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THE BRITISH AMERICAN CULTIVATOR.

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

Vol. I.

TORONTO, FEBRUARY, 1842.

No. 2.

THE CULTIVATOR.

Toronto, February 1, 1842.

Solicitous to render our Publication worthy of the extensive patronage we hope to see it speedily acquire, and to make it equal (not to say surpass), any of a similar character published in the adjoining States, the great circulation of which throughout the Canadas, proves the expediency of some exertions being made towards the "manufacture" of one at home. We have this day, the satisfaction of announcing the gratifying intelligence of the acquisition of an Assistant to our labours, in the person of an individual with whose name the public have been long familiar, and whose works on Agriculture fairly entitle him to rank among the foremost of those authors who have written on this particular branch of science. When we announce that Mr. WILLIAM EVANS, of Cote St Paul, near Montreal, has kindly consented to undertake the arduous and responsible task of editing THE BRITISH AMERICAN CULTIVATOR, we trust the public will receive the announcement as the surest Guarantee of our determination to leave nothing undone which labour and talent can command to make our Paper, what it is our ardent desire to see it become, the very best medium of information on the several subjects it embraces, to be obtained on this side the Atlantic.

Mr. Evans is himself practically conversant with Farming in all its branches, and his long experience of what is most expedient for the proper cultivation of the soil, and the management of Stock cannot fail to render his statements well worthy the attention of the Farmer.

Add to this practical experience, his perfect familiarity with the theory of Agriculture; his extensive knowledge of the best modern works, and of the most recent improvements on the science, together with his acknowledged talent as an agreeable and erudite writer: and we flatter ourselves our readers will be as much gratified with such an accession to our cause as we are ourselves. Our readers will peruse with pleasure, his Introductory Address to the Yeomen of these Provinces, which is to be found on Page 20.

We shall ourselves continue to receive Communications as usual, from our friends and supporters; to answer inquiries; and to intersperse remarks throughout the columns of THE CULTIVATOR: as well as to select from Standard Works and Contemporary Papers, such pieces as we shall deem worthy of insertion for their general utility, but in all cases Mr. Evans will contribute the leading Editorial articles.

We take this opportunity of expressing ourselves decidedly on a matter of importance to the welfare and existence of our work, viz: the necessity of receiving in advance, the small sum we have charged for our Paper, and our resolution to insert no names on our List of Subscribers, but

those who shall have actually paid their Subscriptions. This is a "*sine qua non*"—a stern necessity in fact which we wish once for all to impress upon our readers: and on which we have been induced to remark, in consequence of the receipt of numerous orders from various parts of the country, unaccompanied however, we regret to say, by the only key which can open our distribution chest—the money. It is our purpose to circulate, as widely as possible, the first number of our issue, as a sample of what we propose to produce, and we have accordingly never failed to address one to every person from whom, we have received the sort of order above specified. To such we shall be happy the remittance of our future numbers, as soon as their subscriptions are received.

We have at considerable expence, engaged two suitable persons, as our travelling Agents, to make a Tour through the Province, to procure Subscribers. We hope the Farmers generally, will give them a hearty welcome, and assist them, as far as practicable, in their laudable undertaking.

We promised in our last, that the public should hear from us again on the subject of the "Unburnt Brick House." We give below a Communication on the subject, and we feel satisfied it will be perused with pleasure by our readers. The article alluded to came in at such a late hour, that it could not be placed under the head of "Communications", and in order to give it to our readers without delay, we have excluded much interesting selected matter and Engravings.

[COMMUNICATION].

To the Editor of the British American Cultivator.

Sir:

As you have requested me to furnish you with such information as I possess, respecting the new style of building alluded to in your last, and as I should be truly glad to aid you, in the smallest degree, in your laudable undertaking, especially in attempting to extend the knowledge of an invention in which I have always been deeply interested. I shall not scruple to lay before your readers a plain statement of what I know about it. Perhaps I shall be pardoned for stating, at the outset, that if I am not the person who introduced the fashion into this country, at least I am not aware of any individual attempt of the kind, on this side of the Atlantic, until I erected my driving-house in 1835. Indeed I am a little ambitious on this point; for it would give me the highest gratification to be considered the originator of an invention so useful as this is, and so particularly adapted to the wants of the climate. Nothing, it is said, contributes so much to stamp the character of a people, in the estimation of strangers, as the style of the dwellings they inhabit. Whether, sir, I shall get the credit of a successful projector or not, I can assure you I had my share of the obloquy which projectors have to put up with at the beginning. You would have been amused to have heard the thousand reflections cast upon my judgment by passers-by, when they found me

occupied in "building with mud." Some said that of course the first rains would wash it all level, and that there would be no passing along the turnpike road for the dirt which would inundate it. Others did not go that length, but were nevertheless quite positive that it would never stand the intense frosts of this country, which, they said, would crumble it into dust in a single season. Taken as a body, the only gentlemen who gave me an encouraging word, were those of Dutch descent, who frequently said, "let it go on, that will do, that is a good invention." With the generality of people my poor hand-work was as much an object of ridicule as ever the palace which the Russian Empress built of ice could be to the beholders. You will not therefore think it strange that I should wish to get the credit of it, now the thing has succeeded. Great improvements have been effected, by myself and others, in the details, since that my first effort. And, proceeding from this, as the head quarters of the system, this style of building has been more and more adopted, in many instances by gentlemen of the first consequence, without my having yet heard of a case where any one is dissatisfied with it on trial. Since finding that it so fully answered my expectations, I have lost no opportunity of recommending it to others on every occasion, and I know that you will be doing a great public good, and gain applause for yourself by widely extending, as you sir will have the power of doing, the knowledge of this method through the province. That I consider the material quite good enough for the construction of a handsome house, is proved by the attempt which my friends and neighbours know I have been engaged this last summer in making, to produce a dwelling which shall not do discredit to the township. I have been also repeatedly applied to for instructions by gentlemen anxious to adopt this plan, and have sent workmen in consequence into various districts, and in two or three instances into the States.

You call this style, as many others do, "the unburnt brick house," and we frequently also hear it called "mud-building." I would not quarrel with the name of anything, if it was not calculated to mislead.—And as I think it of consequence to give this art a correct appellation, I will venture to suggest the name of "clay-building."—The first thought which "unburnt-brick" conveys, is of the very thing which the brick-maker produces, except that it is not burnt. This is by no means the case, and persons unacquainted with the matter, excepting by the name, might dismiss it, as being an absurd thing to save the expence of burning where fuel is so cheap. On the other hand, persons hearing it called "mud-building," might hastily suppose that any soil in the state commonly called mud would serve the purpose, and this might lead to lamentable failures. If you call it "clay-building," you name it after an ingredient which it must possess in order to succeed, and possessing which in any considerable proportion, it can hardly fail. The Devou-

(Continued on last Page).

To prevent the Girdling of Trees by Mice in Winter.

We find the following paper among the Memoirs of the Massachusetts Agricultural Society, published in 1810:—

To THE HON. JOHN LOWELL, Esq.

Sir,—The very great destruction of fruit trees, occasioned by mice and moles, during the winters of the two or three last years, has made it an object of the utmost importance to discover the best means of preventing the mischief, or to invent a remedy for the evil, after it has taken place. So prodigiously have these pernicious vermin multiplied of late, in some places, as to threaten the destruction not only of fruit trees, but also of forest trees, and the grass of our best mowing fields. During the winter of 1808 and 1809, they were known in some cases to attack a whole copse of small trees, leaving scarcely one ungirdled; and in many mowing fields, to gutter almost the whole surface of the ground, for acres together, with their burrows and paths. Instead of molesting only the small trees in our orchards, as usual, they have of late completely girdled apple trees, in some instances, of nearly three feet in circumference, and destroyed them.

As this mischief is seldom done but in the severity of winter, when these vermin are driven to the roots of the trees for shelter, and are deprived of their ordinary subsistence by the frost and snow, the most effectual way to prevent their injury is, in the month of November, just before the winter sets in, to clear away all the rubbish and furze from around the roots of young trees, leaving the ground bare, and then to put a coat of dry ashes all around. The roots of the tree then affording them no shelter above ground, and they having a natural aversion to burrowing in ashes, they will be driven for shelter to some other place, and your trees will thereby, in a great measure, be preserved from their mischief. The ashes also will abundantly compensate you for the trouble and expense, causing your trees the year following to thrive and flourish exceedingly.

Another method of some use is, in the early part of winter, after the first snow, to shovel snow around the roots of the trees, and then tread it down hard, by which it will freeze, and become solid like ice, through which they cannot penetrate. But this method is by no means sure, as they will frequently burrow under the ice, and sometimes injure the roots underneath, and in the least thaw pass up and injure the tree.

But after the injury has been done, and your tree has been completely girdled, and all the bark eaten off round the tree to the hard-wood, I know of but one remedy to preserve the tree alive, although many experiments have been tried. A tree girdled in this manner, having no means of conveying the sap and nourishment from the roots up into the body and branches above, must wither and die. The usual way is, among farmers in such cases, to dig up the trees and set out new ones. Sometimes they are cut off and headed down below the place eaten, and new wood in length of time, will shoot out and make a second tree.

But it occurred to me that if any artificial way could be discovered to renew or make a communication of the circulating vessels of the lower sections of the bark and sap eaten off, with the upper, so as to convey up the juices and nourishment from the roots into the branches, the tree might be made to live and flourish.

Accordingly choosing a fine thrifty tree about twelve inches in circumference, as soon as the snow was off the ground in the spring, which had been completely girdled by

the mice, and all the bark eaten off all round to the hard-wood, more than four inches wide, like a belt; I took a sharp knife and opened the edges of the lower and upper circle of the bark eaten off; then took a scion from the tree, about the bigness of a pipe stem, and an inch longer at each end than the space where the bark had been eaten off around the tree, split the scion lengthwise, and shaved the split side down, so as to fit to the body of the tree, being very careful not to disturb the bark of the scion; then cutting away the lower circle until it came to fresh bark, made a perpendicular slit one inch down towards the root of the tree, then crossed this at the bottom with a horizontal slit, half an inch on each side, as in budding; then gently peeled up the bark on each side, and fitted the lower end of the scion in, squeezed the bark down around it; then fitted the upper end of the scion into the upper circle of the bark eaten off, in all respects as I had done the lower. In this manner I placed six scions all round the body of the tree; then covered it over an inch or more thick with Forsaith's composition, and heeded the dirt all round the roots of the tree to keep it moist.

The tree did not put out its leaves so soon nor so vigorously at first, as the other trees; but by the middle of summer it flourished very well, and in the fall there was no apparent difference between it and the surrounding trees. It bore some fruit the last year, and is now covered with young fruit and appears as healthy and flourishing as any tree in the garden.

In the fall of the year after this operation, I opened the roots of this tree, and tore away the plaster, and to my surprise, I found that four of the six scions had taken, and grown to the size of nearly an inch in diameter.—The other two did not take, by which means the tree is a little flat on one side. I lately opened the tree again, and have found that it will soon be covered with bark again, except the side where the scions did not take.

This experiment I have known to have been tried several times since with equal success. Mr. Isaac Davis, of Coxbury, a very intelligent and respectable farmer, in the spring of the year 1809, treated in the same manner a large apple-tree, of more than twenty-seven inches in circumference, which had been eaten off all round for a space of more than four inches. The tree flourished, and bore fruit the last year, and is now covered with a great abundance of fruit; and is extremely thrifty, having recently examined it for the purpose of ascertaining its present state. Mr. Davis made use of common clay mortar in his experiment, instead of Forsaith's composition, which he thinks answer as good a purpose.

Knowing, sir, the interest you feel in every thing that tends to improvement in agriculture and husbandry, I have taken the liberty to address to you the foregoing experiments and observations, which, if in your opinion, should be deemed of public utility, you are requested to communicate in any manner you think most useful to society.

I am, with the highest respect,
Your most obed^t and humble ser^vt.
LUTHER RICHARDSON.

Roxbury, Mass., June 10, 1810.

LIME FOR TREES.—In planting and transplanting trees, the English put a small quantity of lime in the hole, mixed and incorporated with the mould. The effect is to give the trees a vigorous and healthy start.

TO DRIVE AWAY RATS.

Tar, or birdlime, laid in their haunts, will stick to their fur, and cause their departure. If a living rat be caught, and well rubbed or brushed over with tar and train oil, and afterwards put to escape in the holes of others, they will disappear.

Management of Pork.

In Europe, the Russian pork bears a high price; and its quality is supposed to be owing to the pickle in which it is preserved. This is called the "Empress or Russian Brine," and is prepared as follows: boil together over a gentle fire six pounds of common salt, (that in most common use in Russia is rock salt), two pounds of powdered loaf sugar, three ounces of sal-petre, and three gallons of spring or pure water. Skim it while boiling, and when quite cold, pour it over the meat, every part of which must be covered with the brine. Small pork will be sufficiently cured in four or five days; hams intended for drying, in two weeks, unless they are very large. This pickle may be used again and again, if it be fresh boiled up with a small addition to the ingredients.—Before putting the meat into the brine, wash it in water, press out the blood, and wipe it clean.

Pickling tubs should be larger at the bottom than at top, by which means when well packed, the pork will retain its place until the last layer is exhausted. When the pork is cool, it may be cut up, the hams and shoulders for bacon, and the remainder salted. Cover the bottom of the tub or barrel with rock salt, and on it place a layer of meat, and so on till the tub is filled. Use the salt liberally, and fill the barrel with strong brine, boiled and skummed, and then cooled. The following method of preparing hams and shoulders is a good one; as many who have tried it in substance can testify:

To ascertain the probable weight of the meat to be prepared, weigh a number of the hams and shoulders. Then pack them with rock salt in a suitable tub or cask, being careful not to lay the flat sides in the large pieces upon each other, and filling the intervals with hocks, jowls, &c. To every 300 lbs. of meat, then take 20 lbs. of rock salt, or Onondaga coarse salt, 1 lb. of sal-petre, and 14 lbs. of brown sugar, or half a gallon of good molasses, and as much water, (pure spring water is the best), as will cover the meat; put the whole in a clean vessel, boil and skim; then set it aside to cool, and pour it on the meat till the whole is covered some three or four inches. Hams weighing from 12 to 15 lbs. must lie in the pickle about five weeks; from 15 to 25 lbs. six weeks; from 25 to 45 lbs. seven weeks. On taking them out, soak them in cold water two or three hours to remove the surface salt; then wipe and dry them. It is a good plan in cutting up to take off the feet and hocks with a saw instead of an axe, as it leaves a smooth surface, and no fractures for the lodgment of the fly. Some make only six pieces of a trimmed hog for salting; but it is more convenient when intended for domestic use, to have the side pork, as it is called, cut in small pieces.

The goodness of hams and shoulders and their preservation, depends greatly on their smoking as well as salting. Owing to some misconstruction of the smoke-house, to the surface of the meat not being properly freed from the saline matter, or other causes, it not unfrequently happens that during the process of smoking, the meat is constantly moist, and imbibes a pyroligniferous acid taste and smell, destructive of its good qualities. The requisites of a smoke-house are, that it should be perfectly dry; not warmed by the fire that makes the smoke; so far from the fire that any vapour thrown off in the smoke may be condensed before reaching the meat; so close as to exclude all flies, mice, &c., and yet capable of ventilation and escape of smoke. The Westphalian hams are the most celebrated in Europe, principally cured at, and exported from Hamburg. The smoking of these is performed in extensive chambers in the upper stories of high buildings, some of four or five stories; and the

smoke is conveyed to these rooms from fires in the collar, through tubes on which the vapour is condensed and the heat absorbed, so that the smoke is both dry and cool when it comes in contact with the meat. They are thus kept perfectly dry, and acquire a colour and flavour unknown to those smoked in the common method. Hams after being smoked may be kept any length of time, by being packed in dry ashes, powdered charcoal, or being kept in the smoke-house, if that is secure against the fly, or a smoke is made under them once a week. When meat is fully smoked and dried, it may be kept hung up in any dry room, by slipping over it a cotton bag, the neck of which is closely tied around the string which supports the meat, and thus excludes the bacon bug, fly, &c. The small part of a ham, shoulder, &c., should always be hung downwards in the process of smoking, or when suspended for preservation.—*Albany Cultivator.*

The Highland Society.

The Highland Society of Scotland is the most powerful, and perhaps the most useful, agricultural institution at present existing. A Scottish land-owner would blush to acknowledge he was not a member, and many of their tenants have their names enrolled on the list. Nor is it absolutely necessary to be a Scotchman to become a member.

Besides the large amount given in premiums at the annual cattle show, immense sums have been expended in forwarding the enclosing and improving the "muirs and mosses mung," with which Scotland used to abound; and under the fostering care of the society, "barren wilds" have become "fruitful fields." Premiums for anything new in the arts connected with agriculture have been liberally given, and a repository provided for the models. High premiums and honorary medals are given for the best essays on agricultural subjects; the prize essays being recorded in the Quarterly Journal of Agriculture, which being conducted under the auspices of the Society, and containing an account of its transactions, is found a useful and instructive work.

Premiums have been distributed with a sparingness to those who inclosed water-dressed morasses, planted trees, &c.; to those who made the best butter and cheese; in fact, in relation to every subject connected with the purposes of the institution,—the improvement of Scotland.

The Society, for the first two or three years, held their cattle show in Edinburgh. The gentlemen of the west of Scotland having offered a handsome addition to the premiums, it was one year transferred to Glasgow. A rivalry sprang up among the districts, and each vied with the other in making the show splendid. Fairs have now been held in the principal towns of Scotland; and thus year it took place in the ancient border town of Berwick-upon-Tweed. As the English side was allowed to compete, the anticipation, since realized, was entertained, that this would be the most magnificent show ever held; and so it was.

Between the border countries of Northumberland, York, and Durham, on the English side, and Berwick, Roxburgh, and Haddington, on the Scotch, a rivalry exists as intense as it was in the days of yore, but now much more beneficial to the country. Durham was the birth-place of short-horns, Northumberland their nurse; but the Scotch have asserted that they could be reared to perfection north of the Tweed, and the trial which took place on the 29th of September, at Berwick proved that the Scotch were right.

A worthy Scotch friend has placed in our hands a Berwick Advertiser, of October the 2d, containing a full account of the great

agricultural meeting. We wish it was in our power to give to our readers some idea of its magnificence. The picture would arouse our American farmers to greater exertions in the same way. The concourse of people was immense, and it embraced a large portion of the learning, rank, and beauty of both sides of the Tweed; and even Ireland had its representatives there. There were entered for competition, 962 head of cattle; including horses, neat cattle, sheep, and hogs. The premiums ranged from 200 to 5 sovereigns, and included everything which has any connection with agriculture.

We observe that, at the fairs of the Highland Society, sales of cattle, &c., at auction, always take place; and we believe that the commissions on the sales go into the treasury of the Society. This is a practice which ought to be adopted at all the fairs in this country. It would tend greatly to increase competition and the size of the meetings.

In one of the speeches of the Marquis of Tweeddale, he stated that a great deal had been lost by some farmers in liming their poor land. But he stated that land containing much vegetable matter was as much improved as ever by lime. No fact is better known than that lime is of little use on land bare of humus of vegetable matter; but certainly none is better established, by the experiments in England, as well as in this country, that lime is eminently beneficial on land containing a fair proportion of vegetable matter. It is beyond doubt very beneficial in mellowing stiff, cold, and clayey soils.—*Louisville Journal.*

Farmers' Club.

The season is approaching when farmers will have leisure time during the long winter evenings, for social, mental, and moral culture, and opportunities to improve in all things connected with the practice of their art; it is the time to gather knowledge and lay up facts for future use.

What means are best calculated to attain this end?

Agricultural papers are an important help. Every farmer who wishes to thrive in his business ought to take one or more agricultural papers. There is not a number published but contains a useful hint, and the information contained in a volume, will, if properly and judiciously applied, save in the labour of man and beast, much more than the expense of a score of volumes. They pass from hand to hand in the farmer's household. The wife and daughters learn something from them that is useful; the boys acquire a taste for reading on the subject of their employment, and as new ideas are presented to them in a shape that they can understand, they become more interested in it; they take hold with a will, and perform their appropriate duties with greater facility, and greater advantage to their employer, the patient animals on the farm and themselves.

But readers of agricultural papers ought not to expect, in the present state of the science of agriculture, and their own deficiency in knowledge of the fundamental principles of their art, a unity of sentiment among agricultural writers. Neither ought they always to expect success in adopting an experiment that has proved advantageous and profitable to the one who narrates it; they ought not to condemn the paper that recommends a mode of practice that is unsuccessful with them. There are many reasons why success does not uniformly attend the same course of practice. In the first place the idea may be imperfectly received by the mind; again, difference in soil, manure, &c., though slight, may defeat the result expected.

The question arises, how shall farmers avail themselves profitably of new discover-

ies and new developments in the science and practice of agriculture, that are from time to time laid before them? The answer is plain. By acquiring a thorough knowledge of the fundamental principles of agriculture.

By the organization of Farmers' Clubs in every town or school district, where farmers can meet each other one evening in a week, for the purpose of discussion on the principles of agriculture, where doubtful modes of practice can be inquired into, where improvements that have been adopted in other places can be investigated, and their adaptation to particular locations be fully understood; where the primary principles of agricultural science, would be made the subject of frequent conversation and inquiry, and all the good that can be derived from such organizations be obtained. The plan is simple, feasible and profitable. Great good must result from its adoption. The same measures have been adopted in nearly every parish in England, and they have become exceedingly popular. The reports published by these Clubs from time to time, show the great interest that farmers of all grades take in them, and the rapid strides that are made in improvement. In order to give an idea of the manner in which these Clubs are conducted, we shall publish, next week, a report of the doings of one of them, extracted from an English publication, and also give a list of agricultural books that ought to be owned by farmers so organized. Every farming town ought to have an agricultural library.—*Yankee Farmer.*

Apples for Stock.

To the Editor of the Boston Cultivator.

Recent experiments, however, have demonstrated to the more candid and judicious of our farming friends, that Apples are a valuable article for other purposes, and the cider-mill is rapidly giving place, in many sections, to the steaming apparatus and the oven.

Hogs are now fattened exclusively on apples, both boiled and baked, and there is no longer any question but that pork can be made with far less expense, and of a quality equally as good, on apples, as on potatoes, meal, or corn. Last year I butchered a hog, sixteen months old, which weighed 500 lbs. For seven weeks previous to bringing him to the tub, he eat nothing but boiled apples. A few days before killing him, I ordered some dough to be made, thinking that by keeping him for a week or so upon corn-feed, I should increase the quality of the pork. But to my utter astonishment, it was no sooner placed in his trough, than he rooted it out. The experiment was repeated for three several times in succession, but always with the same result. Apples, cooked in the usual way, were then presented, and he eat of them as usual, and upon them he was kept from that time till his death. I never eat sweeter pork, and although I had no regard either to those mysterious signs, so important in the estimation of some farmers, nor to Lunar influence, the

"Meat ne'er shrank a bit i' the pot."

A PRACTICAL FARMER.

TOBACCO.—We yesterday met with a farmer from the interior of our state, who had 1000 pounds of tobacco with him, which he sold at 3 cents per lb. He says he can raise it at a cost of 3 cents per lb. Not 20 miles from us on the Canada side, 2000 lbs. are obtained from an acre. The same can be done in Michigan. Mr. John Melvin informs us that he obtained 4000 lbs. on two acres. Persons desiring to try the experiment, could procure seed in Canada or in the South.

THE CULTIVATOR.

TORONTO, FEBRUARY 1, 1842.

To the Farmers of British North America:

At the earnest solicitation of Mr. EDMONDSON, Proprietor of "THE BRITISH AMERICAN CULTIVATOR," I have been induced to undertake a share in the conduct of this paper for the present, and as my ideas on subjects connected with AGRICULTURE, are already very generally known in this country, perhaps there is no necessity that I should enter into a very particular explanation of them, on the present occasion. I shall, however, submit a few observations for the consideration of the Subscribers to the CULTIVATOR.

For several years of my residence in Canada, it has been a source of unceasing regret, that of the many publications in this country, *not one* was exclusively devoted to the subject of AGRICULTURE, that is the *sole* dependence of nine-tenths of our inhabitants. It would be strange, indeed, if the various interests of Agriculture in British America, would not have furnished abundant matter, to fill constantly, the columns of the largest paper that is published in the country. Farmers ought to be perfectly aware from experience, that their interests require to be urged upon the notice of their Governors and Legislatures, as well as the interests of other classes, and certainly hitherto, these interests did not receive any more attention from the circumstance that they belonged to the class that constituted the vast majority of the British American community. I humbly conceive now, as I always have done, that no other interests in British America, deserve more attention from all those who really desire to promote the general prosperity of this naturally fine country, than the interests of Agriculture. I cannot see upon what grounds it is expected that this country can improve and flourish without a prosperous state of her Agriculture. And if this opinion be correct, it should be the first and chief object of attention, with those who have it in their power, to promote by every fair and practicable means, its improvement and prosperity. It will be for "THE BRITISH AMERICAN CULTIVATOR," to become the medium for suggesting respectfully, such improvements and encouragements, as, if adopted, would be likely to insure a prosperous state of our Agriculture, without doing injustice to any other class.

It is amazing that other classes, whose interests are fenced in on every side by protecting laws, should take immediate alarm, if the Agricultural Class should ask for encouragement and protection. They instantly cry out against them that they want to secure a monopoly, and extravagantly high prices. I never would wish to see extravagantly high prices, but I would wish *remunerating* prices, in order to secure the advance of improvement, by the safe and profitable investment of capital in clearing and

properly cultivating the wilds of British America. Adam Smith says:—"High prices and plenty are prosperity, low prices and want are misery." I think there would not be much difficulty to prove the truth of this proposition in Canada. It ought to be remembered, that of more than one million that constitute the present population of Canada, not over a tenth, or a little more than one hundred thousand are purchasers of Agricultural produce for their own food. Hence it would appear, that the essential interests of nine hundred thousand are sacrificed, or materially injured, for a trifling benefit, in low prices, to one hundred thousand souls.

It is useless to expect that capital will be invested in Agricultural improvement, unless there is some reasonable prospect of safety and remuneration. It is far want of this safety and profit to the capitalist, that our emigrants pass through Canada to the United States. There is abundance of employment for many more emigrants than ever come to this country, if we had capital to pay for work, and if we had prices that would remunerate, money would not be wanted. These are plain facts that are well known, though no remedy ever was attempted. In the columns of THE BRITISH AMERICAN CULTIVATOR, the interests of Agriculture shall be strongly, but honestly advocated on fair principles, towards all other classes. It will be impossible to advance the prosperity of Agriculturists, without promoting in the same degree, the interests of almost every other individual that compose this community, except those who derive their income from another country.—The farmers of this country will not hoard money—they will expend it for some useful or necessary purpose as surely as it comes into their hands. Thus the money they receive for their produce, passes again, directly or indirectly, into the hands from which it comes to them—and we must suppose the Merchant and Tradesman to profit in proportion to the amount of goods which they can sell annually, and the greater the amount of produce that is annually created from our land and labour, the larger will be the sales of the Merchant and Tradesman.

In preparing original matter, and in selecting from other publications, for THE CULTIVATOR, I shall guard against exaggerated statements, that would be calculated to lead into error; and I would respectfully suggest to all Contributors to this Periodical, to observe the utmost caution in reporting experiments, and the results obtained from them, to do so in that manner that will show clearly the expense incurred in every way, as well as the profit realized. A judicious system of practical and profitable husbandry is what we require here, and it will not answer any useful purpose to be told of expensive experiments and their results, that we never can hope to realize by the very best system of ordinary farming—so far as it shall rest with me, the columns of THE CULTIVATOR shall only contain useful and practical information and suggestions,

that will be possible for every farmer to adopt and practice, according as his situation and capital will admit of his doing so. All wild theory and extravagance, shall be excluded as useless and mischievous. I respectfully solicit from my brother-farmers of British America, their support to this Periodical, which can exist and be useful to them, only, by obtaining their patronage.—If my promise will have any influence with them, I pledge it freely, that if they support THE CULTIVATOR, every thing that is possible shall be done, to make it worthy of their patronage. A considerable expense must be incurred on this publication by the Proprietor, and of course it cannot live and prosper, unless the expenses are provided for by numerous Subscribers. If the farmers are of opinion that they do not want this publication, and that they may as well take the foreign Cultivator as one published in their own country, and by their own fellow-subject, it must of necessity be discontinued. If a preference is given to a foreign publication, a native one cannot live, and be profitable any more than Canadian Agricultural produce can be profitable to our farmers, while all descriptions of foreign agricultural produce is freely admitted in competition with it in our markets. I ask not, however, for favour or preference, if unworthy of either. Give a fair trial for one year, and if the result is not satisfactory to you, withdraw your Subscriptions, and let THE BRITISH AMERICAN CULTIVATOR be no more.

I have written this article in a hurry to be in time for the next number of THE CULTIVATOR, and beg you to excuse the plainness of the language and terms, I have made use of. I shall be more particular in future. I have only made a few selections for the present number.

I have the honour to be,
Very respectfully,
Your faithful servant,
WILLIAM EVANS.

Cote St. Paul,
20th January, 1842.

Colonization and Emigration.

Mr. Alison's late work on "THE PRINCIPLES OF POPULATION, and their CONNECTION WITH HUMAN HAPPINESS"—contains much interesting information. In his chapter on "COLONIZATION, and the RECIPROcity SYSTEM"—he shows by his tables, that about a third of the annual exports of British and Irish produce, is to British Colonies in all parts of the world. After giving these tables, he says:—

"These statistical details point to the future policy, and illustrate what is the real sheet anchor of the British Empire, as clearly as if the future, with its changes and chances, were by miraculous interposition laid open to our view. It evidently appears, from the rapid and prodigious growth of the commercial intercourse which we maintain with the British Colonies, compared with the stationary or declining condition of that which we enjoy with all the world, besides, that we possess in ourselves, and independent of foreign rivalry, jealousy, or competition, sources of wealth, prosperity, and grandeur, greater than ever yet was presented to any na-

tion upon earth; while, on the other hand, the sources of our greatness, so far as they depend upon trade with independent states, have clearly reached their limit, and are now all tending towards decay. It is by implanting our seed, therefore, in distant regions, and following our own mission for the colonization and peopling of the desert regions of the earth, that we can alone hope to avert the stationary or declining condition which, from the operation of causes far beyond the reach of human calculation, has now, so far as our intercourse with foreign nations is concerned, come to act upon the British Empire. And if we could conceive that the government and people of this country (for both must co-operate in so highly an undertaking) were duly impressed with the grandeur of this duty, and were guided by adequate wisdom in carrying it into execution; if, discarding all selfish considerations on local interests, they regarded the British Islands only as the metropolis of this vast transmarine dominion, and pursued in good faith the just and equal policy which the interests of such an Empire imperatively require; if the industry of all parts, however remote, were protected by the admission of its produce at the same duty into the British harbours that the British is admitted into theirs; if British justice availed alike the decisions of the courts of law on the Atlantic or the Pacific as within the precincts of Westminster Hall, and the British Navy, maintained in adequate strength, and upheld by patriotic vigour, lay between to cement, and defend the whole parts of this mighty dominion; no doubt can be entertained that the greatness of the British Empire, wonderful as it already is, is but in its infancy, and that the ocean would become to us what the Mediterranean was to the Romans,—a highway emanating from the centre of a boundless dominion, and the means of keeping firmly united its most distant provinces."

Mr. Alison, gives another Table that shows the value of British manufactures, which the respective populations of several of the European States, together with those of the United States of America, and of the British Colonies, consume annually per head, and then observes:—

"It may truly be said that this table speaks as to the real interests and manufacturing establishments of Great Britain; and that if the nation were not struck with judicious blindness, they would at once perceive where it is that the steady and rising market for British manufactures is to be found, and where, on the other hand, all our efforts to promote a successful traffic may be regarded as fruitless and unavailing. For fifteen years past our whole commercial policy has been directed to the object of gaining a mere ready vent for our manufactures into the continental states of Europe. We have concluded no less than twelve reciprocity treaties with the principal journals; and, in order to propitiate their good will, we have sacrificed by our treaties all our commercial advantages at least in our intercourse with these states. And what has been the result? Why, that our commerce with them is a perfect trifle when compared with that which we maintain with our own Colonies, whom we have maltreated and neglected for their sakes; and that, while the old states take off a few pence per head of their population, our own Colonies take off as many pounds. In this instance we have truly verified the old adage, that we have been penny wise and pound foolish, even in regard to our existing interests at the moment. But when, in addition to this, it is recollected that these Colonies are part of ourselves—distant provinces of our own empire, whose blood is our blood, whose strength is our strength; that they are increasing in number, with a rapidity unparalleled in the annals of the world; and that however fast they may augment, they are by their situation and circumstances chained for centuries to agricultural and pastoral enjoyments, and consequently our export trade with them must increase in the same proportion as their numbers; while, on the other hand, the states of continental Europe are increasing far less rapidly in numbers—are actuated for the most part by commercial jealousy, and may any moment become our enemies,—it may safely be affirmed, that the neg-

lect of the colonial provinces to propitiate foreign powers, is of all human absurdities the most absurd."

"Let us, therefore, no longer strain after the impracticable effort to disarm the commercial jealousy of the European States; but, boldly looking our situation in the face, direct our main efforts to the strengthening, conciliating, and increasing of our colonial empire. There is to be found the bone of our bone, and flesh of our flesh. There are to be found the true descendants of the Anglo-Saxon race; then the people, who, already imbued with our tastes, our habits, our artificial wants, must be chained for centuries to agricultural or pastoral employments, and can only obtain from the mother country the immense amount of manufactured produce which their growing wealth and numbers must require. So strongly marked out do these principles appear,—so clearly is the future path traced out for England, not less by her duty than her interests, that there is no one circumstance in her present condition, not even those which are most justly considered as pregnant with danger and alarm, that may not be converted into the source of blessings, if a decided and manly course is taken by the nation and its government, in regard to its colonial interests. Indeed, so clearly does this appear, that one is almost tempted to believe that the manifold political and social evils of our present condition are the scourges intended by providence to bring us back, by necessity, and a sense of our own interests, to those great national duties from which we have so long and so unaccountably survived.

Are we oppressed with a numerous and redundant population. Are we apprehensive that a mass of human beings, already consisting of nearly thirty millions, and multiplying at the rate of a thousand souls a day, will ere long be unable to find subsistence within the narrow space of these islands? Let us turn to the Colonies, and there we shall find boundless regions, capable of maintaining ten times our present population in contentment and affluence, and which requires only the surplus arms and manacles of the parent state, to be converted into gigantic empires, which, before a century has elapsed, may overshadow the greatness ever of European renown. Are we justly fearful that the increasing manufacturing skill and growing commercial jealousy of the continental states may gradually shut us out from the European market, and that our millions of manufacturers may find their sources of foreign subsistence fail at a time when all home employments are filled up? Let us turn to the Colonies, and there we shall see empires of gigantic strength rapidly rising to maturity, in which manufacturing establishments cannot, for centuries, take root, and in which the taste for British manufactures, and the habits of British comfort, are indelibly implanted on the British race? Are we overburdened with the weight of our poor-rates and the multitude of our paupers, and trembling under the effect of the sub-rooted discontent produced in the attempt to withdraw public support from the maintenance of the adult and healthy labourer? Let us find the means of transporting these healthy workmen to our colonial settlements, and we will confer as great a blessing upon them, as we will give a relief to the parent state.

"Are the means to transport these numerous and indigent classes to these distant regions wanting, and has individual emigration hitherto been liable to the reproach, that it removes the better class of our citizens who could do for themselves, and leaves the poorest who incur the land? The British Navy lies between, and means exist of transporting, at hardly any expense to the parent state, all that can ever be required of our working population from that part of the empire which they overburden, to that to which they will prove a blessing. It is astonishing the attention of Government has not, ere this, been turned to this subject. And why may not part at least of the British Navy be constantly employed in transporting emigrants of all classes to our colonial possessions? Why should three hundred vessels of different sizes, that are now in commission in the British Navy, be employed, only in useless parades, when hundreds of thousands on the British shores are pining for the means of transport across the seas, and millions of acres on the other side of the ocean, turning with verdant fertility,

await only their robust hands to be converted into a torrential paradise? Why should the British Navy not be employed like the Roman legions, in time of peace, in works of public utility; and why should their efforts not construct causeways across the deep, which would bind together the immense circuit of the British Colonial Dominions, as strongly as the highways constructed by the legions cemented the fabric of this mighty empire?"

"The Roman legions conquered only by the sword. Fire and bloodshed attended their steps, it was said by our own ancestors on the hills of Caledonia, that they gave peace only by establishing a solitude. The British colonists now set out with the olive-branch, not the sword in hand; with the cross, not the Eagle on their banners—they bring not war and devastation, but peace and civilization around their steps, and the track of their chariot-wheels is followed, not by the sighs of a captive, but the blessing of a renovated world."

"Come bright improvement in the car of Time, And rule the spacious world from clime to clime; Thy handmaid, Art, shall every wild explore, Trace every wave and culture every shore; On Erie's banks, where panther's steal along, And the dread Indian chaunts a dismal song; Where human fiends on midnight errands walk; And bathed in brains the murderous tomahawk. There shall the flocks on thymy pastures stray, And shepherds dance at summer's opening day; Each wandering genius of the lonely glen Shall start to win—the glittering haunts of men; And silence mark, on woodland heights around, The village curfew as it tolls profound."

A very long extract has been given from the work of this very able writer, in order to show the views that are entertained of emigration to the British Colonies. No doubt can exist that there is abundant opportunity for their employment here, and in other colonies, provided capital can be safely invested in Agriculture, but not otherwise. Public works carried on extensively will give temporary employment to emigrants, but there must be something more than this to ensure their successful settlement in this country, and, also, to ensure to the mother-country profitable customers in her own children for the purchase of her manufactures, and supplying the parent state with what she may require of Canadian produce. It is perfectly possible to secure immense benefits, both to the mother-country, and to this colony, by adopting judicious measures of encouragement and protection to Canadian Agriculture, which cannot prosper under existing circumstances, without some change. Those who would encourage emigration, if they desire to see emigrants useful and prosperous here, will have to adopt measures that will secure that result, and if it can be secured independent of Agriculture, we shall not object to the means that may be employed to accomplish it.

We are gratified at the interest a number of Post-Masters have already taken, to procure Subscribers for THE BRITISH AMERICAN CULTIVATOR. We shall continue to send a copy to all such, without regard to the number of Subscribers they procure.—If they should fail at first to make up the number specified in *Our Terms*, entitling them to a copy, probably they may do so before the expiration of the year. We flatter ourselves that the Post-Masters throughout British America, will exert their influence in our favour, as soon as our Publication becomes generally known.

POETRY.

(From the Colonial Farmer).

THE FARMER'S SONG.

In sweet healthy air with a farm of his own,
Secluded from tumult and strife,
The farmer, more blest than the king on his throne,
Enjoys all the comforts of life.
When the sweet smiling spring sheds its perfume
around,
And music enchants every tree,
With his glittering ploughshare he furrows his ground,
With mind independent and free.

When summer to fruit the sweet blossoms trans-
forms,
And his harvest fields wave with the breeze;
Sweet anticipation unfolds all her charms,
And points to contentment and ease.
When bountiful autumn her treasure bestows,
And her fruits are all gathered and stored;
His heart to the Giver with gratitude glows,
And plenty presides at his board.

When Winter howls dismally over the earth,
And want tells her tale at the door;
Serenely he sits by his clean blazing hearth,
And dispenses relief to the poor.
Then let idle ambition her baubles persue,
While wisdom looks down with disdain,
The homo of the farmer hath charms ever new
Where health, peace, and competence reign.

A. W.

☞ The following lines very simply illustrate the manner in which individuals frequently become involved in difficulties which they might amicably adjust by a little reflection.

GOING TO LAW.

An upper and a lower Mill
Fell out about their water—
To war they went—that is, to law—
Resolved to give no quarter.

A lawyer was by each engaged,
And hotly they contended;
When fees grew slack, the war they waged
They judged, were better ended.

The heavy costs remaining still,
Were settled without bother—
One Lawyer took the upper Mill,
The lower Mill the other.

Available Means of Agricultural Improvement.

Societies and premiums were tried in vain in Germany, to renovate agriculture, says Mr. Fleischman, and so was theoretical farming. "The practical farmer, uneducated and full of prejudice," he says, "was not able to understand the principles of the new system; the man of scientific education had no experience and knowledge of applying science to practice properly;" and so both failed, or improved slowly. At last, agricultural schools were established, and the science and practice were taught simultaneously. "In six years," he continues, "the influence of these schools was felt throughout the whole country." Rotation of crops was introduced; the stock was increased and improved; the fertility of the land was renovated; prejudiced neighbours became convinced; they began to imitate, to read, and to think, and in a short space of time, the old system was abandoned, and the

farmer soon saw and realized the advantages of the science of agriculture."

"I took to the establishment of agricultural schools," says our highly intelligent Otsego correspondent, "as belonging to an earlier state of things than agricultural exhibitions. To him who has made no advance," he adds with great truth, "an agricultural exhibition is a source of mortification and a wounding of self-love—[because it throws his own labours and skill into the back ground]—but a school will awaken the spirit of improvement; and a few young men going forth from such an establishment, will be like a little leaven in the inert mass."

It requires but little reflection and foresight to predict, with great certainty, that unless something is speedily done, by the people and the people's representatives, to improve the state of our agriculture, the farmers of Europe will soon supplant; will undersell us—in our own markets, in the products of the soil. We already find the bread-stuffs of Europe and even of Asia, put in requisition to feed our population. From the low price of labour in Europe, and particularly from the recent improvements in agriculture, which are doubling and trebling the products of agricultural labour there, the disparity in the actual cost, to the cultivator of these products, is constantly increasing against us. The venerable Ellenburgh—and may he yet enjoy a long and happy life—was the first to demonstrate the utility of combining the science with the practice of agriculture—of making farmers gentlemen, and gentlemen farmers—of combining intellectual with physical power, and literature with labour—in a school for the education of young men. The sagacious Frederick, king of Prussia, soon saw the advantages to the state, which were likely to result from schools like that at Hofsvyl, and soon established the great school at Moegelin, under the distinguished Thaer, and has since incorporated its principles into the common schools of his kingdom. Bavaria, Austria, and other of the German states, and France, have since established like schools; Russia has agricultural schools near St. Petersburg and Moscow, liberally endowed and supported by the government; and even Ireland, has started in this noble career of usefulness. The United States, which should be foremost in efforts to enlighten, improve and elevate the agricultural population, will, we fear, be last to establish agricultural schools, and the last to profit by their usefulness.

The only present available means of accelerating the introduction of these schools among us—for established they ultimately must and will be—is the agricultural press—the enlarged circulation of agricultural periodicals among the people. They are every day increasing the sphere of their usefulness, and the extent of their circulation. They are bringing into notice the best practices in husbandry, and promulgating the principles of agricultural science. They are producing a salutary change in the public mind in regard to the importance of improving our husbandry; and this change will ere long, we trust, be felt and manifested in our halls of legislation. The sooner the better, for all classes of our citizens.—Buel.

TO HAVE MINCE PIES ANY TIME.—Prepare your meat by boiling and chopping as though it were for immediate use—mix it with a suitable portion of suet, spice and salt; then put it in an earthen pot, pound it down with a pestle, and then cover it with the best of molasses; keep it where it will not freeze, and it will be fit for use any time. My wife has adopted the above course for four or five years past with perfect success; so that we have had mince pies made from meat killed in December as constant in July following

as in January, and quite as acceptable.—
Maine Farmer.

On Educating Children at Home.

SCHENECTADY, May 9th, 1830.

FRIEND BUEL—in the April number of your Cultivator, under the head, "We spread our nets too broad," page 38, the writer says, "The worst place to educate a boy, so far as depends on the advantages of the school, is his native village, where he is wont to lean on parental support, and to remain a mere succour. Send him among strangers, and he will learn to go alone, and to depend for knowledge and character, upon his personal application and good conduct," &c., &c., &c.

These assertions may be plausible to some of your readers; but so far as I have experience, the contrary is the safest course as to the government of children by their parents.

So soon as my children could recognize me, I delighted them by the greatest attention to amuse and please them. This daily attention and fostering care for their comfort and amusement, soon produced their warmest affections and supreme love. They were the most happy when in my care, and were unhappy in my presence, if not in my care and attention. As their knowledge increased and faculties improved, we were extremely careful not to promise the least thing that we did not most rigidly fulfil; so that when they were told any thing, they were certain of its truth, and faithful fulfilment of every promise. Their supreme love and perfect confidence in us was established. If they showed the least disposition to disobey, I told them that I could not love a child who did not love and obey me. This was sufficient for their immediate compliance, for the greatest pain would be loss of our love, and the birch was never needed nor used. The poet's remark on the influence of love was verified:—

In kindred minds it flourishes alone,
And claims attachment equal to its own.

We never gave them any pocket money to absorb their thoughts, and to spend at their pleasure. Money was never given them but for specific purposes, although they were always allowed to have free access to it, and were told its objects and uses. They were provided at home with all that was deemed proper, and they had no desire to enter the attracting and debasing cellars and shops for fruit and luxuries, which are the pests of good morals, and ruin of multitudes of otherwise good children.

Before they reached their seventh year, (the age when the human organ of faculty, the brain is fully developed and matured in volume), they were manly and womanly enough for the age; for they were spoken to as rational and adult beings, and not in trifling language. They were told that God was the author of them, and their kind parents, and all good things; and that their love to Him was paramount—next they might love their parents, &c. These are duties not to be looked for from strangers; nor will children receive moral instruction with the same faith from them, as from parents.

When their age increased, and their manners and principles were formed, they travelled without us. They were furnished with money liberally, and were told not to spend money because they had it, but to pay for all useful and honourable wants—to spend nothing in vice nor evil company.—They always had enough and to spare, and never asked for a dollar that I had the least hesitancy to furnish, for it never was misused or abused. We are now happy in their

reverential and filial obedience and love, and their share in the esteem of society; and the injunction of the wise man, "bring up a child in the way he should go," &c., is fully illustrated in them.

I have seen many very fine children, of good and fine minds and manners when they left their parents, ruined, and their manners and morals completely destroyed by being sent from home for education.

My dear sir, you will forgive me, I hope, for these observations, as I assure you I give them to you merely to correct what I conceive to be wrong opinions, and to exhibit a better example. Let parents who have the means, be liberal in establishing good schools at or near home, and employ competent teachers at some additional cost, and save their dear children from exposure to vice, if they believe there is any value in these opinions and experience.

Yours' respectfully,

Construction of the Flues of Chimneys.

"The great fault," says Count Rumford "of all the open fire-places now in common use, is that they are much too large, or rather it is the throat of the chimney, in the lower part of its open canal, in the neighbourhood of the mouth and immediately over the fire which is too large." The following is a condensed view of some of the rules given on this subject, by this ingenious practical philosopher, and which are founded on the principles of science and on numerous experiments.—1. The throat of the chimney should be perpendicularly over the fire: as the smoke and vapour which rise from a fire naturally tend upwards. By the throat of a chimney is meant the lower extremity of its canal, where it unites with the upper part of its open fire-place. 2. The nearer the throat of a chimney is to the fire, the stronger will be its draught, and the less danger of its smoking, since smoke rises in consequence of its rarification by heat, and the heat is greater nearer the fire than at a greater distance from it. But the draught of a chimney may be too strong so as to consume the fuel too rapidly; and, therefore, a due medium must be fixed upon according to circumstances. 3. That four inches is the proper width to be given to the throat of a chimney, reckoning across from the top of the breast of a chimney, or the inside of the mantle to the back of the chimney, and even in large halls, where great fires are kept up, this width should never be increased beyond 4½ or 5 inches. 4. The width given to the back of the chimney should be about one-third of the width of the opening of the fire place in front. In a room of a middling size, thirteen inches is a good size for the width of the back, and three times 13, or 39 inches, for the width of the opening of the fire-place in front. 5. The angle made by the back of the fire-place and the sides of it, or coverings, should be 135 degrees, which is the best position they can have for throwing heat into the room. 6. The back of the chimney should always be built perfectly upright.—7. Where the throat of a chimney has an end, that is to say, where it enters into the lower part of the open canal of the chimney, there the three walls which form the coverings and the back of the fire-place should all end abruptly, without any slope, which will render it more difficult for any wind from above to force its way through the narrow passage of the throat of the chimney. The back and coverings should rise 5 or 6 inches higher than the breast of the chimney. 8. The current of air which passing under the mantle gets into the chimney, should be made gradually to bend its course upwards; by which means it will unite quietly with the ascending current of smoke. This is effected with the

greatest ease and certainty, merely by rounding off the breast of the chimney, or back part of the mantle, instead of leaving it flat or full of holes and corners.

Stables.

Nothing conduces more to the health of a horse, than a good and wholesome stable.—It should be built upon a high, airy, and firm situation, that the horse, in bad weather, may come in and go out clean. No animal delights more in cleanliness than the horse, or to whom bad smells are more disagreeable and pernicious. Great attention should be paid to the removal of all offensive and putrid matter, to prevent the fever and other troublesome and distressing diseases, which frequently proceed from such neglect. A log stable is preferable to any other, on account of its admitting a free circulation of air in summer; and by the use of slabs or straw in winter, can be made warm and comfortable. Opposite to each stall there should be a lattice or window, with a shutter; by which means you can, at pleasure, either welcome the cheering breeze, or bar out the threatening storm. The rack should be smooth, high, and firmly fastened to the wall, which will prevent a horse injuring his eyes, skinning his face, and doing himself other injury when feeding. The upright pieces of a rack should be four, or four and a half inches apart, to prevent long food from being unnecessarily wasted. The halter should never be tied to the rack, (several fine horses having been ruined by such carelessness,) but should be passed through a ring in the manger, and confined to a longer or smooth piece of wood, weighing about a pound.—With a halter of this description, there is no danger of a horse's hanging, alarming, or injuring himself. A stall should be four and a half or five feet wide, which will allow him to lie down with comfort. The stable floor should be planked, to make the coat of hair show to advantage; but a dirt floor is far preferable, when a horse is wanted for service: there is a moisture received by the hoof from the earth, which is absolutely necessary to make it tough and serviceable. Either kind of stable floors should be a little raised towards the manger, to turn the urine from the stall, which produces an unpleasant smell, and (when permitted to stand a length of time) very unwholesome vapors. When the size of a stable is calculated for several horses, the partitions between the stalls should be neatly and smoothly planked low enough to the floor, to prevent the horse when lying down, getting his legs through, and high enough at top to prevent them from smelling, biting, and molesting each other. A plentiful bed of clean dry straw affords, to a fatigued or travelling horse, as great a welcome as his food, and is as necessary in a stable as the pitchfork, curry-comb, and brush.—*Mason's Farrier.*

NEW INVENTION.—Among the new inventions and contrivances of which I have lately heard, is something which I believe bids fair to become universally useful to the city and country, and the world, and that is, a new method of making good, light, sweet bread.—All the world knows, that one of the most difficult and perplexing matters to house-keepers, is to have good *emptions* or yeast for bread. Now the invention is this:—Take an acid like cream of tartar, (I mean simply an acid in the form of powder), and rub a sufficient quantity of this dry and powdered acid into a proper quantity of dry flour. Then wet the flour and put in your alkali—potash, or any hard alkali. The valuable part of the discovery is this,—the acid and alkali will not effervesce until the loaf is baked, when the acid is rubbed into the flour in a dry state. The experiment is worth

trying. I assure you, that a most delicious bread is produced, light, sweet, and good, in this manner, from any good flour or meal you use, wheat, rye, or Indian. Cream of tartar may be used, and saleratus, for the purpose of trying it. Nothing can be more healthful than this bread. The inventor is a baker by trade, and I believe it will come into use every where. Try it yourself, by rubbing into your flour, in a perfectly dry state, some cream of tartar, and then mixing up the batter with whatever liquid you please, milk, buttermilk, or water, and adding a little saleratus. You will have an excellent and toothsome and wholesome bread.—*Boston Correspondence of Hill's Patriot.*

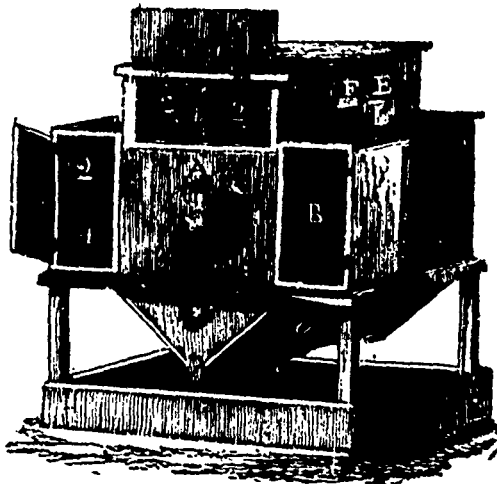
TILLING THE EARTH.—In tilling the earth, some people go upon the same principle that regulates their business intercourse with men. They must be sure to get the advantage of the trade; and if this cannot be secured without, they must cheat and deceive the person with whom they deal. And they think to practice the same artifice upon old mother Earth. You will see them on their grounds in the spring, as sly as dogs, apparently calculating that Earth has forgotten the exhausting crops that were taken from her last year—perhaps they will give a sprinkling of manure, and throw it on so as to make Earth think there is a noble lot of it. Well, they go to work. But the Earth won't be cheated. She will reward every man according to his works, and tell the truth in the autumn. You cannot get the advantage of her as you can with human customers. Treat her well, and she will reward your expenditure and toil; but attempt to cheat her, and she will make you sorry for it when harvest comes.—*Maine Cultivator.*

SAUSAGES.—We prepare our sausage meat in the usual way. Then instead of putting the meat in skins, prepared from hog's entrails, we make bags of white clean cotton or linen cloth, as large, say as a man's arm, larger or smaller, as may suit, and of convenient length, say about a foot long, and put the sausage meat in these bags, and hang them up to dry. In this way, we save much labour in preparing the skins, and considerable in cooking; we slip off the bag from so much as is needed, and cut the sausage into slices of sufficient thickness for cooking. I much prefer sausage put in bags to those put in skins, as they keep more moist. Others, for the same reason, dislike them.—*Selected.*

How to BOIL IRISH POTATOES.—Good and different potatoes depend very much upon the manner in which they are prepared for the table. Some cooks always have heavy, hard, watery potatoes; while others, for the most part have them dry, mealy and excellent. This difference depends, generally, upon the difference of cooking. The first cook puts the potatoes into cold water, warms them through by a slow fire, and cools them as slowly; while the other puts them in boiling water, stirs the fire till they are just done, takes them out immediately, throws a wet cloth round them, and gently squeezes each with the hand till it cracks open, for the watery particles to escape in form of steam, then peels them and they are exactly right. By this plan, almost any potatoe will eat well.—*Nashville Agriculturist.*

RECIPE.

SALIVA in horses can be cured by mixing a table spoonful of flour of sulphur in the salt that is given them from time to time.



Perfect Bee Hive and Non-Swarmer.--Concluded.

The principles of this hive may be adapted to any hive of a square form as well as this, to wit, the box hive, capo hive, sub-tending or pling box hive, as well as the Vermont Hive.

SPECIFICATION OF THE USES OF THE PERFECT BEE HIVE.

The aperture through the centre of the right angle bottom board marked D, readily discharges all filth that falls from among the combs, at the same time its outer projection endwise, opposite D, forms a most convenient alighting place for the bees, and secures them from driving winds in chilly weather.

The ventilators, six in all, marked E, are made of tin tubes three inches in diameter, covered on the inside of the hive with wire screen, and with wire gauze the inside of its outer projection, so that when the whole is covered with a cap on the outside with corresponding holes, ventilation may be graduated at pleasure.

The thermo-metrical chamber, seen at F in the cut, is used only as a deposit for that important instrument, which will show at all times the condition of the bees contained in the hive. This will determine the required quantity of air to cool the hive below swarming temperature, as well as the necessary heat to keep the young broods in a healthful condition, and also determine the most appropriate time for dividing off swarms, which can be done with perfect success and certainty only in the swarming season.

The collateral chambers seen on the right and left of the centre hive are added or removed at pleasure by the use of slides made of sheet

iron, one of which is cut with curves in such a manner as to correspond with the wood or cork stops which are inserted into apertures in the sides of the hive, (these materials being non-conductors of heat and cold), and when removed admit the bees, and animal heat to emanate into the collaterals, both of which may be boxes, or one may be a box as marked B in the cut, and the other a chamber containing drawers marked 2, 4, which may be removed by taking off the whole chamber at once.

As a full illustration of the uses and management of bees in all the classes of hives to which these principles may be adapted, would more properly come into a volume rather than in a single newspaper essay,—I only add that a swarm of bees weighing less than ten pounds when first hived; should be confined to the swarming hive until their increased numbers require more room, when the collateral box may be added. In all cases the box is added first; afterwards the chamber, but no apertures should ever be left open so as to compel the bees to warm by their animal heat any more space than they occupy.

JOHN M. WEEKS.

P. S. Any person who shall enclose \$5 to the proprietor, will be entitled to one individual right, and will be furnished with cuts and drawings of all the hives, instructions, &c., will be forwarded. Territories will be offered on liberal terms. All letters of enquiry must be post-paid.

J. M. W.

West Farms, Salisbury, Vt., June, 1841.

HOW TO TREAT THE LIGHT SOILS TO THE GREATEST ADVANTAGE.—Those who have acquired the reputation of good farmers do not invariably derive the greatest possible advantage from the land they cultivate; principally from their sticking too closely to some system or rotation of crops, which, in general practice, may be deservedly of high repute. This will more particularly apply to the management of light soils, and in those districts where the turnip system commonly prevails. Hence it is that we would venture to recommend partial and occasional departures from a rigid adherence to certain rotations of crops, because, where this is carried out to the extreme limit, when a very unfavourable season occurs, there necessarily must be a great deficiency in one of the few general crops annually cultivated. Tares may be sown on the better sorts of light lands after a good tillage given immediately after harvest. If they are fed off or cut green in May or June, early turnips may be

sown after them, which will be fit to feed off or draw for the cows in September, in good time for ploughing up the land for wheat sowing. In this case the land gets all the ploughing necessary to clean it completely, and exactly at the best time. Three ploughings may be given after the tares, if the land is not clean, and the turnips being well hand-hoed and horse-hoed, the land will be perfectly clean to receive the wheat seed; manure may be put on with the tares or the turnips, and if these are fed off with sheep, they will so enrich the soil that the next crop cannot fail to be abundant. By varying the management of light land according to circumstances, and with some judgment, many more profitable crops can be raised than by the common simple rotation, in which a fourth of the land is sown with turnips. If this crop fails, which is often the case, where it recurs so often, the whole system is deranged, and the loss is very great. The introduction of a greater variety of produce in

the cultivation of light lands, in imitation of the Flemish practice, and the increase of stock kept in consequence, would be an important step in the improvement of British husbandry.—*Selected.*

DISEASE OF SWINE.—Swine are subject to a few diseases that are not very easy of remedy. The best preventive is to keep them clean and cool in summer, and to allow no carrion, or filth whatever, to remain in or near their sties. This rule would require to be more attended to in these Provinces. The diseases they are most subject to are, pox or measles, blood-striking, staggers, quincy, indigestion, catarrh, peripneumonia, and inflammation of the lungs, called heavings. When pigs are sick, if they will eat they will take medicine in their food; but if they will not eat there is scarcely any help for them. As aperients, cleansers, and alteratives; sulphur, antimony, and madder are the grand specifics, and are truly useful. As cordials and tonics, treacle and strong beer in warm wash, and good peas, and pollard. In the measles, sulphur, &c., and if the animal require it, give cordials occasionally. In staggers, bleeding, fresh air and nitre; in catarrh, a warm bed and warm cordial wash; and the same in quincy, or inflammation of the glands in the throat. If external suppuration appear likely, discharge the matter when ripe, and dress with tar and brandy, or balsam. The heavings or unsoundness of the lungs in pigs, like the unsoundness of the liver in lambs, is sometimes found to be hereditary; there is no remedy. This disease in pigs is often the consequence of cold from wet lodging, or of hasty feeding in a poor state; in a certain state it is highly inflammatory, and without remedy.—Uncion with train oil, and the internal use of it, have been thought beneficial. Salt, nitre, and sulphur, occasionally given in the food of swine, will be found a good preventive of disease in these useful animals.—*From a Treatise on Agriculture by Wm. Evans.*

ECONOMY.—The great art of economy in domestic life, is comprised in the two very homely phrases, "to turn every thing to account," and "to make the most of what you have." But their meaning is often perverted, and the habit of turning every thing to an account, and of making the most of every thing, is ascribed to those who are actuated, not by a laudable desire to produce as much comfort as their circumstances will admit, but by an inclination to indulge in a strong propensity to stinginess. Between extravagance and parsimony, the widest possible interval exists; and that economy, that management and application of means, which is deemed perfectly consistent with the most rigid virtue, and the most generous impulse, is of too admirable a character to partake either of the spendthrift's criminality, or of the miser's meanness.

In the young and thoughtless, a spirit of emulation often shows itself, and sometimes leads to the destruction of their domestic happiness. This unbecoming spirit is the source of discomfort, extravagance, and ruin, by urging on the weak-minded to vie with their superiors in fortune, and to sacrifice so much to appearance, as to render themselves destitute of the means of enjoying the substantial comforts of life.

Young house-keepers should consider the serious consequences that are likely to result from setting out in a style of lavish expenditure; and they should remember that, while it is easy to extend, it is extremely difficult to reduce, an establishment. One expensive article requires another to correspond with it, and one expensive entertainment imposes the necessity of other equally

expensive entertainments; for it requires no small share of moral courage, to risk the loss of consequence which may result from allowing the world, as it is called, to surmise, that we are not so rich as may have been imagined. And when the time comes, as sooner or latter it assuredly must, when the means are not adequate to the demands, what sacrifices are made, and what unseemly contrivances are resorted to, in order to keep up, at last, a poor remnant of 'appearance!' and, when this can no longer be effected, then comes the humiliation, with all the bitter feelings attendant upon retrenchment; of all which feelings, the bitterest is, the dread of being degraded in the world's estimation.—Selected.

SUGAR BEET FOR MILCH COWS.—An intelligent gentleman from the eastward, assured us a few days ago, that by giving his cows a peck of sugar beet twice a day, cut up with their hay, he was enabled to get just as rich milk and butter during the winter, as in summer, when the pasture was at its best. Now, as an acre of ground well manured, planted in this root, and well attended, would yield beets enough to keep ten cows, from the 1st of November, till the 1st of May. Should not every farmer make his arrangements for planting beets this spring? From our own experience, we have no doubt, that this addition of beets to the ordinary feed of the cows, would make a weekly difference of 2 lbs. each, in their product of butter. From the 1st of November to the 1st of May there are 26 weeks. This number of weeks at 2 lbs. additional butter, would give us 52 lbs. for each cow during the period named, or 520 lbs. for the ten cows, and if we set down the butter as being worth 25 cents per lb., it will give us \$130 as the value of additional yield brought about by the feeding with the product of an acre in beets. But this is not all—the proprietor of the cows in the spring, would have the gratification to know that he had treated his animals well, and the satisfaction of seeing them in good condition.—*Farmer and Gardener.*

IMPORTANCE OF CHEMISTRY TO AGRICULTURE.—If we strew the floors of our stables with gypsum from time to time, they will lose all their offensive smell, and none of the ammonia which forms can be lost, but will be retained in a condition serviceable as manure.

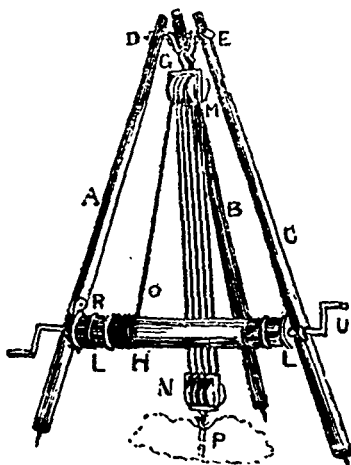
Pastures act a most important part in returning to the soil a supply of nitrogen in place of that taken away in the hay and grain. In large farms, where each field in rotation is in grazing, the nitrogen is completely replaced, and where the manures made on a farm are carefully returned to the soil, the quantity of this important ingredient must increase every year. When the night soil of cities shall be converted into poudrette, as it now is some places, no nitrogen of consequence will be lost, as the quantities used in the shape of corn and cattle will be returned to the country, and made available for new crops and the feeding of new animals. The following extract will show the loss farmers sustain from not attending to these powerful manures:—

“When it is considered that with every pound of ammonia which evaporates, a loss of 60 pounds of corn, (grain) is sustained, and that with every pound of urine, a pound of wheat might be produced, the difference with which these liquid excrements are regarded is quite incomprehensible. In most places only the solid excrements impregnated with the liquid are used, and the dung-hills containing them are protected neither from evaporation or from rain. The solid excrements contain the insoluble, the liquid

all the soluble phosphates, and the latter contain likewise all the potash which existed as organic salts in the plants consumed by the animals.”—*Cultivator.*

Mr. Richardson's Machine for Removing Stones.

A, B, and C, are three strong wooden posts, about 14 feet in length, through the ends of which are holes, for the reception of the strong iron pin DE, upon which is made to slide the curved iron bar G. The holes through which the pin passes being of such a size as to allow a little play to the posts, these may be stretched out like the legs of the common theodolite, in the manner represented in the figure. To the curved iron bar are then attached the fixed block M, and the moveable block N, containing the like number of pulleys. Each of these blocks must be hooped with a strong bar of iron, and the pulleys must be of a size sufficient to admit of a thick rope passing over them. To the lower block N is to be hooked the iron plug P, consisting of a ring for attaching it to the apparatus, of a flat part through which the ring passes, and of a cylindrical part. This cylindrical part may be 2 inches in length, $\frac{3}{4}$ of an inch in diameter at the point, and gradually increasing to about 1-16 part of an inch more at the neck, where it joins the flat part.—The rope O, passing over the fixed pulleys, is attached to the windlass H, which is fixed to the posts A and C. At each end of this windlass is a winch, T and U, for the purpose of saving time in tightening the ropes previous to the windlass being worked.—To work the windlass there are stout bars or levers, for the reception of which are mortises at L, L, as shown in the figure.—At one end of the windlass is fixed a ratchet-wheel, with a catch R fixed to the post A, for the purpose of preventing the weight from falling when the moving power is withdrawn. The posts A and C should be connected by a bar, to keep them steady in their place.



The machine thus formed is to be placed over the stone to be raised, by extending the posts on each side of it, and then the windlass is to be attached. Of the stone to be thus raised, however large it be, it is enough that the smallest part of it can be seen. At this part let a workman, with a mallet and the common boring chisel of masons, make a circular hole, about 2 inches deep, and as perpendicular as possible, so that a stroke or two of the hammer may be necessary to drive the pin home. When thus driven an inch more or less into the stone, it is attached to the block, and the ropes are tightened by turning the winch.—Nothing more is now necessary but to set the men to work the windlass with the

levers; and with no other fastening than this simple pin, stones of some tons' weight may be easily raised from the ground. Being raised up by the pulleys, the stone may be hoisted into a cart or other convenient carriage, and removed from the ground.—*David Low, Esq.*

* An account of this curious machine, the invention of Mr. RICHARDSON, Keawick, and an explanation of the principle on which the iron pin is retained by the stone, though simply driven into it, were given by me in the Edinburgh Philosophical Journal. An account of it was subsequently published in the Transactions of the Highland Society of Scotland. The iron pin, it was shown, is retained in its place by the elasticity of the stone.

Useful Recipes.

TO CURE SCRATCHES IN HORSES.

Wash the feet, or parts affected, with soap suds, wipe them clean and dry, and then apply white lead ground in oil, as thick as can be smoothly and evenly laid on. Exercise moderately, keep the animal dry, and in most cases, the first application will cure effectually. Should a second be necessary, wash off the old lead, and apply with a brush as at first. Six or eight days should intervene between the application.

STAGGERS IN SWINE.

To cure this disease, DeGrauchy recommends cutting a knot in the roof of the mouth till the animal bleeds liberally, and then rubbing it with powdered loam and salt, and giving it a little urine to drink. Pigs have openings on the inside of the fore legs below the knee, from which, when in health, a small discharge is kept up. A stoppage of these orifices, is supposed to be one cause of the staggers; and rubbing them open with a cob or other rough material, will usually effect a cure.

SCOURS IN ANIMALS.

A writer in the Maine Farmer, recommends for this disease, finely pulverized bone. We have never seen it tried, but from the nature of the substances that constitute bone, such as lime to correct too great acidity, and gelatine to smooth the irritated surfaces, it is probable its employment would be useful.

CROUP, OR HIVES IN CHILDREN.

Cut onions into thin slices, between and over them, put brown sugar. When the sugar is dissolved, a teaspoonful of the syrup will produce almost immediate relief. The Editor of the Farmer's Advocate, says he has known the onion used for this formidable disease, but prepared differently.—“Wrap the onion in a wet cloth, or cabbage leaf, cover it with hot embers, and roast it slightly which may be done in a few minutes; the juices then pressed out and sweetened with sugar.” Prepared in either way, it is pronounced effectual.

SCOURS IN CALVES.

When the calf is attacked, it should be put in a warm, dry stable, and not be permitted to suck more than half the quantity of milk it is wont to do; but should be put to the cow regularly three times a day. Make a tea of equal portions of white oak, beech, dogwood, and slippery elm bark, and give small doses twice a day, and the calf will soon recover.—*Agriculturist.*

HORN DISTEMPER.

A “Practical Farmer,” in the Boston Cultivator, while he admits that the application of spirits of turpentine is good, asserts the use of hot brimstone is still better, for the cure of the horn ail. He turns one spoonful of boiling hot into the cavity just between the horns.

Domestic Economy.

In looking over my returns, I was struck with the remark of a man of much practical wisdom, and one of the best farmers in the Commonwealth. He says "that a farmer should produce upon his farm all those supplies for his family which the farm can be made to yield." In his case, this is done within doors and without; for there the spinning wheel has not forgotten to turn round, nor the shuttle to speed its flight. In this cottage, whose neat and beautiful arrangements cannot be surpassed, the clothing, the bedding, and the carpeting were all the product of all their own fields and flocks. I shall not soon forget the unpretending and hearty hospitality of these enviable dwellings. I have slept many a time under a silken canopy, and trodden many a carpet as soft as the pride of eastern luxury could make it; but never with anything like the sentiment of honest pride and independence with which I saw here the floors spread with carpets made from their own flocks, which for fineness and beauty the foot of a princess need not disdain, and on a cold night slept in woollen sheets from their own looms, as soft as the shawls of Cashmere; and wiped my face with towels spun with their own hands from their own flax, of a whiteness as transparent and delicate as the drifted snow. In such beautiful examples of domestic management, it is delightful to see with how limited means the best comforts and luxuries of life may be purchased. Nor were these instances few. The county of Berkshire abounds with examples of this domestic comfort and independence. Much to be regretted will be the change which has already invaded many parts of the State, when under the pretence of superior cheapness, these household fabrics shall give place to the more showy but flimsy products of foreign industry; and the healthy exercise of domestic labor and household cares shall be deemed degrading in our wives and daughters, and exchanged for the idleness and frivolities of pride and luxury.

I agree entirely in the sentiment above expressed, that every farmer should, as far as possible supply the wants of his family from his own farm. He should supply himself with bread, meat, vegetables, milk, butter, cheese and clothing, as far as his farm can be made to do it. He can almost always do it at a less expense than he can purchase these supplies. The labor requisite for this purpose may often be given at times when it would not otherwise be occupied; and by hands for which there might otherwise be no employment. The sentiment of self-respect and self-dependence inspired by such a course, is a great gain. The satisfaction of eating bread raised by one's own labor is not small; and various and important moral influences, which I shall not now discuss, render it altogether desirable; though in some cases the same amount of labor consumed in their production, if applied in other ways, would purchase a larger amount of the same supplies. Though the supply of our own great wants from our own farms, might seem, however, in some cases, to be a pecuniary loss, it is always in the end a moral gain, with which the pecuniary loss is not to be put in competition.—*Colman's Surrey.*

European Farming.

I think that the superiority to be observed in British and Flemish agriculture is to be attributed to the nice adaptation of crops—the perfect system that prevails in every department—the free outlay for manures to invigorate the soil—the patience that never tires in the completion of a task once undertaken, and the industry that in no kind of weather, at no season of the year, fails to remember and perform its tasks and duties.

England is remarkable for confining to certain districts, the productions which flourish best in those soils. Thus the light sands of Norfolk are best adapted to turnips, sown off and followed by barley and clover, therefore in that country the rotation of turnips, barley and clover prevails. It was by this course that Mr. Coke (Earl of Leicester,) reared from perfect barrenness his splendid estate at Holkham. Warwickshire is famous for beans as a first course, followed by wheat.—Lancashire for potatoes as a first crop, wheat and timothy following.

Not less perfect is the system: each one has his part and his duties assigned to him—he is there at all times, and in all weathers, and he stipulates to be only there. And this system pervades all things on the farm.

Upon a farm in Surrey, where I spent six pleasant and agreeable months, I had the opportunity to see the use and the profits of systematic farming. It was a hay farm, of less than two hundred acres—the rent paid, about \$2000. The whole farm, except the garden, was mowed. After the hay was taken care of, the fields were all shut up until there was a good feed upon them. Then Mr. R., went to the nearest fair and purchased large beeves nearly fat. In these fresh, luxuriant pastures, where the grass grew almost fast enough to render not fabulous Sir Boyce Roche's story of the kite thrown into an Irish meadow over night, hidden by the grass next morning, the beeves became in a very short time fit for Smithfield or Old Leadenhall. After a few days' rest, the fair was resorted to for a second drove of cattle of smaller size, but in good flesh, which soon shared the lot of all fat oxen, and became the roast beef of old England. The fields were no longer in a condition to make beef, and therefore, were to furnish the predicament "nearly fat" to take the "first bite" in some unfed meadow. The fourth course was a herd of small Welsh cattle to be merely improved. Fifth and lastly came sheep to be kept till the meadows began to start in the spring, when they were sold, and the meadows shut up.

To recruit this farm, the carts which took the hay to market returned laden with manures to be used as a *top-dressing*.—When not bringing back provisions for farm use, I think I may say they always came back with manures. I had some years ago in my possession a book, which was borrowed by some kind friend or other, and he liked it so well that he forgot to return it. This book gave the best account of the English practice with respect to manures, of any I have ever seen. It was said in that book that five thousand tons of manures had been applied in one year on a single estate. I know that the quantities are immense, and that the lands in that country are kept in a high state of fertility by the axiom impressed on the husbandman that *food is as necessary to the earth as to the human body*. But do not think that I have selected a pattern farm for the subject of the foregoing remarks. It was in all respects only a medium farm. There could not be the same opportunity for the more elaborate practices of husbandry that there is in large Yorkshire farms. It is my opinion that some of the best managed farms in England were on the estates of the Duke of Buckingham at Stowe, in Bucks. It is, however, the *fashion* in England to patronize agriculture: heaven grant it may become so here. You can form no idea with what ease an American can introduce himself to the English, if he is fond of farming. The gift of a few ears of Indian corn to the Horticultural Society brought me tickets and invitations without number to their gardens and fetes, at Chiswick.—*Far. Mon. Vis.*

TO CURE WARTS IN COWS.—A writer in Bell's Messenger says, a solution of alum in water applied to warts on cattle, will effect a cure in a few days.

FATTENING POULTRY.—An experiment has lately been tried of feeding geese with turnips, cut very fine and put into a trough with water. The effect was, that 6 geese, weighing only 9 lbs. each when shut, actually weighed 20 lbs. each, after about three weeks feeding with this food alone.

Malt is an excellent food for geese and turkeys. Grains are preferred for the sake of economy, but will not fatten so fast.

Oats ground into meal and mixed with a little molasses and water; barley meal mixed with sweet milk; and boiled oats mixed with meal, are all excellent for fattening poultry, reference being had to time, expense and quality of flesh.

Corn, before being fed to fowls, should always be crushed and soaked in winter, or boiled. It will thus go much further and digest easier. Hens will often lay in winter when fed in this manner, especially if well sheltered.—*New Genesee Farmer.*

A HORSE POWER REAPING MACHINE.—By Mr. G. Read, 76 Barclay-street, New-York. This is the most rationally constructed machine for cutting grain, that has ever been introduced. It is mounted on one pair of wheels, and the horse by which it is operated, travels forward by the side of the standing grain, while the cutting apparatus projects to the right about four feet; and taking a swath of that breadth, cuts and gathers the grain and deposits it in quantities suitable for binding, and at stated distances on the ground at the opposite side of the machine; while the attendant has only to sit on a convenient seat provided for him, and guide the horse. On fair ground, one machine will cut twenty acres of grain per day, and in better order than can be done by the best grain cradle.

TOBACCO CHEWING.—The St. Louis Gazette goes into a calculation to show the amount of tobacco a man chews in a lifetime. The Editor says:—"Suppose a tobacco chewer is addicted to the habit of chewing tobacco fifty years of his life, each day of that time he consumes two inches of solid plug, which amounts to 6,375 feet, making nearly one mile and a quarter in length of solid tobacco, half an inch thick, and two inches broad." He wants to know what a young beginner would think if he had the whole amount stretched out before him, and he were told that to chew it up would be one of the exercises of his life, and also that it would tax his income to the amount of \$2,005. We guess he would think it a pretty considerable job.

HORSES AND OXEN FOR TEAMS.—I have observed that in many places horses have taken the place of oxen, are used for the purpose of farming, introduced, I suppose, under the impression that they are better adapted to the service, and more profitable to the owner. I am not about to contradict the truth of this supposition, or prove that a man cannot plough and harrow as fast and as well with horses as with oxen, but shall merely mention a few of the comparative merits and demerits of these animals, that may determine which is most useful and profitable.

The horse, when put to service, must have arrived at his full strength and value, consequently there is no gain on the capital invested, besides what arises from service, and as he is good for nothing at the end of service, there will be a discount at least equal to the amount of his cost.

The ox may submit to the yoke when young, and partly remunerate his owner for cost of keeping, while obtaining his growth, when he may be sold to the butcher, and the money invested in younger stock; thus

there will be a constant gain in growth, while the services will be sufficient for the purposes of farming. The horse, if kept on hay alone, must have his masticating powers in almost perpetual motion; the ox reserves some of his time for rumination, hence there may be a difference in the cost of keeping. The cost of equipping a horse for the regular farm service is greater than that of an ox, and more time is required to put on and off these equipments. In shoeing, the difference of cost is in favour of an ox, as also it is in the quality of the manure they make. The ox has an intrinsic value arising from the good qualities of his flesh and skin, the one being good for food, the other for leather, whereas very little can be made out of a dead horse. For some kinds of farm service, the horse is preferable to the ox, such as light ploughing and harrowing, but for carting, hauling stones and other heavy work, he is not so good. He is better adapted to the road service, and is useful for milling, marketing, and meeting, he also may be used for journeying and visiting. It is convenient, and perhaps profitable, to keep both these useful animals as well as cows, sheep, and other stock, but when the number of horses greatly exceed those of oxen, or even cows, it is time to begin to count the cost, which may be done by opening account current with each animal, keeping debt and credit, or what you give or receive from each.—*Maine Farmer.*

Culture of Wheat.

Wheat is the most important of all the grains and its varieties are numerous. Among those now in cultivation, the following may be enumerated:—The bearded, the Dunghes, the golden ear, the velvet ear, the egg-shell, the hedge-wheat, the Essex dun, the Kentish yellow, the white and red Essex, the Mungoswell's, the Burwell red, the Hunters, and the Georgian. A general division of wheat is made into white and red, with several shades between, and summer and winter. Winter wheat may be brought into the nature of summer, by altering the time of sowing. If winter wheat be sown at the period for putting summer wheat into the ground, in the course of two seasons the winter will become of a similar habit as the summer, and the same process will bring a summer wheat to be a winter one.

In general, the fine white wheats are preferred to the brown and red; but the latter is most profitable for wet adhesive soils, and unfavourable climates, on account of its hardness and ripening early. A red wheat, of great productiveness, has been recently introduced into Scotland from *Mar-lane*.

The variety of wheat most profitable to be produced must depend upon the nature of the soil, as land which has produced an indifferent crop of one may yield an abundant crop of another kind, and land is frequently found to yield better crops if the varieties be alternately changed. It has been observed, that a mixture of grain produces the heaviest crops, and that mixed flour makes the best bread.

The richer description of clays and strong loams are the best adapted for the production of wheat, but if properly cultivated and well manured, any variety of these two soils will produce excellent crops of this grain. Good wheat land ought always to possess a large quantity of clay and little sand; for although light soils may be made to produce good crops, yet the strong clay lands in general yield the heaviest grain. Sandy soils, being deficient in firmness, do not afford sufficient support to the roots of plants, such as wheat, which do not sink far into the soil. There are light soils, however, made from decomposed granite, felspar, or clay-stone, compounded with vegetable matter, which produce excellent wheat. These soils abound in the neighbourhood of Edinburgh, and in Fifeshire, and the wheat from them is frequently superior to any in the Edinburgh market. The produce of these soils, however, is much hurt by dry weather.

Colonel le Coutour, of Jersey, has made the culture of the best varieties of wheat his particular

study for several years, and has arrived at the following conclusion by actual and careful experiment:—namely, 'that one ear of a superior variety, sown grain by grain, and suffed to tiller apart, produced 4 lb. 4 ounces of wheat, whereas another ear of an inferior sort, treated in the same manner, produced only 1 lb. 10 ounces. This proves that it is of paramount importance to select the most productive and farinaceous sorts for seed; it being obvious, that a farmer who would have sown his whole crop with the last variety, would have probably been ruined; whereas, the superior variety would have enabled him to farm with profit.' It is hardly possible to enter a field of wheat nearly ripe, without observing that the ears of some of the plants are much superior to the generality of those growing around. Several new and excellent sorts have been obtained, by intelligent farmers making a selection of these remarkably superior ears; saving and growing them apart until the pure stock was increased to serve themselves, and, in time, their immediate neighbourhood. By such means, the *Hardcastle*, the *hedge-wheat*, *Hunter's*, *Heckling's*, &c., have been originated; and with manifest advantage to the sowers, so long as the sorts were kept pure, and attention being paid to giving the sorts those most suitable soils which experience had pointed out. This mode of obtaining improved varieties of corn, so strenuously advocated by Colonel le Coutour, has been practised but by few farmers; a general idea prevailing among them that it is the richness of the land and judicious culture which gives quality, and consequently value, to the sample. In this they are partly right; because, though very fine wheat, in a miller's estimation, may be grown on poor land, it is impossible to grow a profitable crop; a great bulk of both straw and grain answering the farmer's purpose better than the high quality of the latter.—But Colonel le Coutour seems fully convinced that both these objects, that is, quantity and quality, may be obtained at the same time, upon ordinary wheat land; and this is a result that should always be kept in view by agriculturists. Adapting the sort to the soil is one means for securing success. The red and yellow wheats answer better on the heaviest clayey loams than the white varieties, which are delicate, and more suitable for lands of a lighter description." Sir George Mackenzie of Coull has found by experiment that the variety of wheat, cultivated so successfully by Colonel le Coutour, thrives well in *Ross-shire*, and in that northern county actually yields a heavier produce than in *Jersey*. This, however, we must ascribe to Sir George's skilful mode of farming, more than to either soil or climate.

The late Mr. Brown of Markle, an experienced agriculturist, was of opinion that profitable crops of wheat might be produced every second year on rich clays and loams, if well cultivated and situated in a good climate. Land, however, must be highly manured and judiciously fallowed, to bear such frequent repetitions of wheat.

"The season for sowing wheat is necessarily regulated by the state of the land, as well as of the season, on which account it is not always in the farmer's power to choose the moment he would prefer. After fallow, as the season allows, it may be sown from the end of August to the middle of November. On wet clays, it is proper to sow as early as possible, as such soils, when thoroughly drenched with moisture in autumn, are seldom in a proper state for harrowing till the succeeding spring. In the opinions of many experienced husbandmen, the best season for sowing wheat, whether on fallow, rag-fallow, or ploughed clover stubble, is from the beginning of September to the 20th of October, but this must depend upon the state of the soil and weather.—In *East Lothian*, on dry gravelly loams, in good condition, after a clover crop, and well prepared, wheat has been known to succeed best when sown in November. After drilled beans, when over the season will admit of ploughing and harrowing, wheat may be sown from the middle or end of September to the middle of November; after this season, the sowing of wheat ought not to be hazarded till the spring quarter returns.

After turnips, when the crop is consumed or led off, and the ground can be properly ploughed, wheat may be sown any time betwixt the 1st of February and the middle of March, and it is customary to plough and sow the land in successive portions as fast as the turnips are consumed. It

is only on turnip soil of a good quality, verging towards loam, and in high condition, that winter wheat, sown in spring, can be cultivated with success. When circumstances are favourable, however, it will generally happen that such lands, when wheat is not too often repeated, will nearly produce as many bushels of wheat as of barley.—The wheat crop, therefore, on an average of seasons, will exceed the value of the barley crop considerably; hence its culture is an object which ought not to be neglected."

Wheat, as will afterwards be more particularly mentioned, is liable to certain diseases, as, for example, smut, mildew or rust, &c. With the view of preserving the grain from these most injurious disorders, it is customary to prepare the seed by steeping or pickling it in a kind of saline brine, or diluted urine. The value of this process may be learned from the following experiments, as stated in various reports before us. Mr. Bailey of Cheltenham tried experiments on seed in which were a few balls of smut. One-third of the seed was steeped in urine, and limed; one-third steeped in urine, dried, and not limed; and the other third sown without steeping or liming. The result was, that the seed which had been picked and limed, and that which was picked and not limed, was almost free of smut; while that which was sown without undergoing this process was much diseased. The following experiments were made at Lord Chesterfield's farm of *Bradly-Hall*, in *Derbyshire*.—The first was on a peck of very smutty wheat, one-half of which was sown in the state it was bought, and the other washed in three waters, steeped two hours in brine strong enough to float an egg, and then limed. The result was, that two-thirds of the wheat grown from the unwashed seed was scanty, while that produced by the steeped and limed seed had not a single ear of smut. The second experiment was made upon some very fine wheat, perfectly free from smut. A quart of this was washed in three waters, to make it perfectly clean; it was then put for two days into a bag in which was some black dust of smutty grain, and the result was that a large portion of wheat thus sown was smutty, while out of twenty acres sown with the same grain, not inoculated, not one smutty ear was found. Mr. Taylor, junior, of *Ditchingham*, near *Bungary*, sowed a number of ears of wheat with the powder of smut, having moistened them to make the powder adhere; one-half of these were washed, wetted with chamber lye, and limed. A similar quantity of dry wheat was then procured, the whole being dibbled, each parcel by itself. The produce of the infected wheat was three-fourths smut; the same infected wheat, steeped and limed, was perfectly sound. The valuable results arising from steeping wheat seed need not be further illustrated, and we shall now proceed to describe the process.

Steeping or pickling is performed, as already mentioned, after the seed has been washed, by allowing it to lie for a time amongst stale urine, diluted with water, or salt brine, of sufficient strength to float an egg. This seed is put into tubs, containing as much liquid as will cover the grain a few inches, and allow it to be well stirred, so as to bring all the light grains to the surface, which are skimmed off as long as they continue to rise. Another way is to put the seed into baskets, which are immersed in the water, are easily taken out, and can be conveniently placed over an empty tub to drain. The seed is left for three or four hours in the chamber lye, or full six hours in the pickle, after which the liquor is drawn off, and the wheat spread thinly on the floor of the granary, where it is well sprinkled over with quick-lime, slacked in the liquid. About half a peck of lime is sufficient for a bushel of wheat, and it should be well stirred, so that every grain may get a portion. If the seed is to be drilled, it should be passed through a coarse sieve after being limed, which will facilitate its progress through the machine. The grain will thus be quickly dried; and it should not lie more than six hours in the heap, then be spread out and used the following day.

Some caution should be used in having the lime properly slaked, for if this is not done, too great a heat may be raised, which will destroy the vegetative principle. Doubts have been expressed of the efficacy of lime, and a solution of copperas is used on the Continent instead. Dry powdered lime would certainly have no effect, but when

newly slaked it is very efficacious, as has been proved from experiment. It was found that a steep of lime water alone, in which wheat was immersed for four and twenty hours, proved a powerful preventive of disease, while the good effects of unmixed brine were very inconsiderable.

Of the two kinds of steeps mentioned, urine is thought the most efficient, and it should be used neither too fresh nor too stale, as in the first state it is inefficacious, and in the second injurious.—The seed should be sown as soon as dry; for if allowed to lie in sacks or heaps beyond a day or two, the lime may be very hurtful. Another steep, which is recommended by Sir John Sinclair, and is much used in Flanders, France, and Switzerland, is a weak solution of the sulphate of copper, or blue vitrol. The modes of using it are as follows:—

Into eight quarts of boiling water put one pound of blue vitrol, and while quite hot, three bushels of wheat are wetted with five quarts of the liquid; in three hours the remaining three quarts are added, and the wheat is suffered to remain three hours longer in the solution. The whole should be stirred three or four times during the six hours, and the light grains scimmed off. After the wheat is drained, slaked lime is thrown on it to facilitate the drying. Another way of using it is to dissolve five pounds of the sulphate of copper in hot water, and add as much cold water to this as will cover three bushels of wheat. The wheat is allowed to remain five or six hours, or even longer, in the liquid. After two or three bags, of three bushels each, have passed through the liquid, one pound more of the sulphate for each bag should be added; and after twelve bags or so have passed through, new liquid will be required.—From a Treatise on Agriculture, by James Jackson.

Communications.

To the Editor of the British American Cultivator.

Sir;

Having always taken a deep interest in the Agricultural prosperity of this country, and having ever been of the opinion, that a well conducted periodical, purely devoted to that subject, would be one of the most efficient means that could be made use of to advance those interests, it gives me great pleasure in witnessing the exertions you have already made to establish one of that character; and I hail it as one of the most promising indications of the future prosperity of the country, and most sincerely hope, that those whose interests you are advocating, will from one end of the Province to the other, come forward and sustain it with their subscriptions. I am well aware that in order to enable you to do justice to your undertaking, you must have a large list of paying subscribers, and I hope a sufficient number will be found amongst the Farmers and Mechanics of Canada, to give your paper such a circulation, as will amply reward your patriotic undertaking. To make the columns of the Cultivator interesting, you must have a number of Contributors; although I am very incompetent, and cannot clothe my language in a style as edifying as many, yet I feel it an incumbent duty to do what I can, to set an example for others, and encourage you in your praiseworthy undertaking, particularly so, as I have had the honor to be placed at the head of the Agricultural Society of this District for some time.

I fell in hopes that many of those practical farmers interspersed through our country who are more competent than myself, will be induced to exercise their pens for the purpose of promoting the great and leading interests of the country. If these interests are in a healthy and prosperous condition, all others in their train will advance proportionately, but a depression of that art in which nine-tenths of the whole population are engaged, must inevitably have a deadening influence upon every other branch of business in the country.

I trust your Journal will have an extensive circulation among the mechanical class of the community, and knowing that there are many among that class who, from their intelligence and habits of application to useful reading, are well qualified to contribute to your columns, I hope they will not allow diffidence or a dread of criticism to deter them from coming before

the public, for there is no doubt they could communicate much useful information, that would not only amuse but instruct.

No doubt, that class who have been qualified by a superior education (I mean the gentlemen of the learned professions,) will, occasionally enrich your columns with an article couched in a more elegant style, and with a highly polished literary finish; which will serve as models for those, who like myself, are more practical than scientific, but nevertheless, are anxious to see the country prospering in its agricultural, commercial, mechanical, and literary interests.

E. W. THOMSON.

Bronzio, Toronto, Jan. 15, 1841.

To the Editor of the British American Cultivator.

Toronto, 10th January, 1842.

Sir;

Permit me as one of the many who will, I am sure, be benefited by reading the Cultivator, to return my thanks to you for that service which I anticipate the publication of an Agricultural paper will render to the country.

That the farmers of Canada are as anxious to advance their interests as in the world there can be no doubt; and as agricultural instruction by means of the press, has been found so highly beneficial in England and elsewhere, I am satisfied you will meet with that public encouragement which is justly due to you as the first Editor in this Province, of a paper devoted exclusively to the extension of its agricultural interests.

If the farmers will freely make known to each other through the medium of your paper, the results of their experience and opinions on the preparing of the ground, the time of sowing, the quantity of seed requisite to each variety of soil, and the treatment of their stock, &c., &c. they will, by contributing such matter to the columns of the Cultivator, not only encourage your undertaking most effectually, but support the best interests of the Province.

Wishing you every success,

I am, yours,

W. A. BALDWIN.

The Properties of Gypsum and Lime.

To the Editor of the British American Cultivator

Sir,

As there is a growing prejudice against the use of Plaster of Paris and Lime, through an injudicious application of those substances as a stimulating manure, I hope the following remarks will be the means of correcting it:—

The value of Plaster of Paris upon all sandy loams in dry situations is incontestable.—Plaster having perhaps the greater attraction for carbon and moisture than any other substance; attracting by its affinity moisture from the atmosphere, and as an agent giving it out to vegetable matter.

Lime also has a great attraction for carbon and moisture, so much so that in about four days it will absorb one-fourth part of its weight when taken from the kiln. It is very seldom found in its pure state being impregnated with carbon, whence lime in the quarry, is called Carbonate of Lime.—It contains 56 parts of lime and 44 parts of carbon and earthy matter—plaster contains 50 parts of phosphate of lime and 50 of florid acid and other matter. The breath exhaled by man or beast, although ever so pure, when taken into the chest, is highly impregnated with it. The impure air caused by corrupted vegetation, which arises from marshes and swamps, shows plainly the reason those places are unhealthy—as there is more carbonaceous gas formed than the vegetable substances can consume. Lime is essentially necessary to vegetation.—Every plant or shrub, if dried and burnt to ashes, contains nearly half its weight in lime. This speaks volumes to the farmer of good understanding. If he sells his hay and straw from his farm, he robs it of a great deal of the lime which was incorporated in the soil, a practice, which if followed,

would in a short time make it nearly dead matter.—Earth in its primeval state, has a proportion of lime, some greater and some less, which is seldom found too great for the nourishment of plants.

Plaster has a powerful agency for attraction to carbon, which may be understood by noticing the effects of about one bushel sown upon an acre of meadow. On a dewy morning in the spring, throw it over your fruit trees; if they are forty feet high the influence will be the same. This fact will be sufficient to convince the ignorant, who imagine that plaster extracts all the virtue the soil contains. I will venture to assert, if fall be taken back on the land in the shape of manure, which plaster, lime, marl, or other stimulating mineral substances caused to bring forth, that no alarm need be given as to the result. But the great discrepancy rest upon this point, by giving a dressing of these substances, a great return will almost invariably be the result, consequently the land is impoverished in proportion to the produce. The common practice is to dispose of much of the hay and straw, and those who practice that system, forget that they have robbed their farm, and omit to purchase manure from those who purchased their hay or straw, and by that means fail to keep up the original qualities of the soil.—It is not uncommon, through the agency of plaster, on red clover meadow, to get a return in one summer of four tons per acre, (including first and second crop), that quantity judiciously fed to stock, might be converted into manure, sufficient to top dress an acre, and by following out the plan of plastering and top-dressing, and allowing nothing to be wasted which is produced from the land, the fertility of the soil will be increased yearly. This doctrine may appear strange to some, but it is no more strange than true. To conclude, I hope those who are under this false impression, will take the trouble to read these few lines, and if they digest them properly, I flatter myself that I may be the instrument of convincing them of their error.

WILLIAM WALLIS.

City of Toronto, Jan'y 20th, 1842.

Rohan Potatoes.

To the Editor of the British American Cultivator.

MR. EDITOR,

In your first number of The British American Cultivator, I noticed an article, headed "To Correspondents," in which, amongst a variety of roots and plants, which you set down as "humbugs," the Rohan Potatoes is classed as one. I was very much astonished to see this potatoe termed a humbug, knowing to the contrary that it is an excellent potatoe, and well worth cultivating by every farmer in Canada.

I raised in 1840, a patch of the Rohans, which returned me a crop at the rate of six hundred bushels to the acre, which certainly cannot be termed a bad yield. A friend of mine in this neighbourhood, planted one acre of Rohans last year, on purpose to see the quantity they would produce by common cultivation. They were planted in drills thirty inches apart—the ground previously being in a very bad state of cultivation—but was subsequently manured at the rate of sixty single horse cart loads per acre, and treated in every other respect as his other potatoes. When ploughed up in the fall, they yielded a return of four hundred and thirty bushels of good sized potatoes.

I have been frequently told that those potatoes were good for nothing but feeding pigs; but I can assure you when they are properly treated and grown on a light sandy soil, you would find them to be a really and

good flavoured potatoe. It is not unusual to class among the humbugs, many valuable roots and plants, before their qualities are properly tested by a regular system of cultivation.

I would recommend the following system for cultivating the Rohans, and if only your readers think proper to adopt it, I am satisfied they will not be disappointed in a crop. Lay out one acre of ground, or any given quantity; let it be well ploughed and harrowed, in fact made as mellow as possible, form it into drills three feet wide, and manure at the rate of fifty cart loads per acre, spread the manure in the drills, cut the potatoes into sets, containing two eyes each, and plant them on the top of the manure in the drills, thirteen inches apart, and cover them with the plough, and by all means have them planted as early in the month of May as possible. The after cultivation merely consists in keeping them clean and free from weeds, and earthing them once or twice as occasion may require, with the plough.—Wishing you success in your valuable publication. I am yours,

JAMES FLEMING.

Toronto, Jan'y 22nd, 1842.

NOTE BY THE EDITOR.—In speaking the Rohans in our classification of modern humbugs, we did so through the firm conviction that they were not what they were boasted to be—second to any, even pink eyes not excepted. Although these invaluable variety of potatoes, as they are termed by their advocates, have succeeded with some under particular circumstances; yet as a potatoe for general cultivation, we would in our humble opinion, consider them inferior to many other varieties. We think the majority of those who have given them a fair trial, will bear us out in this opinion.

As Conductors of a Public Periodical, we may at times err in our judgment, but we will with pleasure, at all times, insert contrary opinions, if they be supported by sound argument, and by persons of practical experience. Our object is to instruct, not to mislead.

From the Montreal Gazette

**Mr. Evans' Report,
On Agricultural Improvement.**

*On the cost of breeding and feeding cattle,
sheep and swine.*

In my last communication, I stated that I would submit for consideration, what I estimated as the cost to the farmer of breeding, rearing, and fattening animals in this country, I shall begin with neat cattle.

The value of a calf, immediately at her birth, I set down at.....	£0 0 0
Milk for three months, in any situation should be worth five shillings a month.....	0 15 0
Pasturage, from the time the calf is able to eat grass, until the commencement of the following winter.....	0 5 0
Hay, roots, or other winter food, for the first winter, say one hundred and eighty days.....	1 0 0
Cost at the end of the first year from birth.....	£2 6 0
Second year, pasturage for the summer.....	0 10 0
Keep for second winter.....	1 5 0
Cost of the animal when two years old.....	£4 0 0
Third year, pasturage for the summer.....	0 12 6
Keep for the third winter.....	1 10 0
Cost of the animal when three years old.....	£6 2 6
Fourth year, pasturage for the summer.....	0 15 0
Cost of the animal when three and a half years old.....	£6 17 6
I have not charged for attendance, as I consider the manure made by the animal will pay	

for that, I would observe, that if the animal is a heifer, they generally produce a calf at two years old; when her cost amounts only to four pounds currency. In any case they do not exceed three years old, when they produce a calf, and begin to make some return for their keep, and the capital invested in them, in rearing them to that maturity. I do not see, that in any situation in Canada, however remote from market, if the animal has to be fed under cover, or in yards during the winter, that I would estimate their cost at less than I have set down for the several periods. Hence it will be perceived that a heifer of two years old, the earliest possible period that she can yield any return to the farmer, has cost him four pounds currency. And an ox kept to three years and a half old, the earliest possible period that he would be fit for the shambles, will have cost the farmer six pounds, seven shillings and six pence currency. In this estimate I have omitted any allowance for casualties, which would at least require ten per cent on agricultural animals. Interest on capital should also be allowed. As the quality of the animals will depend chiefly upon the breed and keep, I cannot pretend to estimate accurately their value when at maturity; or at the several periods above referred to. Under ordinary circumstances in Eastern Canada, I do not suppose that I could fairly estimate the weight of an ox of three years and a half old, at more than from five to six hundred pounds weight, of beef, hide, and tallow. Hence it will be easy to calculate and ascertain what price beef should bring to pay the Canadian farmer the first cost, interest on capital and a reasonable profit. It is perfectly clear, however, that the present prices in our markets will not refund the farmer his actual expenditure. In the present state of our agriculture, I doubt very much, if the average weight of Lower Canada oxen at three and a half years old, would exceed five hundred pounds at the utmost. If cattle are well kept at all times until at maturity, they may produce more weight of beef and tallow, but they will cost the farmer more than I have estimated for them. No farmer residing within convenient distance to market, can raise cattle at the estimate I have laid down for them. If oxen should be kept the fourth winter, and stall fed, they might pay better, but the number thus fed should find a home market, and that would be very limited, and in fact it cannot be counted upon with any degree of certainty under present circumstances. A farmer may expend a large amount in stall-feeding a lot of cattle, and when they are ready for the shambles, a lot of fat cattle are brought in from the United States, and the price may be reduced to what they cost him when put up from grass, or very nearly so. Hence it is, that none of our farmers can safely attempt to feed cattle for Canada markets, as there is no assurance to him of anything but loss, by doing so.

Of the cost of raising horses, it is needless for me to make any estimate. The sale of horses depends a good deal upon fancy, and other accidental circumstances, and as the farmer will always require horses, they have to be raised at whatever cost.

It is scarcely necessary for me to attempt to estimate the cost to the farmer of raising sheep to maturity. I may observe, however, that it is only by the most careful management of sheep that they can pay the farmers in Canada. If a good produce of lambs are not annually raised in proportion to the number of the flock kept, it is impossible the keeping of sheep can remunerate the farmer. It requires a lamb, and fleece of good weight, to pay for the keep of a ewe, that is kept as she should be kept to insure profit.—While thousands of sheep are constantly coming in from the United States, sheep never will be generally and extensively kept in Canada, however necessary and advantageous they would be to Canadian agriculture. We have abundant proof that there is not anything in the climate or soil of Canada, that would prevent us raising and keeping the best of sheep, as we have several flocks of the finest and most valuable description of those animals in the neighbourhood of Montreal and in many other parts of the country.—The owners of these choice flocks may, I suppose, even under the present unfavourable circumstances, find ample remuneration, but it is because there are only a few, comparatively, of such choice flocks in the country; if good sheep were more generally to be found, and the free admission of foreign sheep to continue, no farmer

could keep sheep profitably, of whatever description.

Few experiments have been made in Canada on the feeding of swine, with a view to ascertain the actual cost of producing a certain quantity of pork. Swine, to a certain age, are chiefly fed on the offal of dairies, the kitchen, and on grass in summer. It costs something, however, to bring them to a age, that they are fit to put up to fatten. A good breed of pigs put up to fatten in fair condition, if fed on peas (the very best food for making good pork), may increase in weight at the rate of about one pound or something over, for every gallon of peas they consume, and if fattened on other grain or vegetables, they will be found to increase in weight very nearly in proportion to the nutritive matters contained in the sort of grain or vegetables they are fed upon, compared with the nutriment in peas. In England, or where dairies are kept, they generally keep one pig for every four cows, and they expect that each pig, will, during the summer, fed on the cheese whey and offal of the dairy increase in weight about 200 lbs., or about 50 lbs. for the waste of each cow. I suppose the same result would be obtained in Canada. From the nearest estimate I can make of the cost of feeding pork, from the period of putting swine up to fatten, I believe that every pound weight of flesh they give, will cost the farmer at least three pence, or at the rate of five dollars the 100 lbs. In most cases, it will cost much more, when there is not a good breed of swine, and when they are not judiciously attended to. Any individual who will purchase store pigs in our markets, and try the experiment of buying food for fattening them, will find that the pork fed, will cost him double what the farmer can sell for, or I should rather say, can obtain for it, in our markets. In England they expect that a bushel of barley will produce ten pounds of green bacon when first dried, provided the hogs are of a good breed, and easy to fatten,

It is much to be regretted that we have not the result of accurate experiments on the feeding of neat cattle, sheep, and swine in this country.—When such experiments would be made, they should be very carefully attended to throughout.—If this was not done, it would only lead us into error. At the commencement of the experiment, the animals, of whatever kind, should be weighed, and subsequently every month at least, during the time of feeding, and finally at the close of the experiment. Also, the food consumed daily, weekly, and monthly, the sort of food made use of, and whether raw, boiled, whole or ground.—The age, and breed of the animals should be noted, and whether male or female, or had produced young. Experiments might also be made on grass fed cattle of various breeds. It is by adopting such measures, that farmers will understand their business, and the value of various varieties of animals, and of the food they consume. I have seen many wonderful statements of what animals have been brought to, but not a title of information of the cost of bringing them to that great perfection. The farmers of Canada want profit more than show, and have not capital to expend, without some prospect of its being refunded to them.

I am sorry that I could not give more accurate information on the cost to the farmer of feeding pork. If I am found in error in any of my estimates, I shall be glad to be set right. My only object is to bring the subject fairly before the public, and with that view, I have made my estimates as accurately as was in my power, and without any intention to mislead.

In conclusion, I am happy to have it in my power to acknowledge the receipt of the first number of the *British American Cultivator*; having only received it last night, I had not an opportunity of reading the articles throughout; I have seen sufficient of it, however, to warrant me in recommending it to every farmer in British America, and wish the proprietors every possible success in their laudable undertaking. Such a paper was greatly wanted in Canada, and if the farmers desire their interests to be advocated fairly, and constantly attended to, they will support this paper, and give it a full and fair trial.

WM. EVANS,

Cote St. Paul, Dec. 31, 1841.

PRUDENCE.—Prudence is of more frequent use than any other intellectual quality; it is exerted on slight occasions, and called into act by the ordinary business of common life.

(From the Albany Cultivator.)

North Deighton, Wetherby, Yorkshire, }
 April 17, 1841. }

GENTLEMEN—Your polite favour came to hand yesterday, for which I beg you will accept my best thanks. That any effort of mine for the spread of agricultural science, should entitle me to the notice of those who are devoting their energies to its cultivation in a country so far distant as America, I do not for a moment imagine, and for this reason it is that I feel it as a compliment. But it is not as a personal compliment that your communication gives me greatest pleasure, nor is it for the sake of bandying unmeaning verbiage (for such is reciprocal "cawing" to use the Scotchman's term), that I lose no time in acknowledging it; but because I regard it as one more evidence of the diffusion of a spirit of citizenship (if I may use the term,) in the cultivation of agricultural science. And, indeed, it is only by an encouragement of this spirit, which regards not the boundaries of nationality, and confines not its exertions to either 'New' or 'Old' World, that knowledge can ever be surely promoted, or that agriculture can ever be what it ought, an universal science, as perfect in its principles as it is profitable in its practice. That it is entitled to consideration as a profitable science, none I think, can deny; for of all sciences it is the only one which can be fairly said to produce or create wealth. Such, however, it does; and the nation encouraging it is encouraging the very means which will best increase its wealth. That it ever will become as perfect in its principles as it deserves cannot be asserted—we may hope it; that it will, however, become much more so than it is, is certain,—and the most conclusive evidence of this is the spirit of intercommunication and of reciprocal assistance between the agriculturists of different countries, who, having different soils, climates, and manners, have different opportunities of observing phenomena and recording truths. But I am speaking enthusiastically. In this cause, however, you will excuse it.

I am glad to observe that you have established a "New-York State Agricultural Society." Of the advantages to flow from it, it is unnecessary for me to dilate to you. Nevertheless, I may say, that in my opinion they will be neither few nor unimportant. In England, these societies are doing much, and they will yet do more—in what way I have endeavoured to show in the "Quarterly Journal of Agriculture" for last month, which you have perhaps seen.

But I augur success to your societies on another ground. The great obstacle to agricultural improvement in England has been an apathetic affection to old plans, and an aversion to modern improvements as "new fangled notions." This feeling you have not to contend with. A great proportion of American farmers, especially those who have emigrated from Europe, have no hereditary prejudices—they are men who have some Quixotic spirit in them—they have broken from the beaten path of their fathers—have risked their all in a country, to the climate, customs, and soil of which they were strangers, and they are, therefore, ready to seize upon every information, and to test every system which will increase their knowledge or improve their farms. Or, to speak plainly, they come as strangers, feel that they are ignorant, and are not above receiving instruction from any source. In England, very often, men inherit the farms upon which they were born, and with the property of the parent inherit, too, his prejudices. To them these prejudices are proverbial, and they practice them in spite of all the opposition that modern science can make. Education, however, is fast dispelling this cloud which has so long darkened the horizon. Even now, in Scotland, and the North of England, it is no bigger than a man's hand.

I cannot conclude without saying a word on the "Cultivator." Till its arrival, I had no idea that the American farmers could boast of such a journal—for, with all our advantages, I must say that we cannot show a journal likely to be so practically useful. Our journals may be, and are highly useful, but then their price, and the high tone in which they are written, confine them amongst the educated farmers who least require their aid. Was there a journal established here, and conducted in the practical manner that the Cultivator is, and at the same moderate charge, I have no more doubt of its complete success than I have

of its usefulness amongst that class of farmers who require enticing to "adopt" improvements. I have written at length, (and probably not intelligibly), for I must say, (and I am not ashamed that it is so), my zeal in the cause of agriculture is greater than my ability. As brother-labourers, however, in the same field, I know you will excuse my prolixity, and believe me to be, gentlemen,
 Your obliged servant,
 JOHN HANNAM.

JOHNSTOWN AGRICULTURAL SOCIETY.

We have before us an address delivered before the "District of Johnstown Agricultural Society," by Wm. O. BUEL, Esq., and which both in matter and manner is worthy of the important subjects discussed. These relate to agriculture itself; to its condition in the district embraced by the society; and the suggestion of such means of improvement in husbandry as seemed best adapted to the country. We should be pleased to extract liberally, but our limits forbid. As specimens we give one or two detached paragraphs. In treating of the best methods of improvement he says:—"But agriculture too is progressing by the assistance of science in good old England, as also in the United States. The efforts made by the learned, by agricultural associations, by experiment, are working wonders. The spirit has not yet prevailed our own beloved land. The way to begin the work is to get up and encourage a cheap periodical publication, and let every man feel it his duty to extend its circulation. This is a most powerful and effective means of doing good; it is no experiment it has been tried, and bears the impress of wisdom upon the face of it. Meanwhile the farmer—every farmer—no exceptions—should be supplied with an agricultural paper." After naming the Albany Cultivator as a valuable and cheap publication, he adds, "there may soon be a Canadian Cultivator." This last is an important suggestion. The farmers of the two Canadas ought to give such a paper an efficient support, and we know there is talent enough to make a most able and interesting journal.

There is much truth in the following remarks. Let every farmer read and remember. "It is easy to tell a good farmer by the appearance of his place, and it is always a blessing to a neighbourhood to have such in its midst. People will learn many things from him, without being, as it were, aware of it; they will learn in spite of themselves; his example and success will influence them. Now what I wish to say is, that whenever you hear of a good farmer, inquire all about him, about his farm, what stock he keeps, what grain he raises, how far he is from market, of his whole management; ask about his family; in short in your own minds, become thoroughly acquainted with him; and if you find any thing worth remembering, which cannot fail to be the case, remember it; any thing worth following, follow it. You need not wait to hear of a man of this kind, but when you meet with another farmer from a distant neighbourhood, ask who is the best farmer, and so on. Every neighbourhood, your own for instance, has some farmers better than others—now, why are they better? make the inquiry; trace the thing to the bottom—it may do you much good."—*lb.*

The following has been extracted from a very recent English publication of merit, written by A. Walker, and forwarded for publication in the Cabinet.

CATTLE.

The best cattle have the face rather short; the muzzle small; the horns fine; the neck light, particularly where it joins the head; the chest wide, deep and capacious; the tail broad and flat towards the top, but thin towards the lower part, which it always be, when the animal is small boned; the lower part of the thigh small; the legs short, straight, clean, and fine boned, though not so fine as to indicate delicacy of constitution; the flesh, rich and mellow to the feel; the skin of a rich and silky appearance; the countenance calm and placid, denoting the evenness of temper, essential to quick feeding and a disposition to get fat.

Every breed of animals which has, through a few generations (two or three is sufficient) been

overfed, requires similar feeding; and the offspring of such animals require and can digest more food than others, who have lived upon little.

All growing animals, including mankind, ought to be sufficiently well fed to preserve health and strength, but never to be stimulated by excess of food. The children of parents, however, who have, through many generations, been well fed, would perish if given no more food than would be sufficient for an Irish or Highland Scot's peasant child.

The chief qualities sought for in cattle are the tendency to fatten on little food, and that to yield abundance of rich milk. The tendency to fatten is indicated chiefly by the capacity of the chest. Animals of all species, says Mr. Knight, all other qualities being equal, are, I think, capable of labour and privation, and capable of fattening, nearly in proportion, as their chests are capacious; but the habits of ancestry will operate very powerfully.

It is the width and depth of frame, says Mr. Berry, which confers weight, and not the mere circumstance of great height. While equally great, if not greater weights, can be obtained with shorter legged animals, they are, independently of other recommendations, generally found to possess better constitutions and greater propensity to fatten.

Mr. Knight says, the constitutional disposition to fatten, is certainly hostile to the disposition to give milk. Cows which give little milk often present large udders, which contain much solid matter; and, to inexperienced eyes, a two year old Hereford cow would give a promise of much milk, where very little would be given. A narrow forehead, and a long face, nearly of the same width from end to end, as in the Alderney cow, certainly indicates much more disposition to give milk than the contrary form, which I have pointed out as indicative of a disposition to fatten.

Fat animals are more generally those of the north, where cold diminishes sensibility. Fat indeed, appears to be the means which nature very extensively employs to lower sensibility by interposition between the skin and the central parts of the nervous system. Fat animals, accordingly, have not only less sensibility and irritability of the skin, but of the organs of sense generally. Thinner animals, on the contrary, are more generally those of the south, and have more acute sensibility and exquisite sensation.

In reply to this observation, Mr. Knight says, I do not doubt but you are right respecting the use of fat in cold climates; all sleeping animals, through winter, go to sleep in a fatted state. I do not think that breeds of cows, which give much rich milk, are very hardy. The Alderney cows are what the Herefordshire farmer calls very nesh, that is, very incapable of bearing hardship of any kind, and particularly cold, consequently of greater sensibility.

Cows which give much milk have the power of eating and digesting much food, and they require, whilst they give much milk, a very abundant and good pasture. The breeds of cows which give less milk, and present greater disposition to become fat, are generally less nesh, and will fatten upon less food. The influence of the feelings is very considerable. I have observed that whenever a young Hereford cow disliked being milked by the dairymaid, she soon ceased to give milk; and I do not doubt that, in all cases, if the calves were twice every day permitted to suck after the dairymaid had finished her labour, the cows would longer continue to give milk and in larger quantity.

This tends to corroborate what has been said as to greater sensibility being favourable to milking.

If this led only to distinction of these two kinds as to milking, namely,—that of fatness and thinness, and that of smaller and larger organs of sense and greater or less sensibility, it would still be valuable, as showing, either at a later or an earlier period, what we may expect in this important particular. But perhaps its utility may extend still further, and enable us to improve the race.

It may form a basis for our determining whether, in endeavouring to improve a breed, fatteners may most easily also become milkers, to some extent; or milkers may, to a similar extent, become fatteners; and what are the circumstances which would most favour such partial interchange, if not absolute improvement.

Indeed from these principles I would conclude that an annual fattening in the north, would become a better milker in the south, where a more genial temperature would render fat less necessary, would increase sensibility, and would cherish the secretion of milk, so intimately connected with that excitement of the productive functions which warmer climates produce.

As these two desirable qualities are both dependent upon one system, and as they are opposed to each other, (for excess of one secretion is always more or less at the cost of the other,) they will be most easily obtained by being distinctly sought for, and the animal of diminished sensibility will most easily fatten, while the animal of increased sensibility will most readily yield milk.

These views are confirmed by the conduct of the London dairy-men. While they acknowledge that the Alderneys yield the best milk, they keep none of them, whatever they may pretend, because these animals are peculiarly delicate, and more especially because they cannot, after being used as milkers, be fattened for the butchers. The York and Durham cows suit them best.

In certain constitutions, however, and to a certain extent, there is a compatibility between fattening and milking.

Mr. Knight says, the disposition to give much and rich milk, and to fatten rapidly, are to some extent at variance with each other; but I have seen cases in which cows which have given a great deal of rich milk, have given birth to most excellent oxen, the cows themselves, however, always continuing small and thin whilst giving milk.

I very confidently believe in the possibility of obtaining a breed of cows which would afford fine oxen, and would themselves fatten well; but, as great milkers require much more food than others, the farmer who rears oxen, does not think much, perhaps not enough, about milk, and is in the habit (which is certainly wrong) of breeding his bulls from cows which have become his best, owing only to their having been bad milkers.

In the selection of bulls, besides attending to those properties which belong to the male, we ought to be careful also, that they are descended from a breed of good milkers, at least if we wish the future stock to possess this property.—*Farmers' Cabinet.*

TOBACCO.

One of the great staple productions of this country, particularly of the southern and western part, is tobacco; and great as the amount now produced, it is evident that if the market abroad was not so fettered and clogged with vexatious restrictions, and such enormous duties, a far greater quantity might be readily grown. In Europe, it seems to be a favourite object for excessive taxation in nearly every government; and at the great meeting of tobacco planters last May, it was shown from authentic documents, that on an export of 100,000 hogsheads, valued here at seven millions of dollars, a duty was paid by the consumers in the various countries of Europe, of more than thirty millions of dollars. As a matter of interest to many of our readers, we copy, or condense, from the report of that body, the amount of tobacco exported to the European countries, respectively, or the most prominent ones:—

Countries.	Export of Tobacco in Hhds.	Tax per lb.
Russia,.....	359	
Holland,.....	3,300	13 cts.
Belgium,.....	6,000	24 "
Great Britain,.....	28,772	72 1/2 "
France,.....	12,000	
Spain,.....	5,700	
Portugal,.....	363	
Italian States,.....	2,000	
Austria,.....	4,000	

The remainder of the 100,000 hogsheads is distributed through the German states, Sardinia, Hungary, &c., &c. We have been unable to ascertain the precise duties paid in all cases, but the normal rates of those ascertained, and the fact that the tobacco import is in most of the countries of Europe farmed out for a stipulated sum, renders it certain that while none are below what is here named, some of the highest much exceed the almost prohibitory imposts of Great Britain. A duty

of 800 per cent., such as England imposes on our tobacco, is an anomaly in the history of trade; and which, under all circumstances, may be deemed positively unjust. What they can grow to any extent, and we must expect them to protect their own agriculture. Tobacco they cannot grow; it is an article of almost universal consumption; and their scale of duties is such as to be felt, not only by every consumer of tobacco in the British empire, but on the sources of Green River or the Miami. Free trade is a good thing; but we have some misgivings about the propriety of that trade in which all the freedom is on one side.

The culture of tobacco is every year extending itself in the Western States, and promises to become a most important article of export from the rich districts north and south of the Ohio. That tobacco can be grown in Indiana, Ohio, Kentucky, and Tennessee, with a profit greater than that attending the culture of wheat and corn, seems certain; and we doubt not that as the cultivation progresses, and the better methods of curing are adopted, the tobacco of the new states will rival in quality and celebrity that of the old. The plants on new land grow more luxuriantly than on soils cultivated for any considerable time; but experience proves that the quality is not so fine. The best tobacco in any country, is grown on lands in good condition, but not extravagantly rich, or highly manured.—*Albany Cultivator.*

ROADS.

GOOD ROADS AND GOOD MARKETS CHEER THE WEARY FARMER ON HIS WAY.

As the Farmer is understood to be devoted to every thing that has relation to the interests of the farmer, I take the liberty of forwarding a few lines on the subject of roads and road-mending; than which, there are few subjects which have a more intimate connection with the interests of an agricultural community.

Many of our roads have, from various causes, been very injudiciously located, but as they are now generally the division lines of contiguous farms, and the habits of our people have become conformed to them, it would not be an easy matter materially to change their position; so that we must submit to what we cannot easily remedy; and continue to travel over steep hills, when it would be much easier to go round them, or to approach their summits at a less angle by oblique direction. In the selection of juries to lay out new roads, it would be well for the judges of our courts to display their powers of discrimination, in selecting the most intelligent and enlightened men to be found in the country; and it would not be amiss, if those thus delegated to perform such an important trust, in which not only the present generation, but posterity will have an interest, should be endowed with a full proportion of moral courage, so that they may not be swayed by local or individual predilections to the prejudice of the interests of the community at large.

After roads have been laid out, confirmed by the court, and opened in obedience to, and according to law, the public are the undoubted proprietors of them, and have the right through their proper officers of the exclusive jurisdiction and care of them, to the full width and length they have been so laid out. Now it must be obvious to every person who moves to and fro in our county, (Montgomery), that in numerous cases our highways are much straightened and contracted, and in some instances full one-third of the public right is discovered to be over the fence within the inclosure of some individual, who appears to have more regard to the indulgence of his own selfish propensities than to the interest or convenience of the public.

The benefit derived by these encroachments is very questionable, and it is believed

that in most cases of the kind, the loss of reputation is more than a counterpoise for it; for in every case those who knowingly interfere with, obstruct, or deprive others of their just rights, as certainly mar and part with a portion, or the whole of their reputation. This is a subject that requires the attention of grand juries, and if supervisors will still continue to neglect their duties after having pledged themselves for their true and faithful performance, it would seem just and reasonable that an example should be made, by the infliction of adequate punishment by the proper authority. Another delinquency, less common, but more dangerous exists in some situations, in permitting individuals to occupy the public highway for quarrying stone, or other purposes, without the shadow of rightful pretext for so doing, and to the manifest injury and danger of persons travelling a regularly laid out highway. One instance of this kind has been very slowly, but regularly progressing for many years in apparent disregard of the public safety and convenience, and so far as the writer has knowledge, without the interference of the proper officers whose duty it is to prevent such injurious encroachments.

In conclusion, I shall simply call attention to the want of intelligence and practical skill which is often noticed in the, so called, repairs of roads; in many cases the labours of supervisors seem to be sedulously devoted to making them worse instead of better, and this arises in most cases evidently from want of skill and judgment, rather than from evil design, and the only remedy that can be applied in such cases is to exercise more care in the selection of supervisors. The persons best qualified for this office will not serve; they think there is more profit in minding their own business; consequently the only alternative is to select from the second best class, who sometimes get along pretty well, but it is seldom that the funds raised for repairing roads are as judiciously expended as they might and ought to be.—The subject of making and repairing roads is one of great interest, and if an able hand, who has the requisite knowledge, would furnish for publication in the Cabinet suitable instructions on it, great good to the public might result from it. It is hoped that in the discussion of various matters interesting to farmers, this may not escape the attention it so manifestly requires. MONTGOMERY.—*Farmer's Cabinet.*

AGRICULTURAL CAPITAL.

What, in the hands of the farmer, constitutes capital, is an important query? With the merchant, cash is the capital, with the land-owner, land is the capital, and with the farmer, cash; land, and stock, is usually considered the capital. But there are many other items that enter into the capital of the farmer generally overlooked, such as implements, manures, and the most important of all, labour. Capital may be productive or non-productive. A million of gold and silver locked in a strong box, or a thousand acres of uncultivated land, may be capital, but so long as the property remains in this state it produces nothing, and the owner may be actually growing poorer, instead of becoming richer. Increase of wealth does not depend on the quantity of capital so much as in the use made of it: and in nothing is this more observable than in farming. There is many a man who has commenced his career as a farmer, with fifty acres of land; on this he annually expended in manure, labour, &c., twenty per cent., and this produce was perhaps forty per cent. Encouraged by this success, he added to his farm another fifty acres, but his expenditure in capital is not proportionally increased, and the profits are lessened in proportion. Still he has not land

enough, and he keeps purchasing land, while he adds little or nothing to his active capital, and the consequence is, while on fifty acres of land, he realized forty per cent., on five hundred acres he realizes nothing. He has converted his productive into unproductive capital, and from his five hundred acres he does not clear as much as he did from his fifty acres, or perhaps he actually falls behind. There is nothing more true than that *moderate desire for large farms has been the ruin of thousands.* It is true that a large farm may be made as productive as a small one, but there must be the same proportion of capital in manure, labour, &c., put upon it, a thing rarely or never done.—That part of the farm upon which most capital is expended is the garden, and this is clearly the most productive and profitable, and so with a small farm when compared with a large one. Let no one therefore desire to possess more land, or undertake the cultivation of more acres than he has capital to manage well. If he does, he will find he is rapidly sinking what little productive capital he possesses, and may become a poor man with the means of exhaustless wealth in his hands.—*Albany Cultivator.*

(Concluded from First Page).

shire and Hampshire buildings, from which the hint was borrowed, are called *cob-walls*, but they are not exactly raised in the manner we now practice and recommend.

I have said, sir, that these buildings may be constructed with any description of clay, but I think the strong blue clay the best.—It need not however be so pure and free from stones as the brick-maker requires, (as it is well known that the least mixture of limestone spoils earth for bricks intended to be burnt). On the contrary, for our purpose, I believe that the clay is all the better for containing a large proportion of small stones or gravel, or that the same might judiciously be mixed with it, if convenient, and that, in that case, no straw would be required. The small stones or gravel would, by themselves, be quite sufficient to give the requisite solidity and binding nature to the material, and showing here and there on the surface, they would give an admirable hold to the plaster which is subsequently to be applied. I believe that the clay and small stones well kneaded together, do in the course of time grow into a solid mass, though I must leave to the learned to explain how that takes place. I remember well, when I used, many years since, to be sometimes at Muddiford in Hampshire, a place on the sea coast, I observed how small chunks of blue clay, from the under soil of the surrounding land, when they came by any accident in the way of the tide, used to be carried backwards and forwards by the ebbing and flowing of the sea, rolling up with them the sand and small pebbles, till they grew to be frequently as big as a flour barrel, and then, if cast by a storm on the dry land, they would lie there and harden into the solidity of a rock, and it was from a piece of them that the shoemakers used to make their lap-stones.—This was the school, I used to think, where the builders of that country, many, many generations before, first learnt to make their cob-walls; for there are buildings of that sort at Christ Church, close by, which are said to be six hundred years old.

If the clay be pure, and gravel or small stones not procurable, straw must be used. I find that it takes about one cwt. of straw to one hundred bricks, of the dimensions given in your last, which were very correctly stated.

You were about right also as to the expenses, the walls being supposed one foot in thickness, which is substantial enough

for a two-storied house. A barn which I have built has the walls eighteen inches thick. It need hardly be remarked that the cost will vary according to the price of labour and other local circumstances.

I shall add such remarks as at present occur to me respecting the mode of proceeding. A box or mould is to be prepared of the dimensions you state, as also one for bevelled bricks for arches &c. We temper the clay by the aid of horses. A place is scooped out about fifteen inches deep, twenty-five feet long, and half that in width.—Into this the clay and water is thrown, and a boy mounted on one horse and leading another, walks them backwards and forwards until every part is thoroughly kneaded, another person, the mean while, throwing in the straw in very small quantities at a time. Sometimes a circular ditch is made, for a horse to go round in, after the fashion of a cider mill. You may save labour in obtaining the clay by ploughing it up on a spot whence you intend taking it. The bricks are set to dry in loose or hollow walls, similar to those used in common brick yards. The foundation for a wall of this description should be laid with stone and mortar, and raised a few inches above the level of the ground. The bricks are to be laid in the same material of which they were made, instead of in mortar. And here it will be proper to point out the advantage of making these squares or bricks, over the older fashion of cob-walls. In constructing the latter, it is necessary to wait for each successive layer of the material to dry, before another can safely be added, lest the wall should subside unqually, and out of form, and the length of this delay depends on the state of the weather. With the bricks, the artificer proceeds uninterruptedly, and with much greater security against any such accident, and his building may be completed with all that celerity so generally desired by inhabitants of America. When the walls are quite dry, the last finish is to be given them by a good coat of plaster, made of lime and sand, and not of clay, though this is sometimes done. You will then have a dwelling of a most durable description, and as handsome as you choose to make it. It will be infinitely superior to a frame house, being, both warm in winter and cool in summer—so much so indeed that underground cellars, for the purpose of preserving articles from frost and heat, may be altogether dispensed with; and most people in this neighbourhood find their underground cellars to be as a great nuisance, and a cause of damp and vermin.

If I were to add that this description of house is as good as one of brick or stone, many would think it was saying a great deal, considering how cheap it is in comparison. But my firm opinion is, that it is very superior in healthiness and comfort to the best brick houses, and to most sorts of stone ones. Every one knows how very porous burnt bricks are, and what a quantity of water each one will drink up when plunged into it fresh from the kiln. From this it happens that the damp is continually making its way from the outside inwards. Unburnt clay, on the contrary, has nothing of this imperfection, and I could give the most incredulous person a convincing proof of this, by exhibiting to him the opposite condition of the paper on two walls in my own house, one built of each material.

But it is time to draw this communication to a close, which I shall do with wishing success to your useful labours, and hoping that your paper may soon rival and surpass any of the kind on this Continent.

I am, Sir, yours,

THOS. SHEPPARD.

Sheppard's Tavern,
Yonge Street, 26th Jan'y, 1842.

ERRATA IN OUR LAST—Page 16, in Mr. Severn's Communication, five lines from the bottom, for 177 lbs. read 77 lbs.

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A choice collection of Green House Plants, Double Dahlias Herbaceous Plants, Flowering Trees, Fruit Trees, &c., &c.

JAMES FLEMING.

Yonge Street,
Toronto, Feb'y, 1842. 2

TORONTO MARKETS;

For the Month ending 31st. January, 1842.

Wheat, per bushel.....	5	0	a	5	9
Barley, per do.....	2	6	a	2	8
Oats, per do.....	1	6	a	1	8
Flour, Farmer's, per barrel.....	25	0	a	27	6
Do. Miller's, warranted per do.....	30	0	a	0	0
Do. Superfine, per do.....	35	0	a	0	0
Oatmeal, warranted, per do.....	0	0	a	25	0
Beef, per cwt.....	15	0	a	17	6
Do. on Foot.....	15	0	a	17	6
Mutton, per lb.....	0	2	a	0	3
Pork, per 100 lbs.....	12	6	a	17	6
Geese, each.....	2	0	a	2	6
Turkies, do.....	3	0	a	5	3
Fowls, per pair.....	1	3	a	1	0
Ducks, per pair.....	1	4	a	2	0
Eggs, per dozen.....	0	7	a	0	10
Butter, in tubs, per lb.....	0	6	a	0	7
Do. in rolls, per lb.....	0	7	a	0	9
Potatoes, per bushel.....	1	0	a	1	3
Hay, per ton.....	79	0	a	80	0

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WM. EVANS, & W. G. EDMUNDSON,
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