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AGRICULTURAL JOURNAL AND TRANSACTIONS

OF THE

LOWER CANADA

Agricultural Society.

Vol. 4. MONTREAL, JULY, 1851. No. 7.

MODEL FARMS.

We become every day more firmly persuaded that the establishment of Agricultural Schools and Model Farms are necessary for promoting the general improvement of Canadian Agriculture. We have, in the two last numbers of the Journal, made an estimate of the probable necessary expenditure for one, and also the returns which might be expected. A Model Farm would answer many useful purposes, as well as instructing pupils in the practical art of agriculture. It is at such an establishment that experiments can be carefully made, and reported so as to be understood, and relied upon. We have various breeds of animals in Canada, and each breed should be fairly tested, from their birth until at full maturity. This is the only fair way to be able to arrive at just conclusions with regard to the comparative merit of various breeds of animals. We cannot judge of the quality of animals if they have not been kept in a proper manner from their birth until at maturity. At a Model Farm all this should be carefully attended to by the conductor, under the constant superintendence of a committee, constituted of competent parties. There should be certain fixed rules for conducting such an establishment, that should be strictly observed. For the keeping of different races of animals there should be suitable conveniences, and stables with separated yards, not allowing larger cattle with small, or young with the old. When good breeds would be kept, every calf, lamb, and pig, born on the establishment, might be sold to farmers for breed, at a good price. It would be the same way with the grain and seeds produced; they might all be sold for seed to farmers. A Model Farm should be the *Nursery* for raising good breeds of animals, and good and pure seeds, for the whole district, and any person desirous to pur-

chase there, should be satisfied that he could have any article he required, of the very best description, and that it should always be what it was represented. These would be advantages of no ordinary character, and they are not imaginary, but would be perfectly possible, and ought to be realized to their fullest extent upon a well-conducted Model Farm. If a Model Farm and Agricultural School cannot be made to pay its own expenses, farming must be an unprofitable occupation. But we are fully convinced, that, with a suitable farm, of the necessary extent, judiciously stocked with animals and implements, furnished with good and convenient farm buildings, a good dairy, and root-houses or cellars, and a competent conductor, the farm would pay its expenses and the interest of the money invested. What is the use of recommending improved systems of husbandry if they are not to be profitable? What should prevent a Model Farm from being profitable? Of course it must be conducted properly and economically, or it would not pay. Everything about it should be on a respectable scale, but not too expensive. If it was on too expensive a scale, it would be no model for Canadian farmers, and ought not to be. A *pattern* farm should be its proper designation, that any farmer coming to visit it might adopt the same system upon his own farm. This should undoubtedly be the proper plan for a Model Farm, or there would not be any benefit from their establishment.

To the Editor of the Agricultural Journal.

SIR—The grand aim of your Journal being the advancement of agriculture, and the consequent prosperity of agriculturists, I shall make no apology for soliciting a small space in your columns to offer a few remarks upon a subject which, though sadly neglected by our farmers, might be made a business of the most profitable kind, and whether limited to domestic purposes or extended to supply our markets, and to furnish an article of export is equally deserving of attention, and promises a very lucrative return. I allude to the products of the orchard, the value and importance of which can hardly be overrated. Even though the fruit of the orchard was perfectly worthless, and claimed no higher rank than its highly ornamental qualities, the cultivation of an orchard would still recommend itself to the man of taste, and would be likely to receive almost as much attention from the farmers of this District, as at present it receives. Nor is this supineness restricted to those whose limited means would make the expense of planting an orchard difficult, but extends almost without exception through all classes of agriculturists. This state of things, I am aware, may be explained by the fact, that, the results of ignorant or unskilful experiments, have too often been stereotyped into immutable laws, which nature stubbornly persists in maintaining in defiance of art, however skilfully applied. Now, sir, let me not be misunderstood as advancing the absurd theory that art may be made to supplant nature; what I do mean to assert is, that nature is frequently misunderstood, and that the blunders of the unskilful are oftentimes most erroneously placed to her account. And further, that in the laws which are truly of nature's framing much, even very much is conceded to skilful entreaty.

Among the blunders which have tended too prejudicially in thisr espect as connected with my present subject, is the very prevalent error that the apple can only be cultivated with success, upon light gravelly, or limestone soils, and that it will not live upon clays. This error which has long prevailed in this District, and is now regarded as one of nature's inviolable laws, has, I have no doubt, deprived us of thousands of acres of orchard, in this Province, and is sending tens of thousands of dollars across our frontier, annually, to purchase an article, for the perfect developement of which, our soil and climate are admirably adapted. To prove the fallacy of the above opinion, I shall first quote an article from the celebrated Downing, and then state my own experience in corroboration

"Clayey loams are, when *well drained*, and when the clay is not in excess, good fruit soils, they are usually stiong and deep soils though rather heavy, and difficult to

work. Trees that *will flourish on these soil such as the apple, pear, cherry, plum and apricot, are usually free from disease or insects, and bear large crops.* In a moist climate like that of England, fruit trees on a clayey loam would die of canker brought on by the excessive quantity of water in the soil, but such is not the case under the high and warm temperature of our summers. The finest, largest, and most productive plumbs and pears within our knowledge grow in sites on the North River, where the soil *is a stiff clayey loam, almost approaching a clay.*" To this I may add that on my own farm near St. Phillips, [the whole of the land in that section having a strong tendency to the character of clays] the site chosen by one of the first occupants for the erection of a dwelling house, is almost the very lowest point on the whole farm, the soil in the garden is a clayey loam of ten inches, lying upon a stratum of tough yellow clay. On this soil, about 30 trees had been planted, which are now about 40 years of age. For the first two or three years I paid little attention to the trees, supposing them to be wild trees; but about three years ago, I gave them a proper pruning and dressing, and the consequence has been that their branches had to be supported to enable them to sustain their abundant load of apples of fine quality, and they are, at this moment, literally covered with young fruit, and are sending forth vigorous shoots; and from all appearances may live and be productive 40 years more. Satisfied by the experiment that the popular notion of the apple tree, dying in a clay soil is a fallacy. I proceeded last year to plant out about fifteen acres of orchard in a meadow, the soil of which is a stiff clayey loam. The trees were planted in the old and unskilful method, viz. making a hole and putting the tree down (*that is burying it*) the soil, in the mean time, receiving a liberal supply of stable manure; nearly all of these trees are still alive, 30 only out of the whole have perished. This spring these trees received a top dressing of one full shovel of our slacked lime, immediately after the departure of the snow, and they now present a very thriving appearance, though few of them put out any new shoots last year. On examining the roots of these trees last fall, I found that nearly all the roots which had been planted down into the holes had rotted off, and that the life of the trees was wholly sustained by small fibrous roots, which the tree had put forth within two or three inches of the surface; and I also found that the number of these fibres was far greater wherever a few handsful of weeds, hay or straw had been thrown about the tree, to protect the surface of the ground from the direct rays of the sun, and a sprinkling of earth had been thrown upon those. This hint suggested to me an entirely new idea of planting, and one that has been of incalculable advantage to me in my planting this spring, and in the hope that it will prove equally advantageous to all who try it, I shall proceed to lay a statement of what I believe to be a new method, and a great improvement in raising an orchard, before your numerous readers; asking their particular attention to the complete success of my own experiment. Following nature's hints in the observations just detailed, I resolved to plant my trees this spring in such a manner as to have a quantity of decaying vegetable matter in such contact with the roots, as to facilitate the developement of and a plentiful supply of fibrous roots, the most obvious as well as the most economical method of doing this, was to *plant my trees upon the unbroken turf* when the decomposing vegetable matter, grass, &c., would invite and plentifully nourish the new made roots. The idea once matured, I waited impatiently till the departing snows allowed me to put my cherished dream to the test upon a large scale. A large tract of my farm had been cleared of timber and had remained unimproved two or three years, the underwood or suckers had been twice cut down and set on fire, together with the long coarse grass which had grown up among them, but the roots still remained in the soil; and to remove these so as to allow the plough to work, would cost five or six dollars an acre, an expense which would hardly be justified by the present state of things. This was the place therefore selected for my new process of planting, 2350 trees were sent to the farm in the fall, and put in by the heels drains were made in the mean time between the intended rows, the sods being all thrown to one side. As soon as the season permitted, planting commenced in the following

manner. The roots were bent outwards from the stem as a hen's foot stands on the ground, and the stem was pressed firmly downward, while a mound composed principally of the sods already mentioned was closely raised about the stem to the height it had formerly grown in the earth, and extended outwards two feet and an half or more according to the length of the roots on every side. This mound consisted almost entirely of vegetable mould in every stage of decomposition, and notwithstanding the wetness of the season and the tenacious nature of the subsoil, which must have destroyed most of them if planted in holes, they have not suffered the slightest injury from the superabundant moisture. The trees were all of my own raising, the largest of which had been sold to customers, and though the planting was not finished till the second week in May, very many of them are now in blossom, nine-tenths of them are in full leaf, and throwing out young shoots, some of which I measured over five inches in length on the 10th instant, and only one out of the whole number appeared to be in a doubtful state. I believe, sir, that such success is unprecedented in this district, and I ascribe it chiefly to the plan adopted, which, so far as I know, is also without precedent, viz: setting the tree upon the grassy surface, both in an old meadow of eight or ten acres, and also in the uncleared land already spoken of. In confirmation of this view I may mention that about 60 trees of the same lot, which were planted upon tilled land, in the old way, are at least a fortnight behind the trees planted on the grass. Reserving some further remarks upon the subject for your next number of the Journal, I shall conclude by observing that there are thousand of acres of land in this district, which are thought to be not worth the trouble of clearing, which might, in this way, be converted into most profitable orchards at a little of the expense usually invested for such purposes, and with far more certain results.

I have the honor to be,
Sir, your obedient servant.

THOMAS MCGINN.

Montreal Gaol, 13th June, 1851.

The calculations of the selfish are always based on the arithmetic of folly.—*Ib.*

To the Editor of the Agricultural Journal.

SIR,—I take the liberty of offering a few remarks through the columns of your highly useful and valuable Journal, which I hope you will endeavor to remedy, if it be in your power, I have been a regular Subscriber to your Journal for these several years, and highly appreciate its usefulness from time to time, not only to farmers but also to all persons who have the welfare of the country at heart. I am sorry to say, that for these three months back I have not received the Journal; when it was in the hands of our first agent, Mr. W. S. Jackson, it came to hand very regularly, but since Mr. Fitch has got the charge of it, the case has been quite reversed. I applied to him several times, and the reply was that he had not received a sufficient number of copies from the publisher in Montreal. Now, Mr. Editor, I cannot say where the blame rests, whether with the agent or the publisher. My humble opinion is that a great deal more might be done for the circulation of the Journal, if proper persons were appointed to act as agents in each parish. I think our Agricultural Societies are greatly to blame in several of the counties, in not taking a more active part in the circulation of such a useful publication, where so much improvement is required. I am certain there is not a farmer in Canada, east or west, who would not derive the amount of one year's subscription by reading a single number of the Journal. I should suggest to each of the county societies to spend a small part of the funds every year, say to the amount of £10, in the purchase of this Journal, and distribute it to those who want instruction in the art of agriculture; this would be a far more judicious and beneficial mode of appropriating a part of the public money, than in the manner a great deal of it is spent, in giving it in prizes to persons who have no need of encouragement in agriculture, who only keep up their fat animals for pleasure and taking prizes at cattle-shows.

Hoping the above hints may have their due weight in the proper place,

I remain,
Your most obedient servant,

A PAYING SUBSCRIBER.

Quebec, 11th June, 1851.

THE MOON.

NEXT to the sun, the moon is to us the most interesting of all the celestial orbs. She is the constant attendant of the earth, and revolves around it intwenty-seven days eight hours, but the period from one new moon to another is about twenty-nine days twelve hours. She is the nearest of all the heavenly bodies, being only about 240,000 miles distant from the earth. She is much smaller than the earth, being only 2180 miles in diameter, and that of the earth is about 7930. Her surface, when viewed with a telescope, presents an interesting and varied aspect, being diversified with mountains, valleys, rocks, and plains, in every variety of form and position. Some of these mountains form long and elevated ridges, while others, of a conical form, rise to a great height from the middle of level plains; but the most singular feature of the moon, in those circular ridges and cavities which diversify every portion of her surface. A range of mountains, of a circular form, rising three or four miles above the level of the adjacent districts, surrounds, like a mighty rampart, an extensive plain; and, in the middle of this plain or cavity, an insulated conical hill rises to a considerable elevation. Several hundreds of these circular plains, most of which are considerably below the level of the surrounding country, may be perceived with a good telescope, on every region of the lunar surface. They are of all dimensions, from two or three miles to forty miles in diameter; and must present to the view of a spectator, placed among them, a more varied, romantic, and sublime scenery than is to be found on the surface of our globe. The lunar mountains are of all sizes, from a furlong to five miles in perpendicular elevation. The bright spots on the moon are the mountainous regions, the dark spots are the plains, or more level parts of her surface. There may probably be rivers, or small lakes,on this planet; but there are no seas or large collections of water.—*Dick's Christian Philosopher.*

THE ENGLISH FARMER.

THERE is no class of men, if times are but tolerably good, that enjoy themselves so highly as farmers. They are little kings. Their concerns are not huddled into a corner, as those of the town tradesmen are. In town, many a man who turns thousands of pounds per week, is hemmed in close by buildings, and cuts no figure at all. A narrow shop, a contracted warehouse, without an inch of room besides to turn him, on any hand; without a yard, a stable, or out-house of any description; perhaps hoisted aloft, up three or four pair of dirty stairs, is all the room that the wealthy tradesman often can bless himself with; and there, day after day, month after month, year after year, he is to be found, like a bat in a hole of a wall, or a tod in the heart of a stone, or of an oak tree. Spring, and summer, and autumn, go round; sunshine and flowers spread over the world; the sweetest breezes blow, the sweetest waters murmur along the vales, but they are all lost upon him; he is the doleful prisoner of Mammon, and so he lives and dies. The farmer would not take the wealth of the world on such terms. His concerns, however small, spread themselves out in a pleasant amplitude both to his eye and heart. His house stands in its own stately solitude; his offices and out-houses stand round extensively, without any stubborn and limiting contraction; his acres stretch over hill and dale; there his flocks and herds are feeding; there his laborers are toiling,—he is king and sole commander there. He lives amongst the purest air and the most delicious quiet. Often when I see those healthy, hardy, full-grown sons of the soil going out of town, I envy them the freshness and the repose of the spots to which they are going. Ample old-fashioned kitchens, with their chimney-corners of the true, projecting, beamed, and seated construction, still remaining; blazing fires in winter, shining on suspended hams and flitches, guns supported on hooks above, dogs basking on the hearth below; cool, shady parlors in summer, with open windows, and odors from garden and shrubbery blowing in; gardens wet with purest dews, and humming at noon-tide with bees; and green fields and verdurous trees, or deep woodlands lying all round, where a hundred rejoicing voices of birds or other creatures are heard, and winds blow to and fro, full of health and life-enjoyment. How enviable do such places seem to the fretted spirits of towns, who are compelled not only to bear their burthen of cares, but to enter daily into the public strife against selfish evil and ever-spreading corruption.—When one calls to mind the simple abundance of farm-houses, their rich cream and milk, and unadulterated butter, and bread grown upon their own lands, sweet as that which Christ broke, and blessed as he gave to his disciples; their fruits ripe and fresh plucked from the sunny wall, or the garden bed, or the pleasant old orchard; when one casts one's eyes upon, or calls to one's memory the aspect of these houses, many of them so antiquely picturesque, or so bright-looking and comfortable, in deep retired valleys, by beautiful streams, or amongst fragrant woodlands, one cannot help saying with King James of Scotland, when he met Johnny Armstrong: —

"What want these knaves that a king should have?"

"But they are not outward and surrounding advantages merely, which give zest to the life of the farmer. He is more proud of it, and more attached to it, than any other

class of men, be they whom they may, are of theirs. The whole heart, soul, and being of the farmer are in his profession. The members of other professions and trades, however full they may be of their concerns, have their mouths tied up by the etiquette of society. A man is not allowed to talk of his trade concerns except at the risk of being laughed at, and being set down as an egotistic ignoramus. But who shall laugh at or scout the farmer for talking of his concerns? Of nothing else does he, in nine cases out of ten, think, talk, or care. And though he may be called a bore by all other classes, what concerns it him? for other classes are just as great bores to him, and he seeks not their company. The farmers are a large class, and they associate and converse principally with each other. 'Their talk is of bullocks, it is true, but to them it is the most interesting talk of all. What is so delightful to them as to meet at each other's houses, and with bright glasses of nectarous ale or more potent spirit sparkling before them, and pipe in mouth, to talk of markets, rents, tithes, new improvements, and the promise of crops? To walk over their lands of a Sunday afternoon together, and pronounce on the condition of growing corn, turnips, and grass; on this drainage, or that neighbor's odd management; on the appearance of sheep, cattle, and horses. And this is to be excused, and in a great degree to be admired. For those are no artificial objects on which they expend their lives and souls; they are the delightful things of nature on which they operate; and nature operates with them in all their labors, and sweetens them to their spirits. This is the grand secret of their everlasting attachment to, and enjoyment of agricultural life. They work with nature, and only modulate and benefit by her functions, as she takes up, quickens, and completes the work of their hands. There is a living principle in all their labors which distinguishes them from most other trades. The earth gives its strength to the seed they throw into it—to the cattle that walk upon it. The winds blow for them, the waters run for them; the very frosts and snows of winter give salutary checks to the rankness of vegetation, and lighten the soil, and destroy what is noxious for them; and every principle of animal and vegetable existence and organization co-operates to support and enrich them. There is a charm in this which must last while the spirit of man feels the stirrings of the spirit and power of God around him. It may be said that rude farmers do not reason on these things in this manner. No, in many, too many, instances I grant it; but they feel. There is scarcely any bosom so cloddish but feels more or less of this, and by no other cause can any explanation be given of the enthusiasm of farmers for their profession. It is not because they can sooner enrich themselves by it—that they are more independent in it—that they have greater social advantages in it. In all these particulars the balance is in favor of the active and enterprising tradesman; but it is this charm which has infused its sweetness into the bosoms of all rural people in all ages of the world. From the days of the patriarchs to the present, what expressions of delight the greatest minds have uttered on behalf of such a life. Think of Homer, Theocritus, Virgil, and Horace; of Cicero, whom I have elsewhere quoted; and of the many great men of this country, some of whom, too, I have noticed, who have devoted themselves with such eagerness to it."—*Howit.*

HIGHLAND AND AGRICULTURAL SOCIETY OF SCOTLAND.

This valuable association, one of the oldest of our agricultural societies, closed its meetings for the season, on the 16th April, when Dr. Anderson, the chemical officer of the Society, delivered a most interesting address, in which he reviewed, at considerable length, the various discussions which had been held during the session. The meeting was presided over by Mr. Low, Professor of Agriculture in the University of Edinburgh, who bore testimony to the ability and zeal with which Dr. Anderson had conducted the business of the Society. We can at present give merely a portion of Dr. Andersons's excellent remarks. The following observations will be found instructive, as bearing upon some of the subjects which have been discussed at the meetings of our own Society, in connexion with the experiments in Ayrshire, which have occupied so much attention:—

"The third discussion on the best methods of preparing and applying the different manures, brought out a large amount of precise and valuable information, and may be looked upon as a very valuable illustration of the care and attention now devoted by our best farmers to such matters. Mr. Finnie, who opened the discussion, entered at great length into the best arragement of a farm-yard, the manure heap, and liquid manure tank, best adapted for the collection and preservation of the shed and liquid manures. His principles, without entering details, may be described as endeavoring, as far as possible, to collect the liquid separate from the solid excreta. The latter he would inter-stratify with peat, where it can be had, or failing that, with soil or clay. Over the heap he laddles the liquid manure, so as to allow as much as possible to be absorbed, and collects in the liquid manure tank only that which cannot be contained. Mr. Finnie, with full knowledge of the beneficial results obtained by the application of liquid manure, is of the opinion, in which I fully agreed with him at the meeting, that

it will, generally speaking, be much more economical to apply manure in the solid than in the liquid state. When liquid manure can be obtained in any quantity, and applied exactly as it is required, no method, perhaps, produces more striking results. Its invigorating effects are immediately seen, and by them we are apt to be led to form an estimate of liquid manure higher, perhaps, than that which it actually deserves, and even to conceive it to be superior to, and likely to form a substitute for, the solid farm-yard manure. I do not, however, think that this is consistent with what we know of its chemical composition, which should incline us to class it rather as an auxiliary, such as guano, sulphate of ammonia, and the like. Viewed in this way its importance cannot be over-estimated, but I confess I conceive it doubtful whether its advantages are likely to be felt, excepting upon what may be called altogether exceptional farms, where its quantity is so great that it becomes desirable to erect machinery for its economic distribution. That such cases exist, the experience of several distinguished farmers seems unequivocably to show, but nothing would be more rash than to attempt the extension of their systems to the general husbandry of the country. In fact, we must have solid as well as liquid manure, and for the very important reason that the latter is deficient in phosphates, which are among the most important and needful elements of our cereal crops; and wherever the quantity of liquid manure does not exceed that produced on ordinary farms. I agree with Mr. Finnie in thinking that the best and most economical plan is to convert it, by means of absorbents, into solid form, rather than to attempt the application of it partly in that and partly in the liquid form. On the subject of these absorbents we have heard a good deal lately, and peat, charcoal, and various other substances have been recommended for the purpose, especially of retaining the ammonia. Some experiments and analyses, made in the laboratory of the Society on this subject, will be found in the last number of the Transactions, which show that in this respect peat itself greatly surpasses charcoal or any other substance. In these experiments, it was found that solution of ammonia was absorbed in the most effectual manner by dried peat, and that even when the saturated peat was exposed to the air until it became dry, it retained a very large quantity of ammonia. It was, however, always observed that a larger quantity of ammonia was absorbed by the peat than was retained by it, after it was allowed to become dry; in some instances as much as half escaping in the latter case; and I think the fact an important one, because it indicates what practice confirms—namely, the necessity of keeping the dung-heaps in a state of moderate moisture, which is the condition best adapted for preventing the escape of its ammonia. There cannot, on the other hand, be anything more important than the avoidance of too large a quantity of moisture, as nothing is more prejudicial to the manure heap than its exposure to all the vicissitudes of our climate—at one moment saturated with rain, or more than saturated, at another dried up by the heat of the sun, in both of which cases a loss of ammonia must be occurring with much more than the average rapidity. All the gentlemen who took part in the discussion were fully alive to this, and it afforded me much satisfaction to observe that one and all of them supported the introduction of correct manure depots, which I anticipate will be the next great improvement in the arrangement of our farm steadings, for it is only under cover that the perfect preservation of manure can be effected, or all those precautions taken, which are required to protect it from loss. Such opinions, however, though they are consistent with theory, and are borne out by the observations made on the superior value of the manure produced by the system of box feeding, and other similar plans, have not as yet been sufficiently substantiated by experiment. So far as I know, we have only one experiment on the comparative value of manure, made under cover and without, that of Mr. Campbell, of Craigie, to which I referred at the meeting; and I mention the matter again here, because it would be doing a good service to the progress of agriculture if any of our members could be induced to institute an extended series of experiments on this subject. The condition in which farm-yard manure should be applied is a question which has been fully discussed by several of the speakers, and the general opinion is, that in autumn it should be applied pretty fresh, but that in spring it should be well and thoroughly rotted. Such, I need scarcely say, is the general opinion, and it is that also to which we should be directly led by theoretical considerations. The rotting of manure is, in fact, the conversion of its nitrogen into ammonia, the state in which it is absorbed by the plant, and when the manure is to lie long in the ground before that process is to take place, it is obvious that the less of its nitrogen that is converted into the condition of the volatile and soluble ammonia, the less likely will it be to lose by the protracted exposure to the vicissitudes of the winter. Exactly the reverse of this should be the farmer's object when he applies his manure in spring. He must then endeavor to have as much of its nitrogen in the form of ammonia as possible, as we know well that the abundant supply of that substance is most valuable as giving a start to the young plant, and bringing it rapidly through the first stage of its tender existence. Such should obviously be the system, where farm-yard manure alone is to be employed; but it

is worthy of observation that the rotting or fermentation of manure can scarcely be carried on without at least some loss of ammonia, and it has frequently struck me, that now we can obtain guano, sulphate of ammonia, and the ammonical manures, theoretically, the best and most economical method of applying farm-yard manure would be to use it unrotted, and to mix it with a sufficient quantity of one or other of these substances, to supply the ammonia requisite for starting the plants. Mr. Main communicated to the meeting the results of a very interesting experiment, in some respects confirmatory of this view, for he found that the best results were produced when a smaller quantity of manure was employed along with a certain proportion of guano. All the manure he applied in this experiment was, however, well rotted; but he gives the results of another experiment in which equal quantities of rotted and recent manure were employed for turnips, and the latter produced by much the best effect. This experiment and its results, are certainly at variance with what has hitherto been the practice established by experience, and I trust it will be carefully repeated, because, should the results be confirmed, it will create a very great change in our agricultural practice. In fact, Mr. Main finds that 28 tons of recent manure, produce a better effect than 28 of rotten; but any one acquainted with the management of a dung heap, knows that 28 tons of well-rotted manure correspond to a much larger quantity, perhaps 35 tons of recent manure, so that if Mr. Main's experiment be confirmed, not only will the application of the manure in a recent state, produce a better crop, but there will be also a very great economy in the quantity employed. The question is one of great importance, and should not be lost sight of by our practical men."

CULTIVATION OF MANGEL-WURZEL OR FIELD BEET.

THE land for beet requires an earlier, though not widely different preparation, from the land for turnips. It is sufficient that the land is clean and well pulverised; and upon all soils, but more particularly those of an adhesive nature, it is essential that this preparation should be made in the autumn, and that upon stiff soils more dependence should be placed upon the frosts and rains of winter for a finely pulverised seed-bed, than upon spring cultivation. Upon free-working soils, of course, this is of comparative trifling consequence. Therefore, upon stiff soils, we would recommend the land to be well worked in the autumn, as early as possible after the removal of the grain crop, and that farm-yard manure should then be ploughed in, and the land allowed to remain without further tillage until the time of drilling the seed in April or May, when a tine or two of the grubber and harrows may be of service in loosening and levelling the surface soil.

Upon all tolerably free-working soils we would adopt the ridge or common drill system of growing turnips, applying a good dressing of farm-yard dung, and from 1 to 2 cwt. of guano or super-phosphate of lime, sown broadcast previously to splitting the drills upon the dung. Upon land prepared in this way in April or May, we drill about 4lb. of seed, which is covered in rather deeper than turnip, by having a light roller to follow the drill. The future cultivation by horse and hand hoeing does not differ much from the turnip, though more attention is required in singling the plants; and upon rich soils, where the roots may reasonably be expected of a large size, the young plants must of course be singled out at proportionally wider intervals. A deficient plant may be filled up with transplanted cabbages or swedes; or, if this be thought too expensive, the less costly, though less advisable plan, may be adopted of drilling the ridges over again for swedes or common turnips.

In October, or early in November, previously to the frost setting in, (which will injure the roots very much,) the crop will be ready to store; and dry weather must be chosen for the work. Considerable attention is required to secure the crop in first-rate condition. With us, the three or four days' beet-harvest, is deemed of equal importance as the busiest time of corn-harvest, and it is a season of equal activity.

Five or six men or women are employed in pulling the roots, twisting off the leaves, and laying each in small heaps for filling into carts, to be removed to the storing heap, which is generally conveniently placed for the homestead. The roots are stacked in a ridge-like heap, having a base of about 5 feet. This is first covered with a good coating of straw, and then with a layer of soil: in this manner the roots are kept from the frost, and keep sound throughout the winter. In the spring, the heap requires looking to, as violent heating, consequent upon the vegetation of the young shoots, may come on and be succeeded by a rapid decay of the roots; but nothing but common attention in removing the soil from the heaps is required to prevent this; and in many instances, when the roots are stored perfectly dry and free from soil, even this care is unnecessary.

The following is the average cost of cultivation, and average produce upon a farm chiefly of a naturally poor gravelly loam, but which is in a high state of cultivation. Upon more fertile and higher rented soils, the produce is often more than one half greater; while the expense would not be increased by any other item than the rent. But we may safely calculate that the produce of mangel shall be equal, and probably superior in weight, to the crops of swedes, and turnips where the same expensive man-

agement has been adopted; and where there has been any excess of expense upon the beet-crop, it will amply repay by the greater weight and greater feeding-value of the crop, when compared with either swedes or white turnips. It must be understood that the beet is grown, in addition to the turnip crop, for supplying spring food, and that this is a District where it is very generally grown; but, at the same time, we cannot perceive why the culture of this root is neglected in Districts that we have visited, and which appear to us to be at least equally adapted for its culture.

Cost of Cultivation per Acre of Beet.

Rent and charges upon land,	£1	15	0
Cleaning land, harrowing, &c.,	0	15	0
Three ploughings, ...	1	4	0
Ridging, ...	0	4	0
Drilling and rolling, ...	0	1	6
Carting and spreading manure,	0	8	6
Hand-hoeing, ...	0	7	6
Horse-hoeing three times, ...	0	6	0
Storing the crop, ...	1	0	0
12 loads, of 1½ tons each, farm-yard dung, at 5s., ...	3	0	0
1½ cwt. of guano, ...	0	15	0
4 lb. of seed, ...	0	4	0
Per acre, ...	£10	0	0
Produce per Acre.			
20 tons of roots, at 12s., ...	£12	0	0
Value of leaves, fed off on the land, or ploughed in, ...	1	0	0
	£13	0	0

The first estimate may be taken as the average expense of cultivation.

The value of the produce cannot be stated with much accuracy, as it is returned to the farmer in beef or mutton, in manure, and in the amelioration of the soil. But 12s. per ton will be considered as being below, rather than above the value, as the crop would fetch more in the market if sold off the land.—*Transactions of the Highland Society.*

DIRECTIONS FOR MANAGING SEEDLING CABBAGE BEDS.

Make a seed bed of the extent that you want, and make the earth very fine, then mark it out in little drills. Drop the seed thinly along those drills, put the earth back upon the seeds, and press it down very lightly upon it. When the seed comes up, which will be very shortly, thin the plants to an inch apart, or perhaps a little more; and do not delay this work by any means; for small as the roots are, the plants injure one another if they stand crowded for even a short space of time while in the seed-leaf. At the same time that you thin the plants, hoe the ground all over very nicely with a small hoe, and particularly near the plants. When the plants have got four or six rough leaves they will touch one another, and ought to be removed from the seed-bed. Prepare for the purpose a bed three feet wide, and as long as the number of the plants may require. Take up the plants with a trowel or a stick, or something that will heave up the earth, and prevent the breakage of the roots too much as they come out of the ground. Then with a sharp-pointed stick replant them in the new bed, at the distance of three or four inches apart every way. This is called *pricking out.* If you have more plants than you want, you throw away the small ones; if you want all the plants that you have got, it is advisable to divide the lot into large and small, keeping each class by itself in the work of pricking out; so that when you come to transplant for the crop, your plants will be all nearly of the same size—that is to say, the large will not be mixed with the small; and there is this further convenience, that the large ones may make one plantation, and the small ones another.—This work should be done, if possible, in dry weather, and in ground which has just been fresh dug. In a very short time those plants will be big enough to be planted out; they will come up with stout and straight stems without any tap-root, and so well furnished as to make them scarcely feel the effect of transplanting; whereas, if you were to suffer them to stand in the seed bed until large enough to be transplanted, they would come up with a long and naked tap-root ungarnished with fibres, and would be much slower in their progress towards perfection, and would, in the end, never attain the size that they will attain by these means.—*Cobbett.*

THE POTATO CROP.

Among the communications received on this subject, the following suggestions were read by the Assistant-Secretary, which had been drawn up by Mr. William M'Meekan, Agricultural Teacher, Holywood National School:—

"1st. That in selecting potatoes for seed, those from the latest part of the farm, or from a late or mountain district—if the seed be changed, should get the preference, always observing that every change should be from late to early. Where change of seed is not admissible, late planting, if the ground be of an early nature, or, what is better now-a-days, early digging—*i.e.*, when the haulm is beginning to change from the deep green—will serve the same purpose. Compare article 11th.

"2d. That the best roots should be chosen. By the best roots I mean the finest, plumpest and best proportioned, not the refuse or 'second pick,' vulgarly called 'good seed,' but the nicest and best tubers, or what is commonly designated 'eating potatoes.' Like produces like.

"3d. That if the tubers are to be planted whole, all the eyes, except the principal crown eyes, should be picked out.

"4th. That if cutting be practised, at least one inch of sound solid substance should be left under, not one side the eye.

"5th. That no sets should be planted until they have shown signs of vegetation, in order to secure an uniform braird.

"6th. That, in all available cases, the first bud should be chosen, that the strength of the potato may not be uselessly expended.

"7th. That they should not be planted in immediate contact with manure of any kind whatever.

"8th. That they should not be planted closer than two feet in the drills, and from twelve to eighteen inches in the sets. If at three feet, on a rich soil, so much the better.

"9th. That not less than three inches, and not exceeding six inches, of soil should be put over the sets, according to soil, season of planting, and kind of seed.

"10th. That in the after cultivation, frequent stirring of the soil, and high earthing or moulding, should be, as far as practicable, dispensed with.

"11th. That potatoes should be harvested, like wheat or oats, when ripe, and not allowed to stand over till they become over ripe. Early digged potatoes keep best.

"12th. That, when pitted or stored, they should be perfectly dry, and a free circulation of air kept up in the heap throughout the winter, taking care to exclude the frost."

THE PREPARATION OF FLAX.

The process to be employed in this new invention has been introduced into this country by the Chevalier Claussen, a Belgian gentleman, who has for several years been occupied with the preparation of flax in various forms. We shall give the account of the invention in his own words:—

"The principle of the invention by which flax is adapted for spinning upon cotton, wool, and silk, independent of flax machinery, consists in destroying the cylindrical or tubular character of the fibre, by means of carbonic or other gas, the action of which splits the tubes into a number of ribbon-like filaments, solid in character, and of a gravity less than cotton, the upper and under surfaces of which are segments of circles, and the sides of which are ragged and serrated. In order to explain the nature of the process by which this change is effected, it is necessary first to explain the structure of the flax plant. The stem of the plant consists of three parts: the shove or wood, the pure fibre, and the gum resin or glutinous matter which causes the fibres to adhere together. In the preparation of the plant for any purpose of fine manufacture, it is necessary first to separate from the pure fibre both the woody part and the glutinous substance. The former of these may be removed by mechanical means, previously referred to, almost as simple as those employed in the threshing of wheat. In order, however, to remove the glutinous substance from the fibre, recourse must be had either to the fermentation produced in the steeping process, or to some other chemical agent. The present system of steeping in water, whether cold or hot, is, however, ineffectual for the complete removal of the glutinous substances adhering to the fibres, a large per centage of which is insoluble in water. The first process, therefore, which it is necessary to adopt in the preparation of flax cotton, is to obtain a perfect and complete disintegration of the fibres from each other, by the entire removal of the substance which binds them together.

"This is effected by boiling the flax for about three hours, either in the state in which it comes from the field, or in a partially cleaned condition, in water containing about one half per cent. of caustic soda. After undergoing this process, the flax is placed in water, slightly acidulated with sulphuric acid; the proportions of acid used being 1 to 500 of water. Any objections urged against the employment of such substances, even in the small proportions above stated, are at once met by the fact, that the soda present in the straw, after the first process, neutralizes the whole of the acid, and forms a neutral salt, known as sulphate of soda. This process producing, as it does, a complete separation of the integral fibres from each other, is equally adapted for the preparation of long fibre for the linen, or of short fibre for the other branches of textile manufacture. When required to be prepared for linen, all that is necessary after the above process, is to dry and scutch it in the ordinary modes. The advantages which this mode of preparation possesses over any other mode in use, are stated in the official report of the proceedings at the Royal Agricultural Society to be the following:—

1. "That the preparation of long fibre for scutching is effected in less than one day, and is always uniform in strength, and entirely free from color, much facilitating the after process of bleaching, either in yarns or in cloth.

2. "That it can also be bleached in the straw at very little additional expense of time or money.

3. "That the former tedious and uncertain modes of steeping are superseded by one perfectly certain, with ordinary care.

4. "That in consequence of a more complete severance of the fibres from each other, and also from the bark and boon, the process of scutching is effected with half the labor usually employed."

Complete, however, as may be the separation produced by this mode of treatment, the fibres, from their tubular and cylindrical character, are still adapted only for the linen or present flax manufactures, as their comparatively harsh and elastic character unfits

them for spinning on the ordinary cotton or woollen machinery. At this stage, therefore, it is that the most important part of the invention is brought into operation. The flax, either before or after undergoing the process required for the severance of the fibres, is cut, by a suitable machine, into the required lengths, and saturated in a solution of sesqui-carbonate of soda (common soda) a sufficient length of time to allow of the liquid entering into and permeating by capillary attraction every part of the small tubes. When sufficiently saturated, the fibres are taken out, immersed in a solution of dilute sulphuric acid of the strength of about one part to two hundred parts of water. The action of the acid on the soda contained in the tube liberates the carbonic gas which it contains; the expansive power of which causes the fibres to split, and produces the result above described. The fibre is then bleached, and after having been dried, and carded in the same manner as cotton, is fit for being spun on the ordinary cotton or wool machinery.

ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.

Incorporated by Charter, granted by Her Majesty, in Council, 27th, March 1845, for the purpose of affording a Practical and Scientific Agricultural Education, to Students from all parts of the Kingdom, on the nomination of Shareholders and Donors.

Patron—His Royal Highness Prince Albert; *President*—The Right Honorable Earl Bathurst; *Vice-President*—The Right Honorable Earl Ducie; *Principal*—The Rev. John Sayer Haygarth, M. A.

Professors, &c.—*Chemistry and Chemical Manipulation*—J. A. C. Voelcker, Ph. D., F. C. S; *Geology, Boology and Botany*—James Buckman, F.G.S., F.L.S., &c; *Veterinary Medicine and Surgery*—G. T. Brown, M.R.C. V.S.; *Surveying, Civil Engineering, and Mathematics*—J. G. B. Marshall, B. A., C. E.; *President of Boarding House*—James Buckman, F.G.S., F.L.S., &c.; *Manager of Farm*—R. Vallentine; *Assistant to Chemical Professor*—A. Williams, M.R.C.S.

OBJECTS.

The object of this Institution is to afford such a course of education as will be most useful to those whose destined profession is to connect them with agriculture, at home or in the Colonies: whether as Owners or Occupiers of Land, Surveyors, Land Agents, or Stewards. In the case of the younger Students, considering that the choice of a profession is not often made at the early age at which they will be received, it is intended, without losing sight of agriculture, or the sciences connected with it, to offer such an education as will qualify them for any calling or profession, at as moderate a cost as is compatible with the advantages offered, and with the liberal scale on which the comforts of the Students will uniformly be arranged.

THE COLLEGE.

The College, which adjoins the Park and Woods of Earl Bathurst, is situated on the farm, about a mile and a half from the town; the principal front, 190 feet long, has a south aspect, and commands an extensive view over north Wiltshire. The Buildings include a large Dining Hall, Library, Museum, Lecture Theatre, Laboratories, Class Rooms, Private Studies, Kitchens, and Servants' Offices; with apartments for resident Professors, and ranges of Dormitories on the upper floors. Adjoining is a Chapel, arranged for the reception of two hundred Students. The whole Building is lighted with gas, and furnished with ample supplies of water; the best methods of warming and ventilation have been adopted.

THE FARM.

The farm, which surrounds the College, contains about 700 acres, (of which 650 are arable,) of a varied soil and character. The Farm Buildings are spacious and well adapted for carrying out the purposes for which the College was founded; a Steam Engine, with improved mechanical arrangements, furnishes all the power for threshing, grinding, &c. A forge, Carpenters' and Wheelwright's Shops are attached. A Dairy and a Slaughter House, for the supply of the College and Markets, are in operation.

Horses, Cattle, Sheep, and Pigs, of various kinds, are bred and reared on the farm. Experiments are tried on small portions of the various rotations, and where their results are satisfactory, they are carried out on a larger scale. A Botanical Garden, of ample extent, enables the Professor, under whose charge it is, to instruct practically in the Botany of agriculture; and to show to the Students various Experiments in Vegetable Physiology.

MANAGEMENT.

The management of the whole establishment of the College is committed to the Principal, who is responsible to the Council for every thing, except the Cultivation of the farm, which is committed to an agriculturist of practical experience, answerable for the management of the Land and the Stock, &c. committed to his charge. The Principal will—with this reservation—superintend and control every department of the College. He will carefully attend to the Religious instruction and moral discipline of every Student, whether in the College or the Boarding House, and will exercise such supervision over the conduct and pursuits of the younger Out-Students as the nature of their relations with the College will permit.

INSTRUCTION.

The course of Instruction pursued with regard to the younger Students, and those

whose future profession may not be determined, will embrace all the branches of a good education. Instruction will be afforded in Arithmetic, Algebra, Mathematics and Natural Philosophy, Surveying and Mensuration, History and Geography, also in Modern Languages and Classics. It will depend on the wishes of Parents and their views for the future profession of their sons, whether they are instructed in the whole course, or whether portions of it be omitted.

The chief attention of the elder Students, and such of the younger as are supposed capable of joining them with advantage, will be directed to a diligent attendance on the Lectures on Chemistry, Geology, Botany, Veterinary Medicine and Surgery, Surveying and Civil Engineering, which have been so arranged that, where time is of consequence, as in the case of the elder Students, an entire course of Lectures on each of the aforesaid subjects may be attended in two Sessions, or one twelvemonth.—The Students will be periodically examined in the subjects of these Lectures, and will receive honorary Certificates and Prizes, according to their proficiency.

The Practical Instruction in agriculture will be given on the farm, where the Students will have an opportunity of becoming acquainted with and taking part in the manual operations of Husbandry. They will thus acquire a practical knowledge of the uses of the different Implements—of the application of Steam Machinery to farming purposes—of the preparation of Corn for the market—of the breeding, rearing, feeding, and general management of all kinds of Stock—and of the rotation of crops, and their fitness more or less for different soils.

A Veterinary Hospital is fitted up for the reception of diseased animals of all descriptions, with pharmacy, &c. attached, where the Students will have opportunities of taking part in dispensing the medicines employed, and of witnessing dissections, operations, &c.

They will also be instructed in the best system of Farm Accounts, and will be periodically examined as to their acquaintance with what has been done on the farm, and also as to their proficiency in agricultural information in general.

The College Certificate—which, it is hoped, may prove, as heretofore, a recommendation to those possessing it, and thus facilitate their obtaining appointments and situations connected with Land—will be granted only to those, who, at their final examination, shew that they are thoroughly masters of the subjects of the various Lectures, and are besides well acquainted with Practical Agriculture. Nor will this Certificate be granted to any Students whose conduct has not been steady and exemplary, or who have not the Professors' certificates for regular attendance at all the Lectures.

ADMISSION.

Students are admitted only on the nomination of a Proprietor, or Donor of £30. Those between the ages of sixteen and twenty have the option of being received in a commodious Boarding House, in Cirencester, under the superintendence of a resident Professor or Master.

Out-Students, above the age of twenty, are admitted, on the nomination of a Proprietor, to attend the Lectures, and avail themselves of the Practical Instruction of the Institution. During their presence on the College premises, they are amenable to the College Regulations for their conduct, under the penalty of forfeiting their Fees, which would also be forfeited in the event of any gross misconduct being brought under the notice of the authorities. Out-Students, under the age of twenty-one are required to reside in Lodgings sanctioned by the College.

Any person desirous of sending a Student for admission, must apply, by letter or otherwise, to the Principal, who will furnish him with the necessary printed forms, which he will have to fill up and return.

CHARGES,

Per Annum, to be paid Half-Yearly, in advance.

	Guineas.
Pupils under fourteen years of age.....	45
Ditto above fourteen.....	55
For a separate sleeping apartment, if it be required, an additional.....	10
For a share in a private study, of which there is but a limited number.....	5
Pupils in the Boarding House.....	80

These terms will include every thing except medical attendance, books, and writing materials.

Out-Students.....£40.

REMARKS ON POULTRY.

Ducks—The white duck is decidedly the one best suited for the farmer; it is generally larger than the brown, and usually is a better layer. Amongst epicures, the dark-colored variety is most esteemed, as the flesh is said to be very delicate, especially when crossed with the Rhone duck. The Muscovy variety is much and deservedly prized, as being a good layer, as well as a careful sitter.

The number of eggs a duck will lay is uncertain. Mr. Mowbray gives an instance of one laying an egg every day for eighty-four days. It is needless to observe that the duck mentioned in this case was well fed, and carefully looked after.

Buffon agrees that there is no domestic bird as easily reared. The usual practice is to place the eggs under a hen to hatch, because of her superior qualities as a nurse; but when we possess a good sitting duck, the preference should always be given to her, because she will more readily and more effectually teach the young brood to provide for themselves.

The moment the young of the wild duck are hatched, their natural instinct teaches them to go in the water; the same instinct leads the brood of the domestic duck to seek for their favorite element. The practice of not allowing them to rush into the pond or stream for at least a fortnight after birth, is recommended by some writers on poultry; certainly, if the water be very cold, as it invariably is early in the season, the young brood may get cramps from continuing too long in it. When the weather and water are warm, it is no advantage to prevent them enjoying themselves: they may be allowed to do so almost immediately after being hatched.

Oatmeal made into paste is excellent food; potatoes are good; Indian-meal is superior. The advantage of using the latter for feeding all kinds of young fowl, deserves the attention of lovers of poultry. I have never seen or heard of birds dying of either the chip or roup when fed on the coarse meal; it may be made into stirabout; yet I do not consider this plan as good as to give the Indian-meal raw or undressed.

It is very useful to allow ducks to enter and roam about the kitchen-garden; they devour the worms, snails, caterpillars, and all such delicacies. When they have plenty of such food they will thrive amazingly, and will require no other sort of nourishment.

One drake is sufficient, I consider, for five ducks, and M. Parmentier says more would be superfluous.

In parts of England, ducks are reared very extensively. Mr. Mowbray states, "Many families in Bucks derive a comfortable living from breeding and rearing ducks, the greater part of which—the early ones, at all events—are actually brought up by hand. The interior of the cottages of those who follow the occupation present a very curious appearance to the stranger, being furnished with boxes, pens, &c., &c., arranged round the walls, for the protection of the tender charge of the goodwife, whose whole time and attention are taken up with this branch of domestic economy."

It would be a great benefit, if some of our cottiers would adopt a system similar to this; they would, undoubtedly, realize much profit, especially if they exercised the project in the vicinity of a large town.—Yours, &c., E. F., *Tipperary, May* 6, 1851.

HORSE-SHOEING.

The shoes of the horse should be of equal thickness throughout, with a flat ground surface, as those with high heels, which asinine smiths make in imitation of their own, are dangerously absurd. The toe, which ought to be raised, is thus lowered, and nature's plan reversed, which elevates the point in order to avoid obstructions. The web should be wide, and of the same width throughout, instead of being pinched in, because the vulcan operator likes to see the shoe well set off at the heels. This is both unphilosophical and detrimental; it deceives the eye of man, and injures the foot of the horse. The *outer* edge of the foot rests on the inner edge of the shoe, and the remaining width of the web projects beyond the hoof; so that the master who thinks his horse has a good open foot, only has to be proud of a bad open shoe, which both conceals deformities underneath, and invites with open arms a bad road to come and do its worst. The heels are made bare just where the navicular joint is most exposed; and if that be inflamed, what must the agony be when the unprotected foot treads on a sharp flint? The horse falls suddenly lame, or drops as if it had been shot—phrases in much too common use to require explanation; and small is the pity which the suffering animal meets with from man, who, having first destroyed the use of his victim's feet, abuses him because he cannot go; and imputes "gloggginess" to him as a crime, as if he were in liquor like a groom, and not in agony.—*Mr. Miles, Veterinary Surgeon to the Life Guards.*

THE MODEL FARM AT GLASNEVIN, NEAR DUBLIN.

(FROM THE MARK LANE EXPRESS.)

I respectfully beg insertion for the following remarks. Business having brought me over to the Irish metropolis, and having the improvement of Ireland at heart, I visited recently an Institution which has undoubtedly effected a steady change in the agricultural character of that country. The Institution I mean is, the Model Farm, Glasnevin, under the Commissioners of National Education.

The model farm is situated two English miles north of Dublin. As I approached the institution, it was easy to discover order and tidiness were observed in its management, by the neatness of the well-kept boundary fences. I was received most kindly by the superintendent, Mr. Donaghy, a gentleman fully alive to the duties of his office, and actuated by a warm desire for the advancement of Ireland's social and industrial happiness. I minutely inspected the establishment. The farm formerly consisted of 52 statute acres, but the commissioners, wisely acting up to their motives, increased it to 128. The old farm is well laid out, drained, deepened, and cropped, under the 3, 4, 5, and 6 courses. The new farm is steadily coming round to the desired standard. Enlarged offices being required consequent upon the additional land, and for the accommodation of an increased number of pupils, a new *suite* of farming buildings is in course of erection, situated in the centre, and commanding a view of the entire farm. The

plan of the buildings is most judiciously laid down, the recognized improvements in farm offices being happily introduced. The existing buildings will be made available for various purposes connected with the farm.

The out-offices are kept scrupulously clean and ventilated—delightful to witness. Everything is kept in its proper place—performed at its proper time. The live stock consists of 21 milch cows, 2 two-year-olds, 3 yearlings, a bullock, bull, and 35 pigs. I cannot refrain from noticing a very fine Yorkshire sow, a handsomely-bred animal. There are two well-bred boars, whose services are given for the improvement of the breed of pigs in the locality. The black cattle are in good condition, of mixed breeds, and housefed; currycombed and brushed morning and evening by the pupils. The cows are permitted three hours' daily exercise in an enclosed yard. Mr. Donaghy is cautious in buying his full number of horned cattle, having suffered rather severely from pleuropneumonia.

On the old farm there are two acres of winter beans in flower; the crop is not only a *model* for its style of cultivation, but as a successful inducement for a more extensive culture of the *winter* bean in so precarious a climate as Ireland. Flax, carrot, parsnip and mangel crops present a promising braird; grain crops and potatoes encouraging, grass and vetches good; the former being cut for soiling more than a month ago. Turnip sowing is actively going forward.

There is an extensive kitchen garden attached to the farm. under the management of the commissioners' gardener, where different vegetables for the Dublin market are grown.

There are 48 students in training—healthy, active, and intelligent young men, who engage for seven hours daily in the farm operations. Thus they acquire *practical* knowledge and *business habits* by the hand of industry. The pupils receive agricultural lectures on the week-day mornings from the superintendent, embracing the general business of farm management according to the most improved principles; the improvement of soils, the management and application of manure, &c.; and the application of scientific knowledge for the attainment of useful and practical ends. There is at the command of the pupils a well-selected agricultural library. The leading agricultural periodicals are subscribed for. A first-class literary teacher resides on the farm, who imparts to the students the elements of a sound English education.

Since Ireland may expect a large number of visitors during the season, I would suggest the model farm, Glasnevin, as not the last, and far be it from the least object for admiration, in which the country abounds. I am sure every visitor will agree in the pleasure of a visit to this institution, not alone from the excellence of its management, but in the worth of its object—the gratuitous education of well-conducted and intelligent young men, selected from the National Agricultural Schools throughout Ireland. If the agriculture of Ireland is to progress, how can it be better advanced than by that refinement which instruction imparts? How can we bring into play the sterling qualities of the national intellect, except by a cheap and popular scheme of industrial education? Our zeal in the organization of education fails without it imprints on the character an intrinsic and indelible good by a systematic and careful study of the errors which demand reform.—*Philos. Dublin, 21st May,* 1851.—*Mark Lane Express.*

FERTILITY OF DRAINING.

In these times, when the means to continue the profitable cultivation of our land are only to be sought for in increasing its returns, I believe no information is more deserving the attention of landowners and farmers, than that which will be afforded in considering some of the beneficial consequences from thorough draining of wet land. Farmers have always seen the immediate mischief to vegetation, which is the consequence of water resting on their land, and from the earliest times have paid attention to keeping the surface of their cultivated land dry; but in all they have been doing, their views have been limited to preserving their crops uninjured from excessive wet, and thus have sought no other effect in their draining than the prevention of harm. The fertilising action of rain in its passage through the soil, in decomposing both organic and inorganic matter, and in carrying of warmth and nutriment to the roots of plants, has been unthought of; they have been seeking the discharge of rain from the surface of the ground by means of open furrows and shallow drains, as if each winter brought too much, and it were poison to their crops, and as though the elements of fertility which this surface running off the water robs the land were worthy of no consideration. But rain is sent at all seasons for important purposes, and none should be allowed to pass away until it has effected the ends for which it is sent. When land becomes saturated with water (and all land which does not naturally rest on a porous strata, or has not been thoroughly drained, is in this state for some months in every year), it ceases to admit of the descent of rain; and all that falls upon it, supposing the ground to have been landed up and intersected with furrows in the usual way, runs over into the furrows, and thence to the ditches, and away. The effect of rain falling on ground whilst in this condition will be readiest explained by bringing to consideration two long jars—one with, and the

other without a vent at the bottom. If these jars are filled with earth, and water be poured on them, the water poured on to the one without a vent, after a time—that is, after the earth has become saturated—will run over the top and down the sides; whilst the water poured on to the other, will be seen to sink down and pass out through the vent. These two vessels represent land in the two conditions—"of undrained and drained;" and to show what must be the different actions of rain on land in these two conditions, we must suppose some of the matter on the two surfaces to be soluble and exposed, to water poured from a height, in imitation of the descent of rain. In one instance, the dissolved matter will pass away with the water over the sides of the jar and be lost; but in the other, it will be carried into the interior, and, by the filtration of the water, be taken and retained by the soil; and this is precisely what is taking place for some months in the year, with respect to the manure, and the finer particles of soil on the surface of the land. The landed up ground, in casting of the rain casts with it the manure and mineral matter dissolved or taken up by the rain; and as the difference of color of the two waters from the jars betray the presence and absence of the dissolved matter in the water, so will the muddy stream in the ditches, in contrast with the clear spring-like water from deep drains, betray the loss that undrained land sustains by the pains the farmer usually takes to preserve his crops from the injury from standing water. The use of rain on drained land, in the winter season, in annually dissolving and carrying down of matter and placing in store, within reach of the roots, food for the summer support of vegetation, appears to me one of the most beautiful processes in nature, to support a continuous vegetation. In this way I see the yearly provision of the tree brought to its roots, and its annual growth provided for. I can now understand the annual springing up of our pastures, and the luxuriant spring vegetation, with no other assistance than the food provided by the winter rains.—*Hewitt Davies, 3, Frederick's place, Old Jewry, London, 14th May.*

IT DEPENDS ON CIRCUMSTANCES.

Does it? Let us—that is, you and I, reader—try the question a little, and see what we can make of it.

What, in the first place is a circumstance? It means something connected with a fact which may be taken away, and yet the fact remains; just as apples may be plucked from the branches, and the tree left. It relates also to having and degree. Lord Bacon says, "None but a virtuous man can hope well in all circumstances;" thereby signifying that whatever be a man's condition, he may, by the practice of virtue, hope with a truly hopeful spirit. It is common to speak of good and bad circumstances pretty much as we speak of hot or cold weather; and most persons appear to think that we have as little control over the one as over the other.

Now, you were too late for the train this morning—or were not in time at your work—or breakfast was not ready when you went home. Did all these failures depend on circumstances? The bed was warm, and the pillow soft, and you felt drowsy, and so laid a little longer, and the precious moment was lost. This would account for missing the train—being late at work—or for your wife's not having risen soon enough to light the fire. Well, it seems clear that, in these cases, the bed and blankets are the circumstances; they are the something connected with a fact which are not essential to it; because if beds and blankets were all to disappear, there would still be men and women. Men and women can and do exist without beds and blankets, so we must look for the explanation in another quarter. Was not the failure entirely in yourself? Don't you feel that you *could* have got up in time had you liked? Don't you know that inside your skull, or brain-shell, as the Germans call it, you have a brain ready to answer all the demands you may make upon it, and a great many more besides? You had only to give a vigorous summons, to say "I will!" and before you were aware, you would have found yourself out of bed and half-dressed.

Look at that man out of a situation! see how he becomes more and more dejected day after day! He tells you that circumstances went against him, and can hardly believe that he had any share in the disaster, or that he can do much to better himself. Poor fellow! if he would only make up his mind to take any work that offers, he would soon find out that a man makes his own circumstances, and enter again on a course of prosperity. The brain and muscle are there waiting, but he won't give the call, and so shifts along till something, as he says, turns up; and by-and-by this something turns him into the poor-house, where he buries his manhood's capabilities in the bog of pauperism.

I once met an emigrant in the backwoods of New York state, and had a talk with him about his ways and means. "Bless ye, sir," he said, "if I had only worked half as hard in Old England as I am obliged to do here, I need not have come, and should have been a sight better off." This man had changed one set of hardships for another set a good deal harder; and experience had taught him that the spirit of a man is above circumstances. Had he worked well in England, he need not have gone to America.

How often do we hear it said that man is the creature or victim of circumstances: but it is really so? If at any time government

tries to exceed its powers and overtax us, we make a great outcry about resisting tyranny, and all that sort of thing; and if a grocer sells us raisin stalks and blackthorn leaves for tea, we are apt to get out of temper with him, and declare that we won't be victimised. And yet we submit to oppression, to curtailments of liberty, to deprivation of our rights in a thousand ways without murmuring, because *it depends on circumstances.*

You will say, perhaps, that you were badly brought up. The excuse might be received if you were still a child; but you have arrived at years of discretion, and can think for yourself, so the excuse will avail you no longer. Do you try to alter? You were not obliged to stay and gossip when you were out on an errand—you were not obliged to stop and drink because Jem Stokes did—you were not obliged to play at dominoes, billiards, or skittles instead of being behind your counter or in your workshop—you were not obliged to borrow five pounds to go betting at the races—you were not obliged to dress your family beyond your means because your wife said it would not do to be outdone by her neighbor—in short, you were not obliged to get into difficulties.

So, my friends, old and young, gentle or simple, be honest! Lay the blame in the right quarter. When you find yourselves in a predicament, confess that you failed in judgment or gave way to temptation. Say, "It depended on me to do better, and I would not. It depended on me—a being able to choose between right and wrong—to choose whether I would go straight or crooked, and I went crooked." Avow with the emigrant, that if you had only worked half as hard on the other side of the line, you would not be where you are. Be honest.

There is, however, one matter in which it may be said *it depends on circumstances;* and this is the training of children. Infants and young children are very imperfect reasoners, and it depends on what they see and hear whether they grow up a joy or a sorrow. Children brought up in a well-ordered home where no clamor and confusion prevail, are more likely to turn out well-conducted members of society, than those reared in dirt and disorder. Those who are taught to take healthful exercise and recreation, to value books, to respect the Sabbath, will be more reasonable and tractable in after life than those who have been neglected. Those treated with kindness will, as a rule, manifest kindness. Those trained to feel that right is right, will incline to continue therein. Habit is often stronger than principle. And thus it depends on circumstances whether children shall grow up to be virtuous and self-reliant; or whether, as men and women, they shall waste their lives in the fatal delusion that they can do nothing whatever towards their amendment.

Agricultural Journal

AND

TRANSACTIONS

OF THE

LOWER CANADA AGRICULTURAL SOCIETY

MONTREAL, JULY, 1851.

RAILROAD FROM QUEBEC TO HALIFAX.

The construction of a Rail-road from Quebec to Halifax, is a work of so much importance to British North America, as well as to the British Empire, that we can scarcely suppose its accomplishment will be deferred for any lengthened period. The cost may be considerable, but the greater part of this expenditure will again be expended for British products and manufactures. The question of pounds, shillings, and pence, to such a rich country as England, and we might add, such a rich country as British America, should not, for a day, delay the construction of this road. A Railroad from Quebec to Halifax, passing through New Brunswick, and a summer line of Steamers from Britain to Quebec, would render the connection, and intercourse of these Provinces with England as easy and complete, as it was between England and Ireland 40 years ago. The project is such a grand and necessary one, that we cannot understand why it should meet with any opposition, either in Britain or British America. At all events we believe that no friend to British connection with this Province would oppose it. We have no doubt that if a road of such importance was required in the United States, it would be completed before the end of seven years from this time. Why should we not be as willing to forward a work that could not fail to be of the greatest advantage to this country, as they would be in the United States. This country is in as good a position at this moment, as regards her vast resources, and her credit, with scarcely any debt, as any country upon earth. The debt she does owe

was incurred for improvements that will amply repay the expenditure. The Quebec and Halifax Rail-road would open up an immense extent of land for settlement and production, that must remain many years unsettled and unproductive, unless this road is made. If rapid communication be now the order of the day, this road completed would shorten the time between England and Canada, by at least two days or more. We should also have the benefit of the expenditure for carrying the Mails and passengers, that is now paid to a foreign country. Let every friend to Canadian prosperity advocate this Rail-road. It is an absurdity that we should be carrying our Mails and passengers through a foreign country, when we have a shorter route through our own. We need not make use of the roads of a foreign country, when we can make roads in our own.

It is a singular circumstance that such a fine city as Montreal, containing little short of 60,000 inhabitants, has not one acre of public garden, of grass land, and trees, to afford the inhabitants a walk on the green sward, in the shade of beautiful trees on a summer's evening. We cannot conceive it possible but that a large proportion of the inhabitants would be delighted to have an opportunity to walk in a beautiful garden, or on the green sward, shaded by fine trees. To the younger portion of the inhabitants at all events, it must be a severe privation, not to have this accommodation, and cannot fail to act injuriously upon their health. It is not possible that any human beings would not prefer shady walks and green sward occasionally, to hard and dusty, if not muddy streets. There are many situations in and near the city that would be suitable for a public garden, and for a green field, that might be shaded with trees, for the use of the inhabitants, and certainly a few acres might be appropriated to this purpose, without injuriously infringing on "building lots." There is something required for health and recreation, as well as for acquiring money. If there was judicious provision made for securing the health of the inhabitants, the population would increase more rapidly. It may be asked what has this subject to do with agriculture, that we should introduce it in this Journal? We reply that agriculturists are interested in the health and prosperity of Montreal, and as we conceive that a public garden, and a beautiful green park shaded with fine trees, for the use of the inhabitants, would be conducive to their health, we have repeatedly endeavored to recommend the subject to public attention. Men of wealth may have their gardens and their carriages for their families, but what are those parties to do who have not gardens nor carriages to give their families the benefit of the fresh air. The hot and dusty streets of Montreal are not very suitable for either the old or the young to take air or exercise in the summer's heat. We shall refer to this subject again, and continue to do so, until some action is taken in the matter.

We recommend the letter of Mr. McGinn, in this number, to the attention of farmers. Upon every farm there should be an orchard of less or more extent. We agree with Mr. McGinn that upon almost any soil apple trees would succeed if due care was taken in planting them. Planting on the surface was adopted, to our knowledge, in Ireland, more than forty years ago, and we have frequently recommended that practice. In many cases an excavation was made, and the hole partly filled with small sized stones, and the surface earth taken out was placed over the stones to the level of the surrounding soil. The apple tree was then placed upon the surface, and the remainder of the excavated earth was mixed with good soil or compost, and formed in a mound about the young tree.

The holes were generally dug before the winter, and the stones filled in, and the earth taken out was much ameliorated by

exposure to the winter's frost, before the trees were planted in spring. It was found that the stones prevented the roots from growing directly into the sub-soil, and consequently were forced to take an horizontal direction in the soil. The stones were also found to act beneficially as a drain in clay soil. There may be situations in Canada where stones are difficult to be obtained, but in that case the land should be well drained, and the trees planted upon the surface as Mr. McGinn suggests. The principle requisite in making an orchard on clay soil is to drain the land well. It is a good plan to raise the soil in high ridges, by repeated ploughings, the ridges to be the width that was proposed to be between each row of apple trees, so that the row of trees might be planted along the middle of each ridge. This plan would answer better than under-draining, as the roots of the trees would be likely to stop the under drains. In forming and ploughing these ridges the soil might be manured and improved as much as was necessary, and the work should be done the summer and fall previous to planting. We consider the spring much the best time for planting almost any trees. In the preparation of the soil for an orchard by forming it into ridges, whatever manure is employed, it should be perfectly rotted, and incorporated with the soil. By preparing the soil properly, a productive orchard may be secured, that may continue good for a century, but by neglecting this preparation, the trees may fail and all the expense be so much thrown away. In a former number we recommended that in the spring, a mixture of lime, soot, and salt, should be spread around the roots of apple trees, to prevent vermin as well as to be beneficial to the trees.

AGRICULTURAL IMPLEMENTS.

We have seen a description of the English Agricultural Implements at present exhibited in the Crystal Palace in London, and they are said to be superior to any implements to be found elsewhere. We were confident that this would be the case; that the principle implements of husbandry in use in Britain could not be excelled, or even equaled by those of any other country. The following letter from the Secretary of the Commissioners, sent from the United States to the great Exhibition, is a proof in what estimation those implements are held by parties capable of appreciating them. We know we may have given offence more than once by our preference and recommendation of these implements above all others. We certainly had no motive in doing so, but because we know them to be superior, for work in the farmer's field. There are very good hand implements made in the United States and in Canada, but the same implements are also to be had in Britain of excellent make. We have no interest in recommending the Agricultural Implements of Britain over those of any other country, unless we were satisfied of their superiority, and of this we never had any doubt whatever.

United States Commission,
Industrial Exhibition, London,
20th May, 1851.

GENTLEMEN,—You have very useful and extremely well-manufactured implements in the Great Exhibition. It might be of service to you, as it would be certainly of great benefit to my countrymen, to have full descriptions of those articles exhibited. Should you feel disposed to give them to me, either in manuscript or print, I shall be very much obliged; and as my country would derive great advantage from their use, I should hope the orders might benefit you.

I am, your obedient servant,

N. S. DODGE,
Sec. of United States Com.

To Messrs. Richmond and Chandler,
Agricultural Engineers, Manchester.

Since writing the above, we have seen a letter in one of our English exchange papers, from an American traveller in Upper Canada, (Mr. Solon Robinson, Editor of the Agriculturist, published in New York), from which we copy the following paragraph:—

"Almost all we see, reminds us of "Auld-Lang-Syne" in farming, such as we were wont to look upon forty years ago, when the old Cary plough used to kick our shins, in Connecticut. The plough in most common use here, is the "Canadian Scotch Plough;" and any argument endeavoring to convince these people that there is a better kind, or even any kind at all, equal to this, is argument thrown away. There are a good many other improvements in agricultural implements and machinery, that are a sealed book to the Canadian farmers generally, and I fear will continue to be so, during the age of the present non-reading generation."

This paragraph we consider to be very objectionable. Mr. Solon Robinson is mistaken if he supposes that improved agricultural implements are "as a sealed book to the Canadians, generally." We have seen as good selections of field agricultural implements in both Upper and Lower Canada, as are to be found in North America, and not one article of them have been imported from the United States. There are several manufactories of agricultural implements of most excellent description, in Canada, and we have seen agricultural implements of Canadian manufacture at the Niagara Exhibition, last September, in fair competition with those of the United States, and we take upon us to say, that the Canadian implements were by no means inferior to those of the State of New York, but, on the contrary, many of them were much superior. Our ploughs, seed and drill harrows, grubbers, wheat drills, (imported from England) turnip drills, do., clod-crushers, and many other field implements, are not equaled by any we have ever had an opportunity of seeing on this continent, unless they were imported from Britain. We do not say all our farmers have these, but we say, that good implements are not as a sealed book to them, but that they can see them, and purchase them if they have the means to do so, and all of Canadian or English manufacture.

The following Prospectus of a Work about to be published in England has been sent to us, and we are confident it will be an interesting volume.

"Prospectus of an important work preparing for immediate Publication, by Subscription, in one thick octavo volume, price 15s., on the *Raw and Manufactured Products of the Vegetable Kingdom*, forming staples of commerce considered in their various uses to man, as furnishing food, clothing, medicine, &c., and in their relation to the arts and manufactures; forming a practical treatise and hand book of reference for the colonist, manufacturer and merchant, on the cultivation and preparation for shipment, &c., of the various substances obtained from trees and plants, entering into the husbandry of tropical and sub-tropical regions, by P. L. Simmonds, Honorary and Corresponding Member of the Royal Agricultural and Commercial Societies of Jamaica, British Guiana, Antigua, Barbadoes, Konigsbery, Natal, the New York State Society, the Societies for Promoting agriculture in Philadelphia and New Orleans; one of the Editors of Johnson's *'Farmer's Encyclopædia;'* many years Editor of the *'Colonial Magazine,'* &c., &c."

" The band of Commerce was design'd
Tassociate all the branches of mankind;
And if a boundless plenty be the robe,
Trade is the golden girdle of the globe:
Wise to promote whatever end He means,
God open fruitful Nature's various scenes,
Each climate needs what other climes produce,
And offers something to the general use;
No land but listens to the common call,
And in return receives supply from all.
Cowper.

We give insertion to the communication of "Anglicus Farmus" on the subject of Model Farms, and the state of agriculture at Beauport, and Charlesbourg below Quebec. The state of agriculture at these places we know very little of, but we imagined it to be much better that our correspondent represents it to be. No one can be more in favor of the establishment of Model Farms than we are, provided they would be what they ought to be. Our correspondent is probably not aware that the Seminary at Quebec have resolved to establish a Model Farm and Agricultural School at St. Joachim, about 30 miles, we believe, below Quebec, on the north side of the river, and we should be sorry that an establishment of the same description, would be in the same neighborhood, if it would interfere with them in any way. If it was not that we have received notice of the intention of the Se-

minary at Quebec, we should have most willingly recommended that application would be made to obtain, if possible, from the Government the use of the farm alluded to by our correspondent, for a Model Farm. The size, (400 arpents), would be suitable, and the situation excellent for the District of Quebec. We should be glad to see a Model Farm established in every country, but we fear this would not be possible, until the people are more fully convinced of the necessity for their establishment. It is to be regretted, however, that a large farm belonging to the Government, should be allowed to remain in a state of waste in consequence of bad management. It is scarcely possible but some persons would be found to manage it in a proper manner, so as to be an example of good farming instead of the contrary. Our correspondent's representation of the state of agriculture in the parishes of Beauport and Charlesbourg, shows how necessary it is that practical measures should be promptly adopted for the improvement of our agriculture. It may be replied that it is the farmers' own business, and that if they are contented with their own method of farming and its results, it is not the business of other parties to find fault. This may be partly true, but such a state of things must greatly check the general prosperity of the country, and must ultimately bring distress upon the farmers who practice such a defective system of husbandry. There is no land, however good, that must not deteriorate under a bad system of husbandry, or at least it must every year be more inclined to yield weeds than a valuable produce. By a better system, the land might soon be restored, but as long as this better system is delayed, it will every year be more difficult to restore it to a profitable state of productive fertility. We shall be very glad to hear again from our correspondent on any subject connected with Agricultural improvement, and beg he will state his views as to the best plans to adopt for the useful working of a Model Farm. We have already submitted an out-line for an establishment in order to induce others to come forward with their plans. It would be necessary that, for a Model Farm, the views of several practical men should be known, that after due consideration, the best plan may be adopted for their management. It would be better never to have a Model Farm unless it was conducted upon the best principles, and under good management. What is the chief cause of the ruined condition of a large portion of the agricultural population of Ireland? Certainly a bad system of agriculture was one, if not the chief cause. A bad system of agriculture will bring poverty, if not ruin upon any country, and to avert this evil, Model Farms are necessary in Canada, as well as in Ireland.

USEFUL MEN.

A man who makes it his study to understand the laws of nature, and endeavors to direct them to the greatest possible benefit of his country and of mankind, receives a very small proportion of the products of that industry which often derives so great advantage from the knowledge whereof he has been the promoter and circulater. Few take the trouble to think that this knowledge may be acquired by many sacrifices, much research, time, and thought, by the individual, and all this he may probably transmit in a few pages, which spreads itself, and when once published becomes imperishable, and the advantage is obtained by the country, without making any adequate return for it, and frequently not even acknowledging the benefit received. It may be answered that persons who do employ themselves in this manner, do it for their own gratification, and that no obligation rested upon them to do so. This may be perfectly true, but it is not a very generous reply by those who may be vastly benefited by the labors of them that are generally ill paid. It is a well established fact that no labor is so ill paid as that which we refer to. It receives,

indeed, a very inadequate portion of the value of the product to which it may have largely contributed. It is from a sense of this injustice, that in other countries, nations and legislatures, who are sufficiently enlightened to conceive the immense benefit of scientific pursuits, have endeavored, by special favors, and flattering distinctions, to indemnify men for the devoted exertion of their natural or acquired faculties to advance the interest of their country. Men who feel the conviction in their own mind, that they never have done any act, or made any sacrifice to promote the general good of their country, cannot understand or admit the possibility of any other individual doing so. The principle of donation to the public good is so utterly at variance with the governing principle of our lives, self interest, that it is neither acknowledged nor understood by most men. In England there are exceptions, enlightened and high minded men come forward to encourage and reward, and it is this praise-worthy consideration that has raised that country and her people to that proud station she occupies at present; the first in arts, and sciences, industry, wealth and power, amongst the nations of the earth. It is the circulation of useful information that excites men, induces them to think of what is proposed to them, and encourages them to introduce improvement. The best informed man in existence, and those who know the most of what would be useful to mankind, if they only exercise this knowledge for their own exclusive benefit during their lives, or keep it to themselves altogether, all their attainments are of no general usefulness, is buried with them living, and dies with them when dead. The most useful attainments, therefore, must be those that are exercised for the good of mankind in general, and we believe gifts were bestowed by the Creator upon a few, for the benefit of the many, and His wise purposes are defeated when they are not so employed. It may be possible that men are deterred from giving the benefit of their useful information to the public, because they may be ungrateful for it, and make a most profitable use of it, without acknowledging the benefit, or paying for it, but this is not a good excuse, though we have experience of its truth. We may be wrong in our opinions on this subject, but we conceive that any individual exertions made in this country decidedly to promote the industry and prosperity of the country, or of any class of her population should meet as decided encouragement, and support from those who possess the power, as well as of those who may be benefited. Unless this is the case how can we ever expect to see the country advance as she ought in improvement. We have, in this article, submitted opinions which we trust may obtain some consideration, not as it might be supposed to refer to any particular party, but as it may generally refer to individuals of this community now or at any future time.

ASSOCIATIONS OF AGRICULTURAL CREDIT.

This is a subject we feel bound to bring constantly before public attention, until some action is taken in the matter. The agricultural class are entitled to every privilege that would assist them to improve their lands and circumstances, provided the granting of such privileges was not unjust towards other classes, which we deny that the establishing of associations of agricultural credit would be. It is only through those associations that farmers could with safety obtain the loan of capital, as they would only be obliged to return the money borrowed by annual instalments, and would not be liable to actions at law, or ruinous expenses. It may be imagined by parties, that if money was saleable as any other commodity, farmers would incur the risk of buying it at any price, and be able to improve their condition by obtaining capital on any terms. We say without hesitation, that under the most favorable circumstances money is

not worth more to a farmer than six per cent. per annum, and it must be judiciously employed when it is worth even that. Farmers, therefore, need not hope that they can ever improve their condition permanently, by obtaining money at a high rate of interest. In England a large amount of money has been loaned for agricultural improvement at a low rate of interest, because the security of land was considered better than any other. We do not see any suitable means of affording the lone of capital for the improvement of Canadian agriculture, except by the establishment of "Associations of Agricultural Credit." The means of obtaining a small loan on favorable terms of repayment, would save many a Canadian family from poverty, and perhaps ruin. The system of law here makes an equal division of property compulsory at the death of the parents of a family, and should one of the family take the house and farm to himself, on condition of paying the other members of the family their portions by annual payments, the whole family may be subject to struggle on, perhaps, the whole of their lives in poverty, because they could not get their portion at once to commence some business on their own account. If the party could obtain a lone to pay off the several heirs at once, all would be able to do something for themselves with a better chance of success. The "Associations of Agricultural Credit," would give the required loan on such terms as would be safe for the borrower, and thus the whole family would be in a position to provide for themselves. There is very little doubt that the law we have referred to, is a great means of checking the improvement of agriculture, and of preventing Canadian farmers from improving their condition. Farms are continually liable to be divided into small lots, or the party who undertakes to keep the farm undivided has to struggle all his life to pay off the portions to the several heirs. It is a matter of great regret that these subjects, and we may say these great evils, should not receive more attention. If there is a remedy it should be adopted, and we would conceive it a very unfortunate circumstance for the rural population if there was not a remedy for this great evil.

There is scarcely a farm in the country that does not become subject to the influence of this law, and it effectually puts it out of the power of one of the sons who may retain the property, if he has many heirs to pay off, even to improve his land, or do much good for himself. He may also be liable to law expenses, should he be unable at any time to meet his engagements to the heirs, who may get connected with other families. What a change it would make for the better, in the circumstances of the whole family, if money ould be borrowed on the terms, it is lent by "Associations of Agricultural Credit," and all the heirs paid off at once if they required it, to enable them to commence business, or become farmers. General improvement of our agriculture is scarcely possible, while there is not some means provided to remedy this evil.

We perceive by our last English papers, that the Central Congress of Agriculture in France, a society formed by 600 delegates from the various Agricultural Societies of France, under the presidency of M. Dupin, has recently appointed a Commission to visit England, for the purpose of reporting upon the Agricultural Implements exhibited in the Crystal Palace, and also to inspect some of the Model Farms. This Commission, of which M. Manveny is Chairman, has arrived in London to fulfil its mission, and has commenced its labors by an interview with the Committee of the Royal English Agricultural Society, in which it presented to the Duke of Richmond, as President of the Society, a set of the Proceedings of the Sister Society in France. This proceeding between the two great Agricultural Societies

of two great Nations, is well calculated to advance agricultural improvement, and to establish the most friendly feelings between the people of both countries, after their long and bloody wars, which we hope are forever at an end.

To the Editor of the Agricultural Journal.

SIR,—For the Information of persons transplanting young trees, such as Maples, Elms, white Birch, &c., will you permit me to enquire, through the columns of your very valuable and interesting Journal:— The most suitable time the same should be done, spring, or autumn; if the tops should be cut off, and what other precautions should be taken in transplanting, and planting the same, being confident your experience in this, as well as all other Branches connected with agriculture in general, will enable persons to succeed in the same, and not be obliged to replant young trees, two or three times before succeeding, after having your opinion on the subject, which will be strictly observed by your

obedient Servant,

T. A. L.

Becancour, 9th June, 1851.

TRANSPLANTING TREES.

In reply to the enquiry of our correspondent respecting the transplanting of trees, we beg to state that we conceive the spring the best season for performing this work. We would recommend that the holes should be dug out in the fall, in order that the soil might be ameliorated by the winter's frost, and also that so much of the work would be done to facilitate the transplanting in spring. We believe that any species of forest trees may be transplanted by observing due caution in taking them up, and not breaking the roots, and taking as much of the soil with the roots as possible; should any of the roots be torn or broken, they should be carefully pruned. In planting, the soil should be carefully broken up, and, if very poor, should be mixed with compost or fertile mould. It is troublesome to transplant trees of large size, and we would not recommend it. It is necessary to prune off part of the tops and branches, when the tree is any considerable size, in order that the top may bear some proportion to the root, otherwise it will not be possible to keep it steady in the soil, and unless it can be kept firmly in the soil, it will not take proper root. This is the principal object of pruning the tops of transplanted trees. They should be preserved from cattle until they are a good size. Of course, any trees of the pine varieties, cannot be pruned in the tops. In transplanting trees the work should not be left to servants or hired laborers, without careful superintendence of the master, or a man who understands the business. There is very little difficulty in transplanting trees so as to succeed, if ordinary caution is observed; but we would recommend that the party who plants the trees, should have them taken up under his own superintendence rather than purchase them from those who take them up to sell, and is no way interested whether they subsequently grow or not. We hope that trees will be planted on every farm that is not already sufficiently wooded, and that where there are trees already, a sufficient portion of them will be spared for ornament and use.

AGRICULTURAL REPORT FOR JUNE.

We do not recollect to have seen so cold and wet a month of June up to the 27th as the past has been, and we fear that the crops must have sustained injury to some extent, in clay lands particularly. Sowing and planting has been retarded by the wet state of the soil, and some lands that were sown, must have suffered by the frequent heavy falls of rain. We have heard that potatoes that were planted, have rotted in many places, and had to be replaced with other seed. When this has to be done, there is not much chance of a large crop. Slugs and wire-worms have also injured the young plants of both wheat, barley, and oats, but to what extent, we are not able to

say. The meadows generally look well, unless where they have had too much moisture. Great heat and moisture will produce grass in almost any situation, but cold and wet will not do so except where the land is in good condition. In many places we have seen crops look very well, where they have been sown early, and the land sufficiently dry. The result of the harvest will depend upon the weather we may have for the next three months, but undoubtedly a considerable portion of the crops will not have been sown and planted under the most favorable circumstances, either as regards the period of sowing or the state of the soil. It appears, however, that it is not in Lower Canada alone that the spring has been unusually cold and wet. In the neighboring States, in England, and in other countries, they also complain. The next three months may be very favorable for us, and this will do much for the crops, and may give us a productive harvest after all. We have seen turnips, mangel-wurzel, and carrots, that were early sown look very well. The color of the young grain crops, particularly peas, are in many places, yellow, and not healthy looking, occasioned by excess of moisture and cold. Very favorable weather with an occasional shower of rain, might yet restore them, but we cannot hide from ourselves, that the most favorable state of the weather for the next three months, can alone secure us a good harvest. The greatest attention should be given to have the weeds carefully kept down in the crops. Summer fallows, where there is any, should have the necessary ploughings and harrowings before the hurry of harvest commences, and preparations should be made for fall wheat, which should be sown the latter end of August or the first week of September. We would recommend to have the land so pulverized as to admit of sowing in drills. This can be done by making small drills with the plough, taking off the mould board, and harrowing in the seed. We have seen fall wheat this spring, that was sown with an English Drill, succeed admirably up to this time. It is a great advantage to have implements that will be always in order to be worked and will execute the work properly, but we have seen many here, that are only fit to ornament the store of the manufacturer or the merchant, but are not fit for work in the field.

The time for mowing meadows will commence about the middle of July, or perhaps sooner. It will be a great advantage to farmers if the weather should be settled fair when that work is in progress. Timothy requires to be cut at once when in bloom, or it will lose some of its value as hay. It should be secured with as little exposure to sun, dew, or rain, as possible, so that it shall retain its sap and color. It may in a good season be sufficiently dried without losing either. There is not any better hay grown than timothy, when harvested in time, and in good condition. Strangers may have a prejudice against its use, but there is not any better hay nevertheless. We have it more pure and unmixed in Lower Canada, than we have seen it in any other part of North America. Clover grows here in great perfection, and if done justice to, and sown in time, is a much more certain crop than in Britain. It requires great care in harvesting, particularly if the weather is not very favorable. It should be cut before the blossom begins to wither, and it should be cured and housed without allowing it to lose its leaves, as the leaves form the best part of it. It should be turned in the swarth, and when partly dry, put into well made cocks of a small size. Then leaving it for a day or two in cocks they might be re-made, shaking them up well, and putting two cocks into one. It may require spreading out and turning subsequently, before it is fit to house; but it should, if possible, be preserved from rain in any stage of its harvesting, as it is almost impossible to make cocks of clover that will keep it safe in heavy rain. When the farmer requires clover for his own use,

he may house it in a much greener state, provided he has some good straw to mix in layers with it. The straw imbibes the sap of the clover, and the cattle will eat both clover and straw in winter. The straw, however, should be good, and not musty. When the weather is good, we always have put up the timothy, cut in the forenoon, in small cocks in the evening of the same day, to save it, when partly dry, from the heavy dews. When the timothy is unmixed, we never break out the swarths. Other grasses made into hay, require more sun and time to save it, and need not be cut so early as clover and timothy. Although a very large quantity of clover seed has been sold in Montreal this spring, it was by no means equal to the quantity required by the farmers. We have seen in the month of June, animals pasturing, or we should rather say, existing on lands where there was scarcely a particle of grass growing. These lands were of excellent quality, and might have been covered with clover and other grass plants, if about half a dollar's worth of seed had been sown to the arpent last year, with the grain crops which were grown upon them. In one instance, we saw a very heavy crop of clover on one side of a fence, and on the other side was pasture, where there was scarcely a plant of grass to be seen. We considered the field that had no grass, was fully as good a quality of soil, if not better, than that covered with a heavy crop of clover, and we were told that the land had not been manured for some time past, upon which the clover was growing. We never have seen a more marked contrast of the effects of good management, and of bad management. Sowing clover or other grass seeds upon land intended to be pastured, even for one year, would be a great benefit to the farmer; it would give him good pasture for his animals, and it would be improving the land for the next crop. It would, also, greatly check the growth of weeds. If farmers complain of want of means, they could raise clover and grass seeds of their own. At all events, there is no excuse for leaving the lands every alternate year, as at present, throughout a large portion of the country without grass, and consequently, not in a condition to support the poor animals that have to exist upon them. It is out of the question that animals under such circumstances can be profitable to their owners. Of course, we do not wish to be understood as saying that this is the general state of Lower Canada. On the contrary, we are happy to say, there are very many exceptions, and that many farmers of both British and Canadian origin, have excellent pastures, and manage their land upon a very good system. This Journal, however, is published for the improvement of agriculture where it is most required, and not for farmers who have already adopted an improved system. We never presume to offer any advice on practical husbandry, to any parties who are satisfied with their own system and its results. It is only for those who are not so fortunately circumstanced, that this Journal is published, and that we are employed as Editor to it, by the Lower Canada Agricultural Society. We therefore hope that no farmer who is satisfied that he pursues a good system of agriculture, will ever think that any of our remarks or suggestions are intended for him. In the month of July would be a good time to sow for crop to plough in as green manure in October. Buck-wheat, rye, rape seed, turnip seed, or even indian-corn, might be sown broad-cast, to answer for this purpose. The orchards are very much complained of this year, from vermin and other causes, and it is probable the produce of apples will be very short. The pastures are good, and the butter market well supplied, and prices low. We hope farmers will put up their butter for selling for exportation, either to the United States or to Britain. The former country will probably be the best market, as well for butter as for many other of our products.

The meat market is well supplied, and the prices not very low. We cannot say what prospect there would be for the sale of wool, if farmers were to increase their stock of sheep. There is very little doubt, however, that we might require more than all the wool we could grow for some time to manufacture for our own wants, if we were to supply them all, and we might supply most of our woolen goods. We have seen the finest blankets of Canadian manufacture, that we have ever seen in any country, and their superiority has been admitted at the great London Exhibition. Flax we may produce in great perfection, and as cheaply as any crop we grow, but there is no good clean seed to be had. What is to prevent us from supplying some of the demand that is likely to be for flax as a substitute for cotton? Why should we not grow it and manufacture it for our own use? Any persons accustomed to the use of linen, would, we believe, prefer it to cotton. Flax, we hope, will now be so much made use of, that we shall soon have linen Lords as well as cotton Lords, and we are certain the former will at least give a more direct encouragement to agriculture, than the latter ever did, whatever political economists may say to the contrary.

30th June.

To the Editor of the Agricultural Journal.

Sir,—And may God speed the plough, is the closing sentence of your leading article in your May No. on the present state of agriculture in Lower Canada. A noble sentiment rendered still more so when breathed by one who understands the art of agriculture, and feels that interest in its progress that every scientific agriculturist ought to do. "Seedtime and harvest shall not cease" is one of the promises of Holy writ, and in all ages has God sped the plough, from the time of that divine injunction given to Noah, to go forth and till the ground, to the present moment. There is no body of people as a class, more singularly blessed than the agriculturists, their business is no lottery, but where the plough has been properly directed, and every other branch of agriculture managed with skill and economy, success has invariably been the result. Agriculture is a noble occupation, Mr. Editor, and one that brings health to the body, strength and vigor to the mind, and, in most instances, independence. I do not mean to say wealth at present in Lower Canada, nor do I wish riches, for who can open and read the sacred pages of the Bible, and say that riches are always accompanied with blessings, only let us remember that excellent prayer of Hager. But enough of Divinity lest I should weary your readers. My present object is to say something on the state of agriculture in Lower Canada, or in the neighborhood of Quebec, and I shall speak more especially of the parish of Beauport. In all that beautiful tract of land, from Dorchester bridge to the falls of Montmorency, as fine a section of country for agriculture as any on this side the Atlantic, with a beautiful southern aspect, a rich black loam soil, and fine good subsoil, which dries itself without the expense of under-draining. In all this twelve or eighteen square miles of fine farming country, you cannot find what might be termed a good farmer. It is true that the habitants are in possession of the land, but they have no conception of European farming. Charlesbourgh is no better. I have passed along that beautiful section of country in the months of June and July, when every man, woman, and child, capable of agricultural labor, should have been in the fields to work; I have looked in vain for a team of cattle or hands cultivating the land, here and there you will see half starved cows striving to appease their hunger among the thistles and other weeds, which are indicative of the state of agriculture in that District.

Strangers driving from Quebec to the falls of Montmorency, will observe that all their stock of cattle (such as it is) is on one side of the road which runs through the middle of the parish. Their farming operations are carried on on the other, which consists of ploughing over the land very flat, taking especial care they do not afterwards disturb the furrows, they sow their seed which is principally oats, a little hemp and birdseed, they then scratch over the top of the furrow slightly with a three-cornered harrow; the next year they reverse the picture, cultivating the other

side, and changing their cattle over, never laying down in grass seed, nor do they pulverise their ground, besides saving the labor of doing so, they look upon it as injurious to the land. Here ends their system of farming. They do not know the advantage of manure, for they have seldom tried it properly. Now with these facts before you, Mr. Editor, what would you suggest, but a Model Farm? Yes, Mr. Editor, the above are facts which I can vouch for, and the farm for a Model Farm, is situated in the centre of the parish, waiting to be occupied for that purpose. I allude to the Government Farm, of late years occupied by Mr. Lane. There is, I should suppose, about 400 acres of land, almost unfit for any other purpose, in consequence of its exhausted state. There is scarcely an acre of fence upon the whole farm; it also wants much drainage, is very foul, and wants a great deal of manure. The buildings are also much out of repair. I do not know that the Government would dispose of the farm for that purpose; but perhaps, Mr. Editor, your able pen might convince them that they could not dispose of the property in a better way, as their system, of late years, of short leasing has certainly ruined the farm. I should think that with about fifteen hundred pounds, a skilful, energetic farmer might equip and organise it for an institution as a Model Farm, and I think, moreover, that it might be made in a very short time self-supporting. There are many ways in which a Model Farm may be useful to a young country like Lower Canada; there are two, however, that are more prominent than all the rest; first, then as a model and a pattern of farming to all the neighborhood around where such an institution may be established, to which all farmers and habitants should have access, where the different modes of operations should be explained to them, and all experiments with their results, &c., secondly, as a proper method of training all young men of means, who may desire to apply themselves to the acquisition of the noble study and practice of farming. The last of the two above mentioned, I believe to be the best and most practical way of improving agriculture. I shall not now, Mr. Editor, trespass upon your time by going into details, but having come from one of the fertile valleys in the west of England, where I learned the art of farming, I shall be prepared hereafter to enter into particulars, how such an establishment might be equipped and managed, by detailing the system there pursued. There are, however, other subjects which I would be willing to address to your valuable Journal, such as fencing, and lime as a manure, the application of such, &c. If you think my present ideas worth publishing, I may probably address you again on the above or other subjects. I must, however, here disclaim from all controversy, I give my ideas as they occur to me, and if they are received with the same spirit that they are given, the Public shall be welcome to the experience of

ANGLICUS FARMUS.

GOOD BREEDING.

THERE are two kinds of politeness. The first, and most valuable is that which pervades the soul, and which is shown by unmistakable and constant acts of good-will and kindness to all within its influence, "whether they be friends, strangers, or enemies." The second kind is that which governs the habits, and regulates the deportment, irrespective of inward thoughts and emotions. It is of great use in the world, just because it softens down the angularities of human nature; induces attention to the proprieties of life; and thus gives double effect to the goodly feelings and intentions of the heart. To distinguish this excellent qualification from the true politeness, from which, by the way, it should never be severed, it is known by the name of GOOD BREEDING.

It would be well if, in *every* class of society, the rules of good breeding were studied with some degree of care, and followed with some degree of attention. For, though it is certain that persons of good feeling will not intentionally offend by uncouth and unseemly habits, and though, also, such persons are not in so great danger of thus offending as the selfish and morose, yet it is equally certain that, for want of knowledge, observation, or due care—perhaps for want of all these—a great number of people must be set down as ill-bred, or, at any rate, as not well-bred.

Happily, though there are many conventionalisms in what is called, "good society," which serve no purpose, apparently, but that of trammelling the members of that society by intricate and unnecessary forms, the common rules of good breeding are natural and simple, commending themselves to the good sense of all. Thus, to deserve and maintain a character for being well-bred, and truly polite in outward actions, it is not

absolutely needful to be fashionable, and not at all needful to be insincere.

At almost all times, and in almost all places, good breeding may be shown; and we think a good service will be done by pointing out a few plain and simple instances in which it stands opposed to habits and manners, which, though improper and disagreeable, are not very uncommon.

In the familiar intercourse of society, a well-bred *man* will be known by the delicacy and deference with which he behaves towards females. That man would deservedly be looked upon as very deficient in proper respect and feeling, who should take any physical advantage of one of the weaker sex, or offer any personal slight towards her. Woman looks, and properly looks for protection to man. It is the province of the husband to shield the wife from injury; of the father to protect the daughter; the brother has the same duty to perform towards the sister; and, in general, every man should, in this sense, be the champion and the lover of every woman. Not only should he be ready to protect, but desirous to please, and willing to sacrifice much of his own personal ease and comfort, if, by doing so, he can increase those of any female in whose company he may find himself. Putting these principles into practice, a well-bred man, in his own house, will be kind and respectful in his behaviour to every female of the family. He will not use towards them harsh language even if called upon to express dissatisfaction with their conduct. In conversation, he will abstain from every allusion which would put modesty to blush. He will, as much as is in his power, lighten their labors by cheerful and voluntary assistance. He will yield to them every little advantage which may occur in the regular routine of domestic life:—the most comfortable seat, if there be a difference; the warmest position by the winter's fireside; the nicest slice from the family joint, and so on.

If walking with a female relative or friend, a well-bred man will take the outer side of the pavement, not only because the wall-side is the most honorable side of a public walk, but also because it is generally the farthest point from danger in the street. If walking alone, he will be ready to offer assistance to any female whom he may see exposed to real peril from any source. Courtesy and manly courage will both incite him to this line of conduct. In general, this is a point of honor which almost all men are proud to achieve. It has frequently happened, that even where the savage passions of men have been excited, and when mobs have been in actual conflict, women have been gallantly escorted through the sanguinary crowd unharmed, and their presence has even been a protection to their protectors. This is as it should be; and such incidents have shown in a striking manner, not only the excellency of good breeding, but have also brought it out when and where it was least to be expected.

In a public assembly of any kind, a well-bred man will pay regard to the feelings and wishes of the females by whom he is surrounded. He will not secure the best seat for himself, and leave the women folk to take care of themselves. He will not be seated at all, if the meeting be crowded, and a single female appear unaccommodated.

On the other hand, a well-bred *woman* will not demand as a right what she may have a claim to expect from the politeness of the other sex, nor show dissatisfaction and resentment if she fancies herself neglected. For want of good breeding some females are exorbitant in their expectations, and appear unthankful even when every thing is done which true politeness demands. Young women should guard against this unamiable defect.

In streets and all public walks, a well-bred person will be easily distinguished from another who sets at defiance the rules of good breeding. He will not, whatever be his station, hinder and annoy his fellow pedestrians, by loitering or standing still in the middle of the footway. He will, if walking in company, abstain from making impertinent remarks on those he meets; he will even be careful not to appear indelicately to notice them. He will not take "the crown of the causeway" to himself, but readily fall in with the convenient custom which necessity has provided, and walk on the right side of the path, leaving the left side free for those who are walking in the opposite direction. Any departure from these plain rules of good breeding is downright rudeness and insult; or, at all events, it betrays great ignorance or disregard of propriety. And yet, how often are they departed from! It is by no means uncommon, especially in country places, for groups of working-men to obstruct the pathway upon which they take a fancy to lounge, without any definite object, as far as appears, but that of making rude remarks upon passers-by. But it is not only the laboring classes of society who offend against good breeding in this way; too many others offend in the same, and by stopping to talk in the middle of the pavement put all who pass to great inconvenience.

In no city or town of England are the rules of good breeding, in this respect, so well observed as in the metropolis itself. It is easier and pleasanter to walk in the crowded streets of Cheapside and Fleetstreet, amidst thousands of pedestrians, than in many provincial towns, with only here and there a few foot passengers who seem to do all their solitary state admits of, to inconvenience their neighbors.

In the common actions and transactions of life, there is a wide distinction between the well-bred and ill-bred. If a person of the latter sort be in a superior condition in life, his conduct towards those below him, or dependent upon him, is marked by haughtiness or by unmannerly condescension. In the company of his equals in station and circumstances, an ill-bred man is either captious and quarrelsome, or offensively familiar. He does not consider that,

"The man who hails you Tom or Jack,
And proves by thumps upon your back,
How he esteems your merit,
Is such a friend, that one had need
Be very much a friend indeed,
To pardon or to bear it.

And if a man void of good breeding have to transact business with a superior in wealth or situation, it is more than likely he will be needlessly humble, unintentionally insolent, or, at any rate, miserably embarrassed. On the contrary, a well-bred person will instinctively avoid all these errors. "To inferiors, he will speak kindly and considerately, so as to relieve them from any feeling of being beneath him in circumstances. To equals, he will be plain, unaffected, and courteous. To superiors, he will know how to show becoming respect, without descending to subserviency or meanness. In short, he will act a manly, inoffensive, and agreeable part, in all the situations in life in which he may be placed."

HOUSEHOLD FURNITURE.

Among the means of domestic comfort there is scarcely any so important as what is called household furniture; most persons must have felt that much of their well-being depends on the articles intended for our daily and nightly use. Such a branch of family economy is one that we may worthily enter upon, and we intend this as the first of a series of articles which shall embrace all essential points of the subject, and perhaps, at the same time, convey a few usual hints to those persevering mechanics and others who employ themselves, during spare hours, in making up articles which add to the comforts or conveniences of their family. A little attention to these matters is of more consequence than many persons believe: keeping up appearances within reasonable bounds is a very laudable endeavor. Appearances are, in many respects, realities: children brought up in a well-conducted home, where they see every day a shelf or two of books, a few tasteful vases or other ornaments, or pictures on the wall, clean curtins and blinds, and well-swept carpet, look upon them all as realities, and without knowing it they grow up with a conviction of their value, and in most cases prove it, by keeping their own households in order. A proper and becoming attention to appearances is often a warrant for true respectability of character; and it is sometimes said, that you never really know people 'till you have seen what their in-door life is.

A want of system with regard to household furniture leads to inconvenience. We frequently see an intermixture of articles quite unsuited to the place they occupy and to each other. Sometimes it is a handsome table too large for a room in which every thing else is shabby: or an over supply of ugly and awkward chairs: or, perhaps, a showy carpet, with nothing else to match. But the greatest mistakes are commonly made in the bed-room; generally the bedstead and window are so overloaded with drapery, that the circulation of air is prevented, light is kept out, and means afforded for the collection of dust. Many people are apt to neglect their bed-rooms because they are seldom seen by visitors; provided the parlor looks pretty well, they leave the rest of the house to take care of itself,—a bad practice, and one that is not at all a true means of keeping up appearances.

We pass nearly one-third of our life in bed-rooms, a fact which shows how important it is that these appartments should be properly cared for. We shall therefore begin what we have to say about household furniture with bedsteads. What is called a four-post bedstead, is nearly always found in the best rooms of the upper and middle classes, and occasionally in those of well-to-do mechanics. Of these it may be said that they require a large, high, and airy room; when placed in a small chamber with a low ceiling they are a deformity, as well as inconvenience: in such rooms it is better to have one of a different make. The present plan of constructing a four-post bedstead is a great improvement on that of a few years ago: the heavy valances and draperies at the top are now done away with, whereby greater lightness and space are obtained. Figure 1, represents a bedstead of this sort. Besides the usual lining at the head and roof, called the headcloth and tester, there is nothing but the curtains and the valance, or base, below. These curtains, as will be seen, do not hide the two foot-posts: to prevent indistinctness, they are shown by dotted lines; and, as they are attached to the rings by hooks, they can be put up and taken down at any time with very little trouble. The poles on which the rings slide are made of wood, and fit, at each end, into a round hole bored into the top of the bedposts. A polished or painted footboard can be introduced according to taste or choice.

Sir Walter Scott said seriously, in his autobiography, "through every part of my literary career, I have felt pinched and hampered at my own ignorance."

FRUITS.

BY ELIZA COOK.

The roses are bright, in their summer days' light,
With their delicate scent and their exquisite hue:
But though beautiful Flowers claim many a song,
The Fruit that hangs round us is beautiful too.

When Mid-summer comes, we see cherries and plums
Turning purple and red when the glowing sun fails,
They hang on their stems like a cluster of gems,
In ruby and coral and amethyst balls.

How delicious and sweet is the strawberry treat,
What pleasure it is to go hunting about,
To raise up the stalks all besprinkled with dew,
And see the dark scarlet eyes just peeping out.

Don't you think we can find in the nectarine rind
A color as gay as the dahlia's bloom;
Don't you think the soft peach gives an odor as fine
As the hyacinth, petted and nursed in the room;

The apricot, yellow, so juicy and mellow,
Is tempting as any fresh cowslip of Spring,
And the currants' deep blushes come through the green bushes
Or hang in white bunches like pearls on a string.

The mulberry tree is enchanting to see
When 'tis laden with autumn fruit, pulpy and cool,
And those other rich berries so guarded by thorns—
Oh, who loves not the flavor of gooseberry-fool?

The woodbine's fair leaves and clematis that weaves
Round the window, are pleasant to all that pass by,
But I'm sure the full clusters of grapes on the vine
Are as lovely a sight for the traveller's eye.

The apples' round cheeks, with their rose-colored streaks,
And the pears that are ready to melt on the spray,
I am sure we must own they have beauties that vie
With the daisy and buttercup spread in our way.

Then the brown nut that drops as we push through the copse,
Till busy as squirrels we rest on the sod,
Oh! I think it has charms for our gathering hands
To match with May blue-bells that sparkle and nod.

So though poets may sing of the blossoms of Spring,
And all the bright glory of Flowers may tell,
We will welcome the berries, the plums and the cherries
And the beautiful Fruits shall be honored as well.

WEALTH, accumulated by fair competition in honest pursuits, is the right of every man; but that which is derived from advantages which the law gives one over another, is *legalized plunder.*

GREAT EXHIBITION.

ICE PRODUCED BY STEAM POWER, AND STEAM CONVERTED INTO SNOW.—That ice can be produced by mechanical means many may have heard; but that steam may be used as an auxiliary for the purpose will seem hardly creditable to anybody; and that *steam* itself may be converted into *snow* by the aid of steam, is a phenomenon of which but very few have heard. Yet these are facts, and are now being daily demonstrated at the Great Exhibition, in the refreshment room adjoining the department of machinery in motion. Mr. Thomas Masters, of the Royal Polytechnic Institution, Regent-street, the inventor of various ingenious machines for freezing, has adapted one of them for being put in motion by steam-power, and which is now in operation daily in the western refreshment room. This apparatus is capable of freezing upwards of 100 quarts of dessert ices (six different sorts are produced in the one machine) every fifteen or sixteen minutes. An unlimited supply of dessert ices can thus be obtained, and of a perfectly smooth quality. The economy of time, labor, and expense, thus insured must be immense. A more perfect and simple contrivance for producing a perennial supply of these delicacies, in a crowded place like the Exhibition, could not be conceived, and the invention is undoubtedly one of the most ingenious novelties in the section devoted to the machinery in motion. The machines, however, are not limited to making dessert ices; they are made to produce cylinders of *solid ice,* sufficiently large to hold decanters of water and many bottles of wine. These cylinders are made in the form of castellated towers, and have a very novel appearance. They not only cool the wine and water placed in the centre, but diffuse a most agreeable coolness through the atmosphere. The converting steam or vapor into snow is effected by forcing it through the machine, and in this way a whole room may be easily cooled down in the hottest weather. These are very singular effects. They are, however, easily to be understood by an examination of some of the patentee's smaller machines, of which there are several exhibited in class 22; and which are calculated for use in a small family or bachelor's chambers. The cost of turning pure water into ice for sherry cobler, cooling wine, and other puposes, is less than what it can be purchased for at the ice stores. The machines are well worthy the attention of the curious and scientific. Mr. Masters, the patentee, is, we understand, the contractor for the supply of the confectionary and dessert ices to the eastern as well as the western refreshment rooms in the Exhibition, and visitors have thus every opportunity of informing themselves of the merits of these singular inventions.

ENORMOUS FLEECE OF WOOL

SIR,—There was shorn, off the back of a one-year-old ram, a few days since, the property of Messrs. R. and J. Morrow, of Legacurry, near Hillsborough, a fleece of wool of the enormous weight of 18 lbs. Such, I believe, is almost unprecedented in the annals of sheep shearing. The ram was from the flock of the Marquis of Downshire, at Hillsborough, and was of the pure Leicester breed.—Yours, &c., M., *4th June*, 1851.

WHITEWASH.

TAKE two quarts of skimmed milk; two ounces of fresh-slaked lime; two pounds whiting; or the same proportions for any large quantity. Put the lime into a stone vessel, and pour upon it a sufficient quantity of milk to make a mixture resembling cream; then add the remainder of the material. When this is done, crumble and spread the whiting on the surface of the fluid, in which it will gradually sink. It must then be well stirred, or ground as any other paint. By the addition of any coloring matter, you make it suit your fancy. It must be put on with a paint brush, and, when dry, a second coat should be given. The quantity named is sufficient for twenty-five square yards.

To mend China.—Mix together equal parts of fine glue, white of eggs, and white lead, and with it anoint the edges of the article to be mended; press them together, and when hard and dry scrape off as much of the cement as sticks about the joint. The juice of garlic is another good cement, and leaves no mark where it has been used.

NOTICE.

A SPECIAL MEETING of the DIRECTORS of the LOWER CANADA AGRICULTURAL SOCIETY is requested to take place at their Rooms in this City, on FRIDAY the 11th day of July, inst., at 11 o'clock, A. M.

By Order,

WM. EVANS,
Secretary and Treasurer, L.C.A.S.

Extract from Notarial agreement entered into between the Lower Canada Agricultural Society and R. W. Lay.

MINTHLY. It is also further covenanted and agreed by and between the said parties hereto, that the said party of the second part (R. W. Lay) is by virtue of these presents constituted, the attorney of the said partiee of the first part pending the present contract, and not further, for the express purpose and with full power and authority to collect all arrears for subscriptions due by subscribers to said Journal while published heretofore by the said parties of the first part.

(Signed,) ALFRED PINSONEAULT, *President.*
WM. EVANS, *Secretary.*

THE AGRICULTURAL JOURNAL AND TRANSACTIONS OF THE LOWER CANADA AGRICULTURAL SOCIETY, in the French and English languages, will hereafter be published by the Subscriber, to whom all Communications relative to Subscriptions, Advertisements, and all business matters connected with the past or forthcoming volumes of the Journal, must be made.

The Journal contains 32 pages Monthly, is published at $1 per annum, and any one obtaining new Subscribers, on remitting $4, will be entitled to Five Copies of the Journal for one year.

Agents and Subscribers are required to remit immediately to the Publisher the amount due the Society. Also, a Correct List of Subscribers in their respective Localities.

Responsible Agents wanted to canvass for the Snow Drop, Agricultural Journal, and other Works, to whom a liberal Commission will be allowed.

ROBERT W. LAY.
193, *Notre Dame Street, Montreal.*

Montreal:—Printed by John Lovell, St. Nicholas Street.