, and respectable, with one half the expense on the part of the husband that is required with the extravagance and mismanagement that prevail in some families. This will make all the difference between prosperity and the accumulation of a competency, and a failure and want.

This shows the importance of woman's influence; and she has not this influence merely on the comfort of the family, and its prosperity in the acquirement and saving of property, so essential to its well being, but her influence is equally great in training the infant and youthful mind to virtue and learning, and rendering the subjects under her care an ornament and blessing to the community, and a credit to themselves and their parents.

Strict economy and skilful management, while they contribute to the acquirement, preparation, and arrangement of those possessions that are essential to independence and happiness, exercise a wholesome discipline over both body and mind, laying a foundation for health, strength, and those principles which insure present comfort and satisfaction and a well founded-hope for future prosperity.

No woman should think of taking charge of a family without being well versed in her profession so as to act upon the best principles and practice, in a skilful manner. Science and skill are as important in the kitchen as on the farm and the one is no more disreputable, difficult, or unpleasant to a woman, than the other is to a man.

Every person should endeavour to excel in his or her avocation, and consider nothing, however minute, as unworthy of attention.

No person, who is not skilled in domestic affairs, should ever have a family subjected to her mismanagement and neglect. Labor is the necessary lot of all animal beings throughout creation, and it is essential to health and happiness. Then how important that it be directed by intelligence and skill which are absolutely requisite to success.—*New England Farmer*.

#### THE POWER AND VALUE OF STEAM.

The modern economy of doing by steam what was formerly done by muscle, brute or human, is incalculably great, and most promotive of the progress of the race, because, by saving human time, and land on which to raise animal provender, it allows a vast accession to the number of human beings, as well as multiplies and cheapens every kind of property, comfort, and luxury. The extent of this saving, say of horse flesh, and, of course, food and capital, may be inferred from the following:

"A pint of water evaporated by two ounces of coal, swells into two hundred and sixteen gallons of steam, with a mechanical force sufficient to raise a weight of thirty-seven tons a foot high. By allowing it to expand, by virtue of its elasticity, a further mechanical force may be attained, at least equal in amount to the former.

Five pounds of water evaporated by a pound of coke in a locomotive engine, will exert a mechanical power sufficient to draw two tons weight on a railroad a distance of one mile in two minutes. Four horses in a stage-coach, on a common road, will draw the same weight the same distance in about eight minutes. Four tons of coke, worth twenty-five dollars, will evaporate water enough to carry, on a railway, a train of coaches weighing about eighty tons, and transporting two hundred and forty passengers with their luggage from Liverpool to Birmingham, and back again, a total distance of 150 miles, in four hours and a quarter each way. To transport the same number of passengers daily by stage-coaches on a common road between the same places, would require 20 coaches, and an establishment of 3800 horses, with which the journey in each direction would be performed in about twelve hours. A more striking illustration of the incalculable saving in time and money produced by steam, cannot be given."—*Dr. Lardner's Lectures.*

**THE CHARCOAL ROAD—SOMETHING NEW.**—The following statement from Joshua Hathaway, the Secretary of the Company, gives some interesting details about the charcoal road between Poplar creek and Pewaukee: The Madison, Watertown, and Milwaukee Plank Road Company have contracted for the construction of four miles of charcoal road in place of planking. The price for construction is \$1200 per mile, exclusive of sluice ways and deep grading, which is to be paid for in addition. The mode of construction is as follows: The wood taken from the track is cut into the longest possible cuts, being straight; the stumps reduced to the surface; the wood being piled lengthwise, 8 feet wide, 4 feet high, with slopes of 45 degrees, is covered with straw and earth from the ditches, is then charred; a quarter of a mile of which can be charred and quenched in 10 days. The earth cover is then raked open to the width of 16 feet, 2 feet thick in the centre and 1 foot in the margin; the burned earth at the sides is then to be raked into the shape, and the weather and use will complete the work. The company are confident that this charred portion will prove the best and most economical and durable portion of their road.—*Wisconsin Farmer.*

**PATENT HOOPS.**—A machine has lately been invented for making hoops, which bids fair to do away the necessity of growing hoop poles hereafter. Any tough, straight-grained timber will answer the purpose. It is first sawed into square strips, the width desired for the hoop; these strips are next turned round, like a hoe handle, and slit through the centre. Each stick thus makes two half-round hoops. They are then steamed and bent. Casks hooped with them, present an extra-neat appearance. The whole work is done by machinery. Just previous to setting them, it is necessary to wet them in cold water. A specimen of these hoops was exhibited at the late State Agricultural Show at Syracuse.

**VINEGAR FROM BEETS.**—It is stated that the juice of one bushel of sugar beets, will make from five to six gallons of vinegar, by washing, grating, expressing, and exposing two weeks to the air in the barrel, with a gauze-covered bung hole.

**TO PREPARE RENNET.**—Take a gallon of blood-warm water to each rennet; soak, after stirring, for 24 hours; strain the liquor and let it settle, saturate with salt, and skim off the scum.

**LEMON PIES.**—In this year of scarcity of fruit, it may be desirable to know that a good pie can be made simply out of lemons and molasses. Press out the juice of a lemon into two teacups full of molasses, grate in the dried peel of another, cover a plate with a layer of crust, spread over some of the mixture, lay on a thin crust, spread another layer of the mixture, and over that lay a top crust; bake thoroughly, and you will have an excellent and wholesome pie. One lemon will make two pies.

**BEEF-TEA.**—Cut a pound of solid beef into very small slices, which put into a stew-pan with a small pat of butter, a clove, two button onions, and a salt-spoonful of salt; stir the meat round over the fire for a few minutes, until it produces a thin gravy; then add a quart of water, and let it simmer at the corner of the fire for a quarter of an hour, skimming off every particle of fat. When done, pass it through a sieve, which is much better than a cloth, as it does not injure the flavour. The same, if wanted plain, is done by merely omitting the vegetables, salt, and cloves; the butter cannot be objectionable, as it is taken out in skimming. Pearl barley, vermicelli, rice, &c., may be served in it, if required.—*Modern Housewife.*

**TO KEEP SILK.**—Silk articles should not be kept folded in white paper, as the chloride of lime used in bleaching the paper will probably impair the colour of the silk. Brown or blue paper is better; the yellowish smooth Indian paper is the best of all. Silk intended for dress should not be kept long in the house before it is made up, as lying in the folds will have a tendency to impair its durability by causing it to cut or split, particularly if the silk has been thickened by gum.

Thread lace veils are very easily cut; satin and velvet being soft are not easily cut, but dresses of velvet should not be laid by with any weight above them. If the nap of thin velvet is laid down, it is not possible to raise it up again. Hard silk should never be wrinkled, because the thread is easily broken in the crease, and it never can be rectified. The way to take wrinkles out of silk scarfs or hankerchiefs, is to moisten the surface evenly with a sponge and some weak glue, and then pin the silk with toilet pins around the selvages on a mattress or feather bed, taking pains to draw out the silk as tight as possible. When dry, the wrinkles will have disappeared. The reason of this is obvious to every person. It is a nice job to dress light coloured silk, and few should try it. Some silk articles may be moistened with weak glue or gum water, and the wrinkles ironed out by a hot flat-iron on the wrong side.—*Sci. Am.*

**DOING GOOD.**—How often do we sigh for opportunities for doing good, whilst we neglect the opening of Providence in little things which would lead to the accomplishment of most important usefulness! Dr. Johnson used to say, "He who waits to do a great deal of good at once, will never do any." Good is done by degrees. However small in proportion to benefits which follow individual attempts to do good, a great deal may be accomplished by perseverance, even in the midst of discouragements and disappointments.—*Channing.*

**TO KEEP MOTHS FROM WOOLEN CLOTHING, CARPETS, AND FURS.**—Place the articles in linen sheets, or bags, sewed closely together, first beating them; so as to clear of all moths and eggs. Camphor or tobacco scattered through light trunks, where they are packed is also a protection.



## Editor's Notices, &c.

**WORLD'S INDUSTRIAL EXHIBITION.**—Mr. Treadwell's letter, in another part of the present number, will, we trust, receive proper attention from the press, and those having the management of the matter, to which it refers. We understand that a Parliamentary Committee has recommended a liberal Government grant towards assisting in giving premiums and defraying the expenses of such articles as may be sent from Canada. The Toronto Mechanics' Institute will open an Exhibition, with special reference to this object, immediately after the Agricultural Fair at Niagara, during the last week in September, which we have no doubt will prove highly attractive. It is further proposed, that a grand and final Exhibition shall take place in Montreal, for the United Province, sometime in October, when all such articles as are suitable for the London Exhibition, will be determined on, and immediately shipped for their ultimate destination.

**PRIZE CHEESE FOR THE LONDON EXHIBITION.**—Our Correspondent from Alderson is informed, that as no specific weight has been determined, for the cheese to be exhibited at the approaching Niagara Show, that point must be left to the judgement and resources of Exhibitors.

### DEATH OF JOHN WETENHALL, ESQ

Since our last issue, this lamented gentleman has been relieved from his late distressing affliction, and his spirit is now, we trust, in that happy land, where pain and disappointment cannot enter. Mr. Wetenhall was descended from a highly respectable family in England; he had been liberally educated, and in the various transactions of public life, enjoyed the confidence and esteem of all who knew him. He felt great interest in the advancement of the country of his adoption, and was well known and appreciated, as an enterprising farmer, particularly for his valuable and improved stock. He was President of the Agricultural Association of Upper Canada for the current year, and previous to his lamented affliction took a lively interest in the welfare of that important Society. He has left a widow and young family, with a wide circle of attached friends to deplore his loss.

### PROVINCIAL AGRICULTURAL ASSOCIATION.

The Local Committee, at Niagara, are actively engaged in making the necessary preparations for this great Exhibition, which promises to exceed any thing previously seen in Canada. All the arrangements, therefore, are projected on a large scale than heretofore. The contract for fencing, buildings, &c., is already taken. About 14 acres of the extensive common close to the Town and steamboat landing, will be enclosed with a fence 10 feet high, in an octagonal form, each side being 350 feet long. Floral Hall 150 feet long, and 44 feet wide. Mechanics' Hall 130 feet long and 24 feet wide. Another hall of the same dimensions for agricultural productions, refreshment booths, &c., will be suitable offices for Directors, Treasurers and Secretaries. There will be upwards of 100 pens, and other conveniences, for cattle. Articles and visitors from the United States, it is expected, will be very large. The Governor General, with the Councils of Elgin and suite, have been invited, and His Excellency has signified his acceptance. A public dinner,

on a large scale, will be got up, independent of the funds of the Association. The premium list contains prizes in money, to the amount of nearly £1,200; and we understand that the Directors intend encouraging articles of merit, not included in that list to the full extent of their ability. We trust that the Canadian public will evince an enlightened patriotism, by a prompt and liberal support of this truly national and most useful institution. As every practicable arrangement will be made by the Committee, for the safe and easy transit of visitors and articles for Exhibition at reduced rates, and likewise for the accommodation of the public in Niagara, and the various towns and villages of its interesting and beautiful neighborhood, we shall expect to see, when the day arrives, thousands after thousands thronging to the encouraging and instructive exhibition of the skill and industry of Canada. The Secretary requests that the County Societies will transmit to him, the names of such gentlemen, as they may appoint as Delegates, and Judges at their earliest convenience, in order that arrangements may be made in proper time. The reader's attention is requested to Mr. Marks' address to be found on another page; and it is hoped that the Provincial Press will insert this communication, and lend its powerful aid in rendering the forthcoming exhibition, a benefit and an honour to the country:

### MORTON'S CYCLOPEDIA OF AGRICULTURE.

We have examined with much care, the first number of this truly original and valuable publication; which for convenience of reference, correctness and fulness of detail, with the superior style of printing and illustration, with which it is "got up," place it indisputably at the head of the important class of publications to which it belongs. We have no room in our present number but barely to announce the work; but we shall draw the attention of our readers to the more interesting and useful features of its various parts as they successively appear. Suffice it to say, for the present, that upwards of fifty of the most eminent farmers and scientific men of Great Britain—with several of whom we have the honour of a personal acquaintance—have been for some years engaged in the preparation of this Cyclopædia; each contributor being practically conversant with, and distinguished in, the particular department allotted to his special care; a feature which alone gives a value and authority to this publication, which is not possessed by any other with which we are acquainted. It is published by Blackie & Son, of Glasgow, and will be completed in about 24 parts, Super Royal 8vo, "with upwards of one thousand illustrations on Wood and Steel." Mr. MACLEAR, Bookseller, of this City, being the Colonial Agent for Messrs. Blackie's publications, can supply the work in parts as they are published, through his Travelling Agents in all the settled districts of Upper Canada, at the Glasgow or London price, 3s. 11-2d. Currency, each part. To such as desire an original and trust-worthy treatise on every subject, connected with the Practice or Science of Agriculture, brought down to the latest moment, we can conscientiously recommend, in terms unqualified, Mr. MORTON'S CYCLOPEDIA.

### APPEAL OF THE PROVINCIAL ASSOCIATION.

We beg the attention of our readers to Mr. Marks' communication in another page, and request the newspaper press to copy

### MARKETS, &c.

At present very little is doing in our market. Prices are nearly stationary, the farmers being busy in the hay field, and will shortly commence the cutting of grain. The wheat crop throughout Upper Canada may be said to be promising, and we have heard of battis rust, accusers from the States are generally favorable. Spring grain and hay, except in particular localities, will be light, but the late rains have considerably improved the appearance of these crops. From England we learn that the weather continued favorable and the crops promising, prices were consequently again looking downwards.